Avoiding Conflicts between the WTO Agreements and the Cartagena Protocol on Biosafety: The Principle of Systemic Integration and the Principles that Lie Behind It

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Abstract

Genetically modified organisms (GMOs) have been heavily traded across borders since their first commercialisation in 1996, despite the fierce global debates on their benefits and risks. International trade in GMOs are regulated mainly through the WTO Agreements and the Cartagena Protocol on Biosafety (the Protocol) at the international level. The treaties are not necessarily always consistent with one another. Their relationship also serves as a specific example of the much debated potentially conflicting relationship between trade and environment, and the particular phenomenon of the fragmentation of international law that sows the seed for conflict of international norms.

Against this background, it is pertinent to ask if there really is the potential for conflicts between the treaties. Also, how do the general international rules on conflict of norms apply to the specific relationship between the treaties? In addition, if necessary, how best might conflicts between international treaties be dealt with or avoided in general?

This thesis starts by looking at the substances of the treaties and finds that there exists the real potential for conflict. It then examines the general international rules on conflict resolution techniques, tests them on the potentially conflicting relationship between the WTO Agreements and the Protocol, and finds that existing rules could not provide definitive solutions where conflicts between the treaties arise.

It is a central argument of this thesis that conflicts between the treaties should be proactively avoided rather than resolved when disputes actually arise. More generally, with the aim of achieving sustainable development and the defragmentation of international law, the principle of systemic integration is set out as a tool which is generally used by international judicial bodies for viewing international law as a whole, as well as a viable means for avoiding conflicts between international norms. The thesis then sketches the theoretical underpinnings of the principle of systemic integration, including the principles of mutual supportiveness, good faith, cooperation, and harmonisation, and argues that the principles that lie behind systemic integration are capable of driving integration at other levels, including institutional and domestic levels.

The thesis also includes an original empirical research undertaken in the form of interviews with state and international organisation representatives, which reaffirms and provides empirical evidence for the doctrinal arguments in this thesis.

Publications and Conference Presentations (derived from this thesis)

Book Chapters:

- Jingjing Zhao, 'Public Participation in China's Domestic Regulation of GMOs: Current Status and Possible Improvements' in W Yu (ed.) Study on the Environmental Resources Law in the Context of Ecological Civilisation (China University of Political Science and Law Press, October 2016, forthcoming).

Articles:

- Jingjing Zhao, 'Country Report, Public Interest Environmental Litigation and the Revised Environmental Protection Law of China,' (2015) Issue 6, *IUCN Academy of International Law eJournal*.
- Jingjing Zhao, 'Country Report (China): Grain Law (Exposure Draft) and China's Regulation on Genetically Modified Food Supplies,' (2013) Issue 4, *IUCN Academy of International Law eJournal*.

Conference Presentations:

- Jingjing Zhao, 'Avoiding Conflicts between International Trade and Environmental Treaties: Beyond the Principle of Systemic Integration', a presentation at the *Law and the Environment Conference 2017*, University College Cork, Ireland, 27 April 2017.
- Jingjing Zhao, 'Public Participation in China's Domestic Regulation of GMOs: Current Status and Possible Improvements', a paper presented at the *2015 Delta Environmental Law Forum*, Beijing, China, 16-19 October 2015.
- Jingjing Zhao, 'A Comparative Study of the Public Participation in GMO Regulatory Regimes in the EU and China', a paper presented at the *Sino-Scotch Comparative Law Symposium*, University of Fudan, China, 26-27 October 2013.
- Jingjing Zhao, 'WTO Agreements and the Cartagena Protocol on Biosafety-Conflicting or Reinforcing?', a poster presented at the *I Strathclyde Postgraduate Colloquium on Environmental Law and Governance,* University of Strathclyde, UK, 6 June 2013.
- Jingjing Zhao, 'Public Opinion and China's Domestic Regulation on GMOs-The Ethical and Legal Perspective', a presentation at the *36th Annual Conference of the Law and Society Association*, Boston, United States, 30 May-2 June 2013.

- Jingjing Zhao, 'The Regulation of International Trade in GMOs', a poster presented at the *Images of Strathclyde*, UK, 29 April 2013.
- Jingjing Zhao, 'Avoiding Potential Conflicts between the WTO Agreements and the Cartagena Protocol on Biosafety', a paper presented at the *2013 Scottish Colloquium for Early Career Legal Researchers*, University of Dundee, UK, 19 April 2013.
- Jingjing Zhao, 'China's Biosafety Regulation and its Response to Relevant International Treaties', a presentation at the *UCL-KCL Postgraduates Environmental Law Symposium*, University College London, UK, 7 November 2012.
- Jingjing Zhao, 'How Do General Rules on Conflict of Norms in International Law Relate to the Relationship between the WTO Agreements and the Cartagena Protocol on Biosafety?', a presentation at the *Copenhagen Doctoral Research Symposium: Mock-up for a Dissertation*, University of Copenhagen, Denmark, 14-16 June 2012.

Declaration of Authenticity and Author's Rights

This thesis is the result of the author's original research. It has been composed by the author and contains material that has been previously submitted for examination leading to the award of a degree at the University of Edinburgh in 2010.

Signed: .....

Date: .....

Similarities to Previously Submitted Material

Chapters 2 and 4 of this thesis contain material that has been previously submitted for examination leading to the award of a Master of Laws by Research (MRes) degree at the University of Edinburgh. The MRes thesis was named 'The principle of systemic integration in treaty interpretation – a case study of the extent to which treaty interpretation can be relied upon to reconcile the SPS Agreement and the Biosafety Protocol'. Although this author endeavoured to evade previously submitted material during the writing of this thesis, due to the nature of this research and the MRes study, the theses unavoidably contain some similarities which are detailed as follows:

The MRes thesis contained a basic discussion on the definition of 'conflicts', similar to a minor part of Chapter 2, section 2 of this thesis.

The MRes thesis also included a general introduction on the fragmentation of international law, similar to part of Chapter 2, section 3 of this thesis.

The MRes thesis contained an introduction on the principle of systemic integration, similar to part of Chapter 4, section 3.2 of this thesis.

The MRes thesis also briefly examined the potential conflicts between the SPS Agreement and the Protocol in relation to risk assessment, similar to part of Chapter 2, sections 4.3.2, 5.2 and 6.1 of this thesis.

The MRes thesis made the argument that the principle of systemic integration can be relied upon to reconcile the SPS Agreement and the Protocol, similar to part of Chapter 4, section 3.4 of this thesis.

A turnitin report indicated 12% similarity of the relevant parts of this thesis to student sources and only 1% for the MRes thesis. This can be supplied on request.

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Abbreviations

ABR	Appellate Body Report
Cartagena Protocol	Cartagena Protocol on Biosafety to the Convention on Biological Diversity
CBD	Convention on Biological Diversity
CCPCC	Chinese Communist Party Central Committee
CTE	Committee on Trade and Environment
DEFRA	Department for Environment Food and Rural Affairs
DSB	Dispute Settlement Body
DSU	Understanding on Rules and Procedures Governing the Settlement of Disputes
EC	European Commission
ECtHR	European Court of Human Rights
EFSA	European Food Safety Authority
EU	European Union
FAO	Food and Agriculture Organisation
GATT	General Agreement on Tariffs and Trade
GM	Genetically Modified
GMO	Genetically Modified Organism
GMP	Government Policy Maker
ICJ	International Court of Justice
ILC	International Law Commission
ILM	International Legal Materials

MFN	Most Favoured Nation
NAFTA	North American Free Trade Agreement
NGO	Non-Governmental Organisation
PR	Panel Report
SPS Agreement	Agreement on the Application of Sanitary and Phytosanitary Measures
TBT Agreement	Agreement on Technical Barriers to Trade
TFEU	Treaty on the Functioning of the European Union
UN	United Nations
UNCED	UN Conference on Environment and Development
UNCLOS	United Nations Convention on the Law of the Sea
UNCTAD	United Nations Conference on Trade and Development
UNTS	United Nations Treaty Series
WHO	World Health Organisation
WTO	World Trade Organisation
VCLT	Vienna Convention on the Law of Treaties

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Chapter 1

Introduction

1. Statement of research

1.1 What is a GMO and why regulate it and its international trade?

Genetically Modified Organisms (GMOs) are the products of modern biotechnology. They can be defined as 'organisms in which genetic material has been altered in a way that does not occur naturally by mating and/or natural recombination'; they are often created by transferring selected individual genes from one organism into another, as well as between non-related species.[1] GM crops were first commercialised in 1996 and their commercialisation is still developing.[2] Concerns, controversies and debates have accompanied the development of biotechnology and GMOs, and these have roared fiercely around the world for the past 20 years, largely because GMOs may impact both negatively and positively on human society on a multidimensional scale. The philosophical and legal debates on GM crops mainly include concerns for the environment and for human health.[3]

Proponents argue that GMOs have positive social, economic and environmental values. A number of *ex ante* empirical studies envisage that GMOs would increase production and net farmer income, decrease food prices, and expand consumers' consumption choices.[4] Some studies also found that GMOs can offer direct and indirect health benefits (e.g. nutrition improvement, reduction of toxic compounds, pesticide

[1] World Health Organisation (WHO), 'What Are Genetically Modified (GM) Organism and GM Food?', available at: http://www.who.int/foodsafety/areas_work/food-technology/faq-genetically-modified-food/en/, last accessed on 30 April 2017.

[2] C James, *20th Anniversary (1996 to 2015) of the Global Commercialization of Biotech Crops and Biotech Crop Highlights in 2015*, *ISAAA Brief 51,* (ISAAA: Ithaca, NY, 2015), 1.

[3] MW Pariza, 'A Scientific Perspective on Labelling Genetically Modified Food', in P Weirich (ed), *Labelling Generically Modified Food: The Philosophical and Legal Debate* (Oxford University Press, 2007), 6.

[4] M Annou and others, 'Innovation dissemination and the market impacts of drought-tolerant, genetically modified rice' (2005) 7 (1–3) *International Journal of Biotechnology* 113, 127; K Anderson and E Valenzuela, 'The World Trade Organisation's Doha cotton initiative: A tale of two issues' (2007) 30 (8) *World Economy* 1281, 1304; M Smale and others, 'Measuring the Economic Impacts of Transgenic Crops in Developing Agriculture during the First Decade: Approaches, Findings, and Future Directions', *Food Policy Review 10* (International Food Policy Research Institute, 2009), 64-73; and K Anderson and LA Jackson, 'GMOs: Trade and Welfare Impacts of Current Policies and Prospects for Reform', in JA McMahon and MG Desta (eds) *Research Handbook on the WTO Agriculture Agreement: New and Emerging Issues in International Agricultural Trade Law* (Edward Elgar, 2012), 158-65.

reduction as well as improved affordability of food),[5] socio-economic benefits (e.g. rural economic development in developing countries), better weed and insect control, higher productivity, and more flexible crop management.[6]

On the other hand, some studies found that the significant risks and uncertainties of GMOs have the potential to cause serious environmental changes or damage (e.g. generate pesticide resistance in the long term);[7] raise food safety concerns (e.g. the possibility of increased allergens, toxins or other harmful objects, flows of antibiotic-resistant genes, and effects on non-target organisms);[8] adversely affect social values (e.g. artificial intervention on genes may cause ecological disruption and biodiversity loss, and trigger moral concerns);[9] result in economic damages (e.g. threaten traditional farming methods and products); [10] and cause health and safety damages to consumers and the public.[11] Moreover, biodiversity is also significant for the maintenance of the atmospheric quality and the effects of climate. For example, climate change is both a cause and an effect of biodiversity change.[12] In practice, some African countries have even refused food aid that includes GMOs, arguably in fear of losing 'GM-free' status while exporting conventional agricultural products, and in light of the aforementioned risks and concerns about GMOs.[13]

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[5] GJ Persley, 'New Genetics, Food and Agriculture: Scientific Discoveries-Societal Dilemmas', Report prepared for the International Council for Science (2003), 8; and W. Klümper and M. Qaim, 'A Meta-Analysis of the Impacts of Genetically Modified Crops' (2014) 9 (11) *PLoS ONE* 1, 5.

[6] S Zarrilli, 'International Trade in GMOs: Legal Frameworks and Developing Country Concerns', *Policy Issues in International Trade and Commodities Study Series No. 29*, (2004) UNCTAD/ITCD/TAB/30, 2; and RB Stewart, 'GMO Trade Regulation and Developing Countries', *Public Law & Legal Theory Research Paper Series Working Paper No. 09-70*, (New York University School of Law, 2009), 33.

[7] The Protocol, Preamble; AW Ando and M Khanna, 'Environmental Costs and Benefits of Genetically Modified Crops: Implications for Regulatory Strategies' (2000) 44 (3) *American Behavioral Scientist* 435, 437-42; and WHO, 'What Are the Issues of Concern for the Environment?', available at: http://www.who.int/foodsafety/areas_work/food-technology/faq-genetically-modified-food/en/, last accessed on 30 April 2017.

[8] Joint FAO/WHO Expert Consultation on Foods Derived from Biotechnology, *Safety Aspects of Genetically Modified Foods of Plant Origin* (2000), 20-1.

[9] PE Hagen and JB Weiner, 'The Cartagena Protocol on Biosafety: New Rules for International Trade in Living Modified Organisms' (2000) 12 *Georgetown International Environmental Law Review* 697, 717.

[10] *Ibid*.

[11] The Protocol, Preamble; S Bonny, 'Factors Explaining Opposition to GMOs in France and the Rest of Europe' in RE Evenson and T Raney (eds) *The Political Economy of Genetically Modified Foods* (Edward Elgar Publishing Limited, 2007), 251; and WHO, 'What Are the Main Issues of Concern for Human Health?', available at: http://www.who.int/foodsafety/areas_work/food-technology/faq-genetically-modified-food/en/, last accessed on 30 April 2017.

[12] C Perrings, 'Biodiversity, Ecosystem Services, and Climate Change: The Economic Problem', a paper circulated to encourage thought and discussion at the World Bank Environment Department, November 2010, 1; and S Díaz and others, 'Biodiversity Regulation of Ecosystem Services', in R Hassan, R Scholes and N Ash (eds), *Ecosystems and Human Well-Being: Current State and Trends* (Island Press, 2005), 315-9.

[13] Zarrilli (n 6), 8-9.

However, the extent to which GMOs pose risks to the environment and human health remains uncertain and controversial. The scientific community has not yet found adequate scientific evidence to reach conclusive decisions on the risks of GMOs.[14] One scientific research project regarding compositional equivalence of GM and non-GM crops found that suspected unintended compositional effects that can be caused by genetic modification did not materialise.[15] Of course, scientific evidence can never be conclusive, and nothing can be declared absolutely safe.[16] Nonetheless, it seems that the potential adverse long-term effects of GMOs cannot be excluded by scientists.[17] Some scientific reports suggest that GMOs may have either positive or negative environmental impact depending on how they are used.[18] Others found that the adverse effects of GMOs cannot be completely ruled out, and GMOs will need to be managed carefully and intelligently.[19] A recent guide published by the British Royal Society stated that GM food was safe to eat, though it acknowledged that GM crops may cross breed with non-GM varieties and there could be unexpected and untoward side effects.[20]

The controversy over GMOs is further complicated by the considerable concerns shown by the public across the globe, in particular about GM food products. A number of Non-Governmental Organisation (NGOs) and campaign groups also protest against GMO production and trade.[21]

The world has seen a change of attitudes towards GMOs from highly promising in the 1980s, to a strong movement of opposition from the end of the 1990s to the early 2000s,

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[14] R Herman and W Price, 'Unintended Compositional Changes in Genetically Modified (GM) Crops: 20 Years of Research' (2013) 61 *Journal of Agricultural and Food Chemistry* 11695, 11696-7; and A Hilbeck and others, 'No Scientific Consensus on GMO Safety' (2015) 27(4) *Environmental Sciences Europe* 1, 4-5.
[15] Herman and Price, *ibid*, 11695.
[16] W Kerr and J Hobbs, 'Consumers, Cows, and Carousels: Why the Dispute Over Beef Hormones is Far More Important than its Commercial Value', in N Perdikis and R Read (eds), *The WTO and the Regulation of International Trade: Recent Trade Disputes Between the European Union and the United States* (Edward Elgar Publishing Ltd, 2005), 193.
[17] B Eggers and R Mackenzie, 'The Cartagena Protocol on Biosafety' (2000) 3(3) *Journal of International Economic Law* 525, 525-6; and A Nicolia and others, 'An Overview of the Last 10 Years of Genetically Engineered Crop Safety Research' (2014) 34(1) *Critical Reviews in Biotechnology* 77, 84.
[18] Persley (n 5), 45; and The Nuffield Council on Bioethics, 'The Use of Genetically Modified Crops in Developing Countries: A Follow-Up Discussion Paper' (2003), 62.
[19] UK GM Science Review Panel, 'An Open Review of the Science Relevant to GM Crops and Food Based on the Interests and Concerns of the Public' (2003), First Report, 9-10.
[20] The Royal Society, 'GM Plants: Questions and Answers', May 2016, available at: https://royalsociety.org/~/media/policy/projects/gm-plants/gm-plant-q-and-a.pdf, last accessed on 30 April 2017.
[21] Greenpeace, 'How to Avoid Genetically Engineered Food: A Greenpeace Shoppers Guide' (2003), available at http://gmoguide.greenpeace.ca/shoppers_guide.pdf, last accessed on 30 April 2017.

and has lasted until now although lessened to a certain extent.[22] A world-wide survey found that a majority of people in all countries examined (US, Canada, UK, Italy, Germany, Japan, and France) felt that GM foods were 'bad'.[23] More recently, a nation-wide survey in the US suggested that a majority of 57% of the investigated adults believed GMOs were unsafe with a minority of 37% adults considered GMOs to be safe; in addition, while 67% adults said that scientists do not clearly understand the health effects of GMOs, only 28% believed scientists have a clear understanding of this.[24] Another survey in Singapore demonstrated that although the public were generally positive towards the safety of GMOs, they were less willing to purchase GM products.[25] A nation-wide survey in China also found that the majority of participants believed GMOs carried certain degree of risks.[26] In the UK, a survey by the British Science Association in 2012 showed that the public's concern over GMOs had softened in the past decade: 15.2% of investigated adults were unconcerned about GM foods compared with 17% in 2003; however, a larger percentage - 46.5% of adults - were still very or fairly concerned about GMOs.[27]

Despite the controversies on GMOs, in global terms, the cultivation of GM crops has increased steadily and consecutively since the time of their first commercialization in 1996 to 2014.[28] The annual global hectarage of GM crops peaked at 181.5 million in 2014, compared with 179.7 million hectares (grown in 28 countries) in 2015.[29] A principal factor leading to the slightly decreased GM hectarage was decreased total crop plantings in some countries.[30] As of 15 November 2015, a total number of 40 jurisdictions (39+EU-28) have

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[22] Bonny (n 11), 241; and Department of Trade and Industry of UK, *GM Nation? The Findings of the Public Debate* (London: Department of Trade and Industry, 2003).
[23] The Pew Research Centre, 'Broad Opposition to Genetically Modified Foods: Modest Transatlantic Gap', 20 June 2003, available at: http://www.people-press.org/2003/06/20/broad-opposition-to-genetically-modified-foods/, last accessed on 30 April 2017.
[24] C Funk and L Rainie, 'Chapter 6: Public Opinion about Food', available at: http://www.pewinternet.org/2015/07/01/chapter-6-public-opinion-about-food/, last accessed on 30 April 2017.
[25] Y Ming, NTU iGEM team, 'Public Perception towards Genetically Modified Organisms (GMO) in Singapore', August 2015, available at: http://2015.igem.org/wiki/images/8/8c/Public_Perception_towards_Genetically_Modified_Organisms_(GMO)_in_Singapore.pdf, last accessed on 30 April 2017.
[26] Y Qu and others, 'Survey Analysis of the Cognition of GMO Risk and Safety among Chinese Public' (2011) 16(6) *Journal of China Agricultural University* 1, 4-5.
[27] The Guardian, 'Public Concern over GM Food has Lessened, Survey Shows', 9 March 2012, available at: https://www.theguardian.com/environment/2012/mar/09/gm-food-public-concern, last accessed on 30 April 2017; and S Castell and others, 'Public Attitudes to Science 2014: Main Report', Ipsos MORI Social Research Institute, March 2014, 27.
[28] James (n 2), 6.
[29] *Ibid*.
[30] *Ibid*.

granted regulatory approvals for GM crops import, food and feed use or for release into the environment.[31]

Ordinarily, food and agricultural products are heavily traded across borders, of which GM food and animal feed trade comprise a significant and increasing part.[32] In 2015, the estimated global market value of GM crops was US$ 15.3 billion (£11.7 billion), representing 20% of the global crop protection market in 2014, and 34% of the global commercial seed market in 2012.[33] GMOs have been sharing an increasing part of international trade, involving both developed and developing countries. Of the top 10 GM crops producing countries (listed by hectarage) in 2015, 8 were developing countries; the same year was also the fourth consecutive year in which developing countries planted more GM crops than developed countries.[34] The four major GM crops on the market (soya, maize, cotton, and canola) are also major internationally traded goods.[35] Moreover, an increasing number of GM products have entered into the international market, due to, *inter alia,* the forest plantation of GM trees to meet the growing international demand for wood and other forest products.[36]

In the scientific debate over GMOs, differentiating fact from fiction is not easy. Although it examines the regulation of scientific assessments on GMOs, this research will not explore the concrete scientific evidence, data or details regarding GMOs, nor does it intend to investigate and weigh the benefits and risks that originate from GMOs. This thesis distances itself from the scientific controversy on whether GMOs are safe or potentially risky, because it does not fall under the research question of this thesis, and this author does not have the personal capacity and scientific background to answer this question. This thesis simply does not deal with these issues aside from outlining that there is a controversy.

Instead, this thesis focuses on the legal implications of the regulation of international trade in GMOs, and studies the legislative and implementing activities regarding

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[31] *Ibid*, 215.
[32] WTO, 'International Trade Statistics 2015: Merchandise Trade', Table II. 3: Share of Agricultural Products in Trade in Total Merchandise and in Primary Products by Region 2014, available at: https://www.wto.org/english/res_e/statis_e/its2015_e/its15_merch_trade_product_e.htm, last accessed on 30 April 2017.
[33] James (n 2), 217.
[34] *Ibid*, 12-15.
[35] Smale and others (n 4), 63.
[36] RA Sedjo, 'Tree Biotechnology: Regulation and International Trade', in RE Evenson and V Santaniello (eds), *International Trade and Policies for Genetically Modified Products,* (CABI Publishing, 2006), 45-6.

the regulation of international trade in GMOs both at the international and domestic levels. It involves a systematic exploration of how the general international rules on conflict of norms apply to the relationship between the WTO Agreements and the Protocol, and the extent to which this specific relationship might influence how treaty conflicts should be dealt with generally in international law.

Particularly, this is done by examining mainly the relationship between the World Trade Organisation (WTO) Agreements and the Cartagena Protocol on Biosafety to the Convention on Biological Diversity (the Protocol) from a norm conflict perspective.[37] This thesis looks at whether there exist potential conflicts between the treaties, and where such is found, it analyses the reasons for the potential conflicts, and how such conflicts are and can be better dealt with in the purlieu of international law, with a view to facilitate the adequate and effective international and domestic regulation of GMOs.

1.2 The regulation of international trade in GMOs under different treaties which may conflict with one another

GMOs are transported across borders through, for example, international trade, transit, international food aid, and accidental releases crossing boundaries. The rapidly growing transboundary movement of GMOs largely takes the form of international trade, which raises concerns and challenges for decision-makers both at the international and domestic levels. These concerns and challenges, together with the regulation of the biotechnology industry as a whole, certainly require global attention.[38]

Indeed, the international regulation of GMOs is a complex issue covering a wide range of issues including biodiversity, environment, trade, health and safety, human rights and development. Thus, the effective regulation of GMOs requires broad and complex international rules that work seamlessly together, and with little or no conflict in the manner in which they address the relevant issues being regulated.

A number of international organisations deal with the regulation of GMOs in different ways, such as the WTO, the World Health Organisation (WHO), the UN Industrial

[37] The Cartagena Protocol on Biosafety to the Convention on Biological Diversity, 29 January 2000, (2000) 39 ILM 1027. This thesis uses the Protocol interchangeably with the Cartagena Protocol.
[38] P Sands, 'Environmental Protection in the Twenty-First Century: Sustainable Development and International Law', in RL Revesz, P Sands, and RB Stewart (eds) *Environmental Law, the Economy and Sustainable Development* (Cambridge University Press, 2008), 389.

Development Organisation (UNIDO), the Organisation of Economic Cooperation and Development (OECD), the UN Environment Programme (UNEP), the Codex Alimentarius Commission (CAC), the International Organisation for Epizootics(IOE), and the joint food standards programme of the Food and Agriculture Organisation (FAO). This results in the fact that several international treaties govern GMOs from different perspectives, and under different sub-systems of international law.

Presently, the WTO Agreements and the Cartagena Protocol are the two main international legal frameworks that apply to international trade in GMOs.[39]

The WTO is a rule-based, member-driven international organisation joined by sovereign states and customs territories. It deals with international rules of trade between its Members. All decisions, except decisions made in the dispute settlement system, under the WTO are made by Members as a result of negotiations. In other words, only Members can take decisions which bind all Members. As of 29 July, 2016, the WTO had 164 Members. The complex WTO legal system covers a series of agreements which regulate different aspects of international trade. This system was designed to prevent governments from setting unnecessary obstacles to, and promote the free, smooth and predictable flow of international trade.[40]

Although no WTO Agreement directly refers to, or specifically covers, the regulation of GMOs, a number of WTO 'covered agreements' may affect international trade in GMOs.[41] For instance, the General Agreement on Tariffs and Trade 1994 (GATT)[42] provides general rules for WTO Members with respect to all international trade in goods, including GMOs. There is also the Agreement on the Application of Sanitary and Phytosanitary Measures (the SPS Agreement)[43] which is arguably the most relevant WTO Agreement on trade in GMOs, and is the focus of this thesis. It regulates measures intended for the protection of human, animal or plant lives, as well as their health. In addition, while

[39] SW Burgiel, 'The Cartagena Protocol on Biosafety: Taking the Steps from Negotiation to Implementation', (2002) 11(1) *RECIEL* 53, 53.
[40] DC Esty, 'GATTing the Greens: Not Just Greening the GATT' (1993) *Yale Law School Faculty Scholarships Series, Paper 453*, 33.
[41] A list of 'covered agreements' is included in Appendix 1 to the Understanding on Rules and Procedures Governing the Settlement of Disputes (DSU), 1992. According to its Article 1.1, the rules and procedures of the DSU shall apply to disputes brought pursuant to the consultation and dispute settlement provisions of the covered agreement. This thesis refers to the covered agreements as the WTO Agreements.
[42] WTO General Agreement on Tariffs and Trade 1994, 15 April 1994, 1867 UNTS 187, (1994) 33 ILM 1153.
[43] WTO Agreement on the Application of Sanitary and Phytosanitary Measures, 15 April 1994, 1867 UNTS 493.

the Agreement on Technical Barriers to Trade (the TBT Agreement)[44] provides technical regulations on GMOs, the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS)[45] is relevant to the intellectual property issues relating to GMOs.

The transboundary movement of GMOs is also regulated by a series of biosafety-related environmental treaties, including the Convention on Biological Diversity (CBD)[46] and its supplementary protocols, the Cartagena Protocol and the more recent Nagoya Protocol on Access and Benefit Sharing (the Nagoya Protocol).[47] The term biosafety describes 'efforts to reduce and eliminate the potential risks resulting from biotechnology and its products'.[48] It focuses on human health, biodiversity, environmental sustainability and food security.[49]

The CBD is a framework treaty with the guiding objectives of pursuing the conservation and sustainable use of biological diversity and its components, and the fair and equitable sharing and balancing of the benefits of the utilization of genetic resources.[50] It entered into force on 29 December, 1993, and had 196 Parties as of July, 2016.[51] It is a framework convention and an 'evolving programmatic regime', which lays down guiding principles and expresses overall goals; it does not define precise obligations, and it leaves the most fundamental issues largely unresolved.[52] However, it requires the Parties to cooperate in the formulation and adoption of protocols to specify more regulative and managerial arrangements, with the Cartagena Protocol and the Nagoya Protocol constituting two successful examples of such corporation.[53]

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[44] WTO Agreement on Technical Barriers to Trade, 15 April 1994, 1868 UNTS 120.
[45] WTO Agreement on Trade-Related Aspects of Intellectual Property Rights, 15 April 1994, 1869 UNTS 299.
[46] Convention on Biological Diversity, 5 June 1992, (1992) 31 ILM 818.
[47] Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from Their Utilization to the Convention on Biological Diversity, 29 October 2010, CBD Decision 10/1, (20 January 2011) UN Doc UNEP/CBD/COP/10/27.
[48] Biosafety Unit at the CBD, 'What is Biosafety?', available at: http://bch.cbd.int/protocol/cpb_faq.shtml#faq2, last accessed on 30 April 2017.
[49] FAO, 'Biosafety issues related to biotechnologies for sustainable agriculture and food security', Paper presented by FAO Ad-hoc Biosafety Working Group at the Brazilian Congress on Biosafety, Rio de Janeiro, September 1999, 118.
[50] The CBD, Article 1. These guiding objectives set out in Article 1 are further elaborated on as binding commitments in the substantive provision of Articles 6-20.
[51] The list of Parties is available at: https://www.cbd.int/information/parties.shtml, last accessed on 30 April 2017.
[52] OR Young, 'Institutional Linkages in International Society: Polar Perspectives' (1996) 2 *Global Governance* 1, 16; AE Boyle, 'The Conventional on Biological Diversity', in L Campiglio (ed), *The Environment after Rio: International Law and Economics* (Springer, 1994); and P Sands, *Principles of International Environmental law* (2nd edition, Cambridge University Press, 2003), 516 & 523.
[53] The CBD, Articles 8, 19 & 28.

The Cartagena Protocol is the first international agreement governing the safety of the transboundary movement of GMOs, and plays an important role in protecting biological diversity from potential risks. The objective of the Protocol is to ensure 'an adequate level of protection in the field of the safe transfer, handling and use of living modified organisms (LMOs)[54] resulting from modern biotechnology.'[55] The Protocol sets out rules for the transboundary movement of GMOs which includes, but is not limited to, international trade in GMOs. It applies to the transboundary movement, transit, handling and use of GMOs which may either have adverse effects on the conservation and sustainable use of biological diversity, or have risks to human health.[56] The Protocol entered into force on 11 September, 2003. As of March 2017, the Protocol had 170 member Parties, the number of which is expected to grow.[57]

Importantly, the Protocol is designed to 'serve as a counterweight' to the WTO Agreements in relation to environmental and biosafety concerns.[58] One central function of the modern welfare state is considered to be the protection of human health and the environment against risks posed by the introduction of new technologies.[59] The WTO does not always provide a sufficient response to environmental concerns, and is arguably restricted from doing so because of its focus of trade.[60] The Cartagena Protocol represents the international community's first attempt to establish a binding global environmental agreement to regulate a core component of international trade.[61] It provides 'potentially globally accepted' rules and institutional mechanisms on the transboundary movement of GMOs, and 'provide a degree of legal certainty' regarding biosafety regulation.[62]

There emerged five major negotiation groups during the negotiation process of the Protocol, including the Miami Group (made up of Argentina, Australia, Canada, Chile, the United States and Uruguay); the Like-Minded Group (made up of the majority of developing countries); the European Union (EU); the Compromise Group (made up of Japan, Mexico,

[54] The Protocol uses 'living modified organisms' (LMOs) for GMOs. This thesis uses LMOs interchangeably with GMOs.
[55] The Protocol, Article 1.
[56] *Ibid*, Article 4.
[57] The list of Parties is available at: http://bch.cbd.int/protocol/parties/, last accessed on 30 April 2017.
[58] Stewart (n 6), 14.
[59] H Kemshall, *Risk, Social Policy and Welfare* (Open University Press, 2002), Chapters 1 & 2.
[60] WTO, 'Trade and Environment at the WTO', April 2004, 6-7, available at: https://www.wto.org/english/tratop_e/envir_e/envir_wto2004_e.pdf, last accessed on 30 April 2017.
[61] Hagen and Weiner (n 9), 713.
[62] R Mackenzie and others, 'An Explanatory Guide to the Cartagena Protocol on Biosafety', (2003) *IUCN Environmental Policy and Law Paper No. 46*, 20.

Norway, Singapore, South Korea, Switzerland and, in Montreal, New Zealand); and the Central and Eastern European (CEE) bloc of countries.[63]

The five major groups of states pursued different aims and institutional arrangements during the negotiations, and to some extent, the concluded Protocol fulfils the groups' divergent aims. For the Miami Group, the conclusion of the Protocol lowers the political tension on GMO regulation; for the EU, the Protocol's specific inclusion of the precautionary principle makes it possible for them to legally restrict the import of GMOs as a precautionary measure; for developing countries, the Cartagena Protocol at least mandates informed consent in the transboundary movement of GMOs which are intended to be deliberately released into the environment.[64]

1.3 The need for a critical study of the relationship between the WTO Agreements and the Protocol

International law is inevitably fragmented, both in its normative and institutional aspects.[65] On the one hand, the fragmentation of international law is not necessarily a bad thing, since it also contains some healthy elements and may have certain positive effects, such as reflecting the rapid expansion of international law into different new fields, and the diversification of its objects and techniques.[66] On the other hand, fragmentation is largely seen as detrimental to international law.[67] The fragmented and decentralised nature of international law has brought complexities and instability to international law-making. In the same vein, there is an unprecedented diversification of fora, actors, and processes involved in the creation of international law. As one would expect, these characteristics of international

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[63] Secretariat of the CBD, 'The Cartagena Protocol on Biosafety: A Record of the Negotiations', September 2003, 12, available at: https://www.cbd.int/doc/publications/bs-brochure-03-en.pdf, last accessed on 30 April 2017.

[64] For a discussion on what the Protocol means for different negotiation groups and for governance of biotechnology, see A Gupta, 'Governing Trade in Genetically Modified Organisms: The Cartagena Protocol on Biosafety' (2000) 42(4) *Environment* 22.

[65] B Simma, 'Universality of International Law from the Perspective of A Practitioner' (2009) 20(2) *The European Journal of International Law* 265, 270; J Crawford, *Chance, Order, Change: The Course of International Law* (Hague Academy of International Law, 2014), 394; and E Kassoti, 'Fragmentation and Inter-Judicial Dialogue: the CJEU and the ICJ at the Interface' (2015) 8(2) *European Journal of Legal Studies* 21, 27.

[66] G Abi-Saab, 'Fragmentation or Unification: Some Concluding Remarks' (1999) 31(4) *New York University Journal of International Law and Politics* 919, 925; and M Koskenniemi, 'Fragmentation of International Law: Difficulties Arising from the Diversification and Expansion of International Law', Report of the Study Group of the International law Commission, UN. Doc. A/CN.4/L.682, 13 Apr 2006, 14, para 14.

[67] H van Asselt, F Sindico, and MA Mehling, 'Global Climate Change and the Fragmentation of International Law' (2008) 30(4) *Law & Policy* 423, 425-7.

law have also given rise to a situation where different norms may be both valid and applicable in a particular situation.

In order to apply and implement international law, it is often necessary to determine the relationship between the norms. Generally speaking, there are two types of such relationship: first, where both norms could be applied conjunctionally, that is, in a way that one norm assists in the interpretation of the other, and; second, where the norms should be applied alternatively, that is, in a situation where the norms are in conflict and point to incompatible decisions, and a choice must be made on which norm should be applied.[68]

As treaties only apply in certain circumstances, the prerequisite for any treaty conflict is that both treaties are simultaneously applicable in certain situations. The Protocol applies to all transboundary movements of GMOs, which principally take the form of international trade. The WTO Agreements regulate international trade in GMOs, but do not apply to the transboundary movement of GMOs for non-commercial uses or their unintentional movements with the exception of some limited competence over issues pertaining to food aid.[69] Therefore, the treaties largely overlap as they both address international trade in GMOs that also fall within the jurisdiction of the other.

The WTO legal system is an obvious source of regime interaction due to its vast number of Members, economic significance, and its 'unparalleled ability to enforce its rules through its rigorous dispute settlement mechanism'.[70] The potential breadth of the Cartagena Protocol also makes it difficult for it not to overlap with either previous or later treaties in the same field. As Safrin observes:

> Given the breadth of biotechnology, which encompasses, inter alia, microbes, medicine, food, forests, and fish, as well as research and commerce, the negotiators faced a palpable risk of unintentionally modifying other agreements through the provisions of the Protocol.[71]

[68] Koskenniemi (n 66), 4.
[69] WTO Agreement on Agriculture, 15 April 1994, 1867 UNTS 410, Articles 9 & 10.
[70] A Palmer, B Chaytor and J Werksman, 'Interactions between the World Trade Organisation and International Environmental Regimes', in S Oberthür and T Gehring (eds), *Institutional Interaction in Global Environmental Governance: Synergy and Conflict among International and EU Policies* (MIT Press, 2006), 181.
[71] S Safrin, 'Treaties in Collision? The Biosafety Protocol and the World Trade Organisation Agreements' (2002) 96 *The American Journal of International Law* 606, 614.

The treaties interact with one another by virtue of the similarity of their membership. As of March 2017, there are 133 states which are parties to both the WTO Agreements and the Protocol.[72] Among the 19 biotech mega-countries growing 50,000 hectares, or more, of biotech crops in 2015,[73] 14 countries (Bolivia, Brazil, Burkina Faso, China, Colombia, India, Mexico, Myanmar, Pakistan, Paraguay, Philippines, South Africa, Spain and Uruguay) are parties to both treaties. At the same time, there are 33 states which are parties to the Protocol but are not Members of the WTO, including 1 biotech mega-country (Sudan); while another 22 WTO Member states, which are major GMO producing and exporting countries, including 4 biotech mega-countries (Argentina, Australia, Canada and US), have not signed up to the Protocol.[74]

However, the treaties are distinct from one another in their nature, aims, measures, texts, scopes, enforceability, and mechanisms.[75] They also provide distinct regulations and procedures over the same matter. Nonetheless, their overlapping nature may result in conflicts between the treaties. For example, the parties are allowed to impose import restrictions or bans on GMOs under the Cartagena Protocol,[76] but such trade-restrictive measures might be challenged as inconsistent with the SPS Agreement. Similarly, the Protocol's specific labelling and technical requirements on GMOs[77] may also be challenged under the TBT Agreement.

Such conflicts between overlapping treaties may add to the work of international tribunals when settling disputes covered by such instruments, as they are faced with difficult choices on the applicable law in relation to the particular dispute. Treaty conflicts may also put government policy-makers in a difficult position regarding domestic regulation of GMOs. They may face a practical dilemma when the states' rights and obligations under the overlapping treaties cannot be implemented at the same time.

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[72] WTO, 'Members and Observers', available at: https://www.wto.org/english/thewto_e/whatis_e/tif_e/org6_e.htm; and CBD, 'Parties to the Protocol and Signature and Ratification of the Supplementary Protocol', available at: https://bch.cbd.int/protocol/parties/, both last accessed on 30 April 2017.

[73] James (n 2), Executive Summary, 2.

[74] *Ibid*.

[75] R Andersen, 'The Time Dimension in International Regime Interplay' (2002) 2(3) *Global Environmental Politics* 98, 101.

[76] This will be discussed in detail in Chapter 3, sections 3.2-3.4 of this thesis.

[77] This will be discussed in detail in Chapter 3, sections 3.5 of this thesis.

It is in view of the above, that the controversial relationship between the WTO Agreements and the Cartagena Protocol, the relationship of which is not always coherent or predictable, needs to be studied. [78] The treaties potentially restrict and limit the scope of one another over the regulation of GMOs. At the centre of this debate are a number of central questions which include: whether trade restrictive measures taken under the Protocol are compatible with the WTO Agreements; and the extent to which the Protocol recognises relevant WTO rules and principles.

The particular difficulties in this relationship include the fact that: some of the wordings of both the WTO Agreements and the Protocol are ambiguous;[79] there is no suitable body to determine the nature of the relationship between these treaties;[80] both treaties are evolutionary in nature and are constantly developed by their Parties, and by judicial practices (for the WTO Agreements);[81] there exist controversies on how the ambiguous treaty wordings should be interpreted;[82] the dispute settlement mechanism competent to resolve any disputes between the treaties is not clear, and even if the issue were clear, the answer may still not be satisfactory depending on whether one's point of view leans more towards the *trade-focused* WTO Agreements or the *biosafety-focused* Cartagena Protocol.[83]

Specifically, existing literature lacks a comprehensive study on the relationship and potential conflicts between the WTO Agreements and the Cartagena Protocol. The purpose of this thesis is to fill this gap and critically assess the interaction between these treaty regimes and different levels of regulation, their potential conflicts and practical implications, and how such conflicts should be dealt with from the different perspectives of international judicial institutions, international governmental organisations, and individual states. This study endeavours to examine the 'actual implications of normative interaction'[84] between the WTO Agreements and the Protocol, and this will be carried out against the backdrop of public international law.

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[78] Hagen and Weiner (n 9), 706-7; and S Oberthür and T Gehring, 'Institutional Interaction in Global Environmental Governance: The Case of the Cartagena Protocol and the World Trade Organisation' (2006) 6(2) *Global Environmental Politics* 1, 25.
[79] This will be discussed in detail in Chapter 5, section 4.1 of this thesis.
[80] This will be discussed in detail in Chapter 5, sections 2.1-2.3 of this thesis.
[81] This will be discussed in detail in Chapter 6, section 2 of this thesis.
[82] This will be discussed in detail in Chapter 2, sections 7.1 of this thesis.
[83] This will be discussed in detail in Chapter 5, sections 2.4-2.5 of this thesis.
[84] van Asselt, Sindico and Mehling (n 67), 431.

Adopting both doctrinal and empirical research methods, this thesis examines how general international rules on conflict of norms relate to the specific relationship between the WTO Agreements and the Protocol. In particular, it analyses and adduces proposals on why and how such potential conflicts as those between the WTO Agreements and the Protocol could be avoided, as well as how treaty conflicts should be dealt with and avoided generally.

1.4 Trade and Environment: an area where treaty conflicts are likely to arise

The relationship between the WTO Agreements and the Protocol serves as a specific example of the much debated interaction between international trade and environmental law, and is one of the many examples of the wider phenomenon of the fragmentation of international law.[85]

Conflicts of international treaties are commonly seen between international trade law and international environmental law, reflecting the conflicts between the development goals of states and protection of the environment.[86] All environmental measures have the potential for economic effects and all trade measures may affect the environment.[87] Both as sub-systems of international law, international trade law and international environmental law may regulate overlapping areas, and compete with one another in the sense of international regulation.[88] However, international trade and environmental rules tend to focus on different areas of international activities, develop distinctly, work on separate tracks, and regulate from different perspectives. The overlaps and their different principles, mechanisms, instruments, and aims sow the seeds for potential conflicts.[89]

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[85] AE Boyle and C Chinkin, *The Making of International Law* (Oxford University Press, 2007), 260; J Pauwelyn, *Conflict of Norms in Public International Law: How WTO Law Relates to Other Rules of International Law* (Cambridge University Press, 2003), 248; DC Esty, *Greening the GATT: Trade, Environment and the Future* (Washington DC: Institute for International Economics, 1994); D Barack (ed), *Trade and Environment: Conflict or Compatibility? Proceedings of the Royal Institute for International Affairs Conference* (London: Royal Institute for International Affairs, 1998); H Nordrström and S Vaughan, 'Trade and Environment', Report of the World Trade Organisation, (1999), 47-58, available at: https://www.wto.org/english/res_e/booksp_e/special_study_4_e.pdf, last accessed on 30 April 2017; F Macmillan, *WTO and the Environment* (Sweet and Maxwell, 2001); and E Vranes, *Trade and the Environment: Fundamental Issues in International Law, WTO Law, and Legal Theory* (Oxford University Press, 2009), 29.

[86] GC Shaffer, 'The World Trade Organisation under Challenge: Democracy and the Law and Politics of the WTO's Treatment of Trade and Environment Matters' (2001) 25 *Harvard Environmental Law Review* 1, 6.

[87] *Ibid*, 23.

[88] Esty (n 40), 32.

[89] G Teubner and P Korth, 'Two Kinds of Legal Pluralism: Collision of Transnational Regimes in the Double Fragmentation of World Society', in MA Young (ed), *Regime Interaction in International Law: Facing Fragmentation* (Cambridge University Press, 2012).

In terms of international environmental law, a number of MEAs employ trade-related measures in order to protect the environment, including trade bans or restrictions, emissions trading schemes, and the requirement of prior informed consent.[90] For example, trade restrictive measures are allowed to be taken under the Convention on International Trade in Endangered Species, the Montreal Protocol on Ozone-Depleting Substances, and the Cartagena Protocol.[91] Trade measures to protect the environment could be a mask for protectionism, and may conflict inevitably with free trade pursued by the WTO rules.[92]

The WTO has an objective to promote and liberalise the free trade of goods and services around the world.[93] It acts as the principal international forum for trade negotiations, and also provides compulsory dispute settlement mechanisms under the WTO Agreements. Its missions are to promote certain values on the relationship between member states, such as cooperative openness, harmonisation, fairness, risk reduction, and self-restraint.[94] It works on an 'intergovernmental' model rather than the 'civil society/stakeholder' or 'supranational' models.[95] All decisions on the parties' rights and obligations under the WTO are made by Members through multilateral negotiations,[96] with the exception of plurilateral agreements which have a narrower group of signatories.[97]

Although the extent to which trade-restrictive measures under environmental law are compatible with WTO rules that generally aim to facilitate trade was identified in the Doha Round negotiations as requiring further work,[98] this issue is still not clear, nor has the WTO/GATT jurisprudence ruled on the consistency of a MEA with any of the WTO

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[90] M Poustie, '*Environment*', in E Moran and others (eds), The *Laws of Scotland: Stair Memorial Encyclopaedia Reissue* (Butterworths LexisNexis, 2007), 36.
[91] Convention on International Trade in Endangered Species of Wild Flora and Fauna, 3 March 1973, (1973) 12 ILM 1085; and The Montreal Protocol on Substances that Deplete the Ozone Layer, 16 September 1987, (1987) 26 ILM 1550. For more discussions, see Safrin (n 70).
[92] MA Young, 'Trade Measures to Address Environmental Concerns in Faraway Places: Jurisdictional Issues' (2014) 23(3) *RECIEL* 302, 304.
[93] WTO, 'An Introduction to Trade and Environment in the WTO', available at: https://www.wto.org/english/tratop_e/envir_e/envt_intro_e.htm, last accessed on 30 April 2017.
[94] S Charnovitz, 'Triangulating the World Trade Organisation' (2002) 96 *The American Journal of International Law* 28, 36 & 43.
[95] Shaffer (n 86), 6.
[96] DSU, Article 3.2.
[97] WTO, 'Plurilaterals: of minority interest', available at: https://www.wto.org/english/thewto_e/whatis_e/tif_e/agrm10_e.htm, last accessed on 30 April 2017; and A Aust, *Modern Treaty Law and Practice* (2nd edition, Cambridge University Press, 2007), 112.
[98] Doha Ministerial Declaration, 14 November 2001, WT/MIN(01)/DEC/1, (2002) 41 ILM 746, para 31-3.

Agreements.[99] It is likely that conflicts between international trade and environmental rules will continue to exist in the foreseeable future. And the process of accommodating trade and environment will be ongoing.

Existing literature suggests that the potential conflicts between trade and environment may be dealt with in two different ways: some argue that the WTO Agreements should be amended or reformed to better address their relationship with international environmental law; others argue that international environmental law should be restructured to be more effective in protecting the environment against economic development.

Proponents of the reformation of WTO rules argue that the international trade system should be refined to be more environmentally sensitive and give specific recognition to environmental values, to better clarify the relationship between WTO rules and MEAs, to include greater recognition that unilateral action may be justified, and to employ explicit balancing with environmental issues to ensure sustainable development. Schoenbaum, for example, argues that WTO rules should be amended to accommodate environmental considerations as a continual concern under the WTO.[100] Schoenbaum also argues that slight amendment to WTO rules without any fundamental revisions would be sufficient enough to protect the environment, because free international trade and environmental protection are principally compatible rather than inherently conflicting.[101]

Furthermore, even though the environment has come to occupy a more central position in the international legal system, international environmental law is in its formative stages.[102] The international community still has strong cleavages over the extent to which the environment is under threat, what to do about it, and who should pay for it.[103] International environmental law lacks both institutional coherence and a compulsory dispute settlement mechanism. It could be reformed to be more efficacious and to be able to defend the environment against economic development, while ensuring that environmental threats can

[99] TJ Schoenbaum, 'International Trade and Environmental Protection', in P Birnie, AE Boyle and C Redgwell, *International Law and the Environment* (3rd edition, Oxford University Press, 2009), 767; and Shaffer (n 86), 3.
[100] Schoenbaum , *ibid*, 810.
[101] TJ Schoenbaum, 'Free International Trade and Protection of the Environment: Irreconcilable Conflict?' (1992) 86 *The American Journal of International Law* 700, 726.
[102] Sands (n 38), 369-70.
[103] J Klabbers, *International Law* (Cambridge University Press, 2013), 252.

be tackled by a more centralised management structure rather than by concerted international action.[104]

In light of the above, a large number of writers have suggested that the institutional reformation of international environmental governance requires the setting up of an International (or World) Environment Organisation (IEO).[105] Palmer argued that an IEO should be established to set standards on environmental protection. Such an organisation should be modelled on the International Labour Organisation, to provide binding and legislative outcomes without the requirement of unanimity.[106] Esty claimed that the main reason for the antagonism between trade and environmental interests is the lack of an IEO, and that environmental law and policy mechanisms should therefore be restructured. As a new parallel international environmental regime, the IEO would guide the world on environmental protection, tackle domestic political pressures, and serve as an honest broker for trade and the environment.[107] Charnovitz argued that the creation of an IEO would entail partial centralisation of international environmental law by making it more coherent both internally and externally, and might help to improve coordination between trade and environment.[108] Roch and Perrez also suggested that establishing an IEO is one of the four approaches to strengthen international environmental governance.[109] Although there is obviously an issue about whether the WTO or an IEO would resolve trade and environment disputes, it appears more likely to this author that the WTO would continue to be that honest broker because of the WTO's governance structures and the fact that, in practice, the WTO has been fulfilling this role so far.[110]

Considering the above, establishing an IEO provides a theoretical solution to the fragmentation and weakness of international environmental law. However, it may meet some practical difficulties. Not all states would necessarily be willing to set up such an international organisation, and a proposed IEO does not necessarily address the relationship

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[104] S Charnovitz, 'A World Environment Organisation' (2002) 27 *Columbia Journal of Environmental Law* 323, 329.
[105] *Ibid*, 325-7; G Palmer, 'New Ways to Make International Environmental Law' (1992) 86 *The American Journal of International Law* 259, 280; Esty (n 40), 36; and CF Runge, 'A Global Environment Organisation (GEO) and the World Trading System' (2001) 35 *Journal of World Trade* 399, 400-3.
[106] Palmer, *ibid*, 281-2.
[107] Esty (n 40), 32, 34 & 36.
[108] Charnovitz (n 104), 338 & 361.
[109] P Roch and FX Perrez, 'International Environmental Governance: The Strive Towards a Comprehensive, Coherent, Effective and Efficient International Environmental Regime' (2005) 16 *Colorado Journal of International Environmental Law and Policy* 1, 22.
[110] This will be discussed in detail in Chapter 5, section 2.3 of this thesis.

with the WTO. The establishment of the WTO involved a huge amount of work, negotiations, controversies and compromises. It is not evidently clear whether states would make the efforts to set up another sophisticated international organisation which, to some extent, is designed to compete with the existing WTO system. Moreover, it would be a complex and time-consuming process and may not be suitable for the protection of the vulnerable environment which requires immediate solution. The WTO regime was able to draw on any already established regime in the form of the GATT, took twenty years to emerge and develop, and it is still evolving. Even if states decided to start the negotiations for an IEO, it is likely that such a process would be extremely difficult and long-lasting. In practice, the establishment of an IEO is not likely to happen in the foreseeable future. What is more, this idea seems to have fallen by the wayside, at least in terms of the academic literature.

2. Motivations and objectives

2.1 Theoretical foundations of this thesis

One of the most debated questions in international law is the interaction and potential conflicts between its different sub-systems and norms.[111] When examining the relationship between different international regimes, attention should be given to questions relating to whether their subject matters are overlapping, whether their member states are similar, their objectives and aims, their main interests, the different development stages they are at, the mechanisms they adopted, the differences in degrees of implementation, and the differences in degrees of political weight, power and support.

As argued above, international trade and environmental treaties often overlap with one another which sow the seed for treaty conflicts. Similar to all other international treaties, their relationship must be considered within the scope of general international law, including general international rules on conflict resolution as well as conflict avoidance techniques.[112]

There exist two different types of treaty conflicts: apparent or *prima facie* conflict is a situation where there is no real conflict since the divergence can be 'interpreted away'; while a genuine conflict arises if the conflict avoidance techniques have proven to be

[111] Pauwelyn (n 85), 12; and MA Young, 'Regime Interaction in Creating, Implementing and Enforcing International law', in MA Young (ed) *Regime Interaction in International Law: Facing Fragmentation* (Cambridge University Press, 2012), 89-96.
[112] C McLachlan, 'The Principle of Systemic Integration and Article 31(3)(c) of the Vienna Convention' (2005) 54 *International and Comparative Law Quarterly* 279, 280.

unsuccessful.[113] That is to say, the overlaps between international trade and environmental treaties may seem like a *prima facie* conflict, but they may prove not to be conflicting through the process of interpretation.[114] International treaties can be interpreted at three different levels, including judicial (giving judicial interpretations), institutional (giving authoritative interpretations), and domestic (giving practical interpretations) levels.[115]

Treaty conflicts are normally first studied in the context of how they are likely to be resolved by international judicial bodies when disputes arise.[116] Conflict resolution is a part of legal reasoning, which is the pragmatic process through which formal law is interpreted and applied.[117] The conflict resolution techniques that are normally used by international judicial bodies in resolving treaty conflicts include explicit conflict clauses, the principle of *lex posterior derogat priori* (more recent law prevails over an inconsistent earlier law) (the *lex posterior* principle), and the principle of *lex specialis derogat generali* (specific law prevails over general law) (the *lex specialis* principle).[118]

While resolving any disputes concerning international trade and environmental treaties, international judicial bodies may find that there are no conflicts between the treaties through the process of treaty interpretation. In essence, based on the presumption against conflict, an international adjudicator may be able to utilise a conflict avoidance technique to avoid a finding of conflict.[119] Treaty interpretation, which is mainly codified in Articles 31 and 32 of the VCLT, does not intervene only in the case of treaty conflicts, but may also serve as a conflict avoidance technique.[120]

The principle of systemic integration, as codified in Article 31(3)(c) of the Vienna Convention on the Law of Treaties (VCLT), lies at the heart of the whole process of judicial treaty interpretation.[121] It requires international adjudicators, while interpreting international treaties, to take into account relevant rules (whether specific or general international rules) of international law.[122] The principle of systemic integration in treaty interpretation is normally

[113] Pauwelyn (n 85), 178; and Koskenniemi (n 66), paras 412-3.
[114] This will be further discussed in Chapter 4, section 2.1 & 2,2 of this thesis.
[115] This will be further discussed in Chapter 4, section 3.1 of this thesis.
[116] This will be discussed in detail in Chapter 3 of this thesis.
[117] Koskenniemi (n 66), para 27.
[118] Pauwelyn (n 85), 328-437.
[119] *Ibid*, 240.
[120] *Ibid*, 244-74; and Koskenniemi (n 66), paras 412-3.
[121] This will be discussed in detail in Chapter 4, section 3.2 of this thesis.
[122] VCLT, Article 31(3)(c).

treated as a conflict avoidance technique rather than a conflict resolution technique, because it determines whether there really are conflicts and can 'interpret away' apparent treaty conflicts.[123] It shows the general reconciliatory approach of the VCLT, and ensures that the outcome of treaty interpretation is linked to the broad legal environment.[124]

The importance of conflict avoidance is widely accepted by existing literature.[125] Overlapping international regimes, such as the WTO Agreements and the Protocol, may be conflicting or mutually reinforcing depending on how they are dealt with.[126] If read in a coherent way and understood as being compatible with each other, the treaties may turn out to be mutually reinforcing which may produce positive results and enhance the goals pursued by the regimes.[127]

The WTO Agreements and the Protocol are capable of being read as compatible with each other for several reasons. The treaties both maintain the sovereign right of states to legitimately protect health and the environment, although through different means. Moreover, the Protocol is not designed to create trade barriers, but rather to pursue the *aim* of biosafety and environmental protection through trade restrictive measures. Furthermore, the majority of the treaties can be in harmonious coexistence and even complementary in terms of the fact that the Protocol offers detailed rules, for example, on risk assessment, while the WTO supplements this with an effective dispute settlement mechanism.[128]

The contention of this thesis is that potential conflicts between the WTO Agreements and the Protocol can be seen as apparent conflicts which should be interpreted away to avoid genuine conflicts. The principle of systemic integration in treaty interpretation as a conflict avoidance technique, together with the principles that lie behind it which will be discuss in the following paragraphs, could help to manage, minimise, and avoid such conflicts and help to overcome compartmentalisation and fragmentation of international law, especially as it relates to the WTO Agreements and the Protocol.[129] As will be demonstrated

[123] This will be discussed in detail in Chapter 4, sections 2.2 and 3.1 of this thesis.
[124] This will be discussed in detail in Chapter 4, section 3.2 of this thesis.
[125] This will be discussed in detail in Chapter 4, section 2.1 of this thesis. The benefits of avoiding treaty conflicts are also discussed in detail in Chapter 4, section 2.3 of this thesis.
[126] *Ibid*.
[127] *Ibid*.
[128] These reasons will be discussed in detail in Chapter 4, section 2.2 of this thesis.
[129] This will be discussed in detail in Chapter 4, section 2.3 of this thesis.

in due course, the argument that conflicts between the treaties should be avoided is also supported by findings of the empirical research carried out in the course of this thesis.[130]

Consequently, relying on the principle of systemic integration, international adjudicators may avoid finding any conflicts between international trade and environmental treaties while interpreting them, and consequently contribute to the avoidance of treaty conflicts and defragmentation of international law. However, the principle of systemic integration in treaty interpretation can only be used in dispute resolution processes by judicial bodies. The extent to which systemic integration may take us in respect of conflict avoidance is thus limited to the judicial level.

Simply relying on the principle of systemic integration at the judicial level may not be the best way to deal with the relationship between the WTO Agreements and the Protocol. Conflict resolution is a very narrow part of disputes. It only happens if states raise a dispute, and states may be reluctant to do so in practice, due to, for example, political, monetary and time concerns.[131] Moreover, in the context of this research, the WTO dispute settlement mechanism is likely to resolve any disputes involving the WTO covered agreements, which, even if the principle of systemic integration is utilised, will inevitably focus on the WTO Agreements at the risk of failing to respect fully the Protocol.[132]

This leads one to argue that a better way to deal with the relationship between the WTO Agreements and the Protocol might be to proactively *avoid* such treaty conflicts before the stage of conflict resolution is reached. As will be demonstrated in due course, this argument is also supported by findings of the empirical research.[133]

As argued above, international treaties can be interpreted at three different levels, including judicial, institutional and domestic levels. Having found that the principle of systemic integration is only applicable at the judicial level and is likely to play a limited role in avoiding conflicts between the WTO Agreements and the Protocol, the question remaining is whether one can examine the principles that lie behind systemic integration. That is, can these principles be used to avoid conflicts of the treaties at the other two (institutional and domestic) levels?

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[130] *Ibid.*
[131] This will be discussed in detail in Chapter 4, section 2.3 of this thesis.
[132] *Ibid.*
[133] *Ibid.*

Close analysis of the sources has allowed this author to discern a number of principles that lie behind systemic integration, including the principles of mutual supportiveness, good faith, cooperation, and harmonisation. These principles have the potential to avoid treaty conflicts and are capable of driving reconciliation at not only judicial, but also institutional and domestic levels.[134] The principles underpinning systemic integration are set out below but a more encompassing discussion is to be found in later chapters.[135]

The principle of mutual supportiveness requires all international rules to be understood and applied as reinforcing each other with a view to fostering harmonisation and complementarity, as opposed to conflictual relationships. Thus, it requires efforts to be made to find coherence between the WTO Agreements and Protocol with an aim of conflict avoidance.[136]

Another principle that may be said to underpin systemic integration is the principle of good faith which requires a treaty to be interpreted and implemented in the light of other instruments. The principle of good faith prohibits the abuse of rights and discretion which might hinder other states' legitimate expectations. Moreover, it may be concretised into the principle of estoppel which prohibits a state from taking up any legal position that contradicts its previous representations or conduct. Furthermore, it requires parties to an international treaty to fulfil their treaty obligations in full and in good faith without violating their obligations under other existing instruments (the *pacta sunt servanda* principle).[137] The principle of good faith in international law thus calls for treaty conflicts to be avoided at the judicial, institutional and domestic levels.

A further principle that may be said to underpin systemic integration is the principle of cooperation, indicating that all states have an overarching general obligation to cooperate which requires them to work together for the good of all. This principle requires cooperation, at the judicial, institutional and domestic levels, with an aim of reconciling international trade and environmental treaties and facilitating their mutual supportiveness.[138]

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[134] This will be discussed in detail in Chapter 4, section 4 of this thesis.
[135] The application of the principles underpinning systemic integration at the institutional and domestic levels will be discussed in detail respectively in Chapters 6 and 7.
[136] This will be discussed in detail in Chapter 4, section 4.2.1 of this thesis.
[137] This will be discussed in detail in Chapter 4, section 4.3.1 of this thesis.
[138] This will be discussed in detail in Chapter 4, section 4.4 of this thesis.

Finally, the principle of harmonisation indicates that if the same states have concluded two treaties on the same subject matter, the different treaties should, to the extent possible, be interpreted with an attempt to achieve conciliation and give rise to a single set of compatible obligations, the same as what is mandated by the principle of systemic integration.[139]

That is to say, the principles that lie behind systemic integration, including the principles of mutual supportiveness, good faith, cooperation, and harmonisation, require overlapping treaties to be interpreted with reference to each other. Consequently, the application of these principles may achieve the same effect of conflict avoidance at the institutional and domestic levels as that achieved by the principle of systemic integration at the international judicial level.[140]

2.2 Fundamental aims of this thesis

In contemporary society, both trade and environmental regimes need to receive the same amount of consideration; neither should be overly emphasised nor ignored.[141] It would do no good to protect the environment at the expense of trade, or the other way around.[142] They are both global issues which demand a global response and the cooperation of states.[143] Unilateral action on either side of the issues would hardly provide any satisfactory solutions to either trade liberalisation or environmental protection.[144]

It is fundamentally for that reason that sustainable development calls for a balance to be struck between the promotion of trade and environmental protection.[145] On the one hand, states have the legitimate right as well as duty to take actions to protect human health

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[139] This will be discussed in detail in Chapter 4, section 4.5 of this thesis.
[140] *Ibid*.
[141] This will be discussed in detail in Chaper 3, section 2.2.1 of this thesis.
[142] S Barrett, 'Environmental Protection and the Global Trade Order: A Different Perspective', in Revesz, Sands, and Stewart (eds) (n 38), 168; K Cook, 'Non-parties', in C Bail, R Falkner and H Marquard (eds), *The Cartagena Protocol on Biosafety: Reconciling Trade in Biotechnology with Environment and Development?* (Earthscan Publications Ltd, 2002), 357.
[143] P Birnie, AE Boyle and C Redgwell, *International Law and the Environment* (3rd edition, Oxford University Press, 2009), 8.
[144] Poustie (n 90), 38; Shaffer (n 86), 58-9; R Howse, 'The Appellate Body Rulings in the Shrimp/Turtle Case: A New Legal Baseline for the Trade and Environment Debate' (2002) 27 *Columbia Journal of Environmental Law* 491, 491.
[145] R Falkner, 'Regulating Biotech Trade: the Cartagena Protocol on Biosafety' (2000) 76(2) *International Affairs* 299, 299; P Sands, 'International Law in the Field of Sustainable Development' (1994) 65 *British Yearbook of International Law* 303, 338-9; and Birnie, Boyle and Redgwell (n 143), 125-7. The aim of sustainable development is discussed in detail in Chapter 4, section 4.2.2 of this thesis.

and the vulnerable environment. On the other hand, unduly restrictive trade measures in the name of environmental protection may create unnecessary 'green barriers' to international trade and in fact be a form of disguised protectionism, with a knock-on effect on economic development.[146] In the end, it is a debate on how states and the international community rank the values of economic development and environmental protection. This thesis attempts to add to the literature by investigating how to strike such a balance in practice. It examines how to ensure that measures taken under the Protocol are not used as disguised restrictions on international trade as they relate to GMOs, and that the WTO Agreements are not used as an excuse to postpone or hinder environmental protection.

Indeed, there are a number of possible solutions to the potential conflicts between the WTO Agreements and the Cartagena Protocol, such as institutional reformation of international environmental governance,[147] making suitable amendments to the WTO Agreements,[148] and negotiating a more comprehensive United Nations (UN) biotechnology treaty to address and clarify the international consensus on basic principles, procedures and specific issues on GMOs.[149] However, this author recognises that these solutions are at best long-term in nature and, at worse, less practically feasible. Hence, this thesis endeavours to seek effective *ad hoc* and practical solutions to the aforementioned potential treaty conflicts, as to how such could be avoided or minimised within the wider field of international law, in an immediate fashion.

Moreover, there has undoubtedly been a growing awareness of the necessity of mutually reinforcing environmental and trade regulations. But how and when this will be achieved is far from clear. Existing literature debates the reconciliation of WTO Agreements and the Protocol largely at the theoretical level, focuses on questions such as their potential conflicts and how the Protocol's negotiations dealt with their relationship, and generally accepts that the WTO Agreements and the Protocol should be interpreted in a way that is

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[146] J Waincymer, 'Cartagena Protocol on Biosafety', (2001), 7, available at: http://www.apec.org.au/docs/waincymer2001.pdf, last accessed on 30 April 2017.

[147] Charnovitz (n 104), 325-7; Palmer (n 105), 278-82; Esty (n 40), 36; R Dolzer, 'Time for Change' (1997) 9 *Our Planet*, available at: http://www.ourplanet.com/imgversn/91/dolzer.html, last accessed on 30 April 2017; and Runge (n 102), 399.

[148] AH Ansari and NAKN Mahmod, 'Biosafety Protocol, SPS Agreement and Export and Import Control of LMOs/GMOs' (2008) 7(2) *Journal of International Trade Law and Policy* 139, 165; and SE Gaines, 'Process and Production Methods: How to Produce Sound Policy for Environmental PPM-Based Trade Measures?' (2002) *27 Columbia Journal of Environmental Law* 383, 425.

[149] R Pavoni, 'Biodiversity and Biotechnology: Consolidation and Strains in the Emerging International Legal Regimes', in F Francioni and T Scovazzi (eds), *Biotechnology and International Law* (Hart Publishing, 2006), 56.

consistent with one another.[150] Less effort has been made on the discussion of how the WTO Agreements and the Protocol should be systemically integrated.

Thus, the key regulatory challenge over GMOs is how to strike the balance between trade and environment.[151] This thesis will explore the ways in which the WTO Agreements and the Protocol can be reconciled in a mutually supportive and complimentary manner. This will be looked at from a number of angles, including a national perspective which is crucial for the efficacious implementation of international environmental law, and an institutional perspective of trying to find a way to enhance the role and performance of existing institutions. Thus, the thesis aims to offer practical recommendations on how trade and environment could be systemically integrated in a mutually beneficial manner in practice.

In addition, built upon a doctrinal analysis, the empirical research carried out for the purpose of this thesis will present a real-life picture of how the potential conflicts between the treaties were envisaged, encountered and dealt with in practice. This offers a valuable and practical exposition on the conflicts between the treaties after more than a decade of entering into force of the Protocol, as well as a viable platform to propose relevant and workable solutions on how such conflicts may be avoided or minimised.

This thesis thus aims to present both conceptual and empirical findings, and to provide legal solutions that contribute to ensuring effective GMO regulation which align with international principles and are also workable at the domestic level. The focus here is on the potential conflicts between the WTO Agreements and the Protocol, with a hope that the discussion will have more general implications for the trade and environment debate, and shed light on the relationship between trade rules and MEAs dealing with other environmental concerns, such as air pollution, climate change, hazardous waste, water, and forests.

It is of interest to GMO importers and, exporters, as well as the international community as a whole, to clarify the relationship between the WTO Agreements and the

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[150] A Gupta, 'Advance Informed Agreement: A Shared Basis for Governing Trade in Genetically Modified Organisms?' (2001) 9(1) *Indiana Journal of Global Legal Studies* 265, 277-9; O Rivera-Torres, 'The Biosafety Protocol and the WTO' (2003) 26(2) *Boston College International and Comparative Law Review* 263, 314-31; L Boisson de Chazournes and MM Mbengue, 'GMOs and Trade: Issues at Stake in the EC Biotech Dispute' (2004) 13(3) *RECIEL* 289, 295-297; and Oberthür and Gehring (n 78), 11-7.

[151] FM Birhanu, 'Genetically Modified Organisms in Africa: Regulating a Threat or an Opportunity?', in L Bodiguel and M Cardwell (eds), *The Regulation of Genetically Modified Organisms: Comparative Approaches* (Oxford University Press, 2010), 233.

Protocol.[152] It is hoped that this thesis will also contribute to the development of the Protocol which is an evolutionary agreement, and will have practical value for states (WTO Members in particular) which are developing their domestic GMO regulatory frameworks.

Thus, it is hoped that the arguments and findings of this thesis will be of use to those involved, and those interested, in the international and domestic regulation of international trade in GMOs, including government policy-makers, international organisations, non-governmental organisations, the wider science community, lawyers, policy consultants, relevant industries, academics, and the interested public. It is also hoped that this thesis will be particularly relevant to international law scholars regarding conflict of international norms and the fragmentation of international law.

3. Methodology and scope

3.1 This thesis encompass both doctrinal and empirical research

In the main, this thesis employs both doctrinal and empirical research methodologies to achieve its aim. It also includes a case study. The doctrinal analysis relies on primary sources where they are available, including treaties, domestic and regional legislation, and the WTO case law. It also places much reliance on secondary sources of international law, particularly the literature that has tackled conflict of norms in international law and the potential conflicts between the WTO Agreements and the Cartagena Protocol. The doctrinal study principally incorporates a comparative approach, particularly regarding the substances of the treaties.

To empirically verify the doctrinal assertions made in this study, this thesis looks at the implementation of the WTO Agreements and the Protocol through original empirical research which has rarely been undertaken by other researchers in the context of international law. Existing literature on the implementation of the treaties, such as the national reports on the implementation of the Protocol provided by member states,[153] and the examination on the development and implementation of National Biosafety Frameworks provided by the UN Environmental Programme (UNEP)-Global Environmental Facility (GEF) Projects,[154]

[152] D Xue and C Tisdell, 'Global Trade in GM Food and the Cartagena Protocol on Biosafety: Consequences for China' (2002) 15 *Journal of Agricultural and Environmental Ethics* 337, 352.
[153] All National Reports can be found at: https://bch.cbd.int/protocol/cpb_natreports.shtml, last accessed on 30 April 2017.
[154] UNEP-GEF, 'UNEP-GEF Project on Development of National Biosafety Frameworks', available at: http://web.unep.org/biosafety/what-we-do/unep-gef-project-development-national-biosafety-frameworks; and

normally focus on one treaty but rarely look at the potential conflicts between the treaties. Thus they are rather limited and present a gap in the literature.

This empirical research goes beyond existing literature and looks at the implementation of the WTO Agreements and the Protocol from the perspective of those who are involved in such processes. It mainly utilises a socio-legal approach, and looks at how conflicts between the treaties have been encountered and dealt with in the processes of both domestic GMO law-making and decision-making. It examines whether decision-makers involved in drafting regulations and making decisions on the domestic regulation of GMOs were aware of, and concerned about, the potential conflicts between the treaties; whether the decision-makers sought to influence the relationship between the treaties; how the potential conflicts and the practical dilemmas (if any) of treaty implementation have been dealt with; whether and how conflicts between the treaties can and should be avoided; and how such conflicts should be better dealt with in the future. The empirical study is designed to reassesses, more than a decade after the entering into force of the Protocol, the impact and spill over effects that the WTO Agreements and the Protocol have had on domestic legislation, policies, and decision-making on GMOs. In order to provide immediate empirical evidences to the assertions made and to avoid repetition, this thesis will elaborate on and weave the empirical findings into each chapter.

The empirical research may also facilitate the evaluation of the success of the WTO Agreements, the Protocol, and the CBD. The success of treaties can be defined in different ways: in the context of this thesis, it means that the treaties do not only operate effectively in an individual fashion, but also in a way which results in no, or minimum, conflicts with one another. Thus, in order to evaluate the success of the CBD, considerations must be given to both the related protocols and to state practice in implementing it at national, regional and international levels.[155]

While planning the empirical research, this author also considered the potential for non-response bias. In the event that there was insufficient access granted or that the answers provided were not helpful, a back-up plan was originally designed to examine the governmental structures and processes dealing with treaty implementation, as well as

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UNEP-GEF, 'UNEP-GEF Project on Implementation of National Biosafety Frameworks', available at: http://web.unep.org/biosafety/what-we-do/unep-gef-project-implementation-national-biosafety-frameworks, both last accessed on 30 April 2017.

[155] Birnie, Boyle and Redgwell (n 143), 617.

provisions of domestic legislation which might lead to or even reflect potential treaty conflicts.[156] This examination itself would provide essential and sufficient doctrinal and practical evidence for the arguments in this thesis. Therefore, the empirical research for this work was carried out to improve the originality of the thesis and provide additional support for the doctrinal hypothesis and arguments in the thesis. However, absent the empirical research and its contribution to the overall argument in this study, the integrity and validity of this thesis remains unaffected.

3.2 Validity of the empirical research approach

This empirical study adopts the qualitative research methodology. As a method of inquiry, qualitative research is widely used in social sciences in order to gain an in-depth understanding of human behaviour and the reasons that govern such behaviour. It usually focuses on a small number of samples rather than large samples. It goes beyond the examination of what, when and where of decision-making, and investigates the reason and process of decision making. Its value has been widely recognised and confirmed by existing literature.[157]

In order to ensure the qualitative research conducted is trusted and reliable, and has potential for credible findings and generalisation, this writer undertook the following research process to ensure its quality, validity and reliability: making the preliminary decisions in identifying a case study, considering ethical issues involved and gaining ethical approval from the University, identifying suitable interviewees, planning interview schedules, designing suitable questions, setting up meetings, using proper recording methods, conducting the interviews, and coding and analysing empirical results. The author had also undertaken empirical research training provided by the University and other organisations to develop and enhance the necessary research skills.

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[156] A case study of the EU's legislative framework on GMOs is presented in Chapter 7, section 3.2 of this thesis.
[157] R Legard, J Keegan and K Ward, 'In-Depth Interviews', in J Ritchie and J Lewis (eds) *Qualitative Research Practice: A Guide for Social Science Students and Researchers* (2nd edition, Sage, 2014), 138-67; C White, K Woodfield and J Ritchie, 'Reporting and Presenting Qualitative Data', in Ritchie and Lewis (eds), *ibid*, 287-314; A Bryman, *Social Research Methods* (4th edition, Oxford University Press, 2012), 37-9; JW Cresswell, *Research Design: Qualitative, Quantitative and Mixed Methods Approaches* (4th edition, Sage, 2013), 139-51; JW Creswell, *Qualitative Inquiry & Research Design: Choosing Among Five Approaches* (3rd edition, Sage, 2012), 36-46; and M Descombe, *The Good Research Guide for Small-Scale Social Science Research Projects* (5th edition, Open University Press, 2014), 54-62, 184-90 & 276-304 .

The qualitative method used in this chapter was validated by the Ethics Committee of the Faculty of Humanities and Social Sciences, University of Strathclyde, from which this research gained the full ethical and sponsorship approval in May 2012. The ethical approval application form and supporting documents (information sheet, consent form, and sample interview questions) are attached to this thesis as appendices.

This author endeavoured to secure the completion and effectiveness of this empirical study by, for example, identifying a broad number of potential interviewees, sending several interview invitations where these were not swiftly accepted, and allowing significant flexibility of the form, time, and location for the interviews.

3.3 Justifying the choice of the jurisdictions

Given the time and financial constraints of PhD research, this thesis is restricted in the number and choice of jurisdictions for the empirical research.[158] The participants chosen for this empirical research included representatives of government policy-makers in the EU, UK, and China, and delegates from relevant international organisations namely the WTO and the CBD. This empirical evaluation was not designed to reflect the views of the chosen jurisdictions or organisations. Instead the main goal was to collect opinions and perceptions of the examined issues from delegates whose everyday work is most relevant to the implementation of the WTO agreements and the Protocol.

The choice of jurisdictions is made mainly based on accessibility and feasibility considerations. Taking into account the residential locations of this writer, it is geographically accessible for the writer to carry out face-to-face interviews in the selected jurisdictions. Moreover, it is feasible to carry out empirical research in the selected jurisdictions since this writer is able to speak their official work languages (English and Chinese).

The author endeavoured to strike a balance between undertaking a broad empirical research and the limits of a PhD research. Of course, the size of sample, in terms of the jurisdictions and organisations considered and the range of interviewees engaged, was (inevitably) rather small. However, it is the author's view that the empirical findings resulting from the consideration of the three sample jurisdictions are sufficiently rich to draw

[158] Limitations of the empirical research will be discussed in detail in Chapter 8 of this thesis.

preliminary conclusions, achieve the purpose of this research, and justify further research in this area. The reasons are as follows.

The case selection is guided mainly by the following criteria: membership of both the WTO and the Protocol, participation in the global trade in GMOs, and established capacity and active domestic GMO legislative frameworks.

First, the selected jurisdictions have similarities in their membership (they are all parties to both the WTO Agreements and the Protocol) and general GMO approaches, yet they are at different stages of developing a national/regional biosafety regulatory framework and developing capacity in biosafety regulation and decision-making.[159]

Second, the selected jurisdictions play an important role in international trade in GMOs. The EU, together with other major players such as China, is continuing its expansion in international agricultural trade, both in terms of imports and exports in agricultural products.[160] Both the EU and certain Asian nations such as China have increasingly high demands for soya and maize products.[161]

Third, the selected jurisdictions have all established their domestic/regional GMO regulatory frameworks, and are major players in terms of the development of international agreements on both trade and GMOs. They represented 2 out of the 5 major negotiation groups of the Protocol.[162]

Moreover, this empirical research involved not only jurisdictional respondents, but also representatives of the two international organisations relevant to this thesis. In relation to further research for a fuller picture, more responses from organisational participants would be an asset, but is not a necessity, since the two organisations were already represented.

Given the nature of this research, very few government officials were involved in the domestic regulation of GMOs, only a small number of officials were accessible, and there

[159] WTO (n 72); and CBD (n 72).
[160] EC-DG Agriculture and Rural Development, *MAP-Monitoring Agri-Trade Policy, Agricultural Trade in 2011: the EU and the World*, May 2012, 11, available at http://ec.europa.eu/agriculture/trade-analysis/map/05-2012_en.pdf, last accessed on 30 April 2017.
[161] US-EU High Level Working Group on Jobs and Growth: Response to Consultation by EuropaBio and BIO, 29 November 2012, 2, available at http://ec.europa.eu/enterprise/policies/international/cooperating-governments/usa/jobs-growth/files/consultation/regulation/15-europabio-bio_en.pdf, last accessed on 30 April 2017.
[162] More details on the negotiation groups were presented in section 1.2 of this chapter.

was a limited number of potential interviewees. The interviewees were representative of their states/organisations. The total number of 8 participants represented all the jurisdictions and organisations that the author planned to investigate. There hardly could have been a larger number of participants. Therefore, this empirical research was of a feasible size which could provide valuable evidence, and its representativeness was relatively high.

This thesis refers to the EU, UK and China as Jurisdictions 1, 2 and 3 (J1, J2 and J3), not necessarily in the matching sequential order but rather randomly. It refers to the WTO and the CBD as Organisations 1 and 2 (O1 and O2), not necessarily in the matching sequential order either. The author uses letters to represent each interviewee who are named in a random order. For example, if there were three interviewees representing Jurisdiction 1, the first delegate will be referred to as AJ1, the second referred to as BJ1, and the third referred to as CJ1. The same is also true for delegates of other jurisdictions and organisations.

3.4 Process of the empirical research

The empirical research was carried out through in-depth semi-structured interviews which were considered to be better than questionnaires, in that, further explanations could be sought when they were needed. The researcher was based in Glasgow, Scotland, and carried out interviews with volunteering participants. Where interviews were not acceptable by the participants, consultations with relevant delegates via telephone and email were also used to gain relevant information. According to the preferences of the interviewees, the interviews were conducted face to face, through Skype or over the phone, and were recorded using a digital voice recorder. The interviews were conducted in English or in Chinese languages.

As envisaged when planning and designing the empirical research, establishing access to the relevant interviewees turned out to be rather difficult. The author started to identify potential interviewees in October 2011. The selection process for choosing particular delegates was guided by the official websites of relevant governmental sectors in the chosen jurisdictions and international organisations, published official documents such as national reports on the implementation of the Protocol and National Enquiry Points of the SPS/TBT Agreement, personal contacts, recommendations by contacted potential participants, and delegates that this author met while observing the Conference of the Parties to the CBD serving as the Meeting of the Parties to the Protocol (COP-MOP) 6 in India. The COP-MOP

is an established mechanism for the Parties to make collective choices. Decision-making under the Protocol is the responsibility of the COP-MOP to which all parties are invited.[163]

In order to seek their consent, the author sent out enquiry emails to 58 potential interviewees from November to December 2011, which briefly described the PhD project and invited them to participate in the empirical research.[164] In order to encourage participation and openness, the author indicated to the potential interviewees that they would remain anonymous. A total number of 26 responses were received via email, telephone and post, 7 of which provisionally agreed to participate, representing Jurisdictions 1 and 2 and Organisations 1 and 2. Two more responses from Jurisdiction 3 asked for further information (questionnaires or interview questions) before making any commitment. For those who refused to participate in the research, their main reasons included the fact that the project was out of their day to day work area, they lacked the necessary expertise or capacity, or had limited human resources available.

After gaining ethical approval from the University, the author started to arrange for the interviews in early July 2012.[165] Based on the availability of the interviewees, 3 interviews (2 via Skype and 1 via phone) were carried out in July and September 2012 with representatives from Jurisdiction 2 and Organisations 1 and 2. Two representatives from Jurisdiction 1 who provisionally agreed to participate were not able to be interviewed because one refused to be recorded or quoted, the other did not reply to further emails or phone calls. Similarly, two representatives from Jurisdiction 2 who provisionally agreed to participate were not able to be interviewed because neither of them replied to further emails or phone calls. The delegates in Jurisdiction 3 refused to participate given the reasons of limited resources and lack of internal approval.

In order to ensure a balanced portrayal in this research, the author decided to approach representatives of Jurisdictions 1 and 3 again. The author managed to engage with some potential interviewees face-to-face and talked about the research with some of the delegates that had previously been contacted while observing the COP-MOP 6 conference in India in October 2012. From October to December 2012, emails were sent and phone calls were made to 11 suitable delegates in Jurisdictions 1 and 3 (mainly identified while observing

[163] The Protocol, Article 29.
[164] A copy of the enquiry emails is attached to this Chapter as appendix. See Appendix I. The same enquiry emails sent out in Chinese language is attached as Appendix VI.
[165] A copy of the emails used to arrange interviews is attached to this Chapter as appendix. See Appendix II.

COP-MOP 6), explaining that representatives from Jurisdiction 2 and Organisations 1 and 2 had co-operated with the study and had been interviewed. They were then invited to participate to enable the author represent their jurisdictions' perspective fully and accurately in this research. More emails were also sent to the delegates which the author met and established contact with during the conference in India. Four delegates' responses were thereafter received and the various parties agreed to participate in the research. Three other delegates refused to participate, but recommended their colleagues who were more suitable.

The second round of interviews was carried out from November to December 2012, with 3 representatives from Jurisdiction 1 and 1 representative from Organisation 2 (two interviews face-to-face, another two via telephone). Moreover, comments on and answers to the research questions were also received from representative from Jurisdiction 3 by email and during a quick face to face conversation in India. A copy of a formal invitation letter titled 'Information Sheet' and a 'Consent Form' was sent to each of the respondents prior to the interviews.[166]

In total, 8 delegates participated in this empirical research including: two policy officers from the governmental sector in charge of environmental issues in Jurisdiction 1 who were also the official delegates in international meetings and negotiations with respect to the treaties that this thesis considers (AJ1 and BJ1); a legal service officer who provides legal advice to governmental sectors of Jurisdiction 1 when they are dealing with regulatory measures or having problems with the WTO law (CJ1); a researcher who provides information and support on biosafety for the governmental sector in charge of environmental issues in Jurisdiction 2 (AJ2); a policy officer from the governmental sector that regulates GMOs in Jurisdiction 3 (AJ3); a programme officer for biosafety policy and legal matters in the Secretariat of Organisation 1 (AO1); a counsellor and lawyer in the Legal Affairs division of Organisation 2, the second person in charge within the division (AO2); and a senior counsellor and deputy director of the Agriculture and Commodities Division of the Secretariat of Organisation 2 (BO2).

The interviews focused on 7 main groups of questions: about the organisation where the interviewee was from; the interviewees' awareness of the content of the potentially

[166] Copies of the Information Sheet and Consent Form are attached to this Chapter as appendices. See Appendix III and IV. Copies of the same Information Sheet and Consent Form in Chinese language are attached as Appendix VII and VIII.

conflicting treaty rights and obligations; awareness of the potential conflicts between WTO Agreements and the Protocol; practical difficulties faced by government policy-makers when implementing the treaties; awareness of the principle of systemic integration and whether this principle is and/or could be a useful technique to deal with the potential conflicts; how conflicts between the treaties could be resolved, and other relevant issues. A copy of the sample interview questions is attached to this thesis as an appendix.[167] Those questions mainly served as guidance for the author during the interviews. Not all questions were put forth to all the respondents in view of the different ways the conversations preceded. Not all respondents necessarily commented on all questions either as a result of their independent choices.

It is worth mentioning that the thesis took a different turn, so initial questions of the empirical research focused only on the principle of systemic integration. However, the approach changed after the empirical research, and the thesis also examines the principles that lie behind systemic integration and the extent to which they may facilitate avoidance of conflicts between the WTO Agreements and the Protocol. Even so, as will be elaborated on in Chapters 6 and 7, the empirical research showed some indications on the use of analogies to systemic integration at the institutional and domestic levels.[168]

4. Outline of this study

Chapter 2 will locate this thesis within the broad field of public international law. It starts by examining the definition of treaty conflicts, and the inevitable fragmentation of international law which fundamentally causes such conflicts. It then narrows consideration down to the relationship between the WTO Agreements and the Protocol, and provides a contextual examination of the substances of the treaties, aiming to examine the possible synergies between them, and answer the question of whether there is real potential for conflicts to occur between the treaties and, if yes, what in specific terms are those conflicts. It is hoped that this chapter will provide institutional and legal context to the subsequent discussion of international regulation of GMOs by the WTO and the Cartagena Protocol. The assertions made will be tested against both doctrinal and empirical evidences.

[167] See Appendix V. A copy of the same sample interview questions sent out in Chinese language is attached as Appendix IX.
[168] Limitations of the empirical research will be discussed in detail in Chapter 8 of this thesis.

Chapter 3 examines the extent to which general international rules on conflict resolution techniques can aid the resolution of conflicts between the WTO Agreements and the Protocol. It starts with considering whether conflicts between international treaties can simply be resolved based on the hierarchy of international law. It then investigates the general international rules on conflict resolution, as reflected mainly in the VCLT,[169] including explicit conflict clauses in treaties and the *lex posterior* principle. This will be followed by an examination of the *lex specialis* principle which is not incorporated in the VCLT, but is a widely accepted maxim of interpretation or conflict resolution technique in public international law. This chapter then seeks to investigate whether these existing general international rules would provide definitive answers to the question of how any dispute concerning the WTO Agreements and the Protocol should be resolved.

Based on both doctrinal and empirical evidences, Chapter 4 looks into the question of whether the international community should proactively seek avoidance of the treaty conflicts, or should leave the conflicts and resolve them when they actually arise. It then examines the general international rules on conflict avoidance techniques, namely the principle of systemic integration in treaty interpretation which is traditionally talked about in the context of international judicial institutions. With the aim of conflict avoidance, Chapter 4 then distils the principles and techniques that lie behind systemic integration, including the principles of mutual supportiveness, good faith, cooperation, and harmonisation, which are capable of driving integration at other levels, including institutional and domestic levels.

Chapter 5 tests whether the principle of systemic integration as a general conflict avoidance technique may help to create a meaningful relationship between the WTO Agreements and the Protocol. It examines the extent to which this principle may be used by international judicial institutions to avoid treaty conflicts, achieve harmonisation of the international rules, aid the defragmentation of international norms, and promote a certain degree of coherence and unity of international law in the long term. It examines the judicial fora that are likely to settle any disputes concerning the WTO Agreements and the Protocol, evolution of the WTO jurisprudence on the principle of systemic integration, and how conflicts between the treaties could be better avoided at the international judicial level. This

[169] Vienna Convention on the Law of Treaties, adopted 23 May 1969, in force 27 January 1980, 1155 UNTS 331, (1969) 8 ILM 679; and Sands (n 52), 944.

chapter involves a doctrinal test of the principle of systemic integration in the specific field of GMO regulation, supported by some empirical findings.

Chapter 6 deals with the principles that lie behind systemic integration which require conflicts between the WTO Agreements and the Protocol to be avoided at the institutional level. Based on both doctrinal and empirical evidences, this chapter tests respectively the efforts that have already been made by the organs of the WTO and the Protocol, the extent to which cooperation and coordination already exists between the treaty organs, as well as why and how such institutional integration could be improved, from both sides, with an aim of conflict avoidance and defragmentation of international law.

Taking a fresh perspective, Chapter 7 discusses whether conflicts between the treaties can be avoided by states, and the extent to which the principles behind systemic integration may provide an immediate and viable way of dealing with potentially conflicting rights and obligations in the WTO Agreements and the Protocol at the domestic level. It examines the importance of examining the relationship between the treaties from the perspective of states. Taking the EU's GMO regulatory framework as a case study, Chapter 7 looks at the practical dilemma faced by states on whether they could utilise and implement the WTO Agreements and the Protocol without violating any of them. It also studies the extent to which the principles behind systemic integration require states to avoid treaty conflicts in the process of domestic law-making and treaty implementation, whether states have already made such efforts, and why and how conflicts between the treaties can be better avoided at the domestic level.

Chapter 8 concludes the discussion in this thesis. It briefly summarises and ties together the discussions made in the previous chapters, and places them in the context of the broader area of study. It more clearly highlights the major arguments, findings and recommendations of this thesis.

Overall, this thesis aims to analyse how, if at all, treaty conflicts can be avoided, and coherence can be maintained during the regulation of international trade in GMOs with an aim of achieving sustainable development and the defragmentation of international law.

Chapter 2

The Potential Conflicts and Possible Synergies between the WTO Agreements and the Cartagena Protocol: A Comparative Examination of the Substance of the Treaties

1. Introduction

Treaties must be applied and interpreted against the background of the general principles of international law.[1] Since both the WTO Agreements and the Protocol are treaties under sub-systems of international law, their relationship must be examined within the broad field of general international law, which will serve as the background for and be tested in the examination of the specific relationship between the WTO Agreements and the Protocol.

This chapter starts by examining the definition of 'conflict' in international law. It then goes on to analyse the inevitable fragmentation of international law regarding the diverse fora for law-making and the almost inevitable clashes between legal regimes which result. Deducing hierarchies of norms is therefore very difficult. It then narrows consideration down to the particular issue regarding the regulation of GMOs under the WTO Agreements and the Cartagena Protocol which serves as an example of the potentially conflicting relationship between international trade and environmental laws.

A conflict, as defined within this thesis, does not necessarily mean conflict between treaties in their entirety, but rather conflict between specific rights and obligations under those treaties which become apparent upon careful examination of the relevant regimes. This chapter then examines the substance of the WTO Agreements and the Cartagena Protocol in detail. It looks at the GATT, the SPS and TBT Agreements which may affect international trade in GMOs. It examines the complex and still-not-clear interrelationship between these WTO Agreements, as well as the circumstances in which each agreement will apply. This is followed by a detailed explanation of each agreement's core mechanisms and their potential impact on international trade in GMOs.

It then moves on to the introduction and textual analysis of the Protocol. It looks at the Protocol's core mechanisms: the Advance Informed Agreement procedure and risk

[1] AD McNair, *The Law of Treaties* (Clarendon Press, 1961), 466.

assessment requirements for GMOs intended for release into the environment; the fact that the Protocol explicitly incorporates the precautionary principle; the role that socio-economic considerations may play in domestic GMO approval processes; and its requirements with respect to the handling, transportation, packaging and identification of GMOs.

Lastly, the chapter examines the possible synergies between the treaties and answers the question of whether there really are potential conflicts between them and, if so, what exactly are those potentially conflicting areas? It investigates whether there exist potential conflicts particularly in relation to the implementation phase of the treaties, and explains the reasons behind such tensions where such are found. The potential conflicts are studied mainly in relation to: scientific evidence and the incorporation of precautionary principle; socio-economic considerations in decision-making processes; and the compulsory labelling of GMOs.

In this chapter, the potential treaty conflicts are discussed in the event when states are parties to both the treaties. If, however, a state is not a party to the protocol, the potential conflicts as will be discussed in the following sections do not necessarily exist. However, even for non-parties, the relationship between the WTO Agreements and the Protocol may still be problematic if an actual dispute concerning the treaties arises. As is the case happened in the *EC-Biotech* dispute,[2] even if a disputing state is a non-party, the Protocol may still be referred to justify a trade-restrictive measure which is otherwise inconsistent with the WTO Agreements. The issues regarding non-parties to the Protocol will be explored in detail in the Chapter 5.[3]

2. The definition of 'conflict' in international law

Conflict of norms is not a novel issue at either the domestic or international levels. However, the issue of normative conflicts appears to be more of a problem in international law than in domestic legal systems.[4] Although the definition of 'conflict' does not have any normative value or affect the nature of relevant instruments, one cannot look at conflict of norms without examining its definition. Existing literature demonstrates two main approaches

[2] This case will be discussed in detail in section 4.3.1 of this chapter.
[3] See Chapter 5, section 7 of this thesis.
[4] The reasons supporting this argument are discussed in the following paragraphs, particularly in section 3.1 of this chapter.

towards the definition: some authors define it narrowly, while others give it a rather general scope.

A narrow definition of 'conflict' implies that a conflict of norms arises only when a Party to two legal regimes cannot simultaneously comply with the *obligations* under both instruments.[5] Jenks was arguably the first to adopt this strict notion. In specific reference to treaties, Jenks states that, 'a conflict of law-making treaties arises only where simultaneous compliance with the obligations of different instruments is impossible.'[6] This narrow approach was supported by other scholars, such as Kelsen,[7] Mus,[8] Marceau,[9] and Sadat-Akhavi.[10] For example, Marceau argues that the coherence of the international legal order should be promoted by using the approach of effective interpretation and restricting the definition of conflict.[11] It is, however, doubtful whether a narrow definition of conflict will help in this regard.

The narrow definition of 'conflict' seems to be overly restrictive.[12] International norms can be either prescriptive or permissive in character. A prescriptive norm may impose an obligation on the addressees to do something or not to do something. A permissive norm gives the addressees the right or freedom to do something or not to do something. Other than the traditional example of conflicting obligations, there exist other categories of norm conflicts, including: conceptual conflicts between different approaches or underlying programmes adopted by instruments; conflicts resulting from the distinct objectives or aims of treaties; conflicts in the implementation phase to pursue treaty aims and duties; and conflicts regarding political aims and underlying considerations.[13]

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[5] CW Jenks, 'The Conflict of Law-Making Treaties' (1953) 30 *British Yearbook of International Law* 401, 426.
[6] *Ibid*, 451.
[7] H Kelsen, *General Theory of Norms* (M Hartney tr, Oxford Clarendon Press, 1991), 99. Kelsen argues that a conflict of norms may occur only if both norms impose obligations on the addressees, and if in obeying or applying one norm, the other one is necessarily or possibly violated.
[8] JB Mus, 'Conflicts between Treaties in International Law', (1998) 45(2) *Netherlands International Law Review* 208, 214-7.
[9] G Marceau, 'Conflicts of Norms and Conflicts of Jurisdictions: The Relationship between the WTO Agreement and MEAs and other Treaties' (2001) 35(6) *Journal of World Trade* 1081, 1082-6.
[10] A Sadat-Akhavi, *Methods of Resolving Conflicts between Treaties* (Leiden: Nijhoff, 2003), 5. The author argues that 'a conflict of norms arises when it is impossible to comply with all requirements of two norms', or according to the author, 'compliance with one norm entails non-compliance with the other'. He believes that the conflicting norms are mutually exclusive, and cannot coexist in a legal order.
[11] Marceau (n 9), 1085-6.
[12] CJ Borgen, 'Resolving Treaty Conflicts' (2005) 37 *The George Washington International Law Review* 573, 575.
[13] R Wolfrum and N Matz, *Conflicts in International Environmental Law* (Springer, 2003), 6-12.

In addition, the narrow definition is restricted to mutually exclusive obligations and does not exhaust all the possibilities of norm conflicts. It ignores the complexity of conflicts between norms of contemporary international law which comprise not only obligations but also rights of states. Even Jenks himself recognises the practical limitation of the narrow definition and states that 'a divergence which does not constitute a conflict may nevertheless defeat the object of one or both of the divergent instruments…(and) may in some cases, from a practical point of view, be as serious as a conflict'.[14] Thus, the narrow definition is clearly inadequate and outdated as it only refers to obligations and ignores the increasing number of international rules which confer rights and the potential conflicts which are associated with such norms.

Considering the above, the narrow definition is particularly not applicable to the relationship between the WTO Agreements and Multilateral Environmental Agreements (MEAs). By covering only obligations, the narrow definition indirectly resolves certain contradictions (such as the prohibition and permission of trade-restrictive measures under the WTO Agreements and MEAs) in favour of the obligation, and against the right. Even authors who advocate the narrow definition recognise that the narrow approach would lead to no conflict *stricto sensu* between the WTO Agreements and MEAs.[15] This narrow approach which leads to no conflict between the WTO Agreements and MEAs is problematic, because it mechanically defines away an evident problem,[16] essentially resolves certain types of conflicts by ignoring them,[17] and may lead to a situation where one treaty frustrates the purpose of another one.[18] Consequently, no MEAs have the opportunity to be prioritised over WTO rules according to the *lex posterior* principle[19] even if they are clearly later in time.[20]

Other authors adopt a wider approach to the definition of 'conflict' which includes conflicts between both obligations and rights. Pauwelyn argues that 'two norms are in a relationship of conflict if one constitutes, has led to, or may lead to, a breach of the other'.[21] More specifically, one norm may be breached, firstly, by the mere emergence of another

[14] Jenks (n 5), 426.
[15] Marceau (n 9), 1086.
[16] E Vranes, 'The Definition of "Norm Conflict" in International Law and Legal Theory' (2006) 17(2) *European Journal of International Law* 395, 405.
[17] J Pauwelyn, *Conflict of Norms in Public International Law: How WTO Law Relates to Other Rules of International Law* (Cambridge University Press, 2003), 171.
[18] Borgen (n 12), 612.
[19] This principle will be discussed in detail in the following paragraphs.
[20] Vranes (n 16), 403.
[21] Pauwelyn (n 17), 175-88.

norm; secondly, by the exercise or implementation of the other norm. Pauwelyn divides the second type of conflict into four situations: first, conflict between two commands; second, conflict between a command and a prohibition; third, conflict between a command and a right; fourth, conflict between a prohibition and a right.[22] Similarly, Borgen argues that treaty conflicts arise when the mere existence of, or the actual performance under, one treaty frustrates the purpose of another treaty.[23] Koskenniemi also takes the goals of a treaty as a starting point, and defines conflict as a situation where two rules or principles suggest different ways of dealing with a problem, because one treaty may frustrate the goals of another treaty without strict incompatibility between their provisions.[24] The wider approach was also adopted by Vranes who argues that 'there is a conflict between two norms, one of which may be permissive, if in obeying or applying one norm, the other one is necessarily or possibly violated.'[25]

The wider definition of conflict is broad enough to cover 'conflicts between international legal instruments with diverging objectives'.[26] It is particularly called for in relation to the WTO Agreements,[27] which do not only impose obligations on Members to liberalise international trade, but also confer rights to justify domestic trade restrictions.[28] There will apparently be no conflict if a state does not realise such rights. However, the objective of conferring such rights on a Member cannot be achieved without a state utilising them. A right which cannot be or is not used will possibly render the treaty meaningless.

The WTO jurisprudence has not always been consistent regarding the definition of 'conflict'. In the *Indonesia-Automobiles* case, the Panel adopted the narrow approach by referring to Jenks' strict definition of conflict. It ruled that 'there is a conflict when two (or

[22] *Ibid*.
[23] Borgen (n 12), 575.
[24] M Koskenniemi, 'Fragmentation of International Law: Difficulties Arising from the Diversification and Expansion of International Law', Report of the Study Group of the International law Commission, UN. Doc. A/CN.4/L.682, 13 Apr 2006, 19, para 25.
[25] Vranes (n 16), 415.
[26] H van Asselt, F Sindico, and MA Mehling, 'Global Climate Change and the Fragmentation of International Law' (2008) 30(4) *Law & Policy* 423, 430.
[27] Pauwelyn (n 17), 188-200.
[28] Eg. the TBT Agreement, Preamble, and Articles 2.1-2.2; the SPS Agreement, Preamble, Article 2; and the Agreement on Subsidies and Countervailing Measures, 15 April 1994, 1869 UNTS 14, Article 2.

more) treaty instruments contain obligations which cannot be complied with simultaneously'.[29]

However, other WTO jurisprudence tends to at least implicitly adopt the wider definition of conflict.[30] In the *EC-Bananas* case, the Panel admitted that conflict between WTO agreements may occur between an obligation and an explicit right; and merely taking into account obligations while ignoring rights would render parts of the WTO Agreements meaningless and be inconsistent with the parties' intentions.[31] In the *Guatemala-Cement* case, the Appellate Body (AB) found that a conflict only occurs when the rules 'cannot be read as complementing each other' and 'where adherence to the one provision will lead to a violation of the other provision'.[32] This ruling offers sufficient leeway for the AB to explicitly recognise cases of conflicts between obligations and rights in the future cases.[33] Moreover, the Panel in the *Turkey-Textiles* case held that an internal conflict between the WTO Agreements is a situation where 'adherence to one provision will lead to a violation of the other provisions';[34] and interpretation which 'would lead to a denial of either party's rights or obligations' should be prevented.[35] This also at least implicitly recognises that conflicts may arise between rights and obligations.

The Cartagena Protocol is principally about rights and permissions, and is a good example of international treaties which confer positive rights. The wider definition of conflict covers not only norms imposing obligations but also norms conferring rights, and is more adaptable to the comprehensive relationship between contemporary international norms. Adopting the wide definition of conflict seems to be crucial in examining the relationship between the WTO Agreements and the Protocol.[36]

A comparison of the pros and cons of the different approaches finds that the wider definition of conflict suits the purpose of this thesis. Thus, this thesis adopts the wider

[29] *Indonesia-Certain Measures Affecting the Automobile Industry*, Panel Report, WT/DS54/55/59/64/R, 2 July 1998, 329.
[30] NT Tuncer, 'The Definition of Norm Conflict in Public International Law: The Case of World Trade Organisation Law' (2012) 9(1) *Ankara Law Review* 27, 43-8.
[31] *European Communities-Regime for the Importation, Sale and Distribution of Bananas*, Panel Report, WT/DS27/R, 9 September 1997, paras 338 & 401.
[32] *Guatemala-Anti-Dumping Investigation Regarding Portland Cement from Mexico*, Appellate Body Report (ABR), WT/DS60/AB/R, 25 November 1998, para 65.
[33] Tuncer (n 30), 47.
[34] *Turkey-Restrictions on Imports of Textile and Clothing Products*, Panel Report, WT/DS34/R, 31 May 1999, para 9.93.
[35] *Ibid*, para. 125.
[36] Details on the rights that are conferred by the Protocol will be discussed in section 5 of this chapter.

approach towards the definition which has more practical value than the narrow one. This is because it enables this thesis to examine the question of norm conflicts in a comprehensive and integral way, and provides a fuller picture of how such conflicts should be dealt with, particularly in the context of examining states' practice of implementing the WTO Agreements and the Protocol.

However, it must be noted that the wider approach normally takes the goals of treaties as the starting point in defining conflicts,[37] when in fact, it may not always be clear or easy to identify whether the goal of a treaty has been frustrated by any other treaty, or even to define whether a conflict exists.

Therefore, instead of defining 'conflict' based on the goals of treaties, this author's submission is that the definition of conflict may be approached from the perspective of the implementation of treaties.[38] States are the makers (the ones that are involved in, for example, the drafting of treaties) as well as consumers or law-takers (the ones that must, for example, implement treaties) of international law. If two international norms which deal with overlapping areas from different perspectives provide incompatible directions, a state cannot fully rely on the norms without breaching one or the other. The norms would be in conflict in such an instance. One may thus argue that two international norms are in conflict if they are both valid and applicable in a situation, but provide incompatible directions on how to deal with the same set of facts. In other words, international norms are in conflict if any one of them cannot be implemented without violating the other.

3. The inherent fragmentation of international law and the possibility of norm conflict arising

3.1 The inevitable fragmentation of international law

The phrase 'fragmentation of international law' was first used by the International Law Commission (ILC) in a feasibility study named 'Risks Ensuing from Fragmentation of International Law' in 2000.[39] The ILC subsequently established a study group between 2003

[37] Borgen (n 12), 575; and Koskenniemi (n 24), 19, para 25.
[38] This will be discussed further at Chapter 7, section 2 of this thesis.
[39] ILC, *Official Records of the General Assembly, Fifty-fifth Session, Supplement No. 10* (2000) UN Doc. A/55/10, para 729.

and 2006[40] which issued a report at its fifty-eighth session in 2006, stating that 'fragmentation' is a consequence of the expansion and diversification of international law. The fragmentation of international law underlies concerns about friction between different sub-systems of international law, as well as the general coherence of the system of international law.[41]

According to the ILC, there are three types of fragmentation in international law: first, the numerous interpretations of general international law may be conflicting; second, specialised regimes may emerge as exceptions to general international law, and; third, the different types or sub-systems of international law may be conflicting.[42] This thesis is concerned mainly with the third type of fragmentation.

As a result of the fragmentation of international law, different norms may all be valid and applicable in a situation. The overlapping norms are not necessarily consistent with one another. General international law deals with the relationship between norms regulating the overlapping areas from different perspectives in two ways: first, both norms may be deemed as complete equals. They can apply simultaneously without incompatibility. Second, the norms are in conflict and point to incompatible decisions, a choice must be made on which norm should be applied. One norm thus prevails over the other, but does not render the other norm illegal.[43]

The potential inconsistency of overlapping international norms may cause legislative uncertainty and ambiguity. More importantly, in practice, norm conflicts and disputes may arise as a manifestation of fragmentation. In such cases, neither the obligations nor the rights under the conflicting norms may be properly implemented. This could have serious consequences in terms of the effectiveness of regulation and achieving the outcome of regulatory goals.

Furthermore, norm conflicts may arise in any legal system, both in domestic law and international law. Although international law as a whole does not have to be in 'absolute

[40] The study group is themed 'Fragmentation of International Law: Difficulties Arising from the Diversification and Expansion of International Law' and designed to work on the issue of fragmentation (including the problem of treaty conflicts).
[41] Koskenniemi (n 24), 85.
[42] ILC, *Report of the International law Commission, 56th session,* Supplement No. 10 (A/59/10), 3 May-4 June and 5 July-6 August 2004, 284; and Koskenniemi (n 24), para 47.
[43] Koskenniemi (n 24), 173, para 340; and Pauwelyn (n 17), 278.

unity' comparable to domestic legal systems,[44] conflicts of norms are more likely to occur in international law than in domestic legal systems as a result of the decentralised nature of international law. It is for this reason that, at the international level, conflicts have increasingly arisen between substantive norms, interpretations and procedures from the same sub-system or across sub-systems.

This point is further made by looking at some of the basic characteristics of international law and how it is formulated. The unique system of international law-making is principally developed through treaties and customary international law,[45] and is formulated on the basis of inter-state relations. States make international law either through agreement, or through state practice out of a sense of legal obligation (*opinio juris*).[46] The system of international law-making is eclectic, unsystematic, overlapping, and often poorly coordinated.[47] It is less elaborate and more rudimentary than the system of domestic law.[48] The inevitable fragmentation of international law is evident in the separate legal regimes and instruments, various processes, and different participants involved in the making of international law, as well as the fact that there are no universal institutional frameworks, authoritative lists of sources or authorised interpretations of international norms.

Also, there is no centralised legislator or a universal legislative body which corresponds to a national parliament at the municipal level.[49] International law-making is based on the consent of states. International law lacks any identifiable constitutional structure,[50] and does not seem possible to arrive at a system which includes legislation, enforcement and adjudication without the consent of all the nations.[51] States have the

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[44] H van Asselt, *The Fragmentation of Global Climate Governance: Consequences and Management of Regime Interactions* (Edward Elgar Publishing, 2014), 34.

[45] D Freestone, 'The Road from Rio: International Environmental Law after the Earth Summit', (1994) 6 *Journal of Environmental Law* 193, 195. The generally recognised sources of international law as listed in Article 38 of the Statute of the International Court of Justice are discussed in the following paragraphs of this section. Moreover, soft law is also an important form of international law although it is not listed as one of the traditional sources.

[46] D Shelton, 'International Law and "Relative Normativity"', in M Evans (ed), *International Law* (3rd edition, Oxford University Press, 2010), 147.

[47] AE Boyle and C Chinkin, *The Making of International Law* (Oxford University Press, 2007), 23 &100.

[48] P Weil, 'Towards Relative Normativity in International law?' (1983) 77 *The American Journal of International Law* 413, 413.

[49] R Jennings and A Watts (eds), *Oppenheim's International Law Vol 1* (9th edition, Longman, 1992), 114.

[50] However, it may be argued that international law or certain subsystems of international do have identifiable constitutional characteristics. For example, this thesis will argue that the aim of sustainable development bear constitutional values in international law in its Chapter 4, section 4.2.2.

[51] G Palmer, 'New Ways to Make International Environmental Law' (1992) 86 *The American Journal of International Law* 259, 270.

contractual freedom in terms of international law-making. Only freely accepted rules are legally binding on the states accepting them.[52] States have the right to freely act or make their own decisions, although this freedom has become increasingly limited.[53]

In addition, international rules are generally made in an *ad hoc* manner, largely without recourse to legal developments occurring elsewhere.[54] The different sub-systems of international law are generally developed separately from each other and focus on diverging values.[55] They are made by varying groups of states at the international level and by different specialists in terms of state representatives. At the institutional level, different international organisations and institutions are involved in the international law-making process, but do not have absolute division of powers among them. No matter how clearly and precisely the competence of an international organisation is drafted, overlaps of authorities cannot be necessarily avoided. It thus results in the potential for divergent regulatory approaches to be taken.[56] In other words, the separate development of specialised sub-systems of international law may lead to overlaps and serious conflicts of international norms.[57]

The specialised international law-making and international institution-building processes tend to be reluctant to take into account any relevant legislative and institutional activities, or the general principles and practices of international law, even when the relevant law or practices are governing the same subject matter.[58] The diversity of participating states and law-making institutions will inevitably result in incoherence and uncertainty in the relationship between treaties, the potential conflicts between international norms, and the fragmentation of international law.[59]

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[52] *S.S. Lotus* (Fr. v. Turk.), 1927 P.C.I.J. (ser. A) No. 10 (Sept. 7), 18; and *Case Concerning Military and Paramilitary Activities in and Against Nicaragua* (Nicaragua v. U.S.), Judgement (Merits), (1986) ICJ Reports 14, 135, para 269, available at: http://www.icj-cij.org/docket/files/70/6503.pdf, last accessed on 30 April 2017.
[53] W Czapliński and G Danilenko, 'Conflict of Norms in International Law' (1990) 21 *Netherlands Yearbook of International Law* 3, 12.
[54] D French, 'Treaty Interpretation and the Incorporation of Extraneous Legal Rules' (2006) 55 *International and Comparative Law Quarterly* 281, 302.
[55] Jenks (n 5), 403; C Pavel, 'Normative Conflict in International Law' (2009) 46 *San Diego Law Review* 883, 885; and P Zapatero, 'Modern International Law and the Advent of Special Legal Systems' (2005) 23(1) *Arizona Journal of International & Comparative Law* 55, 65.
[56] J Harrison, *Making the Law of the Sea, A Study in the Development of International Law* (Cambridge University Press, 2011), 239-40.
[57] I Brownlie, 'The Rights of Peoples in Modern International Law', in J Crawford (ed), *The Rights of Peoples* (Clarendon Press, 1988), 15.
[58] Koskenniemi (n 24), 11.
[59] Boyle and Chinkin (n 47), 248.

Moreover, unlike domestic law, the system of international law does not have a clearly defined, authoritative list of sources as hinted earlier. This shows the fragmented nature of international law and the increased possibility of conflict among its norms. Article 38 of the Statute of the International Court of Justice (ICJ) states that international law may derive from the generally recognised formal sources, including treaties, international custom, general principles of law, and the subsidiary means of judicial decisions and the teachings of publicists.[60] However, Article 38 is not clearly defined and has an open character. It is not an exhaustive or authoritative list of the sources of international law. Its ability to define the sources of international law has been questioned.[61] Its identification has been criticised as inadequate and out of date, and does not sufficiently adapt to the conditions of modern international intercourse.[62]

Furthermore, the exact contents, meanings, and original intentions of international norms are not always clear. This, again, is a demonstration of the fragmented nature of international law and a major source of conflict among its norms. Generally speaking, international treaties are the results of lengthy and complex negotiations and compromises. In order to reach an end to the negotiation process, treaty norms are often left vague and ambiguous, especially where agreement may otherwise not be achieved. For example, the negotiators may consciously use general wordings for the key and most controversial elements.[63]

Although treaty interpretation may help to resolve such ambiguities,[64] the system of international law does not have any authoritative guide for the interpretation of such norms, as alluded to above. International institutions, tribunals and states are all competent to interpret international norms, in their own way and normally based on their own interests. The not-necessarily-consistent interpretations may also cause further fragmentation of international law.

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[60] Statute of the International Court of Justice, 26 June 1945, 59 Stat. 1055, 33 U.N.T.S. 933, Article 38(1).
[61] Pauwelyn (n 17), 90.
[62] H Thirlway, 'The Sources of International Law', in M Evans (ed), *International Law* (3rd edition, Oxford University Press, 2010), 99.
[63] Palmer (n 51), 269.
[64] More discussion on treaty interpretation will be carried out in the following paragraphs and in Chapter 5.

3.2 Treaty-making in specialist fora sows the seed for treaty conflicts

Contemporary international law has seen a proliferation of treaties (multilateral and bilateral, global and regional) and customs (general and regional). A treaty, which may sometimes also be known as a convention, protocol, agreement, declaration, act, or covenant, is 'an international agreement concluded between states in written form and governed by international law, whether embodied in a single instrument or in two or more related instruments and whatever its particular designation'.[65] Treaties regulate the relations between states, create clear rights and legally binding obligations which can easily be adapted to deal with different circumstances in different member states, and can indicate the development of customary international law.[66]

Multilateral agreements undertaken in treaty form are the most important contemporary international law.[67] An enormous variety of treaties has emerged as a result of the need for specialist or technical regulation. Treaties are the principal source of international environmental law, and play a dominant role in the regulation of international economic relations and human rights.[68]

Different treaties regulate behaviour within their particular areas, but they do not exist in isolation. The proliferation of treaties results in the common phenomenon in which more than one treaty may deal with the same matter in different ways, most of the time without reference to one another. Specialised treaties overlap with one another to a certain extent, in a manner that is not always consistent. To elucidate this point, one can point to the relationship between the WTO Agreements and MEAs, and between trade rules and international human rights treaties.[69] In this regard, the overlap and tension sows the seed of conflicts between the treaties.

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[65] VCLT, Article 2(1)(a).

[66] Boyle and Chinkin (n 47), 233; M Poustie, '*Environment*', in E Moran and others (eds), The *Laws of Scotland: Stair Memorial Encyclopaedia Reissue* (Butterworths LexisNexis, 2007), para 13; and M Fitzmaurice, 'The Practical Working of The Law of Treaties', in M Evans (ed), *International Law* (3rd edition, Oxford University Press, 2010), 172-3.

[67] Boyle and Chinkin (n 47), 233 & 260; and A Cassese, *International Law*, (2nd edition, Oxford University Press, 2005), 170.

[68] Cassese, *ibid*, 172.

[69] H Lim, 'Trade and Human Rights: What's at Issue?', (2001) 35 Journal of World Trade 275; M Cohn, 'The World Trade Organisation: Elevating Property Interests above Human Rights', (2001) 29 Georgia Journal of International and Comparative Law 247; and G Marceau, 'WTO Dispute Settlement and Human Rights' (2002) 13(4) *European Journal of International Law* 753, 754.

As earlier discussed, conflict between treaties is a particular phenomenon of the fragmentation of international law, and is inherent in the decentralised nature of international law. In terms of law-making, treaties under different sub-systems of international law are developed by different states, in distinct institutional fora, each with their own objectives, and with limited communication or consultation with other treaties, thus increasing the possibility of conflict of international norms.[70]

Moreover, even where different treaties are made by the same group of states, the states' delegates sent to negotiate these treaties are usually different specialists. Hence, the fragmentation of international law can be seen as 'the result of a transposition of functional differentiations of governance from the national to the international plane'.[71] A state sends different delegates to participate in the negotiation of various treaties. Such delegates are generally specialists from different governmental departments. It is normally the case that different groups of negotiators focus on the negotiation of treaties within their own fields of interest or expertise. They do not necessarily contact or consult one another on relevant issues even if they are representing the same state.[72]

It is worth mentioning that potential conflicts do not only exist between treaties under different sub-systems of international law, but conflicts may also exist among treaties under the same sub-system of international law, such as international environmental law. Existing international environmental law is fragmented, has developed in a piecemeal way, and has been argued to be not fundamentally effective.[73] There is no comparable system to WTO rules which protects environmental values and policies.[74] Being concluded by different delegates, most MEAs lack reference to other relevant rules. Different MEAs are not always consistent and may be in conflict with one another. For example, the CBD may be

[70] TJ Schoenbaum, 'International Trade and Environmental Protection', in P Birnie, AE Boyle and C Redgwell, *International Law and the Environment* (3rd edition, Oxford University Press, 2009), 802.
[71] B Simma, 'Universality of International Law from the Perspective of A Practitioner' (2009) 20(2) *The European Journal of International Law* 265, 270.
[72] This argument is justified by the empirical research carried out in the course of this thesis. See Chapter 7, section 5 of this thesis.
[73] H van Asselt, 'Managing the Fragmentation of International Environmental Law: Forests at the Intersection of the Climate and Biodiversity Regimes' (2012) 44 *International Law and Politics* 1205, 1209; and G Loibl, 'International Environmental Regulations: Is a Comprehensible Body of Law Emerging or is Fragmentation Going to Stay?', in I Buffard and others (eds), *International Law between Universalism and Fragmentation: Festschrift in Honour of Gerhard Hafner*, (BRILL, 2008), 794.
[74] EB Weiss, 'Environment and Trade as Partners in Sustainable Development: A Commentary' (1992) 86 *The American Journal of International Law* 728, 729.

incompatible with other MEAs such as the UN Convention on the Law of the Sea,[75] the Kyoto Protocol[76] and the Convention to Combat Desertification.[77]

4. The WTO Agreements which regulate international trade in GMOs

4.1 The interrelationship between the GATT, the SPS Agreement and the TBT Agreement, and their relevance to the regulation of GMOs

When WTO Members make domestic legislation or take decisions regarding international trade in GMOs, identifying which WTO rules are relevant is certainly good practice and something that most countries will consider. Moreover, in the event that a dispute regarding the international trade in GMOs arises before the WTO Dispute Settlement Body, the Panel must firstly decide which WTO agreement applies. Yet, even the interrelationship between GATT, the SPS Agreement and the TBT Agreement is still difficult to determine.[78]

The GATT sets out general rules for WTO Members applying to all international trade in goods. According to the Marrakesh Agreement Establishing the World Trade Organisation (the Marrakesh Agreement), the primary aims of the GATT are the reduction of tariffs and non-tariff barriers to trade and the elimination of discrimination in international trade.[79] The GATT serves as some sort of 'background' for the regulation of international trade in goods, including GMOs. That is to say, even for measures under the surveillance of the SPS or TBT Agreements, they must also comply with the requirements of the GATT.

In this connection, both the SPS and the TBT Agreements are designed to enable Members to challenge unnecessary non-tariff barriers to international trade, and to forestall protectionism in the guise of sanitary and phytosanitary measures (SPS measures) and technical regulations.[80] In particular, the SPS Agreement allows Members to take legitimate SPS measures aimed at the protection of human, animal or plant life or health. It, however,

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[75] UN Convention on the Law of the Sea, (1982) 21 ILM 1261.
[76] Kyoto Protocol to the United Nations Framework Convention on Climate Change, (1998) 37 ILM 22.
[77] UN Convention to Combat Desertification in Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa, (1994) 33 ILM 1328. For more discussion see Wolfrum and Matz (n 13), 13-117.
[78] E Montaguti and M Lugard, 'The GATT 1994 and Other Annex 1A Agreements: Four Different Relationships?' (2000) *Journal of International Economic Law* 473, 474.
[79] The Marrakesh Agreement Establishing the World Trade Organisation, (1994) 33 ILM 1144, Preamble.
[80] F Roessler, 'Environmental Protection and the Global Trade Order', in RL Revesz, P Sands, and RB Stewart (eds) *Environmental Law, the Economy and Sustainable Development* (Cambridge University Press, 2008), 123.

requires that those measures do not constitute arbitrary or unjustifiable discrimination, or a disguised restriction on international trade.[81]

On its part, the TBT Agreement applies to all mandatory technical regulations and voluntary standards (including industrial and agricultural products) except for those included in the SPS Agreement.[82] It contains substantive requirements on technical regulations. It allows Members to impose technical regulations or standards designed for legitimate purposes, requiring that the regulations or standards do not create unnecessary barriers to international trade.[83]

From the above, it is quite obvious that the GATT and the SPS Agreement may both apply simultaneously to a given measure. SPS measures which are consistent with the SPS Agreement are automatically presumed to be in accordance with the GATT, in particular Article XX(b) of the GATT.[84] The GATT and the TBT Agreement may also apply at the same time and operate concurrently in a dispute.[85] In the *US-Clove Cigarettes* case, the AB found that 'the language of the second recital of the TBT Agreement indicates that the TBT Agreement expands on pre-existing GATT disciplines and emphasised that the two agreements should be interpreted in a coherent and consistent manner'.[86]

However, to the extent of any conflicts between the GATT and the SPS/TBT Agreement, the latter will prevail. This is based on a general interpretative note to Annex 1A of the Marrakesh Agreement which states that, in the event of a conflict between the GATT and a provision of another agreement in Annex 1A to the Marrakesh Agreement (*such as the SPS and TBT agreements*[87]), 'the provision of the other agreement shall prevail to the extent of the conflict.'[88]

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[81] The SPS Agreement, Article 2.
[82] The TBT Agreement, Article 1.3.
[83] M Cardwell and F Smith, 'Contemporary Problems of Climate Change and the TBT Agreement: Moving Beyond Eco-labelling', in T Epps and M Trebilcock (eds), *Research Handbook on the WTO and Technical Barriers to Trade* (Edward Elgar, 2013), 403.
[84] The SPS Agreement, Article 2.4.
[85] *European Communities-Measures Affecting Asbestos and Asbestos-containing Products (EC-Asbestos)*, Panel Report, WT/DS135/R, 5 April 2001, para 8.16.
[86] *United States-Measures Affecting the Production and Sales of Clove Cigarettes (US-Clove Cigarettes)*, ABR, WT/DS381/AB/R, 16 May 2012, 63, para 91.
[87] The examples are added by this author.
[88] Available at: http://www.wto.org/english/docs_e/legal_e/05-anx1a.pdf, last accessed on 30 April 2017; also see A Kudryavtsev, 'The TBT Agreement in Context', in in T Epps and M Trebilcock (eds), *Research Handbook on the WTO and Technical Barriers to Trade* (Edward Elgar, 2013), 43.

Thus, the internal hierarchy among the biosafety related WTO Agreements is that the SPS Agreement and the TBT Agreement take precedence over the GATT. One might say it is an example of *lex specialis* with the more detailed special laws taking precedence over the general rules in GATT. For example, the SPS Agreement is often seen as the *lex specialis* of GATT considering that it gives instructions on the specific requirements of the general rule of Article XX(b) of GATT.[89]

In practice, a WTO Panel would normally examine a measure under the SPS/TBT Agreement before examining it under the GATT in a situation where both the GATT and the SPS/TBT Agreement apply.[90] It is the 'habit' of the WTO DSB to turn first to the SPS Agreement, based on the 'relatively greater specificity' of the SPS Agreement and for reasons of efficiency.[91] Similarly, when claims are presented in parallel under both the TBT Agreement and the GATT, claims under the TBT Agreement are generally considered first on account of the specificity of the TBT Agreement.[92]

Furthermore, it is worth emphasising that the SPS Agreement and the TBT Agreement have different scopes and are mutually exclusive.[93] On the one hand, the SPS Agreement covers all measures whose purpose is to protect: human or animal health from food-borne risks; human health from animal- or plant-carried diseases; and animals and plants from pests or diseases, whether or not these are technical requirements.[94] Therefore, it is the purpose of a measure that determines whether it is subject to the SPS Agreement.[95]

On the other hand, the TBT Agreement covers and provides all technical regulations, standards, and conformity assessment procedures and aims to ensure that they are

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[89] The SPS Agreement, Preamble states that the purpose of the Agreement is to set rules '*for* the application of the provisions of GATT 1994 which relate to the use of sanitary or phytosanitary measures, in particular the provisions of Article XX (b)'. More discussions see, Koskenniemi (n 24), para 98; and L Gruszczynski, 'The SPS Agreement within the Framework of WTO Law: The Rough Guide to the Agreement's Applicability', 28 June 2008, 26, available at: http://ssrn.com/abstract=1152749, last accessed on 30 April 2017.

[90] *Australia-Measures Affecting the Importation of Salmon (Australia-Salmon)*, Panel Report WT/DS18/R, 12 June 1998, para 8.38-9 & 8.185; *and European Communities-Measures Concerning Meat and Meat Products (EC-Hormones)*, ABR, WT/DS26/AB/R, 16 Jan 1998, para 8.42.

[91] J Scott, *The WTO Agreement on Sanitary and Phytosanitary Measures: A Commentary* (Oxford University Press, 2007), 29.

[92] *United States-Measures Concerning the Importation, Marketing and Sale of Tuna and Tuna Products* (*US-Tuna II*), Panel Report, WT/DS381 /R, 15 September 2011, 132-3, paras 7.43 & 7.46.

[93] The SPS Agreement, Article 1.4; and the TBT Agreement, Article 1.5.

[94] The SPS Agreement, Annex A (1).

[95] WTO, 'Understanding the WTO Agreement on Sanitary and Phytosanitary Measures', May 1998, available at: https://www.wto.org/english/tratop_e/sps_e/spsund_e.htm, last accessed on 30 April 2017.

met, except when they are SPS measures as defined by the SPS Agreement.[96] In Article 1.5, the TBT Agreement specifically states that its provisions 'do not apply' to SPS measures. Thus it is the type of the measure which determines whether it is subject to the TBT Agreement.[97] For a measure to be qualified as a technical regulation, the document must lay down product characteristics or their related processes and production methods; compliance with the same must be mandatory; and even if not mentioned, the document must apply to an identifiable product.[98]

In relation to the regulation of GMOs, the national approval procedures of GMOs are normally put in place to protect human, animal, or plant life or health from 'food-borne' or 'pest-or disease-related' risks. Such procedures are likely to be classified as biosafety-related sanitary and phytosanitary measures, and will thus fall under the SPS Agreement.[99] Once given a national approval, additional measures (that are not SPS measures) aiming at environmental protection or the protection of consumer interests, such as the packaging and labelling requirements of GMOs in order to provide information to consumers, are likely to be classified as technical regulations, and will therefore fall under the TBT Agreement. Moreover, a measure falling within the SPS/TBT Agreement may also need to be tested against and comply with the GATT, with the caveat that there is a presumption of compliance with the GATT if a measure is compliant with the SPS/TBT Agreement.

Although the relationship between the SPS Agreement and the TBT Agreement is less cumbersome, states may 'forum shop' between the SPS and the TBT Agreements when drafting domestic regulations.[100] It is sometimes difficult to decide which agreement applies to certain measures, such as *prima facie* TBT measures which are actually designed for SPS concerns, and measures reflecting both the SPS and TBT concerns.[101]

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[96] The TBT Agreement, Annex 1.
[97] WTO, (n 95).
[98] *European Communities-Measures Affecting Asbestos and Asbestos-containing Products (EC-Asbestos)*, ABR, WT/DS135/AB/R, 12 March 2001, paras 67-70. A technical regulation may also include or deal exclusively with terminology, symbols, packaging, marking or labelling requirements as they apply to a product, process or production method.
[99] The SPS Agreement, Annex A (1).
[100] D Ahn, 'Comparative Analysis of the WTO SPS and TBT Agreements' (2002) 8(3) *International Trade Law & Regulation* 1, 17; and C Downes, 'Worth Shopping Around? Defending Regulatory Autonomy under the SPS and TBT Agreements' (2015) 14(4) *World Trade Review* 553, 554-8.
[101] Gruszczynski (n 89), 17-8.

4.2 The GATT and its relevance to international trade in GMOs

4.2.1 The principles of non-discrimination against 'like products'

Although compliance with the GATT is assumed where the SPS Agreement is complied with, the GATT still needs to be examined in the context of this thesis for three main reasons: first, a comprehensive examination requires analysis of the GATT. Thus all international trade in GMOs falls under the regulation of the GATT. As argued above, all international trade in GMOs fall under the regulation of the GATT, including measures under the purview of the SPS or TBT Agreements. Moreover, Article 2.4 of the SPS Agreement, which states that measures that are consistent with the SPS Agreement are automatically presumed to be consistent with the GATT, is a rebuttable presumption. Thus a measure which does not comply with the SPS Agreement will need to be tested against the GATT. Furthermore, the GATT will be applicable if the measure is not covered by the SPS and TBT Agreements.

In the same vein, all WTO Members' domestic legislation and decisions regarding international trade in goods must normally comply with the GATT's general obligations.[102] Important GATT obligations mainly include the non-discrimination principles as stated in Articles I:1 and III of GATT (respectively the most favoured nation principle and the national treatment principle) which prevents 'less favourable treatment' to 'like products', and the prohibition of quantitative restrictions on international trade in goods as stated in Article XI of GATT. The most favoured nation principle imposes the obligation of non-discrimination for imported 'like products' from any Members.[103] The national treatment principle requires Members not to discriminate between imported 'like products' and domestic products.[104]

The GATT non-discrimination principles are only applicable if the disputed goods are 'like products'; and for a breach of the national treatment principle, the complaining Member must prove that the imported products are afforded 'less favourable treatment' than that afforded to like domestic products.[105] The term 'less favourable treatment' under the

[102] There exist certain exceptions. For example, in relation to international trade in agricultural products, if there is any conflict between the Agreement on Agriculture and GATT, the provisions of the Agreement on Agriculture prevail. See Agreement on Agriculture, Article 5(1) & (8).
[103] The GATT 1994, Article I:1.
[104] *Ibid*, Article III:4.
[105] The assessment of likeness under the GATT will be discussed in detail in section 4.4.2 of this chapter.

GATT is generally defined as a detrimental impact on the conditions of competition for imported products.[106]

The general criteria for the determination of 'like products' under Article III of the GATT were first established by a GATT Working Party in 1970, and is known as the competition-based approach.[107] This approach focuses on the competitive relationship between the products from the following aspects: the properties, nature and quality of the products; the products' end-uses in a given market; the tariff classification of the products; and the tastes and habits of consumers which change from country to country.[108]

The assessment of likeness under the GATT was dealt with in the *Japan-Alcoholic Beverages* case, where the AB adopted the competition-based approach and quoted these four criteria.[109] This approach was reaffirmed by the AB in the *EC-Asbestos* case.[110] In this dispute, the AB reversed the Panel's finding that domestic and imported products were 'like', and found that several criteria should have been taken into account by the Panel in the determination of likeness under Article III:4, including not only the competitive relationship between products, but also health risks associated with a product (although health risks could be subsumed under the existing criteria).[111] The AB, thus, established the need for future Panels to examine all of the relevant criteria than focus unduly on just one.

An important question in relation to environmental measures is whether products are allowed to be treated differently because of their processes and production methods (PPMs), even if such methods do not leave a trace in the final product. The PPMs used in the

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[106] *Korea-Measures Affecting Imports of Fresh, Chilled and Frozen* Beef (*Korea-Various Measures on Beef*), ABR, WT/DS161/169/AB/R, 10 January 2001, para 137; and *Dominican Republic-Measures Affecting the Importation and Internal Sale of Cigarettes*, ABR, WT/DS302/AB/R, 25 April 2005, para 96.

[107] Border Tax Adjustments, Working Party Report, 2 December 1970, GATT BISD (18th Supp).

[108] *Ibid*, 5, para 18. It is worth mentioning that the tariff classification of the products was not mentioned in this report.

[109] *Japan-Taxes on Alcoholic Beverages (Japan-Alcoholic Beverages II)*, ABR, WT/DS8//10/11/AB/R, 4 October 1996, 19-21. This discussion of what constitute 'like products' under the GATT is also relevant to the earlier discussion of GATT in section 4.2 of this chapter.

[110] *EC-Asbestos, ABR* (n 98), 38, para 101.

[111] *Ibid*, para 113. In this paragraph, the AB stated that: '*We are very much of the view that evidence relating to the health risks associated with a product may be pertinent in an examination of "likeness" under Article III:4 of the GATT 1994. We do not, however, consider that the evidence relating to the health risks associated with chrysotile asbestos fibres need be examined under a separate criterion, because we believe that this evidence can be evaluated under the existing criteria of physical properties, and of consumers' tastes and habits, to which we will come below*.'

manufacture of products do not necessarily render these products 'unlike'. Whether two products are 'like' must be determined on a case-by-case basis.[112]

PPMs are not listed in the competition-based approach, although the TBT Agreement explicitly refers to PPMs when defining technical regulations,[113] Generally speaking, the AB does not take PPMs as one of the criteria when making decisions on 'like products' under the GATT, unless such processes and methods can be detected in the final products, which is increasingly the case for GM products.[114] Interestingly, in the *Shrimp-Turtle* case, the AB justified discrimination between products on the basis of PPMs. It found that the US's ban on shrimps harvested by methods which may lead to the incidental killing of sea turtles was directly connected to the policy of the conservation of sea turtles, thus was provisionally justified paragraph (g) of Article XX.[115] This at least leaves open the possibility for GMOs and non-GMOs to be seen as not being 'like products' under the GATT, particularly considering the increasing physical differences between GMOs and non-GMOs, and the relatively strong consumer perceptions against GMOs.[116]

4.2.2 The general exceptions under Article XX

The GATT, on the other hand, provides certain exceptions in Article XX to these general obligations. Article XX allows Members to adopt certain trade-restrictive measures on international trade which are otherwise inconsistent with the GATT. The general exceptions may serve as an instrument for reconciling trade with other concerns.[117] They, to some extent, address the coexistence of two regimes and strike a balance between trade and other legitimate interests such as the environment.[118]

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[112] *Ibid*, para 20.
[113] The TBT Agreement, Annex 1(1). The question of how 'like products' are defined under the TBT Agreement will be discussed in detail in the following section 4.4.2 of this thesis.
[114] R Read, 'Process and Production Methods and the Regulation of International Trade' in N Perdikis and N Read (eds) *The WTO and the Regulation of International Trade: Recent Trade Disputes Between the European Union and the United States* (Edward Elgar, 2005), 244-245; and G Marceau, 'The New TBT Jurisprudence in *US-Clove Cigarettes*, WTO *US-Tuna II*, and *US-COOL*' (2013) 8 *Asian Journal of WTO & International Health Law & Policy* 1, 7-8.
[115] *United States-Import Prohibition of certain Shrimp and Shrimp Products (Shrimp-Turtle),* ABR, WT/DS58/AB/R, 12 October 1998, para 126.
[116] This will be discussed in detail in section 4.4.2 of this chapter.
[117] E Trujillo, 'A Dialogical Approach to Trade and Environment' (2013) 16 (3) *Journal of International Economic Law* 535, 538.
[118] SE Gaines, 'Process and Production Methods: How to Produce Sound Policy for Environmental PPM-Based Trade Measures?' (2002) *27 Columbia Journal of Environmental Law* 383, 427; and Y Ngangjoh-Hodu, 'Relationship of GATT Article XX Exceptions to Other WTO Agreements' (2011) 80 *Nordic Journal of International Law* 219, 221.

International trade in GMOs are subjected to both the most favoured nation treatment and national treatment principles, although the possible violation of the latter might be a more obvious and complicated issue.[119] GATT Article XX could provide a potential justification for different treatment between GMOs and their conventional counterparts (non-GMOs) which would otherwise violate the above mentioned non-discrimination principles, only if they are seen as 'like products'.[120] The relevant parts of GATT Article XX state that:

> 'Subject to the requirement that such measures are not applied in a manner which would constitute a means of arbitrary or unjustifiable discrimination between countries where the same conditions prevail, or a disguised restriction on international trade, nothing in this agreement shall be construed to prevent the adoption or enforcement by any contracting party of measures:…
>
> (b) necessary to protect human, animal or plant life or health;…
>
> (g) relating to the conservation of exhaustible natural resources if such measures are made effective in conjunction with restrictions on domestic production or consumption…'[121]

Deviations from the general obligations of the GATT may hence be justified under Article XX if the relevant measures fall within one of the categories of Article XX and meet the requirement of the *chapeau*.[122] Although not explicitly referred to in the wordings of Article XX, in practice, Members often provide scientific evidence to the WTO to prove that their measures objectively relate to health and environmental concerns, and thus qualify as 'exceptions' under Article XX.[123] As quoted above, paragraphs (b) and (g) of Article XX address human health and environmental safety concerns, and offer two possible tracks to justify restrictive measures on international trade in GMOs.

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[119] L Boisson de Chazournes and MM Mbengue, 'GMOs and Trade: Issues at Stake in the EC Biotech Dispute' (2004) 13(3) *RECIEL* 289, 291.
[120] The definition of 'like products' under the GATT is discussed in detail in the preceding section 4.2.1 of this chapter.
[121]The GATT 1994, ArticleXX.
[122] AH Qureshi, 'The Cartagena Protocol on Biosafety and the WTO-Co-Existence or Incoherence?' (2000) 49 *International and Comparative Law Quarterly* 835, 848; H Anderson, 'Protection of Non-trade Values in WTO Appellate Body Jurisprudence: Exceptions, Economic Arguments, and Eluding Questions' (2015) 18(2) *Journal of International Economic Law* 383, 394; and P Van den Bossche, *The Law and Policy of the World Trade Organisation* (Cambridge University Press, 2006), 617.
[123] D Motaal, 'Is the World Trade Organisation Anti-Precaution?' (2005) 39(3) *Journal of World Trade* 483, 491.

Paragraph (b) is relevant to international trade in GMOs considering the potential risks that are posed by GMOs to human, animal or plant life or health. The AB in the *EC-Asbestos* case found that trade restrictive measures taken for national public health reasons which are supported by appropriate scientific evidence fell under the category of paragraph (b).[124] In order to determine whether a measure is necessary within the meaning of paragraph (b), a preliminary 'necessary' test must be taken based on all relevant factors, with a particular focus on 'the extent of the contribution to the achievement of a measure's objective and its trade restrictiveness' and 'the importance of the interests or values at stake'.[125] Moreover, the measure must have no 'possible alternatives' identified by the complaining Member[126] which are not only less trade restrictive, but also 'preserve for the responding Member its right to achieve its desired level of protection with respect to the objective pursued', and are 'reasonably available'.[127]

Also, the applicability of paragraph (g) is relevant to international trade in GMOs given the GMOs' risks to the environment, in particular environmental contamination to non-GM organisms. By far, in all the nine GATT and WTO disputes (at the date of writing) in which paragraph (g) has been invoked, the Panels and the AB have demonstrated 'friendly' and 'flexible' attitudes when interpreting 'exhaustible natural resources' while at the same time also maintaining a high threshold for invoking paragraph (g) exception.[128] The case law has not yet reached any consensus on the meaning and scope of paragraph (g), but the AB in the *Shrimp-Turtle* case interpreted broadly the concept of 'exhaustible natural resources' and included 'living species……in certain circumstances indeed susceptible of depletion, exhaustion and extinction, frequently because of human activities'.[129] There seems to be no doubts that biodiversity would constitute an exhaustible natural resources.[130]

Even if a domestic measure on GMOs were considered to fall under one of the above mentioned categories, its legitimacy must also be tested against the *chapeau* of Article XX, which requires that the exceptions do not constitute arbitrary or unjustifiable

[124] *EC-Asbestos, ABR* (n 98), para 162.
[125] *Brazil-Measures Affecting Imports of Retreaded Tyres (Tyres (Brazil-Retreaded Tyres)*, ABR, WT/D332/AB/R, 17 December 2007, para 156.
[126] *United States-Measures Affecting the Cross-Border Supply of Gambling and Betting Services*, ABR, WT/DS285/AB/R, 7 April 2005, para 311.
[127] *Ibid*, paras 308 & 311.
[128] M Chi, '"Exhaustible Natural Resource" in WTO Law: GATT Article XX (g) Disputes and Their Implications' (2014) 48(5) *Journal of World Trade* 939, 964.
[129] *Shrimp-Turtle,* ABR (n 115), para 128.
[130] Boisson de Chazournes and Mbengue (n 119), 294.

discrimination or disguised prohibition on international trade.[131] Accordingly, both the SPS Agreement and the TBT Agreement prohibit arbitrary or unjustifiable discrimination or disguised prohibition on international trade.[132] Article XX, thus, exists as a potential source to permit unilateral actions, but the *chapeau* makes sure that this permission is not used as a guise for unilateralism and protectionism.[133]

In practice, however, Article XX has not provided Members with much room to enact environmental measures. Of the 44 WTO cases (at the date of writing) in which the respondent Members have tried to invoke Article XX as a defence to a breach of other GATT provisions, it is only in the case of *EC-Asbestos* that such a move has been successful.[134] In most cases, the cause of environmental protection (or equivalent) was accepted, but the way in which it was implemented was problematic.[135] For example, in the *US-Gasoline* case, the AB found that the measure at issue did meet the terms of paragraph (g). However, the US gasoline rule was unpredictable for foreign refineries, thus it constituted 'unjustifiable discrimination' and a 'disguised restriction on international trade' under the Article XX *chapeau*, and therefore was not justified under Article XX.[136] Similarly, in the *Shrimp-Turtle* case, the AB found that the disputed measure fell under the category of paragraph (g), but failed the test against the Article XX *chapeau*.[137] Likewise, in the *Brazil-Retreaded Tyres* case, the AB held that the disputed Brazilian policy was within the purview of paragraph (b), but constituted arbitrary or unjustifiable discrimination and did not meet the requirement of the *chapeau*, although with this case, one may argue that an AB compliant measure (i.e. one

[131] E Vranes, *Trade and the Environment: Fundamental Issues in International Law, WTO Law, and Legal Theory* (Oxford University Press, 2009), 276-81; and L Manson and T Epps, 'Water Footprint Labelling and WTO Rules' (2014) 23(3) *RECIEL* 329, 339.
[132] The SPS Agreement, Preamble; and The TBT Agreement, Preamble.
[133] PJ Wells, 'Unilateralism and protectionism in the World Trade Organisation: the Interpretation of the Chapeau within GATT Article XX' (2014) 13(3) *Journal of International Trade Law and Policy* 223, 227-8.
[134] Public Citizen, 'Only One of 44 Attempts to Use the GATT Article XX/GATS Article XIV "General Exceptions" Has Ever Succeeded: Replicating the WTO Exception Construct Will Not Provide for an Effective TPP General Exception', August 2015, available at: https://www.citizen.org/documents/general-exception.pdf, last accessed on 30 April 2017.
[135] AH Ansari and NAKN Mahmod, 'Biosafety Protocol, SPS Agreement and Export and Import Control of LMOs/GMOs' (2008) 7(2) *Journal of International Trade Law and Policy* 139, 163.
[136] *United States-Standards for Reformulated and Conventional Gasoline (US-Gasoline)*, ABR, WT/DS2/AB/R, 20 May 1996, 21 & 30.
[137] *Shrimp-Turtle,* ABR (n 115), para 126.

which did not have a Mercosur exemption) would in fact have been more trade restrictive rather than less trade restrictive.[138]

4.3 The SPS Agreement is arguably the most relevant WTO Agreement on international trade in GMOs

4.3.1 The scope of application of the SPS Agreement

The scope of application of the SPS Agreement is limited to measures necessary to protect human, animal or plant life or health, whether or not these are technical requirements.[139] An SPS measure can be a relevant law, decree, regulation, requirement and procedure.[140]

As a trade agreement, the focus of the SPS Agreement is inevitably trade rather than environmental, health and safety concerns. To expand, the SPS Agreement does not create any minimum standard for food safety or for production processes. There is no requirement that certain measures must be taken regarding health and environmental protection issues. A Member does not violate the SPS Agreement by not regulating the imports or by permitting exports unsafe for the foreign consumer.[141]

The SPS Agreement originates from Article XX(b) and (g) of the GATT. It is also a 'carve-out' from the TBT Agreement as it deals with 'a limited set of measures'.[142] The substantive requirements for national regulatory measures under the SPS Agreement are often regarded as more stringent than the ones under GATT and the TBT Agreement, since the SPS Agreement has the strong requirement that all SPS measures must be based on risk assessments which are supported by sufficient scientific evidence.[143] Thus, the SPS

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[138] Retreaded tyres imported from Mercosur countries (also known as Southern Common Market, a regional trade agreement with the full members of Argentina, Brazil, Paraguay, Uruguay and Venezuela) were exempted from the Brazil's import Ban and fines on retreaded tyres. See *Brazil-Retreaded Tyres*, ABR (n 125), paras 52-5, 212, 223 & 228; Ngangjoh-Hodu (n 120), 224; and G Gagliani, 'The Interpretation of General Exceptions in International Trade and Investment Law: Is a Sustainable Development Interpretive Approach Possible?' (2015) 43(4) *Denver Journal of International Law & Policy* 559, 571.

[139] The SPS Agreement, Annex A (1).

[140] *Ibid.*

[141] S Charnovitz, 'The Supervision of Health and Biosafety Regulation by World Trade Rules' (1999-2000) 13 *Tulane Environmental Law Journal* 271, 276.

[142] D Motaal, 'The "Multilateral Scientific Consensus" and the World Trade Organisation' (2004) 38 *Journal of World Trade* 855, 856.

[143] Discussion on measures taken where there is insufficient scientific evidence will be presented in section 4.3.3 of this chapter.

Agreement has clearer rules on risk assessment and scientific evidence than the GATT and the TBT Agreement which do not have explicit provisions on such issues.[144]

The *EC-Biotech* case was the first WTO dispute to comprehensively analyse the conditions of the applicability of the SPS Agreement. The claimants (US, Canada, Argentina) did not challenge the respondent's (EU) legislation on GMO approvals,[145] but mainly challenged the alleged general EU moratorium on approvals of biotech products, and the EU Member States' safeguard measures prohibiting the import/marketing of certain GMOs at the domestic level. The Panel treated both the EU approval procedures[146] and member states' safeguard measures as SPS measures.[147] It found that the general *de facto* moratorium which was in effect was not itself an SPS measure, but rather affected the operation and application of the EC approval procedures.[148] The Panel determined that the moratorium led to procedural delay in approving new biotech products for commercialisation at the EU level, and hence were in violation of Annex C(1)(a) and Article 8 of the SPS Agreement.[149] In addition, the safeguard measures taken by EU Member States against certain biotech products were found to constitute a violation of Articles 5.1 and 2.2 of the SPS Agreement, and could not be justified under Article 5.7 of the SPS Agreement; thus, Member States were recommended to bring their safeguard measures into conformity with the SPS Agreement.[150] Although the EU said it would comply with the Panel's decisions, it requested an extension of time to do so.[151]

Importantly, the *EC-Biotech* Panel also provided a broad interpretation of the definition of SPS measures and expanded the scope of application of the SPS Agreement, by deciding that if at least one of the measure's purposes is for sanitary or phytosanitary considerations, the measure falls within the SPS Agreement, even if other purposes may also

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[144] PE Hagen and JB Weiner, 'The Cartagena Protocol on Biosafety: New Rules for International Trade in Living Modified Organisms' (2000) 12 *Georgetown International Environmental Law Review* 697, 709-10.
[145] Relevant EU legislation will be considered in detail in Chapter 7, section 3.2.1 of this thesis.
[146] *European Communities-Measures affecting the Approval and Marketing of Biotech Products* (*EC-Biotech*), Panel Report, WT/DS291/292/293/R, 29 September 2006, paras 7.436
[147] *Ibid*, paras 7.2610, 7.2662, 7.2702, 7.2749, 7.2774, 7.2813, 7.2854, 7.2891 & 7.2922.
[148] *Ibid*, paras 7.1393 & 8.6.
[149] *Ibid*, paras 7.1272 & 8.6.
[150] *Ibid*, paras 7.1264, 7.1273 & 7.2550.
[151] EC, 'EU and Canada Settle WTO Case on Genetically Modified Organisms', 15 July 2009, available at: http://europa.eu/rapid/press-release_IP-09-1142_en.htm?locale=en; and EC, 'EU and Argentina Settle WTO Case on Genetically Modified Organisms', 18 March 2010, available at: http://europa.eu/rapid/press-release_IP-10-325_en.htm?locale=en, both last accessed on 30 April 2017.

fall within other agreements.[152] The extended definition of 'SPS measure' covers a wider range of trade-restrictive measures taken to protect the environment by addressing the protection of the life and health of animals and plants,[153] including measures to protect biodiversity as 'damage to "biodiversity" implies damage to living organisms.'[154]

Particularly, GMOs with potential adverse effects on the environment and biodiversity are generally covered by Annex A to the SPS Agreement.[155] It does not seem difficult for a state to argue or for a WTO Panel to recognise that domestic GMO regulations with trade impacts are under the purview of the SPS Agreement. In relation to GMO regulation, any national scheme for its approval and control will qualify as an SPS measure in the future; consequently, the SPS Agreement would be of primary relevance to domestic regulation or decision-making on GMOs and their international trade which may present environmental risk.[156]

4.3.2 The SPS Agreement's requirement on risk assessment and the significant role of scientific evidence

Under the SPS Agreement, Members are free to choose their appropriate sanitary and phytosanitary level of protection,[157] and have the right to determine their own appropriate level of protection to 'zero risk'.[158] However, in doing so, they have an obligation to minimise negative trade effects.[159] Article 2.3 of the SPS Agreement is a non-discrimination rule retained from the GATT, reflecting the most favoured nation and national treatment principles. It specifically prohibits SPS measures from constituting arbitrary or unjustifiable

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[152] *EC-Biotech*, Panel Report (n 146), para 7.425; and J Peel, 'Scope of Application of the SPS Agreement: A Post-Biotech Analysis', in G Van Calster and MD Prévost (eds), *Research Handbook on Environment, Health and the WTO* (Edward Elgar, 2013), 345.
[153] *EC-Biotech*, Panel Report (n 146), para 7.207.
[154] *Ibid*, para 7.372.
[155] E Petersmann, 'The WTO Dispute over Genetically Modified Organisms: Interface Problems of International Trade Law, Environmental Law and Biotechnology Law', in F Francioni and T Scovazzi (eds), *Biotechnology and International Law* (Hart Publishing, 2006), 197.
[156] B Eggers and R Mackenzie, 'The Cartagena Protocol on Biosafety' (2000) 3(3) *Journal of International Economic Law* 525, 536; S Oberthür and T Gehring, 'Institutional Interaction in Global Environmental Governance: The Case of the Cartagena Protocol and the World Trade Organisation' (2006) 6(2) *Global Environmental Politics* 1, 12; S Safrin, 'Treaties in Collision? The Biosafety Protocol and the World Trade Organisation Agreements' (2002) 96 *The American Journal of International Law* 606, 627; and J Peel, 'A GMO by Any Other Name…Might Be an SPS Risk!: Implications of Expanding the Scope of the WTO Sanitary and Phytosanitary Measures Agreement' (2006) 17(5) *European Journal of International Law* 1009, 1024-5.
[157] The SPS Agreement, Articles 3.3. Its Annex A (5) also specifically states that the 'appropriate level' under Article 5.6 is the level deemed appropriate by the Member.
[158] *Australia-Salmon*, ABR, WT/DS18/AB/R, 20 October 1998, para 126.
[159] The SPS Agreement, Article 5.4.

discrimination or a disguised restriction on international trade.[160] Article 5.6 of the SPS Agreement requires SPS measures to be least trade-restrictive.[161]

The SPS agreement encourages Members to base their SPS measures on international standards, guidelines, or recommendations.[162] It recognises three international standard-setting organisations which were in existence long before the Uruguay Round trade negotiations under the WTO: the Codex Alimentarius Commission (for food safety), the Office Internationale des Epizooties (for animal health and zoonoses), and the Secretariat of the International Plant Protection Convention (for plant health).[163] These international bodies promulgate environmental, health and safety standards for internationally traded products, including GM products, among which the Codex has most directly addressed GMO regulatory issues.[164]

At the same time, the SPS Agreement allows Members to introduce or maintain SPS measures which result in a higher level of sanitary or phytosanitary protection than such international standards.[165] In such a circumstance, the member must demonstrate that their SPS measures are based on adequate risk assessment[166] and supported by sufficient scientific evidence,[167] ensure that there is a reasonably objective relationship between the SPS measures taken and the level of risk identified by the risk assessment,[168] and make sure that their measures are not inconsistent with any other provision of this Agreement.[169]

That is to say, the SPS Agreement encourages the harmonisation of SPS measures on as wide a basis as possible, while at the same time recognising the right of Members to determine their appropriate level of protection.[170] In determining whether an SPS measure is based on, conforms to, or results in a higher level of protection than an international standard, the Panels should undertake a 'comparative assessment' between the SPS measure against the benchmark of the international standard. In so doing, the Panels may be guided by any

[160] *Ibid*, Article 2.3.
[161] *Ibid*, Article 5.6.
[162] *Ibid*, Articles 3.1 & 3.2.
[163] *Ibid*, Article 3.
[164] RB Stewart, 'GMO Trade Regulation and Developing Countries', *Public Law & Legal Theory Research Paper Series Working Paper No. 09-70*, (New York University School of Law, 2009), 13.
[165] The SPS Agreement, Article 3.3.
[166] *Ibid*, Article 5.1.
[167] *Ibid*, Article 2.2 & 5.2.
[168] *Ibid*, Article 3.3.
[169] *Ibid*, Article 2.1.
[170] *EC-Hormones*, ABR (n 90), para 177.

relevant interpretative principles (such as the principles codified in the VCLT) and additional sources including views of the relevant standard-setting bodies.[171]

The centre piece of the SPS Agreement is the stringent requirement that all SPS measures must be based on a risk assessment. 'Based on' may be taken as refer to a certain objective relationship between two element; that is to say, to 'an objective situation that persists and is observable between an SPS measure and a risk assessment'.[172] Among others, this point is made in Article 5.1 of the SPS Agreement which provides that:

> 'Members shall ensure that their sanitary and phytosanitary measures are based on an assessment, as appropriate to the circumstances, of the risks to human, animal or plant life or health, taking into account risk assessment techniques developed by the relevant international organisations.'[173]

Risk assessment is defined for the purpose of the SPS Agreement as the evaluation of the likelihood of domestic entry, establishment or spread of a pest or disease and the associated consequences according to the proposed SPS measures; or the evaluation of the potential for adverse effects on human or animal health arising from the products to be imported.[174] In the case of a dispute before a WTO Panel, it is up to the Panel to decide whether a contested measure is based on a risk assessment or not.

However, it is still not clear what exactly constitutes a risk assessment, how a risk assessment should be conducted, and when a measure is taken 'without sufficient scientific evidence'. Although the Appellate Body used the wording of 'sufficiently supported or reasonably warranted',[175] it has not decided what constitutes a rational relationship.

Furthermore, Article 5.2 of the SPS Agreement indicates some of the factors that should be taken into account in risk assessments which include: available scientific evidence; relevant PPMs; relevant inspection, sampling and testing methods; prevalence of specific diseases or pests; existence of pest- or disease- free areas; relevant ecological and environmental conditions; and quarantine or other treatment.[176] Article 5.2 is clearly not a

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[171] *India-Measures concerning the Importation of Certain Agricultural Products (India-Agricultural Products)*, ABR, WT/DS430/AB/R, 4 June 2015, para 5.79.
[172] *EC-Hormones*, ABR (n 90), para 189.
[173] The SPS Agreement, Article 5.1.
[174] *Ibid*, Annex A (4).
[175] *EC-Hormones*, ABR (n 90), para 186.
[176] The SPS Agreement, Article 5.2.

closed list. The risks to be evaluated under the requirement of Article 5.1 are not only risks ascertainable in a science laboratory, but also risks in human societies as they apply to the real world.[177] No risks should be excluded from assessments from the scope of application of Articles 5.1 and 5.2 on an *a priori* basis.[178] Also, no minimum magnitude of risk must be established under a risk assessment.[179]

The risk assessment under the SPS Agreement must be based on ascertainable risk.[180] The substantive requirement that an SPS measure must be based on a risk assessment demands a rational relationship between the SPS measure and the risk assessment.[181] It also demands 'a rational or objective relationship between the SPS measure and the scientific evidence.'[182] According to the AB in the *EC-Hormones* case, Articles 5.1 and 2.2 of the SPS Agreement should constantly be read together; and Article 5.1 is a 'specific application of the basic obligations contained in Article 2.2.[183]

Scientific evidence thus plays an important part in the explicitly science-based SPS Agreement.[184] Article 2.2 of the SPS Agreement imposes strong scientific requirements by requiring Members to ensure that any SPS measure: (1) is applied only to the extent necessary to protect human, animal or plant life or health, (2) is based on scientific principles, and (3) is not maintained without sufficient scientific evidence, except as provided for in Article 5.7.[185]

The focus of the WTO DSB has been on the 'sufficiency' requirements.[186] In the *Japan-Varietals* case, the Panel, firstly, examined the third requirement, and decided not to

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[177] *EC-Hormones*, ABR (n 90), para 187.
[178] *Ibid*, para 206.
[179] *Ibid*, para 186.
[180] The SPS Agreement, Article 2.2.
[181] *EC-Hormones*, ABR (n 90), paras 189 & 193.
[182] *Japan-Measures Affecting Agricultural Products (Japan-Varietals)*, ABR, WT/DS76/AB/R, 22 February 1999, para 84.
[183] *EC-Hormones*, ABR (n 90), para 180.
[184] D Xue and C Tisdell, 'Global Trade in GM Food and the Cartagena Protocol on Biosafety: Consequences for China' (2002) 15 *Journal of Agricultural and Environmental Ethics* 337, 353; and L Gruszczynski, 'Science in the Process of Risk Regulation under the WTO Agreement on Sanitary and Phytosanitary Measures' (2006) 7(4) *German Law Journal* 371.
[185] The SPS Agreement, Article 2.2. It states that: '*Members* shall ensure that any sanitary or phytosanitary measure is applied only to the extent necessary to protect human, animal or plant life or health, is based on scientific principles and is not maintained without sufficient scientific evidence, except as provided for in paragraph 7 of Article 5.'
[186] Scott (n 91), 86.

look at the first two requirements because the sufficiency requirement was not fulfilled.[187] This in a sense provides evidence that these three requirements seem to be cumulative in nature, and a legitimate SPS measure should fulfil all three conditions.[188] In the same vein, in the *Australia-Apples* case, the AB upheld the Panel's findings and stated that Australia's Import Risk Analysis conclusions, based on which import of apples from New Zealand was banned, were not objective and coherent because they exaggerated or overestimated certain risks and consequences and did not find sufficient support in the scientific evidence relied upon.[189]

4.3.3 The precautionary principle and Article 5.7 of the SPS Agreement

The precautionary principle allows measures to be taken to protect the environment when full scientific certainty is not available. It aims to bridge the gap between scientific knowledge and decision-making process.[190] The precautionary principle itself is still controversial and is unclear on issues such as its definition, content, scope of application, and impact on the burden of proof.[191]

Principle 15 of the 1992 Rio Declaration on Environment and Development (Rio Declaration) is the most widely cited definition of the precautionary principle. It states that 'where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation.'[192] Principle 15 thus sets out the conditions on which precautionary measures can be taken: some scientific knowledge of potential risks rather than simply fear; a cost-benefit analysis; and a threat of serious or irreversible damage. However, since the Rio

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[187] *Japan-Varietals*, ABR (n 182), para 8.62.
[188] Scott (n 91), 85.
[189] *Australia-Measures Affecting the Importation of Apples from New Zealand (Australia-Apples)*, ABR, WT/DS376/AB/R, 29 November 2010, paras 222-3.
[190] N de Sadeleer, 'The Precautionary Principle in European Community Health and Environmental Law: Sword or Shield for the Nordic Countries', in N de Sadeleer (ed), *Implementing the Precautionary Principle: Approaches from the Nordic Countries, the EU and USA* (Earthscan Publishing Ltd, 2007), 6.
[191] Stewart (n 164), 27-8; and S Marr and A Schwemer, 'The Precautionary Principle in German Environmental Law', in H Somsen and others (eds) *Yearbook of European Environmental Law: Volume 3* (Oxford University Press, 2003), 125-48.
[192] Rio Declaration, Vol. I, Annex I. Adopted by the UN Conference on Environment and Development (UNCED), 3-14 June 1992, (1992) 31 ILM 874.

Declaration itself is a soft law instrument and is not binding, this definition has been criticised as vague and leaves a number of questions unanswered.[193]

The precautionary principle originated in German environmental law in the 1970s, and entered into the international arena in the Second Conference on the Protection of the North Sea in 1987.[194] Although some international judicial decisions suggest that there is a trend towards making the precautionary principle part of customary international law,[195] currently the precautionary principle is probably not a principle of customary international law,[196] but has been widely included and discussed in international agreements, domestic policy and decisions, reports and statements made by international judicial institutions, and academic works.[197]

While no reference to the precautionary principle is made in either the GATT or in the TBT Agreement, there exist debates on whether the SPS Agreement accommodates the precautionary principle, and if so, to what extent. Article 5.7 of the SPS Agreement states that:

> '*In* cases where relevant scientific evidence is insufficient, a Member may provisionally adopt sanitary or phytosanitary measures on the basis of available pertinent information, including that from the relevant international organizations as well as from sanitary or phytosanitary measures applied by other Members. In such circumstances, Members shall seek to obtain the additional information necessary for a more objective assessment of risk and review the sanitary or phytosanitary measure accordingly within a reasonable period of time.'[198]

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[193] F Snyder, 'Soft Law and Institutional Practice in the European Community', in S Martin (ed), *The Construction of Europe* (Kluwer Academic Publishers, 1994), 198; C Chinkin, 'The Challenge of Soft Law: Development and Change in International Law' (1989) 38 *International and Comparative Law Quarterly* 850, 851; and Boyle and Chinkin (n 47), 212-3; Poustie (n 66), 112; and Motaal (n 123), 485.

[194] The Ministerial Declaration of the Second Conference on the Protection of the North Sea, (1987) 27 ILM 835, 840, Article XVI(1).

[195] Seabed Disputes Chamber of the International Tribunal for the Law of the Sea, Advisory Opinion, 1 February 2011, para 131-135.

[196] Poustie (n 66), 115; and E Fisher, 'Is the Precautionary Principle Justifiable?' (2001) 13(3) *Journal of Environmental Law* 315, 327.

[197] More discussion on the precautionary principle is available at: e.g. D Bodansky, 'Scientific Uncertainty and the Precautionary Principle' (1991) 33(7) *Environment* 4, 4; D Hughes, 'The Status of the "Precautionary Principle" in Law' (1995) 7 *Journal of Environmental Law* 224, 238; S LaFranchi, 'Surveying the Precautionary Principle's Ongoing Global Development: The Evolution of An Emergent Environmental Management Tool' (2005) 32 *Boston College Environmental Affairs Law Review* 679, 687-99; and A Herwig and C Joerges, 'The Precautionary Principle in Conflicts Law Perspectives', in G Van Calster and MD Prévost (eds), *Research Handbook on Environment, Health and the WTO* (Edward Elgar, 2013), 12.

[198] The SPS Agreement, Article 5.7.

Some argue that the SPS Agreement includes precautionary language in Article 5.7 which permits measures to be adopted provisionally on the basis of available pertinent information.[199] Others take the view that the SPS Agreement allows for precautionary action, and it is Article 5.1 instead of Article 5.7 that does it, as Article 5.7 is designed to deal with situations in which there is yet to be sufficient science evidence.[200] It appears to this author that the former argument makes more sense based on the case law that will be discussed below.

In the *EC-Hormones* case, the EC argued that the precautionary principle was a general customary rule or at least a general principle of law which should lead to a less strict interpretation of Articles 5.1 and 5.2 of the SPS Agreement.[201] This argument was rebutted by the AB. The AB was reluctant to decide on the status of the precautionary principle in international law, and found it 'unnecessary and probably imprudent' to determine whether the precautionary principle has been widely accepted as a principle of general or customary international law.[202] It decided that the precautionary principle is not binding on the WTO, and cannot serve as grounds for justifying otherwise inconsistent WTO measures.[203] This approach was reaffirmed by the Panel in the *EC-Biotech* case.[204]

The AB in the *EC-Hormones* case, on the other hand, found that the precautionary principle finds reflection in the Preamble, Article 3.3 and Article 5.7 of the SPS Agreement, and could be relevant to the interpretation of the SPS Agreement.[205] Article 5.7 of the SPS Agreement reflects its own version of the precautionary principle and has great potential impact on WTO rules.[206] Although requiring that SPS measures must be based on sound science, the SPS Agreement allows provisional precautionary measures to be taken in the absence of sufficient scientific evidence.

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[199] P Birnie, AE Boyle and C Redgwell, *International Law and the Environment* (3rd edition, Oxford University Press, 2009), 780.
[200] Motaal (n 123), 496.
[201] *EC-Hormones*, European Community's appellant submission, para 91.
[202] *EC-Hormones*, ABR (n 90), para 123.
[203] *Ibid*, paras 123-125.
[204] *EC-Biotech,* Panel Report (n 146), paras 7.3067 & 7.3220.
[205] *EC-Hormones*, ABR (n 90), para 124. The Appellate Body found that '*the* precautionary principle does not… relieve a panel from the duty of applying the normal principles of treaty interpretation in reading the provisions of the SPS Agreement.'
[206] I Cheyne, 'Gateways to the Precautionary Principle in WTO Law' (2007) 19(2) *Journal of Environmental Law* 155, 159 & 172.

In furtherance of that point, the AB in the *Japan-Varietals* case stated that for such provisional measures to be taken, four conditions must be met: the relevant scientific evidence must be insufficient; the measures are provisionally adopted on the basis of available pertinent information; necessary additional information must be sought; and the review of relevant measures within a reasonable period of time must be undertaken. The AB also found that these requirements were cumulative in nature. In other words, a measure would be found inconsistent with Article 5.7 whenever one of the requirements is not met.[207]

In relation to the critical question of how to determine whether relevant scientific evidence is sufficient or not, the indication given by the *EC-Biotech* Panel is that this is largely a scientific question.[208] The AB, in the disputes of *EC-Hormones* and *EC-Asbestos*, recognised that in a risk assessment, Members could be guided by 'a divergent opinion coming from qualified and respected sources',[209] and do not have to follow automatically 'a majority scientific opinion'.[210] In the same vein, in the *Japan-Apples* case, the AB stated the evaluation of whether relevant scientific evidence is insufficient must be carried out in the light of a particular inquiry; and such insufficiency would be constituted if 'the body of available scientific evidence does not allow, in quantitative or qualitative terms, the performance of an adequate assessment of risks as required'.[211] Scientific insufficiency may thus be considered legitimate under the SPS Agreement, subject to compliance with the four conditions of Article 5.7. This leaves the door open for treaties which expressly adopt precautionary principle, such as the Cartagena Protocol, to shed light on the interpretation of the SPS Agreement.[212]

What is more, according to the WTO case law, the reflection of the precautionary principle in the SPS Agreement[213] cannot override the scientific risk assessment requirement[214], and cannot be used by a Member to mitigate its obligation to base its SPS measures on a risk assessment. Hence, in the *EC-Hormones* case, the AB decided that Article

[207] *Japan-Varietals*, ABR (n 182), para 89.
[208] *EC-Biotech,* Panel Report (n 146), 976.
[209] *EC-Hormones*, ABR (n 90), para 194.
[210] *EC-Asbestos, ABR* (n 98), para 17.
[211] *Japan-Measures Affecting the Importation of Apples (Japan-Apples)*, ABR, WT/DS245/AB/R, 26 November 2003, para 179.
[212] CE Foster, 'Precaution, Scientific Development and Scientific Uncertainty under the WTO Agreement on Sanitary and Phytosanitary Measures' (2009) 18(1) *RECIEL* 50, 51; and S Bell, D McGillivray and OW Pedersen, *Environmental Law* (8th edition, Oxford University Press, 2013), 165-9.
[213] The SPS Agreement, Article 5.7.
[214] *Ibid*, Articles 5.1, 2.2.

5.7 did not constitute an exception from a 'general obligation' under Article 5.1, and did not override the provisions of Article 5.1 and 5.2 of the SPS Agreement,[215] reflecting the Agreement's 'delicate and carefully negotiated balance' between trade and the life and health of human beings.[216]

Similarly, in the *EC-Biotech* case, the Panel held that a Member's decision to follow a precautionary approach in its SPS measures could have a bearing on a Panel's assessment of whether such measures were based on a risk assessment.[217] However, if a Member incorporates a precautionary approach in its SPS measures, such an approach must be consistent with the requirements of Article 5.1.[218]

In terms of the extent that the SPS Agreement incorporates the precautionary principle, some argue that the accommodation of precaution under the SPS Agreement is unsatisfactory, particularly regarding the recognition of new or divergent scientific opinions and the appropriateness of a precautionary approach.[219] Also, several commentators posit that incorporating the precautionary principle in the SPS Agreement does not necessarily make it easier for Members to justify import bans for SPS purposes, because the SPS Agreement does not require cost-benefit analysis, and the potential for the precautionary principle to loosen the SPS Agreement's requirement by allowing for scientific uncertainty will be defeated by the requirement of cost-benefit analysis which is required by the precautionary principle (as stated in the above-mentioned Rio Declaration definition).[220]

From the above, Article 5.7 appears to be a 'qualified exemption' rather than an exception to Article 2.2 for Members.[221] The burden lies on the complaining party to prove that the challenged measure is inconsistent with Article 5.7.[222] In order to be consistent with Article 5.1, provisional precautionary measures taken under Article 5.7 should also be based on science, and could only be taken when a risk assessment demonstrates that scientific evidence is insufficient, moreover, such measures must be reviewed in case new scientific evidence arises.

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[215] *EC-Hormones*, ABR (n 90), para 125.
[216] *Ibid*, para 177.
[217] *EC-Biotech,* Panel Report (n 146), paras 7.3065 & 7.3066.
[218] *Ibid*, para 7.3065.
[219] Foster (n 212), 58.
[220] Charnovitz (n 141), 294.
[221] *Japan-Varietals*, ABR (n 182), para 80.
[222] *EC-Biotech,* Panel Report (n 146), paras 7.3000, 7.3001 & 7.3004.

4.4 The TBT Agreement and its labelling requirements

4.4.1 The labelling of GMOs is likely to be regulated by the TBT Agreement

The labelling of GMOs may fall within the SPS Agreement or the TBT agreement, depending on the principal objective of the measure. According to Article 1.5, the TBT Agreement explicitly covers labelling requirements which do not fall within the SPS Agreement.[223] Consequently, labelling requirements which are directly related to food safety for the protection of human, animal, or plant life or health (although such situations are rather rare) would fall under the SPS Agreement. Generally speaking, packaging and labelling requirements aimed at all other reasons, such as providing information to consumers, would fall under the TBT Agreement.

As argued above, the TBT Agreement requires that technical regulations must be non-discriminatory.[224] Legitimate technical regulations should be based on a risk assessment, taking into account available scientific and technical information; should not create unnecessary barriers to trade, and should be no more trade restrictive than necessary to fulfil a legitimate objective[225].

On the one hand, the TBT Agreement appreciates non-trade policy objectives and allows for necessary obstacles to international trade in appropriate circumstances. It allows trade-restrictive technical regulations to be used for 'legitimate objectives'.[226] Some examples of 'legitimate objectives' for TBT purposes include, *inter alia*: 'national security requirements; the prevention of deceptive practices; protection of human health or safety, animal or plant life or health, or the environment'.[227] Therefore, under the TBT Agreement, these will constitute valid objects for GMO labelling. Yet, that list is a 'reference point' rather than a 'closed list'.[228] The word 'legitimate' itself surely implies that there are illegitimate objectives as well,[229] and the complainants would bear the burden of proving an

[223] The TBT Agreement, Article 1.5.
[224] *Ibid*, Article 2.1.
[225] *Ibid*, Article 2.2.
[226] *Ibid*.
[227] *Ibid*.
[228] *US-Tuna II*, ABR, WT/DS381/AB/R, 16 May 2012, para 313.
[229] M Andenas and S Zleptnig, 'Proportionality: WTO Law: In Comparative Perspective' (2007) 42 *Texas International Law Journal* 371, 422.

objective's illegitimacy.[230] Consequently, labelling requirements relating to GMOs based on non-listed considerations, such as consumers' right to know and providing the consumers with information on the countries which the products are from, are likely be identified as 'legitimate objectives' for TBT purposes.[231]

On the other hand, the TBT Agreement seeks to ensure that technical regulations are not more trade-restrictive than necessary to fulfil a legitimate objective and do not create unnecessary obstacles to international trade.[232] For example, the national treatment and most favoured nation treatment requirements of 'like products' must be followed;[233] technical regulations should be least-trade-restrictive[234] and must be designed to 'fulfil a legitimate objective;[235] and Members must use relevant international standards as the basis of technical regulations where such standards exist or their completion is imminent unless they would be ineffective or inappropriate.[236] The labelling of GMOs which fall under the TBT Agreement would need to fulfil these requirements.

It is not clear how the TBT Agreement will apply to the regulation of GMOs. Controversial questions include: whether GMOs and non-GMOs are 'like products' for the purposes of both Article 2.1 of the TBT Agreement and Articles I and III of the GATT (on non-discrimination requirements); the likely impact of labelling and product-tracing requirements for GMOs; and the implications for Article 2.1's no less favourable treatment requirement.[237]

4.4.2 The definition of 'like products' under the TBT Agreement

The core of the TBT Agreement is the non-discrimination requirements (Article 2.1) which require Members not to accord 'less favourable treatment' to imported products *vis-à-vis* domestic 'like products' or 'like products' originating in any other country.[238] However, this does not forbid discrimination between imported and domestic products or

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[230] *United States-Certain Country of Origin Labelling Requirements (US-COOL)*, ABR, WT/DS384/386/AB/R, 29 June 2012, para 449.
[231] *Ibid*, para 453.
[232] The TBT Agreement, Article 2.2.
[233] *Ibid*, Article 2.1.
[234] *Ibid*, Article 2.2, 2.3.
[235] *Ibid*, Article 2.2.
[236] *Ibid*, Article 2.4.
[237] D Morgan and G Goh, 'Genetically Modified Food Labelling and the WTO Agreements', (2004) 13(3) *RECIEL* 306, 306.
[238] *Ibid*, Article 2.1.

products imported from different countries which are not 'like products'. The debate focuses on whether two products (e.g. GM and non-GM products) are recognised as 'like products'. This has a huge impact on the regulation of GMOs, especially on the GMO labelling requirements' consistency with WTO rules.[239]

Whether 'like products' are defined under the TBT Agreement in the same way as under the GATT is a disputable question and one much discussed in the literature.[240] Some argue that the legal standards for justifying discrimination under GATT Article XX *chapeau* and Article 2.1 of the TBT Agreement should be essentially the same.[241] Others argue that the non-discrimination requirements of Article 2.1 are parallel and can be analogised to the obligations of GATT Articles I:1 and III:4; but the TBT Agreement does not contain a list of exceptions which would justify inconsistency with its Article 2.1.[242] Article XX of the GATT cannot be used to justify violation of Article 2.1 of the TBT Agreement, since it can be used only to justify violation of the GATT or other WTO provisions that expressly refer to GATT.[243] If 'like products' and 'less favourable treatment' under Article 2.1 of the TBT Agreement are defined in the same manner as in Articles I and III of the GATT, without exceptions, the TBT Agreement would appear 'far more intolerant of Member's technical regulations' than the GATT.[244]

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[239] Whether GMOs and non-GMOs are 'like products' also impacts on the application of the non-discrimination principles under the GATT, see discussion in section 4.2 of this chapter.

[240] The definition of 'like products' was discussed in detail previously in section 4.2.1 of this chapter. See also G Marceau and JP Trachtman, 'A Map of the World Trade Organisation Law of Domestic Regulation of Goods: The Technical Barriers to Trade Agreement, the Sanitary and Phytosanitary Measures Agreement, and the General Agreement on Tariffs and Trade' (2014) 48(2) *Journal of World Trade* 351, 358-68 & 409-30; DH Regan, 'Measures with Multiple Purposes: Puzzles from *EC-Seal Products*', *AJIL Unbound* (25 June 2015), available at: https://www.asil.org/blogs/measures-multiple-purposes-puzzles-ec%E2%80%94seal-products; and JY Qin, 'Accommodating Divergent Policy Objectives under WTO Law: Reflections on *EC-Seal Products*', *AJIL Unbound* (25 June 2015), available at: https://www.asil.org/blogs/accommodating-divergent-policy-objectives-under-wto-law-reflections-ec%E2%80%94seal-products, both last accessed on 30 April 2017.

[241] GM Durán, 'Measures with Multiple Competing Purposes after *EC-Seal Products*: Avoiding a Conflict between GATT Article XX-Chapeau and Article 2.1 TBT Agreement' (2016) 19 *Journal of International Economic Law* 467, 470.

[242] Marceau (n 114), 4-12; and T Voon, A Mitchell and C Gascoigne, 'Consumer Information, Consumer Preferences and Product Labels under the TBT Agreement', in T Epps and MJ Trebilcock (eds), *Research Handbook on the WTO and Technical Barriers to Trade* (Edward Elgar, 2013), 461.

[243] *China-Measures Related to the Exportation of Various Raw Materials*, ABR, WT/DS394/395/398/AB/R, 30 January 2012, paras 303 & 306; and I Espa, 'The Appellate Body Approach to the Applicability of Article XX GATT in the Light of China-Raw Materials: A Missed Opportunity?' (2012) 46(6) *Journal of World Trade* 1399, 1418-20.

[244] S Poli, 'The Reform of the EU Legislation on GMOs: A Journey to An Unknown Destination?' (2015) 4 *European Journal of Risk Regulation* 559, 140; and Ngangjoh-Hodu (n 120), 231.

The case law helps to shed some light on the question of how to determine if two products are 'like' under the TBT Agreement. In the *US-Clove Cigarettes* case, the AB emphasised the importance of the competition-based approach, and found that the determination of 'like products' in the TBT Agreement was to be approached in a way similar to GATT Article III:4.[245] The competition-based test of 'like products' applies to both national treatment and most favoured nation requirements of Article 2.1 of the TBT Agreement.[246] However, some argue that the AB in the *US-Clove Cigarettes* case has used the competitive relationship test in the TBT context as set up in the *EC-Asbestos* case too narrowly, hence some products may found to be 'not like, because they do not compete with each other, when they should be regarded as like for TBT purposes'.[247]

In the more recent *US-COOL* case, a US law that requires country of origin labelling ('COOL') for certain meat products was challenged. These labels defined country of origin on the basis of whether the animal (from which the meat was derived) was born, raised and/or slaughtered in the US.[248] The Panel found that the animals and meat products at issue were 'like products', because the discrimination was explicitly based on the products' origin. This determination was not appealed.[249]

Similarly, in the *US-Tuna II* case, the measure challenged by Mexico (complainant) was the US (respondent) domestic regulation[250] that sets out requirements for labelling tuna as 'dolphin safe' which are caught with a method that prevents accidental killing of dolphins. The import of tuna without such a label was banned by the US. The AB reaffirmed the competition-based approach and stated that decisions on whether two products are like should focus on the competitive relationship between and among the products.[251] The Panel examined all of the four traditional criteria and found that all the tuna products at issue were 'like products'.[252] It then held that the US measure was inconsistent with Article 2.1 (on no less favourable treatment), but is consistent with Article 2.2 (on not more trade-restrictive

[245] *US-Clove Cigarettes*, ABR (n 86), para 112.
[246] Marceau (n 114), 7.
[247] DH Regan, 'Regulatory Purpose in GATT Article III, TBT Agreement Article 2.1, the Subsidies Agreement, and Elsewhere: *Hic et ubique*', in G Van Calster and MD Prévost (eds), *Research Handbook on Environment, Health and the WTO* (Edward Elgar, 2013), 63.
[248] *US-COOL*, Panel Report, WT/DS384//386/R, 18 November 2011, paras 7.90-7.100.
[249] *Ibid*, para 7.256; T Voon, 'Exploring the Meaning of Trade-Restrictiveness in the WTO' (2015) 14(3) *World Trade Review* 451, 466; PC Mavroidis, 'What is not so Cool about US-COOL Regulations? A Critical Analysis of the Appellate Body's Ruling on US-COOL' (2014) 13(2) *World Trade Review* 299, 301.
[250] The Dolphin Protection Consumer Information Act of 1990, 101st Congress (1989-1990) S.2044.IS.
[251] *US-Tuna II*, ABR (n 228), 86-7, paras 214-5.
[252] *US-Tuna II*, Panel Report (n 92), paras 7.233-51.

than necessary) of the TBT Agreement.[253] The findings in the *US-Clove Cigarettes*, *US-COOL* and *US-Tuna II* cases demonstrate the AB's willingness to refer to the extensive GATT jurisprudence in interpreting the TBT Agreement, thus 'increasing the predictability of outcomes in potential TBT disputes'.[254]

If two products were found to be "like", the question remains whether imported products are treated in a less favourable manner than domestic products. In the *US-Clove Cigarettes* case, the AB referred to the definition of 'less favourable treatment' under the GATT;[255] it also took an additional step and required an examination on 'whether the detrimental impact on imports stems exclusively from a legitimate regulatory distinction rather than reflecting discrimination against the group of imported products', which was previously stated in the *US-Tuna (Mexico)* GATT dispute.[256] That is to say, the AB is likely to 'adopt a stringent approach under Article 2.1 to technical regulations including product labels that are *de facto* or *de jure* discriminatory, while granting more leeway to Members under Article 2.2 in determining what is necessary to achieve a legitimate policy goal'.[257] Doing so avoided an overly restrictive reading of Article 2.1 and achieved a GATT Article XX-like balance between Members' 'market access obligations and their right to give priority to non-trade concerns'.[258]

The TBT Agreement does not provide decisive standards for defining whether two goods are 'like products'. Some argue that GMOs and non-GMOs are not 'like products' based on both procedural and material elements: the distinguished AIA procedure illustrates that GMOs are specific products and are not subjected to the same procedural requirements as non-GMOs; and the scientific risks of GMOs provides material justification that GMOs should not be treated in a similar manner to non-GMOs.[259] This argument appeals to this author, largely because there appears to be increasingly physical differences between GMOs

[253] *US-Tuna II*, ABR (n 228), paras 299, 342.
[254] Voon, Mitchell and Gascoigne (n 242), 455.
[255] This was discussed in detail previously in section 4.2.1 of this chapter.
[256] *US-Clove Cigarettes*, ABR (n 86), paras 166, 182; and *United States-Restrictions on Imports of Tuna (Mexico)*, Panel Report, unadopted, DS21/R, 3 September 1991, BISD 39S/155, para 5.42.
[257] Voon, Mitchell and Gascoigne (n 242), 473.
[258] G Marceau, 'A Comment on the Appellate Body Report in EC-Seal Products in the Context of the Trade and Environment Debate' (2014) 23(3) *RECIEL* 318, 318.
[259] Boisson de Chazournes and Mbengue (n 119), 292-3.

and non-GMOs,[260] and there are increasingly strong consumer perceptions against GMOs[261] which represent one of the factors to be considered under the 'competition-based approach', namely 'the tastes and habits of consumers'.[262]

The existing case law has important ramifications for determining whether GMOs and non-GMOs are 'like products'.[263] It is, however, still difficult to predict what criteria should be used and whether the 'competition-based approach' will be adopted when determining whether GM products and their traditional counterpart are 'like products'. It is also not clear to what extent they may affect the WTO DSB's opinion on the labelling of GMOs in the future. It is likely that these contentious issues on the application of the TBT Agreement will be left for the WTO AB to examine.

5. Introduction and textual analysis of the Cartagena Protocol

5.1 A brief introduction on the Cartagena Protocol[264]

The adoption of the Cartagena Protocol was facilitated by many developing countries, some developed countries, and relevant environmental non-governmental organisations.[265] The conclusion of the Protocol reflects 'a delicate balance between the competing interests at stake'.[266] The main contentious issues during the Protocol negotiations included: which categories of GMOs should be covered under the Protocol and its Advance Informed Agreement (AIA) procedure; whether importing parties may base GMO import bans or restrictions on the precautionary principle or socio-economic considerations; whether GMOs should be labelled or specifically identified; and the Protocol's relationship with other international rules especially the WTO Agreements.[267]

The Cartagena Protocol divides GMOs into two categories according to their purported usages, including GMOs intended for introduction into the environment, and

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[260] EcoWatch, 'New Study Shows Glaring Differences between GMO and Non-GMO Foods', available at: http://www.ecowatch.com/new-study-shows-glaring-differences-between-gmo-and-non-gmo-foods-1881866201.html, last accessed on 30 April 2017.
[261] This was discussed in detail in Chapter 1, section 1.1 of this thesis.
[262] See the previous discussion in section 4.2.1 of this chapter.
[263] See the previous discussion in section 4.4 of this chapter.
[264] The Protocol uses 'living modified organisms' (LMOs) for GMOs. This thesis uses LMOs interchangeably with GMOs.
[265] SW Burgiel, 'The Cartagena Protocol on Biosafety: Taking the Steps from Negotiation to Implementation', (2002) 11(1) *RECIEL* 53, 58.
[266] Eggers and Mackenzie (n 156), 527.
[267] *Ibid*, 527.

GMOs intended for direct use as food or feed, or for processing (GMO-FFPs). The Protocol has different substantive and procedural requirements for each category of GMOs.

The main provisions of the Protocol with potential effects on international trade in GMOs are: the AIA mechanism including notification, documentation, and other regulatory requirements;[268] the right of the importing countries to carry out risk assessment on GMOs;[269] requirements relating to relevant information;[270] the decision-making procedure for GMOs intended for introduction into the environment;[271] the procedure for GMOs intended for direct use as food, feed, or for processing;[272] the requirements on handling, transport, packaging and identification;[273] and provisions on liability and redress[274].[275]

From the above, however, the core mechanisms to be discussed in detail in the following sections include: the AIA procedure; the risk assessment and management requirements; the inclusion of the precautionary principle; the labelling requirements; the need for Parties to adopt appropriate domestic biosafety regulations; and the clearing-house mechanism.

5.2 The AIA procedure and risk assessment for GMOs intended to be release into the environment

The core mechanism of the Protocol is the AIA procedure which applies before the first intentional transboundary movement of GMOs intended for introduction into the environment.[276] Under the AIA procedure, the Party of export must notify the importing countries of this intention prior to the first transboundary movement of GMOs, and provide detailed information on the proposed export, including but not limited to any previous risk assessment reports.[277]

The Party of import has the right not to import GMOs intended for release into the environment without their prior consent; or to ban or restrict the import of GMOs based on a

[268] The Protocol, Article 7.
[269] Articles 5.2, 5.3 & Annex 2.
[270] Article 8.
[271] Articles 9, 10.
[272] Articles 11.4 & 11.8.
[273] Article 18.2.
[274] Article 27.
[275] Xue and Tisdell (n 184), 338-42.
[276] The Protocol, Article 7(1) .
[277] *Ibid*, Article 8 & Annex 1.

risk assessment which takes into account biodiversity and human health.[278] It shall ensure that risk assessments are carried out, and should communicate its risk assessment-based decisions on whether to allow the import of GMOs, within certain time limits.[279]

The AIA procedure extends and complements existing prior informed consent procedures regarding hazardous chemicals and pesticides in the Rotterdam Convention [280] and hazardous wastes in the Basel Convention.[281] It strengthens the regulatory powers of importing countries in the governance of GMOs.[282] Indeed, it allows for a certain degree of flexibility by enabling Parties to: follow their own domestic regulatory framework,[283] adopt simplified procedures,[284] or enter into Protocol-consistent[285] bilateral and regional agreements.[286]

At its heart, the AIA procedure recognised that in order for importing countries to protect their domestic environment and human health, they should be provided with sufficient information by the exporting countries on the potential risks of GMOs before the initial transboundary movement. For exporting countries, the concern is that this procedure may be used as an unnecessary non-tariff barrier to international trade in GMOs that may result in trade disputes.[287]

Risk assessment, on the other hand, is the foundation of the decision-making process under the AIA procedure. Accordingly, the Protocol provides that importing countries should ensure that their informed decisions regarding GMOs intended for release into the environment are in accordance with the results of risk assessment on the possible adverse effects on biodiversity and potential risks to human health.[288] This on its face appears to eliminate the possibility of discretion being applied, however, this may not necessarily be

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[278] *Ibid*, Articles 7-10 & 12.
[279] *Ibid*, Articles 10-13, 15 & Annex 2.
[280] The Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade, 10 September 1998, (1999) 38 ILM 1. According to its Article 2(a), the Rotterdam Convention only applies to certain chemicals.
[281] The Basel Convention on the Control of Transboundary Movement of Hazardous Wastes and their Disposal, 22 March 1989, (1989) 28 ILM 657. Its Annex III B3, in particular B3060 does not apply to wastes from agro-food industries or other organic wastes.
[282] R Falkner, 'Regulating Biotech Trade: the Cartagena Protocol on Biosafety' (2000) 76(2) *International Affairs* 299, 308.
[283] The Protocol, Article 9(2)(c) & (3).
[284] *Ibid*, Article 13.
[285] *Ibid*, Article 14(1).
[286] Eggers and Mackenzie (n 156), 530.
[287] Hagen and Weiner (n 144), 706-13; Oberthür and Gehring (n 156), 12-20; and Qureshi (n 122), 848.
[288] The Protocol, Article 10(1) & (6).

the case since the Protocol allows Parties to taken into account precautionary concerns and socio-economic considerations.[289]

The risk assessments, it is further provided, shall be carried out 'in a scientifically sound manner' and 'taking into account recognised risk assessment techniques.'[290] The Protocol also sets out the risk assessment requirements in detail, including what points should be considered, general principles, and the methodology of risk assessment.[291] Also, the importing party may require the exporting countries to carry out risk assessments and/or bear the cost of the risk assessment.[292] Any risks identified shall be regulated, managed and controlled by the Parties.[293]

However, the Protocol's provisions on risk assessment are not necessarily clear and straightforward especially during the implementation process. Hence, they need to be further interpreted or developed by parties through the COP-MOPs. Risk assessment has been one of the substantive issues to be discussed in the COP-MOP.[294]

With respect to the AIA procedure, it does not apply to GMO-FFPs (such as soybeans which are not intended for planting but for direct use as food or feed or for processing)[295] or GMOs identified by the Protocol Parties as being not likely to have adverse effects on biodiversity or human health.[296] A Party is free to take a decision on the import of GMO-FFPs under its domestic regulatory framework which is consistent with the objective of the Protocol.[297] Within 15 days of making that decision, the Party must communicate the decision to other Parties through the Biosafety Clearing-House (BCH).[298]

The BCH requires that information on all aspects of GMOs is shared in a transparent way. Parties must communicate their relevant decisions including domestic approvals of GMOs, national laws, regulations, and guidelines to the web-based database,

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[289] This will be discussed further in the paragraphs below.
[290] The Protocol, Article 15(1) & (2).
[291] *Ibid*, Annex III.
[292] *Ibid*, Article 15.
[293] *Ibid*, Article 16.
[294] COP-MOP 4 Decisions, (16 May 2008) BS-IV/11; COP-MOP 6 Decisions, (5 October 2012) BS-VI/12; COP-MOP 7 Decisions, (4 October 2014) UNEP/CBD/BS/COP-MOP/DEC/VII/12. This is discussed further at Chapter 6, section 6.1 of this thesis.
[295] The Protocol, Article 7(2) & (3).
[296] *Ibid*, Article 7(4).
[297] *Ibid*, Article 11(4).
[298] *Ibid*, Articles 7(3) & 11(1).

within the time limit.[299] Information exchange through the BCH assists Parties in considering whether to approve the import of certain GMOs well in advance, and promotes the communication and harmonisation of risk assessment and management techniques among different countries. In other words, the BCH serves as 'a multilateral information exchange mechanism',[300] and is arguably 'the most important institutional development to emerge from the Protocol',[301] although the effectiveness of the BCH in achieving its mandate remains to be seen.

5.3 The Protocol explicitly incorporates the precautionary principle

As discussed previously, the precautionary principle is widely adopted in international environmental law. MEAs tend to incorporate the precautionary principle, although most of them do not contain it in a clearly defined way. The precautionary principle thus operates as a 'guiding principle' in environmental law rather than a legally binding rule both at the international and domestic levels.[302]

While the CBD does not specifically mention 'precautionary principle', it indirectly incorporates the principle through its Preamble which contains the position that: 'where there is a threat of significant reduction or loss of biological diversity, lack of full scientific certainty should not be used as a reason for postponing measures to avoid or minimise such a threat.'[303]

This is unlike the Protocol which goes a step further to specifically and explicitly incorporates the precautionary principle in its Preamble, Article 1, Article 10(6) and Article 11(8), Annex II, and Annex III (4).[304] Particularly, it directly reaffirms the precautionary approach contained in Principle 15 of the Rio Declaration in its Preamble and Article 1.[305] In addition, the Protocol clearly specifies the rights of importing countries to take decisions in the event of scientific uncertainty and/or the insufficiency of scientific evidence, and to rely on the non-scientific considerations of biological diversity and human health. Thus, Parties

[299] *Ibid*, Article 11.
[300] Eggers and Mackenzie (n 156), 530.
[301] Falkner (n 282), 310.
[302] Poustie (n 66), 112-4.
[303] The CBD, Preamble.
[304] E.g. Annex III (4) of the Protocol states that: '*lack* of scientific knowledge or scientific consensus should not necessarily be interpreted as indicating a particular level of risk, an absence of risk, or an acceptable risk'.
[305] The Preamble states that: '*Reaffirming* the precautionary approach contained in Principle 15 of the Rio Declaration on Environment and Development…'; Article 1 states that: '*In* accordance with the precautionary approach contained in Principle 15 of the Rio Declaration on Environment and Development…'

are entitled to restrict or ban the import of GMOs if the risk is uncertain due to the insufficiency of scientific evidence. Articles 10.6 and 11.8 of the Protocol both state that:

> Lack of scientific certainty due to insufficient relevant scientific information and knowledge regarding the extent of the potential adverse effects of a living modified organism on the conservation and sustainable use of biological diversity in the Party of import, taking also into account risks to human health, shall not prevent that Party from taking a decision, as appropriate, with regard to the import of the living modified organism…

Importantly, the precautionary principle applies to both categories of GMOs and operates both in the general AIA procedure[306] and within the procedure for GMO-FFPs.[307] The Protocol allows Parties to take precautionary measures when deciding whether or not to permit import of GMOs intended for release to the environment.[308] It also empowers the Parties to use the precautionary principle as a basis for their national biosafety regulations on which decisions on transboundary movement of GMOs would be based.[309]

The precautionary principle is arguably the centre point of the Protocol,[310] such that it could, to some extent, be characterised as an 'inherently precautionary instrument'.[311] The Protocol seems to have adopted a stronger version of the precautionary principle, as well as rendering it in a more precise way than other MEAs. This is not unconnected with the fact that a comparison between different treaty wordings shows that the prerequisite for taking precautionary measures has been evolving. Under Principle 15 of the Rio Declaration, there are requirements of 'threats of serious or irreversible damage' and 'cost-effective measures'; the CBD requires 'threat of significant reduction or loss of biological diversity'; the Protocol has a much less stringent requirement of 'potential adverse effects', arguably because GMOs present a more direct potential threat to human health.[312]

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[306] The Protocol, Article 10(6).
[307] *Ibid*, Article 11(8).
[308] *Ibid*, Article 1.
[309] *Ibid*, Article 10.6.
[310] V Koester, 'A New Hot Spot in the Trade-Environment Conflict' (2001) 31(2) *Environmental Policy and Law* 82, 82.
[311] R Mackenzie and P Sands, 'Prospects for International Environmental Law', in C Bail, R Falkner and H Marquard (eds), *The Cartagena Protocol on Biosafety: Reconciling Trade in Biotechnology with Environment and Development?* (Earthscan Publications Ltd, 2002), 461.
[312] Secretariat of the CBD, 'The Cartagena Protocol on Biosafety: A Record of the Negotiations', September 2003, 16, available at: https://www.cbd.int/doc/publications/bs-brochure-03-en.pdf, last accessed on 30 April 2017.

During the negotiations of the Protocol, one of the controversial issues was the role that the precautionary principle plays within risk assessment. Disagreements mainly occurred between the Miami Group and the EU on whether the AIA and other decision-making procedures should be based solely on sound scientific evidence or whether Parties are entitled to restrict GMO imports as a precautionary measure without sufficient scientific evidence of the harm.[313] The different opinions reflect their respective domestic and regional regulations on GMOs. Proponents of precautionary provisions focused on the relative novelty of GMOs and lack of experience with them; while opponents stressed that the Protocol was itself a precautionary instrument and precautionary provisions would be used as a justification for protectionist trade measures.[314] Other controversies included whether to use the wording of 'precautionary principle' or the 'precautionary approach'; and whether precautionary measures should be referred to merely in the Preamble and Objective or in the main part of the Protocol.[315]

Taking precautionary measures under the Protocol is a mere right, not an obligation.[316] Some questions regarding the precautionary principle are still ambiguous, such as to what extent the Protocol enshrines the precautionary principle and what precautionary action could be taken under the Protocol? Understanding these questions has a significant impact on the rights of importing countries.

5.4 The role of socio-economic considerations in the domestic GMO approval process

Consistent with the scope of the CBD, the Protocol focuses on the potential impacts of GMOs on the environment; meanwhile, it also allows its Parties to include food and feed safety considerations and other public interests issues.[317] In Article 26, the Protocol introduces the concept of socio-economic considerations, and leaves open the possibility for its Parties to take into account socio-economic considerations along with ascertainable scientific risks in their biosafety regulatory processes.[318] Article 26 states that:

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[313] Ibid, 38-9; R Mackenzie and others, 'An Explanatory Guide to the Cartagena Protocol on Biosafety', (2003) *IUCN Environmental Policy and Law Paper No. 46*, 237-8; and Hagen and Weiner (n 144), 700-2.
[314] Mackenzie and others, *Ibid*, 13.
[315] *Ibid*.
[316] Eggers and Mackenzie (n 156), 532.
[317] J Falck-Zepeda, 'Socio-Economic Consideration, Article 26.1 of the Cartagena Protocol on Biosafety: What are the issues and What is at Stake?' (2009) 12(1) *AgBioForum* 90.
[318] The Protocol, Article 26(1).

> 1. The Parties, in reaching a decision on import under this Protocol or under its domestic measures implementing the Protocol, may take into account, consistent with their international obligations, socio-economic considerations arising from the impact of living modified organisms on the conservation and sustainable use of biological diversity, especially with regard to the value of biological diversity to indigenous and local communities.
>
> 2. The Parties are encouraged to cooperate on research and information exchange on any socio-economic impacts of living modified organisms, especially on indigenous and local communities.

The wording of Article 26 is brief and rather vague.[319] Some argue that Article 26 should be strictly interpreted as only allowing socio-economic considerations if they impact on the value of biodiversity to indigenous and local communities.[320] Others find that many countries, especially developing countries, have expanded the narrow scope of Article 26 to include broader socio-economic considerations.[321] A great number of questions are left untouched and unanswered, such as: what exactly is the meaning or definition of socio-economic considerations? Are there any limitations on the reference to socio-economic considerations? How serious should the impact of GMOs on the conservation and sustainable use of biological diversity be in order to trigger socio-economic considerations?

The Protocol leaves it for the Parties to decide what specific socio-economic considerations they will consider in their domestic regulatory processes. It encourages Parties to 'cooperate on research and information exchange' concerning any socio-economic impacts of GMOs, especially on indigenous and local communities.[322] Although the Parties have made efforts to clarify the content and scope of socio-economic considerations through the COP-MOPs, such efforts have not yet been successful.[323]

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[319] J Waincymer, 'Cartagena Protocol on Biosafety', (2001), 6, available at: http://www.apec.org.au/docs/waincymer2001.pdf , last accessed on 30 April 2017.
[320] G Jaffe, 'Implementing the Cartagena Biosafety Protocol through national biosafety regulatory systems: an analysis of key unresolved issues' (2005) 5 *Journal of Public Affairs* 299, 305.
[321] J Falck-Zepeda and P Zambrano, 'Socio-Economic Considerations in Biosafety and Biotechnology Decision Making: The Cartagena Protocol and National Biosafety Frameworks' (2011) 28(2) *Review of Policy Research* 171, 175.
[322] The Protocol, Article 26(2).
[323] COP-MOP 6 Decisions, 'Socio-Economic Considerations' (5 October 2012) BS-VI/13; COP-MOP 7 Decisions, 'Socio-Economic Considerations' (4 October 2014) UNEP/CBD/BS/COP-MOP/DEC/VII/13.

A document prepared for COP-MOP 4 can be considered as a starting point and guidance for the definition of socio-economic considerations. It sets out a non-exhaustible list of the types of socio-economic impacts, which may include: impacts related to soil fertility and soil structure; impacts of GMOs on non-target organisms and the prevalence of pests; impacts related to land use, gene flow and co-existence; impacts related to yields, inputs and products/outputs; impacts related to employment and labour; impacts related to international markets and market access; food security and food sovereignty related impacts; impacts on land tenure, rural-urban migration and communities; impacts from opportunity costs and from the balance of costs and benefits; and impacts of GMOs on competition and small versus large farmers.[324]

Nonetheless, the conceptual clarity of what constitutes socio-economic considerations under the Protocol is yet to be adequately developed. In order to reduce the possible negative impacts, there must be clear decision-making rules and standards to ensure national biosafety frameworks' transparency and clarity.[325] Parties intending to include such considerations must set forth which, when and how such factors will be analysed.[326] Their domestic biosafety laws and regulations should clarify issues such as the definition and scope of socio-economic considerations, the appropriate timing for assessing those considerations, implementation modalities, implementation entities, available methods for addressing those considerations, and the methods, standards, and procedures used to assess those considerations.[327]

At this juncture, it is noteworthy that Article 26 also places several constraints on the application of socio-economic considerations.[328] For example, any such considerations must be limited to those that have been found to impact on the conservation and sustainable use of biological diversity. In addition, socio-economic considerations may only be taken into account in a manner consistent with the Party's 'other international obligations', presumably including obligations under the WTO Agreements. However, this requirement does not

[324] COP-MOP 4 Meeting Documents, 'Socio-Economic Considerations (Article 26, Paragraph 2)' (17 March 2008) UNEP/CBD/BS/COP-MOP/4/15.
[325] Jaffe (n 320), 306.
[326] L Fransen and others, 'Integrating Socio-Economic Considerations into Biosafety Decisions: The Role of Public Participation' (2005) *World Resources Institute: WRI White Paper*, 5.
[327] Falck-Zepeda and Zambrano (n 321), 180-6.
[328] The Protocol, Article 26(1).

necessarily mean that decisions based on socio-economic considerations will be consistent with the WTO Agreements.[329]

Moreover, it is a mere right, not an obligation, for the Parties to take into account socio-economic considerations. Parties do not have to follow slavishly these considerations but can simply consider them. They do not violate the Protocol if socio-economic values are not referred to in decision making and implementation processes.

5.5 The handling, transport, packaging and identification of GMOs under the Protocol

The Cartagena Protocol imposes a general obligation on each Party to take necessary measures to require that the transboundary movement of GMOs must be accompanied by relevant documentation providing identification of relevant traits of the GMOs and specifying requirements for their safe handling, storage, transport, and use.[330] This applies to all GMOs within the scope of the Protocol.

According to Article 18(2)(b), GMOs destined for contained use must be 'clearly identified' as GMOs with relevant details.[331] GMOs intended for introduction into the environment must be clearly identified as GMOs and accompanied with detailed description on their traits, handling requirements and other relevant information.[332] In addition, according to Article 18(2)(a) of the Protocol, GMO-FFPs should indicate that they 'may contain' GMOs and that they are not intended for introduction into the environment.[333]

Still, the Cartagena Protocol's labelling requirements are not too clear or definitive, especially for GMO-FFPs. The GMOs intended for introduction into the environment, such as micro-organisms or seeds, only account for a small percentage of international trade in GMOs. The majority of international trade in GMOs relates to GMO-FFPs. The provision on shipments of GMO-FFPs was 'the final major sticking point of the negotiations'.[334] The different negotiation groups, particularly the EU and the Miami Group, had great controversies about this issue.

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[329] The potential conflicts between the Protocol and the WTO Agreements in this regard will be discussed in the following paragraphs.
[330] The Protocol, Article 18(1).
[331] *Ibid*, Article 18(2)(b).
[332] *Ibid*, Article 18(2)(c).
[333] *Ibid*, Article 18(2)(a).
[334] Eggers and Mackenzie (n 156), 532.

In relation to the labelling of GMO-FFPs, the wording of 'may contain' in Article 18(2)(a) instead of 'contain' is the result of controversial negotiations and compromises. Although, Article 18(2)(a) calls for detailed labelling requirements to be developed by the Parties, this is yet to be worked out. There is also the need for clarification to be made regarding aspects like: allowances for accidental inclusion of GMOs, the specific information to be provided, and how the importer receives and uses the information.[335]

Some argue that the Protocol's provision will not be a determining factor on the labelling of GMO-FFPs because of its unclear and compromising wordings; instead, the requirements on the labelling of GMO-FFPs will follow market imperatives and national developments.[336] Others argue that the most accurate labelling for GMO-FFPs might be to 'indicate that a cargo 'contains GMOs' and list the modified organisms that might be present.'[337] It appears to this author that the latter argument makes more sense, because even though Article 18(2)(a) requires the labelling of 'may contain', it is clear that the wording of 'may contain' must be labelled on GMO-FFPs.

Overall, the compulsory labelling requirement on the transboundary movement of GMOs is a debatable issue. Some examples of the controversies include: why and how should certain products be labelled? Which kind of information should be made clear on the labelling? What is the function of labelling? Would labelling necessarily improve food safety, human health or the protection of the environment?

Critics of the labelling of GMOs argue that the labelling of GMOs may inform consumer decision-making, but does not necessarily protect the environment or human health.[338] In addition, compulsory labelling will increase consumer suspicion regarding GMOs, increase direct and indirect expenses of GMO production, and act as a disguised restriction on international trade.[339]

On the other hand, proponents of GMO labelling believe that labelling would facilitate more well-informed consumer purchasing choices, promote their awareness of GM

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[335] N Kalaitzandonakes, 'Cartagena Protocol: A New Trade Barrier?'(2006-2007) 29 *Regulation* 18, 19.
[336] A Gupta, 'Governing Trade in Genetically Modified Organisms: The Cartagena Protocol on Biosafety' (2000) 42(4) *Environment* 22, 24.
[337] Kalaitzandonakes (n 335), 22.
[338] AE Appleton, 'The Labelling of GMO Products Pursuant to International Trade Rules', (1999-2000) 8 *NYU Environmental Law Journal* 566, 568.
[339] *Ibid*, 569-70.

products, and contribute to the protection of health and safety. For example, if some customers are allergic to certain GMOs, labelling would help them to avoid such choices. Labelling of GMOs is also called for by a growing number of the public. A survey in the UK found that 99% of the respondents believed that it was necessary to label all GM products and domestic regulations should make the labelling of GMOs compulsory.[340]

In the end, the success of any labelling would depend upon its effectiveness in influencing consumer behaviour.[341] In practice, domestic labelling policies in different jurisdictions differ widely in their nature, scope, coverage, exceptions, and their degree of enforcement; this consequently results in different effects on consumer choice, consumer information, food marketing, and international trade.[342] An increasing number of countries have adopted labelling policies for GMOs since the first labelling policies were introduced by the EU in 1997. The EU and China are examples of the jurisdictions which have a compulsory labelling requirement on GMOs.[343]

6. Possible synergies between the WTO Agreements and the Protocol: Risk assessment

6.1 Similar but not identical requirements on risk assessment under the SPS Agreement and the Protocol

A comparison of substances of the treaties finds that both the SPS Agreement and the Protocol include requirements on risk assessment, although the Protocol has such requirements only for one of the two types of GMOs, which is for GMOs intended for release into the environment but not for GMO-FFPs.

In relation to the regulation of GMOs intended for release into the environment, there exist similarities as well as differences between the SPS Agreement and the Protocol. The similarity is that both treaties require that a legitimate measure be based on risk assessment. As discussed in previous paragraphs, the SPS Agreement strictly requires that all

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[340] W Poortinga and N Pidgeon, 'Public Perception of Agricultural Biotechnology in the UK: the Case of Genetically Modified Food' in D Brossard, J Shanahan, and TC Nesbitt (eds), *The Public, the Media and Agricultural Biotechnology* (CAB International, 2007), 21.

[341] Manson and Epps (n 131), 334.

[342] More discussion on domestic labelling policies in a number of countries is available at: G Gruère and S Rao, 'A Review of International Labelling Policies of Genetically Modified Food to Evaluate India's Proposed Rule' (2007) 10(1) *AgBioForum* 51.

[343] EC Regulation 1829/2003 on genetically modified food and feed [2003] OJ L 286/1, Articles 12 & 24; and Measures for the Administration of the Labelling of Agricultural Genetically Modified Organisms, MOA, (2002), Article 3.

SPS measures must be based on a risk assessment which is supported by sufficient scientific evidence.[344] These substantive scientific evidence requirements may also apply to procedural measures, such as the AIA procedure.[345]

The Protocol's core mechanism of the AIA procedure requires that importers' decisions on GMOs intended for release into the environment must be based on risk assessments which are carried out in a scientifically sound manner.[346] Some have argued that the risk assessment requirement under the Protocol reflects the science test under the SPS Agreement.[347]

It is, however, at least debatable whether 'risk assessment' under the SPS Agreement and the Protocol have the same meaning. The scope for risk assessment seems to be more limited under the SPS Agreement than under the Protocol. Waincymer, for example, argues that the WTO Agreements and the Protocol have entirely different risk assessment requirements both in nature and in legal effect, because the Protocol does not specify any minimum standards for risk assessment, and does not impose the direct obligation of undertaking risk assessment on importing countries. It is normally the importing country which bears the costs of risk assessment under the SPS Agreement. Consequently, an importing country may require the exporter to carry out risk assessment and mandate stringent and costly requirements, then ban or restrict the import of GMOs claiming that the risk assessment was inadequate or 'failed to overcome the precautionary principle with a sufficient degree of confidence'.[348]

In relation to the decision-making processes for GMO-FFPs, under the Protocol, international trade in GMO-FFPs is exempted from the AIA procedures and the risk assessment requirements. Article 11 only requires the consistency of any decision on GMO-FFPs with the Protocol. Although the Preamble of the Protocol states that the Protocol does not affect the Parties' rights and obligations under other international rules, Article 11, unlike Article 26 of the Protocol which specifically mentions 'other international obligations', is silent on its relationship with other relevant international rules. In this connection, there may

[344] The SPS Agreement, Articles 2.2 & 5.1.
[345] T Apps, 'Pre-Market Approval Systems and the SPS Agreement', in G Van Calster and MD Prévost (eds), *Research Handbook on Environment, Health and the WTO* (Edward Elgar, 2013), 330.
[346] The Protocol, Articles 10.1, 15.1 & Annex III.
[347] Eggers and Mackenzie (n 156), 543.
[348] Waincymer (n 319), 8.

be tension and conflicts with respect to the SPS Agreement's requirement on risk assessment and the Protocol's regime on GMO-FFPs. For example, a decision to ban or restrict the import of GMO-FFPs might be challenged under the SPS Agreement as not being based on a risk assessment. Moreover, regulation in respect of one type of GMOs (i.e. those intended for release into the environment) and not the other could seemingly result in discrimination under the WTO Agreements.

Although not identical, the similar risk assessment requirements under the treaties themselves are unlikely to result in conflicts. This is largely because, as argued above, both the SPS Agreement and the Protocol requires decisions to be made on the basis of risk assessment. The only possible conflict in this regard happens when the Protocol does not require risk assessment to be taken on one type of GMOs (GMO-FFPs).

What is more, there exist possible synergies between the SPS Agreement and the Protocol in terms of their requirements on risk assessment. Such requirements under the different treaties may be read in a way that is consistent with and mutually reinforces one another. For example, since the Protocol spells out exactly what a risk assessment entails,[349] while the provisions of the SPS Agreement do so in less detail,[350] the Protocol may help to facilitate the interpretation and implementation of risk assessment under the SPS Agreement.

That is to say, the provisions on risk assessment under the SPS Agreement and the Protocol could be interpreted in conformity with each other in a way that avoids any treaty conflicts. This can be achieved by using the interpretative technique of the principle of systemic integration and possibly also the principles that lie behind it, which are capable of being relied upon to avoid treaty conflicts. Such technique and principles will be elaborated on in detail in Chapter 4.

6.2 The process of risk analysis: assessment, management and communication

Having potential synergies between the WTO Agreements and the Protocol in relation to risk assessment does not necessarily indicate that the treaties are compatible with one another in the process of risk regulation on GMOs. This is largely because such process involves not only risk assessment, but also risk management and communication which may

[349] The Protocol, Article 15 & Annex III.
[350] The SPS Agreement, Article 5.2, Annex A. This issue has also been fleshed out in the case law, e.g. *Australia-Salmon,* ABR (n 158), para 121; *EC-Hormones,* Panel Report, 18 August 1997, WT/DS26/R/USA, paras 8.98 & 8.104-7.

lead to conflicts between the treaties. As recognised by the Codex Alimentarius, there are 3 distinct but closely interlinked components of the process of risk analysis, including risk assessment, risk management and risk communication.[351]

The Codex Alimentarius Commission is an intergovernmental food standard-setting body established by the WHO and FAO in 1963, currently having 188 Codex members which covers 99% of the world's population.[352] It aims at the development of worldwide food quality and safety standards to protect consumers' health and ensure the safety, quality and fairness of international food trade.[353] As mentioned above, it is accepted and recognised by the SPS Agreement as one of the international standard-setting bodies.[354]

The Codex Alimentarius represents a form of soft law, since its standards are not binding and cannot be legally enforced. It is often referred to as a sort of gentleman's club or epistemic community of food specialists, with strong industry representation.[355]

Risk assessment is defined for the purpose of the Codex Alimentarius as: 'a scientifically based process consisting of the following steps: (i) hazard identification, (ii) hazard characterization, (iii) exposure assessment, and (iv) risk characterization'.[356] Moreover, risk management is defined as: 'The process, distinct from risk assessment, of weighing policy alternatives, in consultation with all interested parties, considering risk assessment and other factors relevant for the health protection of consumers and for the promotion of fair trade practices, and, if needed, selecting appropriate prevention and control options'.[357] Furthermore, risk communication refers to a dialogue (interactive exchange of information and opinions) between risk managers and other parties, including risk assessors, consumers and other relevant stakeholders.

That is to say, Codex decisions (including standards and guidelines) and recommendations should be based on risk assessment, which must be based on sound science

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[351] WHO and FAO, 'Definitions of Risk Analysis Terms Related to Food Safety' (adopted in 1997, amended in 1999, 2003, 2004), available at: *Codex Alimentarius Commission Procedural Manual 21st Edition*, 114.
[352] WHO and FAO, 'Codex Members and Observers', available at: http://www.fao.org/fao-who-codexalimentarius/members-observers/en/, last accessed on 30 April 2017.
[353] WHO and FAO, 'About Codex', available at: http://www.fao.org/fao-who-codexalimentarius/about-codex/en/, last accessed on 30 April 2017.
[354] This was discussed in detail in section 4.3.2 of this chapter.
[355] MA Pollack and GC Shaffer, *When Cooperation Fails: The International Law and Politics of Genetically Modified Foods* (Oxford University Press, 2009), 163-4.
[356] WHO and FAO (n 351), 114.
[357] *Ibid.*

and should incorporate the four steps of the risk assessment process.[358] Risk assessment assists risk managers with information analysis and independent scientific advice, and provides the scientific basis that underpins risk management actions. Although having some interactions, there is a functional separation between scientific issues of risk assessment and political issues of risk management, which leaves open the possibility for the SPS Agreement and the Protocol to have possible synergies regarding risk assessment, while having potential conflicts in relation to risk management.

The SPS Agreement focuses on the requirement of risk assessment and scientific evidences, while no WTO Agreement includes any specific provision on risk management.[359] On the other hand, the Protocol specifically distinguishes risk management from risk assessment, and requires the parties to 'establish and maintain appropriate mechanisms, measures and strategies to regulate, manage and control risks' as identified in risk assessments.[360] While doing so, risk managers are allowed to take into consideration non-scientific factors and adopt precautionary measures.

Although there is a requirement for risk assessment under both the SPS Agreement and the Protocol which are not likely to result in any conflicts, the treaties' different approaches towards risk management may lead to inconsistencies, tensions and potential conflicts. As stated by the Panel in the *EC-Biotech* case, 'the responsibility for resolving the impact of uncertainty on the risk management decision lies with the risk manager, not the risk assessors'.[361] Consequently, the Panel found that the outside scientific studies which were cited by the EU to support its Member States' safeguard measures did not constitute a risk assessment, and such safeguards violated Article 5.1 of the SPS Agreement that legitimate measures must be based on risk assessments.[362]

Concerns with the Protocol's inclusion of the precautionary principle and socio-economic considerations are that if improperly applied, they may be used as disguised restrictions to international trade, as decisions on the import of GMOs are strongly impacted

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[358] WHO and FAO, 'Working Principles for Risk Analysis for Application in the Framework of the Codex Alimentarius' (adopted in 2003), available at: *Codex Alimentarius Commission Procedural Manual 21st Edition*, 109; and The Codex Alimentarius Commission, 'Decisions of the 21st Session of the Commission', 1995, para 1.

[359] Although some WTO provisions, such as Article 5.6 of the SPS Agreement, are seemingly relevant for how risks are managed.

[360] The Protocol, Article 16.

[361] *EC-Biotech,* Panel Report (n 146), para 7.3240.

[362] *Ibid*, para 7.3045.

by political considerations and the development of biological technology.[363] These potential conflicts will be explored in detail in the following paragraphs.

7. Potential conflicts between the provisions of the WTO Agreements and the Protocol

7.1 Are there really potential conflicts between the WTO Agreements and the Protocol?

Some academics believe that there are no significant conflicts between WTO Agreements and the Protocol. For example, Koester argues that even though the Protocol allows trade restrictive measures to be taken on the ground of the precautionary principle, there is not likely to be any conflict between the WTO Agreements and the Protocol. Instead, the Protocol strikes a reasonable balance between trade and the environment, and will not result in many disputes with the WTO.[364] Similarly, Ansari and Mahmod argue that the Cartagena Protocol's mechanism for risk assessment and precautionary principle only leans towards environmental protection because it is one of the MEAs. It is not trade restrictive and thus does not conflict with the WTO Agreements.[365] In support, but in a different direction, Mackenzie and others take the view that the Protocol has limited impact on international trade because the Protocol's greatest potential impact on trade is limited to GMOs intended for introduction into the environment which comprise only a small market share of the overall international trade in GMOs.[366] There is also Stella-Villa who posits that there is little conflict between WTO Agreements and the Protocol because their differences in text, scope and enforceability keep the realms of the treaties separate.'[367]

These arguments do not appeal to this author. Indeed, as argued by Koester, the Protocol does endeavour to strike a balance between itself and other international treaties (the WTO Agreements in particular). However, both the effectiveness of the Protocol's efforts and the extent to which they may help to avoid treaty conflicts are debatable. It is fundamentally questionable whether such efforts can stop conflicts between the treaties from

[363] Burgiel (n 265), 55; and K Morrow, 'Genetically Modified Organisms and Risk', in L Bodiguel and M Cardwell (eds), *The Regulation of Genetically Modified Organisms: Comparative Approaches* (Oxford University Press, 2010), 75.
[364] Koester (n 310), 89 & 91.
[365] Ansari and Mahmod (n 135), 143.
[366] Mackenzie and others (n 313), 227.
[367] DE Sella-Villa, 'Gently Modified Operations: How Environmental Concerns Addressed through Customs Procedures Can Successfully Resolve the US-EU GMO Dispute' (2009) 33(3) *William & Mary Environmental Law and Policy Review* 971, 979.

arising.[368] Ansari and Mahmod's argument also seems invalid since the Protocol specifically allows members to take trade-restrictive measures which are not necessarily consistent with the WTO Agreements.[369] Moreover, the potential conflicts between the WTO Agreements and the Protocol should not be ignored simply based on the reason that the number of such disputes might be limited, as argued by Mackenzie and others.[370] In addition, Stella-Villa's argument seems quite weak as the WTO Agreements and the Protocol obviously overlap with one another.[371]

This author takes the widely accepted position that there exist potential conflicts between the WTO Agreements and the Protocol.[372] Although no trade provisions of any MEA have yet been challenged before a WTO dispute settlement body, it may be argued that the Protocol is different from other MEAs and has more potential to conflict with the WTO Agreements. This may be so for several reasons, namely: the significant amount of economic interests involved in international trade in GMOs; the very much divided public opinions on the benefits and risks of GMOs; the approach towards the Protocol taken by certain significant GMO producing countries (such as the US); and the fact that the Protocol has been interpreted in different ways.[373] Moreover, the proliferation of domestic biosafety frameworks and the related risk assessment, authorisation, and labelling obligations are likely to further complicate international trade in GMOs.[374] Thus, considering the definition of conflict that is adopted by this thesis, the WTO Agreements and the Protocol may conflict with one another when they are both valid and applicable in a situation, but provide incompatible directions on how to deal with the same set of facts.[375]

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[368] This will be discussed in detail at Chapter 3, section 3 and Chapter 4, section 4.2 of this thesis.
[369] This was discussed in detail in section 5.2 of this chapter.
[370] Treaty conflicts might also arise in relation to GMOs intended for food, feed, and for processing which will be discussed in detail in the following sections 7.2, 7.3 & 7.4 of this chapter.
[371] This was discussed in detail in Chapter 1, section 1.3 of this thesis.
[372] Hagen and Weiner (n 144), 706-13; Burgiel (n 265), 56; S Zarrilli, 'International Trade in GMOs: Legal Frameworks and Developing Country Concerns', *Policy Issues in International Trade and Commodities Study Series No. 29*, (2004) UNCTAD/ITCD/TAB/30; Morrow (n 363), 66; PL Fitzgerald, *International Issues in Animal Law: The Impact of International Environmental and Economic Law upon Animal Interests and Advocacy* (Carolina Academic Press, 2012); A Gupta and R Falkner, 'The Influence of the Cartagena Protocol on Biosafety: Comparing Mexico, China and South Africa' (2006) 6(4) *Global Environmental Politics* 23, 29-32; Safrin (n 156); Oberthür and Gehring (n 156), 12-20; Ansari and Mahmod (n 135), 162; and Qureshi (n 122), 848.
[373] S Zarrili, 'International Trade in GMOs and GM Products: National and Multilateral Legal Frameworks', *Policy Issues in International Trade and Commodities Study series No. 29* (UNCTAD, 2005), 39-40.
[374] Details of the potential conflicts between the WTO Agreements and the Protocol will be discussed in the following paragraphs.
[375] See section 2 of this chapter.

Potential conflicts between the WTO Agreements and the Protocol could result from the inconsistency and tension between the treaty provisions. The two treaty regimes include different rights, obligations, and mechanisms which are not always consistent with each other. Many provisions of WTO Agreements and the Protocol suggest different ways of dealing with overlapping areas.[376] The Cartagena Protocol adopts trade restrictive measures in its regulation of international trade in GMOs in order to protect biosafety, while the WTO Agreements restrict the use of SPS measures or technical regulations in order to facilitate international trade. The Protocol regulates PPMs, while the WTO Agreements (with exception of the TBT Agreement) mostly focus on the characteristics of end products.

Additionally, the fundamental reason for the potential conflicts between the WTO Agreements and the Protocol is the fact that based on their respective interests in international trade of GMOs, states pursue different political aims, have different perspectives on economic development and environmental protection, as well as different arrangements under the different treaty regimes.[377] Importantly, the WTO Agreements and the Protocol were concluded in different times; under diverging social, economic, and scientific circumstances; by different states; and by different negotiation groups (both internationally and within the same countries). Also, negotiators of the Protocol accepted international commitments on which the WTO negotiators did not or failed to consider, such as the precautionary principle.[378]

Although the WTO legal system may conceive environmental objectives and permit a certain degree of trade restrictive measures, it imposes rather stringent restrictions by requiring those measures to not constitute unnecessary obstacles to international trade. It focuses on the exporters' rights to have their products treated in a non-discriminatory, scientifically-based, and rational manner.

For example, as discussed above, under the SPS Agreement, Members have the right to ban international trade in GMOs or to postpone its decisions regarding the import of GMOs. However, such right seems to be rather restricted, because at the same time, Members have the obligation to justify scientifically its SPS measures through risk assessments, as well

[376] Koskenniemi (n 24), para 25.
[377] A Palmer, B Chaytor and J Werksman, 'Interactions between the World Trade Organisation and International Environmental Regimes', in S Oberthür and T Gehring (eds), *Institutional Interaction in Global Environmental Governance: Synergy and Conflict among International and EU Policies* (MIT Press, 2006), 189.
[378] Petersmann (n 155), 197.

as the trade-related obligation of non-discrimination. That is to say, all legitimate SPS measures must be applied only to the extent necessary to protect human, animal or plant life or health.[379] They must not be arbitrary or discriminatory and must not constitute a disguised restriction on trade.[380] They must not be more trade-restrictive than is necessary to achieve a Member's appropriate level of protection.[381] What is more, they must be based on a scientific risk assessment[382] and sufficient scientific evidence.[383] In case relevant scientific evidence is insufficient, Members are allowed to take provisional regulatory measures and deviate from the risk assessment requirement, subject to certain conditions, however, Members must seek to obtain additional information and review the provisional measures within a reasonable time.[384]

On the other hand, the Protocol focuses on the protection of biosafety, health and environmental values, and takes an eco-centric view. It reinforces the importers' rights to make prior informed decisions and to ban or restrict GMO imports on environmental, health and safety grounds.

The potential conflicts between the WTO Agreements and the Protocol is a particularly imminent question during the implementation process of the treaties. In practice, even for treaty provisions which do not clash in terms of their wordings, the means to pursue different treaty aims and duties may still initiate conflicts in the implementation phase.[385] This is particularly true in the context of this research, as the Protocol grants its Parties a wide margin of discretion in domestic regulation of GMOs to pursue environmental and health values, which will inevitably overlap and potentially conflict with their obligations under the WTO system. Parties may discretionally interpret or apply the complicated and ambiguous language in narrow or broad ways when making import decisions, in order to suit the Parties' own interests.[386] Consequently, conflicts may arise in practice over how Parties implement the Protocol's provisions.[387] That is to say, domestic governments' efforts to regulate GMOs

[379] The SPS Agreement, Article 2.2.
[380] *Ibid*, Article 2.3.
[381] *Ibid*, Article 5.6.
[382] *Ibid*, Article 5.1.
[383] *Ibid*, Article 2.2.
[384] *Ibid*, Article 5.7. The specific requirements will be discussed in detail in the following paragraphs.
[385] Wolfrum and Matz (n 13), 11.
[386] Hagen and Weiner (n 144), 710-1.
[387] Eggers and Mackenzie (n 156), 540.

for health and environmental reasons may come into conflict with the rules on free trade of the WTO.[388]

Moreover, globally, there is rapid growth of international trade in agricultural commodities, in particular soya and maize products, most of which are GM products.[389] The EU, China and the US have been the three largest global players in international trade since 2004.[390] Large quantities of GM soya and maize are imported into the EU as animal feed, food, and biofuels.[391] This trend indicates that the EU's import of GM products is likely to increase further. Consistently, large and increasing quantities of GM commodities, especially GM soya and maize, are also imported into the UK mainly as animal feed, and to a much lesser extent in food products.[392] Similarly, China is, and will remain a significant importer and growth market of GM products as a result of the large volume of agricultural products demanded by the world's largest population, and the relatively cheaper price of imported GM products compared to domestically produced ones.[393] Therefore, it is highly likely that international trade in GMOs will continue to increase, and this in turn will lead to an increase in the potential for actual conflicts occurring between the WTO Agreements and the Protocol.

Furthermore, the empirical research carried out in the course of this research reaffirmed that there existed potential conflicts between the WTO Agreements and the Protocol, particularly in the implementation process of the treaties. As stated in the preceding chapter, the empirical research was carried out through semi-structured interviews.[394] The results of the interviews were coded, analysed, and used in the context of this thesis, but the identities of the interviewees, in line with best practice, were not disclosed and the recordings of the interviews remain confidential. The coding of the empirical results was carried out

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[388] R Howse and J Meltzer, 'The Significance of the Protocol for WTO Dispute Settlement', in Bail, Falkner and Marquard (eds) (n 311), 482.

[389] C James, *20th Anniversary (1996 to 2015) of the Global Commercialization of Biotech Crops and Biotech Crop Highlights in 2015*, *ISAAA Brief 51,* (ISAAA: Ithaca, NY, 2015), 215; T Kaphengst and others, 'Assessment of the Economic Performance of GM Crops Worldwide', Report of the Ecologic Institute, Berlin, March 2011, I.

[390] Eurostat, 'International Trade in Goods', available at: http://ec.europa.eu/eurostat/statistics-explained/index.php/International_trade_in_goods, last accessed on 30 April 2017.

[391] James (n 389), 201; EC-DG Agriculture and Rural Development, *MAP-Monitoring Agri-Trade Policy, Agricultural Trade in 2011: the EU and the World*, May 2012, 2, available at http://ec.europa.eu/agriculture/trade-analysis/map/05-2012_en.pdf, last accessed on 30 April 2017; Genewatch, 'GM Crops and Foods in Britain and Europe', available at: http://www.genewatch.org/sub-568547, last accessed on 30 April 2017.

[392] DEFRA and Rural Payments Agency, '2010 to 2015 Government Policy: Food and Farming Industry', Policy Paper by DEFRA and Rural Payments Agency, 8 May 2015, Appendix 7.

[393] *Ibid*, 73.

[394] This was discussed in detail in Chapter 1, section 3 of this thesis.

according to the questions asked and answered during the interviews. The method used in analysing the empirical findings includes making extensive use of quotations from the delegates interviewed in the course of this research before engaging with, and connecting the material to the aim of the research.

In total, 5 (AJ2, AO1, AO2, BJ1, and BO2) out of 7 interviewees who talked on this issue believed that there were inconsistencies and potential conflicts between the treaties, or stated that the wordings of the treaties were not incompatible on their face, but that conflicts might arise depending on how the treaties were implemented.[395] Another interviewee (AJ3) was of the opinion that the treaties had no conflict at the level of law, but did not comment on whether there were potential conflicts during implementation.[396] One further interviewee (CJ1) claimed that the treaties interacted with one another but could be interpreted in a harmonious way which did not necessarily conflict.[397]

More specifically, agency AO1, official of an international organisation, commented that there could definitely be some mismatch between the WTO Agreements and the Cartagena Protocol. AO1 listed two areas of the Protocol that stood out in terms of their potential to cause tension or conflicts with the trade rules: the Protocol adopts the precautionary approach and allows parties to make decisions on the importation of GM products on the basis of precautionary measures when scientific information is not adequate, and it allows parties to take into account socio-economic considerations in decision making.[398]

In the same vein, agency AO2, representative from another international organisation, stated that there were certain areas of tension or conflicts between the treaties, which might possibly create obstacles for the implementation of the treaties. AO2 believed that whether there was a conflict between the WTO Agreements and the Protocol depended on the definition of conflict. The more broadly you defined conflict, the more you would find conflict. AO2 claimed that the potentially conflicting areas include, firstly, the fact that the treaties adopted different approaches to the issue of burden of proof. Under the Protocol, it was for the country challenging the import restriction to prove that the restriction was not justified, while under the WTO it was often for the country that imposes the restriction to

[395] Details of the interviewees' comments will be presented in the following paragraphs.
[396] Communication from Respondent A of Jurisdiction 3 to the author, dated October 2012.
[397] Interview, Respondent C of Jurisdiction 1, December 2012.
[398] Interview, Respondent A of Organisation 1, July 2012.

prove justification. But whether this was a conflict depended on the facts of the dispute and the definition of conflict. Secondly, one might argue that the Protocol confirmed states' rights to refuse GM food, and consequently conflicts with the WTO Agreements which generally do not accept trade restrictions. Thirdly, the Protocol gave treaty recognition to a fully functioning precautionary principle, and the WTO Agreements only reflected the precautionary principle in part.[399] However, the interviewee believed that this was not a conflict because the treaties just did not perfectly overlap as against them clashing.[400]

In support, agency BJ1, official of the government of jurisdiction 1, commented that although the WTO Agreements and the Cartagena Protocol had some differences, there was no real conflict at the level of law; instead, conflicts might arise depending on how the treaties were implemented. BJ1 stated that the treaties regulated similar activities, and that they overlapped with one another, not necessarily only in a synergetic way. The basic focus of the Cartagena Protocol was environmental and biosafety protection. Although the WTO appreciated some environmental and health concerns, its basic focus was removing obstacles to international trade. States had different, sometimes industry-driven, political and economic agendas which might result in conflict.[401]

Similarly, organisational representative BO2 stated that the WTO Agreements and the Protocol did not conflict in the way they are written *per se*, although the only provision that on the face of it brought up concerns was that on the precautionary principle or with taking precautionary actions. The representative BO2 commented that conflicts might arise depending on how states implemented the treaties, especially considering the large and growing volume of international trade in GMOs. For example, whether the fact that the Protocol allowed Parties to take into account socio-economic considerations would conflict with the WTO Agreements depended on how the issue is dealt with and how much weight is given to these factors in a particular case.[402]

[399] This was discussed in detail in Section 4.3.3 of this chapter.
[400] Interview, Respondent A of Organisation 2, September 2012.
[401] Interview, Respondent B of Jurisdiction 1, December 2012.
[402] Interview, Respondent B of Organisation 2, November 2012.

7.2 Potential conflicts regarding scientific evidence and the precautionary principle in the risk management process

Precaution is an inherent element of risk analysis. The degree of insufficiency and uncertainty in scientific information and evidence should be explicitly considered by risk managers and be reflected in the risk management options and decisions.[403]

The role that science and non-scientific concerns play in the decision-making process heavily impacts on the relationship between the WTO Agreements and the Protocol. On the one hand, the SPS Agreement does not specifically refer to, but only reflects to an extent, the precautionary principle. In case a proper risk assessment cannot be carried out due to the insufficiency of scientific evidence, the SPS Agreement allows provisional measures to be taken. It also imposes an obligation on the importers to seek additional information for a more objective risk assessment within a reasonable period of time.[404]

On the other hand, the Protocol's requirement that decisions should be made in accordance with risk assessments, on the face of it, appears to narrow the discretion available to importing states as they would need to follow the result of any risk assessment. However, it does not mean that the Protocol adopts as stringent scientific requirements as the SPS Agreements. In fact, the Protocol allows non-scientific factors to be taken into account in the decision-making process. The Protocol specifically adopts the precautionary principle. This entails a shift in decision-making in favour of a bias towards safety and caution.[405] In the case of a lack of scientific certainty due to insufficient scientific evidence in a risk assessment, precautionary measures (such as import ban or restrictions on GMOs) may be justified by non-commercial concerns such as environmental and human health protection.

In light of the above, some argue that the Protocol's AIA mechanism may legitimise 'additional national or regional regulatory measures not required under the Protocol.'[406] Others are of the view that the Protocol's AIA procedure is not 'inherently WTO-illegal', but it may conflict with the WTO Agreements if improperly applied.[407] This

[403] HT Anker and MR Grossman, 'Authorisation of Genetically Modified Organisms: Precaution in US and EC Law', (2009) 4(1) *European Food and Feed Law Review* 3, 18.
[404] The SPS Agreement, Article 5.7.
[405] Freestone (n 45), 211.
[406] Hagen and Weiner (n 144), 706.
[407] C Thorn and K Brosch, 'The Cartagena Protocol on Biosafety and The World Trade Organisation: Implementing a WTO-Consistent Biosafety Regulatory Framework', November 2004.

argument also finds some support from the empirical research, in which one governmental official (AJ2) claimed that member states tended to use the AIA procedure to protect their own interests. Agency AJ2 commented that the Protocol did not strictly regulate its member states in specific detail. Instead, it gave great discretion to member states and allowed them to make decisions according to their domestic legislation or other international treaties. Conflicts between the treaties might arise in relation to the utilisation of the AIA procedure, which allowed states to postpone or ban the import of GMOs according to risk assessments. Such a restriction might be regarded as a technical or green barrier to international trade, according to this respondent.[408]

It is still unclear the extent to which precautionary measures taken under the Protocol would be consistent with the WTO Agreements. The extent to which the Protocol may vary rights and obligations under WTO Agreements is also debatable. As indicated by the *EC-Biotech* and *EC-Hormones* cases which were discussed earlier,[409] it is not, however, likely that WTO Panels and the AB will accept the Protocol's version of the precautionary principle.[410] Inconsistencies may, thus lie in the extent to which the precautionary principle may affect decision-making under the SPS Agreement and the Protocol. This is in addition to the fact that conflicts between the relevant regimes may yet occur from three different perspectives as explored below.

First, a comparison of the treaties shows that the SPS Agreement's version of the precautionary principle seems to be much weaker than the one under the Protocol.[411] The SPS Agreement's conditions for triggering the precautionary principle are more stringent than the conditions under the Protocol. Under the Protocol, the precautionary principle is triggered by 'lack of scientific certainty due to insufficient relevant scientific information and knowledge'.[412] A precautionary approach would thus be justified by both scientific uncertainty and insufficiency.

Comparably, the precautionary principle can only be triggered under the SPS Agreement by the insufficiency of scientific evidence. The AB, in the *Japan-Apples* case, stated that Article 5.7 can only be applied when relevant scientific evidence is insufficient for

[408] Interview, Respondent A of Jurisdiction 2, July 2012.
[409] The cases were discussed more in detail in section 4.3.3 of this chapter.
[410] Stewart (n 164), 29.
[411] *Ibid*, 28.
[412] The Protocol, Article 10.6.

a risk assessment, not in the case of scientific uncertainty.[413] Tensions may, thus, arise as the precautionary principle would apply under the SPS Agreement only when there is insufficient scientific information to carry out a risk assessment, while it would also apply under the Protocol when a risk assessment suggests that there is still a lack of certainty about the potential adverse effects of GMOs.[414]

Second, a party's rights and obligations under the Protocol in relation to the precautionary principle are different from those under the SPS Agreements. The precautionary measures are provisional under the SPS Agreement. Members have absolute obligations to seek additional information necessary for a more objective risk assessment so as to review such measures under the SPS Agreement, and this must be done within a reasonable period of time.[415]

Comparably, Members do not have absolute obligations to review such measures under the Protocol. The absence of a requirement for regular reviews under the Protocol is consistent with the application of precautionary measures in the Rio Declaration.[416] The importing Parties 'may' review such measures, but they are not obliged to do so unless explicitly requested by the exporting Parties.[417] Unlike the SPS Agreement, the Protocol does not require such review to be done within a reasonable period of time, and this may be more restrictive to international trade.[418] Different from the SPS Agreement, the Protocol also does not limit the duration of precautionary measures.

Lastly, although the Protocol puts a time limit on the decision making process regarding the import of GMOs,[419] a failure by the importing countries to communicate their final decisions within respective time periods 'shall not imply its consent' to the import of GMOs intended for release into the environment,[420] and 'shall not imply its consent or refusal' to the import of GMOs intended for direct use as food or feed, or for processing.[421] In practice, in the case of scientific uncertainty or insufficiency, the importing Party may decide not to reply to a notification or not to make a decision regarding GMO imports, so as to make

[413] *Japan-Apples*, ABR, (n 211), para 184; and *EC-Biotech,* Panel Report (n 146), para 8.9.
[414] Zarrilli (n 372), 13.
[415] The SPS Agreement, Article 5.7.
[416] Cheyne (n 206), 159.
[417] The Protocol, Article 12.
[418] Ansari and Mahmod (n 135), 165.
[419] The Protocol, Articles 10(3) & 11(1).
[420] *Ibid*, Article 10(5).
[421] *Ibid*, Article 11(7).

a *de facto* ban or restriction on international trade in GMOs. Such measure may be challenged under the SPS Agreement or the TBT agreement and result in potential conflicts.[422]

However, having potential conflicts does not necessarily indicate that the treaties will conflict regarding the use of precautionary principle. As stated by one of the respondents, governmental official CJ1, in the empirical research, the precautionary principle was not a principle of general international law that could be usefully imported into the WTO system.[423] Even though the Protocol specifically adopted the precautionary principle, this did not really add a lot to what we could get by simply invoking Article 5.7 of the SPS Agreement (on reflection of the precautionary principle). CJ1 referred to the example of the EU GMO legislative framework which was based on the notion of the precautionary principle. In the *EC-Biotech* case, the three complaining members did not attack the lawfulness of EU GMO legislation which required prior-authorisation of GMOs. CJ1 noted that in some sense, the complainants accepted the notion of precaution in relation to GM products in general. Moreover, CJ1 believed that although the precautionary approach as reflected in the context of Article 5.7 of the SPS Agreement was 'temporary', a precautionary measure may still exist for a relatively long period, because a measure could be justified as temporary as long as it is periodically and constantly under review. According to agency CJ1, that is to say, a measure might still be a temporary one under Article 5.7 where it was justified by the uncertainty 'by the fact that the problem you legitimately identified as it needs the research that has not yet announced'.[424]

7.3 Potential conflicts in relation to socio-economic considerations

Another non-scientific factor allowed in the decision-making process under the Protocol is socio-economic consideration. Article 26 of the Protocol legitimises trade-restrictive measures that are justified by the fact that import of GMOs may negatively affect socio-economic values, particularly among indigenous and local communities. It was one of the issues that divided the negotiators throughout the negotiation process of the Protocol.[425]

Potential GMO importers considered that the domestic introduction of GMOs may have adverse impacts on their societies and economies, in terms of causing loss of markets

[422] The SPS Agreement, Annex C 1(a); and the TBT Agreement, Article 5.2.1.
[423] Interview (n 397).
[424] *Ibid.*
[425] Eggers and Mackenzie (n 156), 527.

and employment, and threatening their cultural and ethical values. They believed that the inclusion of socio-economic considerations in decision-making processes can help, for example, to improve the quality of decision-making, improve society's welfare, and protect indigenous and local communities from the potential harm GMOs could cause.[426]

On the other hand, many potential GMO exporting countries were concerned that the inclusion of socio-economic considerations may lead to discrimination and protectionism, and may be used to erect undue trade barriers and to distort international trade in GMOs.[427] It was seen by the exporters as 'an additional regulatory hurdle' which may have a negative impact in terms of the time needed for completion of a risk assessment, cost of compliance with biosafety regulations, or preventing access to and development of new technologies.[428]

Debates on the practical implications of Article 26 focus on questions such as the extent to which this article may contribute to the conservation and sustainable use of biodiversity, and whether a Party's right to take into account socio-economic considerations is compatible with its other international obligations. It is generally accepted that states' rights to consider socio-economic values in decision-making processes may enter into conflict particularly with their obligations under the WTO Agreements.[429]

Measures which are applied to address certain socio-economic considerations would normally also fall under the regulation of the SPS Agreement. This is affirmed by the Panel in the *EC-Biotech* case. The EU argued that the import bans imposed by some member countries on EU-approved GMOs were not inconsistent with the SPS Agreement, because the import bans can be justified on the basis of reasons which fell outside of the scope of the SPS Agreement. The reasons were associated with socio-economic considerations, such as negative impacts on biodiversity, contamination of conventional crops, impacts on farms and farming systems, and long-term ecological impacts. The Panel rejected the EU's argument and found that all those considerations fell within the scope of the SPS Agreement.[430]

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[426] A La Vina and L Fransen, 'Integrating Socio-Economic Considerations into Biosafety Decisions: The Challenge for Asia', (Washington DC: World Resources Institute, 2004), 2.
[427] COP-MOP 2 Meeting Documents, 'Socio-Economic Considerations: Cooperation on Research and Information Exchange (Article 26, Paragraph 2)' (24 March 2005) UNEP/CBD/BS/COP-MOP/2/12.
[428] Falck-Zepeda and Zambrano (n 321), 178.
[429] S Smyth and J Falck-Zepeda, 'Socio-economic Considerations and International Trade Agreements' (2013) 14(1) *Estey Centre Journal of International Law and Trade Policy* 18; and Falck-Zepeda (n 317).
[430] *EC-Biotech,* Panel Report (n 146), paras 7.2576, 7.2584, 7.380, 7.2839, 7.343 & 7.344.

Indeed, the SPS Agreement allows economic considerations to be taken into account when adopting SPS measures, and it is for Members to do so in practice. It states that in assessing the risk to animal or plant life or health and determining the appropriate measure to be applied, WTO Members must take into account relevant economic factors including: the potential damage in terms of loss of production or sales in the event of the entry, establishment or spread of a pest or disease; the costs of control or eradication in the territory of the importing Member; and the relative cost-effectiveness of alternative approaches to limiting risks.[431]

A comparison of the Protocol[432] and the SPS Agreement indicates that there exist significant differences between them in terms of the extent to which the treaties allow the inclusion of socio-economic considerations. States have greater regulatory flexibility under the Protocol than under the WTO Agreements. The range of socio-economic considerations which may be taken into account under the Protocol seems to be much wider than the ones under the SPS Agreement. The exception of economic considerations under the SPS Agreement is narrowly defined, and could greatly hinder countries wishing to take into account a broader range of socio-economic considerations surrounding GMOs.[433]

The *EC-Biotech* case may provide some preliminary indications on how the WTO dispute settlement system would deal with the potential conflicts between the Protocol and the WTO Agreements regarding socio-economic considerations. The Panel ruled that EU member states' import ban on GMOs was inconsistent with the SPS Agreement because it did not meet the obligations to base the measure on a scientific risk assessment.[434]

The *EC-Biotech* Panel report sets a legal precedent which WTO members should consider. In the future, any inclusion of socio-economic considerations in decision-making should comply with the SPS Agreement and be based on a risk assessment.[435] Moreover, it should comply with the SPS Agreement's procedural requirements, and not be discriminatory[436] or more trade-restrictive than necessary.[437] In addition, if a provisional

[431] *Ibid*, Article 5(3).
[432] A list of what may constitute socio-economic considerations under the Protocol is presented in section 5.4 of this chapter.
[433] Jaffe (n 320), 306.
[434] *EC-Biotech,* Panel Report (n 146), paras 7.3116, 7.3120, 7.2121 & 7.3126-9.
[435] The SPS Agreement, Article 5.1.
[436] *Ibid*, Article 2.3.
[437] *Ibid*, Article 5.6.

measure is taken on a precautionary basis, additional information must be sought and the measure should be reviewed.[438]

Moreover, although WTO Members have the obligation to consider economic factors regarding SPS measures, the SPS Agreement specifically and strictly requires all SPS measures to be based on risk assessment and sufficient scientific evidence. It not only mandates scientific evidence, but also demands sufficiency of scientific information. In practice, no WTO DSB or disputing countries have quoted socio-economic risks to justify an otherwise WTO-inconsistent measure. Some argue that it is very likely that WTO Panels and the Appellate Body will not accept a social risks paradigm.[439] Unlike WTO agreement, the Cartagena Protocol does not have non-discrimination requirements such as national treatment or most favoured nation treatment obligations. It does not mandate any measures or procedures not to be carried out in an arbitrary or unjustifiably discriminatory manner.

In addition, the socio-economic impacts of GMOs are also receiving attention at the national level.[440] The cultural, social, economic, moral, and community values hugely vary in different countries. For example, consumers in the EU tend to be very critical about GMOs, and have huge demand on the right to be informed of the GMOs contained in their food, while GMOs and their labelling have not become a major issue for the US consumers. It would be unwise to ignore the socio-economic considerations which greatly differ from country to country.

In relation to the domestic implementation of socio-economic risk assessments, many countries have included or are considering the inclusion of socio-economic considerations in their domestic legislation. Some national biosafety frameworks take a strict science-based approach and only regulate GMOs based on sufficient scientific evidence, such as those of the US, Canada, and Australia. Other states not only take into account science, but also incorporate political considerations to different degrees and use different modalities in domestic regulation of GMOs, such as the EU, China, Brazil, and Mexico.[441]

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[438] *Ibid*, Article 5.7.
[439] Stewart (n 164), 32.
[440] For more discussion on the review of socio-economic considerations' inclusion in domestic biosafety frameworks, see: J Falck-Zepeda, J Wesseler, and S Smyth, 'The current status of the debate on socio-economic assessments and biosafety highlighting different positions and policies in Canada and the US, the EU and Developing Countries' (2010) Paper presented at the 2010 World Congress of Environmental and Resource Economics (WCERE) in Montreal, Canada, 29June 2010.
[441] Falck-Zepeda and Zambrano (n 321), 175-6.

If the inclusion of socio-economic considerations in national laws and regulations is not properly done, it may negatively impact, or constitute significant barriers to, international trade in GMOs. The socio-economic considerations' (under the Protocol) consistency with the SPS Agreement is still questionable. There exist apparent tensions and potential conflicts between the Protocol and the SPS Agreement in this regard.

7.4 Potential conflicts in relation to compulsory labelling requirements

The issue of labelling of food is related to the consumer autonomy argument.[442] Food labels are an essential source of information, and can inspire and provide the critical stimulus for a food purchase.[443] The Protocol's mandatory labelling requirements on products which contain or may contain GMOs are designed to avoid adverse effects on biological diversity and risks to human health.[444] Although the Protocol does not specifically refer to it, some argue that the overall objective of the mandatory labelling requirement is to provide consumer information and enable customers to have effective control and choice over what they consume, be it for health, safety, ethical, religious, or other reasons.[445]

On the other hand, the WTO regime does not stipulate for compulsory labelling of GMOs meant for international trade. The TBT Agreement is the most relevant WTO Agreement to the labelling of GMOs, and applies if the labelling scheme is designed to provide information to consumers; the SPS Agreement is also relevant to the labelling of GMOs, and applies only if the primary goal of the labelling is food safety or human, plant or animal health considerations.[446]

Generally, labelling requirements based on PPMs may also be examined under the provisions of the GATT, but the AB has not made a definitive ruling on whether or not such labelling requirements are consistent with Articles I:1 and III:4 of the GATT (on non-

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[442] A Rubel and R Streiffer, 'Respecting the Autonomy of European and American Consumers: Defending Positive Labels on GM Foods' (2005) 18 *Journal of Agricultural and Environmental Ethics* 75, 77 & 82; P Markie, 'Mandatory Genetic Engineering Labels and Consumer Autonomy', in P Weirich (ed), *Labelling Generically Modified Food: The Philosophical and Legal Debate* (Oxford University Press, 2007), 88-103; and R Streiffer and A Rubel, 'Genetically Engineered Animals and the Ethics of Food Labelling', in Weirich (ed), *ibid,* 64-5.

[443] FH Degnan, 'Biotechnology and the Food Label', in Weirich (ed), *ibid,* 17.

[444] The Protocol, Article 18(1).

[445] R Streiffer and A Rubel, 'Choice versus Autonomy in the GM food Labelling Debate' (2003) 6(3) *AgBioForum* 141, 142; and K Hansen, 'Does Autonomy Count in Favour of Labelling Genetically Modified Food?' (2004) 17(1) *Journal of Agricultural and Environmental Ethics* 67, 68.

[446] The SPS Agreement, Annex A (1); and Voon, Mitchell and Gascoigne (n 242), 454.

discrimination requirements) or can be justified under Article XX of the GATT (on general exemptions).[447]

Furthermore, the nature of labelling of GMOs and, for example, dolphin-safe tuna, is not necessarily the same. Although both concern the production and process methods, the 'dolphin safe' labelling expresses positive information on environmental protection, and may be appealing to consumers who are faced with choices. The labelling of GMOs, on the other hand, may not necessarily be seen as positive. The labelling of GMOs, in this context, may be seen as conveying negative information to the consumers, particularly to those who are concerned with the potential risks of GMOs.[448] However, to others, GMO labelling may be simply seen as providing necessary information similar to information on salt content or additives.

No WTO case law has yet ruled on whether compulsory labelling of GMOs is consistent with the WTO rules. Uncertainties still remain as regards whether the Protocol's labelling requirement is consistent with the WTO Agreements; this raises concerns mainly in relation to Articles 2.1 (on national treatment) and 2.2 of the TBT Agreement (on not creating unnecessary obstacles to international trade).[449] Some argue that the labelling of GMOs should not be threatened by WTO rules.[450] This is especially so, as it seems unlikely that the labelling of GMOs, or the failure to implement a food labelling regime, would have disastrous consequences for international trade in GMOs.[451]

This argument may seem to be true as labelling is common for food products, and is a low cost measure to provide information, and is arguably the least trade-restrictive measure of regulation available.[452] Thus, it seems unclear why there is a serious risk that

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[447] *US-Tuna II*, ABR (n 228), para 406; and Kudryavtsev (n 88), 43.
[448] A Tegene and others, 'The Effects of Information on Consumer Demand for Biotech Foods: Evidence from Experimental Auctions' (Washington, DC: United States Department of Agriculture Economic Research Service, 2003), available at: http://www.ers.usda.gov/media/1535443/tb1903.pdf, last accessed on 30 April 2017.
[449] M Stilwell and R Taraspfsky, 'Towards Coherent Environmental and Economic Governance: Legal and Practical Approaches to MEA-WTO linkages' (Geneva: WWF/CIEL, 2001), 9; and Manson and Epps (n 131), 340.
[450] 'The Way Forward for the Multilateral Trading System', Trade and Economics Briefing Paper No. 1, Novemer 2000, 2, available at: http://www.consumersinternational.org/media/321501/the%20way%20forward%20for%20the%20multilateral%20trading%20system.pdf, last accessed on 30 April 2017.
[451] C Wolf, 'Labelling Genetically Engineered Foods: Rights, Risks, Interests, and Institutional Options', in Weirich (ed) (n 442), 180.
[452] Voon, Mitchell and Gascoigne (n 242), 461.

compulsory labelling of GMOs might fall foul of the WTO Agreements as long as imported GM products were not treated in a less favourable manner against like GM products with national origin or originating in any other country.

However, even if imported and domestic GMOs (or GMOs originating in any other country) were treated alike, there is still the possibility that imported GMOs and domestic non-GMOs might be seen as 'like products' (such as imported GM potatoes and domestic non-GM potatoes).[453] In that case, the compulsory process–based labelling requirements on imported GM potatoes may be seen as a 'less favourable treatment' comparing to the fact domestic non-GM potatoes are not required to be labelled,[454] and consequently would be found to be discriminatory against GMOs and inconsistent with WTO obligations.[455]

Moreover, it is at least disputable whether the compulsory labelling of GMOs would meet the TBT Agreement's requirement of not 'creating unnecessary obstacles to international trade' and not being 'more trade restrictive than necessary to fulfil a legitimate objective'.[456] If improperly applied, the compulsory labelling requirements of GMOs may be used as non-tariff trade barriers under the current rules of the WTO.

Another vital point is that, the labelling requirements under the Protocol may also conflict with the SPS Agreement, if the primary goal of GMO labelling under the Protocol is food safety or human, plant or animal health considerations instead of providing information to consumers. On the one hand, the SPS Agreement requires all SPS measures to be based on risk assessment and sufficient scientific evidence. On the other hand, the Protocol mandates the labelling requirement, but does not contain any requirement on scientific information for the labelling of GMOs. Thus, the labelling requirement under the Protocol may be challenged in the WTO dispute settlement mechanism as an SPS measure which is not supported by sufficient scientific evidence. It may also be in conflict with Articles 5.5 and 5.6 of the SPS Agreement as an arbitrary or unjustifiable measure, or being more trade-restrictive than necessary.[457]

[453] Whether GMOs and non-GMOs are 'like products' was discussed previously in section 4.4.2 of this chapter.
[454] 'Less favourable treatment is discussed in detail previously in section 4.4.2 of this chapter.
[455] The TBT Agreement, Article 2.1; and Gruère and Rao (n 342), 59.
[456] The TBT Agreement, Article 2.2.
[457] Petersmann (n 155), 198.

8. Conclusion

Based on existing literature, this chapter defined 'conflict' from the perspective of the implementation of treaties and argued that two international norms are in 'conflict' if any one of them cannot be implemented without violating the other. It also found that treaty conflicts are the result and a manifestation of the inherent fragmentation of international law.

A comparison of the substances of the WTO Agreements and the Protocol found that they have similar requirements on risk assessment which are largely in conformity with one another. However, the overlap and apparent tensions between the treaties may also lead to conflicts, at least for states which are parties to both of them. In particular, conflicts between the treaties are more likely to occur during the implementation process of the treaties.

For instance, a measure taken under the Protocol may be challenged in the WTO DSB as violating the general GATT obligation of non-discrimination. Moreover, the SPS and TBT Agreements may be invoked to justify trade restrictive measures imposed by a WTO member *vis-à-vis* GMOs and GM products.[458] However, if improperly applied, the Protocol may be in conflict with the SPS or TBT Agreement. For example, compulsory GMO labelling may be challenged under the TBT Agreement as discriminatory if GMOs are considered as 'like products' to non-GMOs.

The major conflict between the SPS Agreement and the Protocol relates to the adoption of precautionary trade restrictive measures for GMOs intended for release into the environment in the case of scientific uncertainty. The Parties' right to ban or restrict GMO imports in the case of insufficiency of scientific evidence may also be challenged under the time limit requirement of the SPS Agreement. Moreover, the treaties may conflict in a case in which a country takes into account socio-economic considerations when banning or prohibiting the import of GMOs under the Protocol, while the SPS Agreement requires that all measures must be based on risk assessment and sufficient scientific evidence.

Having dissolved the doubts about whether or not the WTO Agreements and the Protocol have possible synergies or could come in conflict with one another, and demonstrated specifically and elaborately the areas of potential conflicts between both

[458] Zarrili (n 373), 41-3.

regimes, the vital question then arises as to how this conflict may be resolved or dealt with. The first port of call for answers to this poser would naturally and reasonably be the general rules on conflict resolution. In other words, can, or to what extent can, the general rules of conflict of norms be helpful in resolving the potential conflict between the two regimes in question? This following chapter 3 will endeavour to answer this question.

Having potential conflicts does not necessarily mean that conflict will actually arise or that the WTO Agreements and the Protocol are incompatible. This author's suggestion is that the tension can be managed and proactively avoided, and the treaties could be interpreted in conformity with one another, using the principle of systemic integration and the principles that lie behind it. These arguments will be tested in Chapters 4, 5, 6 and 7.

Chapter 3

General International Rules on Conflict Resolution cannot provide any Definitive Solution to Conflicts between the WTO Agreements and the Protocol

1. Introduction

Generally speaking, the relationship between conflicting treaty regimes is first examined in the context of how international judicial bodies resolve any disputes concerning treaty conflicts. This chapter tests how general conflict resolution techniques of public international law can aid in resolving conflicts between the WTO Agreements and the Protocol.

If the disputing states are parties to both the treaties, general international rules on how to resolve conflict of norms would apply to the relationship between the treaties. If, however, one of the disputing states is not a party to the protocol, the techniques discussed in this chapter will not be necessarily applicable in the dispute resolution process. The issue of non-parties would unavoidably lead to further uncertainty regarding how disputes concerning the WTO Agreements and the Protocol would be resolved. It may thus not be the best way to deal with the issue of non-parties in the judicial fora when disputes actually arise. Instead, the difficulties posed by non-parties may be better resoled if conflicts between the treaties were proactively avoided. The issues regarding non-parties to the Protocol will be explored in detail in the Chapter 5.[1]

All conflict of norms should be determined on the basis of three basic principles, including the contractual freedom of states, the *pacta sunt servanda* principle (states must perform and implement treaties that are binding in full and in good faith),[2] and the *pacta tertiis nec nocent nec prosunt* (a treaty binds the parties and only the parties; it does not create obligations for a third state)[3] principle.[4]

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[1] See Chapter 5, section 7 of this thesis.
[2] VCLT, Article 26.
[3] VCLT, Article 34.
[4] J Pauwelyn, *Conflict of Norms in Public International Law: How WTO Law Relates to Other Rules of International Law* (Cambridge University Press, 2003), 328.

The chapter starts with examining the bigger picture of how general international law resolves conflict between treaties. It looks at whether there is an inherent hierarchy of the different sources of international law, and whether a practical hierarchy can be found in international practice. It also considers whether conflicts between international treaties can simply be resolved based on the hierarchy of international law.

It then looks at the Vienna Convention on the Law of Treaties (VCLT) which codifies general conflict resolution techniques, including explicit treaty clauses aimed at resolving conflicts and the *lex posterior* principle. Following these is an examination of the *lex specialis* principle which is not incorporated in the VCLT, but is a widely accepted maxim of interpretation or conflict resolution technique in public international law.

There is no abstract hierarchy among the conflict resolution techniques. No particular conflict resolution principle or rule has absolute validity.[5] Nonetheless, the functioning and interrelations of the conflict maxims can be examined in the following order: the starting point is whether the conflicting norms form part of *jus cogens*. The VCLT defines *jus cogens* or a peremptory norm of general international law[6] as accepted and recognised by the whole international community as a norm that admits of no derogation, and which can be modified only by a new general norm of international law of the same character.[7] If only one of the norms forms part of *jus cogens*, it prevails over the other one; if both/neither are *jus cogens*, the principles of *lex posterior* and *lex specialis* come into play. Moreover, for countries which are parties to both conflicting treaties, explicit conflict clauses set out in treaties can be relied upon to resolve the conflicts.

Two particular difficulties exist in relation to the question of how general conflict resolution techniques apply to conflicts concerning the WTO Agreements and the Protocol: firstly, general conflict resolution techniques of international law are normally used to settle conflicts between different *obligations*. However, in addition to *obligations*, both the WTO law and the Cartagena Protocol also endow the parties with *rights*. Secondly, within the contemporary institutional framework of international law, it is very likely that conflicts

[5] CW Jenks, 'The Conflict of Law-Making Treaties' (1953) 30 *British Yearbook of International Law* 401, 436.
[6] The terms *jus cogens* or peremptory norms of general international law are deemed as interchangeable in the VCLT. See Articles 53 and 64.
[7] VCLT, Articke 53; D Shelton, 'International Law and "Relative Normativity"', in M Evans (ed), *International Law* (3rd edition, Oxford University Press, 2010), 144; and D Shelton, 'Normative Hierarchy in International Law' (2006) 100 *The American Journal of International Law* 291, 299.

between the WTO Agreements and the Protocol will be resolved by WTO Panels or the AB.[8] The question here is how should the conflicts be properly resolved without focusing too much on the WTO Agreements and neglecting the Protocol?

The chapter then tests how such conflict resolution techniques apply to the specific relationship between the WTO Agreements and the Protocol. It proceeds to look at whether general international rules on conflict resolution, including explicit conflict clauses in treaties, the *lex specialis* rule, and the *lex posterior* rule, can provide a definitive solution to conflicts between the WTO Agreements and the Protocol or not. By examining the extent to which general conflict resolution techniques may help to resolve any conflicts between the treaties when they actually arise, this chapter serves as a first step in studying how conflicts between the treaties should be dealt with. It will then lead to other possibilities in dealing with the treaty conflicts (in Chapter 4), which is based upon the premise of the benefits of conflict avoidance.

2. General international rules on conflict resolution techniques

Public international law contains general rules and principles on how conflicts between international norms should be resolved.[9] While there is no decisive or authoritative list of techniques for resolving conflicts, international judicial institutions normally base their decisions on certain principles.

A number of authors have enumerated these principles in a manner that partly overlaps. Some of the principles listed by Jenks are: the hierarchic principle, the *lex prior* principle, the *lex posterior* principle, the *lex specialis* principle, the autonomous principle, the pith and substance principle, and the legislative intention principle.[10] Also, Pauwelyn argues that conflicts should be resolved by searching for 'current state consent' through three steps: explicit conflict clause as agreed by the states; the *lex posterior* principle; and the principle of *lex specialis* or other forms of indications by states.[11] In addition, Shelton argues that the primacy of conflicting norms of international law should be decided on the following basis: whether one of the norms is *jus cogens* (norms that admit of no derogation); the principles of precedence, such as *lex specialis* and *lex posterior*; treaty provisions on how conflicts should

[8] This will be discussed in detail in Chapter 5, section 2 of this thesis.
[9] P Merkouris, *Article 31(3)(c) VCLT and the Principle of Systemic Integration: Normative Shadows in Plato's Cave* (2015, Brill-Nijhoff), 173.
[10] Jenks (n 5), 436.
[11] Pauwelyn (n 4), 331.

be resolved; asserting that a particular sub-system of international law prevails over other international law; and soft law requirements on conflict issues.[12]

Faced with a conflict of norms, international adjudicators must answer the controversial question of how should this actual norm conflict be resolved? The judges must make a decision on which norm should prevail and be applied in a particular case. The issue here is not about invalidity but about priority between norms. In this regard, techniques discussed in the paragraphs below may be referred to by international tribunals when giving judicial resolution to norm conflicts.

2.1 Dispute resolution in a decentralised system of international law - difficulty arises when conflicting treaties adhere to different dispute resolution techniques

As argued in the preceding chapter, two international norms are in conflict if they are both valid and applicable in a situation, but provide incompatible directions on how to deal with the same set of facts. In case the conflicting international norms cannot be implemented, complied with, or exercised without violating the other, the apparent question becomes that of which of the two rules should 'prevail'.[13]

There is no doubt that conflict of norms of international law, as well as enforcement of international law, may be resolved by negotiations between relevant parties. The results of such negotiation are likely to be practically satisfactory.[14] While there is no inherent hierarchy among the different conflict resolution techniques, in practice, negotiation might be the first and most common and convenient technique chosen by disputing states. Most recent conflicts between treaties have been resolved by political negotiations rather than by international tribunals.[15]

When a conflict of norms actually arises and negotiations fail to resolve the conflict to a satisfactory level, the parties normally seek to resolve the conflicts through international adjudication. Third-party dispute settlement is provided by a variety of international judicial institutions which make authoritative decisions over the disputes. States are free to choose

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[12] Shelton (2006, n 7), 292-5.
[13] E Vranes, *Trade and the Environment: Fundamental Issues in International Law, WTO Law, and Legal Theory* (Oxford University Press, 2009), 47.
[14] Jenks (n 5), 434.
[15] CJ Borgen, 'Resolving Treaty Conflicts' (2005) 37 *The George Washington International Law Review* 573, 606.

from an increasing number of international judicial institutions, such as international and regional courts,[16] as well as arbitration and *ad hoc* tribunals.

It is not definitive, and possibly also a matter of conflict, which tribunal is competent to address the disputes. The jurisdictional question lies in two tiers: firstly, whether the tribunal has jurisdiction to assess the norm other than the one from which its jurisdiction originates; secondly, whether the tribunal has the necessary expertise to assess this other norm and the relationship between the norms.[17] In the decentralised system of international law, it is rather common that norms from different sub-systems of international law may require different dispute resolution mechanisms. If states do not agree on which norm applies in a given case, it is questionable which dispute resolution mechanism should apply. That is to say, another level of conflict may arise as to which one of the conflicting norms should be relied upon to decide on the competence of adjudication.[18]

2.2 Is it possible to resolve the conflicts based on the hierarchy of norms in international law?

2.2.1 There is no inherent hierarchy of the sources of international law

Both in the domestic and international legal systems, legal norms may exist at different hierarchical levels. The hierarchy of norms is normally determined by the respective sources from which the norms are derived.[19] Within a national legal system, there is generally a clear and formal hierarchy of norms. Consequently, most (if not all) conflicts of domestic norms are avoided simply by interpretation, which might suggest that there is no conflict at all, or that such conflicts are resolved either on the basis of the hierarchical order of the norms or under the principles of *lex specialis* and *lex posterior* for monist states.[20]

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[16] Such as the ICJ, International Tribunal for the Law of the Sea, Central American Court of Justice, the WTO dispute settlement body, the European Court of Justice, the Inter-American Court of Human Rights, and the European Court of Human Rights.

[17] J Waincymer, 'Cartagena Protocol on Biosafety', (2001), available at http://www.apec.org.au/docs/waincymer2001.pdf, last accessed on 30 April 2017.

[18] JI Charney, 'The Impact of the International Legal System of the Growth of International Courts and Tribunals', (1998-1999) 31 *NYU Journal of International Law and Politics* 697; CPR Romano, 'The Proliferation of International Judicial Bodies: The Pieces of the Puzzle', (1998-1999) 31 *NYU Journal of International Law and Politics* 709; and Y Shany, *The Competing Jurisdictions of International Courts and Tribunals*, (Oxford University Press, 2003).

[19] Shelton (2010, n 7), 142.

[20] *Ibid*.

On the other hand, it is generally accepted that the system of international law does not have a formal, inherent, or clearly defined hierarchy of norms which has been determined by the international community as a whole. Although Article 38 of the Statute of the ICJ provides a list of generally recognised formal sources, it does not represent a hierarchy.[21] As argued by Brownlie, they are 'not stated to represent a hierarchy, but the draftsmen intended to give an order and in one draft the word "successively" appeared'.[22] One possible exception, which is however not directly related to the specific focus of this thesis, is Article 103 of the UN Charter,[23] which provides that a member's obligations under the Charter prevail over all the member's obligations under any other international agreements. This 'UN Charter obligations' is the only example where an international norm having a higher legal standing based on the source from which it originates.[24]

As discussed in the preceding chapter, all norms of international law originate from state consent. It is thus presumed that all sources of international norms have the same binding value and are hierarchically equal. International law lacking a formal hierarchy implies that conflicts of international norms cannot be decided simply based on their respective sources, but should rather be decided according to other conflict resolution rules.

2.2.2 The practical hierarchy of the sources of international law

Although international law does not have an inherent hierarchy among its sources which can be relied upon to resolve conflicts of international norms, in practice, there is an informal hierarchy from which a priority of sources may be derived by international tribunals. When examining the relationship between norms of international law, one may investigate a possible hierarchy existing among the sources, naming the practical priority of one source over another.

In this connection, international tribunals imply a hierarchical preference among the various sources, such as the concept of *jus cogens*. Both international practice and literature also indicate that certain norms are of particular importance, over others, for the

[21] Statute of the International Court of Justice, Article 38(1). This has been discussed in Section 3.1 of this Chapter.
[22] I Brownlie, *Principles of Public International Law* (7th edition, Oxford University Press, 2008), 3.
[23] UN, Charter of the United Nations, 24 October 1945, 1 UNTS XVI.
[24] TO Elias, *The Modern Law of Treaties* (Oceana Publications, 1974), 69; I Sinclair, *The Vienna Convention on the Law of Treaties* (2nd edition, Manchester University Press, 1984), 114; A Sadat-Akhavi, *Methods of Resolving Conflicts between Treaties* (Leiden: Nijhoff, 2003), 61; and Borgen (n 15), 581.

whole international community.[25] This practical or informal hierarchy is not the result of legislation, but emerges from 'forensic'[26] or 'natural'[27] legal reasoning. Importantly, however, the hierarchical status seems to be particularly important when resolving conflicts between a treaty and a customary international law.[28]

Koskenniemi has listed some examples of the informal hierarchy between sources of international law: first, *jus cogens* should trump 'general law'; second, treaties generally enjoy priority over customs, except when the custom forms part of *jus cogens*, or the subsequent custom terminates or revises an earlier treaty;[29] third, particular treaties have priority over general treaties; fourth, local customs enjoy priority over general customary law; fifth, customary law has priority over general principles of law according to Article 38(1)(c) of the Statute of the ICJ; sixth, Article 103 of the United Nations Charter; seventh, obligations *erga omnes* (toward all).[30] As a result of the informal hierarchy, in practice, international tribunals normally look at the normative problem in the sequence of treaties, custom and then the general principles of international law.

The highest in the hierarchy, which is the concept of *jus cogens*, was introduced into the international legal system by the ILC and was accepted by Article 53 and 64 of VCLT.[31] The notion of *jus cogens* enjoys an absolute priority in international law.[32] Such a norm will terminate or invalidate any pre-existing treaty which is in conflict with that norm.[33] Shelton argues that *jus cogens* originated solely as a limitation on international freedom of contract and the treaty-making power of states. The notion may 'override the will of persistent objectors to the emergence of the norm as customary international law.'[34] However, the concept lacks any agreed content or consensus in subsequent state practice.[35]

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[25] W Czapliński and G Danilenko, 'Conflict of Norms in International Law' (1990) 21 *Netherlands Yearbook of International Law* 3, 8; and M Koskenniemi, 'Fragmentation of International Law: Difficulties Arising from the Diversification and Expansion of International Law', Report of the Study Group of the International law Commission, UN. Doc. A/CN.4/L.682, 13 Apr 2006, 167, para 326.
[26] R Jennings and A Watts (eds), *Oppenheim's International Law* (9th edition, London: Longman, 1992), 26.
[27] ME Villiger, *Customary International Law and Treaties: a study of their interactions and interrelations with special consideration of the 1969 Vienna Convention on the Law of Treaties* (Dordrecht: Nijhoff, 1985), 161.
[28] Czapliński and Danilenko (n 25), 5.
[29] Pauwelyn (n 4), 133-4.
[30] Koskenniemi (n 25), 47 &167, paras 85 & 327.
[31] Sinclair (n 24), 21.
[32] P Weil, 'Towards Relative Normativity in International law?' (1983) 77 *The American Journal of International Law* 413, 423; Brownlie (n 22), 514; and Pauwelyn (n 4), 98.
[33] VCLT, Articke 64.
[34] Shelton (2006, n 7), 304.
[35] *Ibid*, 297; and Czapliński and Danilenko (n 25), 9.

The extent to which the practical hierarchy discussed above may be relied upon to resolve norm conflicts in the context of this thesis is questionable. Neither the WTO Agreements nor the Protocol has special characteristics such as the *jus cogens*. Both instruments are multilateral international treaties respectively under international trade law and international environmental law, and are of the same hierarchical status. Thus it will not be possible to resolve conflicts between the treaties simply based on the hierarchy of international law.

2.3 The VCLT recognises a number of conflict resolution techniques[36]

The VCLT as a whole is the international community's latest attempt to codify the law of treaties.[37] It is a treaty concerning the customary international law on bilateral and multilateral treaties. After 20 years of preparation by the UN International Law Commission, the VCLT was adopted on 22 May 1969, and entered into force on 27 January 1980. It has been ratified by 114 states as of August 2016.[38]

As a whole, the VCLT has not been accepted by all states of the international community.[39] However, to a very large extent, most of the VCLT provisions are the codification of pre-existing general international law on treaties.[40] They either codify customary international law, or give rise to rules belonging to general international law.[41] In practice, the VCLT has been applied without question by many international and national judicial institutions.[42]

The VCLT contains basic rules on the resolution of normative conflicts between treaties, mainly through Article 30 which provides rules on the application of successive treaties relating to the same subject-matter. However, the VCLT is only one instance of the

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[36] Rules on the interpretation of treaties as codified in section 3 of the VCLT will be discussed in detail in Chapter 4, section 3.1 of this thesis.
[37] Borgen (n 15), 601.
[38] Available at: https://treaties.un.org/Pages/showDetails.aspx?objid=0800000028004bfbd, last accessed on 30 April 2017.
[39] The VCLT has been ratified by 114 states as of August 2016, available at: https://treaties.un.org/pages/ViewDetailsIII.aspx?src=TREATY&mtdsg_no=XXIII-1&chapter=23&Temp=mtdsg3&clang=_en, last accessed on 30 April 2017.
[40] H Thirlway, 'The Sources of International Law', in M Evans (ed), *International Law* (3rd edition, Oxford University Press, 2010), 99.
[41] A Cassese, *International Law*, (2nd edition, Oxford University Press, 2005), 171.
[42] P Birnie, AE Boyle and C Redgwell, *International Law and the Environment* (3rd edition, Oxford University Press, 2009), 16.

regulations which may affect conflict resolution.[43] Paragraphs 3, 4, and 5 of Article 30 were designed to be residuary rules, which operate only in the absence of express treaty provisions regulating priority between one treaty and other treaties.[44] Thus, as the UN Office of Legal Affairs recognises, the general rules specified in Article 30 of the VCLT may not be sufficient to 'address all the problems arising with respect to the priority of the application of a particular treaty'.[45]

Article 30 of the VCLT only applies to 'successive treaties relating to the same subject matter'.[46] It consequently excludes most of the dominant type of conflicts between treaties dealing with different subjects but with overlapping interests. In practice, it is arguably for this reason that Article 30 has only been applied occasionally by the international community.[47]

This wording has led to the debate on how 'the same subject matter' should be interpreted. Some authors take a strict approach and argue that the 'same subject matter' should be interpreted in a strict sense and Article 30 should only apply to potentially conflicting treaties which are successive and related to the exact same subject matter.[48] In the same vein, Aust argues that Article 30 should not apply 'when a general treaty impinges indirectly on the content of a particular provision of an earlier treaty'.[49]

Others, such as Bolgen and Koskenniemi, argue that the wording should be widely interpreted and fear that the strict interpretation of 'the same subject matter' may take most of the important cases of treaty conflicts out of the domain of Article 30.[50] Pauwelyn also argues that 'relating to the same subject-matter' only imposes a requirement that there is a conflict or incompatibility between the treaties. The application of the *lex specialis* principle and the

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[43] Borgen (n 15), 604.
[44] UN, *United Nations Conference on the Law of Treaties, Second Session, Vienna, 9 April-22 May 1969, Official Records*, 253, para 42, available at: http://legal.un.org/diplomaticconferences/lawoftreaties-1969/vol/english/2nd_sess.pdf, last accessed on 30 April 2017; Sinclair (n 24), 97; Waincymer (n 17), 3; and Sadat-Akhavi (n 24), 61.
[45] UN Office of Legal Affairs, *Final Clauses of Multilateral Treaties: Handbook*, (United Nations Publication, 2003), 86, available at http://treaties.un.org/doc/source/publications/FC/English.pdf.
[46] VCLT, Article 30(1).
[47] Borgen (n 15), 605.
[48] A Schulz, 'The Relationship between the Judgements Project and Other International Instruments', Preliminary document for Hague Conference on Private International Law, December 2003, 6.
[49] A Aust, *Modern Treaty Law and Practice* (2nd edition, Cambridge University Press, 2007), 183.
[50] Borgen (n 15), 612-5; and Koskenniemi (n 25), 129, para 253.

decision on whether there is conflict between two treaties should not be construed on the abstract criterion of 'the same subject-matter'.[51]

This thesis adopts the wider interpretation. As argued in previous paragraphs, two treaties which have different focuses and do not regulate the same subject matter, may overlap to a certain extent and possibly frustrate each other. Conflicts between treaties with different subject matters but overlapping interests are on the increase, and they play a significant role in contemporary international arena. They cannot be neglected simply because they are not dealing with the same subject matter. Consequently, the question of whether two international treaties relate to the same subject matter should ultimately be settled through the test of whether 'the fulfilment of the obligation under one treaty affects the fulfilment of the obligation of another'.[52]

2.4 Conflict resolution technique I: resolving conflicts based on specific provisions of the conflicting treaties[53]

A treaty may include specific provisions aimed at determining its relationship with other treaties and resolving conflicts.[54] An explicit conflict clause (also known as 'savings clause') can be used to establish competences, prevent conflicts or resolve conflicts. The right of states to draft savings clauses in treaties is evidenced by Article 30(2) of the VCLT which states that 'when a treaty specifies that it is subject to, or that it is not to be considered as incompatible with, an earlier or later treaty, the provisions of that other treaty prevail'.

A savings clause may provide priority for the treaty in which it is included, stating that the treaty should be given priority over conflicting treaties. For example, both the UN Convention on the Law of the Sea (UNCLOS) and the North American Free Trade Agreement (NAFTA) state that, with some exceptions, they prevail over pre-existing treaties.[55] Otherwise, a savings clause may prioritise other treaties by stating that one or more

[51] Pauwelyn (n 4), 365 & 367.
[52] Koskenniemi (n 25), 130, para 254.
[53] This thesis will discuss the savings clause as written in the Protocol and the extent to which it addresses its relationship with the WTO Agreements in Chapter 3, section 3 and Chapter 4, section 4.2.
[54] ILC, *Yearbook of the International Law Commission 1966, Vol. II*, 214, available at: http://legal.un.org/ilc/publications/yearbooks/english/ilc_1966_v2.pdf, last accessed on 30 April 2017.
[55] UNCLOS, (1982) 21 ILM 1261, Article 311(1); and NAFTA, (1993) 32 ILM 289, 605, Article 103.

treaties supersede the treaty in which it is included.[56] Using explicit conflict clauses to resolve disputes could only work on a case-by-case basis. They do not provide general rules on the resolution of conflicts.

This practice of using explicit conflict clauses to resolve norm conflicts originates from the contractual freedom of states. The inclusion of an explicit conflict clause or a compatibility clause in a treaty is a drafting and procedural technique. Including explicit conflict clauses in a treaty is described as the best way to avoid or resolve conflict.[57] Some even argue that the only way to ensure systematic integration of treaties is to make such specific expression in the treaty provisions.[58] It requires treaty negotiators to treat the sub-systems of international law as meaningfully interrelated in a manner that can affect one another. Thus, negotiators may be required to consult other treaty regimes to which their states already belong.[59]

However, the inclusion of conflict clauses in treaties does not mean that potential conflicts between norms will necessarily be avoided or resolved. Firstly, the wording of a conflict clause itself may not be always clear; it may be confusing and ambiguous. Even detailed conflict clauses are not able to include or foresee every possible situation. For example, the Hong Kong International Convention for the Safe and Environmentally Sound Recycling of Ships specifically states that parties shall implement the Convention taking into account relevant and applicable international rules, standards, recommendations and guidance developed by the International Labour Organisation and the Basel Convention.[60] This provision is not clear as to how the other rules should be taken into account, or whether they, in fact, take priority over those of the Convention.

Moreover, two potentially conflicting treaties may each contain a savings clause, and the two conflict clauses may not be fully compatible, or may even be conflicting with each other. For example, Article 22(2) of the CBD requires the parties to act consistently with the rights and obligations under the law of the sea. However, Article 311(2) and (3) of

[56] Examples of saving clauses giving priority to prior treaties include Article 4 of the European Energy Charter Treaty, Article 40 of the North American Agreement on Environmental cooperation, Article 104 of NAFTA, and Article 60 of the European Convention on Human Rights.
[57] Czapliński and Danilenko (n 25), 13; and Borgen (n 15), 636.
[58] AE Boyle, 'Further Development of the Law of the Sea Convention: Mechanisms for Change' (2005) 54 *International & Comparative Law Quarterly* 563, 583.
[59] Borgen (n 15), 637.
[60] The Hong Kong International Convention for the Safe and Environmentally Sound Recycling of Ships, adopted on 15 May 2009, SR/CONF/45, (Yet to come into force), Annex, Chapter 1, Regulation 3.

UNCLOS states that the member states' rights and obligations under other agreements shall only be altered by the UNCLOS if those rights and obligations are incompatible with the UNCLOS or affect the rights and obligations under the UNCLOS. A close look at the two respective savings clauses - Article 22 of the CBD and Article 311 of UNCLOS – reveal that they are not fully coherent in relation to the rights and obligations they cover.[61]

2.5 Conflict resolution technique II: The *lex posterior* principle as reflected in Article 30(3) of the VCLT

Articles 30(3) of the VCLT reflects the *lex posterior* principle for successive treaties relating to the same subject matter, and states that: 'when all the parties to the earlier treaty are parties also to the later treaty but the earlier treaty is not terminated or suspended in operation under article 59, the earlier treaty applies only to the extent that its provisions are compatible with those of the later treaty.'

The *lex posterior* principle is often listed as a principle of interpretation or conflict resolution technique in public international law. Resort can be made to the *lex posterior* principle if conflict of norms in international law cannot be resolved through political negotiations or specific conflict clauses. The *lex posterior* principle provides that 'later legislation supersedes earlier legislation'.[62] In domestic legal systems, *lex posterior* has definite priority over *lex priori* because the sources of law are formally organised and clearly defined.

Yet, the *lex posterior* principle may not be applicable to all forms of norm conflicts at the international level. As argued above, the decentralised international legal system has neither clear sources nor legislative bodies which have the necessary authority to repeal or amend earlier law-making treaties or instruments. It would be particularly difficult to apply this principle to customs or general principles of international law, because it is generally very difficult (if not impossible) to tell when a custom or general international law emerged.

The *lex posterior* principle clarifies the relationship between different treaties by deciding on the applicability of treaties on a temporal scale and providing for a rule of

[61] R Wolfrum and N Matz, 'The Interplay between the UN Convention on the Law of the Sea and the Convention on Biological Diversity' (2000) *Max Planck Yearbook of United Nations law* 445, 477; and R Wolfrum and N Matz, *Conflicts in International Environmental Law* (Springer, 2003), 125.
[62] Jenks (n 5), 445; and H Aufricht, 'Supersession of Treaties in International law' (1952) 37 *Cornell Law Quarterly* 655, 657.

preference. It gives priority to one of the conflicting treaties and indicates that a later rule overrides an earlier one. Both the *lex posterior* and *lex specialis* principles are derived from the principle of contractual freedom of states and the fact that the parties to a treaty are free to establish and develop their mutual relations.[63] The theorem of this rule is that the more recent expression of states' will, formed under the more concretely present circumstances, supersedes the earlier will of states.

The *lex posterior* principle applies only if the earlier treaty is not terminated or suspended under Article 59 of the VCLT,[64] and the later treaty has the same coverage of parties as the earlier treaty, or has all the earlier treaty parties as its own parties together with newly joined states. When the parties to the later treaty are different from the earlier treaty and do not include all parties to the earlier one, according to Articles 30(4) of the VCLT, the *lex posterior* principle is applicable as between parties to both treaties. As between a State party to both treaties and a state party to only one of the treaties, the *pacta tertiis nec nocent nec prosunt* principle applies,[65] and the treaty to which both states are parties will govern their mutual rights and obligations prevail.[66]

Nevertheless, there appears to be a limited scope for applying the *lex posterior* principle to conflicts between treaty norms.[67] The principle does not have absolute validity, because a later treaty does not necessarily express the 'correct common intent' of the contracting parties (states cannot *per se* be presumed to have known the contents of all existing treaties); and a later consent of states does not always prevail over an earlier one without any restrictions.[68]

Additionally, in respect of conflicts between two multilateral treaties, the application of the *lex posterior* principle might be particularly problematic as to determination of the 'later' treaty. This problem was first brought up by the United Kingdom delegation during the Vienna Conference.[69] For example, it is not obvious as to whether the SPS Agreement or the Cartagena Protocol should be seen as the 'later' treaty. There still exist

[63] Jenks (n 5), 446; and Czapliński and Danilenko (n 25), 21.
[64] According to Article 59, an earlier treaty terminates if the parties to it conclude a new one on the same subject matter, excluding the application of the earlier treaty.
[65] VCLT, Article 34.
[66] *Ibid*, Article 30(4).
[67] Aufricht (n 62), 679-82; and Jenks (n 5), 445-6.
[68] Vranes (n 13), 57.
[69] UN (n 44), 222, para 40.

debates on whether the threshold date for determining the 'later' treaty should be the date of adoption or entry into force.[70]

2.6 Conflict resolution technique III: The *lex specialis* principle

When a situation is regulated by a general standard as well as a more special rule which, in and of themselves, are incompatible with one another, the *lex specialis* principle suggests that the special rule should take precedence over the general standard.[71] Existing literature generally refers to Grotius, Vattel and Pufendorf as the scholars who have first dealt with the *lex specialis* principle in international law.[72] The theorem of this principle is that the special rule may provide better access to the will of states.[73] Moreover, the speciality of a rule lies in the fact that it binds a limited number of states, or provides an exception from the general regulation of the subject matter.[74] Compared to general law, specific rules are normally based on particular circumstances, and may be more effective and more to the point.[75]

The *lex specialis* maxim is primarily a principle of legal logic.[76] It is a widely accepted maxim of interpretation or conflict resolution technique in public international law, although normally without lengthy elaboration. It can be applied to resolve apparent conflicts between two differing and potentially applicable rules.[77] Although not incorporated in the VCLT, the *lex specialis* principle applies, but is not limited like the *lex posterior* principle in 30(3) of the VCLT, to the relationship between treaties. Also, it is applicable between conflicting treaties which do not deal with the same subject matter, and thus fall out of the purview of Article 30 of the VCLT. And unlike the *lex posterior* principle, it applies to conflicts between special law and general international law. For example, a treaty (as *lex specialis*) would normally prevail over a custom (as a general law).[78]

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[70] This will be discussed in detail in section 4.1 of this chapter.
[71] L Boisson de Chazournes, *Les contre-measures dans les relations internationales économiques* (Pedone, 1992).
[72] Jenks (n 5), 446; Pauwelyn (n 4), 387; and Koskenniemi (n 25), 4.
[73] N Koutou, *The Termination and Revision of Treaties in the Light of New Customary International Law*, (Oxford University Press, 1995), 142.
[74] *Ibid*, 141.
[75] Koskenniemi (n 25), 36, para 60.
[76] Aufricht (n 62), 698.
[77] Jennings and Watts (n 26), 1270.
[78] Villiger (n 27), 161; and Jennings and Watts (n 26), 1270 & 1280.

Furthermore, the *lex specialis* principle has been widely accepted as reflected in the literature and international judicial decisions. Some argue that Article 38 of the Statute of the ICJ attributes priority of application in accordance with the *lex specialis* principle.[79] Others posit that the principle of *lex specialis* has 'sometimes been applied to resolve apparent conflicts between two differing and potentially applicable rules'.[80] This principle is specifically adopted by the ILC Draft Articles on Responsibility of States for Internationally Wrongful Acts.[81] Moreover, in the *Mavrommatis Palestine Concessions* case,[82] the Permanent Court of International Justice ruled that a special and more recent agreement should be prioritised over a general agreement.[83]

Yet, the principle of *lex specialis* cannot be automatically applied without any doubts. The main problem is that it is not always apparent as to which rule is special. This is especially the case when both rules are under different sub-systems of international law. For example, it may be difficult to decide which of the two treaty norms has a more precisely delimited scope of application. Different conclusions may be arrived at when the treaties are examined by different interpreters, from different perspectives, or with different focuses. Moreover, the application of the principle of *lex specialis* is limited, as it can neither overrule the principle of *lex posterior*, nor be decisive in many cases.[84]

2.7 Section conclusion: General international law does not seem to provide a definitive answer as to how conflicts of norms should be resolved

Political negotiations appear to be the most appropriate and convenient conflict resolution technique, but they may not always come to satisfactory conclusions. The parties may then seek third-party adjudication from international judicial institutions which will make authoritative decisions to resolve the norm conflicts, based on a variety of norm conflict resolution techniques.

As discussed above, the VCLT contains basic rules on the resolution of normative conflicts between treaties. For example, according to its Article 30(2), international tribunals

[79] Czapliński and Danilenko (n 25), 8.
[80] Jennings and Watts (n 26), 1270.
[81] Article 55, in ILC, *Yearbook of the International Law Commission 2001, Vol. II, Part Two*, 140, available at: http://legal.un.org/ilc/publications/yearbooks/english/ilc_2001_v2_p2.pdf, last accessed on 30 April 2017.
[82] *Mavrommatis Palestine Concessions* case (Greece v. U.K.), 1924 P.C.I.J. (ser. B) No. 3 (Aug. 30), 31.
[83] More discussion on the international case law which have accepted the *lex specialis* principle is available at Koskenniemi (n 25), 40-47, para 68-84.
[84] Sadat-Akhavi (n 24), 189-191; and Pauwelyn (n 4), 409.

may base their decisions on the conflict clauses under the disputing treaties. However, not all treaties include conflict clauses, and even if they do, conflicts between norms may not necessarily be avoided or resolved through conflict clauses.

Also, both the *lex posterior* and the *lex specialis* principles can be relied upon to resolve treaty conflicts to some extent. However, there are difficulties and exceptions in the application of these principles. A special or later rule prevails over a general or earlier rule only because the special or later rule provides better access to the states' intentions. Neither the *lex posterior* principle nor the *lex specialis* principle is an absolute legal norm in their own right which must be applied by relevant parties or tribunals. They must be weighed and reconciled on a case-by-case basis, in the light of the specific circumstances.[85]

The above mentioned conflicts resolution techniques, including explicit conflict clauses and the principles of *lex posterior* and *lex specialis*, will be tested into the relationship between the WTO Agreements and the Protocol in following paragraphs, with an aim of examining whether they can provide any definitive solutions.

3. Explicit conflict clauses in the WTO Agreements and the Protocol as agreed by states cannot provide a definitive solution to conflicts between the treaties

As discussed above, Article 30(2) of the VCLT gives states the right to include a savings clause in a treaty in order to clarify its relationship with other treaties, establish competences, prevent conflicts, or resolve conflicts. It is a right, not an obligation to draft a savings clause.

Not all international treaties include such a provision, and the effectiveness of a savings clause is still questionable. For example, the WTO legal system does not include a general conflict clause in respect of other international treaties. No WTO provisions explicitly provide that the WTO Agreements are to prevail over or derogate from pre-existing or future treaties.[86] Arguably, the Members have chosen to separate their trade commitments from those in the environment area, and abstained from working out a relationship between

[85] Jenks (n 5), 436; Koutou (n 73), 142; and M Akehurst, 'The Hierarchy of the Sources of International Law', (1974-75) 47 *British Yearbook of International Law* 273, 273.
[86] S Zarrili, 'International Trade in GMOs and GM Products: National and Multilateral Legal Frameworks', *Policy Issues in International Trade and Commodities Study series No. 29* (UNCTAD, 2005), 37-44.

their obligations in the two areas.[87] Although in a sense, the WTO system has shown an increasing openness to other regimes of international law, including MEAs.[88] For example, part of the Doha Round includes negotiations on trade and the environment which aims at enhancing the mutual supportiveness between them.[89]

Similarly and traditionally also, MEAs do not directly addresse their relationship with other international instruments. However, this may not be true for the biotechnology-related MEAs, because the CBD and its subsequent protocols, including the Cartagena Protocol and the Nagoya Protocol, all refer to their relationships with other international treaties.

Both the CBD and the Protocol contain 'savings clauses' on their relationship with other international treaties.[90] Article 22 of the CBD states that the Parties' rights and obligations under any existing international agreement shall not be affected by the CBD, but only in so far as their exercise does not cause serious damage or threat to biological diversity.[91] This is rather confusing as the 'serious damage or threat' standard lacks any determinative criteria. It is obviously vague and difficult to apply, and can be given different interpretations.[92] While Article 22 may appear to give priority to existing rights and obligations under other treaties, the ambiguous 'serious damage or threat' requirement may lead to a *de facto* precedence of the CBD over other instruments.

In an effort to clarify the relationship between the Protocol and other international agreements, the Protocol's 'savings clause' states that 'this Protocol shall not be interpreted as implying a change in the rights and obligations of a Party under any existing international agreements' and that this is 'not intended to subordinate this Protocol to other international

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[87] H Horn and PC Mavroidis, 'Multilateral Environmental Agreements in the WTO: Silence Speaks Volumes' (2014) 10 *International Journal of Economic Theory* 147, 156-62.
[88] J Pauwelyn, 'Recent Books on Trade and Environment: GATT Phantoms Still Haunt the WTO' (2004) 15 *European Journal of International Law* 575, 591.
[89] Doha Ministerial Declaration, 14 November 2001, WT/MIN(01)/DEC/1, (2002) 41 ILM 746, para 31. The Doha Round is the latest round of trade negotiations among the WTO membership which was officially launched in 2001. Its aim is to achieve major reform of the international trading system through the introduction of lower trade barriers and revised trade rules. It is unclear whether the Doha Round is still going on or whether trade negotiations based on elements of the Doha Round are instead taking place. The concept of the single undertaking seems to have collapsed with numerous examples of early harvests having occurred (though noticeably not in the trade and environment domain). The Doha Round negotiations on trade and the environment will be discussed further in Chapter 6, section 5.1 of this thesis.
[90] The CBD, Article 22; and The Protocol, Preamble.
[91] The CBD, *Ibid*.
[92] Birnie, Boyle and Redgwell (n 42), 802.

agreements'.[93] The 'savings clause' was an extensively debated issue during the Protocol's highly political negotiation process. Not all parties endeavoured to decide on how environmental and trade agreements should be related to each other in the Protocol.[94]

The Protocol's 'savings clause' was designed to mainly address, and reflects the parties' awareness of, the potential for conflicts between the Protocol and the WTO Agreements.[95] The negotiators of the Protocol did not consider the relationship between the Protocol and other relevant international agreements, such as the International Plant Protection Convention, the Chemical Weapons Convention, and the Biological Weapons Convention.[96]

As one can easily observe, the 'savings clause' was concluded in a rather obscure way, representing a mixed bag of Parties' intentions.[97] It has been widely criticised as ambiguous and vague, and has very limited influence on the practice of preventing or resolving conflicts by itself.[98] It leaves the interpreter little practical guidance as to how to resolve any potential conflict between the Protocol and other international agreements.[99] Some even argue that the seemingly contradictory statements of the 'savings clause' conflict or cancel each other out, and puzzle more than they clarify.[100]

Considering the above, the relationship between the Protocol and the WTO Agreements does not appear to be effectively clarified, and this situation is not helped by the interpretation of the 'savings clause' in the CBD or the Protocol. Thus, it is still arguable whether a party's rights and obligations under the WTO would be respected by the Protocol, or the party's rights and obligations under the Protocol take precedence over those under the

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[93] The Protocol, the Preamble.
[94] Waincymer (n 17), 2.
[95] R Mackenzie and others, 'An Explanatory Guide to the Cartagena Protocol on Biosafety', (2003) *IUCN Environmental Policy and Law Paper No. 46*, 27.
[96] International Plant Protection Convention, 17 November 1997, 2367 UNTS 223; Convention on the Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons and on Their Destruction, 13 January 1993, (1993) 32 ILM 800; and Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on Their Destruction, Apr. 10, 1972, 26 UST 583, 1015 UNTS 163. For more discussions, see: S Safrin, 'Treaties in Collision? The Biosafety Protocol and the World Trade Organisation Agreements' (2002) 96 *The American Journal of International Law* 606, 617. Safrin participated in the negotiations of the Protocol as a state department lawyer.
[97] More discussion on the savings clause's negotiation history is available at: A Gupta, 'Governing Trade in Genetically Modified Organisms: The Cartagena Protocol on Biosafety' (2000) 42(4) *Environment* 22.
[98] PE Hagen and JB Weiner, 'The Cartagena Protocol on Biosafety: New Rules for International Trade in Living Modified Organisms' (2000) 12 *Georgetown International Environmental Law Review* 697, 707; Mackenzie and others (n 95), 27; and Zarrili (n 86), 37-44.
[99] Mackenzie and others (n 95), 27.
[100] Gupta (n 97).

WTO.[101] Learning from case law dealing with the relationship between the different WTO Agreements, the 'savings clause' in the Protocol is likely to be interpreted in a way that cannot be used as a shield to justify otherwise WTO inconsistent measures.[102] That is to say, neither the 'savings clause' in the CBD nor that in the Protocol establishes a clear rule on which treaty should be prioritised, and cannot be relied upon to provide a definitive solution to any conflict that may arise between the Protocol and the WTO Agreements.

4. Neither can the principle of *lex posterior* nor the principle of *lex specialis* provide a definitive solution to conflicts that may arise between the WTO Agreements and the Protocol

4.1 The *lex posterior* principle is not necessarily applicable

As discussed above, the *lex posterior* principle may be used to determine the relationship and settle disputes between international treaties, and suggests that a later treaty supersedes an earlier one. However, this principle does not have absolute validity. It applies only to successive treaties relating to the same subject matter, and only to conflicts between treaties to which at least one party is identical.[103] Specifically, the application of the *lex posterior* principle to the relationship between the WTO Agreements and the Protocol may be particularly problematic as to the requirements on successive treaties and membership, and the determination of the 'later' treaty.

The *lex posterior* principle predominantly applies to 'successive treaties', it 'does not solve questions of conflicts between earlier or later rights or obligations of States under different treaties'.[104] Although both the WTO Agreements and the Protocol regulate international trade in GMOs, they respectively deal with trade and biosafety. The treaties are not commonly seen as being concerned with the same subject matter, and can hardly be classified as successive treaties even for countries which are parties to both the treaties.[105]

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[101] R Falkner, 'Regulating Biotech Trade: the Cartagena Protocol on Biosafety' (2000) 76(2) *International Affairs* 299, 313; and Hagen and Weiner (n 98), 709.
[102] *China-Measures Affecting Trading Rights and Distribution Services for Certain Publications and Audiovisual Entertainment Products*, ABR, WT/DS363/AB/R, 21 December 2009, para 4.207; and UN Educations, Scientific and Cultural Organisation Convention on the Protection and Promotion of the Diversity of Cultural Expressions, adopted on 20 October 2005, Article 20.
[103] Aufricht (n 62), 657.
[104] EW Vierdag, 'The Time of the 'Conclusion' of a Multilateral Treaty: Article 30 of the Vienna Convention on the Law of Treaties and Related Provisions' (1988) 59 *British Yearbook of International Law* 75, 110.
[105] Borgen (n 15), 614.

Moreover, the WTO Agreements and the Protocol do not have the same coverage of membership. The *lex posterior* principle will not be applicable if the later treaty does not have the same coverage of parties as the earlier treaty, nor has all the earlier treaty parties as its own parties together with newly joined states. It is thus questionable whether the *lex posterior* principle can be applied to the relationship between these two treaties.

Assuming that one argues the WTO Agreements and the Protocol are in some sense successive, the implications of the application of the *lex posterior* principle are still not straightforward. In order to determine which of the conflicting treaties is the later one, some argue that the relevant date should be the date of its conclusion or adoption.[106] Similarly, Wolfrum and Matz argue that reference to the date of adoption seems appropriate when considering a subsequent development or change of law; while referencing the date of entry into force takes into account the fact that specific treaty obligations do not arise before that.[107]

Others argue that the threshold date for the application of the *lex posterior* principle should instead be the date of entry into force. This argument appears to be more suitable for the purpose of resolving treaty conflicts between most contemporary treaties. Referencing the date of adoption has been challenged as only resolving the most basic constellations of conflicting treaties where 'the point of time of adoption of a treaty is one and the same for all contracting parties'.[108] Referencing the date of adoption cannot provide answers to the common situations where the adoption of multilateral treaty-making through complex procedures may be varied.[109] If the temporal scale of a treaty is decided based on differing dates of accession to the treaty, a treaty which is *lex posterior* for one party might be earlier in time for another party.

The Protocol (which entered into force on 11 September 2003) came into force later than the WTO Agreements (which entered into force on 1 January 1995) and appears to be the *lex posterior*. However, this may not be true for the Protocol's member states which acceded to the WTO after the adoption or entering into force of the Protocol, as the WTO Agreements would in that case be the *lex posterior* instead. Consequently, the *lex posterior* principle does not seem to provide any definitive solution to the conflicts between the WTO Agreements and the Protocol.

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[106] UN (n 44), 253, paras 39-40; Vierdag (n 104), 93; and Sadat-Akhavi (n 24), 75-8.
[107] Wolfrum and Matz (2003, n 61), 155.
[108] Vranes (n 13), 61.
[109] *Ibid*; and Sinclair (n 24), 94.

4.2 The principle of *lex specialis* cannot be automatically triggered

As discussed above, the *lex specialis* principle applies, but is not limited to, the relationship between international treaties, which suggests that the special rule overrides the general rule when they are regulating the same situation. The WTO DSB has resorted to the principle of *lex specialis* on an occasional basis when interpreting the WTO Agreements. It stated that one of the special agreements, such as the Agreement on Subsidies and Countervailing Measures, prevailed over the general provisions of the GATT.[110] However, the application is limited within the WTO Agreements themselves. The WTO Panels and AB have made no reference to *lex specialis* in cases between the WTO Agreements and non-WTO rules.

In relation to the application of the *lex specialis* maxim, the major issue is to decide which of the conflicting treaties can be said to be more specific than another. One norm can be seen as more special than the other 'if its applicability depends upon at least one criterion more than that of the more general norm'.[111] It is relatively easy to decide if the conflicting treaties are a framework convention and its detailed protocol, although conflicts between such treaties are rather rare. Priority will normally be given to the protocol over the framework convention. For example, the Cartagena Protocol is a supplementary protocol to the framework convention of the CBD; in the case of any conflict, the Protocol would prevail over the CBD as the *lex specialis.*

It is, however, much more difficult to apply the *lex specialis* maxim if the conflicting treaties address the same issue in equally specific terms but from different perspectives. Potential conflicts between the WTO Agreements and the Protocol, which serve as an example and illustration of the relationship between trade and environment, can be classified as conflicts between two special laws.[112]

It is not straightforward as to which treaty is more specialised and is the *lex specialis*. The SPS Agreement is more specialised in terms of protecting human and animal and plant health. The TBT Agreement is more specialised in terms of technical regulations

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[110] *Indonesia-Certain Measures Affecting the Automobile Industry*, Panel Report, WT/DS54/55/59/64/R, 2 July 1998, para 14.28; *India-Quantitative Restrictions on Imports of Agricultural, Textile, and Industrial Products*, Panel Report, WT/DS90/R, 6 April 1999, para 4.20; and *Turkey-Restrictions on Imports of Textile and Clothing Products*, Panel Report, WT/DS34/R, 31 May 1999, para 9.92.
[111] Vranes (n 13), 64.
[112] Koskenniemi (n 25), para 47.

and product standards. While the Protocol is more specialised regarding biosafety and the protection of biodiversity. It is, thus, highly unclear as to which treaty is special and which is general. The *lex specialis* principle might have some relevance in this case, but do not seem to be able to definitively resolve any conflict between the WTO Agreements and the Protocol. Thus, the principle of *lex specialis* is of little or no relevance to resolve conflicts between the treaties.[113]

4.3 The principles of *lex posterior* and *lex specialis* cannot provide any definitive solution

Both the principles of *lex posterior* and *lex specialis* are conflict resolution techniques. It is not possible to establish a general rule to the effect that either the principle of *lex posterior* or *lex specialis* always prevails over the other. The majority of literature holds that the principles of *lex posterior* and *lex specialis* function at the same level, and may be combined to resolve a treaty conflict.[114] In case the principles yield opposite results as to which norm is to prevail, the interpreter should consider and weigh all interpretative means available.[115]

From a practical point of view, as argued above, the WTO dispute settlement mechanism is highly likely to be the dispute settlement forum for disputes between the WTO Agreements and the Protocol, and its jurisdiction is limited to interpreting and directly applying the WTO Agreements. The WTO DSB may take into account non-WTO rules on an auxiliary level, but does not have the option to apply the principles of *lex posterior* and *lex specialis* in relation to the CBD and the Protocol which are outside the WTO's jurisdiction.[116]

In a nutshell, the principles of *lex posterior* and *lex specialis* are not likely to apply to the resolution of any conflict between the WTO Agreements and the Protocol. Even if applied, it is highly unclear as to whether the WTO Agreements or the Protocol can be classified as *lex posterior* or *lex specialis*. One may, thus, safely argue that neither can the principle of *lex posterior* nor the principle of *lex specialis* provide any definitive solution to conflicts that may arise between the WTO Agreements and the Protocol.

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[113] Wolfrum and Matz (2003, n 61), 156-8.
[114] Aufricht (n 62), 698; Jenks (n 5), 436; W Karl, 'Conflicts between Treaties', in R Bernhardt, *Encyclopedia of Public International Law, Volume 7* (North-Holland Publishing Co., 1984), 469; and Vranes (n 13), 66.
[115] Vranes (n 13), 48.
[116] T Cottier, 'Implications for Trade Law and Policy: Towards Convergence and Integration', in C Bail, R Falkner and H Marquard (eds), *The Cartagena Protocol on Biosafety: Reconciling Trade in Biotechnology with Environment and Development?* (Earthscan Publications Ltd, 2002), 473.

5. Conclusion

In a bid to address the issue of whether or not general international conflict resolution techniques can provide definitive solution to the potential conflicts between the WTO Agreements and the Protocol, the chapter has first examined general international rules on conflict resolution techniques, including the hierarchy of international law, explicit conflict clauses, the *lex posterior* principle, and the *lex specialis* principle. This served as the background for the examination of the specific relationship between the WTO Agreements and the Protocol.

The chapter then moved on to address the core issue of the potency of general conflict resolution techniques in relation to potential disputes arising from the WTO Agreements and the Protocol. It found that whereas the WTO Agreements do not include any savings clause, the Protocol does. However, the Protocol's savings clause, it was shown, is drafted in an ambiguous and contradictory way, and is not likely to give any practical guidance on the resolution of any conflicts that may arise between the WTO Agreements and the Protocol. Moreover, considering the analysis, how the principles of *lex posterior* and *lex specialis* may be applied to the treaties is still disputable as it is not clear as to which treaty will be classified as *lex posterior* or *lex specialis*. More importantly, should the WTO DSB get to handle a GMO-related trade dispute, it is not likely to apply the principles of *lex posterior* and *lex specialis* in the first place.

That is to say, none of the existing conflict resolution techniques – be it the savings clause or the principles of *lex posterior* and *lex specialis* – are adequate to provide clear and definitive solutions for resolving conflicts between the treaties. While the general conflict resolution techniques have their respective strengths, nevertheless they are also laden with weaknesses, so that they are not always adequate in providing clear and systematic solutions to conflicts of treaties which result from the fragmentation of international law.[117] In the instance of conflict, it would be difficult to decide on the international priorities among those treaties. Hence, how conflicts between the WTO Agreements and the Protocol should be best resolved remains a controversial question.

Finally, considering the above points – that there is hardly an appropriate, acceptable and competent forum for the resolution of potential conflicts between the WTO

[117] Borgen (n 15), 575 & 578.

Agreement and the Protocol, and the fact that the general conflict resolution techniques are not adequate in this regard – this thesis moves on to explore a potentially viable alternative and studies whether or not the international community should make more efforts to avoid any conflicts between the WTO Agreements and the Protocol, so as to facilitate their implementation as well as the international regulation on trade in GMOs.

Taking into account practicality, this thesis examines in the next chapter why and how potential conflicts between WTO Agreements and the Protocol should be avoided, rather than 'resolved' when disputes actually arise. It considers the principle of systemic integration in treaty interpretation as a useful means to avoid the treaty conflicts. Systemic integration, however, has its intrinsic limitations and can only operate at the level of international judicial bodies. The next chapter then takes a step further and examines the principles that lie behind systemic integration, including the principles of mutual supportiveness, good faith, cooperation and harmonisation, which may contribute to conflict avoidance not only at the level of international judicial bodies, but also at the levels of institutions and states.

Chapter 4

Avoiding Conflicts between the WTO Agreements and the Protocol: The Principle of Systemic Integration and the Principles that Lie Behind It

1. Introduction

As argued in previous Chapters 2, there exist tensions between the WTO Agreements and the Protocol, and there is the real threat of conflicts between the treaties. Chapter 3 found that the general conflict resolution techniques cannot provide any definitive solution to conflicts between the treaties and there is hardly an appropriate forum for the resolution of such conflicts.

However, tensions, which can be managed, do not necessarily equal conflicts. Another way, and arguably a viable one too, of possibly dealing with the relationship and potential conflicts between the treaties is for the international community to act proactively in avoiding the conflicts. This may serve as a better solution than trying to resolve the conflicts when they actually arise. This chapter thus endeavours to examine how to make conflicts less likely.

In that light, this chapter starts with examining the possible synergy between closely related and even intertwined or overlapping regimes. Some regimes may be overlapping and not conflicting, for example, as discussed in Chapter 2, the WTO Agreements and the Protocol have similar and overlapping requirements on risk assessment which can hardly result in any conflicts.

This chapter then moves on to study the principle of systemic integration which is at the heart of the whole process of treaty interpretation. The principle of systemic integration is an interpretative technique that is generally used by international judicial bodies; however, it can also, when pulled apart to discern the principles underpinning it, be used to bring about conflict avoidance. Relying on both doctrinal and empirical evidence, this chapter looks at the process of treaty interpretation at large and VCLT provisions which regulate this process; introduces and analyses the principle of systemic integration; examines the debate on the potential scope and application of Article 31(3)(c) of the VCLT; and investigates whether systemic integration can and should be relied upon to reconcile the WTO Agreements and the Protocol at the judicial level.

This thesis then endeavours to study how conflicts between the treaties can be avoided at two additional dimensions of institutional and domestic contexts. With the aim of conflict avoidance and defragmentation of international law, this chapter then unpacks the principle of systemic integration and arrives at the principles that lie behind systemic integration, including the principles of mutual supportiveness (and the aim of sustainable development to which it closely links), good faith, cooperation, and harmonisation. These principles that lie behind systemic integration can achieve comparable result of conflict avoidance and are capable of driving integration at the institutional and domestic levels.

The principle of systemic integration and the principles that lie behind it may each and all avoid normative conflicts, aiming at a harmonious balance of norms.[1] Treaty interpretation under the principle of systemic integration can be an effective way of achieving the principles of mutual supportiveness, harmonisation, good faith and cooperation; however, it works only at the level of international judicial bodies. The underpinning principles, on the other hand, may be workable at the three (judicial, institutional and domestic) levels and offer solutions in terms of conflict avoidance between the treaties.

2. Conflicts between the treaties can and should be avoided rather than resolved

2.1 Overlapping international regimes are not necessarily conflicting

The relationship between the WTO Agreements and the Protocol is an example of the relationship between two sub-systems of international law which deal with overlapping subjects and issues. Existing literature talks about such a relationship, using interchangeably terms like interplay, interaction, linkage, relation, and interconnection. Regime interplay may be defined as 'situations where the contents, operation or consequences of one institution (the recipient regime) are significantly affected by another (the tributary regime)'.[2]

There exist two main arguments in relation to the taxonomy of regime interplay. Young argues there are four types of institutional linkages in international society. First, embedded regimes are issue-specific and are deeply embedded in overarching institutional

[1] N Matz-Lück, 'Harmonization, Systemic Integration, and "Mutual Supportiveness" as Conflict-Solution Techniques: Different Modes of Interpretation as a Challenge to Negative Effects of Fragmentation?' (2006) 17 *Finnish Yearbook of International Law* 39, 43.

[2] OS Stokke, 'The Interplay of International Regimes: Putting Effectiveness Theory to Work', (2001) FNI Report 14/2001, 2, available at http://dspace.cigilibrary.org/jspui/handle/123456789/12090, last accessed on 30 April 2017.

arrangements which demonstrate the broader principles and practices in international society, such as the various components of the Antarctic Treaty Systems.[3] Second, nested regimes are specific arrangements which are supplementary to the broader institutional frameworks dealing with the same issue area, such as the CBD and the Cartagena Protocol.[4] Third, clustered regimes combine different governance systems into institutional packages, such as the 1982 Convention on the Law of the Sea which has functionally differentiated provisions for navigation, fishing, etc.[5] Most, if not all, Nested and Clustered regimes are based on conscious choices. Fourth, overlapping regimes can describe a situation in which 'individual regimes that were formed for different purposes and largely without reference to one another intersect on a *de facto* basis, producing substantial impacts on each other in the process'.[6] Young argues that institutional intersections are often created unforeseeably and unintentionally by the regime creators; thus, states may not immediately realise or deal with the institutional overlaps.[7] This, however, may not always be the case. For example, intersections between trade and environmental instruments were foreseen by the international community, particularly during the negotiation process of the Cartagena Protocol, although the extent to which such intersections have been dealt with cannot be said to be fully satisfactory.

However, Young's categorisations were criticised by Stokke as limited to a range of different purposes and excessively comprehensive.[8] Stokke also identifies four types of interplays between international regimes. First, diffusion of regime features may occur when the material contents of one regime are influenced by another. Second, political spill-over happens when the operation of a regime is influenced by the interests or capabilities defined under another regime. Third, normative interplay describes a situation where the rules respectively upheld in two regimes may conflict or reinforce one another. Fourth, operational interplay may be established to avoid normative conflict or wasteful duplication through deliberately coordinating activities under separate regimes.[9]

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[3] OR Young, 'Institutional Linkages in International Society: Polar Perspectives' (1996) 2 *Global Governance* 1, 2-3.
[4] *Ibid,* 3. The example is given by this author.
[5] *Ibid,* 5.
[6] *Ibid,* 6.
[7] *Ibid*.
[8] Stokke (n 2), 4-5.
[9] OS Stokke, 'Managing straddling stocks: the interplay of global and regional regimes' (2000) 43 *Ocean & Coastal Management* 205, 205.

Young and Stokke's classifications are both reasonable, but Stokke's theory is more suitable for the purpose of this thesis, for it can better explain and help to shape the relationship between the WTO Agreements and the Protocol. Stokke's first three types of regime interplay may all find expression in the relationship between WTO Agreements and the Protocol. The fourth type, as far as this writer is concerned, is one example of how institutional systemic integration may help to promote the mutual supportiveness of the treaties and to avoid their potential conflicts. Stokke's theory is also supported by primary resources. For example, the fact that the negotiation process of the Protocol took into account the WTO Agreements can be seen as a real-life example that Stokke's theory works.[10]

It is important to stress that regime interactions impact on the decision-making process, or the implementation and effectiveness of the target institution. Overlapping regimes do not necessarily conflict with one another. Regime interactions may be neutral in nature, and could be beneficial or adverse.[11] Overlapping regimes may, thus, be neutral, conflicting or mutually reinforcing depending on how they are dealt with.

The goals of international regimes may be negatively affected if the regimes involve incompatible arrangements. Different international regimes, such as the WTO Agreements and the Protocol, interact with one another and this sows the seed for potential conflicts. However, if properly dealt with, interactions between international regimes may produce positive results and enhance the goals pursued by the regimes. In support, Young has rightly posited that institutional overlaps 'can lead to the development of unusually effective international regimes by stimulating efforts to think in whole-ecosystem terms and to devise integrated management practices'.[12]

Put differently, treaties which are potentially in tension may turn out to be mutually reinforcing if they are read in a coherent way and are understood as far as possible as being compatible with each other. Treaty conflicts can thus be avoided by international judicial bodies in interpreting the treaties in the light of one another, or by relevant institutions and states in dealing with and implement the treaties in a way that promotes the treaties' mutual supportiveness. This will require relevant international regimes to be viewed and

[10] This will be discussed in more details in Chapter 6, section 4 of this thesis.
[11] S Oberthür and T Gehring, 'Institutional Interaction in Global Environmental Governance: The Case of the Cartagena Protocol and the World Trade Organisation' (2006) 6(2) *Global Environmental Politics* 1, 4 & 6-10.
[12] Young (n 3), 7.

implemented as whole rather than separate pieces of legislation.[13] It also needs international actors to take deliberate and coordinated measures to systemically integrate the treaties so as to achieve positive results. Of course, a coherent reading of the treaties will only be meaningful if it tries to achieve a teleological and effective interpretation of the treaties simultaneously.

To be sure, existing literature widely accepts that potentially conflicting international norms may be reconciled to avoid the conflicts. Broude is of the view that international norms may be reconciled by using 'methods deliberately aimed at the reconciliation of formally disparate elements of international law through…inter-institutional comity, margins of appreciation, subsidiarity, interpretation, and other such doctrines and conceivable tools.'[14] Generally in support, Stokke takes the position that both normative and programmatic coordination of international regimes may maximise coherence between overlapping norms and avoid duplication of work between regimes.[15]

Regime interplay is a fact; its capacity to influence practice depends on its effectiveness. The question that is even more important than the types of regime interplay that exist is how the regime interplay may actually modify behaviours of international actors and solve problems, such as the potential ways and gains of better coordination across regimes; the different ways to prevent or reconcile potential conflicts among different regimes; and the ways in which separate regimes can stimulate and reinforce one another.[16]

2.2 Having potential conflicts does not necessarily mean that the WTO Agreements and the Protocol are incompatible

Both the WTO Agreements and the Protocol maintain the sovereign right of any government to take legitimate measures to protect health and the environment.[17] Their difference is in the means chosen to pursue the goal, in particular the limitations, restrictions,

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[13] G Marceau, 'A Call for Coherence in International Law: Praises for the Prohibition against 'Clinical Isolation' in WTO Dispute Settlement' (1999) 33 *Journal of World Trade* 87, 127; and J Pauwelyn, 'Bridging Fragmentation and Unity: International Law as a Universe of Inter-Connected Islands' (2003-04) 25 *Michigan Journal of International Law* 903, 906-7.

[14] T Broude, 'Principles of Normative Integration and the Allocation of International Authority: The WTO, the Vienna Convention on the Law of Treaties, and the Rio Declaration' (2008) 6(1) *Loyola University Chicago International Law Review* 173, 173.

[15] Stokke (n 9), 230.

[16] Stokke (n 2), 8.

[17] Available at: http://www.wto.org/english/tratop_e/sps_e/spsund_e.htm, last accessed on 30 April 2017; and the Protocol, Article 1.

and conditions that the treaties put on such right. The WTO legal system restricts the use of SPS measures and technical regulations, and requires that such measures should not be used to create unnecessary barriers to trade. It is not by its nature anti-environment. By concluding the SPS Agreement, all WTO Members accept that some trade restrictions may be necessary to ensure food safety and animal and plant health.[18] This is fully consistent with the values that are pursued by the Protocol.

Moreover, as can be drawn from its Preamble, the Protocol is not by its nature anti-trade or development, nor was it designed to conflict with the WTO rules.[19] The Protocol sets out the rights and procedures for Parties to ban or restrict GMO imports, but it is not designed to restrict international trade or to create trade barriers. A trade restrictive measure under the Protocol is the *method* used to pursue the *aim* of biosafety and environmental protection.

The WTO Agreements and the Protocol influence one another in terms of developments and performance. As overlapping international regimes, the treaties have potential conflicts,[20] but may also be mutually reinforcing, depending on how the treaties are implemented. They are capable of a mutually beneficial existence because the majority of the treaties can be assumed to be potentially synergetic and can be in harmonious coexistence; and they may be seen as complementary in terms of the fact that the Protocol offers detailed rules while the WTO supplements this with an effective dispute settlement mechanism.[21] That is to say, the tensions between the WTO Agreements and the Protocol do not necessarily result in conflicts and could be managed.

The contention of this thesis is that potential conflicts between the WTO Agreements and the Protocol can be seen as apparent conflicts. Treaty interpretation as a conflict avoidance technique, together with the principles that lie behind systemic integration which will be discuss in the following sections, could manage these tensions and help to

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[18] PL Fitzgerald, *International Issues in Animal Law: The Impact of International Environmental and Economic Law upon Animal Interests and Advocacy* (Carolina Academic Press, 2012), 210.

[19] The Protocol, Preamble (savings clause). More discussion is available at Chapter 3, section 3 and Chapter 4, section 4.2 of this thesis.

[20] This was discussed in detail in Chapter 2, section 7 of this thesis.

[21] GK Rosendal, 'Impacts of Overlapping International Regimes: The Case of Biodiversity' (2001) 7 *Global Governance* 9, 97-8; DE Sella-Villa, 'Gently Modified Operations: How Environmental Concerns Addressed through Customs Procedures Can Successfully Resolve the US-EU GMO Dispute' (2009) 33(3) *William & Mary Environmental Law and Policy Review* 971, 982; PG Gayathri and RR Kurup, 'Reconciling the Bio Safety Protocol and the WTO Regime: Problems, Perspectives and Possibilities' (2009) 1(3) *The American Journal of Economics and Business Administration* 236, 240; and V Hrbatá, 'No International Organisation is an island…the WTO's Relationship with the WIPO: A Model for the Governance of Trade Linkage Areas' (2010) 44(1) *Journal of World Trade* 1, 32.

overcome compartmentalisation and fragmentation of international law, especially as it relates to the WTO Agreements and the Protocol. As stated by governmental official CJ1 in the empirical research, the Protocol's provisions were general and rather open-ended and could be substantively included in the context of relevant WTO Agreements. The SPS Agreement and the Protocol could be interpreted in a harmonious way which did not necessarily conflict.[22]

2.3 Conflicts between the treaties should be avoided rather than resolved

Norm interpretation should precede all conflict resolution techniques, as it is a means for clarifying the meaning and scope of norms in order to determine whether there actually is a conflict of norms.[23] It is a conflict-avoidance tool which may dissolve an apparent conflict by explaining one norm in the light of another.[24] In fact, effective interpretation may resolve the fragmentation of international norms,[25] and promote the coherence of the international legal order.[26]

Moreover, conflicts can, of course, only be resolved if states raise disputes. However, states may be reluctant to do so in practice for different reasons such as political, monetary and time concerns. For example, prior to the *EC-Biotech* case, the US had resisted bringing a WTO challenge over GMOs, with a hope of addressing the dispute diplomatically and without the risks of international litigation.[27] It is worth mentioning that the WTO dispute settlement process is normally lengthy, which may not be suitable for resolving disputes relating to the WTO Agreements and the Protocol. For example, in the *EC-Biotech* case, the Panel took three years to consider the dispute and produced a report of over 1000 pages. The WTO dispute settlement process also incurs significant costs which may deter states, in particular least development states, from bring a dispute. Thus it may not be a good idea for states to wait for conflict to arise.

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[22] Interview, Respondent C of Jurisdiction 1, December 2012.
[23] A Sadat-Akhavi, *Methods of Resolving Conflicts between Treaties* (Leiden: Nijhoff, 2003), 28.
[24] J Pauwelyn, *Conflict of Norms in Public International Law: How WTO Law Relates to Other Rules of International Law* (Cambridge University Press, 2003), 244-5.
[25] M Koskenniemi, 'Fragmentation of International Law: Difficulties Arising from the Diversification and Expansion of International Law', Report of the Study Group of the International law Commission, UN. Doc. A/CN.4/L.682, 13 Apr 2006, 17, 213, para 423.
[26] G Marceau, 'Conflicts of Norms and Conflicts of Jurisdictions: The Relationship between the WTO Agreement and MEAs and other Treaties' (2001) 35(6) *Journal of World Trade* 1081, 1085-6.
[27] MA Pollack and GC Shaffer, *When Cooperation Fails: The International Law and Politics of Genetically Modified Foods* (Oxford University Press, 2009), 177.

Furthermore, conflict resolution is a very narrow part of disputes. In the context of this research, the WTO dispute settlement mechanism is likely to resolve trade and environment disputes (considering the lack of such a mechanism under the Protocol and environmental law in general),[28] which makes the extent to which conflict resolution can contribute to the reconciliation of treaties even narrower. Even if the DSB uses the interpretative tool of systemic integration, they use it from the perspective of the WTO. Other possibilities may be the development of an international neutral dispute resolution forum that neither leans towards trade nor the environment; however, even if possible, this will be a long-term project, and such a forum may look rather like the ICJ given the breadth of the treaties that judges would need to be familiar with.[29] Thus, there is the need to find immediate solutions which may avoid the conflict resolution process by proactively avoiding any conflicts between the WTO Agreements and the Protocol.

Thus, avoiding conflicts between the treaties may: contribute to the avoidance of wasteful duplication of work both in terms of implementation and at international institutional level; help in the clarification of certain provisions and minimise confusion and misunderstanding; promote the unity of procedural requirements; facilitate the implementation of treaties; help to avoid future potential conflicts and consequently avoid wasting time and effort in resolving the conflicts; and eventually benefit both free international trade and environmental and biosafety protection.

The argument that conflicts between the treaties should be avoided rather than resolved is supported by findings of the empirical research carried out in the course of this thesis, although a minority (25%) of interviewees stated that it would in practical terms be the decision of each state. In relation to the question of whether conflicts between the WTO Agreements and the Protocol should be actively avoided or resolved when disputes arises, there appeared to be a divergence of opinions between respondents from international organisations and state respondents.

Among the 5 participants who commented on this matter, all 3 respondents from international organisations (AO1, AO2, and BO2) believed that conflicts should be avoided as much, and as early as possible. Among them, agency AO1 claimed that states which are

[28] This will be discussed in detail in Chapter 5, section 2 of this thesis.
[29] A Boyle and J Harrison, 'Judicial Settlement of International Environmental Disputes: Current Problems', (2013) 4(2) *Journal of International Dispute Settlement* 245, 250-6.

parties to both the WTO Agreements and the Protocol could do a lot of things to avoid conflicts in the first place. If the treaties were systemically integrated, it would definitely contribute to the aim of sustainable development in a direct way.[30] In the same vein, Agency AO2 also stated that potential conflicts between the treaties should be avoided as much as possible. Originating from the principle of good faith, conflicts should be avoided by setting assumptions against conflict and trying to read potentially conflicting obligations coherently. AO2 indicated that it was the decision of the states that they wanted two sets of rules. If a dispute arose, the judicial settlement body had to resolve it by 'pushing aside one of the provisions and keeping one'. AO2 added that when a judge did this, it arguably went against the will of states to have both provisions.[31] Similarly, agency BO2 believed that the potential conflicts between the WTO Agreements and the Protocol should be avoided, and that they could be avoided 'by better working at an earlier level in terms of developing what could be developed'.[32]

While recognising the value of avoiding potential conflicts, the 2 state respondents (CJ1 and AJ2) referred to state sovereignty and claimed that, in practice, whether or not to avoid potential conflicts depended on the decision of each member state. Among them, agency CJ1 believed that a state which was a party to both international agreements should try to respect all of its international obligations. However, CJ1 indicated that there were a lot of states which shied away from conflicts. Some states simply worked in their own way until others commenced legal suits.[33] Similarly, Agency AJ2 commented that states normally use the AIA procedure under the Protocol for the protection of their domestic interests.[34] Agency AJ2 also stated that relying on international treaties to pursue states' domestic interests seemed to be a sovereignty issue, which did not only apply to the regulation on GMOs, but in other areas as well.

3. The principle of systemic integration in treaty interpretation can be relied upon to avoid treaty conflicts

Having argued that conflicts between the WTO Agreements and the Protocol should be actively avoided rather than resolved, this section will investigate the principle of

[30] Interview, Respondent A of Organisation 1, July 2012.
[31] Interview, Respondent A of Organisation 2, September 2012.
[32] Interview, Respondent B of Organisation 2, November 2012.
[33] Interview, Respondent C of Jurisdiction 1, December 2012.
[34] Interview, Respondent A of Jurisdiction 2, July 2012.

systemic integration in treaty interpretation, which can be used in judicial fora once a dispute is 'live' and actually being contested. It requires the treaties to be interpreted in the light of one another and may thus, to certain extent, contribute to the reconciliation of the treaties.

3.1 The process of treaty interpretation at large

As alluded to earlier, overlaps between international norms do not necessarily lead to conflicts. The overlaps between treaties may seem like a *prima facie* conflict, but they may prove not to be conflicting through the process of interpretation. Law is an interpretative concept.[35] Interpretation is defined as the process of obtaining clarification of the meaning and scope of a judgment or norm.[36] Treaty interpretation is a matter of definition,[37] a means of diplomacy,[38] and a process of legal reasoning.[39] It is a deeply obscure and subjective process.[40] It does not create new rules, but only gives meaning to the broad and ambiguous terms of a treaty.

Importantly, a treaty may be interpreted at three different levels: judicial interpretations, authoritative interpretations, and practical interpretations.[41] First, international tribunals which settle a dispute between states, such as the ICJ, the European Court of Justice (ECtHR) and the WTO Dispute Settlement Body (DSB), could not make a judicial decision without interpreting relevant treaties. While doing so, judicial institutions adopt certain treaty interpretation techniques which will be discussed below. Second, states may give authoritative interpretation to ambiguous treaty wordings collectively through international institutions (treaty organs) or meeting of parties.[42] Third, individual states through government policy-makers cannot implement treaties without interpreting them when they are drafting domestic regulations or making relevant decisions. Thus, Aust posits that 'treaty

[35] R Dworkin, *Law's Empire* (Harvard University Press, 1986), 410.
[36] *Asylum Case* (Columbia v. Peru), Request for Interpretation of the Judgement of 20 November 1950, Judgement, (1950) ICJ Reports 395, 402, available at: http://www.icj-cij.org/docket/files/13/1933.pdf, last accessed on 30 April 2017.
[37] Pauwelyn (n 24), 245.
[38] Koskenniemi (n 25), 25, para 37.
[39] C McLachlan, 'The Principle of Systemic Integration and Article 31(3)(c) of the Vienna Convention' (2005) 54 *International and Comparative Law Quarterly* 279, 310.
[40] D French, 'Treaty Interpretation and The Incorporation of Extraneous Legal Rules' (2006) 55 *International and Comparative Law Quarterly* 281, 281.
[41] This will be further discussed in Chapters 5, 6 and 7 of this thesis.
[42] The Marrakesh Agreement, Article IX:2; and the Protocol, Article 29.

interpretation forms a significant part of the day-to-day work of a foreign ministry legal adviser.'[43]

Furthermore, apart from customary international law, there were no binding treaty rules on treaty interpretation until the entry into force of the VCLT.[44] Part III Section 3 of the VCLT provides a framework approach to treaty interpretation. Article 31 of the VCLT is widely accepted in international jurisprudence as declaratory of the customary international law of treaty interpretation.[45] It is thus both a treaty rule and a customary rule, because as acknowledged by the ICJ, a customary rule which is codified in a treaty text 'continues to exist alongside treaty law'.[46] Article 31 is titled the 'General Rule of Interpretation' and stipulates that:

> 1. A treaty shall be interpreted in good faith in accordance with the ordinary meaning to be given to the terms of the treaty in their context and in the light of its object and purpose.
>
> 2. The context for the purpose of the interpretation of a treaty shall comprise, in addition to the text, including its preamble and annexes:
>
> (a) any agreement relating to the treaty which was made between all the parties in connexion with the conclusion of the treaty;
>
> (b) any instrument which was made by one or more parties in connexion with the conclusion of the treaty and accepted by the other parties as an instrument related to the treaty.
>
> 3. There shall be taken into account, together with the context:
>
> (a) any subsequent agreement between the parties regarding the interpretation of the treaty or the application of its provisions;
>
> (b) any subsequent practice in the application of the treaty which establishes the agreement of the parties regarding its interpretation;

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[43] A Aust, *Modern Treaty Law and Practice* (2nd edition, Cambridge University Press, 2007), 184.
[44] A Cassese, *International Law*, (2nd edition, Oxford University Press, 2005), 178.
[45] *Arbitral Award of 31 July 1989 (Guinea-Bissau v Senegal)*, Judgment, (1991) ICJ Reports 53, para 48; *Maritime Delimitation and Territorial Questions between Qatar and Bahrain (Qatar v Bahrain)*, Judgment, (1995) ICJ Reports 6, para 33; *Oil Platforms (Islamic Republic of Iran v USA),* Preliminary Objections, (1996) ICJ Reports 803, para 23; *Japan-Taxes on Alcoholic Beverages*, ABR, WT/DS8//10/11/AB/R, 4 October 1996, Section D; *Pulp Mills case (Argentina v Uruguay)*, Judgment, (2010) ICJ Reports 14, 46, para 64, available at: http://www.icj-cij.org/docket/files/135/15877.pdf, last accessed on 30 April 2017; *Iron Rhine Arbitration (Belgium v. Netherlands)*, ICGJ 373 (PCA 2005), 62, para 45; P Birnie, AE Boyle and C Redgwell, *International Law and the Environment* (3rd edition, Oxford University Press, 2009), 19; and McLachlan (n 39), 293.
[46] *Case Concerning Military and Paramilitary Activities in and Against Nicaragua* (Nicaragua v. U.S.), Judgement (Merits), (1986) ICJ Reports 14, para 176; and P Merkouris, *Article 31(3)(c) VCLT and the Principle of Systemic Integration: Normative Shadows in Plato's Cave* (2015, Brill-Nijhoff), 5.

(c) any relevant rules of international law applicable in the relations between the parties.

4. A special meaning shall be given to a term if it is established that the parties so intended.'

Treaty interpretation is not the revision or rewriting of treaties, it cannot alter the meaning of norms in order to harmonise them.[47] As stated by the ICJ, it is the duty of the Court 'to interpret the Treaties, not to revise them'.[48] Treaty interpretations should be based on either a construction of the text and wording of treaty provisions, or the negotiating history of the treaty (subjective interpretation).[49] According to Article 31(1), the starting point of treaty interpretation is the treaty itself. The meaning of the wordings must be firstly examined in their context and in the light of the object and purpose of the provision.[50] The treaty being interpreted employs a primary role.[51]

Moreover, there exist other supplementary means of interpretation, including the preparatory works of the treaty and the circumstances of its conclusion.[52] Pre-normative elements may also be crucial for treaty interpretation in a way which helps to identify the intentions of the parties. The preparatory works are noteworthy evidence of the views of the states, represented by the negotiators, on both the negotiation process and expectations of state behaviour under the treaty.[53]

Thereafter, in case the treaty provision being interpreted is still ambiguous or more than one allowable interpretation has emerged, three further factors shall be taken into account to clarify the interpretation: subsequent agreement, subsequent practice and relevant rules of international law.[54]

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[47] AE Boyle, 'Further Development of the Law of the Sea Convention: Mechanisms for Change' (2005) 54 *International & Comparative Law Quarterly* 563, 568; and Sadat-Akhavi (n 23), 28.
[48] ICJ, 'Advisory Opinion on Interpretation of Peace Treaties with Bulgaria, Hungary and Romania (Second Phase)', (1950) ICJ Reports 8, 229.
[49] Cassese (n 44), 178.
[50] McLachlan (n 39), 311.
[51] P Sands, 'Treaty, Custom and the Cross-fertilization of International Law' (1998) 1 *Yale Human Rights and Development Law Journal* 85, 102-3, para 39.
[52] VCLT, Article 32; and *Iron Rhine Arbitration* (n 45), 63, para 48.
[53] H Caminos and MR Molitor, 'Progressive Development of International Law and the Package Deal' (1985) 79 *The American Journal of International Law* 871, 877.
[54] VCLT, Article 31(3).

Of particular interest is the last factor that is specifically contained in Article 31(3)(c).[55] The notion behind this provision is that no sub-systems of international law are stand-alone phenomena or self-contained regimes.[56] In contemporary international law, it seems difficult to achieve fully the goals pursued under one international instrument without taking into account other relevant rules or instruments.

An international judicial institution is, thus, required to read beyond the text of a treaty to determine its meaning. 'Relevant rules', as referred to in Article 31(3)(c), may be referred to so as to clarify the wording of a treaty, or provide support to an interpretation based on the wording of the treaty itself.[57] These 'relevant rules' might be treaties, customary international law, general principles of law, or other instruments of a soft law nature.

It is worth emphasising that Article 31(3)(c) is only part of a larger interpretation process in order to achieve cognition of legal norms. Interpreting the treaties in the light of one another facilitates treaty interpretation, but does not amend, rewrite or replace the treaties, nor necessarily create novel obligations and rights. The adjoining rules being considered might be applied, invalidated, or momentarily set aside.[58] The obligation under Article 31(3)(c) does not prescribe any specific outcome, but only requires relevant rules to be taken into account.[59]

3.2 The principle of systemic integration is at the heart of the process of treaty interpretation

Article 31(3)(c) of the VCLT codifies and gives a legislative expression to the principle of systemic integration of treaties which also shows the general conciliatory approach of the VCLT.[60] The principle of systemic integration is both a treaty rule and the customary law equivalent of Article 31(3)(c).[61] It requires that relevant rules (whether

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[55] *Oil Platforms (Islamic Republic of Iran v USA),* Judgement, (2003) ICJ Reports 161, 182, para 41.
[56] B Simma, 'Self-Contained Regimes' (1985) 16 *Netherlands Yearbook of International Law* 111, 111; and J Pauwelyn, 'The Role of Public International Law in the WTO: How Far Can We Go?' (2001) 95 *The American Journal of International Law* 535, 577.
[57] French (n 40), 282.
[58] Koskenniemi (n 25), 244.
[59] *EC-Biotech*, Panel Report, WT/DS291/292/293/R, 29 September 2006, para 7.69.
[60] Sands (n 51), 95, para 25; McLachlan (n 39), 281; French (n 40), 281-314; Koskenniemi (n 25), 23, para 33; and VP Tzevelekos, 'The Use of Article 31(3)(C) of the VCLT in the Case Law of the ECtHR: An Effective Anti-Fragmentation Tool or a Selective Loophole for the Reinforcement of Human Rights Teleology?' (2010) 31(3) *Michigan Journal of International Law* 621.
[61] Merkouris (n 46), 5-6.

specific or general international rules) should be considered, and the outcome of treaty interpretation should be linked to the broad legal environment.[62]

International law is not simply a collection of rules.[63] It has real life influence and importance. The dynamic or living treaty interpretation should also reflect the changing values and social contexts, as well as the changes in international law and policy.[64] This can be achieved by referring to international rules other than the treaty to be interpreted, especially rules set out later than the treaty. Reference to general rules of international law is an everyday, often unconscious part of the interpretation process.[65] Doing so may incorporate recent developments of the international community which inevitably form part of the interpretation of a pre-existing text.[66]

The principle of systemic integration in treaty interpretation is normally used in dispute resolution processes by judicial bodies.[67] It may help to clarify treaty wordings, keep the treaties up-to-date, and save the need for constant amendments.[68] It ensures that the narrow interpretation of one treaty does not overrule the broad notion of international justice. The foundation of this principle is the fact that treaties, as creatures of international law themselves, are limited in their respective scope and predicated for their existence and operation as a part of the international legal system.[69]

Therefore, the international community should put significant efforts on the promotion of integration, coherence, effectiveness and universal reach of existing international law.[70] The principle of systemic integration practically balances conflicting values and interests in international law.[71] Some even argue that Article 31(3)(c) is the only available instrument of international law for achieving an integrated approach to competing norms.[72]

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[62] Koskenniemi (n 25), 209, para 415.
[63] R Gardiner, *International Law* (Pearson Longman, 2003), 214.
[64] Boyle (n 47), 567.
[65] Koskenniemi (n 25), 209, para 414.
[66] French (n 40), 285.
[67] Merkouris (n 46); Koskenniemi (n 25); and McLachlan (n 39).
[68] Birnie, Boyle and Redgwell (n 45), 19-20.
[69] *Ibid*, 243-4, paras 479-80.
[70] AE Boyle and C Chinkin, *The Making of International Law* (Oxford University Press, 2007), 39.
[71] McLachlan (n 39), 319.
[72] P Sands, 'Environmental Protection in the Twenty-First Century: Sustainable Development and International Law', in RL Revesz, P Sands, and RB Stewart (eds) *Environmental Law, the Economy and Sustainable Development* (Cambridge University Press, 2008), 402.

Essentially, the doctrine of systemic integration is not only an interpretative method and a well-established principle of international law, but also indicates the beginnings of a constitutional approach to the interpretation of international law, in that, it leads to seeing the system of international treaties as a coherent whole which may be particularly helpful in hard cases of treaty interpretation.[73] McLachlan attributes an appropriate analogy to systemic integration as 'a master key in a large building' which permits access to all of the rooms.[74] That is to say, in hard cases where a treaty cannot be interpreted and applied according to its own terms and context (the 'individual keys'), the 'master key' will help by invoking other relevant rules of international law and interpret the treaty in the broader framework of international law.[75]

In essence, systemic integration may promote harmonisation, guarantee the unity of the international legal system, and reduce the inconveniences caused by fragmentation of international law.[76] It does so by reconciling the norms through the process of trying to prove their compatibility. Two norms 'are reconcilable when there is at least one way of complying with all their requirements'.[77] Some treaties clearly state that they should be reconciled with other relevant instruments. For example, Article 237(2) of UNCLOS states that special conventions should be implemented in a manner consistent with the general principles and objectives of the UNCLOS.

The primary aim of the systemic integration principle is, thus, to reconcile the two treaties in order to see if they fit together, and to avoid apparent conflicts of norms through treaty interpretation, so as to achieve the harmonisation of norms of international law.[78] It contributes to the cognition of international norms, and emphasises both the belief that rules should not be considered in isolation of general international law and the unity of international law.[79] It has an integrative effect and provides the procedural requirement on how trade and environment could be reconciled. It can be used to avoid potential conflicts

[73] McLachlan (n 39), 280; and Tzevelekos (n 60), 632.
[74] McLachlan (n 39), 281.
[75] *Ibid*.
[76] Sands (n 72), 405; and ILC, *Official Records of the General Assembly, Fifty-fifth Session, Supplement No. 10* (2000) UN Doc. A/55/10, 301, para 349.
[77] Sadat-Akhavi (n 23), 34.
[78] McLachlan (n 39), 318.
[79] Sands (n 51), 95, para 25; A Lindroos and M Mehling, 'Dispelling the Chimera of "Self-Contained Regimes": International Law and the WTO' (2005) 16(5) *European Journal of International Law* 857; and B Simma and D Pulkowski, 'Of Planets and the Universe: Self-contained Regimes in International Law' (2006) 17(3) *European Journal of International Law* 483.

between international rules and ultimately promote the effectiveness of the international legal regime as a whole.

The principle of systemic integration is a widely accepted and promoted principle which underpins the whole process of treaty interpretation as regulated by Article 31 of the VCLT.[80] It will apply even when it is not made express.[81] Often, formal reference to systemic integration may not be needed because 'other techniques provide sufficiently the need to take into account the normative environment'.[82]

What is more, international judicial practice has sought to weave the various strands of international law into a coherent system. For example, it is argued that the ICJ has made an effort to integrate humanitarian law, human rights law, environmental law, and law governing the use of force into a systematic structure.[83] A number of judicial institutions have made reference to Article 31(3)(c) in considering how to reconcile norms of international law, such as the ECtHR,[84] WTO DSB,[85] ICJ,[86] and North American Free Trade Agreement Tribunal.[87] For example, in the *Iron Rhine Arbitration* case, the tribunal decided that: according to Article 31(3)(c) of the VCLT, any rules which 'might be considered of possible relevance' to the interpretation of the Iron Rhine Treaty articles, should be taken into account in the interpretation.[88] It is likely that more international tribunals will refer to Article 31(3)(c) in hard cases of the interpretation of a treaty,[89] although how effective this technique has been in practice is still a questionable issue.[90]

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[80] French (n 40), 281-314; F Baetens, 'Muddling the Waters of Treaty Interpretation? Relevant Rules of International Law in the *MOX Plant* OSPAR Arbitration and *EC-Biotech* Case' (2008) 77(3) *Nordic Journal of International Law* 197, 210; C McLachlan, 'Investment Treaties and General International Law' (2008) 57 *International and Comparative Law Quarterly* 361, 372-3; and B McGrady, 'Fragmentation of International Law or "Systemic Integration" of Treaty Regimes: *EC-Biotech Products* and the Proper Interpretation of Article 31(3)(c) of the Vienna Convention on the Law of Treaties' (2008) 42 *Journal of World Trade* 589, 611.
[81] McLachlan (n 39), 311.
[82] Koskenniemi (n 25), 211, para 421.
[83] ICJ, 'Legality of the Threat or Use of Nuclear Weapons: Advisory Opinion' (1996) ICJ Reports 226, 256; and A Orakhelashvili, 'The Interaction between Human Rights and Humanitarian Law: Fragmentation, Conflict, Parallelism, or Convergence?' (2008) 19(1) *The European Journal of International Law* 161, 169.
[84] *Demir and Baykara v Turkey* [2008] ECHR 1345, para 67.
[85] This will be discussed in detail in Chapter 5, section 3 of this thesis.
[86] *Oil Platforms* (n 55), 182, para 41.
[87] *Award on the Merits*, 10 April 2001; and *Award in Respect of Damages*, 31 May 2002, (2002) 41 *ILM* 1347.
[88] *Iron Rhine Arbitration* (n 45), paras 58-59.
[89] McLachlan (n 39), 309.
[90] The cases in which Article 31(3)(c) has been relied on will be discussed in the following section 3.3.1 of this Chapter. More discussion see Koskenniemi (n 25), 218-232, para 433-460; and Sands (n 72), 402.

However, there is a need to clarify that the principle of systemic integration does not simply put different aims into one goal. Nor is it designed to broaden the authority of any of the relevant international institutions or domestic governmental sectors. It aims, among other things, at promoting the cooperation and information exchange between relevant institutions, and requires all international institutions not to ignore other regimes and rules. It supports activities but does not affect substantive regulatory or allocative decisions.[91]

3.3 The application of Article 31(3)(c) of the VCLT

3.3.1 Existing literature: three different approaches

By its nature, Article 31(3)(c) is a treaty obligation as well as a basic procedural obligation, since the VCLT itself is an international treaty. Its applicability largely depends on how its wording is interpreted which is vital in order to fully perform its purpose of reducing fragmentation and promoting coherence in international law.

The scope of application of Article 31(3)(c) is rather unclear and ambiguous.[92] Existing literature is controversial on questions of how to apply this provision, such as, under what circumstances should Article 31(3)(c) be invoked? While some argue that reference should be made to other rules only if the treaty itself gives rise to a problem in its interpretation,[93] others take the position that Article 31(3)(c) applies whenever 'relevant rules' are available.[94] Moreover, what rules should be seen as 'relevant', and under what circumstances are relevant rules 'applicable in the relations between the parties'? Does the term 'parties' refer only to the parties in dispute or all parties to the treaty being interpreted, or must all the parties also be parties to the treaty being referred to?[95] In addition, how might Article 31(3)(c) help to promote the defragmentation and coherence of international law?[96]

Among all the ambiguities, the most controversial, yet important, question is how to interpret 'parties'? The wider the definition is; the more rules must be taken into account

[91] Stokke (n 2), 13.
[92] Pauwelyn (n 24), 254; McLachlan (n 39), 313-5; Sands (n 51), 88; and Baetens (n 80), 197.
[93] ILC, *Report of the International law Commission, 56th session,* Supplement No. 10 (A/59/10), 3 May-4 June and 5 July-6 August 2004, 300, para 347. The report states that: '*as* a general rule, there would be no room to refer to other rules of international law unless the treaty itself gave rise to a problem in its interpretation.'
[94] French (n 40), 303.
[95] *Ibid*, 305.
[96] McLachlan (n 39), 281.

when interpreting one international treaty. Existing literature diverges and gives the term 'parties' a strict, less strict, or wider interpretation.

Some argue that a strict interpretation should be taken purely based on the wording of Article 31(3)(c), and a relevant treaty should be referred to only if all of its parties are also parties to the treaty to be interpreted. In agreement, McLachlan argues that this approach can make sure 'any interpretation of the treaty's provisions imposes consistent obligations on all the parties to it'.[97]

In support, the WTO and GATT case law tend to adopt the strict interpretation, although the approaches taken by the judicial bodies have not been consistent or coherent. In the *US-Tuna* case, the GATT Panel argued that other rules can be referred to only if they were accepted by *all* GATT contracting parties.[98]

Departing from this strict approach, in the *Shrimp-Turtle* case, in order to interpret the term 'exhaustible natural resource' of Article XX(g) of the GATT, the AB referred to a number of international environmental treaties which were not binding on all WTO Members, or even on the parties in dispute.[99] The AB's consideration of MEAs was limited to giving meaning to explicit treaty terms, in a way that is similar to the role played by dictionaries in defining the terms.[100]

In the *EC-Biotech* case, the Panel opted for the strict approach on the ground of state sovereignty and consent. The Panel held that the rules of international law to be taken into account in the interpretation of the WTO Agreements must be binding on all WTO Members,[101] because Article 31(3)(c) requires 'consideration of those rules of international law which are applicable in the relations between all parties to the treaty which is being interpreted'.[102] It specifically stated that the term 'parties' under Article 31(3)(c) does not refer to 'one or more parties' or 'the parties to a dispute'.[103] The Panel decided that Article 31(3)(c) was not applicable in this case because three of the disputing states (Argentina, Canada and the United States) were not parties to the Cartagena Protocol; it thus

[97] *Ibid*, 313-5.
[98] *United States-Restrictions on Imports of Tuna (EEC)*, Panel Report, unadopted, DS29/R, 16 June 1994, para 5.19.
[99] *Shrimp-Turtle,* ABR, WT/DS58/AB/R, 12 October 1998, paras 129-31.
[100] Pauwelyn (n 24), 262.
[101] *EC-Biotech*, Panel Report, WT/DS291/292/293/R, 29 September 2006, paras 7.68.
[102] *Ibid*, paras 7.70.
[103] *EC-Biotech*, Panel Report (n 101), para 7.68.

found that the Protocol cannot be referred to as relevant rules of international law applicable in the relations between the parties.[104]

The Panel's strict approach has been widely criticised for discarding completely the relevance of the Protocol and missing opportunities for constructive interaction between the WTO Agreements and MEAs.[105] This approach was argued as a means to weed out eco-protectionism,[106] a step back in bringing WTO law and international environmental law closer,[107] and a radically limiting move to rob Article 31(3)(c) of its potential significance in 'opening the WTO system to normative influence from general international law'.[108]

Differently, a less strict approach is that 'parties' should be interpreted as the parties in a particular dispute instead of parties to the multilateral agreement.[109] In support, French argues that this more liberal position is more realistic, even though less coherent.[110] Similarly, Koskenniemi takes the view that reference to another treaty should be made if the disputing parties are also parties to that treaty.[111]

In addition, some believe that an even wider interpretation should be given to the term 'parties'. McLachlan states that Article 31 is the promulgation of a general rule which is applicable irrespective of whether any particular parties to a treaty are in dispute or not.[112] Taking WTO law as an example, Pauwelyn argues that 'parties' do not have to be all WTO Members or disputing parties in a particular case. Instead, the interpretation of WTO law must take into account relevant non-WTO rules which are accepted or tolerated (explicitly or implicitly) by all WTO Members and, thus, reflect their 'common intentions' (under Article 31(3)(c)),[113] or reflect the 'ordinary meaning' of the term to be interpreted, in the same way

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[104] *Ibid*, para 7.71.
[105] K Kulovesi, *The WTO Dispute Settlement System: Challenges of the Environment, Legitimacy and Fragmentation* (Kluwer Law International, 2011), 175-178.
[106] C Henckels, 'GMOs in the WTO: A critique of the Panel's Legal Reasoning in EC-Biotech' (2006) 7(2) *Melbourne Journal of International Law* 278, 287.
[107] I van Damme, 'Seventh Annual WTO Conference: An Overview' (2008) 11 *Journal of International Economic Law* 155, 156.
[108] A Lang, 'Twenty Years of the WTO Appellate Body's "Fragmentation Jurisprudence"' (2015) 14(3) *Journal of International Trade Law and Policy* 116, 119.
[109] D Palmeter and P Mavroidis, *Dispute Settlement in the WTO, Practice and Procedure* (2nd edition, Cambridge University Press, 2004), 57.
[110] French (n 40), 307.
[111] Koskenniemi (n 25), 238, para 472.
[112] McLachlan (n 39), 315.
[113] *European Communities and Certain Member States-Measures Affecting Trade in Large Civil Aircraft (EC and Certain Member States- Large Civil Aircraft)*, ABR, WT/DS316/AB/R, 18 May 2011, para 845; and Pauwelyn (n 56), 575-6.

that a dictionary does (under Article 31 (1)).[114] Similarly, Young believes that the extraneous rules should be referred to as long as they express the common intentions (or at least understanding) of all the parties.[115] In support, but in a different direction, Merkouris proposes a 'proximity criterion' and argues that the meaning of 'parties', together with the terms of 'relevance' and 'applicability', should be determined by a combined and balanced application of four different manifestations of terminological/linguistic, subject-matter, shared parties ('actor') and temporal proximity.[116]

The wider approach has been adopted by some international judicial institutions. For example, in the *Demir and Baykara v Turkey* case, the ECtHR made clear reference to Article 31(3)(c) and indicated that it 'can and must' interpret the Convention for the Protection of Human Rights and Fundamental Freedoms (the Convention) in the light of the consensus that emerged from 'elements of international law other than the Convention, the interpretation of such elements by competent organs, and the practice of European States reflecting their common values'.[117] In addition, the ECtHR did not require relevant rules to have the same coverage of parties (or parties in dispute) as the Convention. It specifically stated that:

> 'it is not necessary for the respondent State to have ratified the entire collection of instruments that are applicable in respect of the precise subject matter of the case concerned. It will be sufficient for the Court that the relevant international instruments denote a continuous evolution in the norms and principles applied in international law or in the domestic law of the majority of member States of the Council of Europe and show, in a precise area, that there is common ground in modern societies.'[118]

3.3.2 The approach adopted in this study

This thesis does not adopt the strict approach, as it seems to be overly limited for three main reasons. First, in practice, the strict approach would render it impossible for Article 31(3)(c) to ever allow reference to be made to other multilateral treaties as aids to treaty interpretation, as there hardly exists any international treaties which have the exact

[114] Pauwelyn (n 24), 257-63.
[115] MA Young, 'The WTO's Use of Relevant Rules of International Law: An Analysis of the Biotech Case' (2007) 56 *International and Comparative Law Quarterly* 907, 914-8.
[116] Merkouris (n 46), 100-1.
[117] *Demir and Baykara v Turkey* (n 84), para 85.
[118] *Ibid*, para 86.

same coverage of parties; this would result in 'the isolation of multilateral agreements as ''islands'' permitting no references *inter se* in their application'.[119] This practical effect is likely to be inconsistent with the intention of most treaty-makers and the legislative ethos behind the treaties,[120] and consequently disrupt state consent which is considered the foundation of international law. In practice, the WTO has one of the broadest memberships in international law. This strict approach will hardly allow any international rules to be taken into account in the interpretation of WTO Agreements.[121]

Second, the strict approach might also result in inconsistency of international law. Taking the WTO Agreements and the Cartagena Protocol which do not yet have identical party members as an example, the strict approach would not allow the treaties to be taken into account in one another's interpretation. However, at least theoretically, there is the possibility that the treaties may have the exact same coverage of parties. In that case, the Protocol should be taken into account when interpreting the WTO Agreements. This would result in the fact that the WTO Agreements are interpreted in a different way, although the latter might not have changed at all.

This thesis does not adopt the less strict approach either. The less strict approach certainly provides some remedy to the potential shortcomings of the strict approach, but it also has its disadvantages, such as, divergent interpretations.[122] In other words, it could lead to a situation where the interpretation of the same term within the same treaty differs according to the different states in dispute. This inconsistency of treaty interpretation might consequently pose difficulty for the understanding and implementation of treaties, and consequently jeopardise the consistency and stability of treaty interpretation. Moreover, the less strict approach is particularly not suitable for the purpose of this thesis, as a number of WTO Members are not parties to the Cartagena Protocol, and *vice versa*.

Consequently, this author is more inclined to lean towards the wider approach of interpreting the term 'parties'. This is not because it seems to be the only choice left. As argued above, the wider approach is the common approach used by human rights courts and particularly the ECtHR. It is supported by convincing judicial findings and is adopted by

[119] Koskenniemi (n 25), 227 & 237, paras 450 & 471.
[120] *Ibid*.
[121] Henckels (n 106), 293.
[122] Koskenniemi (n 25), 238, para 472.

other literature.[123] The wider approach suits the purpose of this thesis, especially as it gives more treaties the opportunity to be referred to when interpreting a given treaty, thus ensuring or enhancing the consistency of the rules of international law, and contributing to conflict avoidance between the relevant rules.[124]

It is, however, not always clear what actually is the 'common intention' of the parties - a requirement for applying the wider approach as discussed above. The criteria for defining 'common intention' are unclear. It also seems difficult to reach a conclusion on who has the right to decide on the above question. This author's submission is that, reference to other rules of international law should be made under Article 31(3)(c) as long as those other rules are most directly relevant to the matters to be interpreted.[125]

3.4 The treaties should be systemically integrated to avoid potential conflicts

Conflicts between the treaties should be avoided with an aim of promoting their mutual supportiveness, due to the nature of the treaties. The WTO legal system is part of the body of international law. In practice, the Appellate Body (AB) has often referred to decisions of other judicial institutions, such as the ICJ, with respect to the rules on treaty interpretation and the allocation of the burden of proof.[126] The WTO Agreements also overlap with a large number of other instruments which, consequently, increases the need for coordination with other regimes.

The AB recognised as early as the *US-Gasoline* case that the WTO Agreements should not be read 'in clinical isolation from public international law'.[127] The WTO legal system incorporates the principles of systemic integration and good faith by requiring that the interpretation and clarification of the WTO Agreements should be 'in accordance with customary rules of interpretation of public international law.'[128] This confirms that general

[123] McGrady (n 80), and Kulovesi (n 105), 141-2.
[124] *European Communities-Measures Concerning Meat and Meat Products (EC-Hormones)*, ABR, WT/DS26/AB/R, 16 Jan 1998, paras 7.70.
[125] *Ibid*, paras 7.54 (This was an argument of the European Communities).
[126] *Ibid*; B Simma, 'Universality of International Law from the Perspective of A Practitioner' (2009) 20(2) *The European Journal of International Law* 265, 283.
[127] *US-Gasoline*, ABR, WT/DS2/AB/R, 20 May 1996, 17.
[128] DSU, Article 3.2.

international rules on treaty interpretation, including the principles of systemic integration and good faith, apply to the WTO dispute settlement mechanism.[129]

At the law-making level, the WTO Agreements came early in time in the international regulation of trade as it relates to GMOs. They were concluded before the rapid development, and without consideration of, complex modern biotechnology. Historically, at the end of World War II in 1945, the international community perceived international trade as a way of averting depression and armed conflict. The GATT was originally adopted in 1947 to facilitate international trade, promote trade liberalisation, and cut tariffs to a low level. In effect, the GATT is the foundation of contemporary international trade system.

On the other hand, environmental protection was not seen as an issue after the war. Environmental protection did not become an aim in itself, and international environmental law did not begin to develop until the UN Stockholm Conference in 1972.[130] Clearly, environmental protection was not taken into account either domestically or internationally when the GATT was first adopted in 1947.[131] In fact, no WTO provision specifically refers to GMOs.

The WTO legal system follows the general rules and orientations of relevant WTO Agreements instead of regulating international trade in GMOs specifically or in detail. It generally deals with issues concerning biotechnology through the interpretation of existing WTO rules by Panels and the AB, which may not necessarily produce a desirable answer. Some developed countries, such as the US, Canada and Japan proposed to regulate biotechnology specifically under the WTO rules in the 1999 WTO ministerial conference. Most developing countries, however, objected to these proposals in fear of the 'exclusive jurisdiction' on GMOs by the WTO, and preferred the separate regulatory regime of the CBD.[132]

The Cartagena Protocol, on the other hand, specifically regulates transboundary movements of GMOs and incorporates certain concrete procedural requirements. It is safe to

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[129] R Howse, 'The Appellate Body Rulings in the Shrimp/Turtle Case: A New Legal Baseline for the Trade and Environment Debate' (2002) 27 *Columbia Journal of Environmental Law* 491, 518.
[130] LK Caldwell, *International Environmental Policy: From the Twentieth to the Twenty-First Century* (3rd edition, Duke University Press, 1996), 63.
[131] M Poustie, '*Environment*', in E Moran and others (eds), The *Laws of Scotland: Stair Memorial Encyclopaedia Reissue* (Butterworths LexisNexis, 2007), 36.
[132] R Falkner, 'Regulating Biotech Trade: the Cartagena Protocol on Biosafety' (2000) 76(2) *International Affairs* 299, 305; and Oberthür and Gehring (n 11), 3.

argue that, at least for countries which are parties to both the WTO Agreements and the Cartagena Protocol, the Protocol reflects the Parties' most recent intention on the regulation of GMOs. The WTO Agreements should, thus, be reconciled with the Protocol, so as to take into account the states' intent and to fit into the specific regulation of GMOs.

Existing literature widely accepts that the WTO Agreements should be interpreted in the light of relevant rules of international law under the principle of systemic integration.[133] Sands contends that the WTO system should be interpreted consistently with general international law and customary rules without undermining its object and purpose.[134] Pauwelyn argues that the presumption against conflict of norms requires the WTO rules to be interpreted in conformity with WTO Members' other obligations under international law.[135] Henckels agrees but takes the argument further by stating that interpreting the WTO Agreements in the light of other international rules would promote consistent and transparent understanding of international law, and add to the integrity and coherence of the WTO's judicial decisions.[136]

Moreover, the empirical studies carried out in the course of this thesis suggest that the principle of systemic integration is viewed as a powerful tool to facilitate the implementation of the treaties by the participants. Out of the 7 interviewees who commented on the question of whether they were aware of any general international rules of conflict avoidance and in particular the principle of systemic integration, only one interviewee (AJ2) claimed to have not heard of the principle of systemic integration before the interview.[137] It appeared to the author that all 6 other interviewees (AO1, CJ1, BO2, AO2, BJ1 and AJ1) had some (yet different) degree(s) of understanding of general international law rules on conflict avoidance.[138] Among them, 4 interviewees (AO1, CJ1, BO2, and AO2) stated that (at least at the theoretical level) the approach of systemic integration could and should be used to avoid potential conflicts between the treaties, which, if properly utilised, would facilitate

[133] Marceau (n 26), 1116; Pauwelyn (n 24), 460; L Bartels, 'Applicable Law in WTO Dispute Settlement Proceedings' (2001) 35(3) *Journal of World Trade* 499, 509; McLachlan (n 39), 279; and C Pavel, 'Normative Conflict in International Law' (2009) 46 *San Diego Law Review* 883, 904.
[134] Sands (n 51), 95 & 104.
[135] Pauwelyn (n 24), 488-9.
[136] Henckels (n 106), 288.
[137] Interview, Respondent A of Jurisdiction 2, July 2012.
[138] Details of the interviewees' comments will be presented in the following paragraphs.

implementation of the treaties; while the other 2 agencies (AO1 and AJ2) claimed that there were practical difficulties in using this technique.[139]

In relation to personal knowledge of the principle of systemic integration, the 4 interviewees (AO1, CJ1, BO2, and AO2) specifically stated that they were aware of the principle of systemic integration prior to the interview. In particular, organisational representative AO1 believed the systemic integration approach was found in Article 31 of the VCLT on the interpretation of treaties which alluded to the need to consider treaties in their entirety and in an integrated manner.[140] Agency AO1 had previous experience of considering how to implement this integrated approach towards developments at the national level while working for the government.[141] In this connection, governmental official CJ1 was aware of a general principle in international law which required a treaty interpreter to adopt a harmonious approach in the reading of different legal texts which were applicable in the same situation.[142] Similarly, organisational delegate BO2 was aware of the VCLT as a set of international rules which helped to decide which international obligations might take precedence over another.[143] In the same vein, organisational delegate AO2 stated that Article 31(3)(c) of the VCLT was a very important tool for reconciling and avoiding norm conflicts in general.[144]

In relation to the question of utilising the principle of systemic integration to avoid potential conflicts between the WTO Agreements and the Protocol, Agency AO1 claimed that the principle of systemic integration was definitely a good tool for avoiding treaty conflicts. AO1 believed the starting point for systemic integration was to appreciate, understand and accept that trade interests and environmental interests were equal in importance and should be mutually supportive.[145]

Moreover, agency CJ1 stated that the Protocol might be brought into the WTO litigation system and invoked by a defendant as 'other relevant international law'.[146] CJ1 further claimed that this could be achieved internationally by the Appellate Body which was

[139] Details of the interviewees' comments will be presented in the following paragraphs; AO1's discussion on the practical difficulties will also be presented in Chapter 5, section 5 of this thesis.
[140] Interview, Respondent A of Organisation 1, July 2012.
[141] *Ibid.*
[142] Interview, Respondent C of Jurisdiction 1, December 2012.
[143] Interview, Respondent B of Organisation 2, November 2012.
[144] Interview, Respondent A of Organisation 2, September 2012.
[145] Interview (n 140).
[146] Interview (n 142).

aware that whilst it had a big responsibility to apply the WTO Agreements, it did not do so 'in clinical isolation of general international law'. In practice, WTO judges 'looked for ways where they can understand the agreements to make them sit comfortably with other areas of international law'.[147]

Furthermore, agency AO2 believed Article 31(3)(c) was 'nothing but to implement in good faith'. If a state signed different treaties that appeared to conflict, the state should use Article 31(3)(c) to properly assess the scope of its obligations and policies, implement all obligations in good faith, and avoid conflicts when implementing its various obligations.[148] AO2 claimed that the biggest concern about the conflict resolution technique was the issue of what rules could be brought under Article 31(3)(c). AO2 believed that in practice, for non-parties, the Protocol could not be used to interpret WTO rules because the state was a constant and loud opponent to the Protocol.[149]

4. The principles that underpin systemic integration may contribute to conflict avoidance between the treaties

4.1 Why should the principles behind systemic integration be examined?

Global governance is a pluralist order involving different parts of domestic, regional, and global origin that interact in a largely political fashion.[150] As discussed above, international treaties are being interpreted on three levels. First, international judicial institutions give treaties judicial interpretation during dispute settlement processes. Secondly, states give authoritative interpretation by making collective efforts through international institutions or treaty organs. Thirdly, individual states also interpret treaties during the implementation process.[151] It is thus necessary to examine how potential conflicts between the treaties can be avoided or minimised at three equally important and intertwined levels: at the international judicial institution level, at the treaty institutional interaction level, and at the member states' implementation level.

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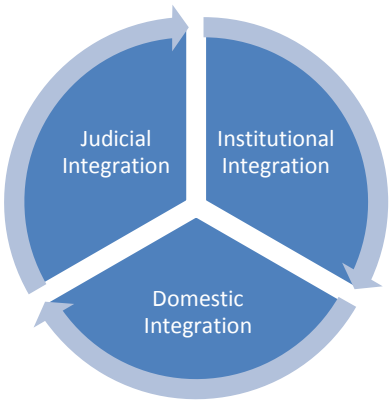
[147] *Ibid.*
[148] Interview (n 144).
[149] *Ibid.*
[150] N Krisch, 'Pluralism in Global Risk Regulation: The Dispute over GMOs and Trade' (2009) *Law, Society and Economy Working Papers 17*, 2, available at: https://www.lse.ac.uk/collections/law/wps/WPS2009-17_Krisch.pdf, last accessed on 30 April 2017.
[151] See section 3.1 of this chapter.

The principle of systemic integration is traditionally talked about in the context of international judicial institutions.[152] It can be used to avoid conflicts at the state where 'the enforcement of, or reliance on, a particular norm is being considered'.[153] However, as Figure 1 shows, the avoidance of norm conflicts can be achieved not only in judicial fora, but also through other means such as taking into account existing rules at the negotiation state of new norms, by drafting treaties more clearly, and cooperation and information sharing between international organisations.[154]

Figure 1: Conflicts between the treaties can be avoided at three levels



With the aim of conflict avoidance, it is crucial to distil the principles and techniques that lie behind systemic integration which are capable of driving integration at other levels, including institutional and domestic levels. The following paragraphs will examine the principles that lie behind systemic integration, including the principles of mutual supportiveness, good faith, cooperation, and harmonisation, which have the potential to avoid treaty conflicts through not only judicial, but also institutional and domestic integration.

Efforts to avoid treaty conflicts can be made on each one of the levels individually, and on all three levels collectively. The three levels are also intertwined with one another, in the sense that efforts made in one tier may need the support from the other ones. For example, certain forms of institutional integration also require individual states to reconcile the treaties at the domestic level.[155]

[152] For more discussion see section 3.2 of this chapter.
[153] Pauwelyn (n 24), 239.
[154] *Ibid*, 237-8.
[155] MB Mokhtar, GC Ta, and MW Murad, 'An Essential Step for Environmental Protection: Towards a Sound Chemical Management System in Malaysia' (2010) 17(5) *Journal of Chemical Health & Safety* 12, 15.

Although, as stated above, initial questions of the empirical research carried out in the course of this thesis did not directly refer to the principles that lie behind systemic integration,[156] the importance of looking at the underpinning principles was reflected by the empirical findings. The empirical research found that 4 (AJ1, BJ1, CJ1 and BO2) out of the 6 (AO1, CJ1, BO2, AO2, BJ1 and AJ1) interviewees who had understanding on systemic integration were practically aware of and using analogies to systemic integration at the institutional and domestic levels, although BJ1 also pointed out the practical difficulties in so doing.[157]

Among them, governmental official BJ1 stated that if one examines a matter only at the level of the law, the differences and potential conflicts between treaties could be mitigated through methods of legal interpretation. One could find a rather straight-forward way to achieve mutual supportiveness between the treaties.[158] Agency BJ1 believed there was a lot of room for treaty interpretation which can be executed in a manner that approaches the two bodies of law as mutually supportive. However, in practice, this would not happen in the short term because of the unavoidable economic discrepancy.[159]

Similarly, agency BO2 believed the biggest issue that created conflicts was that, domestically, the offices and the people who worked on the Protocol were not the same people who were responsible for the country's decisions on the WTO and trade. In many cases the two groups of officials did not communicate with each other.[160] BO2 stated that the most important way to avoid conflicts between the WTO Agreements and the Protocol was to have better coordination at both the institutional and domestic levels.[161]

In the same vein, Agency CJ1 believed that efforts should be made at both the international and domestic levels to aid the implementation of the WTO agreements and the Protocol.[162] Moreover, agency AJ1 appeared to be utilising the principles of cooperation and

[156] This was discussed in detail in Chapter 1, section 3.4 of this thesis.
[157] Details of the interviewees' comments will be presented in the following paragraphs.
[158] Interview, Respondent B of Jurisdiction 1, December 2012.
[159] *Ibid*.
[160] Interview, Respondent B of Organisation 2, November 2012.
[161] *Ibid*.
[162] Interview, Respondent C of Jurisdiction 1, December 2012.

harmonisation (arguably in an unintentional way) within the local practice of Jurisdiction 1.[163]

4.2 The principle of 'mutual supportiveness' between trade and environment and the aim of sustainable development

4.2.1 The principle of mutual supportiveness

The principle of mutual supportiveness requires that all international rules should 'be understood and applied as reinforcing each other with a view to fostering harmonisation and complementarity, as opposed to conflictual relationships'.[164] Hence, attempts should be made to find coherence between the WTO Agreements and MEAs to avoid conflicts between the treaty provisions.[165] As will be discussed in the following paragraphs, the notion of mutual supportiveness has normative manifestations, and is now widely incorporated in a number of instruments, both outside and inside the WTO. Mutual supportiveness is currently not, but has the potential to be crystallised as a general principle of international law which may be relevant to any issues of interpretation, fragmentation and competing regimes.[166]

Mutual supportiveness is based on the assumption that 'conflicts may and should be resolved between the treaty partners as they arise and with a view to mutual accommodation'.[167] That is to say, mutual supportiveness plays down the sense of conflict and reads the relevant materials from the perspective of their contribution to some generally shared systemic objective.[168]

The principle of mutual supportiveness was originally designed to achieve 'common objectives' of international trade and environmental regimes and to strengthen their coherence, balance and interaction.[169] It closely links to the aim of sustainable development

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[163] Interview, Respondent A of Jurisdiction 1, November 2012. More details will be discussed in Chapters 6 and 7 of this thesis.
[164] R Pavoni, 'Mutual Supportiveness as a Principle of Interpretation and Law-Making: A Watershed for the "WTO-and-Competing-Regimes" Debate?' (2010) 21(3) *European Journal of International Law* 649, 650.
[165] B Brack and K Gray, 'Multilateral Environmental Agreements and the WTO' (2003) Report of the Royal Institute of International Affairs, 26; and TJ Schoenbaum, 'International Trade and Environmental Protection', in Birnie, Boyle and Redgwell (n 45).
[166] Pavoni (n 164), 651.
[167] Koskenniemi (n 25), para. 276.
[168] *Ibid*, para 412.
[169] L Boisson de Chazournes and MM Mbengue, 'A "Footnote as A Principle": Mutual Supportiveness in an Era of Fragmentation', in HP Hestermeyer and others (eds), *Coexistence, Cooperation and Solidarity-Liber Amicorum Rüdiger Wolfrum* (Martinus Nijhoff Publishers, 2012), Vol 2 1615, 1617-9.

and is generally considered to be an efficient way of achieving this aim.[170] The principle of mutual supportiveness started to emerge from the 1990s, and was first referred to in Agenda 21 in 1992, which states that: 'the international economy should provide a supportive international climate for achieving environment and development goals by…making trade and environment mutually supportive'.[171]

As an interpretative technique, mutual supportiveness can be seen as a combination of the principles of systemic integration and harmonisation.[172] It may operate as an effective technique capable of reconciling competing legal rules.[173] It supports the objectives of both trade and environmental treaties in a neutral and unbiased way by finding an 'equitable balance between the competing interests and values' of the different regimes.[174]

Moreover, as argued by Pavoni, the principle of mutual supportiveness is not only an interpretative principle or technique sharing the same rationale and addressing similar concerns to systemic integration, but also has a law-making dimension which implies a duty to pursue good faith negotiations for the conclusion and amendment of international rules.[175] This argument has been echoed by a number of scholars.[176] At the law-making level, mutual supportiveness is rooted in and builds upon the principles of good faith and cooperation.[177]

The principle of mutual supportiveness underpins the principle of systemic integration, and may operate respectively at the international judicial, institutional and domestic levels and offers a potential solution to the avoidance of treaty conflicts. Its application in judicial fora may be limited particularly if one (or more) of the disputing states is not a party to one of the disputed treaties, although such limitation does not exist at the other two levels.

Promoting harmonisation and mutual supportiveness fits best with the aim of efficient management, and preserves the rights and obligations under both treaties in a

[170] The connection between mutual supportiveness and the aim of sustainable development will be discussed in detail in the following section 4.2.3 of this chapter.
[171] Agenda 21, 14 June 1992, (1992) 31 ILM 874, para 2.3(b).
[172] L Stuart, 'Trade and Environment: A Mutually Supportive Interpretation of WTO Agreements in Light of Multilateral Environmental Agreements' (2014) 12 *New Zealand Journal of Public and International Law* 379, 386.
[173] Pavoni (n 164), 659.
[174] *Ibid*, 665.
[175] *Ibid*, 650.
[176] Stuart (n 172), 385-6.
[177] Pavoni (n 164), 667.

maximal way.[178] Mutual supportiveness may thus enhance the positive interaction and build a constructive and interactive relationship between trade and environmental rules.[179] In addition, the principle of mutual supportiveness relates not only to the states at the international level, but also to the relationship between states, international institutions and non-state actors.[180]

It is worth mentioning that one cannot assume *a priori* that mutual supportiveness exists between all treaties. It is not applicable to treaties which seek to 'achieve physically incompatible solutions, or are inspired by very different (perhaps opposite) objectives'.[181] In such cases, one treaty must prevail over the other, and the focus shifts from coordination to rights and obligations.[182] More specifically, the weakness of savings clauses on mutually supportiveness lies in their open-endedness, which transfers the parties' competence to determine what should be done in case of conflicts to the law-applier, and inevitably supports 'the primacy of the treaty that is part of the law-applier's regime'.[183]

Mutual supportiveness connects with and is hardly distinguishable from sustainable development, and is most commonly characterised as the interpretative pillar of and an essential means for achieving the aim of sustainable development.[184] It is for these reasons, the following sections will examine the aim of sustainable development and its connection with mutual supportiveness.

4.2.2 The aim of sustainable development

The substantive elements of the aim of sustainable development include: integration of environmental protection and economic development,[185] the right to development,[186] sustainable utilisation and conservation of natural resources,[187] and both inter

[178] Koskenniemi (n 25), 142-3, para 281.
[179] Boisson de Chazournes and Mbengue (n 169), 1625.
[180] M Sanwal, 'Trends in Global Environmental Governance: The Emergence of a Mutual Supportiveness Approach to Achieve Sustainable Development' (2004) 4(4) *Global Environmental Politics* 16, 20.
[181] Koskenniemi (n 25), 141, para 277.
[182] *Ibid*.
[183] *Ibid*, 142-3, para 280.
[184] Pavoni (n 164), 661-2.
[185] The Rio Declaration, principle 4.
[186] *Ibid*, principle 3.
[187] *Ibid*, principles 2 & 23.

and intra-generational equity.[188] These elements, which obviously call for the beneficial integration of environmental and trades concerns and interests, are set out in the Rio Declaration – a confirmed soft law instrument - which contains key principles of international environmental law.[189]

The aim of sustainable development represents a policy goal or principle which can influence both litigation and practice, and it may lead to significant changes and developments in existing laws.[190] Its authority and significance are endorsed by the *opinio juris* of states, and have been widely accepted by numerous governments at both the international and domestic levels, by a large number of treaties, by various international organisations, and by the majority of literature.[191] As argued by Lowe:

> Sustainable development can properly claim a normative status as an element of the process of judicial reasoning. It is…a legal concept exercising a kind of interstitial normativity, pushing and pulling the boundaries of true primary norms when they threaten to overlap or conflict with each other.[192]

The aim of sustainable development does not only have normative value, but also potentially bears constitutional value in international law. According to Dworkin, a principle is a standard that is to be observed because it is 'a requirement of justice or fairness or some other dimension of morality'; does not set out automatically legal consequences; is 'one which officials must take into account as a consideration inclining in one direction or

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[188] *Ibid*, principle 3; EB Weiss, *In Fairness to Future Generations* (UN University, 1989), 5-28; and World Commission on Environment and Development (WCED), *Our Common Future* (Oxford University Press, 1987), 43.
[189] Poustie (n 131), 25.
[190] Boyle and Chinkin (n 70), 224.
[191] M Jacobs, *The Green Economy: Environment, Sustainable Development and the Politics of the Future*, (Pluto Press, 1991), 59; P Sands, 'International Law in the Field of Sustainable Development' (1994) 65 *British Yearbook of International Law* 303, 305-15; MC Segger, 'Sustainable Development in International Law', in HC Bugge and C Voigt (eds), *Sustainable Development in International and National Law: What Did the Brundtland Report Do to Legal Thinking and Legal Development, and Where Can We Go from Here?* (Europa Law Publishing, 2008), 162; X Fuentes, 'International Law-Making in the Field of Sustainable Development: The Unequal Competition between Development and the Environment', in N Schrijver and F Weiss (eds), *International Law and Sustainable Development: Principles and Practice* (Martinus Nijhoff Publishers, 2004), 7; AE Boyle and D Freestone, 'Introduction', in AE Boyle and D Freestone (eds), *International Law and Sustainable Development: Past Achievements and Future Challenges* (Oxford University Press, 1999), 5-6; D French, *International Law and Policy of Sustainable Development* (Manchester University Press, 2005), 37-42; and Birnie, Boyle and Redgwell (n 45), 125-7.
[192] AV Lowe, 'Sustainable Development and Unsustainable Arguments', in Boyle and Freestone (eds), *ibid,* 31.

another'; and conflicts of principles do not mean that the non-prevailing one is not a principle of the legal system.[193]

Constitutionalism in international law is a highly controversial topic, and its content remains unclear.[194] This author takes the position that constitutionalism in international law is not the constitutionalisation of any particular institutions such as the WTO,[195] nor can it be defined with direct analogies to domestic constitutional arrangements which deviate from the traditional concepts of state consent and sovereignty in terms of international law-making.[196] Constitutionalism in the context of this thesis refers to a system of shared values which shape the making and development of international law.[197] It can be defined as a mindset, a programme of moral and political regeneration, and a vocabulary of institutional hierarchies and fundamental values in the application of law, to which international lawyers can resort.[198]

Contributing to sustainable development is considered as the principal aim of contemporary international environmental law.[199] This requires the development of new international environmental rules that integrates social and economic concerns.[200] And for this to happen in an effective manner, there is the need to correctly re-imagine the aim of sustainable development from different perspectives - that is, not only from a limited environmental perspective, but also from the perspective of trade as well.

The concept of sustainable development is also included in international trade law.[201] The ICJ has confirmed that states have the obligation to respect and protect the natural

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[193] R Dworkin, *Taking Rights Seriously* (Duckworth, 1977), 22-31.
[194] J Klabbers, 'Setting the Scene', in J Klabbers, A Peters and G Ulfstein (eds), *The Constitutionalization of International Law*, (Oxford University Press, 2009), 1; J Kammerhofer, 'Constitutionalism and the Myth of Practical Reason: Kelsenian Responses to Methodological Problems' (2010) 23 *Leiden Journal of International Law* 723, 723; and E Hey, 'International Public Law' (2004) 6 *International Law FORUM du droit international* 141, 152.
[195] DZ Cass, *The Constitutionalization of the World Trade Organisation: Legitimacy, Democracy, and Community in the International Trading System* (Oxford University Press, 2005), 3-5.
[196] I Brownlie, *Principles of Public International Law* (7th edition, Oxford University Press, 2008), 609; and Boyle and Chinkin (n 70), 233.
[197] E de Vet, 'The International Constitutional Order' (2006) 55 *International and Comparative Law Quarterly* 51, 52; and E Kassoti, 'Fragmentation and Inter-Judicial Dialogue: the CJEU and the ICJ at the Interface' (2015) 8(2) *European Journal of Legal Studies* 21, 27.
[198] M Koskenniemi, 'Constitutionalism as Mindset: Reflections on Kantian Themes about International Law and Globalization' (2007) 8 *Theoretical Inquiries in Law* 9, 18.
[199] Jacobs (n 191), 59; Poustie (n 131), 2 & 25-6; Fuentes (n 191), 7; S Bell, D McGillivray and OW Pedersen, *Environmental Law* (8th edition, Oxford University Press, 2013), 57; and Birnie, Boyle and Redgwell (n 45), 123-5.
[200] Sands (n 72), 390.
[201] The extent to which mutual supportiveness and sustainable development have been dealt with in the WTO regime will be discussed in detail in the following section 4.2.4 of this thesis.

environment.[202] This obligation is part of the corpus of international law relating to the environment,[203] and is applicable at all times and to all activities, including international trade.[204] Trade is not just about trade; it also impacts, and is impacted by, other policy fields.[205] The growth in trade is not simply the generation of wealth; it should be consistent with the development of social justice and environmental management.

4.2.3 The connection between mutual supportiveness and sustainable development

Mutual supportiveness closely connects with and is an essential way of achieving sustainable development. That is to say, trade and environment should be integrated in a mutually supportive way to achieve the overarching goal of sustainable development. The characterisation of sub-systems of international law has no normative value *per se* nor does it demarcate strict battle lines between them. It is merely an informal label which reflects the diverse interests or policy objectives of the international community.[206] In other words, international trade and environmental law are artificial compartments of international law. Thus, the lines between trade and environment have become increasingly blurred.[207]

The protection of the environment and the development of the economy are not necessarily conflicting values or alternatives by their nature. If properly dealt with, trade liberalisation may provide financial support for environmental protection; at the same time, proper environmental policies could ensure that trade liberalisation also produces environmental merits.[208]

Both international trade and environmental law apply the general rules and principles of international law and have the same long-term aim of security, prosperity and sustainable development. The international legal system can be seen as 'a consistent and coherent body of norms whose observance secures certain valued goals which can intelligibly

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[202] *Request for an Examination of the Situation in Accordance with Paragraph 63 of the Court's Judgement of 20 December 1974 in the Nuclear Tests (New Zealand v. France) Case*, Order of 22 September 1995, (1995) ICJ Reports, 306, para 64.
[203] ICJ (n 83), 241.
[204] *Ibid*, para 33.
[205] T Kleinlein, 'Judicial Lawmaking by Judicial Restraint? The Potential of Balancing in International Economic Law' (2011) 12 (5) *German Law Journal* 1141, 1146.
[206] Koskenniemi (n 25), 17, para 21.
[207] SW Burgiel, 'The Cartagena Protocol on Biosafety: Taking the Steps from Negotiation to Implementation', (2002) 11(1) *RECIEL* 53, 59.
[208] DC Esty, 'GATTing the Greens: Not Just Greening the GATT' (1993) *Yale Law School Faculty Scholarships Series, Paper 453*, 35; and SE Gaines, 'Process and Production Methods: How to Produce Sound Policy for Environmental PPM-Based Trade Measures?' (2002) *27 Columbia Journal of Environmental Law* 383, 424.

be pursued all together'.[209] That is to say, the community may pursue different goals at the same time, and may compromise one goal for the sake of the other.[210]

It is the international community's express commitment to treat environment and trade in an integrated manner and to cooperate in the further development of international law in the field of sustainable development.[211] According to Dworkin's 'single right answer' thesis, the single right answer to the relationship between trade and environment appears to be the proper balancing of the regimes with an aim of achieving sustainable development.[212]The consistency and mutual supportiveness between trade and the environment is the aim and manifestation of sustainable development. It is widely accepted that international trade and environmental law can, and should, be mutually supportive given that proper economic and environmental policies are adopted at both the international and domestic level.[213] In policy terms, reconciling trade and environment treaties seems to be the best way to achieve the overarching goal of sustainable development.

The aim of sustainable development entails a balancing, integration, and compromise between environment protection and economic growth.[214] This requirement applies not only in autonomous activities, but also when states are implementing specific

[209] N MacCormick, *Legal Reasoning and Legal Theory* (Oxford University Press, 1978), 106.
[210] Dworkin (n 193), 92.
[211] WCED (n 188), 62; The Rio Declaration, Principles 2, 4, 12; *Korea-Measures Affecting Government Procurement (Korea-Procurement)*, Panel Report, WT/DS163/R, 1 May 2000, para 7.96; B Eggers and R Mackenzie, 'The Cartagena Protocol on Biosafety' (2000) 3(3) *Journal of International Economic Law* 525, 541; P Sands, *Principles of International Environmental law* (2nd edition, Cambridge University Press, 2003), 941; P Roch and FX Perrez, 'International Environmental Governance: The Strive Towards a Comprehensive, Coherent, Effective and Efficient International Environmental Regime' (2005) 16 *Colorado Journal of International Environmental Law and Policy* 1, 10; and Sands (n 51), 85.
[212] Dworkin (n 193), 279.
[213] AH Ansari, 'WTO and MEAs: Resolving the Competing Paradigm' (2007) 7(2) *Journal of International Trade Law and Policy* 2, 2-13; T Kelly, 'The WTO, the Environment and Health and Safety Standards', (2003) 26(1) *The World Economy* 131, 143; M Matsushita, 'Governance of International Trade under World Trade Organisation Agreements-Relationship between WTO Agreements and other Trade Agreements' (2004) 38(2) *Journal of World Trade* 185, 188; B Ogolla, A Markus and X Wang, 'International Biodiversity and the World Trade Organisation: Relationship and Potential for Mutual Supportiveness' (2003) 33(3-4) *Environmental Policy and Law* 117, 131; GP Sampson, 'Effective Multilateral Environment Agreements and Why the WTO Needs Them' (2001) 24(9) *The World Economy* 1109, 1128; and E Trujillo, 'A Dialogical Approach to Trade and Environment' (2013) 16 (3) *Journal of International Economic Law* 535, 577-8.
[214] A van Aaken, 'Defragmentation of Public International Law through Interpretation: A Methodological Proposal' (2009) 16 *Indiana Journal of Global Legal Studies* 483, 495-6; R Pavoni, 'Biodiversity and Biotechnology: Consolidation and Strains in the Emerging International Legal Regimes', in F Francioni and T Scovazzi (eds), *Biotechnology and International Law* (Hart Publishing, 2006), 55; and Birnie, Boyle and Redgwell (n 45), 54-5.

treaties.[215] This inherently complex notion thus requires both international institutions and states to promote the mutual supportiveness of environmental and trade regimes.[216]

In furtherance of the aim of sustainable development, from the perspective of environmentalists, Agenda 21 states that the international economy should set up a 'supportive international climate for achieving environment and development goals'.[217] Moreover, at the World Summit on Sustainable Development in Johannesburg in 2002, environmental ministers called for the promotion of an 'open, equitable, rule-based, predictable and non-discriminatory multilateral trading and financial system that benefits all countries in the pursuit of sustainable development'.[218] Furthermore, the 2012 UN Conference on Sustainable Development formally linked economic development with, and elaborates the ways in which it can be a tool to advancing, sustainable developments.[219] This may also affect the way trade regimes deal with environmental concerns.[220]

More recently, the 2015 UN Sustainable Development Summit recalled the need to integrate and balance the indivisible three dimensions of sustainable development: the economic, social and environmental.[221] As part of the 2030 Agenda for Sustainable Development, the Sustainable Development Goals (SDGs) are a set of 17 goals and 169 targets which members of the UN endorsed in 2015.[222]

The newly endorsed SDGs reinforce the aim of sustainable development as a core policy principle. Their purpose is to mobilise action in the coming 15 years in order to end poverty and hunger, protect the planet from degradation, to foster prosperous, peaceful, just and inclusive societies, and to ensure that economic, social and technological progress occurs in harmony with nature.[223] The SDGs are applicable to all countries and all stakeholders, at all times and to all activities. They put significant emphasis on the role which trade can play in promoting sustainable development, and aim to produce a win-win for trade and

[215] *Iron Rhine Arbitration* (n 45), para 59.
[216] D French, 'The Role of the State and International Organisations in Reconciling Sustainable Development and Globalisation', in Schrijver and Weiss (eds) (n 191), 61; and Pavoni (n 214), 51.
[217] Agenda 21, 14 June 1992, (1992) 31 ILM 874, para 2.3.
[218] UN, 'Report of the World Summit on Sustainable Development', A/COF.199/20, 4 September 2002, 37, para 47.
[219] UN Conference on Sustainable Development Rio + 20, *The Future We Want: Final document of the 2012 Rio+20 Conference*, A/RES/66288, 22 June 2012, paras 125-9.
[220] Trujillo (n 213), 577-8.
[221] UN, *Transforming Our World: the 2030 Agenda for Sustainable Development*, Report of the UN Sustainable Development Summit 2015, A/RES/70/1, adopted on 25 September 2015, Preamble.
[222] *Ibid.*
[223] *Ibid.*

environment.[224] While the normative battle might have been won, the real battle about how to integrate trade and environment and avoid conflict is still to come.

In particular, SDG 17 requires efforts being made to 'strengthen the means of implementation and revitalise the global partnership for sustainable development', with a specific focus on enhancing policy coherence for sustainable development.[225] This author's submission is that, this can be achieved by intentionally avoiding conflicts between international trade and environmental rules, such as the potential conflicts between the WTO Agreements and the Protocol.

The mutual supportiveness between trade and environment under the aim of sustainable development is widely recognised by judicial practice and other soft law instruments.[226] In the *Gabčíkovo-Nagymaros* case, the International Court of Justice (ICJ) interpreted a treaty on a joint hydroelectric power project in light of new environmental rules with an aim of reconciling trade and environmental concerns.[227] The ICJ stated for the first time in its decisions 'this need to reconcile economic development with protection of the environment is aptly expressed in the concept of sustainable development'.[228] This decision promotes a mutually supportive interpretation of treaty wordings and thus contributes to conflict avoidance.

Similarly, in the *SD Myers* case, the arbitral tribunal established under NAFTA found that 'environmental protection and economic development can and should be mutually supportive'.[229] In support, in the *Iron Rhine Arbitration* case, the tribunal stated that economic development and environmental protection stand not as alternatives, instead, they are integral concepts which are capable of symbiotic relation, and are 'mutually reinforcing'.[230]

[224] SDGs 2, 3, 8, 10, 14 & 17, in UN (n 221).
[225] SDGs 17.14.
[226] The question of how WTO jurisprudence has dealt with the principle of sustainable development will be discussed in detail in the following section.
[227] *Case Concerning the Gabčíkovo-Nagymaros Project (Hungary v. Slovakia)*, (1997) ICJ Reports 7, 140.
[228] *Ibid*, paras 112 & 140.
[229] *SD Myers, Inc. v. Canada*, Partial Award, 13 November 2000, (2001) 40 ILM 1408.
[230] *Iron Rhine Arbitration* (n 45), paras 58-9, 80, 84, 221-3 & 243.

4.2.4 The principle of mutual supportiveness is a legal standard internal to the WTO

The WTO pursues the overarching goal of sustainable development. The close link between mutual supportiveness and sustainable development, as argued above,[231] is recognised by the preamble to the Marrakesh Agreement which is the founding agreement of the WTO. Sustainable development is specifically incorporated into the Marrakesh Agreement which explicitly acknowledges that trade and economic endeavours should allow for 'the optimal use of the world's resources in accordance with the objective of sustainable development'.[232]

The above aim-setting statement makes the achievement of sustainable development a formal goal and objective of the WTO.[233] Although this preambular provision is not legally binding, it can still be cited as a justification for WTO judicial decisions, and has already been invoked by the DSB in the *US-Gasoline*,[234] *India-Quantitative Restrictions*,[235] and *Shrimp-Turtle*[236] cases.[237] Sustainable development is also a necessity which encompasses the legitimate objectives of GATT Article XX, because both the protection of human, animal or plant life or health and the conservation of exhaustible natural resources are 'just a few of the objectives which could be pursued to foster sustainable development'.[238]

The principle of mutual supportiveness has thus been turned into 'a legal standard internal to the WTO' by the 1994 Ministerial Decision and a follow up Trade and Environment (CTE) Report.[239] This principle should, at the very least, be applied when interpreting the WTO Agreements. The Ministerial Conference is the highest decision-

[231] The connection between mutual supportiveness and sustainable development was discussed in detail in the preceding section 4.2.3 of this chapter.
[232] The Marrakesh Agreement, Preamble.
[233] Stuart (n 172), 410.
[234] *US-Gasoline*, ABR (n 127), v(c) 30.
[235] *India-Quantitative Restrictions on Imports of Agricultural, Textile, and Industrial Products*, Panel Report, WT/DS90/R, 6 April 1999, para 7.2.
[236] *Shrimp-Turtle, Recourse to Article 21.5 of the DSU by Malaysia, AB-2001-4,* ABR, 22 October 2001, paras 129-31.
[237] EB Lydgate, 'Sustainable Development in the WTO: from Mutual Supportiveness to Balancing' (2012) 11(4) *World Trade Review* 621, 625.
[238] G Gagliani, 'The Interpretation of General Exceptions in International Trade and Investment Law: Is a Sustainable Development Interpretive Approach Possible?' (2015) 43(4) *Denver Journal of International Law & Policy* 559, 569.
[239] Pavoni (n 164), 652-3.

making body of the WTO, which normally meets every two years.[240] In order to identify and understand the relationship between trade and the environment so as to promote sustainable development, the 1994 Ministerial Decision on Trade and Environment created the CTE which is open to the entire WTO membership.[241] The CTE was established 'with the aim of making international trade and environmental policies mutually supportive', and has taken slow but progressive steps to reconcile trade and environment.[242] The CTE's first Report in 1996, which reflects the intention of all members of the WTO, reiterated that trade and environment are 'representative of efforts of the international community to pursue shared goals', and 'should be mutually supportive in order to promote sustainable development'.[243]

The WTO's commitment to sustainable development was reaffirmed by the 2001 Doha Ministerial Declaration, which recognised that trade and environment can and must be mutually supportive in promoting sustainable development. Sustainable development is hence an objective running through the current Doha Round negotiations, and has increasingly appeared in the trade agenda.[244] For example, in 2005, the WTO Secretariat organised a Symposium on Trade and Sustainable Development to examine the aim of sustainable development and its relevance to the WTO.[245] The need to enhance mutual supportiveness of trade and environment was also reaffirmed by the Hong Kong Ministerial Declaration in 2005.[246]

The WTO regime of today is neither concerned solely with economic development nor is intended merely to promote trade liberalisation. It is an arena of competing values[247] with a role to 'elucidate upon the role of "trade" in an international arena increasingly focused

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[240] WTO, 'Ministerial Conferences', available at: https://www.wto.org/english/thewto_e/minist_e/minist_e.htm, last accessed on 30 April 2017.
[241] WTO, 'The Committee on Trade and Environment', available at: https://www.wto.org/english/tratop_e/envir_e/wrk_committee_e.htm, last accessed on 30 April 2017.
[242] WTO, 'Ministerial Decision on Trade and Environment', 15 April 1994, available at: https://www.wto.org/english/tratop_e/envir_e/issu5_e.htm, last accessed on 5 October 2010.
[243] CTE, 'Report of the Committee on Trade and Environment', WT/CTE/1, 12 November 1996, paras 167 & 171, Section VII of the Report of the General Council to the 1996 Ministerial Conference, WT/MIN(96)/2, 26 November 1996.
[244] Doha Ministerial Declaration, 14 November 2001, WT/MIN(01)/DEC/1, (2002) 41 ILM 746, paras 6 & 31-3.
[245] WTO, 'WTO Symposium on Trade and Sustainable Development within the Framework of Paragraph 51 of the Doha Ministerial Declaration', 10-11 October 2005, available at: https://www.wto.org/english/tratop_e/envir_e/sym_oct05_e/sym_oct05_e.htm, last accessed on 30 April 2017.
[246] WTO, 'Ministerial Declaration', 18 December 2005, WT/MIN(05)/DEC, paras 30 & 31.
[247] ME Footer, 'Post-Normal Science in the Multilateral Trading System: Social Science Expertise and the EC-Biotech Panel' (2007) 6(2) *World Trade Review* 281, 288.

upon the promotion of sustainable development'.[248] Some even argue that the WTO has gravitated towards becoming a World Trade and Sustainable Development Organisation.[249]

Reflecting on the principle of mutual supportiveness and the aim of sustainable development, the WTO regime should and has already considered the need to promote and preserve non-trade concerns.[250] However, it is still uncertain as to how far non-trade values can be accommodated in the WTO. The AB has been very reticent to take explicitly into account normative influences from non-WTO law, mainly due to 'a judicial sensibility which valorises the virtues of modesty, caution and self-restraint'.[251]

Not all non-trade concerns necessarily promote sustainable development. Non-trade values generally encompass 'protection of the environment, animal rights, religious ethics, social rights, labour rights, human health', and other concerns such as food security.[252] Certain of the WTO Agreements such as the Agreement on Agriculture explicitly mention non-trade concerns, including food security and the need to protect the environment;[253] besides, the WTO case law has also provided Members with policy space for measures based on justifiable non-trade values applied in good faith.[254]

In evaluating the context of a necessity analysis under Article XX of the GATT, in *Korea-Beef* case, the WTO AB appeared to imply that non-trade values can be ranked according to their importance, which involves 'a process of weighing and balancing a series of factors'.[255] In the *Brazil-Retreaded Tyres* case, the AB stated that the factors to be assessed include the relative importance of the interests or values pursued, the 'contribution of the measure to the realisation of the ends pursued by it', and the 'restrictive impact of the

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[248] S Switzer, 'Connecting the Triangle: Aligning Justice, Trade and Development' (2008) 8 *University College Dublin Law Review* 25, 38-9.
[249] GP Sampson, *The WTO and Sustainable Development* (New Delhi: TERI Press, 2005), 2.
[250] H Anderson, 'Protection of Non-trade Values in WTO Appellate Body Jurisprudence: Exceptions, Economic Arguments, and Eluding Questions' (2015) 18(2) *Journal of International Economic Law* 383, 396; P Delimatsis, 'The Fragmentation of International Trade Law' (2011) 45(1) *Journal of World Trade* 87, 116; and Hrbatá (n 21), 38.
[251] Lang (n 108), 120-1.
[252] Anderson (n 250), 383; and S Switzer, 'Biofuels, Food Security and the WTO Agreement on Agriculture', in JA McMahon and MG Desta (eds) *Research Handbook on the WTO Agriculture Agreement: New and Emerging Issues in International Agricultural Trade Law* (Edward Elgar, 2012), 267.
[253] Agreement on Agriculture, Preamble.
[254] G Marceau and J Wyatt, 'The WTO's Efforts to Balance Economic Development and Environmental Protection: A Short Review of Appellate Body Jurisprudence' (2013) 1(1) *Latin American Journal of International Trade Law* 291.
[255] *Korea-Various Measures on Beef*, ABR, WT/DS161/169/AB/R, 10 January 2001, para 164; M Andenas and S Zleptnig, 'Proportionality: WTO Law: In Comparative Perspective' (2007) 42 *Texas International Law Journal* 371, 407.

measure on international commerce'.[256] In the *EC-Seal Products* case, the AB further clarified that whether a measure is necessary cannot be determined by the level of contribution alone but also by the other factors of the necessity analysis.[257] Through the interpretation of Articles 2.1 and 2.2 of the TBT Agreement, the AB has developed a similar interpretation to the existing GATT balance between the objective of trade liberalisation and Member's right to regulate and give priority to non-trade concerns, although, as noted above, not all non-trade values necessarily contribute to the promotion of sustainable development.[258]

Furthermore, there also exist significant differences between the pursuit of non-trade values under Article 2.1 of the TBT and Article XX of the GATT, including the legal standards applicable under the two provisions, and their main functions and scopes.[259] The TBT Agreement defined non-trade values in an open way but Article XX of the GATT defines them in a relatively narrow way. The AB established quite a low threshold of 'some relation' which allows a broader range of considerations to be considered as 'legitimate objective' under the TBT Agreement.[260]

The relevance of mutual supportiveness and sustainable development for the WTO has also been recognised by the case law. In the *Shrimp-Turtle* case, the AB specifically referred to the principle of mutual supportiveness and the close link between mutual supportiveness and sustainable development.[261] It demonstrated the importance of the Marrakesh Agreement's preambular provision in illustrating the overall approach of member states.[262] The AB noted that the WTO Members were 'fully aware of the importance and legitimacy of environmental protection as a goal of national and international policy'.[263] It also recognised that mutual supportiveness is a standard internal to the WTO system by acknowledging 'the need for, and the appropriateness of, such efforts have been recognised in

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[256] *Brazil-Retreaded Tyres*, ABR, WT/D332/AB/R, 17 December 2007, para 143.
[257] *European Communities-Measures Prohibiting the Importation and Marketing of Seal Products (EC-Seal Products*), ABR, WT/DS400/401/AB/R, 22 May 2014, para 5.215.
[258] *United States-Measures Affecting the Production and Sales of Clove Cigarettes (US-Clove Cigarettes)*, ABR, WT/DS381/AB/R, 16 May 2012, para 174; G Marceau, 'The New TBT Jurisprudence in *US-Clove Cigarettes*, WTO *US-Tuna II*, and *US-COOL*' (2013) 8 *Asian Journal of WTO & International Health Law & Policy* 1, 36.
[259] *EC-Seal Products*, ABR (n 211), para 5.310-5.312; G Marceau, 'A Comment on the Appellate Body Report in EC-Seal Products in the Context of the Trade and Environment Debate' (2014) 23(3) *RECIEL* 318, 325.
[260] *United States-Certain Country of Origin Labelling Requirements (US-COOL)*, ABR, WT/DS384/386/AB/R, 29 June 2012, para 445. The TBT jurisprudence was discussed in detail in Chapter 2, section 4.4 of this thesis.
[261] *Shrimp-Turtle,* ABR (n 99), paras 154 & 168.
[262] *Shrimp-Turtle* (n 236), paras 152, 153 & 155.
[263] *Shrimp-Turtle,* ABR (n 99), para 129.

the WTO itself as well as in a significant number of other international instruments and declarations'.[264] Some even argue that the principle of mutual supportiveness was a veritable driving force behind the AB's interpretive activities in the *Shrimp-Turtle* case; thus the AB was capable of referring to any environmental rules even if they were unratified by some of the disputing parties.[265]

Similarly, in the *EC-Tariff Preferences* case, the AB confirmed that sustainable development constitutes an objective of the WTO.[266] Accordingly, Avafia rightly argues that the DSB has revealed 'a trend generally favourable to the pursuit of sustainable development goals…and the appreciation of sustainable development objectives by WTO organs is widening to its broader socio-economic goals'.[267]

In concrete terms, in case there is a trade dispute on GMOs which should be resolved by the WTO DSB, if the principle of mutual supportiveness was applied, the result would be that the DSB should fully take into account relevant MEA rules in order to interpret the WTO Agreements and resolve the dispute.[268] In order to accommodate non-WTO rules in the WTO legal system, mutual supportiveness may bind WTO Members which are non-parties to the competing treaty regime.[269] In practice, though, in the *EC-Biotech* case, the Panel's decision to ignore the importance of MEAs, on the basis that some of the disputing states were not parties to the MEAs, runs counter to the notion of mutual supportiveness.

The Panel's approach is criticised as inconsistent with the principles of systemic integration and mutual supportiveness which arguably may undermine the WTO's objective of sustainable development, for it dramatically limits the number of international rules that could be relevant under VCLT Article 31(3)(c), as well as reduces the consideration of MEAs under VCLT Article 31(1) to use effectively as dictionaries.[270] Should the Panel have taken a mutually supportive approach, it should have considered the CBD and the Protocol both

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[264] *Ibid,* para 168.
[265] Pavoni (n 164), 664.
[266] *European Communities-Conditions for the Granting of Tariff Preferences to Developing Countries*, ABR, WT/DS/246/AB/R, 20 April 2004, para 94.
[267] T Avafia, 'Does the WTO's Dispute Settlement Understanding Promote Sustainable Development' in MW Ghering and MC Segger (eds), *Sustainable Development in World Trade Law* (The Hague: Kluwer Law International, 2005), 271.
[268] Boisson de Chazournes and Mbengue (n 169), 1624.
[269] Pavoni (n 164), 649.
[270] *Ibid*, 1635-7; and Stuart (n 172), 405-6.

under Article 31(1)[271] and in a way that they shed light on non-WTO international standards regarding GMOs.[272]

4.2.5 Explicit reference to mutual supportiveness in MEAs and the Cartagena Protocol

The principle of mutual supportiveness has been reiterated in international instruments, in particular MEAs, in a constant and consistent fashion.[273] Mutual supportiveness was first integrated in the preambles to MEAs in 1998 in the Rotterdam Convention, which states that: 'recognising that trade and environmental policies should be mutually supportive with a view to achieving sustainable development'.[274] Very similar wordings on mutual supportiveness were then included in the preambles to other MEAs, such as the Cartagena Protocol, the International Treaty on Plant Genetic Resources for Food and Agriculture,[275] and the Stockholm Convention on Persistent Organic Pollutants.[276]

Thereafter, in 2005, mutual supportiveness was included in the operative clause of a MEA for the first time in the Cultural Diversity Convention, demanding complementarity and synergies in the interpretation and implementation of competing regimes.[277] Similarly, the Protocol's 'savings clause' is reiterated and expanded in the more recently adopted Nagoya Protocol.[278] The Nagoya Protocol reiterates the wording of 'mutually supportive manner' in its Article 4.1. In addition, it expands the 'savings clause' from the Cartagena Protocol's Preamble in its lengthy Article 4 of the Nagoya Protocol, as operative language in the body of a treaty carries more weight than preambular language. Article 4 can be seen as evidence and an expansion of member states' willingness for the Nagoya Protocol to be mutually supportive with other treaties. It together with the savings clause in the Cartagena Protocol also suggests a trend for bio-related treaties to be mutually supportive with other international instruments.

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[271] Young (n 115), 927.
[272] Pavoni (n 164), 666.
[273] *Ibid*, 651.
[274] The Rotterdam Convention, Preamble.
[275] Adopted by the 31st Session of the Conference of the FAO on 3 November 2001. Available at: http://www.fao.org/plant-treaty/overview/en/, last accessed on 30 April 2017.
[276] Adopted on 22 May 2001, (2001) 40 ILM 532.
[277] UN Educational, Scientific and Cultural Organisation Convention on the Protection and Promotion of the Diversity of Cultural Expressions, 20 October 2005, available at: http://en.unesco.org/creativity/convention, last accessed on 30 April 2017.
[278] The Nagoya Protocol, Article 4. Its paragraph 1 states that: '*The* provisions of this Protocol shall not affect the rights and obligations of any Party deriving from any existing international agreement, except where the exercise of those rights and obligations would cause a serious damage or threat to biological diversity. This paragraph is not intended to create a hierarchy between this Protocol and other international instruments.'

The Protocol regulates its relationship with other international treaties mainly in its Preamble. It requires member states to take into account other rules of international law, and indicating that trade and environmental agreements are of equal status, as well as relevant to sustainable development, and should be complementary and mutually supportive.[279]

Adopting a nearly identical text to the 8th preambular paragraph of the Rotterdam Convention, the Protocol recognises that 'trade and environment agreements should be mutually supportive with a view to achieving sustainable development'.[280] The 'savings clause' in the Preamble also states that the Protocol does not change a party's existing rights and obligations under other international agreements, while it also adds that the Protocol is not subordinate to other international agreements.[281]

In addition, the Cartagena Protocol entitles the Parties to take more protective action than the standard set out in the Protocol in order to protect the conservation and sustainable use of biological diversity. It also requires that such actions should be consistent with the objective and provisions of the Protocol, and be in accordance with the Parties' other obligations under international law.[282] The Protocol's approach is consistent with the CBD which encourages member states to cooperate with one another directly or through competent international organisations on matters of mutual interest for the conservation and sustainable use of biological diversity.[283]

From the above, it is the clear intent of the Parties to the Protocol that there should be harmonious interpretation of its provisions with pre-existing obligations and commitments. On the one hand, the savings clause indicates that the Protocol is not isolated; instead, it should be interpreted and implemented taking into account other rules of international law, including the WTO Agreements. On the other hand, the intention of the 'savings clause' is clear that the Parties' rights and obligations under the Protocol are parallel to those under other international agreements, including the WTO Agreements.[284] It implies

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[279] M Alfonso, 'The Relationship with Other International Agreements: An EU Perspective', in C Bail, R Falkner and H Marquard (eds), *The Cartagena Protocol on Biosafety: Reconciling Trade in Biotechnology with Environment and Development?* (Earthscan Publications Ltd, 2002), 423-37.
[280] The Protocol, Preamble.
[281] The 'savings clause' was also discussed in Chapter 3, section 3 of this thesis.
[282] The Protocol, Articles 2(4) & 26.
[283] The CBD, Article 5.
[284] D Xue and C Tisdell, 'Global Trade in GM Food and the Cartagena Protocol on Biosafety: Consequences for China' (2002) 15 *Journal of Agricultural and Environmental Ethics* 337, 352.

that the Protocol should be seen as no less important than any other international agreements.[285]

The savings clause creates certain degree of balance between trade and environmental agreements.[286] It reflects the parties' awareness of the potential for treaty conflicts and their will to respect and achieve the goals of both regimes and promote their compatibility.[287] It reflects the parties' intention that trade and environmental agreements should be mutually supportive in order to achieve sustainable development. It also indicates how such mutual supportiveness might be better achieved.[288] This argument is supported by the findings of my empirical research, in which organisational delegate AO1 believed that the 'savings clause' of the Protocol did not create any hierarchy between the Protocol and other international rules, instead, it indicated that trade rules and environmental rules should support each other. In the event that a dispute arose, the savings clause gave general guidance to the tribunal or the judicial process regarding how disputes should be considered and handled.[289]

Furthermore, the savings clause suggests that the Protocol and the WTO Agreements should be systemically integrated by being given conciliatory interpretations.[290] The treaties should, thus, exist in parallel, supplement and reinforce each other, and should be read as compatible and mutually accommodating of each other, with an overall obligation to cooperate.[291] This approach is consistent with the conflicts rules developed by the WTO dispute settlement mechanism, and has the potential of reducing conflicts between WTO Agreements and the Protocol.[292]

The Protocol represents a significant achievement in the attempt to reconcile trade in GMOs and the protection of environment and health.[293] Although, as earlier argued, the 'savings clause' strikes a 'somewhat ambiguous compromise' and cannot be said to be fully

[285] Koskenniemi (n 25), 140, para 275.
[286] S Safrin, 'The Relationship with Other Agreements: Much Ado about a Savings Clause', in Bail, Falkner and Marquard (eds) (n 279), 441-2.
[287] R Mackenzie and others, 'An Explanatory Guide to the Cartagena Protocol on Biosafety', (2003) *IUCN Environmental Policy and Law Paper No. 46*, 27-8.
[288] H van Asselt, F Sindico, and MA Mehling, 'Global Climate Change and the Fragmentation of International Law' (2008) 30(4) *Law & Policy* 423, 431.
[289] Interview (n 140).
[290] Eggers and Mackenzie (n 211), 534; and Falkner (n 132), 300.
[291] Wolfrum and Matz (2000, n 61), 476; Wolfrum and Matz (2003, n 61), 125; and Koskenniemi (n 25), 137, para 271.
[292] Eggers and Mackenzie (n 211), 543; and Falkner (n 132), 313.
[293] Falkner, *ibid,* 311.

satisfactory,[294] it is by no means a meaningless compromise. Without the inclusion of such a clause, some parties may implement the Protocol in a manner that could violate their WTO obligations.[295]

4.3 The principle of good faith

4.3.1 Good faith as a general principle of international law

Another principle that may be said to underpin systemic integration is the principle of good faith. Interpreting and implementing a treaty in the light of other instruments can be seen as resulting from the requirement of good faith. Good faith is a fundamental and one of the most important general principles of international law which permeates many international legal rules, including the law of treaties and international dispute settlement.[296] It guides the exercise of a state's rights and obligations, and necessarily limits the actions and sovereignty of a state in order to protect other states and their trust and reliance in international law.[297]

It is difficult to establish an all-pervading obligation of good faith, because international law lacks any central legislative body.[298] Moreover, this concept can hardly be defined in absolute terms, but can be illustrated by means of international judicial decisions.[299] The ICJ case law can act as a key source of guidance in applying this principle.[300]

The principle of good faith prohibits the abuse of rights and discretion which might hinder other states' legitimate expectations.[301] In the *Pulp Mills* case, the ICJ ruled against a

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[294] PE Hagen and JB Weiner, 'The Cartagena Protocol on Biosafety: New Rules for International Trade in Living Modified Organisms' (2000) 12 *Georgetown International Environmental Law Review* 697, 706.
[295] S Safrin, 'Treaties in Collision? The Biosafety Protocol and the World Trade Organisation Agreements' (2002) 96 *The American Journal of International Law* 606, 610-1.
[296] AD Mitchell, 'Good Faith in WTO Dispute Settlement' ((2006) 7 *Melbourne Journal of International Law* 339, 341-4; MN Shaw, *International Law* (7th edition, Cambridge University Press, 2014), 103; and G Cook, *A Digest of WTO Jurisprudence on Public International Law Concepts and Principles* (Cambridge University Press, 2015), 153.
[297] S Reinhold, 'Good Faith in International Law', *Bonn Research Papers on Public International Law Paper No 2/2013*, 23 May 2013, 16-7. Available at: http://ssrn.com/abstract=2269746, last accessed on 30 April 2017.
[298] Y Shany, 'Toward a General Margin of Appreciation Doctrine in International Law?' (2006) 16(5) *The European Journal of International law* 907, 920.
[299] B Cheng, *General Principles of Law as Applied by International Courts and Tribunals* (Stevens & Sons, 1953), 105; and Cook (n 296), 153.
[300] H Thirlway, 'The Law and Procedure of the International Court of Justice 1960-1989: Part One' (1990) 60(1) *The British Yearbook of International Law* 1, 58.
[301] Cheng (n 299), 121.

pulp mill built within Uruguay on the bank of a shared river with Argentina, because the sovereign exploitation of natural resources by Uruguay caused environmental damage to the neighbouring Argentina, and was considered to be an abuse of right and a violation of the principle of good faith.[302]

Moreover, another concretisation of good faith is the general principle of estoppel.[303] Estoppel prohibits a state from taking up any legal position that contradicts its previous representations or conduct, while another state has legitimate reliance on its actions.[304] Its primary foundation is that good faith must prevail international relations.[305] The essentials of estoppel include: (1) a clear and unambiguous statement of fact; (2) which is voluntary, unconditional, and authorised; and (3) which is relied upon in good faith 'either to the detriment of the party so relying on the statement or to the advantage of the party making the statement'.[306] In the *Temple of Preah Vihear* case, the ICJ relied upon the estoppel principle and restricted Thailand from raising any objections, with declarations that it had not made before, to an original map that it previously agreed on.[307]

Furthermore, in the area of treaty law, the particularisation of the principle of good faith is the *pacta sunt servanda* principle.[308] The principle of good faith applied to the entire process of treaty interpretation.[309] Article 31(1) of the VCLT requires a treaty to be interpreted 'in good faith'.[310] The *pacta sunt servanda* principle requires that member states to an international treaty must fulfil their treaty obligations in good faith without violating their obligations under other existing instruments.[311] The negotiation history of the VCLT indicates that the obligation of good faith and *pacta sunt servanda* may be violated if the object and purpose of a treaty is defeated, even if the treaty itself is not violated.[312] In the

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[302] *Pulp Mills case*, Judgment, (n 44), para 14.
[303] J Crawford, *Brownlie's Principles of Public International Law* (8th edition, Oxford University Press, 2008), 420-1.
[304] Reinhold (n 297), 13.
[305] *Case concerning the Temple of Preah Vihear (Cambodia v. Thailand)* (Merits) [1962] ICJ Report 39, (Sep OP Alfaro), para 42.
[306] DW Bowett, 'Estoppel before International Tribunals and Its Relation to Acquiescence' (1957) 33 *The British Yearbook of International Law* 176, 202; and Crawford (n 303), 420.
[307] *Case concerning the Temple of Preah Vihear* (n 305), paras 27-34.
[308] VCLT, Article 26.
[309] PA Lanyi and A Steinbach, 'Promoting Coherence between PTAs and the WTO through Systemic Integration', 1 December 2016, *Journal of International Economic Law*, 4, forthcoming, available at: https://papers.ssrn.com/sol3/papers2.cfm?abstract_id=2905375.
[310] VCLT, Article 31(1).
[311] R Gardiner, *International Law* (Pearson Longman, 2003), 139.
[312] ILC, *Yearbook of the International Law Commission* (1966), Vol. II, 211.

Gabčíkovo-Nagymaros case, the ICJ stated that the good faith requirement in Article 26 of the VCLT meant that: '…the purpose of the Treaty, and the intentions of the Parties in concluding it…should prevail over its literal application. The principle of good faith obliges the Parties to apply it in a reasonable way and in such a manner that its purpose can be realised.'[313] Similarly, in the *Korea-Government procurement* case, the Panel held that *pacta sunt servanda* would be violated in the disputed measures frustrated the object and purposes of the treaty.[314]

Good faith is a 'pervasive' principle that 'underlies all treaties'.[315] It applies to different levels of the formation, application and implementation of treaties. First, one particularisation of this principle is the obligation to negotiate in good faith, which requires states to demonstrate reasonable regard for other states' rights and obligations.[316] Second, good faith should govern the work of relevant international organisations in relation to the law-making and application of treaties. Third, and more importantly, states must perform and implement the treaties in good faith. As stated by the Panel in the *Thailand-Cigarettes (Philippines)* case, in the absence of solid evidence to prove the contrary, governmental officials should be assumed to act in good faith and not in contradiction to their WTO obligations.[317]

In addition, the principle of good faith can be used as a basis for legal obligations in the same manner as the *pacta sunt servanda* principle is for treaty obligations. As stated by the ICJ in the *Nuclear Tests* case,

> 'One of the basic principles governing the creation and performance of legal obligations…is good faith. Trust and confidence are inherent in international cooperation, in particular in an age when this cooperation in many fields is becoming increasingly essential. Just as the very rule of *pacta sunt servanda* in the law of treaties is based on good faith, so also is the binding character of an international obligation.'[318]

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[313] *Case Concerning the Gabčíkovo-Nagymaros Project* (n 227), 79.
[314] *Korea-Procurement*, Panel Report (n 211), para 7.93-7.99.
[315] *United States-Transitional Safeguard Measure on Combed Cotton Yarn from Pakistan*, ABR, WT/DS192/AB/R, 8 October 2001, para 81.
[316] Reinhold (n 297), 15.
[317] *Thailand-Customs and Fiscal Measures on Cigarettes from the Philippines [Thailand-Cigarettes (Philippines)]*, Panel Report, WT/DS371/R, 15 November 2010, footnote 1543.
[318] *Nuclear Tests Case (Australia v France)* (Merits) [1974] ICJ Report 253, 46.

4.3.2 WTO and its jurisprudence on good faith

The principle of good faith underlies the WTO Agreements as a whole as well as claims in WTO disputes, since the WTO rules themselves are treaties and creatures of international law.[319] As argued above, according to Article 3.2 of the DSU, WTO Panels and the AB have the obligation to interpret the WTO Agreements in accordance with 'customary rules of interpretation' which are principally codified in the VCLT, including the principles of systemic integration and good faith.[320]

The DSU also specifically incorporates the principle of good faith. It states that 'if a dispute arises, all Members will engage in these procedures in good faith in an effort to resolve the dispute'.[321] More specifically, in the consultation stage of disputes, Members which have received a consultation request have an obligation (unless otherwise mutually agreed) to reply to the request and enter into consultations in good faith in due time.[322]

The WTO jurisprudence has dealt with claims and generated a substantial body of statements on good faith.[323] It either identifies good faith as implicitly contained in the WTO Agreements or applies it as a source of WTO, although conditioned by the pro-trade content of good faith.[324] In the *Shrimp-Turtle* case, the AB found that the *chapeau* to GATT Article XX was 'but one expression of the principle of good faith', and also reflected on the notion of abuse of right.[325] Similarly, in the *US-Hot-Rolled Steel* case, the AB stated that the principle of good faith restricted investigating authorities from imposing on exporters with unreasonable burdens.[326]

The DSB has consistently stated that Members should be presumed to act in good faith,[327] while showing a reluctance to find that Members have failed to do so.[328] In the *Chile-Alcoholic Beverages* case, the AB restricted the WTO adjudicators from presuming, in any

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[319] D McRae, 'Comments on Dr Claus-Dieter Ehlermann's Lecture' (2003) 97 *American Society of International Law Proceedings* 87, 89.
[320] DSU, Article 3.2.
[321] *Ibid*, Article 3.10.
[322] *Ibid*, Article 4.3.
[323] M Panizzon, *Good Faith in the Jurisprudence of the WTO: The Protection of Legitimate Expectations, Good Faith Interpretation and Fair Dispute Settlement* (Hart Publishing, 2006).
[324] *Ibid*, 5.
[325] *Shrimp-Turtle,* ABR (n 99), paras 154 & 168; and Cook (n 296), 158.
[326] *United States-Anti-Dumping Measures on Certain Hot-Rolled Steel Products from Japan (US-Hot-Rolled Steel*), ABR, WT/DS184/AB/R, 24 July 2001, para 101.
[327] Cook (n 296), 165; and Mitchell (n 296), 362.
[328] Mitchell (n 296), 371.

way, that Members have continued previous protection or discrimination through the adoption of a new measure, which would come close to presuming that Members have acted in bad faith.[329]

In furtherance, in the *EC-Sardines* case, the AB stated that 'we must assume that Members of the WTO will abide by their treaty obligations in good faith, as required by the principle of *pacta sunt servanda* articulated in Article 26 if the Vienna Convention'.[330] Similarly, in the *US-Continued Suspension* case, the AB stated that Members should be presumed to have acted in good faith when implementing the DSB's recommendations and rulings, although such an assumption cannot answer the question whether the implementing Member has indeed brought about substantive compliance; and the presumption of good faith can be claimed by both parties.[331]

More recently, In the *US-COOL* case, the Panel reiterated the importance of presumption of good faith, which can be rebutted by solid evidence.[332] In the *US-Anti-Dumping and countervailing Duties (China)* case, the AB stated again that treaty interpretation should not be 'based on the assumption that one party is seeking to evade its obligations and will exercise its rights so as to cause injury to the other party'.[333] These statements suggest that Members are obliged to carry out their treaty obligations in good faith.[334] They are of particular importance to this thesis, because they largely point to a direction of conflict avoidance.

It is worth to mention that there may be limits to the use of the principle of good faith in judicial fora such as the WTO DSB. In particular, good faith cannot necessarily be relied upon and applied by the DSB in respect of non-WTO obligations. Its limitations are also obvious if one (or more) of the disputing states is not a party to one of the disputed treaties. However, as an underpinning principle to systemic integration, the principle good faith guides actions not only at the international judicial level, but may also work at the

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[329] *Chile-Taxes on Alcoholic Beverages (Chile-Alcoholic Beverages)*, ABR, WT/DS87/AB/R, WT/DS110/AB/R, 13 December 1999, para 74.
[330] *European Communities-Trade Description of Sardines (EC-Sardines)*, ABR, WT/DS231/AB/R, 26 September 2002, para 278.
[331] *United States-Continued Suspension of Obligations in the EC-Hormones Dispute (US-Continued Suspension)*, ABR, WT/DS320/AB/R, 16 October 2008, para 315.
[332] *US-COOL*, Panel Report, WT/DS384//386/R, 18 November 2011, para 7.60.
[333] *United States-Definitive Anti-Dumping and countervailing Duties on Certain Products from China*, ABR, WT/DS379/AB/R, 11 March 2011, para 326.
[334] Mitchell (n 296), 362.

institutional and domestic levels and contribute to conflict avoidance, where such limitations will cease to act as obstacles.

4.4 The principle of cooperation

Another principle that may be said to lie behind systemic integration is the principle of cooperation. It indicates that all states have a general obligation to cooperate which requires them to work together for the good of all.[335] This doubtlessly includes cooperation in order to promote trade and protect the environment, in a way that, for example, reconciles international trade and environmental treaties and facilitates their mutual supportiveness. As stated in Resolution 2625 by UN General Assembly, 'states have the duty to cooperate with one another, irrespective of the differences in their political, economic and social systems, in order to maintain international peace and security and to promote international economic stability and progress, the general welfare of nations and international cooperation free from differences based on such differences'.[336] It is worth mentioning that this statement was made prior to the emergence and development of international environmental law, and seems safe to argue that concurrently states should also cooperate in order to protect the environment.

The principle of cooperation is an overly general concept. It may be practically impossible to find that a state has failed to cooperate in the above mentioned broad aims; however, it is possible to establish and test a legal duty to cooperate in specific treaties such as the UNCLOS and the Basel Convention.[337] In the *Mox Plant* case, Ireland claimed that the UK breached its obligations under the UNCLOS to sufficiently cooperate with other states in the framing and implementation of relevant measures, although the case was withdrawn from the UNCLOS tribunal after a ruling by the European Court of Justice confirming its own jurisdiction.[338]

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[335] V Lowe, *International Law* (Oxford University Press, 2007), 111.
[336] UN General Assembly, *Resolution 2625 (XXV). Declaration on Principles of International Law concerning Friendly Relations and Co-operation among States in accordance with the Charter of the United Nations*, A/RES/25/2625, 24 October 1970.
[337] Lowe (n 335), 111-2.
[338] *Mox Plant case (Ireland v United Kingdom)*, Order, Request for Provisional Measures, ITLOS case No 10, ICGJ 343 (ITLOS 2001), 3 December 2001; and *Mox Plant case (Commission of the European Communities v Ireland)*, Judgement, Case No C-459/03, [2006] ECR I-4635, (2006) ECR I-4657, ILEC 047 (CJEU 2006), 30 May 2006.

Similarly, in the *Lac Lanoux Arbitration* case, the arbitral tribunal reflected and affirmed that cooperation constituted a principle of customary law.[339] It decided that if the use of shared resources may lead to serious negative impact on other states, a state has the duty to carry out prior consultation and negotiation with the relevant states.[340] The tribunal stated that:

> 'The conflicting interests aroused by the industrial use of international rivers must be reconciled by mutual concessions embodied in comprehensive agreements. States have a duty to seek to enter into such agreements…Consultations and negotiations between the two states must be genuine, must comply with the rules of good faith and must not be mere formalities.'[341]

The WTO system itself is based on multilateral cooperation. The need for cooperation is also expressed by the WTO, which requires its Members to adequately explore means of addressing environmental concerns through cooperation with other states and endeavour to find cooperative solutions to trade problems.[342] The 1996 CTE Report clearly states that 'multilateral solutions based on international cooperation and consensus' are 'the best and most effective way for governments to tackle environmental problems of a transboundary or global nature'.[343]

In the *Shrimp-Turtle* case, as argued above, the AB acknowledged that mutual supportiveness and the ensuring duties of multilateral cooperation and negotiation was a standard internal to the WTO system.[344] The AB stated that Members must 'make good faith efforts' and engage other relevant states in 'serious, across-the-board negotiations with the objective of concluding bilateral or multilateral agreements' for environmental protection, and this must be done before enforcing any unilateral trade-restrictive measures.[345] The WTO Members are thus obliged to work cooperatively with other states and make concerted and cooperative efforts in order to reach cooperative multilateral solutions.

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[339] Lowe (n 335), 112; and A Hildering, *International Law, Sustainable Development and Water Management* (Eburon Publishers, 2006), 63.
[340] *Lac Lanoux Arbitration (France v Spain)*, (1959) 24 ILR 101, 16 November 1957, 15.
[341] *Ibid*, 15-6.
[342] WTO, 'WTO Report: The Need for Environmental Cooperation', available at: https://www.wto.org/english/tratop_e/envir_e/stud99_e.htm, last accessed on 30 April 2017.
[343] CTE (n 243), para 171.
[344] Pavoni (n 164), 663.
[345] *Shrimp-Turtle,* ABR (n 99), para 166; and *Recourse to Article 21.5 of the DSU by Malaysia* (n 236), para 122.

4.5 The principle of harmonisation

The principle of harmonisation can be defined as the situation according to which 'when two states have concluded two treaties on the same subject matter, but have said nothing of their mutual relationship, it is usual to first try to read them as compatible'.[346] It requires that the different norms bear on a single issue should, to the extent possible, be interpreted with an attempt to achieve conciliation and give rise to a single set of compatible obligations, the same as what is mandated by the principle of systemic integration.[347]

Harmonisation is intrinsically linked to that fact that international law has a strong presumption against normative conflict.[348] The presumption against conflict is based on the principles of good faith and *pacta sunt servanda*, and requires a norm to be interpreted in a way that avoids conflict with other norms.[349] Harmonisation implicitly accepts that 'normative conflicts may arise if the presumption against conflict is rebutted',[350] while, as argued above, the principle of mutual supportiveness plays down the sense of normative conflict.[351] In such case, the apparently conflicting norms should be harmonised through interpretation in order to render them compatible.[352] The principle of harmonisation thus indicates that 'two incompatible treaties are not necessarily contradictory; they are both valid, and one should try to interpret and implement them in possible harmony'.[353]

Although unity in international law can never be absolute, one should still strive for a 'necessary and potentially far-reaching coherence' of the international legal system.[354] Coherence in international law is not an absolute objective; instead, it is 'a desirable purpose within the limits in which coherence is actually beneficial for the international legal

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[346] Koskenniemi (n 25), 118-9, para 229.
[347] ILC, 'Conclusions of the work of the Study Group on the Fragmentation of International Law: Difficulties arising from the Diversification and Expansion of International Law' (2006) (adopted by the ILC and appearing in the Yearbook of the International Law Commission 2006, vol. II, Part Two), para 4; and Tzevelekos (n 60), 631.
[348] Aufricht (n 62), 657; H Lauterpacht, 'Law of Treaties', Document A/CN.4/63, in *Yearbook of the International Law Commission 1953 Vol. II*, 156; Jenks (n 3), 427; M Akehurst, 'The Hierarchy of the Sources of International Law', (1974-75) 47 *British Yearbook of International Law* 273, 275; *Indonesia - Certain Measures Affecting the Automobile Industry (Indonesia-Autos)*, Panel Report, WT/DS54/55/59/64/R, 2 July 1998, para 14.28; and Pauwelyn (n 24), 240-1.
[349] Pauwelyn (n 24), 242-3.
[350] Boisson de Chazournes and Mbengue (n 169), 1617.
[351] Koskenniemi (n 25), 207, 412.
[352] *Ibid*, 207, para 441.
[353] W Czapliński and G Danilenko, 'Conflict of Norms in International Law' (1990) 21 *Netherlands Yearbook of International Law* 3, 25.
[354] Matz-Lück (n 1), 40-1.

system'.[355] The aim of harmonisation is thus to 'come closer to a structured and coherent international legal system' by achieving the parallel application of divergent norms to the highest possible extent.[356]

As a principle that lies behind systemic integration, the principle of harmonisation is neither a technique nor a tool as such. It simply introduces 'a concept in need of the employment of subsidiary methods which serve the higher objective of coherence of norms'.[357] Neither the principles of harmonisation nor mutual supportiveness provide for firm criteria on how or by what methods they can be achieved.[358] Both principles are aims and objectives in international law, which need secondary tools to achieve conflict-solution.[359] Arguably, interpretation is a viable, and possibly the only, tool to achieve harmonisation,[360] as interpretation may not only determine whether there is an actual conflict of norms in a given situation, but also harmonise the potentially conflicting norms and avoid actual conflicts.[361] The harmonisation of norms through interpretation must rely on the principle of mutual supportiveness giving the highest degree of application to both.[362]

Harmonisation thus points to a direction of conflict avoidance. As argued by Wolfrum and Matz, a systematic approach to harmonisation and coordination between environmental agreements may provide for greater coherence and enhanced the efficiency of international environmental law.[363] The potential conflicts between treaties might eventually be avoided if 'a harmonised interpretation of treaties is favoured and if the harmonised interpretation is made binding for the parties involved'.[364]

5. Conclusion

Based on both doctrinal and empirical evidences, this chapter has found that overlapping international regimes may conflict with one another, but also have the potential to be synergetic if properly applied. Both doctrinal and empirical research suggested that there are several possible rationales for systemic integration between the WTO Agreements

[355] *Ibid*, 41.
[356] *Ibid*, 41-4.
[357] *Ibid*, 45.
[358] *Ibid*, 46.
[359] *Ibid*.
[360] *Ibid*, 42.
[361] McLachlan (n 39), 286; and Matz-Lück (n 1), 42.
[362] Matz-Lück (n 1), 48.
[363] R Wolfrum and N Matz, *Conflicts in International Environmental Law* (Springer, 2003), 3.
[364] *Ibid*, 11.

and the Protocol, not least the foreseeable difficulties in resolving satisfactorily disputes arising between both regimes. Thus, conflicts between the WTO Agreements and the Cartagena Protocol should be proactively avoided rather than resolved, and the treaties should be coordinated to pursue the objective of avoiding conflict. This can be achieved by using the principle of systemic integration and its cognate principles which all aims at a balanced understanding and application of two treaties that avoids strengthening one instrument at the expense of the other.[365]

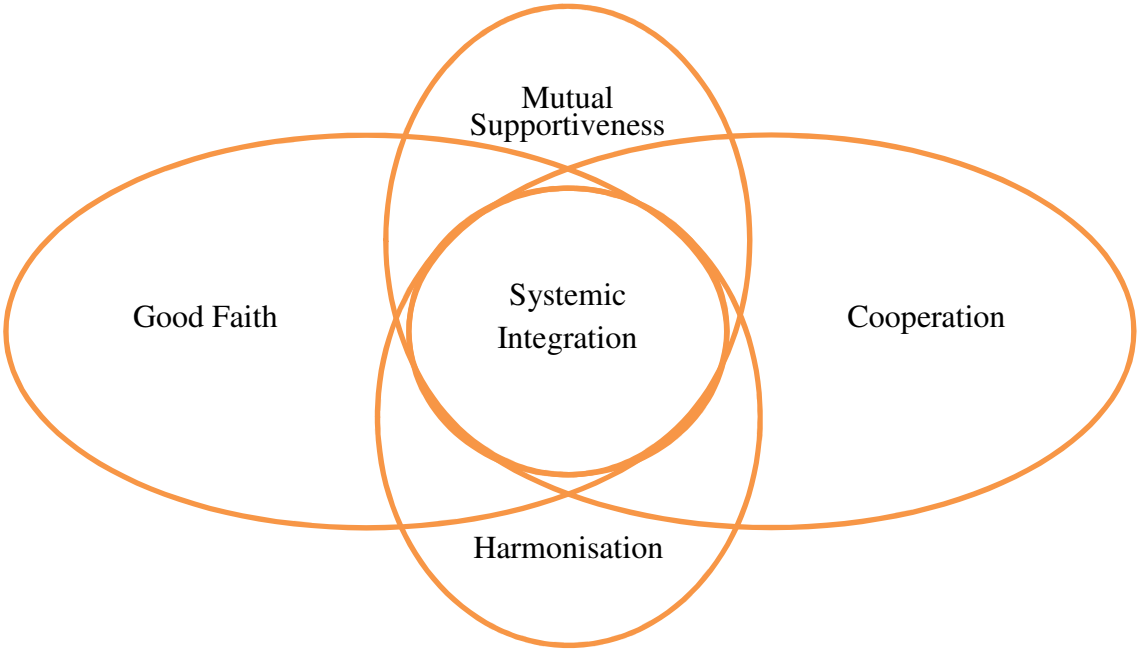
The principle of systemic integration as codified in Article 31(3)(c) of the VCLT, which is incorporated both in the WTO Agreements and in the Cartagena Protocol, can and should be used to avoid or minimise the potential conflicts between the treaties, especially as the adequate and acceptable resolution of such conflicts when they arise would hardly be feasible as shown in the preceding chapter.

Unlike the principle of systemic integration which is a treaty interpretation tool capable of being used to deal with integration between judicial bodies operating at the international law level, the principles that underpin systemic integration, including the principles of mutual supportiveness, harmonisation, good faith and cooperation, require efforts to be made not only at the international judicial level, but also at the institutional and domestic levels.

As Figure 2 shows, the four principles that lie behind systemic integration are interlinked with one another. They overlap with one another to the extent that they separately and collectively underpin the principle of systemic integration. The principle of mutual supportiveness is rooted in and builds upon the general principles of good faith and cooperation.[366] Mutual supportiveness may be seen as a corollary of the duty of good faith since it may effectively avoid treaty conflicts, thereby preserve the integrity of competing treaties and the *pacta sunt servanda* principle.[367] The savings clauses requiring mutual supportiveness between international treaties is 'simply another way to emphasise the importance of harmonising interpretation'.[368]

[365] Matz-Lück (n 1), 44-5.
[366] Pavoni (n 164), 667.
[367] *Ibid*, 659.
[368] Koskenniemi (n 25), 141, para 277.

Figure 2: The relationship between the principles that underpin systemic integration



Having studied why and how potential conflicts between the WTO Agreements and the Protocol should be avoided rather than resolved when disputes actually arise, this thesis examines in the next chapter (Chapter 5) the extent to which the principle of systemic integration can be relied upon to reconcile the treaties at the international judicial level. It will then seek to test in the following chapters (Chapters 6 & 7) whether systemic integration that normally applies between states in disputes before judicial fora, together with the aforementioned principles that lie behind systemic integration, can be applied to other scenarios, such as between international organisations or domestically between government agencies.

Chapter 5

Avoiding Treaty Conflicts through Judicial Integration

1. Introduction

Adjudication is a realistic avenue towards avoiding conflicts and promoting coherence, using the principle of systemic integration as a method of interpretation.[1] Having argued in the preceding chapter that the potential conflicts between the WTO Agreements and the Protocol can and should be avoided or minimised using the principle of systemic integration and the principles that lie behind it, this chapter tests whether or not, and if yes, the extent to which, the principle of systemic integration may be used by international judicial institutions when interpreting the treaties in order to achieve judicial integration. It examines how conflicts between the treaties could be avoided at the international judicial level, and involves a doctrinal test of the principle of systemic integration in the specific field of GMO regulation, supported by some empirical findings.

This chapter starts by comparing possible institutions and mechanisms with the aim of finding the forum that is likely to settle any disputes concerning the WTO Agreements and the Protocol, and whether it is the most suited forum to deciding on the complex issues of GMOs. It then examines why and how judicial integration of the treaties can be achieved by international judicial bodies when interpreting the treaties. It then tests the evolution of the WTO jurisprudence on the use of the principle of systemic integration, and studies how the WTO case law has interpreted and applied this notion, particularly when dealing with the relationship between the WTO Agreements and MEAs.

The chapter then examines the limitations of the use of systemic integration in judicial fora, in particular, it studies the legal difficulties faced by the WTO DSB in so doing. This is followed by looking at whether or not, and if yes, the extent to which, WTO Members which are non-parties to the Protocol may also be obliged to and benefit from the systemic integration between the WTO Agreements and the Protocol.

[1] PA Lanyi and A Steinbach, 'Promoting Coherence between PTAs and the WTO through Systemic Integration', 1 December 2016, *Journal of International Economic Law*, 3, forthcoming, available at: https://papers.ssrn.com/sol3/papers2.cfm?abstract_id=2905375.

2. The WTO DSB is likely to settle any disputes that may arise between the treaties

2.1 The WTO has a compulsory dispute settlement mechanism and process

Accepting that both free international trade and the protection of the environment are pathways to achieving sustainable development, and bearing in mind that there are potential conflicts between trade and the environment, one important issue concerning conflict resolution in this regard is to find the appropriate dispute settlement fora. In the effort to resolve GMO trade regulatory conflicts, the question as to which forum is properly suited to hear disputes concerning the WTO Agreements and the Protocol is a highly political and controversial issue.

The Uruguay round of multilateral trade negotiations, which resulted in the establishment of the WTO, created the current dispute settlement mechanism as part of the WTO Agreement which is embodied in the DSU (constitutes Annex 2 of the WTO Agreement).[2] The WTO dispute settlement system has compulsory jurisdiction over disputes raised under the WTO Agreements, and an effective enforcement system which includes, but is not limited to, competent authority to issue sanctions.[3] The dispute settlement mechanism is 'quasi-automatic' in nature.[4] It is designed to provide security and predictability in the WTO legal system.[5] Although the system has been the object of criticism, it has proved to be highly active and popular in practice.[6] The dispute settlement process entails four major steps. Disputes between parties should first be remitted to consultations, or alternative measures such as conciliation, good offices, mediation, and arbitration.[7] If that is not possible or not successful, the disputes may then be adjudicated by *ad hoc* WTO Panels which will result in a panel report.[8] The panel reports can be appealed to the permanent AB which will result in AB reports that may uphold, modify, or reverse the panel reports.[9] Once the Panel

[2] WTO, 'Introduction to the WTO Dispute Settlement System', available at: https://www.wto.org/english/tratop_e/dispu_e/disp_settlement_cbt_e/c1s2p1_e.htm, last accessed on 30 April 2017.
[3] DSU, Article 1.
[4] G Marceau, 'Consultations and the Panel Process in the WTO Dispute Settlement System', in R Yerxa and B Wilson (eds), *Key Issues in WTO Dispute Settlement: The First Ten Years* (Cambridge University Press, 2005), 29.
[5] DSU, Article 3.2.
[6] P Van den Bossche, *The Law and Policy of the World Trade Organisation* (Cambridge University Press, 2006), 284-9; and M Cartland, G Depayre and J Woznowski, 'Is Something Going Wrong in the WTO Dispute Settlement?' (2012) 46(5) *Journal of World Trade* 979, 985.
[7] DSU, Articles 4, 5 & 25.
[8] *Ibid*, Article 6.
[9] *Ibid*, Article 17.

and AB reports are adopted by the DSB which is likely to happen, the last major step in the process is their implementation and enforcement.[10]The Panel and AB decisions (which have been adopted by the DSB) have legally binding force only for the disputing parties, and solely on the specific subject matter of the dispute.[11] The parties have to implement promptly the recommendations or rulings of the DSB.[12] If a party fails to do so within a reasonable period of time as mutually agreed or adjudicated by arbitration,[13] the other party will be allowed to ask the DSB for the granting of an authorisation to suspend concessions or other obligations.[14] This allows the Panel and AB's recommendations and rulings to be enforced.[15] Accepting retaliation is the 'ultimate, and necessary, escape clause for governments faced with judgments which carry too high a domestic political cost to implement'.[16]

Even though the WTO dispute settlement decisions cannot add or diminish the rights and obligations of the parties under the WTO Agreements,[17] such judicial decisions and interpretations are of great importance in understanding WTO law, and may have relevance for the interpretation of relevant WTO Agreements as such.[18]

It is also noteworthy that the WTO does not only have a compulsory dispute settlement mechanism, but also provides non-contentious routes to resolve trade disputes, such as negotiation, good offices and mediation.[19] For example, Members have the ability to raise specific trade concerns under the SPS Agreement, which provides for a Committee on Sanitary and Phytosanitary Measures (SPS Committee) to ensure the implementation of the Agreement.[20] The SPS Committee primarily serves as 'a forum for information exchange and peer review' and elaborates on provisions of the SPS Agreement; it also serves as a forum for

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[10] *Ibid*, Article 2.1; and Van den Bossche (n 6), 203-4 & 229.
[11] *Japan-Taxes on Alcoholic Beverages*, ABR, WT/DS8//10/11/AB/R, 4 October 1996, 107; *United States-Tax Treatment for 'Foreign Sales Corporations' (US-FSC)*, ABR, WT/DS108/AB/R, 24 February 2000, paras 112-3; and *Peru-Additional Duty on Imports of Certain Agricultural Products (Peru-Agricultural Products)*, ABR, WT/DS457/AB/R, 20 July 2015, para 5.95..
[12] DSU, Articles 21.1 & 21.3.
[13] *Ibid*, Article 21.3.
[14] *Ibid*, Article 22.6.
[15] A Krallmann, 'WTO Dispute Settlement-The Establishment of "Binding Guidance" by the Appellate Body in *US Stainless Steel* and Recent Dispute Settlement Rulings' in C Herrmann and JP Terhechte (eds), *European Yearbook of International Economic Law2011* (Springer, 2011), 420.
[16] WA Kerr and JE Hobbs, 'The North American-European Union Dispute Over Beef Produced Using Growth Hormones: A Major Test for the New International Trade Regime' (2002) 25(2) *The World Economy* 283, 284.
[17] DSU, Article 3.2.
[18] DSU, Articles 16.4 & 17.14; and J Scott, *The WTO Agreement on Sanitary and Phytosanitary Measures: A Commentary* (Oxford University Press, 2007), 44-5.
[19] DSU, Article 5.
[20] The SPS Agreement, Article 12.1.

the resolution of trade disputes, by encouraging and facilitating *ad hoc* consultations or negotiations among Members on specific SPS issues.[21]

This mechanism has been rather effective since a total number of 403 specific trade concerns were raised in the past 21 years (between 1995 and the end of 2015), with 146 trade concerns (36%) reported as successfully resolved.[22] In particular, four specific trade concerns were raised regarding GMOs, although no solutions have yet been reported for any of them.[23] It is this author's submission that this mechanism may serve as a useful way of integrating trade and environmental values and avoiding potential trade disputes regarding GMOs. For example, China proposed to amend the implementation regulations on safety assessment of agricultural GMOs in April 2015.[24] In July and October 2015, Paraguay and the US raised specific trade concerns to the SPS Committee about the inclusion of some socio-economic aspects in the Chinese risk assessment process for GMOs.[25] Although the Committee has not reported on such concerns, China's final amendment issued in 2016 omitted reference to socio-economic considerations which essentially resolved such concerns and avoided potential trade disputes.[26]

The SPS Committee has also set up a new mediation procedure in July 2014 to encourage and facilitate the resolution of specific SPS issues with a view to reach mutually satisfactory solutions. Some argue that this will add to the tools for resolving differences on specific trade concerns, and bridge the gap between raising specific trade concerns in the SPS Committee and resorting to the (costly and complicated) litigation-type WTO dispute settlement mechanism.[27] However, whether it will achieve this aim remains to be seen. In

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[21] The SPS Agreement, Article 12.2; Scott (n 18), 48; and H Horn, PC Mavroidis and EN Wijkström, 'In the Shadow of the DSU: Addressing Specific Trade Concerns in the WTO SPS and TBT Committees' (2013) 47(4) *Journal of World Trade* 729, 753.

[22] The SPS Committee, 'Specific Trade Concerns: Note by the Secretariat', 23 February 2016, G/SPS/GEN/204/Rev.16, 5 & 7.

[23] *Ibid*, 23-6, 41-2 & 58-9.

[24] Ministry of Agriculture of China (MOA), 'Decision of the MOA Regarding the Amendment of the Administration of the Safety Assessment of Agricultural Genetically Modified Organisms (draft for comments)', 24 April 2015, Article 3, available at: http://www.chinalaw.gov.cn/article/cazjgg/201504/20150400398942.shtml, last accessed on 30 April 2017.

[25] The SPS Committee (n 22), 41-2.

[26] MOA, 'Decision of the MOA Regarding the Amendment of the Administration of the Safety Assessment of Agricultural Genetically Modified Organisms', 25 July 2016, Article 3, available at: http://www.moa.gov.cn/govpublic/KJJYS/201607/t20160729_5223344.htm, last accessed on 30 April 2017.

[27] WTO SPS Committee, *Procedure to Encourage and Facilitate the Resolution of Specific Sanitary or Phytosanitary Issues among Members in accordance with Article 12.2*, Decision adopted by the Committee, G/SPS/619, July 2014, para 1.1; and N Park and MH Chung, 'Analysis of a New Mediation Procedure under the WTO SPS Agreement' (2016) 50 *Journal of World Trade* 93, 105-6.

practice, Nigeria indicated its intention to start a mediation process to resolve trade frictions with Mexico about delays in exports for hibiscus flowers in 2015,[28] although before it actually reached mediation, both countries later reported they have resolved the issue bilaterally in 2016.[29]

2.2 The Protocol does not have any compulsory dispute settlement mechanism

Dispute settlement under international environmental law is decentralised and consensual, and is rarely compulsory or binding. This echoes the fact that the development of international environmental law has been piecemeal, fitful, unsystematic and even random.[30] Although significantly advanced in the past decades, international environmental law is still institutionally weak and fragmented. It is not equipped with the same level of resources, effective structures, and political weight as WTO law, and lacks an effective or compulsory dispute settlement mechanism.[31]

In fact, the traditional methods of enforcing obligations in international environmental law (including state responsibility and liability, dispute settlement, and countermeasures such as reprisals, retorsions, and sanctions) do not function effectively due to their deficiencies.[32] However, within the context of international environmental law, in order to facilitate treaty implementation, the Montreal Protocol set up a non-compliance

[28] WTO, 'Nigeria to Request Mediation to Resolve Friction over Plant Health Certificates', available at: https://www.wto.org/english/news_e/news15_e/sps_14oct15_e.htm, last accessed on 30 April 2017.
[29] WTO, 'New Trade Concerns Reviewed by WTO Committee on Food Safety and Animal/Plant Health', available at: https://www.wto.org/english/news_e/news16_e/sps_16mar16_e.htm, last accessed on 30 April 2017.
[30] G Palmer, 'New Ways to Make International Environmental Law' (1992) 86 *The American Journal of International Law* 259, 259.
[31] P Roch and FX Perrez, 'International Environmental Governance: The Strive Towards a Comprehensive, Coherent, Effective and Efficient International Environmental Regime' (2005) 16 *Colorado Journal of International Environmental Law and Policy* 1, 16-7; and H Anderson, 'Protection of Non-trade Values in WTO Appellate Body Jurisprudence: Exceptions, Economic Arguments, and Eluding Questions' (2015) 18(2) *Journal of International Economic Law* 383, 389.
[32] M Ehrmann, 'Procedures of Compliance Control in International Environmental Treaties' (2002) 13(2) *Colorado Journal of International Environmental Law and Policy* 377, 379-86.

procedure.[33] This procedure has served as a model of an endogenous enforcement procedure in other MEAs.[34]

The non-compliance procedures may serve as a new way to deal with non-adherence to MEAs in state practice.[35] The underlying idea of the non-compliance mechanism is that 'carrots' may be more effective than 'sticks' in case of non-compliance, and the state in question will be assisted to achieve compliance rather than being held responsible for breach.[36] Moreover, the non-compliance procedures may still act as a 'stick' when there is no formal process to enforce adherence to MEAs.

As is therefore expected, the Cartagena Protocol relies on compliance review rather than on dispute settlement procedures to ensure proper implementation of its obligations.[37] The Protocol's non-compliance procedures are precautionary in their nature and operate on internal cooperation. They mainly aim at promoting compliance with and implementation of, the Protocol rather than compensation, punishment or conflict resolution.[38]

Similar to other MEAs, the Protocol's non-compliance procedures are entrusted to a Compliance Committee as an institutional arrangement.[39] During the first COP-MOP to the Protocol in 2004, a Compliance Committee was set up to 'promote compliance with the provisions of the Protocol, to address cases of non-compliance by Parties, and to provide

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[33] UNEP, 'Report of the Fourth Meeting of the Parties to the Montreal Protocol on Substances that Deplete the Ozone Layer', U.N. Doc. UNEP/OzL.4/15 (1992), Annex IV, (1992) 3 *Yearbook of International Environmental Law* 819; F Romanin Jacur, 'The Non-Compliance Procedure of the 1987 Montreal Protocol to the 1985 Vienna Convention on Substances that Deplete the Ozone Layer', in T Treves and others (eds), *Non-Compliance Procedures and Mechanisms and the Effectiveness of International Environmental Agreements* (T.M.C. Asser Press, 2009), 15.

[34] A Cardesa-Salzmann, 'Constitutionalising Secondary Rules in Global Environmental Regimes: Non-Compliance Procedures and the Enforcement of Multilateral Environmental Agreements' (2012) 24(1) *Journal of Environmental Law* 103, 114; and G Handl, 'Compliance Control Mechanisms and International Environmental Obligations' (1997) 5 *Tulane Journal of International and Comparative Law* 29, 33.

[35] Ehrmann (n 32), 390-415.

[36] M Koskenniemi, 'Breach of Treaty or Non-Compliant? Reflections on the Enforcement of the Montreal Protocol' (1992) 3 *Yearbook of International Environmental* Law 123, 162; and A Chayes and AH Chayes, *The New Sovereignty: Compliance with International Regulatory Agreements* (Harvard University Press, 1995).

[37] The Protocol, Article 34.

[38] *Ibid*; V Koester, 'The Compliance Mechanism of the Cartagena Protocol on Biosafety: Development, Adoption, Content and First Years of Life' (2009) 18(1) *RECIEL* 77, 80; and J Klabbers, *International Law* (Cambridge University Press, 2013), 264-5.

[39] R Churchill and G Ulfstein, 'Autonomous Institutional Arrangements in Multilateral Environmental Agreements: A Little-Noticed Phenomenon in International Law' (2000) 94 *The American Journal of International Law* 623, 644–7; C Ragni, 'Procedures and Mechanisms on Compliance under the 2000 Cartagena Protocol on Biosafety to the 1992 Convention on Biological diversity', in Treves and others (eds) (n 33), 106-10.

advice or assistance, where appropriate'.[40] The Compliance Committee meets annually to address relevant issues and prepare reports for the COP-MOPs.[41] In practice, there is little evidence as to whether or not the non-compliance procedures in the Protocol are as effectively as those in other MEAs, such as the Montreal Protocol and the Kyoto Protocol, since they have rarely been resorted to.[42]

Furthermore, as alluded to earlier, the Cartagena Protocol does not have a compulsory conflict resolution mechanism, and is less clear than the WTO in terms of dispute settlement forum and process. The Protocol does not include any specific provisions on the settlement of disputes. It refers back to the CBD's dispute settlement provisions, which do not contain a mandatory dispute settlement procedure.[43]

In that connection, the CBD provisions depend upon prior consent of the parties before submitting the dispute to arbitrators or adjudicators. According to Article 27 of the CBD, disputes concerning the interpretation or application of the Protocol can, based on the will of the parties, be resolved by negotiation, good offices or mediation by a third party, arbitration, or judicial settlement by the International Court of Justice. If the Parties have not accepted any arbitral or judicial settlement, the dispute must be submitted to a mandatory, but non-binding, conciliation procedure unless the Parties agree otherwise.[44]

It is worth mentioning, however, that no provision in the Cartagena Protocol prevents parties from resolving disputes or seeking clarification of trade-related rights and obligations under the WTO dispute settlement mechanism. Nor have the WTO members waived their rights to bring disputes to the WTO DSB by entering into the Protocol.[45]

2.3 The WTO DSB is likely to settle any disputes concerning trade and environment

There exist debates in relation to the choice of dispute settlement forum for trade and environment disputes. Some argue that the better way to resolve such disputes is through

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[40] COP-MOP 1 Decisions, 'Establishment of procedures and mechanisms on compliance under the Cartagena Protocol on Biosafety' (27 February 2004) BS-I/7.
[41] COP-MOP 2 Decisions, 'Rules of Procedure for Meetings of the Compliance Committee' (3 June 2005) BS-II/1.
[42] Cardesa-Salzmann (n 34), 116 & 118.
[43] The Protocol, Article 32.
[44] The CBD, Article 27.
[45] J Waincymer, 'Cartagena Protocol on Biosafety', (2001), 12-3, available at: http://www.apec.org.au/docs/waincymer2001.pdf, last accessed on 30 April 2017.

further negotiations rather than litigation.[46] Others argue that instead of settling by the existing WTO dispute resolution mechanism, there should emerge appropriate forum(s) and procedures which involve both environmental and trade expertise for the resolution of environment and trade disputes.[47] A third set of commentators reveal that certain disputes are being litigated not only at the WTO level but also in trade remedies mechanism before domestic administrative agencies, and advice that domestic trade remedies regulations should be amended to better serve both environmentalists and fair trade advocates.[48]

The majority of authors, however, agree that disputes between trade and the environment would fall under the WTO dispute settlement mechanism which provides speed and certainty to dispute resolution.[49] The 2002 World Summit on Sustainable Development also suggested that trade and environment should be balanced or reconciled under the WTO rather than by the UN General Assembly or the UN Environment Program, even though it is disputable whether the WTO is the appropriate forum for integrating trade and environmental concerns.[50] It is, however, generally accepted that the WTO's compulsory dispute settlement mechanism is stronger and more powerful than the non-compliance mechanisms of most international environmental law regimes.[51]

Although some improvements have already been made, there is still a very real imbalance between contemporary international trade law and international environmental

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[46] TJ Schoenbaum, 'International Trade in Living Modified Organisms: The New Regimes' (2000) 49 *International and Comparative Law Quarterly* 856, 866; and S Lester, 'WTO-Sanitary and Phytosanitary Measures Agreement Decisions' (2007) 101 *The American Journal of International Law* 453, 459.

[47] EB Weiss, 'Environment and Trade as Partners in Sustainable Development: A Commentary' (1992) 86 *The American Journal of International Law* 728, 731.

[48] M Wu and J Salzman, 'The Next Generation of Trade and Environment Conflicts: The Rise of Green Industrial Policy', (2014) 108(2) *Northwestern University Law Review* 401, 407 & 443.

[49] TJ Schoenbaum, 'Free International Trade and Protection of the Environment: Irreconcilable Conflict?' (1992) 86 *The American Journal of International Law* 700, 726; P Birnie, AE Boyle and C Redgwell, *International Law and the Environment* (3rd edition, Oxford University Press, 2009), 754; and S Bell, D McGillivray and OW Pedersen, *Environmental Law* (8th edition, Oxford University Press, 2013), 168.

[50] For more discussion, see D Shelton, 'International Law and "Relative Normativity"', in M Evans (ed), *International Law* (3rd edition, Oxford University Press, 2010), 163.

[51] DC Esty, *Greening the GATT: Trade, Environment and the Future* (Washington DC: Institute for International Economics, 1994), 77; F Macmillan, *WTO and the Environment* (Sweet and Maxwell, 2001), 266-9; CF Runge, 'A Global Environment Organisation (GEO) and the World Trading System' (2001) 35 *Journal of World Trade* 399, 422; GK Rosendal, 'Impacts of Overlapping International Regimes: The Case of Biodiversity' (2001) 7 *Global Governance* 9, 110-1; S Charnovitz, 'A World Environment Organisation' (2002) 27 *Columbia Journal of Environmental Law* 323, 359-60; A González-Calatayud and G Marceau, 'The Relationship between the Dispute-Settlement Mechanisms of MEAs and those of the WTO' (2002) 11 *Review of European Community and International Environmental Law* 275; and K Kulovesi, *The WTO Dispute Settlement System: Challenges of the Environment, Legitimacy and Fragmentation* (Kluwer Law International, 2011), 59.

law.[52] The two regimes are at different development stages. For example, the WTO is relatively developed while, after more than a decade coming into force, the Protocol still has a series of undecided issues. The WTO legal system lies at the centre stage of international law. It has a stronger institutional structure comparing to international environmental law. International trade law also has a much greater real-life impact in shaping national policy than do environmental treaties.[53]

As argued above, the compulsory WTO dispute settlement mechanism is 'virtually automatic', and provides speed and certainty.[54] It often serves as the only international forum available to settle trade and environment disputes, although it is far from being the ideal forum.[55]

Practically, given the fact that there is a structural imbalance between the WTO regime and the international environmental regime, and that the institutional structure of contemporary international law is not likely to undergo any fundamental change in the foreseeable future, any disputes concerning conflicts between WTO law and international environmental law are highly likely to be resolved by WTO judicial bodies.

2.4 The technical debate: is the WTO DSB the most suitable forum for deciding the complex issues on trade and environment disputes?

Whether the WTO DSB is the most suitable forum for deciding trade and environment disputes is still a debatable question. In the GATT Council meetings, some member states questioned whether it was appropriate for the GATT to address environmental protection problems as a general trade policy issue; whether the GATT had the competence and capacity to legislate on this subject; and whether the GATT should be the forum to handle this matter.[56] These concerns are arguably still valid under the WTO DSB. Other important questions that arise include: to what extent is it possible for the DSB to consider environmental values; to what extent can the DSB take into consideration MEAs in its

[52] Weiss (n 47), 729; Roch and Perrez (n 31), 15-7; and M Poustie, '*Environment*', in E Moran and others (eds), The *Laws of Scotland: Stair Memorial Encyclopaedia Reissue* (Butterworths LexisNexis, 2007), 36.
[53] Bell, McGillivray and Pedersen (n 49), 168.
[54] J Pauwelyn, 'Enforcement and Countermeasures in the WTO: Rules are Rule-Toward a More Collective Approach', (2000) 94 *The American Journal of International Law* 335, 336; and Bell, McGillivray and Pedersen (n 49), 167.
[55] Kulovesi (n 51), 59.
[56] GATT Council, Minutes of Meeting Held in the Centre William Rappard on 6 February 1991, C/M/247 (Mar. 5, 1991), 22, 23, 25 & 26.

decision-making; and does the WTO adjudicators have the necessary knowledge and competency to resolve conflicts between trade and environmental regimes, or even apply and interpret MEAs?[57]

One concern about the DSB not being suitable for adjudicating trade and environment disputes is based on the controversial role that non-WTO international rules play in the WTO dispute settlement procedure.[58] For example, in the *Chile-Swordfish* case, the EC initiated the dispute settlement proceedings under the WTO, claiming that Chile's prohibition on unloading of swordfish in Chilean ports violated substantive provisions of the GATT.[59] Chile, on the other hand, claimed that the EC violated UNCLOS and failed to adopt necessary conservation measures on swordfish; and started parallel dispute settlement proceedings before the ITLOS, arguably based on concerns on the role that UNCLOS might play in the WTO dispute settlement procedure.[60]

Some argue that WTO panels and the AB are only permitted to (directly) apply provisions of the WTO Agreements.[61] In addition, it has been argued that the WTO system is not capable of managing complex non-trade issues,[62] and is not a proper model for integrating the MEAs.[63] These arguments, though valuable and valid to some extent, may not be entirely true from a doctrinal standpoint at least, as trade liberalisation is, and should not, be the sole value of the WTO system, considering that sustainable development as an aim has been written into the WTO Agreements.[64] In other words, the WTO dispute settlement

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[57] V Koester, 'A New Hot Spot in the Trade-Environment Conflict' (2001) 31(2) *Environmental Policy and Law* 82, 85.

[58] JP Trachtman, 'The Domain of WTO Dispute Resolution' (1999) 40(2) *Harvard Journal of International Law* 333, 342-343; G Marceau, 'Conflicts of Norms and Conflicts of Jurisdictions: The Relationship between the WTO Agreement and MEAs and other Treaties' (2001) 35(6) *Journal of World Trade* 1081, 1117; G Marceau, 'WTO Dispute Settlement and Human Rights' (2002) 13(4) *European Journal of International Law* 753, 773-8; E Vranes, 'The Definition of "Norm Conflict" in International Law and Legal Theory' (2006) 17(2) *European Journal of International Law* 395; and J Pauwelyn, *Conflict of Norms in Public International Law: How WTO Law Relates to Other Rules of International Law* (Cambridge University Press, 2003), 463-5.

[59] *Chile-Measures Affecting the Transit and Importation of Swordfish (Chile-Swordfish)*, Request for the Establishment of a Panel by the European Communities, WT/DS193/2, 6 November 2000. This case will be discussed in detail in the following section 6.

[60] ITLOS, 'Case Concerning the Conservation and Sustainable Exploitation of Swordfish Stocks in the South-Eastern Pacific Ocean', Order 2000/3, 20 December 2000.

[61] DSU, Articles 1.1, 3.2, 7.1 & 7.2. For more discussion, see Trachtman (n 58), 343; Marceau (2001, n 58), 1081, 1116; and MA Young, 'The WTO's Use of Relevant Rules of International Law: An Analysis of the Biotech Case' (2007) 56 *International and Comparative Law Quarterly* 907, 912.

[62] J Bhagwati, 'Afterword-The Question of Linkage' (2002) 96 *The American Journal of International Law* 126, 132.

[63] Charnovitz (n 51), 334 & 338.

[64] This is discussed further in Chapter 2, section 3.1.2 of this thesis.

mechanism is not a hermetic system and is, or should not be, hostile to general international law.[65]

Another concern is based on the difficulties that the WTO dispute settlement system faces in resolving trade and environment disputes. The WTO is a trade organisation, not an environmental one.[66] It naturally focuses on the free movement of international trade, and does not take environmental protection as its most prioritised problem, similar to the fact that trade is not of utmost importance for international environmental organisations or agreements. Moreover, the WTO dispute settlement bodies consist of experts with understanding of trade considerations. They do not necessarily have the knowledge and experience required for the interpretation of the Protocol. Similarly, at the domestic level, relevant governmental sectors which are in charge of the implementation of the WTO Agreements or the Protocol do not necessarily fully understand the other treaty.[67] Although acknowledging these difficulties, this author's submission is that focusing on its primary area of responsibility and competency does not necessarily mean that the WTO dispute settlement system cannot deal with environmental principles and rules (such as those in the Protocol), especially in cases where they intersect and possibly conflict with those of the WTO in a given trade-related situation.[68]

One further concern is the extent to which the DSB accommodates environmental protection. There exist criticisms that the WTO dispute settlement mechanism is inimical to environmental concerns.[69] As argued by a number of scholars, WTO law should be updated to reflect, for example, environmental and social considerations.[70] Matsushita and others believe that the WTO covered agreements are not exhaustive sources; instead, all

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[65] G Marceau, 'A Call for Coherence in International Law: Praises for the Prohibition against 'Clinical Isolation' in WTO Dispute Settlement' (1999) 33 *Journal of World Trade* 87, 87-152.
[66] GC Shaffer, 'The World Trade Organisation under Challenge: Democracy and the Law and Politics of the WTO's Treatment of Trade and Environment Matters' (2001) 25 *Harvard Environmental Law Review* 1, 23.
[67] This argument is justified by the author's empirical research carried out for this thesis. See Chapter 7, section 4.2 of this thesis.
[68] FX Perrez, 'The Cartagena Protocol on Biosafety and the Relationship between the Multilateral Trading System and Multilateral Environmental Agreements' (2000) 10(4) *Swiss Review of International and European Law* 518, 527.
[69] Schoenbaum (n 49), 726; Birnie, Boyle and Redgwell (n 49), 754; Bell, McGillivray and Pedersen (n 49), 168; L Gruszczynski, 'Standard of Review of Health and Environmental Regulations by WTO Panels', in G Van Calster and MD Prévost (eds), *Research Handbook on Environment, Health and the WTO* (Edward Elgar, 2013), 756.
[70] Esty (n 51), 205; and JL Dunoff, 'The Post-Doha Agenda: Questions about Constitutions, Competence and Coherence', in R Buckley (ed.) *The WTO and the Doha Round: The Changing Face of World Trade* (The Hague: Kluwer Law International, 2003), 59.

international rules are 'potential sources of law in WTO dispute settlement'.[71] In support, Kulovesi states that non-WTO rules may theoretically play a role in the WTO dispute settlement procedure in three different ways: 'through direct application, as a source of interpretative material, or as factual evidence'.[72]

That is to say, the capacity and suitability of the WTO dispute resolution system with respect to effectively and acceptably resolving trade and environmental disputes (particularly arising from the WTO Agreements and the Protocol) is quite limited. Although having some potential, it does not seem to provide a suitable and acceptable forum for adequately settling trade and environment disputes in a fair and balanced manner.

2.5 The WTO DSB is likely to settle disputes concerning the WTO Agreements and the Protocol in practice

In relation to international trade in GMOs, there might be calls for adjudication in future disputes regarding any excessive use of trade measures under the Protocol. For example, disputes might be raised by an exporting country to challenge an importing country's import restrictions as being inconsistent with WTO rules, even though they are consistent with the Protocol.

In the event of disputes arising from international trade in GMOs between countries which are parties to both the WTO Agreements and the Protocol, some argue that the preferred solution is for the Protocol's dispute settlement procedures to be used because the WTO can only effectively adjudicate upon WTO Agreements.[73] However, as argued above, the Protocol does not have a compulsory conflict resolution mechanism and has relatively weak dispute settlement institutions and enforcement mechanisms. The Protocol may thus not be able to provide satisfactory dispute resolution procedures.

Practically, trade disputes regarding GMOs will fall under the SPS or TBT Agreement. Similar to other trade and environment disputes, it is most likely that conflicts between the WTO Agreements and the Protocol will be addressed by the efficient and

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[71] M Matsushita, TJ Schoenbaum and P Mavroidis, *The World Trade Organisation: Law, Practice and Policy* (2nd edition, Oxford University Press, 2006), 54.
[72] Kulovesi (n 51), 137.
[73] AH Qureshi, 'The Cartagena Protocol on Biosafety and the WTO-Co-Existence or Incoherence?' (2000) 49 *International and Comparative Law Quarterly* 835, 854.

automatic WTO dispute settlement mechanism.[74] In such a case, the WTO DSB cannot reject a member's request for the establishment of a Panel, as long as the complainant is unwilling to join in the 'negative' consensus in the DSB against establishment.[75] The controversial question here is: given that both the WTO Agreement and the Protocol are valid and applicable in such a situation involving GMOs, which treaty should prevail?

Another point is that, a WTO member which is not a party to the Protocol may also raise a dispute and refer it to the WTO dispute settlement body.[76] In such a case, the WTO dispute settlement mechanism is the only available forum, because the dispute settlement procedure of the Protocol will not be applicable for non-parties. Thus, for trade disputes between a party and a non-party to the Protocol, the case will also most likely be brought to the attention of the WTO dispute settlement mechanism.[77]

In practice, the WTO system serves as the primary international authority for addressing GMO-related trade disputes.[78] All major GMO producing and receiving states are WTO Members, while a number of major GMO exporting countries, such as the US, Argentina and Canada, have not ratified the Protocol.[79] The complainants are likely to claim that the WTO rules, not the Protocol provisions, are being violated.[80] The WTO DSB is faced with questions such as the extent to which the Protocol validates domestic GMO regulations that would otherwise violate WTO Agreements.[81] It is, however, arguable whether the DSB would necessarily rule against an import ban or labelling of GMOs which is consistent with the Protocol.[82]

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[74] B Eggers and R Mackenzie, 'The Cartagena Protocol on Biosafety' (2000) 3(3) *Journal of International Economic Law* 525, 541; and Birnie, Boyle and Redgwell (n 49), 803.
[75] DSU, Article 6.1.
[76] SW Burgiel, 'The Cartagena Protocol on Biosafety: Taking the Steps from Negotiation to Implementation', (2002) 11(1) *RECIEL* 53, 56.
[77] S Zarrili, 'International Trade in GMOs and GM Products: National and Multilateral Legal Frameworks', *Policy Issues in International Trade and Commodities Study series No. 29* (UNCTAD, 2005), 39.
[78] RB Stewart, 'GMO Trade Regulation and Developing Countries', *Public Law & Legal Theory Research Paper Series Working Paper No. 09-70*, (New York University School of Law, 2009), 15.
[79] CBD, 'Parties to the Protocol and Signature and Ratification of the Supplementary Protocol', available at: https://bch.cbd.int/protocol/parties/, last accessed on 30 April 2017.
[80] A Cosbey and S Burgiel, 'The Cartagena Protocol on Biosafety: An Analysis of Results, An IISD Briefing Note' (International Institute for Sustainable Development, 2000).
[81] Stewart (n 78), 15.
[82] S Charnovitz, 'The Supervision of Health and Biosafety Regulation by World Trade Rules' (1999-2000) 13 *Tulane Environmental Law Journal* 271, 300.

3. Evolution of the WTO jurisprudence on the principle of systemic integration: towards clear acceptance and strict application

As discussed in Chapter 4,[83] the approaches taken by the DSB on the principle of systemic integration have had a few 'twists and turns' and are not consistent or coherent, even though a consistent and systematic approach to MEAs may help to remedy or enhance the legitimacy of the WTO.[84] Even so, it appears that the WTO jurisprudence has changed towards more acceptance of the principle of systemic integration. The DSB recognises that the systemic integration should be used, and has used it in interpreting the WTO Agreements. However, there still are problems and limitations, since existing jurisprudence tends to give Article 31(3)(c) a strict interpretation which may restrict the use of systemic integration, and there is 'sill little demonstrated commitment to the WTO's own goal of mutual supportiveness'.[85]

On the one hand, the AB clearly accepts the principle of systemic integration and acknowledges the WTO law's place within the broad area of international law.[86] The WTO Panels and the AB have already made nearly one thousand statements on topics of general international law, which clearly indicate that the WTO Agreements must be applied and interpreted in the context of general rules of international law.[87] The DSB has occasionally utilised the principle of systemic integration and referred to other rules of international law which it deemed to be relevant, including MEAs, as an aid to the interpretation of WTO Agreements. The AB has shown itself willing to use non-WTO rules as a guide and interpret a term of the WTO Agreements in the light of how the term is defined in other rules.[88] A considerable number of international rules are, thus, finding their way (not all of which are express or evident) into the WTO legal system as, for example, fact, evidence of fact, or evidence of meaning.[89]

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[83] See Chapter 4, section 3.3.1 of this thesis.
[84] Kulovesi (n 51), 155.
[85] J McDonald, 'Politics, Process and Principle: Mutual Supportiveness or Irreconcilable Differences in the Trade-Environment Linkage' (2007) 30(2) *UNSW Law Journal* 524, 546.
[86] A Lang, 'Twenty Years of the WTO Appellate Body's "Fragmentation Jurisprudence"' (2015) 14(3) *Journal of International Trade Law and Policy* 116, 117 & 120.
[87] G Cook, *A Digest of WTO Jurisprudence on Public International Law Concepts and Principles* (Cambridge University Press, 2015).
[88] Lang (n 86), 119.
[89] J Flett, 'Importing Other International Regimes into World Trade Organisation Litigation', in MA Young (ed), *Regime Interaction in International Law: Facing Fragmentation* (Cambridge University Press, 2012), 262,

On the other hand, systemic integration and Article 31(3)(c) has been applied by the WTO judiciary rather restrictively.[90] The AB has been hesitant to accept MEAs as relevant to the WTO adjudication,[91] is reticent to take explicitly into account normative influences from non-WTO rules, and is reluctant to consider potentially conflicting non-WTO rules in the interpretation of the WTO Agreements in its jurisprudence.[92] In so doing, as discussed in Chapter 4, it tends to adopt a strict interpretation on the meaning of 'parties' under Article 31(3)(c) of the VCLT; moreover, the AB, such as in the cases of *EC and Certain Member States- Large Civil Aircraft* and *Peru-Agricultural products*, also treated the term 'relevant' as a substantive requirement of the application of the principle of systemic integration.

In the *Shrimp-Turtle* case, the AB made particular reference to Article 31(3)(c) for the first time, albeit only in a footnote.[93] The AB's approach is consistent with the principles of systemic integration and mutual supportiveness, and serves as a recognition that interpretation of the WTO rules had to be in light of environmental concerns.[94] Similarly, in the *US-FSC* case, in order to interpret the term of 'foreign trade income', the AB referred to a number of regional agreements which were not binding on the disputing parties.[95]

In the same vein, in the *Korea-Government procurement* case, the Panel stated that customary international law, which arguably includes the principles of systemic integration and good faith, applies generally to the economic relations between the WTO Members, although it required that such rules apply only to the extent that the WTO Agreements do not 'contract out' from it.[96] By contrast, in the *EC-Biotech* case, the Panel recognised that the relevant rules of international law should be taken into account in the interpretation of the

290 & 295-7; and H Horn and PC Mavroidis, 'Multilateral Environmental Agreements in the WTO: Silence Speaks Volumes' (2014) 10 *International Journal of Economic Theory* 147, 162.

[90] M Foltea, *International Organisation in WTO Dispute Settlement: How Much Institutional Sensitivity?* (Cambridge University Press, 2012), 37.

[91] Horn and Mavroidis (n 89), 147.

[92] Lang (n 86), 119-20.

[93] *Shrimp-Turtle,* ABR, WT/DS58/AB/R, 12 October 1998, para 158, footnote 157.

[94] E Trujillo, 'A Dialogical Approach to Trade and Environment' (2013) 16 (3) *Journal of International Economic Law* 535, 550.

[95] *US-FSC*, ABR (n 11), paras 141-5.

[96] *Korea-Procurement*, Panel Report, WT/DS163/R, 1 May 2000, para 7.96.

WTO Agreements, but interpreted the term 'parties' as requiring that such rules must be binding on all WTO Members, which ruled out the relevance of the Protocol to this case.[97]

The *EC-Biotech* case sees the confrontation of two fundamentally opposed approaches towards risk, nature, and scientific progress, including the permissive approach largely taken by the US which restricts the production, sale and use of GMOs only when there are scientifically proven risks, and the precautionary approach fundamentally taken by the EU which allows one to err on the side of caution and take restrictive measures on GMOs even in the case of scientific uncertainty.[98] These two approaches normally coexist, but clashes over questions of international trade in GMOs.[99] Pollack and Shaffer argued that there existed difficulties, limits, and in many cases the outright failure of international cooperation in the regulation of GMOs.[100] To them, the *EC-Biotech* case is seen as a failed attempt at bilateral and multilateral cooperation.[101]

As discussed in Chapter 2, based on the way the US framed their application, the Panel in the *EC-Biotech* case did not test the EU regulatory framework against the substantive obligations imposed by the SPS Agreement, but restricted itself to the de facto moratorium on approvals and Member States safeguard bans.[102] The Panel refrained from rejecting the EU approach outright and avoided the question of whether the EU approach had a sufficient scientific basis; instead, it decided the issue on the narrowest basis possible and limited the scope of proceedings.[103] Regarding the Member States' safeguard measures, the Panel stated that precautionary measures might be accepted if a risk assessment indicated 'uncertainties or constraints' in its examination.[104] The Panel has, at least in principle, left

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[97] *EC-Biotech*, Panel Report, WT/DS291/292/293/R, 29 September 2006, paras 7.68-7.71. More analysis of the relevant WTO case law in available at: R Howse, 'The Use and Abuse of Other "Relevant Rules of International Law" in Treaty Interpretation: Insights from WTO Trade/Environment Litigation', *Institute for International Law and Justice Working Paper 2007/1* (2007), http://www.iilj.org/wp-content/uploads/2016/08/Howse-The-use-and-abuse-of-other-relevant-rules-of-international-law-in-treaty-interpretation-2007-1.pdf, last accessed on 30 April 2017.

[98] N Krisch, 'Pluralism in Global Risk Regulation: The Dispute over GMOs and Trade' (2009) *Law, Society and Economy Working Papers 17*, 3, available at: https://www.lse.ac.uk/collections/law/wps/WPS2009-17_Krisch.pdf, last accessed on 30 April 2017; and MA Pollack and GC Shaffer, *When Cooperation Fails: The International Law and Politics of Genetically Modified Foods* (Oxford University Press, 2009), Chapter 2.

[99] Krisch, *ibid*, 4.

[100] Pollack and Shaffer (n 98), 280.

[101] *Ibid*, 7.

[102] More details on the EC-Biotech case were presented in Chapter 2, section 4.3.1 of this thesis.

[103] Krisch (n 98), 22; and Pollack and Shaffer (n 98), 178.

[104] *EC-Biotech*, Panel Report (n 97), paras 7.3065 & 7.3244-5.

open the possibility that the EU's precautionary GMO regulation may be in (or could relatively easily be brought into) conformity with the SPS Agreement.[105]

Since the *EC-Biotech* case, the DSB appears to have changed its approach back to the one taken in the *Shrimp-Turtle* case towards more acceptance of the principle of systemic integration. In the *Brazil-Retreaded Tyres* case, the AB recognised the complexity of environmental problems which 'may be tackled only with a comprehensive policy comprising a multiplicity of interacting measures', though arguably in a different context.[106] This acknowledgement may play a key role in bridging between trade and environmental treaties, with an aim of mutual supportiveness achieved through informal integration which in the context of this thesis, can be said to be institutional and domestic integration.[107]

Moreover, in the *EC and Certain Member States- Large Civil Aircraft* case, although the AB noted that 'one must exercise caution in drawing from an international agreement to which not all WTO Members are party', it referred to 'other rules of international law', and stated that Article 31(3)(c) of the VCLT is an expression of the principle of systemic integration; when interpreting the WTO Agreements in the light of non-WTO rules, a 'delicate balance' must be struck between an individual Member's international obligations and 'ensuring a consistent and harmonious approach to the interpretation of WTO law among all WTO Members'.[108] This reopens the door which the *EC—Biotech* Panel had shut so firmly,[109] and indicates that a Member's obligations under the WTO Agreements might be clarified, under certain circumstances, with reference to non-WTO law.[110] However, in the same case, the AB ruled out the applicability of Article 31(3)(c) because it considered the disputed other rules being not 'relevant' to the interpretation of the WTO Agreements at hand.[111]

More recently, in the *Peru-Agricultural products* case, the AB considered that the disputed other rules of international law were not 'relevant' within the meaning of Article

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[105] Krisch (n 98), 7.
[106] *Brazil-Retreaded Tyres*, ABR, WT/D332/AB/R, 17 December 2007, para 151.
[107] L Boisson de Chazournes and MM Mbengue, 'A "Footnote as A Principle": Mutual Supportiveness in an Era of Fragmentation', in HP Hestermeyer and others (eds), *Coexistence, Cooperation and Solidarity-Liber Amicorum Rüdiger Wolfrum* (Martinus Nijhoff Publishers, 2012), Vol 2 1615, 1634.
[108] *European Communities and Certain Member States-Measures Affecting Trade in Large Civil Aircraft (EC and Certain Member States- Large Civil Aircraft)*, ABR, WT/DS316/AB/R, 18 May 2011, para 845.
[109] Lang (n 86), 119.
[110] Lanyi and Steinbach (n 1), 14.
[111] *EC and Certain Member States- Large Civil Aircraft*, ABR (n 108), para 851.

31(3)(c), because they did not concern the same subject matter as the disputed WTO Agreements, or as bearing specifically upon the interpretation of the disputed WTO provisions.[112] Thus the AB found no need to address the meaning of the term 'parties' under Article 31(3)(c) of the VCLT.[113] Even so, the AB seemed to have adopted the wider approach[114] towards interpretation of 'parties' by indicating that 'while an interpretation of the treaty may in practice apply to the parties to a dispute, it must serve to establish the common intention of the parties to the treaty being interpreted'.[115]

Apart from the *EC-Biotech* case, the above WTO authorities suggest that if considered as being relevant, non-WTO rules, such as the Protocol, serve only as interpretative elements rather than a source of law.[116] The input of other rules of international law is limited to the extent that they can assist in treaty interpretation and help to clarify the meaning of explicit wordings of the WTO Agreements.[117] They play a supporting role in WTO treaty interpretation. In other words, reference to other rules is 'not with a view to enforce the content of those bilateral agreements but strictly for the purpose of interpreting an ambiguous WTO provision'.[118] In all, the WTO is now relatively open to interaction with other international regimes through established channels which are capable of influencing the development of both WTO law and other international regimes.[119]

This serves as an example of 'a soft law elaboration of hard law obligations', where the hard law has not changed, but the jurisprudence (soft law) has dramatically changed.[120] The WTO legal framework with respect to the environment has been standing still, but the

[112] *Peru-Agricultural Products*, ABR (n 11), para 5.103.
[113] *Ibid*, paras 5.104-5.105.
[114] This was discussed in detail in Chapter 4, section 3.3.1 of this thesis.
[115] *Peru-Agricultural Products*, ABR (n 11), para 5.95.
[116] PC Mavroidis, 'No Outsourcing of Law? WTO Law as Practiced by WTO Courts' (2008) 102 *The American Journal of International Law* 421, 450; P Kuijper, 'The Law of the GATT as a Special Field of International Law: Ignorance, Further Refinement or Self-Contained System of International Law?' (1994) 25 *Neitherlands Yearbook of International Law* 227; Trachtman (n 58), 336; and R Howse, 'The Appellate Body Rulings in the Shrimp/Turtle Case: A New Legal Baseline for the Trade and Environment Debate' (2002) 27 *Columbia Journal of Environmental Law* 491, 514-5.
[117] Pauwelyn (n 58), 262.
[118] *Korea-Various Measures on Beef,* WT/DS161/169/AB/R, 10 January 2001, para 539.
[119] Flett (n 89), 303-4.
[120] A Lang and J Scott, 'The Hidden World of WTO Governance' (2009) 20(3) *The European Journal of International Law* 575, 600.

jurisprudence has changed significantly with a different interpretation now being put on the WTO rules (e.g. GATT).[121]

Importantly also, the WTO case law has shown a dominant trend towards deference to nationally enunciated objectives and the often trade-restrictive, unilateral and extra-jurisdictional measures chosen to achieve them; usually one the condition that relevant countries have been afforded domestic autonomy within the WTO covered agreements.[122] For instance, in the *EC-Hormones* case, the AB recognised that risks have to be considered in the context of a society where people eat, sleep, and die, in addition to risk ascertainable in a science laboratory.[123]

4. Judicial Integration of the WTO Agreements and the Protocol can be achieved by international judicial bodies when interpreting the treaties

Having made efforts to unravel the question of the appropriate forum for disputes arising from the WTO Agreements and the Protocol, and found that the WTO jurisprudence has seen an evolution towards more acceptance (yet strict application) of systemic integration, this section will investigate the issue of whether or not the principle of systemic integration should be used by adjudicators with an aim of avoiding conflicts between the treaties.

4.1 The ambiguous wordings of both treaties leave room for treaty interpretation

No law, be it international or domestic, is free from uncertainties and ambiguities. How the ambiguous wordings are interpreted significantly affect the rights and obligations of the parties. The controversial and ambiguous wordings of both the WTO Agreements and the Protocol need to be clarified and, to this end, they leave room for treaty interpretation.

Both the terms of the WTO Agreements and their applicability have inherent uncertainties. No WTO provision specifically refers to GMOs, and it is not always easy for either international judicial institutions or member states to identify clearly what the WTO rule on international trade in GMOs is. The interrelationship between the overlapping WTO

[121] A Cosbey and PC Mavroidis, 'Heavy Fuel: Trade and Environment in the GATT/WTO Case Law' (2014) 23(3) *RECIEL* 288, 289.
[122] *Ibid*, 300.
[123] *EC-Hormones*, ABR, WT/DS26/AB/R, 16 Jan 1998, para 187.

Agreements (including the GATT, the SPS and TBT Agreements) is still unclear.[124] Some argue that the task falls upon the WTO dispute settlement mechanism to interpret relevant WTO rules on GMOs.[125]

Compared with the WTO agreements, the Protocol seems to contain more ambiguous provisions. This echoes the fact that international environmental law mainly contains procedural obligations (to cooperate, to consult, to report) instead of specific, substantive obligations.[126] The negotiators to the Protocol also left a number of questions unsettled, such as issues on liability and redress which should be further negotiated and developed by the parties, and detailed requirements on risk assessment and socio-economic considerations.[127]

4.2 Both the treaties should shed light on the interpretation of one another

The international community has developed a dominant court-centred approach which analyses judicial opinions to understand regime overlap and interaction.[128] Treaty interpretation is a fundamental aspect of the international judicial and arbitral process, which has the principle of systemic integration as an overarching rule. As discussed in Chapter 4, this thesis adopts a wider definition of 'parties' under Article 31(3)(c) of the VCLT. It argues that reference to other rules of international law should be made as long as these other rules are most directly relevant to the matters to be interpreted. Thus, a treaty might play a role in the interpretation of another treaty even if the treaties do not have the same coverage of memberships, or the treaties do not even bind all disputing parties in a particular case.[129]

Although the WTO Agreements and the Protocol do not have the exact same members (although the majority of the WTO members are also parties to the Protocol, and *vice versa*), they both are the most directly relevant treaties to international trade in GMOs, and should be seen as 'relevant rules of international law' that are relevant to one another

[124] This was discussed further in Chapter 2 of this thesis, section 4.1.
[125] Stewart (n 78), 13.
[126] Klabbers (n 38), 263.
[127] The parties have adopted a new UN treaty named 'The Nagoya-Kuala Lumpur Supplementary Protocol on Liability and Redress to the Cartagena Protocol on Biosafety' at COP-MOP 5 on 16 October 2010. The supplementary treaty is open for signature at the United Nations Headquarters in New York from 7 March 2011 to 6 March 2012, and will enter into force 90 days after being ratified by at least 40 Parties to the Cartagena Protocol on Biosafety.
[128] G Teubner and P Korth, 'Two Kinds of Legal Pluralism: Collision of Transnational Regimes in the Double Fragmentation of World Society', in Young (ed) (n 89), 137-8 & 173.
[129] See Chapter 4, sections 3.3.2 of this thesis.

according to the wider definition of 'parties'.[130] In other words, both treaties are relevant to one another in the process of treaty interpretation; and the notion of interpreting the WTO Agreements in the light of the Protocol does not mean that the Protocol should be *applied* under the WTO regime, and *vice versa*.

When resolving trade disputes concerning the WTO Agreements and the Protocol, and indeed when dealing with other treaty conflicts, the WTO DSB should apply the principle of systemic integration and interpret the treaties in the light of one another.[131] Although this technique is used in a conflict resolution process (resolving international trade disputes on GMOs), it may still contribute to avoiding conflicts between the WTO Agreements and the Protocol.

Much ink has been spilled on the consistency of MEAs with the WTO Agreements.[132] A number of existing works focus on interpreting or implementing the Protocol in the light of the WTO Agreements, and argue that the Protocol should be interpreted and implemented in ways that are consistent with the WTO Agreements in order to avoid conflicts between both regimes.[133] That is to say, member states should only develop domestic biosafety regimes which are consistent with the WTO regime, and should follow relevant WTO practices and procedures while fulfilling the Protocol's obligations.[134]

On the other hand, international trade rights and obligations cannot remain unchanged because the Protocol is not 'subordinate' to WTO Agreements.[135] In order to adapt to the progressive development of technology and the constant changes in social and economic paradigms, the WTO Agreements should be further developed and interpreted in an evolutionary manner in the light of other relevant international rules. It appears there is some thought in this line within the WTO dispute settlement system as, in the *Canada-Renewable Energy* case, for instance, an open conflict between the WTO rules and climate policy was

[130] VCLT, Article 31(3)(c).
[131] E Kassoti, 'Fragmentation and Inter-Judicial Dialogue: the CJEU and the ICJ at the Interface' (2015) 8(2) *European Journal of Legal Studies* 21, 34-7.
[132] Weiss (n 47), 729; Waincymer (n 45), 15; C Thorn and K Brosch, 'The Cartagena Protocol on Biosafety and The World Trade Organisation: Implementing a WTO-Consistent Biosafety Regulatory Framework', November 2004, 6-7; and Oberthür and Gehring (n 11), 15.
[133] Oberthür and Gehring (n 11).
[134] Thorn and Brosch (n 132), 6-7.
[135] PE Hagen and JB Weiner, 'The Cartagena Protocol on Biosafety: New Rules for International Trade in Living Modified Organisms' (2000) 12 *Georgetown International Environmental Law Review* 697, 715.

arguably avoided only through the WTO dispute settlement body's (heavily criticised) interpretation of the definition of subsidy with the aid of another (non-WTO) instrument.[136]

Needless to say, the systemic integration of trade and the environment is a two-way process. Greening the GATT is as important as GATTing the Green.[137] For the majority of literature which accepts that the WTO Agreements should shed light on the interpretation and implementation of the Protocol, the WTO Agreements are undoubtedly 'relevant rules of international law' for the Protocol. It is also true the other way round; which means the Protocol as well should be classified as relevant rules for the WTO Agreements, and the Protocol should influence the interpretation and implementation the WTO Agreements.[138]

The reconciliation of the WTO Agreements and the Protocol under the principle of systemic integration in treaty interpretation requires efforts to be made from both sides. When taking into account other international rules in interpreting one treaty, there is normally the assumption that those other rules have no ambiguities. The reality, however, is that there may be ambiguities in both treaties. Yet, this does not in any significant way devalue the conflict-avoidance potential of the principle of systematic integration, especially as the ambiguities in both regimes may be of a different nature and scope. Instead of focusing on strictly interpreting one treaty in the light of another in a manner that gives the impression that one is superior to the other, one may handle both treaties with a reconciliatory approach. This task can perhaps be better completed by states, as will be discussed in the following sections, than by judicial institutions and international organisations which are unavoidably biased towards one treaty.

4.3 The WTO DSB can and should make efforts to reconcile with the Protocol

Different judicial bodies may take a different approach to treaty interpretation over the same dispute. As argued above, practically, the WTO dispute settlement mechanism is

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[136] *Canada-Certain Measures Affecting the Renewable Energy Generation Sector (Canada-Renewable Energy)*, and *Canada-Measures Relation the Feed-in Tariff Program (Canada- Feed-in Tariff Program)*, ABR, WT/DS412/426/AB/R, 6 May 2013, paras 5.170-5.186; K Kulovesi, 'International Trade Disputes on Renewable Energy: Testing Ground for the Mutual Supportiveness of WTO Law and Climate Change Law' (2014) 23(3) *RECIEL* 342, 48; the critics can be found at M Trebilcock, R Howse and A Eliason, *The Regulation of International Trade*, (4th Edition, Routledge, 2013), 395–9.

[137] DC Esty, 'GATTing the Greens: Not Just Greening the GATT' (1993) *Yale Law School Faculty Scholarships Series, Paper 453*.

[138] Marceau (2001, n 58), 1081; D Palmeter and PC Mavroidis, 'The WTO Legal System: Sources of Law' (1998) 92(3) *The American Journal of International Law* 398, 409; and J Pauwelyn, 'How to Win a World Trade Organisation Dispute Based on Non-World Trade Organisation Law? Questions of Jurisdiction and Merits', (2003) 37(6) *Journal of World Trade* 997, 1000-5.

likely to be the dispute settlement forum for disputes between the WTO Agreements and the Protocol.[139] This fact affects the power balance between trade and non-trade values, and 'places the quest for mutual supportiveness firmly in the WTO's hands'.[140] Thus, the international judicial institution which can and should systemically reconcile the WTO Agreements and the Protocol is likely to be the WTO DSB.

Moreover, taking into account the historical and political realities, the WTO DSB has the capacity, the need, and the obligation to reconcile WTO agreement provisions with other international treaties.[141] The WTO panels have a 'right to seek information and technical advice from any individual or body which it deems appropriate'.[142]

The WTO Agreements need to be interpreted in the light of other international rules in order to be consistent with the development happened in other areas. For example, the 'exclusive science' approach (strictly requiring all measures to be based on scientific risk assessments and sufficient scientific evidence) under the SPS Agreement may be appropriate for traditional products whose risks have been well studied and are easier to identify. However, there have been critics and debates on whether this approach is suitable for the international regulation of GMOs. The risks of GMOs are less certain, and most of the GMO risks are highly controversial. Modern biotechnology is developing at a fast speed, and this makes it difficult always to provide sufficient scientific evidence on the risks of GMOs. There is also the fear that potential unknown risks of GMOs may cause serious and irreversible damage to the environment and human health.

Furthermore, trade sanction measures taken for environmental purposes may not only hinder free international trade, but also raise concerns regarding a state's sovereignty by committing it to standards established by other states. In relation to risk assessment and scientific evidence, sovereignty and discretion of a state plays a greater role under the Protocol than under the SPS Agreement. When regulating GMOs, states may wish to take into account not only scientific evidence, but also concerns about environmental and human health protection, socio-economic values and the aim of sustainable development.

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[139] See section 2 of this chapter.
[140] McDonald (n 85), 540.
[141] T Voon, 'Evidentiary Challenges for Public Health Regulation in International Trade and Investment Law' (2015) 18 (4) *Journal of International Economic Law* 795, 816; and M Burri-Nenova, 'Trade and Culture in International Law: Paths to (Re)conciliation' (2010) 44(1) *Journal of World Trade* 49, 73.
[142] DSU, Article 13.1.

A WTO Panel or the AB may refer to the Cartagena Protocol when interpreting the ambiguous wordings of Article 5.7 (on how to determine whether relevant scientific evidence is sufficient or not) of the SPS Agreement. As argued by Henckels, the precautionary principle as reflected in the Cartagena Protocol should be invoked in the interpretation of the SPS Agreement.[143] Also, according to McMahon, the WTO should 'begin a process of reconciling the demands of science with the other factors that must be taken into account in any decision on risk'.[144] Specifically, Ansari and Mahmod take the view that the SPS Agreement should give a greater degree of freedom of risk assessment to states, and Articles 5.5 and 5.7 (on precautionary measures) of the SPS Agreement should be amended to be in line with the Protocol.[145] Also, Schoenbaum argues that the only way to make the treaties mutually supportive is to interpret the precautionary principle under the Protocol as intended to supplement the risk assessment requirements of the SPS Agreement but not to override the SPS Agreement.[146]

The argument that systemic integration can and should be better achieved by judicial institutions can be reaffirmed by the findings in the empirical research carried out in the course of this thesis. A total number of 4 interviewees (CJ1, AO2, BO2, and AO1) claimed that the principle of systemic integration would be better used by international judicial institutions, which might contribute to the avoidance of conflicts between WTO Agreements and the Protocol.[147] Among them, 3 interviewees (CJ1, AO2, and BO2) stated that a dispute regarding international trade in GMOs was likely to be resolved by the WTO DSB, which should make (better) use of the approach of systemic integration.[148]

More specifically, organisational delegate AO2 claimed it was the obligation of the WTO to make sure that relevant organs of the WTO were well aware of other international rules, and to interpret the WTO obligations in a way that avoided clashes. AO2 stated that the job of a WTO judge was to enforce the WTO law, they could not push aside the WTO obligation and apply the Protocol, but at the same time, the WTO judge had an obligation to

[143] C Henckels, 'GMOs in the WTO: A critique of the Panel's Legal Reasoning in EC-Biotech' (2006) 7(2) *Melbourne Journal of International Law* 278, 305.
[144] JA McMahon, 'The EC-Biotech Decision: Another Missed Opportunity?', in L Bodiguel and M Cardwell (eds), *The Regulation of Genetically Modified Organisms: Comparative Approaches* (Oxford University Press, 2010), 354.
[145] AH Ansari and NAKN Mahmod, 'Biosafety Protocol, SPS Agreement and Export and Import Control of LMOs/GMOs' (2008) 7(2) *Journal of International Trade Law and Policy* 139, 164.
[146] Schoenbaum (n 49), 865.
[147] Details of the interviewees' comments will be presented in the following paragraphs.
[148] *Ibid*.

interpret WTO obligations in such a manner as to avoid conflict with other international treaties as far as possible.[149] AO2 believed that conflicts could be avoided through the DSB's interpretation of WTO obligations. Agency AO2 stated that the broader you read a WTO provision, the more likely it is to clash with other treaty obligations. Both the WTO Member States and judges have the legal, political and moral obligation to read the WTO Agreements narrowly in order to reduce their scope and avoid clashes with other treaties.[150]

Similarly, governmental official CJ1 believed that the approach of systemic integration should be used by the DSB, in such a way that other international rules were invoked by a defendant and drawn into the WTO litigation.[151] In the same vein, agency AO1 claimed that if judicial institutions did interpret the WTO Agreements and the Cartagena Protocol in a mutually supportive way or even give consideration to both sets of rules, it would be a more practical and feasible approach to reconcile the treaties.[152]

5. Limitations of systemic integration

The principle of systemic integration is not without its limitations, nor is it the only technique available of avoiding norm conflicts. Neither interpretation nor systemic integration could necessarily prevent all conflict between norms. If the relevant objects and purposes are irreconcilable, for example, if a state's obligation under one norm is incompatible with the state's right under another norm, it would be difficult to deny either the right or the obligation through interpretation or integration.[153] Pauwelyn wisely states that systemic integration 'may resolve apparent conflicts; it cannot resolve genuine conflicts'.[154] McGrady argues that systemic integration is only applicable if two treaty obligations are capable of being read together.[155] Similarly, Matz-Lück holds that systemic integration may fail if the relevant rules are 'in many ways incoherent'.[156] In support, but in a different direction, Merkouris points out that even if the principle of systemic integration was used in a

[149] Interview, Respondent A of Organisation 2, September 2012.
[150] *Ibid.*
[151] Interview, Respondent C of Jurisdiction 1, December 2012.
[152] Interview, Respondent A of Organisation 1, July 2012.
[153] N Matz-Lück, 'Harmonization, Systemic Integration, and "Mutual Supportiveness" as Conflict-Solution Techniques: Different Modes of Interpretation as a Challenge to Negative Effects of Fragmentation?' (2006) 17 *Finnish Yearbook of International Law* 39, 48.
[154] Pauwelyn (n 58), 272.
[155] B McGrady, 'Fragmentation of International Law or "Systemic Integration" of Treaty Regimes: *EC-Biotech Products* and the Proper Interpretation of Article 31(3)(c) of the Vienna Convention on the Law of Treaties' (2008) 42 *Journal of World Trade* 589, 607.
[156] Matz-Lück (n 153), 50.

given dispute, the interpretations of a rule by the disputing parties might be conflicting and completely irreconcilable if the parties refer to different 'relevant rules' for the purpose of systemic integration.[157]

Moreover, at the end of the day, the WTO Agreements are international trade agreements, while the DSB is tasked to give judicial interpretation to such agreements and settle trade disputes. Even if the DSB applies the principle of systemic integration, it doubtlessly applies it with a particular focus on the trade agreements, which can hardly be said to be impartial to any trade and environment contest. As argued by Koskeniemi, for conflicts between treaties from different regimes, systemic integration works only if the law-applier is an impartial third party, so that the treaties could be interpreted beyond the regimes and no treaty is given any preference.[158]

Furthermore, the effectiveness of systemic integration may also be limited by a number of external factors, including the balance of power between relevant actors, the historic moment of a particular case, and more importantly, political concerns.[159] International law-making is a political activity which 'reflects on-going concerns of the international community or of groups of states and NGOs'.[160] International law (and its application) is a complex and dynamic system shaped by political, diplomatic and socio-economic factors.[161] For example, some argue that the WTO 'is not an international legal system but rather a political compromise that is voluntarily agreed to'.[162] There exist salient political clashes between trade and environmental regimes. In particular, the regulation of GMOs, both internationally and domestically, is a highly politicised issue which involves balancing and prioritising trade and the environment. Hence, the potential conflicts between the WTO Agreements and the Protocol cannot be looked at only as a legal issue.[163]

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[157] P Merkouris, *Article 31(3)(c) VCLT and the Principle of Systemic Integration: Normative Shadows in Plato's Cave* (2015, Brill-Nijhoff), 166-7.
[158] M Koskenniemi, 'Fragmentation of International Law: Difficulties Arising from the Diversification and Expansion of International Law', Report of the Study Group of the International law Commission, UN. Doc. A/CN.4/L.682, 13 Apr 2006, 17, 142, para 280.
[159] *Ibid*, 688.
[160] AE Boyle and C Chinkin, *The Making of International Law* (Oxford University Press, 2007), 103 & 108; and R Higgins, 'A Babel of Judicial Voices? Ruminations from the Bench' (2006) 55 *International and Comparative Law Quarterly* 791, 804.
[161] Klabbers (n 38), 3-20.
[162] Kerr and Hobbs (n 16), 284.
[163] This is argument was drawn from the results of the empirical research, see Interview (n 149).

In addition, a state may strategically use the WTO dispute settlement system to promote trade interests over the environment. Should this happen, there does not seem to be much that the international community could do to remedy it. However, what the international community should do might be to act proactively to prevent states from taking such actions. It is in states' best interests to minimise conflicts using systemic integration. The principle of systemic integration may pull states towards compliance with both the WTO Agreements and the Protocol, such that proactive measures need to be taken to avoid conflicts between the treaties.

These arguments can be supported by the findings in the empirical research. As argued above and in the preceding chapter, in relation to the judicial use, 4 interviewees (AO1, CJ1, BO2, and AO2) believed that systemic integration is a useful technique for the reconciliation of the treaties.[164] Three of them (CJ1, BO2, and AO2) made the statements without addressing the limitations of political difficulties.[165] The other interviewee (AO1)[166] and another respondent (AJ2, who claimed to have no previous knowledge about the principle of systemic integration)[167] mentioned the political difficulties in the use of this principle, but still argued that systemic integration is a useful technique which can and should be better used. That is to say, although political difficulties were referred to by some respondents, the empirical study provided a reasonable level of support for the approach of systemic integration, in terms of it being a valuable technique that could be used to avoid potential conflicts.

More specifically, organisational delegate AO1 pointed out that the practicality of systemic integration was really questionable, because the WTO law had a special status and served as a kind of 'unwritten constitution' of international law that every other rule should try to fit into it.[168] The international commitment to the protection of trade interests was strong, clear, and unreserved, but there was no full or unambiguous commitment to environmental rules, AO1 said. AO1 also stated that the DSB only focused on WTO rules, and was not likely to consider the Protocol as a source of rules that needed to be investigated in addressing the cases. AO1 stated that 'the chances of resolving the dispute on the basis of

[164] This was discussed in detail in Chapter 4, section 3.4 of this thesis.
[165] Interview (n 151); Interview, Respondent B of Organisation 2, November 2012; and Interview (n 149).
[166] Interview (n 152).
[167] Interview, Respondent A of Jurisdiction 2, July 2012.
[168] Interview (n 152).

the Protocol is slim because the WTO Panels are not interested in looking at other rules outside of the WTO regime'. Even so, AO1 believed the concept of sustainable development required the international community to conclude rules that not only safeguarded trade but also fulfilled global environmental concerns.[169]

As far as agency AO1 was concerned, integration of treaties at the international level was not feasible in the near future, even though the world was moving towards that direction, and it was something that could be achieved 'may be at the end of this century'. Thus, AO1 indicated that more efforts were needed so that systemic integration would not simply remain an academic exercise or a theoretical approach.[170]

After a brief introduction of the approach of systemic integration by the author, governmental official AJ2 indicated that theoretically this technique would help to avoid the potential conflicts between the treaties, but in practice there would be a lot of difficulties as to who should take the responsibility for applying systemic integration, and whether it got all parties' agreement. Its successful application, according to AJ2, would also depend on whether it was a recognised international principle, and whether there existed relevant case law confirming this. AJ2 believed that the systemic integration approach was simply a principle, and the Protocol did not have any provision confirming this principle of Art 31(3)(c) of the VCLT. Whether it could be applied depended on the nature of the specific case.[171]

6. The role of judicial body is wider than resolving disputes

The role of international judicial bodies is wider than simply resolving disputes. Although the judicators were resolving disputes, they point to the need and direction of conflict avoidance, which arguably can be achieved at other levels including institutional and domestic levels. In the *Gabčíkovo-Nagymaros* case, the ICJ required the disputants to find a solution which incorporates both the treaty objectives and 'norms of international environmental law and the principles of the law of international watercourses'.[172] This

[169] *Ibid*.
[170] *Ibid*.
[171] Interview (n 167).
[172] *Case Concerning the Gabčíkovo-Nagymaros Project (Hungary v. Slovakia)*, (1997) ICJ Reports 7, 141.

decision acknowledged the central role of good faith negotiations by the disputing parties for settling the disputed manners in a mutually satisfactory way.[173]

In support, in the *Pulp Mills* cases, the ICJ recognised the importance of sustainable development as a key tool for the equitable reconciliation of economic and environmental values.[174] More generally, and in support of that position, the ICJ also prefers, where possible, the integration of fragmented international law.[175]

Similarly, in the *Fisheries Jurisdiction* case, the UK claimed that a unilateral declaration by Iceland breached their previous agreements on fishing rights. The ICJ stated that the most appropriate method for dispute solution in this case was that of negotiation, which should be carried out in good faith.[176] This is particularly important for the aim of this thesis, for it pointed to the direction of conflict avoidance and stressed the need to reconcile the disputed rights through negotiation.

In relation to the WTO jurisprudence, the AB has attempted to 'defuse the stakes of inter-regime conflicts' in its decisions through methods of, such as, actively seeking to avoid addressing the questions of normative conflicts, hierarchies in international law and the constitutionalisation of international law, and endeavouring to leave controversial problems as open as possible, for as long as reasonable.[177]

The principles of mutual supportiveness and good faith have found reflection in WTO practice. In the *EC-Hormones* case, after the adoption of a variety of DSB decisions, consultations and retaliatory measures, in order to put an end to one of the WTO's longest running disputes, the EU and the US reached a provisional four-year agreement in 2009 which was then extended and revised in 2014 for a further 3 years period.[178] Although this was arrived at long after the dispute and after significant economic leverage was applied by the US, such an agreement may arguably serve as an example of 'mutually agreed solution',

[173] *Ibid*, paras. 139-42 & 155, point 2.B of the dispositive. See also *Pulp Mills case (Argentina v Uruguay)*, Judgment, (2010) ICJ Reports 14, paras. 266 & 281.
[174] *Pulp Mills case*, Judgment, *ibid*, paras 75-6 & 177.
[175] Higgins (n 160), 794.
[176] *Fisheries Jurisdiction Case (UK v Iceland)* (Merits) [1974] ICJ Report 3, para 73.
[177] Lang (n 86), 121.
[178] Council Decision on the conclusion of the revised Memorandum of Understanding with the United States of America Regarding the Importation of Beef from Animals Not Treated with Certain Growth-Promoting Hormones and Increased Duties Applied by the United States to Certain Products of the European Union [2014] OJ L 27.

including the implementation of DSB rules, as promoted by the WTO.[179] In other words, the disputing parties managed to accommodate valid yet competing interests and values through good faith negotiations aiming at mutually agreed solutions.[180]

In the same vein, in the *Chile-Swordfish* case, as stated above, the parties initiated parallel dispute settlement proceedings before the WTO and the ITLOS,[181] which carried the risk of rendering contradictory and incompatible judgment as both judicial bodies retain jurisdiction over the disputed issue.[182] Shortly after initiating legal actions before two judicial bodies, in order to achieve mutually agreed solution to the disputed matters, the parties entered into negotiations through, for example, high-level meetings; and arrived at a provisional agreement suspending the judicial proceedings.[183] Achieving such an agreement can be seen as good example of how the principles of mutual supportiveness and good faith can help in dealing with treaty conflicts. It also indicates the need for increased efforts in accommodating economic and environmental regimes at both substantive and institutional levels.[184]

7. The principle of systemic integration may, but not necessarily, pull WTO members which are non-parties to the Protocol towards compliance

There is no doubt that the conclusion, entering into force, and the manner in which a treaty is negotiated, all depend on the intention and consent of the parties.[185] According to Article 34 of the VCLT, treaties only bind the parties to them; non-parties do not have the legal obligations to fulfil the requirements of the treaties.[186] Neither the WTO Agreements nor the Protocol is, thus, legally binding on non-parties states.

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[179] DSU, Articles 3(6)(7), 4(3), 11 & 22.
[180] R Pavoni, 'Mutual Supportiveness as a Principle of Interpretation and Law-Making: A Watershed for the "WTO-and-Competing-Regimes" Debate?' (2010) 21(3) *European Journal of International Law* 649, 678.
[181] See section 2.4 of this chapter.
[182] MA Orellana, 'The Swordfish Dispute between the EU and Chile at the ITLOS and the WTO', (2002) 71 *Nordic Journal of International Law* 71, 75.
[183] *Chile-Swordfish*, WT/DS193/3, 6 April 2001 and WT/DS193/3/Add.1, 9 April 2001; and ITLOS, 'Case Concerning the Conservation and Sustainable Exploitation of Swordfish Stocks in the South-Eastern Pacific Ocean', Order 2001/1, 15 March 2001.
[184] Orellana (n 182), 80.
[185] I Brownlie, *Principles of Public International Law* (7th edition, Oxford University Press, 2008), 609; and Boyle and Chinkin (n 160), 233.
[186] VCLT, Article 34; A Cassese, *International Law*, (2nd edition, Oxford University Press, 2005), 170.

However, strictly requiring two regimes to have identical membership before they can influence each other's norms may negate the development of international law.[187] International instruments may have some force in relation to even those who are not parties to them, without unduly attenuating state sovereignty.[188] In other words, 'states may be bound by rules of international law to which they have not consented (or even objected)', and the credibility of this argument may be traced to the fundamental changes in the international system after World War II.[189] State sovereignty has been challenged by the Hague Declaration on the Environment, which states that binding international environmental rules could be made without unanimous state consent.[190] Some international rules may be binding on all states regardless of the attitude of any particular one.[191]

In respect of the WTO's practice, for example, while requiring that environmental measures should be as far as possible based on international consensus, the WTO AB in the *Shrimp-Turtle* case does seem to indicate that trade restrictive measures taken under multilateral environmental agreements could be justified under Article XX of the GATT and seen as consistent with the WTO Agreements.[192] The AB did not require such measures to be taken only against members of the MEAs. This at least leaves open the possibility for trade-restrictive measures taken against non-parties of the MEAs to be considered as consistent with the WTO Agreements.[193]

Moreover, a treaty obligation might be modified without all parties' consent; such modification and interpretation may, depending on the treaty's voting-rules in the decision-making process, become binding on parties who voted against it.[194] Lauterpacht argued as early as 1935 that: 'It is clearly impossible to accept the view that the provisions of a multilateral treaty can never be modified and its obligations limited by particular agreements

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[187] MA Young, 'Regime Interaction in Creating, Implementing and Enforcing International law', in Young (ed) (n 89), 96.
[188] MA Young, 'Fragmentation, Regime Interaction and Sovereignty', in C Chinkin and F Baetens (eds) *Sovereignty, Statehood and State Responsibility: Essays in Honour of James Crawford* (Cambridge University Press, 2015), 71.
[189] JI Charney, 'Universal International Law' (1993) 87 *The American Journal of International Law* 529, 543.
[190] Hague Declaration on the Environment, (1989) 28 ILM 1308, 1310.
[191] Charney (n 189), 529.
[192] *Shrimp-Turtle, Recourse to Article 21.5 of the DSU by Malaysia,* Panel Report, WT/DS58/RW, 15 June 2001, para 5.73, and ABR (n 93), para 153; and P Sands, *Principles of International Environmental law* (2nd edition, Cambridge University Press, 2003), 945.
[193] J Scott, 'International Trade and Environmental Governance: Relating Rules (and Standards) in the EU and the WTO' (2004) 15(2) *European Journal of International Law* 307, 311.
[194] Matz-Lück (n 153), 51.

unless with the consent of all other contracting parties'.[195] For example, the WTO Ministerial Conference and the General Council have the exclusive authority to interpret WTO Agreements by a three-fourths majority vote.[196] Such interpretation applies to Members who have not accepted it. This makes it possible for the WTO Agreements to be interpreted in a way that is influenced by other international rules (such as the Protocol) without the non-parties' consent.

Furthermore, treaty provisions may bind non-parties through their evolution into customary international law.[197] Article 34 of the VCLT is generally believed to be modified by the following Article 38 by allowing a treaty norm to be invoked against third states as a customary norm.[198] Treaties may create rights and obligations for third states if they reflect custom which existed prior to the negotiation of the treaty, or if they provide the impetus for the creation of a new customary rule.[199] Treaties may generate or codify customary law if they constitute good evidence of what the existing law is, or if they influence state practice and provide evidence of *opinio juris* for new or emerging customary law.[200]

It is, thus, debateable whether trade restrictive measures taken under the Protocol by a potential importing country will be consistent with the WTO Agreements when the exporting country is not a member of the Protocol. Ignoring the Protocol for non-parties might have adverse effect on the consistency of the interpretation of the WTO Agreements, and the WTO legal system may appear to be excessively intrusive and predominant.[201] Also, interpreting WTO Agreements in the light of international treaties which not all WTO members have accepted may be criticised as 'indulging in judicial activism', even though it is also argued that such an approach makes WTO rules more 'coherent, predictable and dynamic'.[202]

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[195] H Lauterpacht, 'The Chinn Case' (1935) 16 *British Yearbook of International Law* 162, 166.
[196] The Marrakesh Agreement, Article IX:2.
[197] Birnie, Boyle and Redgwell (n 49), 16.
[198] VCLT, Article 38 states that: '*Nothing* in articles 34 to 37 precludes a rule set forth in a treaty from becoming binding upon a third State as a customary rule of international law, recognized as such.'
[199] H Caminos and MR Molitor, 'Progressive Development of International Law and the Package Deal' (1985) 79 *The American Journal of International Law* 871, 880.
[200] AE Boyle, 'Some Reflections on the Relationship of Treaties and Soft Law' (1999) 48 *International and Comparative Law Quarterly* 903, 904; and Boyle and Chinkin (n 160), 234.
[201] T Cottier, 'Implications for Trade Law and Policy: Towards Convergence and Integration', in C Bail, R Falkner and H Marquard (eds), *The Cartagena Protocol on Biosafety: Reconciling Trade in Biotechnology with Environment and Development?* (Earthscan Publications Ltd, 2002), 472.
[202] R Steinberg, 'Judicial Lawmaking at the WTO: Discursive, Constitutional, and Political Constraints (2004) 98 *The American Journal of International Law* 247, 247-8 & 259; and Henckels (n 143), 283.

As claimed by governmental official CJ1 in the empirical research, the Protocol might not be completely irrelevant for the adjudicator, even if anyone (or indeed, both) of the disputing parties before the DSB was a non-party to the Protocol. For if the other relevant rules of international law addressed and solved the problem in an intelligent rational way in another forum, any intelligent judge in the WTO was going to be interested.[203] This writer's submission is that, although the Protocol is not binding on non-parties states, nor is there sufficient evidence to suggest that the Protocol currently represents customary international law, non-parties may still benefit from and contribute to the systemic integration of the WTO Agreements and the Protocol. The reasons are as follows.

It is argued that people often focus on the short term and neglect the long term, in a way that can harm their own interests.[204] As a law which is made by lawmakers who are also the primary subjects of the law, the Protocol reflects the international community's collective interests, arguably including, to an extent, those of non-party states.[205] Even though non-parties may find short-term advantages in ignoring the Protocol, it is likely to be in their long-term interests to take into account the Protocol while drafting legislation or making decisions regarding trade in GMOs.[206]

In addition, non-WTO Agreements which do not bind all the parties might be taken into account in interpreting the WTO Agreements if those intrinsic agreements could provide evidence of the 'ordinary meaning' of the treaty terms in WTO instruments.[207] In practice, when non-parties encounter ambiguities in WTO requirements, such as the detailed requirements and procedural issues concerning risk assessment, there seems to be no reason why they cannot refer to relevant Protocol provisions or guidelines for clarification.

A number of MEAs, such as the 1973 CITES Convention,[208] the 1987 Montreal Protocol,[209] the 1989 Basel Convention,[210] and the 1993 CBD,[211] regulate or restrict their members' trade with non-parties so as not to breach their aims and objectives. However,

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[203] Interview (n 151).
[204] CR Sunstein, *Laws of Fear: Beyond the Precautionary Principle* (Cambridge University Press, 2005), 52.
[205] *Ibid*.
[206] Charney (n 189), 533.
[207] *EC-Biotech,* Panel Report (n 97), para 7.92.
[208] Convention on International Trade in Endangered Species of Wild Flora and Fauna, 3 March 1973, (1973) 12 ILM 1085, Article X.
[209] The Montreal Protocol on Substances that Deplete the Ozone Layer, 16 September 1987, (1987) 26 ILM 1550, Article 4.
[210] The Basel Convention, Articles 4(5), 11.
[211] The CBD, Articles 7, 8(g), 19(4), 14, 16 & 17.

whether such restrictions are consistent with WTO rules have not yet been considered through litigation.[212] Taking a similar approach, the Protocol indirectly addresses the issue of non-parties by regulating parties' trade with non-parties. The Protocol requires the transboundary movements of GMOs between Parties and non-Parties to be consistent with the objective of the Protocol; and 'encourages' non-parties to adhere to the Protocol and to contribute appropriate information to the Biosafety Clearing-House.[213] Although the position is not clear, it seems the Protocol, at least to some extent, affords certain rights and obligations to non-parties.[214]

From a practical point of view, when states are drafting domestic legislation or making decisions on international trade in GMOs, they do not tend to make different arrangements according to whether other states are parties to the WTO or the Protocol. This argument is supported by my empirical findings where agency CJ1 commented that Jurisdiction 1 did not have regulations that made differentiation according to whether a country was a member of the Cartagena Protocol or not.[215]

Another important point is that, as discussed in previous chapters, most non-parties to the Protocol, such as the US, Canada, Argentina and Australia, are producers and exporters of GMOs. They have significant GMO information, risk assessment abilities, relevant domestic legislation, and expert and technical support. They also have necessary or sufficient knowledge about the Protocol, have the capacity to carry out at least some of the obligations of the Protocol, and have actively participated in the negotiation processes of the Protocol and continuously observe the COP-MOPs.[216] They opted not to sign or ratify the Protocol arguably based on the lack of political will, although their involvement is most vital for the treaty to be efficacious. Some even argue that not becoming a party to the Protocol was 'a bullet proof litigation strategy' against any attempt by a state (which is a party to both the WTO Agreements and the Protocol) to defend its domestic regulation of GMOs with reference to its rights and obligations under the Protocol.[217]

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[212] Hagen and Weiner (n 135), 712-3; and Sands (n 192), 945-6.
[213] The Protocol, Article 24.
[214] Waincymer (n 45), 11; K Cook, 'Non-parties', in Bail, Falkner and Marquard (eds) (n 201), 353-5.
[215] Interview (n 151).
[216] The COP-MOPs allow representatives from non-member states, UN agencies, inter-governmental and non-governmental organisations, academia, and industry to observe the conference upon approval from the Secretariat.
[217] Ansari and Mahmod (n 145), 162.

However, the non-parties' policy on GMOs do not necessarily stay unchanged. It constantly evolves due to the change of governments, the development of biotechnology, and the country's status in international trade. A traditionally GMO exporting country may become an importer of GM products at some stage, and *vice versa*. With the ever-growing international flow of goods, such imports of products containing GMOs or derived from GMOs may be done unintentionally. For example, country A may import GM soybeans from country B, which is a traditionally GMO exporting country, and export soya source which are made from those GM soybeans to country B. Those soya sources are likely to contain GM elements as a result of the distinguishing feature of GMOs.

The changing of role as GMO exporter or importer may consequently affect a state's policy and regulation on GMOs, and impact on its decision on whether or not to join the Protocol as a member. Non-parties would, of course, be legally bound by the Protocol's provisions if they opt to accede to the Protocol, normally based on their specific status and interests. They may be tempted to join the Protocol for the benefits in becoming a party, such as influencing the Protocol's implementation and shaping its further development, receiving financial support, facilitation of mechanisms and opportunities to collaborate with other governments, improved access to relevant technologies and data, and demonstration of commitment to the protection of biosafety.[218] Before formally acceding to the Protocol, referring to the treaty in practice may be seen as a state's expression of its changed national policy and a version of pre-ratification *opinio juris*.

Having argued that the principle of systemic integration may pull non-parties towards compliance with the Protocol, it is worth mentioning that this may not necessarily be the case. In other words, there are obvious problems in the use of systemic integration for non-parties. However, it is still a step forward in achieving conflict avoidance between the WTO Agreements and the Protocol.

Given the uncertainty surrounding the use of systemic integration judicially (particularly as a consequence of the jurisprudence of the *EC-Biotech* case), looking to other levels becomes quite vital if we want to avoid the fragmentation of international law. Litigation has its limits whereas other, more political efforts at domestic and institutional

[218] SDS Mishra, V Ahuja, SJ Solanki (eds), *Issues Related to Genetically Modified Crops: with a Focus on Post Release Monitoring* (Indian Ministry of Agriculture and Biotech Consortium India Limited, 2006), 31.

levels which take into account the principles that lie behind systemic integration could be more fruitful.

8. Conclusion

In a bid to address the extent to which the principle of systemic integration may contribute to conflict avoidance at the international judicial level, this chapter had first dealt with the matter of the appropriate forum for resolving such conflict. While it found that there is hardly an appropriate forum for such disputes, it discovered that the WTO legal system has a compulsory, effective and automatic dispute settlement mechanism which the Protocol does not have. Thus, the view was taken that the WTO DSB is likely to be the dispute settlement forum for disputes involving the WTO Agreements and the Protocol, which should thus bear the burden of conflict avoidance. Yet, the WTO DSB, it was argued, is not completely suitable and competent to resolve, or provide definitive answers in the resolution of, disputes between both regimes.

This chapter has found that the principle of systemic integration can and should be used by international judicial institutions in order to reconcile the WTO Agreements and the Protocol. At its root, the principle of systemic integration calls for a balancing of competing interests between the WTO Agreements and the Protocol. Bearing this direction in mind, the problem left is how to achieve the balance and mutual supportiveness.

This chapter also found that the WTO jurisprudence has evolved towards more acceptance of the principle of systemic integration, although applying it in a rather restrictive way. At the international judicial level, existing literature focuses on interpreting the Protocol in a way that is consistent with the WTO Agreements. However, treaty interpretation is a two way process. One cannot practically interpret one treaty without interpreting the other one. Relevant WTO provisions should also be interpreted in the light of the Protocol. The WTO DSB should take into account the Protocol while interpreting relevant WTO provisions where necessary. They should not ignore the Protocol simply based on the fact that certain WTO members are not parties to the Cartagena Protocol.

However, the extent that systemic integration can be used by judicial institutions is still limited by the political difficulties that it faces, and the fact that this principle cannot legally bind non-parties to the Protocol towards reconciliation of the WTO Agreements and the Protocol, although it may, to some extent, attracts non-parties to do so.

It is worth mentioning that international judicial institutions can play only a limited role in dealing with the complex challenges of norm conflicts, as most regime interactions occur outside international courthouses.[219] There exist other types of regime interactions including regulatory and administrative interactions, operational interactions, and conceptual interactions.[220] Decision-makers are confronted less by conflicting norms and more by constraints and ambiguities in the day-to-day institutional interaction and normative overlap between regimes.[221] The challenges of regime interaction are also present at other stages of international law-making and implementation.

Limitations on the use of systemic integration at the judicial level may lead one to argue that conflicts between the treaties may be avoided at other levels using other techniques, such as the principles that lie behind systemic integration, including the principles of mutual supportiveness, good faith, cooperation and harmonisation, which were discussed in the preceding chapter.

Unlike the principle of systemic integration which is limited to be used by international judicial bodies, the underpinning principles may be applicable at the institutional and domestic levels and may serve as the driving force for the integration and conflict avoidance of the treaties, including for non-parties to the Protocol. It is mainly to this, and related matters, we now turn in detail.

[219] Teubner and Korth (n 128), 144.
[220] *Ibid*, 158-68.
[221] Young (n 187), 89-94.

Chapter 6

Avoiding Treaty Conflicts through Institutional Integration: The Cooperation and Coordination between Treaty Organs in Terms of Law-making and Giving Authoritative Interpretation

1. Introduction

Since the fragmentation of international law has both a substantive and an institutional dimension,[1] the avoidance of treaty conflicts should also be seen from the institutional perspective. International institutions influence one another in (either positive or negative) ways that are relevant for their development and effectiveness.[2]

As argued in previous chapters, the principle of systemic integration and the principles that lie behind it require conflicts between the WTO Agreements and the Protocol to be avoided at the judicial, institutional, and domestic levels. Based on both doctrinal and empirical evidences, this chapter tests the extent to which cooperation and coordination already exists between the treaty organs, as well as why and how such institutional integration could be improved with an aim of conflict avoidance and defragmentation of international law.

The institutional fragmentation of international law is typically examined in the context of the proliferation of international courts and tribunals and the resulting concerns over deviating jurisprudence and forum-shopping.[3] The institutional harmonisation in this chapter, however, means the cooperation and coordination between international treaty organs. It examines the extent to which relevant international organisations may contribute to

[1] T Kleinlein, 'Judicial Lawmaking by Judicial Restraint? The Potential of Balancing in International Economic Law' (2011) 12 (5) *German Law Journal* 1141, 1173; and J Crawford, *Chance, Order, Change: The Course of International Law* (Hague Academy of International Law, 2014), 285-302.

[2] S Oberthür and T Gehring, 'Institutional Interaction in Global Environmental Governance: The Case of the Cartagena Protocol and the World Trade Organisation' (2006) 6(2) *Global Environmental Politics* 1, 1.

[3] M Koskenniemi, 'Fragmentation of International Law: Difficulties Arising from the Diversification and Expansion of International Law', Report of the Study Group of the International law Commission, UN. Doc. A/CN.4/L.682, 13 Apr 2006, 17, 247, para 489; VP Tzevelekos, 'The Use of Article 31(3)(C) of the VCLT in the Case Law of the ECtHR: An Effective Anti-Fragmentation Tool or a Selective Loophole for the Reinforcement of Human Rights Teleology?' (2010) 31(3) *Michigan Journal of International Law* 621, 680-5; and P Merkouris, *Article 31(3)(c) VCLT and the Principle of Systemic Integration: Normative Shadows in Plato's Cave* (2015, Brill-Nijhoff), 4.

the avoidance of conflicts between the WTO Agreements and the Protocol through actions taken at the institutional level.

This chapter starts with examining the evolving nature of both the treaties which leaves open the possibility for institutional integration. It then tests whether the principles underpinning systemic integration can be introduced into the relationship between institutions with an aim of establishing if they can be used to help avoid conflicts through institutional cooperation and coordination, together with the benefits in so doing. It then examines respectively the extent to which the Protocol and WTO organs have collaborated with one another, followed by a suggestion on how better institutional integration can and should be pursued, with efforts to be made from both sides.

2. Both the WTO Agreements and the Protocol are evolving in their nature: opening opportunities for institutional integration

Although the concept of law comprises inherent legal stability and security, no law could foresee and exhaust all possible circumstances in the future, especially in the so-called 'hard cases' when a particular lawsuit cannot be brought under a clear rule of law that is laid down by some institution in advance.[4] Law should be constantly developed and adjusted to fit into novel circumstances.

The international legal system is not necessarily static; instead, it is dynamic, evolving, and flexible.[5] It is continuously developed by treaty parties and international judicial practices, mirroring the fundamental changes caused by the evolving needs of the international community.[6] There exist an increasing number of framework treaties which only provide basic principles, and leave the specific obligations and rights to the discretion of parties, requiring the parties to further conclude 'implementing' protocols, such as the 1992 CBD and its 2000 Cartagena Protocol and 2010 Nagoya Protocol; the 1985 Vienna Convention and its 1987 Montreal Protocol; and the 1992 UN Framework Convention on Climate Change and the 1997 Kyoto Protocol.[7] It has also been argued that WTO law itself

[4] R Dworkin, *Taking Rights Seriously* (Duckworth, 1977), 81.
[5] *Case Concerning the Gabčíkovo-Nagymaros Project (Hungary v. Slovakia)*, (1997) ICJ Reports 7, paras 66-8 & 112; and W Czapliński and G Danilenko, 'Conflict of Norms in International Law' (1990) 21 *Netherlands Yearbook of International Law* 3, 4.
[6] H Caminos and MR Molitor, 'Progressive Development of International Law and the Package Deal' (1985) 79 *The American Journal of International Law* 871, 882.
[7] M Poustie, '*Environment*', in E Moran and others (eds), The *Laws of Scotland: Stair Memorial Encyclopaedia Reissue* (Butterworths LexisNexis, 2007), 29 & 37.

constitutes an incomplete contract,[8] and one can see very explicit elements of that in, for example, the built-in agenda of the Agreement on Agriculture for further negotiations,[9] as well as the built-in commitment to review the TRIPS Agreement.[10]

However, the evolutionary character of international law creates difficulties for the determination of its normative contents. This is particularly true in relation to the regulation of international trade in GMOs, because the issue of biosafety itself is rapidly evolving and involves conflicting interests and certain degrees of scientific uncertainty. The international community is not necessarily able to enact timely legislation and respond to the rapidly developing technology.[11] Both the WTO Agreements and the Protocol are constantly evolving, and have an on-going need for further negotiation, interpretation, implementation and enforcement of their provisions. The Protocol is mainly developed by its COP-MOP, which is this instrument's only regular institutional mechanism.[12] The WTO Agreements are shaped by the judicial decisions of the WTO DSB in a way that such decisions may have relevance for the interpretation of relevant WTO Agreements,[13] and further developed through Parties' decisions, and are evolving alongside the Doha Round of trade negotiations among the WTO membership.[14]

Particularly, the treaties can be developed by states giving authoritative interpretation collectively through international institutions (treaty organs). Authoritative interpretation is the result of a collective process by state parties to a treaty and generally an expression of agreement by all.[15] Giving an authoritative interpretation requires the parties' collective efforts and compromises. As argued by Marceau, the main objective of any treaty interpretation is to identify the collective or compromised intention of the parties.[16] However, within the same treaty regime, states normally pursue different, sometimes contradictory,

[8] H Horn, G Maggi and RW Staiger, 'Trade Agreements as Endogenously Incomplete Contracts', (2010) 100(1) *American Economic Review* 394, 394.
[9] Agreement on Agriculture, Article 20.
[10] TRIPS Agreement, Articles 27(3)(b) & 71(1).
[11] F Francioni, 'International Law for Biotechnology: Basic Principles', in F Francioni and T Scovazzi (n 89), 5.
[12] The Protocol, Article 29.
[13] More discussion is presented in Chapter 2, Section 4.1 of this thesis.
[14] Details on the Doha round negotiations will be presented in the following section 5.1 of this chapter.
[15] N Matz-Lück, 'Norm Interpretation across International Regimes: Competences and Legitimacy', in MA Young (ed), *Regime Interaction in International Law: Facing Fragmentation* (Cambridge University Press, 2012), 221.
[16] G Marceau, 'Conflicts of Norms and Conflicts of Jurisdictions: The Relationship between the WTO Agreement and MEAs and other Treaties' (2001) 35(6) *Journal of World Trade* 1081, 1086.

aims based on their own interests. It may not always be clear what the intention of all the parties is.

The process of law-making through parties' decisions is similar for the WTO Agreements and the Protocol, and there is some degree of uncertainty always attached to such processes. The WTO is an international organisation established by an international agreement among states and customs entities. It only provides a forum for international negotiations and discussions. It is the collective of member states which makes the ultimate decision. The same is also true for the Protocol which is based on the international contract between its Parties.

The right to give authoritative interpretations of WTO Agreements which bind the parties is solely reserved to WTO members through the Ministerial Conference and the General Council.[17] However, WTO members have not adopted any such authoritative interpretations.[18] In practice, WTO provisions have been interpreted and clarified mainly by judicial decisions of the WTO panels and the AB.[19]

The negotiation and adoption of a MEA normally serves as the starting point, rather than the end, of an international cooperation effort, as its parties generally seek to develop and improve the MEA through regular meetings.[20] Hence, the Protocol is constantly evolving though negotiations of the parties and decisions of the COP-MOPs.[21] The evolutionary and flexible character of both the WTO Agreements and the Protocol makes it possible for the treaties to respond effectively to developments in scientific and technological knowledge. Interacting with other treaties is a way through which the Protocol and the WTO Agreements may further evolve.

[17] The Marrakesh Agreement, Article IX:2.
[18] A Krallmann, 'WTO Dispute Settlement-The Establishment of "Binding Guidance" by the Appellate Body in *US Stainless Steel* and Recent Dispute Settlement Rulings', in C Herrmann and JP Terhechte (eds), *European Yearbook of International Economic Law*, 418.
[19] For more discussion, please see IV Damme, 'Treaty Interpretation by the WTO Appellate Body' (2010) 21(3) *The European Journal of International Law* 605, 611; and R Quick, 'Do We Need Trade and Environment Negotiations or Has the Appellate Body Done the Job?' (2013) 47(5) *Journal of World Trade* 957, 980.
[20] M Buck, 'The EU's Representation in Multilateral Environmental Negotiations after Lisbon', in E Morgera (ed) *The External Environmental Policy of the European Union: EU and International Law Perspectives* (Cambridge University Press, 2012), 77.
[21] The Protocol, Article 29.

3. The principles that lie behind systemic integration requires conflicts between the treaties to be avoided at the institutional level

3.1 The principles behind systemic integration call for institutional integration

In order to avoid conflicts between the WTO Agreements and the Protocol at the institutional level, there is no doubt that the institutional framework of international law should be strengthened to be more coherent and efficacious. A more coherent international law-making system is of great importance in dealing with conflicts between international norms and properly balancing trade and the environment. However, even if carried out, institutional reform would be a difficult and time-consuming process. Realistically, the institutional structures of WTO law and international environmental law are not likely to change in the foreseeable future.[22] Nonetheless, the vitality of both economic development and the protection of the vulnerable environment call for an immediate solution regarding how conflicts between treaties on trade and environment should be dealt with.

Within the existing legal and institutional structure of international law, one *ad hoc* solution is to establish and strengthen the cooperation and coordination between international treaties through their respective organs, in the process of law-making, giving authoritative interpretations and the daily work of the organisations. Keohane and Nye recognised as early as in 1974 that international institutions can help to foster regular interactions among government policy-makers through the formation of transnational and transgovernmental networks.[23]

The principles that lie behind systemic integration require efforts to be made at the institutional level to avoid conflict between the treaties. The principle of mutual supportiveness requires the relevant international institutions to reconcile and promote the mutual supportiveness between the treaties with an aim of achieving sustainable development. Moreover, the principle of good faith calls for the institutions to act in good faith in the law-making process and while giving authoritative interpretations to the treaties. Furthermore, the principle of cooperation renders the relevant institutions upon the obligation to cooperate with one another in their daily activities. Lastly, the principle of harmonisation

[22] More discussion see Chapter 1, section 1.4 of this thesis.
[23] RO Keohane and JS Nye, 'Transgovernmental Relations and International Organisations', (1974) 27(1) *World Politics* 39, 43.

requires the institutions to promote the harmonisation of the WTO Agreements and the Protocol so that the treaties could be read in conformity with one another.[24]

While not directly focused on the principles behind systemic integration (due to the focus on systemic integration itself in the original research), the empirical study carried out in the course of this thesis did indicate that the principles behind systemic integration were already being used to a certain extent by relevant international institutions in practice, although in a rather unintentional way. It also indicated that existing institutional collaboration had not been made to a fully satisfactory extent. Better institutional collaboration would ensure mutual understanding and aid the avoidance of any potential conflicts between the treaties.[25]

Conflicts of international treaties can thus be avoided through increased coordination between institutions. Stuart argues that no institution is an island, and accordingly they must 'recognise and respect the rights of others' and act in a manner supportive of the goal of creating a well-functioning international society and ultimately a better world.[26] Similarly, Foltea proposes the concept of 'institutional sensitivity' which refers to the 'receptivity' of one international institution to other fields of public international law and its classical sources.[27]

As has been recognised under the Doha Round,[28] it is simply not in the interest of the WTO as an organization and may put the WTO's legitimacy under greater threat if it ignores MEAs and makes decisions in a closed environment.[29] Apart from being taken into account by the DSB in the interpretation of WTO rules under the principle of systemic integration, there exist other ways for non-WTO rules and institutions to have an impact on the interpretation and implementation of WTO rules. It is widely accepted that

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[24] SW Burgiel, 'The Cartagena Protocol on Biosafety: Taking the Steps from Negotiation to Implementation', (2002) 11(1) *RECIEL* 53, 53; D French, 'The Regulation of Genetically Modified Organisms and International Law: A Call for Generality', in L Bodiguel and M Cardwell (eds), *The Regulation of Genetically Modified Organisms: Comparative Approaches* (Oxford University Press, 2010), 357; and S Barrett, 'Environmental Protection and the Global Trade Order: A Different Perspective', in RL Revesz, P Sands, and RB Stewart (eds) *Environmental Law, the Economy and Sustainable Development* (Cambridge University Press, 2008), 168.
[25] Details of the empirical findings will be presented in the following paragraphs.
[26] L Stuart, 'Trade and Environment: A Mutually Supportive Interpretation of WTO Agreements in Light of Multilateral Environmental Agreements' (2014 12 *New Zealand Journal of Public and International Law* 379, 384.
[27] M Foltea, *International Organisation in WTO Dispute Settlement: How Much Institutional Sensitivity?* (Cambridge University Press, 2012), 31.
[28] This was discussed in detail in Chapter 4, section 4.2.5 of this thesis.
[29] P Nichols, 'GATT Doctrine', (1996) 36(2) *Virginia Journal of International Law* 379, 464-5.

institutionalized cooperation involving national and supranational experts would lead to deliberative decision-making and policy learning regarding the regulation of GMOs.[30]

Strengthening institutional integration may bring positive results, such as the effective promotion of coherence and avoidance of potential conflicts between sub-systems of international law, and reduction in the impact of the inherent fragmentation of international law. One successful example to date is the coordination and cooperation between the Basel Convention, the Rotterdam Convention, and the Stockholm Convention in the areas of chemicals and hazardous waste trade regulation.[31] Moreover, 'trade and' issues have also been dealt with through institutional cooperation. For example, the CBD Secretariat has already been cooperating with the SPS Agreement's advisory bodies in areas of invasive species, and it is possible that more collaboration on GM plants may follow.[32]

The cooperative arrangements among relevant institutions have a soft law nature. They could help to define and clarify some mutually agreed upon terms and to coordinate their actions, they allow ample flexibility as it could be either formal or informal, and they can only be achieved if the relevant institutions make efforts to cooperate with one another.[33]

3.2 Institutional integration can be achieved through institutional cooperation and coordination in the process of law-making, giving authoritative interpretations, and the daily work of the organisations

In order to make a more consistent international regulatory structure for biotechnology, potential conflicts between the WTO Agreements and the Protocol may be avoided or minimised if relevant institutions make efforts to cooperate and collaborate. This can be achieved in the first place through cooperation between institutions in their law-

[30] MA Pollack and GC Shaffer, *When Cooperation Fails: The International Law and Politics of Genetically Modified Foods* (Oxford University Press, 2009), 174.
[31] Ad Hoc Joint Working Group on Enhancing Cooperation and Coordination among the Basel, Rotterdam and Stockholm Conventions, 'Chronology of the Consideration by Parties to the Basel, Stockholm and Rotterdam Conventions on Cooperation and Coordination between the Three Conventions', BC-RC-SC/AHJWG.1/INF/4, 13 February 2007, annex ('Decision Vlll/8 on Cooperation and Coordination between the Basel, Rotterdam and Stockholm Conventions'; 'Decision SC-2/15 on Synergies'; 'Decision RC-3/8 on Cooperation and Coordination between the Rotterdam, Basel and Stockholm Conventions'); and KN Scott, 'International Environmental Governance: Managing Fragmentation through Institutional Connection' (2011) 12 *Melbourne Journal of International Law* 177, 196.
[32] Burgiel (n 24), 59.
[33] V Mosoti, 'Institutional cooperation and norm creation in international organisations', in T Cottier, J Pauwelyn and EB Bonanomi (eds), *Human Rights and International Trade* (Oxford University Press, 2005), 172.

making activities.[34] The principles that lie behind systemic integration could be built into new treaty regimes in aiming to avoid treaty conflicts. For example, the WTO law has a requirement that members should have due regard to other relevant laws.[35] The Protocol's savings clause also respects the rights and obligations under existing treaties.[36] These examples can be seen as consistent with the requirements of the principles of good faith, estoppel, cooperation and harmonisation.

Moreover, in the decision-making process concerning authoritative interpretations, the states are bound by the general treaty interpretation rules, including the principle of systemic integration, unless they agreed otherwise.[37]

The principle of mutual supportiveness requires a mutually supportive interpretation to be given to the provisions of international trade and environmental treaties in order to avoid conflicts and strengthen both regimes.[38] Mutual supportiveness of seemingly contradictory treaties can be achieved if a treaty organ, such as the conference of parties, cooperates with and involves the treaty organ of the other agreement while making decisions on the interpretation of the treaty.[39] The principle of mutual supportiveness often triggers further efforts concerning interpretation or other means of coordination, such as the establishment of working groups or other institutions at the institutional level.[40] As recognised by the ILC, 'often regimes operate on the basis of administrative coordination and "mutual supportiveness" the point of which is to seek regime-optimal outcomes'.[41]

In addition, reflecting on the principles of mutual supportiveness, good faith, cooperation, and harmonisation, institutional cooperation can be achieved by, and at the level of, the WTO and the CBD Secretariats (which are respectively the administrative arm of the treaties), sub-organs (such as the SPS and TBT Committees and their Secretariats), and

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[34] *Ibid*; and J Harrison, *Making the Law of the Sea, A Study in the Development of International Law* (Cambridge University Press, 2011), 242.
[35] GATT, Article XII.
[36] This was discussed further in chapter 4, section 4.2 of this chapter.
[37] Matz-Lück (n 15), 222.
[38] PG Gayathri and RR Kurup, 'Reconciling the Bio Safety Protocol and the WTO Regime: Problems, Perspectives and Possibilities' (2009) 1(3) *The American Journal of Economics and Business Administration* 236; G Jaffe, 'Implementing the Cartagena Biosafety Protocol through National Biosafety Regulatory Systems: An Analysis of Key Unresolved Issues' (2005) 5 *Journal of Public Affairs* 299, 302-3.
[39] N Matz-Lück, 'Harmonization, Systemic Integration, and "Mutual Supportiveness" as Conflict-Solution Techniques: Different Modes of Interpretation as a Challenge to Negative Effects of Fragmentation?' (2006) 17 *Finnish Yearbook of International Law* 39, 51.
[40] *Ibid*, 44-5.
[41] Koskenniemi (n 3), 252, para 493.

working groups.[42] The Secretariat of the CBD is responsible for facilitating and supporting parties' efforts to implement the CBD and its supplementary Protocols, namely the Cartagena Protocol and the Nagoya Protocol. It is worth to mention that such institutional cooperation has inherent limitations, mainly due to the quite different institutional/membership structures of the CBD and the WTO in terms of facilitating cooperation.[43]

A Secretariat, as argued by Jinnah, should become not simply an implementer or functionary, but also an overlap manger which can 'identify and magnify complementary efforts, negotiate principles of conflict, and navigate intersecting lines of practice'.[44] The role of Secretariats in acting as overlap managers can be fulfilled by, for example, brokering knowledge, facilitating negotiations in ways that shape state preference and guide state behaviour about overlap management, designing and building the overlap management governance architecture, and influencing international cooperation.[45]

Further than this, institutional coordination can be achieved through more extensive contacts between relevant institutions, such as the institutionalisation of formal high level officials meetings; through granting observer status to other relevant institutions; and possibly through inviting relevant institutions to take part in each other's work.[46] There is also possibly an overarching supervisory role for the UN High-level Political Forum on Sustainable Development[47] being observers of the WTO and Protocol regimes in terms of how they mainstream sustainable development. The WTO and the Protocol organs can cooperate with one another through, for example, efficacious information exchange, observing the meetings of one another, and jointly drafting guidelines and recommendations.

In that connection, the effective exchange of information and documents is a necessary prerequisite for institutional coordination.[48] It is the basis of all other means of

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[42] A Lang and J Scott, 'The Hidden World of WTO Governance' (2009) 20(3) *The European Journal of International Law* 575, 577-8.
[43] Such limitations will be discussed in detail in section 7 of this chapter.
[44] S Jinnah, *Post-Treaty Politics: Secretariat Influence in Global Environmental Governance* (MIT Press, 2014), 11.
[45] *Ibid*, 71-2.
[46] OS Stokke, 'Managing straddling stocks: the interplay of global and regional regimes' (2000) 43 *Ocean & Coastal Management* 205, 230.
[47] This is the main UN platform on sustainable development, providing political leadership, guidance and recommendations. It follows up and reviews the implementation of sustainable development commitments and the 2030 Agenda for Sustainable Development, including the SDGs. For more information, see: https://sustainabledevelopment.un.org/hlpf/about, last accessed on 30 April 2017.
[48] The UN Economic Commission for Europe Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters (the Aarhus Convention), 25 June 1998, 2161

cooperation, and may help Parties and relevant institutions to identify conflicts and decide upon priority issues for future activities.[49] Information exchange covers not only the provision and transmission of information, but also 'the associated processes of discussion, contestation, elaboration, and justification that occur in and around such exchange'.[50]

The exchange of information can be achieved through, for example: systematic forums of exchange or other permanent relations; one-time events such as joint studies and workshops on specific topics; allowing one institution to observe the meetings of another institution; exchanging views on specific issues between the institutions, and sharing of information on law-making or planned law-making activities.[51] For instance, initiatives have been taken by the WTO Secretariat and actors from the human rights and climate change regimes to engage in an extended dialogue and exchange of information.[52] The effective exchange of information could and should also be achieved by the relevant organs of the WTO and the Protocol.

In furtherance of these ideas, and in relation to the application of the law and the daily work of the institutions, the relevant organs of the WTO and the Protocol may conclude a formal agreement or Memorandum of Understanding to provide a clear external demonstration of linkage between the regimes and institutions.[53] Such documents are only politically binding rather than legally binding. They can be used to provide mutually agreed guidance for the harmonisation of treaties and possible future institutional cooperation and coordination.[54]

The empirical study carried out as part of research for this thesis also suggests that more institutional coordination and cooperation is needed which may facilitate the work of relevant institutions and will be beneficial for the implementation of the treaties. In this connection, Agency BO2, representative of an international organisation, stated that, at the international level, the same governments and the same people met in different fora, and

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UNTS 447, Articles 4 & 5, available at: http://www.unece.org/fileadmin/DAM/env/pp/documents/cep43e.pdf, last accessed on 30 April 2017.

[49] R Wolfrum and N Matz, *Conflicts in International Environmental Law* (Springer, 2003), 171.

[50] Lang and Scott (n 42), 578-9.

[51] Wolfrum and Matz (n 49), 172; and Harrison (n 34), 259-60, 268 & 276.

[52] G Teubner and P Korth, 'Two Kinds of Legal Pluralism: Collision of Transnational Regimes in the Double Fragmentation of World Society', in MA Young (ed), *Regime Interaction in International Law: Facing Fragmentation* (Cambridge University Press, 2012), 168-171.

[53] H van Asselt, F Sindico, and MA Mehling, 'Global Climate Change and the Fragmentation of International Law' (2008) 30(4) *Law & Policy* 423, 437; and Scott (n 31), 192.

[54] Wolfrum and Matz (n 49), 173.

decisions were being made without communication, awareness, and coordination across the environmental community and trade community.[55] In order to achieve better coordination at the international level, BO2 believed that if the Protocol were to be given an observer status in the SPS Committee, the coordination would be better so that the Secretariat of the CBD could 'come three times a year to the SPS Committee, at least report their activities and what they are working on, and hear the discussions in the SPS Committee and what is happening here that might be relevant'.[56]

Agency BO2 also added that whether or not the observer status is granted, informal Secretariat-Secretariat contacts could be much more frequent, as the Secretariats of the WTO and the CBD were not having much contact on the issue of GMOs. The two Secretariats were not new to the institutional cooperation, as they were having rather frequent contacts regarding the issue of endangered species which was covered by both the CBD and the SPS Agreement. The WTO was a member of an inter-agency liaison group on endangered species, and engaging with this liaison group had produced positive results. This proved that the two Secretariats had the capacity to collaborate, and similar efforts should be made in relation to the regulation of GMOs.[57]

4. The organs of the Protocol have made consistent efforts to reconcile with the WTO

Generally speaking, reflecting on the principles of mutual supportiveness, good faith, cooperation, and harmonisation, the law-makers of new international regimes tend to take into account relevant existing international rules of which they are aware. The parties may encourage its intersection with existing institutions so as to promote consistency between the regimes, and may seek to harmonise the regimes at the earliest stage, depending on interest and power relationships.[58] For example, some argue that the relationship between trade and environment should be clearly negotiated and explained so as to minimise conflicts.[59] Practically, the Protocol has made consistent efforts in reconciling with WTO Agreements, both at the law-making level and at the institutional level.

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[55] Interview, Respondent B of Organisation 2, November 2012.
[56] *Ibid*.
[57] *Ibid*.
[58] R Andersen, 'The Time Dimension in International Regime Interplay' (2002) 2(3) *Global Environmental Politics* 98, 101.
[59] J Waincymer, 'Cartagena Protocol on Biosafety', (2001), 1, available at: http://www.apec.org.au/docs/waincymer2001.pdf, last accessed on 30 April 2017.

At the law-making level, the negotiation processes of the Protocol involved a high level of awareness of the existence and substance of the WTO Agreements, which can certainly be seen as acted in good faith as well as promoting the mutual supportiveness between trade and the environment. The institutional overlap and potential conflicts between the Protocol and the WTO Agreements was one of the central questions throughout the negotiation process of the Protocol.[60] It generated a number of controversies, and has continued to be the focus of debates.

The WTO Agreements, in particular the SPS Agreement, have influenced the negotiations of the Protocol.[61] Some argue that the SPS Agreement and the Protocol could be viewed as harmoniously as the SPS Agreement existed during the negotiation process of the Protocol, and the Protocol was drafted in a way that is compatible with the SPS Agreement.[62] Others argue the Protocol is an example of an MEA which aims to be cognisant and supportive of existing trade rules and thus should not be interpreted by the WTO DSB as violating WTO disciplines.[63]

The Protocol's substantive provisions also appear to have taken into account the WTO Agreements. For example, the Protocol's core provisions on the AIA procedure seem to be 'tailored so as to meet the WTO requirements'.[64] The Protocol requires that decisions on the import of GMOs intended for release into the environment must be based on a risk assessment 'carried out in a scientifically sound manner'[65] Such a risk assessment must be based on 'available scientific evidence in order to identify and evaluate the possible adverse effects'[66] of GMOs on biodiversity and human health. The Protocol's risk assessment requirements, at least on the face of it, seem to be consistent with Articles 2.2 and 5.1 of the SPS Agreement. Moreover, the Protocol limits parties' rights to make informed decisions by

[60] B Eggers and R Mackenzie, 'The Cartagena Protocol on Biosafety' (2000) 3(3) *Journal of International Economic Law* 525, 527.
[61] GW Schweizer, 'The Negotiation of the Cartagena Protocol on Biosafety' (2000) 6(2) *The Environmental Lawyer* 577, 596.
[62] S Charnovitz, 'The Supervision of Health and Biosafety Regulation by World Trade Rules' (1999-2000) 13 *Tulane Environmental Law Journal* 271, 300.
[63] O Rivera-Torres, 'The Biosafety Protocol and the WTO' (2003) 26(2) *Boston College International and Comparative Law Review* 263, 322.
[64] Eggers and Mackenzie (n 60), 539; and Oberthür and Gehring (n 2), 15.
[65] The Protocol, Articles 10(1) & 15(1).
[66] *Ibid*, Articles 15(1).

conferring the parties with obligations to make such decisions within a time limited period, which is consistent with relevant WTO obligations.[67]

However, as outlined in Chapter 2, this does not necessarily mean that the risk assessment procedures under the Protocol and those under the SPS Agreement are fully consistent with one another.[68] It is also not clear how states will implement such procedures in practice. Despite all of these pre-emptive measures, there is still a risk of conflict. As argued in Chapter 3, it is highly likely that the different risk assessment procedures under the Protocol and under the SPS Agreement may conflict with one another, especially in relation to the precautionary principle which plays different roles in risk assessment and decision making process under the treaty regimes.

Moreover, it is at least questionable how effectively the negotiations of the Protocol took into account the WTO Agreements. The reasons being that the majority of the Protocol negotiators are representatives from Environment Ministries of participating countries, yet they were negotiating on an international treaty the subject of which is largely about agriculture and agricultural trade. It is likely that governmental officials from environmental sectors often possess different attitudes towards technological innovation and their products, such as biotechnology and GMOs. In addition, they often lack understanding about GMO production and trade. Thus, the extent to which the negotiators are neutral and technically equipped during the Protocol negotiation processes is disputable, and is arguably a perennial problem.

At the institutional level, being consistent with the principles of cooperation and harmonisation, the Protocol has made significant efforts in reconciling with the WTO regime through bodies, such as, its Secretariat and COP-MOPs. The CBD Secretariat, which also serves as the Secretariat to the Protocol, has an explicit and far-reaching mandate on managing overlap.[69] It has made increasing efforts to cooperate with the WTO Secretariat.[70] This is in line with one of the functions of the CBD Secretariat which is to 'coordinate with

[67] *Ibid*, Articles 9 & 10. For more discussions, see PE Hagen and JB Weiner, 'The Cartagena Protocol on Biosafety: New Rules for International Trade in Living Modified Organisms' (2000) 12 *Georgetown International Environmental Law Review* 697, 714-5; and Eggers and Mackenzie (n 60), 539.
[68] This was discussed in detail in Chapter 2, section 6 of this thesis.
[69] S Jinnah, *Post-Treaty Politics: Secretariat Influence in Global Environmental Governance* (MIT Press, 2014), 74.
[70] P Birnie, AE Boyle and C Redgwell, *International Law and the Environment* (3rd edition, Oxford University Press, 2009), 802.

other relevant international bodies and, in particular to enter into such administrative and contractual arrangements as may be required for the effective discharge of its functions'.[71]

Moreover, reflecting on the principle of good faith, the Protocol endeavours to facilitate information exchange with technical institutions and other bodies, including the WTO.[72] It gives the WTO Committee on Sanitary and Phytosanitary Measures an observer status in its COP-MOPs which make authoritative decisions regarding the Protocol.[73] The COP-MOPs have also put much emphasis on examining the relationship between the Protocol and other relevant international rules, have had this topic as a standing issue on their agendas, and have requested the Executive Secretary (subject to availability of funds) to further pursue cooperation with other organisations, conventions and initiatives.[74]

The empirical studies carried out in the course of this thesis reaffirmed that there already existed collaboration between the WTO and Protocol organs, although not necessarily to a satisfactory level. In particular, organisational representative AO1 stated that the Protocol had made all sorts of efforts to appear to be consistent with trade rules. If similar efforts were being made by the trade community, potential conflicts may not be completely avoided, but at least the conflicts or tension could be mitigated to a large extent.[75] Agency AO1 pointed out that there appeared to be institutional collaboration between the Secretariats of the WTO and the CBD, including but not limiting to issues concerning GMOs. For example, the CBD Secretariat had been involved in the discussions under the WTO Doha Round on the reconciliation between trade rules and multilateral environmental agreements. The CBD Secretariat has observer status in the Committee on Trade and Environment (CTE), it has followed and contributed to relevant developments under the WTO, and it provides inputs and reactions to the International Plant Protection Convention which was one of the WTO standard-setting bodies.[76] In relation to the regulation of GMOs, the CBD Secretariat has been following up developments in the WTO that have some significance to the work under the Protocol, providing information to the WTO through its observer status in the CTE, and

[71] The CBD, Article 24(d).
[72] COP-MOP 7 Decisions, 'Cooperation with Other Organisations, Conventions and Initiatives' (4 October 2014) UNEP/CBD/BS/COP-MOP/DEC/VII/6.
[73] COP 9 of the CBD Decisions IX/4, 'Gaps and Inconsistencies in the International Regulatory Framework', para 4.
[74] COP-MOP 6 Decisions, 'Cooperation with Other Organisations, Conventions and Initiatives' (5 October 2012) BS-VI/6; COP-MOP 7 Decisions (n 72); and COP-MOP 8 Decisions, 'Cooperation with Other Organisations, Conventions and Initiatives' (14 December 2016) CBD/CP/MOP/DEC/VIII/6.
[75] Interview, Respondent A of Organisation 1, July 2012.
[76] *Ibid*.

providing a summary of the decisions that have been reached by the parties to the Protocol to the WTO Secretariat.[77]

5. Institutional cooperation with an aim of pursuing a coordinated policy: practice of the WTO

5.1 Environmental law's influence on WTO processes: there already exists certain level of institutional integration

Reflecting on the principles that lie behind systemic integration, including the principles of mutual supportiveness, good faith, cooperation, and harmonisation, the WTO has made certain efforts to harmonise trade and environment regulation at both the substantive and procedural levels.

In order to enhance the mutual supportiveness of trade and environment, the Doha Ministerial Declaration mandated Members to negotiate on the relationship between WTO rules and MEAs, procedures for regular information exchange between the WTO Committees and MEA Secretariats, and the reduction or elimination of barriers to environmental goods and services.[78] This can certainly be seen as consistent with the principle of mutual supportiveness, although such negotiations have not seen much progress in practice.[79]

Reflecting on the principles of mutual supportiveness, good faith, cooperation, and harmonisation, institutional cooperation and integration is not novel to the WTO. The WTO explicitly recognises such a need: for example, it specifically refers to the requirement of cooperation in Article XV of the GATT and Article III:5 of the Marrakesh Agreement. The Marrakesh Agreement also specifically requires the General Council to 'make appropriate arrangements for effective cooperation' with other international organisations and NGOs.[80]

At the institutional level, the WTO regime has made some efforts towards reconciliation with MEAs, largely through the creation and work of the CTE. The CTE is a specific organisational body set up to identify and understand the issue of coordination and

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[77] *Ibid*.
[78] Doha Ministerial Declaration, 14 November 2001, WT/MIN(01)/DEC/1, (2002) 41 ILM 746, para 31.
[79] WTO, 'The Doha Round', available at: https://www.wto.org/english/tratop_e/dda_e/dda_e.htm; and WTO, 'Negotiations on Trade and the Environment', available at: https://www.wto.org/english/tratop_e/envir_e/envir_negotiations_e.htm, both last accessed on 30 April 2017. The Doha Round negotiations on trade and the environment will be discussed further in Chapter 3, section 3 of this thesis.
[80] The Marrakesh Agreement, Article V.

cooperation with international environmental regimes, and has sustainable development as one of its most important themes.[81] The CTE has made a positive contribution in the sense that the relationship between trade and environment has been envisaged by the Doha negotiating agenda.[82]

Moreover, there is also the SPS Committee which is tasked with developing a procedure to monitor the process of international harmonisation of SPS measures and to coordinate efforts with relevant international organisations in this regard.[83] The Committee provides a mechanism for coordination between different and fragmented international institutions.[84]

Furthermore, environmental law, together with other factors such as the emergence of internet as a simple, low cost mode of mass dissemination, has had procedural influences on WTO processes and increased its transparency and accountability.[85] Nowadays, relevant documents on WTO dispute settlement are readily available online; the DSB accepts *amicus curiae* briefs from NGOs and other groups; and NGOs are allowed to observe certain dispute settlement proceedings.[86] Such procedural improvements may arguably improve the quality of DSB decisions and enhance deliberations at the national level by create public sphere in the WTO regime.[87]

In addition, other international organisations may also have an impact on the WTO regime and its dispute settlement process through providing information and expert advice.[88] WTO panels 'have the right to seek information and technical advice from any individual or body which it deems appropriate'.[89] The SPS Agreement specifically requires a panel to 'seek advice from experts chosen by the panel in consultation with the parties to the dispute' regarding scientific or technical issues.[90] Such experts often lie with other international

[81] WTO, 'Sustainable Development', available at: http://www.wto.org/english/tratop_e/envir_e/sust_dev_e.htm, last accessed on 30 April 2017.
[82] Doha Ministerial Declaration, (n 78), paras 6, 31 & 32; and M Sinha, 'An Evaluation of the WTO Committee on Trade and Environment' (2013) 47(6) *Journal of World Trade* 1285, 1292.
[83] The SPS Agreement, Articles 3.5 & 12.4.
[84] J Scott, *The WTO Agreement on Sanitary and Phytosanitary Measures: A Commentary* (Oxford University Press, 2007), 45-6.
[85] J McDonald, 'Politics, Process and Principle: Mutual Supportiveness or Irreconcilable Differences in the Trade-Environment Linkage' (2007) 30(2) *UNSW Law Journal* 524, 539.
[86] Ibid.
[87] Ibid, 540.
[88] Foltea (n 27), 44.
[89] DSU, Article 13.
[90] The SPS Agreement, Article 11.

organisations.[91] This leaves the door open for the institutional integration between the WTO and the Protocol organs.

In practice, the WTO has already cooperated with a number of international organisations, such as the International Monetary Fund, the World Intellectual Property Organisation, the World Customs Organisation, the World Health Organisation and the Codex Alimentarius Commission, through signing cooperation agreements, consultation, exchange of statistical data, information sharing, mutual technical assistance, and provision expert advice.[92] There seems to be no reason why such cooperative activities can or should not be used in the institutional cooperation between the WTO and Protocol organs.

5.2 The efforts made by the WTO in reconciling with the Protocol organs are not fully satisfactory

In practice, the WTO has witnessed a lack of progress in clarifying and dealing with its relationship with MEAs. The CTE has been criticised as not making much progress in practice.[93] As argued by Shaffer, trade-environment issues are high profile items precisely because of their potential environmental and economic impacts. State representatives closely defend their constituencies' interests within the CTE. It is at least questionable whether the CTE has the necessary competency to address environmental issues, as state representatives before it come predominantly from foreign or trade ministries.[94]

Moreover, the SPS Committee opens its observer status to a range of international organisations such as the Codex Alimentarius, the World Organisation for Animal Health, the International Plant Protection Convention, the WHO, the UN Conference on Trade and Development, and the International Standards Organisation. Although the CBD Secretariat is an accredited observer to meetings of the WTO CTE, and has continued efforts to gain observer status in the biosafety-relevant committees (SPS and TBT Committees) of the

[91] Foltea (n 27), 44.
[92] *Ibid*, 44, 72 & 183-279.
[93] GC Shaffer, 'The World Trade Organisation under Challenge: Democracy and the Law and Politics of the WTO's Treatment of Trade and Environment Matters' (2001) 25 *Harvard Environmental Law Review* 1, 47-8 & 83; and M Gabler, 'Norms, Institutions and Social Learning: An Explanation for Weak Policy Integration in the WTO's Committee on Trade and Environment' (2010) 10(2) *Global Environmental Politics* 80.
[94] Shaffer, *ibid.*

WTO,[95] it has not been granted such an observer status, mainly due to the fact that certain WTO Members have constantly objected to granting it such status.[96]

The empirical research carried out in the course of this thesis reaffirmed that the WTO has not reconciled with the Protocol organs to a satisfactory level. In this connection, governmental representative AO1 claimed that the WTO had not made a similar effort as the Protocol in institutional integration. AO1 pointed out that trade rules did not include much concern or efforts on integrating with multilateral environmental agreements. AO1 stated that 'it is only the implementation of the Protocol which is expected to fit itself in some sort of conciliatory or harmonious way towards the trade rules, not the other way around. This is a big issue that needs to be addressed in order to achieve the aim of sustainable development'.[97]

In agreement, agency BO2 stated that the collaboration between the two institutions had not been satisfactory in practice, and both institutions were partly to be blamed.[98] BO2 stated that the WTO had closer collaboration with the CBD when the Cartagena Protocol was being negotiated. Since the Protocol had been concluded, collaboration between the two institutions had been less frequent and less close. The reasons from the WTO side were mainly that the GMO issue was only a small part of the problems and issues raised at the WTO, and the WTO had a busy schedule, a shortage of staff and very small resources to follow what was happening beyond its daily work. BO2 stated that the WTO as an institution might take into account the Protocol only if there was a formal dispute. But the decisions of the Panel had to be based on WTO Agreements. In other words, the WTO DSB could not rule on whether the countries were following the Protocol, it could only rule on whether a country followed the WTO Agreements.[99]

[95] COP-MOP 7 Decisions (n 72), para 2(c).
[96] This was pointed out by agencies AO1 and BO2 in the empirical research, which will be discussed in detail in section 7 of this chapter.
[97] Interview (n 75).
[98] Interview (n 55).
[99] *Ibid*.

6. Better institutional integration can and should be pursued: efforts to be made from both sides

6.1 The WTO should make more efforts in reconciling with the Protocol (and indeed other MEAs) organs

6.1.1 The granting of observer status

In order for the WTO Agreements and the Protocol to be systemically integrated at the institutional level, the WTO organs should make more efforts to cooperate and coordinate with the Protocol organs than they have done in the past. Doing so would be an effective way to avoid conflicts and promote the mutual supportiveness between the treaties, to provide evidence that the WTO is acting with good faith, and to promote the cooperation and harmonisation of international trade and environmental regimes. Consequently, doing so would be consistent with the requirements of the principles that lie behind systemic integration.

This can be achieved by, for example, better facilitation of information exchange and updating. The work of the WTO is not conducted in a completely transparent way. The WTO's dispute settlement procedures are confidential;[100] and the WTO meetings are generally not open to the public, although several have been held in public with the consent of the parties involved.[101] The lack of openness and transparency within a particular regime can be an impediment to regime interaction.[102] Better cooperation can and should be achieved by the WTO Committees through, for example, opening their observer status to the Protocol organs.

As argued above, the Protocol has not been granted an observer's status in the WTO Committee. The WTO requires that 'observer status should be granted to organisations which objectively contribute to the functioning and implementation of the SPS Agreement'.[103] This writer's submission is that, the WTO SPS Committee should give the Protocol/CBD Secretariat observer status at its relevant meetings, as this Secretariat arguably

[100] DSU, Artilce 14.
[101] Rules of Procedure for Meetings of the General Council, Rule 37.
[102] MA Young, 'Regime Interaction in Creating, Implementing and Enforcing International law', in MA Young (ed) *Regime Interaction in International Law: Facing Fragmentation* (Cambridge University Press, 2012), 94.
[103] Consideration of requests for observer status (Secretariat), WTO Document G/SPS/W/98, 19 Feb. 1999, at para 7.

meets the above WTO requirement for the granting of observer status, especially considering the close linkage between trade and the environment and the obvious impact of the content of the Protocol/CBD on international trade.

This assertion can be supported by the findings of the empirical research. In this connection, agency AO1, official of an international organisation, pointed out that the CBD has made consistent efforts in order to be granted an observer status at the SPS Committee. AO1 believed that such a status should have been given, since having an observer status will allow the CBD to better follow up developments and discussions in the relevant processes under the WTO, with a view to provide that information to the Protocol's parties so that they can take that information into account in the implementation of their obligations under the Cartagena Protocol.[104]

In the same vein, agency BO2, representative of another international organisation, stated that, as far as the WTO was concerned, institutional collaboration between the two organisations would be much better if the SPS Committee could give the Protocol an observer status. There could have been a regular channel for information sharing if the CBD/Protocol had observer status in the SPS Committee.[105]

Moreover, the WTO Secretariat should make better use of its observer status at the Protocol COP-MOPs.[106] As reaffirmed by agency BO2 in the empirical research, although the WTO had an observer status in the CBD and the CBD/Protocol covered a number of different issues and interests that were related to the WTO, the WTO normally does not attend or attends but contributes very little to the COP-MOPs. This was mainly due to capacity concerns and the fact that certain issues on the COP-MOPs agenda were not covered by the WTO.[107]

6.1.2 The WTO should take into account any guidelines developed under the Protocol

In order to be consistent with the principles of mutual supportiveness, good faith, cooperation, and harmonisation, another example of institutional cooperation is through mutual recognition of authority which serves as an example of 'established cooperation

[104] Interview (n 75).
[105] Interview (n 55).
[106] This argument is the result of this writer's observation while observing the COP-MOP 6 in Hyderabad, India from 1 to 5 October 2012.
[107] Interview (n 55).

between international organisations with distinct but overlapping functions'.[108] The WTO Secretariat and Committees should cooperate with other international organisations by recognising the authority of recommendations, guidelines and technical standards developed under other organisations. In order to harmonise SPS measures on as wide a basis as possible, the SPS Agreement encourages its members to justify their SPS measures against international standards, guidelines and recommendations set up by other international organisations, although such standards do not necessarily have binding force under the SPS Agreement.[109] SPS measures which conform to recognised international standards are deemed to be consistent with both the SPS Agreements and the GATT.[110]

As discussed in Chapter 2, the SPS Agreement recognises three international standard-setting organisations.[111] The TBT Agreement also recognises the authority of relevant international standards developed under other institutions.[112] Although the Protocol/CBD is not recognised as a relevant standard-setting organisation by the WTO, its COP-MOP 6 discussed the possibility of referencing the Protocol under the standards of the WTO SPS Committee, but did not reach any conclusion on this issue.[113]

In practice, the Protocol/CBD is not likely to be accepted as an international standard-setting organisation by the WTO in the foreseeable future. Apart from the political difficulties, the main technical reason is that the WTO requires that an international standardising body must be open for membership to all (WTO) Members.[114] The Protocol as a UN treaty only has parties that are sovereign jurisdictions, and is not open to WTO members which are not sovereign jurisdictions, such as Hong Kong (China) and Macao (China).

This situation was reaffirmed by the findings of the empirical research carried out in the course of this thesis. As commented by agency BO2, official of an international organisation, such non-state WTO members that were not able to be Protocol members, together with WTO member states which chose not to become a Protocol member, made it

[108] Scott (n 84), 244.
[109] The SPS Agreement, Article 3.1.
[110] *Ibid*, Article 3.2.
[111] See Chapter 2, section 4.3.2 of this thesis.
[112] The TBT Agreement, Article 2.4.
[113] COP-MOP6 Decisions, 'Handling, Transport, Packaging and Identification of Living Modified Organisms' (5 October 2012) BS-VI/8.
[114] The SPS Agreement, Annex A (3)(d); and *United States-Measures Concerning the Importation, Marketing and Sale of Tuna and Tuna Products*, ABR, WT/DS381/AB/R, 16 May 2012, 136, para 359.

difficult for standards and guidance developed under the Protocol to be formally recognised by the SPS Agreement. Moreover, in practice, the SPS Committee had not received proposals, or considered and discussed the possibility of recognising any other relevant standard-setting bodies.[115]

Similarly, although not specifically commenting on the issue of institutional collaboration, governmental official BJ1 stated that there was nothing preventing the SPS Agreement from recognising other institutions as international standard-setting bodies, such as the Cartagena Protocol which was 'a global agreement where the large majority of countries have signed up to and may even be more active than the WTO at this point'.[116] However, BJ1 pointed out this was not likely to happen in practice because the WTO member states would not reach such a consensus.[117]

Nevertheless, the Parties to the Protocol are in the process of setting up detailed guidance on risk assessment and on socio-economic considerations within the structure of the Protocol. Considerable efforts have been made in this direction, and more work and improvements are needed before the parties can adopt authoritative documents by consensus. Once the guidance on risk assessment and on socio-economic considerations are adopted under the Protocol, there does not seem to be any good reason why decisions and compromises reached in one international institution (the Protocol) should not be respected or followed by largely overlapping members in another institution (the WTO).

In relation to guidance on risk assessment, in COP-MOP 4, the Parties to the Protocol established an *Ad Hoc* Technical Expert Group (AHTEG) on Risk Assessment and Risk Management, charged with the responsibility of developing further guidance on specific aspects of risk assessment and risk management.[118] With input from the Open-Ended Online Expert Forum (set up to support the work of the AHTEG by providing information that is relevant to its mandate), the fourth meeting of the AHTEG developed a revised version of the Guidance on Risk Assessment of Living Modified Organisms (the Guidance), which was designed to assist Parties and other governments in implementing relevant provisions on risk

[115] Interview (n 55).
[116] Interview, Respondent B of Jurisdiction 1, December 2012.
[117] *Ibid.*
[118] COP-MOP 4 Decisions, 'Risk Assessment and Risk Management' (16 May 2008) BS-IV/11.

assessment.[119] As a living document, the Guidance has been further improved, updated and tested.

Although the COP-MOP 6 decided not to endorse the Guidance yet, it did 'commend' the progress made on developing it.[120] The Parties recognised that the Guidance does not impose any obligations on Parties, and should be tested nationally and regionally, with the mandate of the Open-Ended Online Forum being extended, and a new AHTEG being established.[121] In the more recent COP-MOPs 7 and 8, the Parties again considered but did not endorse the Guidance.[122] The COP-MOP 7 required further revision, improvement, and testing of the Guidance, with input from the extended AHTEG and the Open-Ended Online Forum.[123] The COP-MOP 8 invited interested parties, other governments and relevant organisations to use the Guidance as a voluntary tool in assisting risk assessments, and extended the Open-Ended Online Forum for information exchange and further revision on the Guidance.[124]

In relation to guidance on socio-economic considerations, a workshop on Capacity-building for Research and Information Exchange on Socio-economic Impacts of LMOs was held in November 2011.[125] The report of which, together with the Note by the Executive Secretary on Socio-Economic Considerations, was considered by the parties in COP-MOP 6.[126] In COP-MOP 6, the Parties expressed the need for further guidance on the implementation of Article 26(1) of the Protocol (on socio-economic considerations). The meeting also achieved a broad consensus that socio-economic considerations require substantive engagement, and realised that the first step should be to clarify what constitute socio-economic considerations. More importantly, as a real breakthrough, the COP-MOP 6 established for the first time an AHTEG on Socio-Economic Considerations to clarify the concept of socio-economic considerations which also opens the way to developing guidelines

[119] COP-MOP 6 meeting documents, 'Guidance on Risk Assessment of Living Modified Organisms' (30 July 2012) UNEP/CBD/BS/COP-MOP/6/13/Add.1, 8.
[120] COP-MOP 6 Decisions, 'Risk assessment and risk management (articles 15 and 16)' (5 October 2012) BS-VI/12, 88-92.
[121] *Ibid*.
[122] COP-MOP 7 Decisions, 'Risk assessment and risk management (Articles 15 and 16)' (4 October 2014) UNEP/CBD/BS/COP-MOP/DEC/VII/12.
[123] *Ibid*.
[124] COP-MOP 8 Decisions, 'Risk assessment and risk management' (16 December 2016) CBD/CP/MOP/DEC/VIII/12, paras 3 & 7.
[125] COP-MOP 6 Information Documents, (4 August 2012) UNEP/CBD/BS/COP-MOP/6/INF/13.
[126] COP-MOP 6 Official Documents, (14 December 2011) UNEP/CBD/BS/COP-MOP/6/1.

in this regard in the future.[127] The AHTEG was extended by the Parties decisions in COP-MOP 7, tasked with further developing conceptual clarity as well as 'an outline for guidance' with a view to making progress towards achieving operational requirements on socio-economic considerations,[128] which was further extended in the more recent COP-MOP 8.[129]

The guidelines, standards and recommendations developed under the Protocol which are widely or globally recognised can be seen as soft law in nature. They have the possibility of being accepted as presumptively authoritative by the WTO Secretariat, Committees, and DSB in the future. The development of standards influenced by the Protocol could affect outcomes of WTO disputes.[130] Even if not recognised by the WTO as international standards, considering their relevance to the work of the WTO, the WTO DSB may, and should, based on the principles of mutual supportiveness, good faith, cooperation, and harmonisation, be interested in the guidelines developed under the Protocol. Consequently, based on the principles that lie behind systemic integration, such guidelines might be taken into account by the WTO organs and the DSB.

This assertion may be supported by previous practice from other fields. For example, in dealing with certain developing countries' concerns on hazardous or toxic products, the CTE refers to a number of existing international agreements including the Basel Convention and the London Guidelines.[131] Moreover, the WTO adjudicators have already taken into account acts emerging from other international organisations that are not traditional sources of international law, such as 'treaty implementation standards, authoritative findings of legislative facts, recommendation, pronouncements, and informal interpretations'.[132] For example, in the *Mexico-Telecoms* case, the Panel referred to an UN document and an OECD Recommendation to facilitate the interpretation of WTO

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[127] COP-MOP 6 Decisions, 'Socio-Economic Considerations' (5 October 2012) BS-VI/13, 94.
[128] COP-MOP 7 Decisions, 'Socio-Economic Considerations' (4 October 2014) UNEP/CBD/BS/COP-MOP/DEC/VII/13.
[129] COP-MOP 8 Decisions, 'Socio-Economic Considerations (Article 26)' (14 December 2016) CBD/CP/MOP/DEC/VIII/13.
[130] TP Stewart and DS Johanson, 'A Nexus of Trade and the Environment: The Relationship between the Cartagena Protocol on Biosafety and the SPS Agreement of the World Trade Organisation' (2003) 14(1) *Colorado Journal of International Environmental Law and Policy* 1, 45-52.
[131] WTO, 'The Environment: A Specific Concern', available at: https://www.wto.org/english/thewto_e/whatis_e/tif_e/bey2_e.htm, last accessed on 30 April 2017; and London Guidelines for Exchange of Information on Chemicals in International Trade, UNEP-guidelines, as amended 1989).
[132] Foltea (n 27), 42.

wordings.[133] None of these instruments were considered under VCLT Article 31(3)(c) which only refers to the traditional sources of international law.[134]

6.1.3 The WTO, Protocol and Codex organs should collaborate with one another in developing guidelines on risk assessment

As a requirement of the principles of mutual supportiveness and good faith, one further way of institutional cooperation is for the institutions to review their regimes for supporting research development. For example, the WTO and the Protocol Secretariats may jointly establish specific bodies or draft guidelines on environment-related trade measures so as to avoid potential conflicts.[135] Drawing on the experiences of the UN Forum on Forests,[136] the Intergovernmental Forum on Mining, Minerals, Metals and Sustainable Development,[137] and the Intergovernmental Forum on Chemical Safety under the WHO,[138] an Intergovernmental Forum on Trade and Biosafety could be set up to build formal linkages between the WTO and the Protocol, and to provide the institutions with a mechanism to discuss and consult on issues relevant to the treaties.[139]

The treaty organs can cooperate with one another to clarify certain substantive issues. For example, the Protocol may support, strengthen, and positively reinforce the SPS Agreement by better defining the precautionary principle, providing an excellent explanation on what a scientific risk assessment should entail, and making reference to risk management.[140] The treaty organs may also collaborate with one another to clarify the consideration of social, cultural and ethical values along with scientific evidence in determining the validity of trade restrictive measures.[141] Moreover, the WTO can also make more efforts to cooperate with the Protocol through the scientific and technical subsidiary organs. The WTO organs may take into account conclusions drawn by the Open-Ended

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[133] *Mexico-Measures Affecting Telecommunications Services (Mexico-Telecoms)*, Panel Report WT/DS204/R, 2 April 2004, para. 7.236.
[134] Foltea (n 27), 44.
[135] OS Stokke, 'The Interplay of International Regimes: Putting Effectiveness Theory to Work', (2001) FNI Report 14/2001, 11, available at http://dspace.cigilibrary.org/jspui/handle/123456789/12090, last accessed on 30 April 2017.
[136] For details see http://www.un.org/esa/forests/, last accessed on 30 April 2017.
[137] For details see http://www.globaldialogue.info/wn_e.htm, last accessed on 30 April 2017.
[138] For details see http://www.who.int/ifcs/en/, last accessed on 30 April 2017.
[139] For more discussions, please see GK Rosendal, 'Impacts of Overlapping International Regimes: The Case of Biodiversity' (2001) 7 *Global Governance* 9.
[140] Jaffe (n 38).
[141] RB Stewart, 'GMO Trade Regulation and Developing Countries', *Public Law & Legal Theory Research Paper Series Working Paper No. 09-70*, (New York University School of Law, 2009), 25.

Online Forums and ad-hoc working group of experts under the Protocol, perhaps in a way similar to reviewing unsolicited *amicus curiae* briefs.[142]

More specifically, in terms of the ongoing development of guidelines on risk assessment under the Protocol, apart from the argument made in the above paragraphs that the WTO should take such guidelines into account when they are completed, there should be better institutional integration. What is more, such institutional integration should not be limited to the treaty organs of the WTO and Protocol. Other relevant international institutions, such as the Codex Alimentarius Commission, should also be included in this process. This is consistent with and may serve as an example of this thesis's overall argument that treaty conflicts should be avoided proactively with an aim of defragmentation of international law. That is to say, based on the principles of mutual supportiveness, good faith, cooperation, and harmonisation, the WTO Secretariat, the Protocol Secretariat and COP-MOPs, and the Codex Alimentarius Commission should cooperate and collaborate with one another while drafting such guidelines, with the aim of avoiding any treaty conflicts.

At the institutional level, harmonisation efforts have been made by the Codex and the WTO. Officials within the two regimes have increasingly worked together to ensure greater coherence: for example, the Codex normally observes SPS Committee meetings, while the SPS Committee provides feedback to the Codex on behalf of WTO Members regarding clarification of issues and update of standards.[143] In so doing, the SPS Committee has notified the Codex that it lacked a certain standard; subsequently, the Codex agreed to set up the required standard which successfully avoided a trade dispute.[144] Reasons for having had such collaboration are arguably because, as previously discussed, the Codex is accepted as an international standard-setting body by the SPS Agreements,[145] and because of the fact that the WTO and Codex are both intergovernmental organisations which rely on member states for decision-making process.[146]

The Codex has endeavoured to work on the issue of GMOs. In 2003, the Codex issued its internationally harmonised guidelines for safety approval, naming *Principles and*

[142] T Kelly, 'Tuna-Dolphin Revisited' (2014) 48(3) *Journal of World Trade* 501, 520-1.
[143] Scott (n 84), 68-9; and Pollack and Shaffer (n 30), 173-4.
[144] Pollack and Shaffer (n 30), 174.
[145] See Chapter 2, section 4.3.2 of this thesis.
[146] How the difference of delegates in international organisations might affect institutional integration is also discussed in section 7 of this chapter.

Guidelines on Foods Derived from Biotechnology, which contain three sets of rules on risk assessment and food safety analysis of GM foods.[147] The *Principles* reflect the general principles for risk assessment and management negotiated under the Codex, and apply them to the case of biotechnology; while the *Guidelines* go into details regarding technical issues of risk assessment.[148] These guidelines are likely to serve as a first point of reference for countries in shaping their national GMO regulations.[149]

The Codex *Principles and Guidelines* have played an important role in the WTO case law. In the *EC-Biotech* [150]case, for example, the Panel repeated referred to Codex standards, principles, and guidelines in 36 separate paragraphs of the Panel Report, while interpreting specific terms of the SPS Agreement, including additive, contaminant, and risk assessment.

The SPS Committee's successful reference of matters to Codex for standard-setting, together with the WTO DSB's reference to Codex definitions in the interpretation of WTO Agreements, proves that 'governance through networks of governmental officials and members of different international secretariats *can* work'.[151] The Codex-SPS Committee coordination should be expanded to also include the CBD Secretariat which represents interests of the Cartagena Protocol. In order to avoid conflicts, the WTO could suggest that the Protocol make reference to what had been done under the Codex, particularly regarding the definition of and guidance on risk assessment, which were recognised by the WTO.[152]

This argument was reflected to a certain extent by the findings of the empirical research. In this connection, organisational delegate BO2 stated that there could be or should be a lot more coordination both at the international and national levels. The development of guidelines on risk assessment and management, both at the national and international levels, should include both trade and environment officials, so that conflicts could be avoided from

[147] The Codex, *Principles for the Risk Analysis of Foods Derived from Modern Biotechnology* (2003, revised 2008), Codex Doc CAC/GL 44; *Guideline for the Conduct of Food Safety Assessment of Foods Derived from Recombinant-DNA Plants* (2003, revised 2008), Codex Doc CAC/GL 45; and *Guideline for the Conduct of Food Safety Assessment of Foods Produced Using Recombiant-DNA Microorganisms* (2003), Codex Doc CAC/GL 46.
[148] Pollack and Shaffer (n30), 167-8.
[149] *Ibid*, 168.
[150] *Ibid*, 174.
[151] *Ibid*.
[152] *Ibid*.

the very start of the development of guidelines and methodologies.[153] Agency BO2 claimed that the Secretariats of the two organisations should work together and be aware of what the other one was doing. For example, the WTO could be more directly involved in developing guidelines on risk assessment under the Protocol. The WTO could point out potential conflicts and flag these issues to its member delegates.[154]

The importance of collaboration on risk assessment and management were also recognised by other interviewees who did not comment specifically on institutional collaboration. Organisational delegate AO1 indicated that both the Cartagena Protocol and the SPS Agreement take risk assessment as a basis for decision taking.[155] Governmental official BJ1 also stated that the basic pillar of implementing the Protocol was domestic legislation on risk assessment and risk management. The Protocol was much more specific in terms of GMO risk assessment and risk management, which have the potential to be referred to by the WTO.[156]

6.2 The Protocol organs can better collaborate with the WTO

Having made consistent efforts in collaborating with the WTO does not necessarily indicate that the practice by the Protocol cannot be improved. In order to avoid conflicts between the treaties, the Protocol can and should collaborate with and learn from the WTO to a larger extent. This may be achieved by, for example, replicating the WTO Trade Policy Review Mechanism (TPRM),[157] which is the main transparency instrument of the WTO, in the Protocol.

As an earlier result of the Uruguay Round negotiations, the TPRM was established to collectively evaluate the trade policies and practice of individual Members, with an aim of enhancing the transparency of Members' trade policies and facilitating the smooth functioning of the WTO.[158] All WTO Members are subject to periodic review under the TPRM.[159]

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[153] Interview (n 55).
[154] *Ibid*.
[155] Interview (n 75).
[156] Interview (n 116).
[157] WTO Trade Policy Review Mechanism, 15 April 1994, 1869 UNTS 480.
[158] TPRM, para A.
[159] TPRM, para C(ii).

Reviews are conducted by the Trade Policy Review Body (TPRB) which is the General Council in another guise, comprising the WTO's full membership.[160] The reviews are based on both a policy statement by the Member under review and a report drawn up by the Secretariat on its own responsibility.[161] The focus of the reviews is Members' own trade policies and practices, while taking into account their wider economic and developmental needs, their policies and objectives, as well as the external environment that they face.[162] Apart from the reviews of individual Members, the TPRB is also tasked to carry out an annual overview of developments in the international trading environment which are having an impact on the multilateral trading system.[163]

Since its creation in 1989, the TPRM has become a major source of information on the trade policies of individual Members and international trade developments, a forum where policies and concerns can be explained and expressed on a largely non-legalistic basis.[164] These 'peer reviews' provide an opportunity for other WTO Members to understand a Member's policies and practices, and for the reviewed Member to get feedback on its performance in the WTO system; consequently, they encourage Members to follow more closely the WTO rules and to fulfil their commitments.[165] They also increase the transparency in the trade policies and practices of individual Members and the WTO as a whole.[166]

The Protocol, on the other hand, requires its Parties to monitor the implementation of their obligations under the treaty, and report periodically to the COP-MOPs on their implementation measures.[167] The Protocol also established the Biosafety Clearing-House to facilitate the exchange of information and policies and assist Parties to implement the treaty.[168] Parties are required to make available to the Biosafety Clearing-House of their relevant legislation and guidelines, treaties other than the Protocol, summaries of risk

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[160] TPRM, para C(i).
[161] TPRM, para C(v).
[162] TPRM, para A(ii).
[163] TPRM, para G.
[164] S Laird and R Valdés, 'The Trade Policy Review Mechanism' in M Daunton, A Narlikar and RM Stem (eds), *The Oxford Handbook on the World Trade Organisation* (Oxford University Press, 2012), 465 & 469.
[165] WTO, 'Trade Policy Reviews: Ensuring Transparency', available at: https://www.wto.org/english/thewto_e/whatis_e/tif_e/agrm11_e.htm, last accessed on 30 April 2017.
[166] Laird and Valdés (n 164), 481; and J Chaisse and M Matsushita, 'Maintaining the WTO's Supremacy in the International Trade Order: A Proposal to Refine and Revise the Role of the Trade Policy Review Mechanism' (2013) 16(1) *Journal of International Economic Law* 9, 20-1.
[167] The Protocol, Article 33.
[168] *Ibid*, Article 20.

assessment or environmental reviews of GMOs, decisions regarding the transboundary movement of GMOs, and national reports on the implementation of the Protocol.[169]

The Protocol relies largely on its Parties for information exchange and reporting on its implementation. It is the submission of this author that the Protocol could learn from the better practice of the WTO and replicate the TPRM, by establishing an organ under the Protocol equivalent to the TPRB to carry out reviews on the Parties relevant policies and practices regarding the Protocol. Once such an organ is established, it should collaborate and cooperate with the TPRB, particularly on matters relevant to international trade in GMOs. Even before its establishment, such collaboration may be achieved between the CBD Secretariat and the TPRB (which is, in essence, the General Council). Doing so would see greater transparency of Parties GM policies and facilitate the implementation of the Protocol, and contribute to avoidance of conflicts between the WTO Agreements and the Protocol.

Moreover, the empirical research suggested that the extent to which the Protocol organs collaborate with the WTO was not fully satisfactory. In particular, organisation representative BO2 stated that more efforts could also have been made from the CBD/Protocol side.[170] As stated by agency BO2, the WTO representatives observed the COP-MOP 6 meetings of the Cartagena Protocol in India in October 2012, yet, the SPS Committee was not made aware of the fact that one issue[171] on the meeting agenda was to recommend relevant standards developed under the Protocol to be recognised in the SPS Agreement, which was the main reason why the WTO observed the COP-MOP 6 meeting. It was one of the WTO member states, not the CBD Secretariat, which pointed out the issue to the SPS Committee. BO2 believed this was an example of the way it should not have worked.[172]

Agency BO2 thus stated that more efforts should also be made by the CBD Secretariat in offering relevant information and providing possible development of the Protocol which might be relevant to the WTO. In relation to the standard-setting issues discussed in COP-MOP6, agency BO2 claimed that 'there should have been much collaboration early on, with a discussion by the CBD saying we are being asked to prepare some standards, if we were to do that, what would be the value for the WTO?' In the

[169] *Ibid.*
[170] Interview (n 55).
[171] The COP-MOP 6 of the Protocol discussed the possibility of referencing the Protocol under the standards of the WTO SPS Committee. This was discussed in detail in section 6.1.4 of this chapter.
[172] Interview (n 55).

meantime, BO2 stated that the WTO Secretariat and Committees would have known this issue much earlier if it was following the CBD/Protocol more regularly and closely.[173]

7. Limitations of institutional integration

Institutional cooperation and coordination, despite its significant value, is obviously not the only conflict avoidance technique, and it has its disadvantages. Concerns are that international institutions have their own specific working areas and mechanisms which normally have narrow functions. The same is also true for domestic governmental sectors, such as Ministry of Trade and Ministry of Environment, which work on different areas of domestic governance. Requiring them to coordinate and cooperate with other institutions or sectors may increase their workload and may not turn out to be feasible in practice. Whether institutional cooperation and coordination between the relevant organs of the WTO and the Protocol is actually happening will be examined below in detail.

An issue which was omitted in the original research is the differences of the delegates in the CBD Secretariat and the SPS Committee. The relationship between the two organs is not a relationship between equal or similar institutions. In other words, decisions makings under the institutions are different. The CBD Secretariat is formed by international civil servants and speaks with one voice, while the SPS Committee allows WTO Members to intervene the decision-making process. The culture of the WTO has discouraged the Secretariat and Committees from taking a hard line against Members in anything other than the most diplomatic language.[174]

Having such differences does not necessarily mean that the institutions cannot collaborate, although they would inevitably affect the extent of the collaboration. If the intuitions were at the same level, their collaboration would have been more straightforward.

As the original research design did not include this question, the issue of whether the difference in the status of institutions might affect institutional collaboration was thus not enquired specifically during the empirical research. On reflection, the empirical research should have included this question, which may be examined in any follow-up research in the future.

[173] *Ibid.*
[174] Laird and Valdés (n 164), 465.

Even so, this issue was reflected to some extent by the empirical findings. For example, agency AO1, official of an international organisation, commented during the interview that it was not the Committee who did not wish to give the CBD Secretariat an observer status. The fact was that the CBD's application for an observer status to the SPS and TBT Committees had been constantly blocked by some WTO members, although the specific names of such Members were not mentioned during the interview.[175] Agency BO2 also confirmed that certain Members have not agreed to give such an observer status to the CBD.[176] In other words, even if the SPS Committee wished to grant such an observer status, it was not able to do so against Member States' specific objections.

8. Conclusion

This chapter has found that the principles that lie behind systemic integration, including the principles of mutual supportiveness, good faith, cooperation, and harmonisation, can and should be relied upon to reconcile the WTO Agreements and the Protocol at the institutional level. The institutional integration, with an aim of avoiding conflicts between the treaties, can be achieved, for example, through cooperation and coordination between the treaty organs in terms of law-making and giving authoritative interpretation.

It also found that at the institutional level, the CBD Secretariat and the Protocol's COP-MOPs have made significant efforts in reconciling with the WTO Secretariat both at the law-making stage and during its everyday work, while similar efforts had not been made the other way round.

Both treaty organs may be partly to blame for the current unsatisfactory collaboration. Therefore, more efforts and improvements could be made from both sides in the future to strengthen institutional integration between the organisations through, for example, better information exchange, and more collaboration in relation to international standard setting.

In this connection, this chapter argued that the WTO organs should make more efforts in collaborating with those of the Protocol through, for example, reviewing its relevant provisions in the light of the Protocol, granting the Protocol observer status in the SPS and

[175] Interview (n 75).
[176] Interview (n 55).

TBT Committee meetings, and possibly recognising the Protocol as a standard setting body and accepting guidance and standards developed under the Protocol as authoritative.

However, institutional integration has inherent limitations which unavoidably affect the extent to which it could contribute to avoiding conflicts between the WTO Agreements and the Protocol. Such limitations, together with the failure for systemic integration at the judicial level which was examined in detail in the preceding chapter, may lead one to argue that efforts can and should be made at other levels in order to avoid the treaty conflicts. As argued in Chapter 4, the principles that lie behind systemic integration have the potential to be applied at both the institutional and domestic levels with the aim of conflict avoidance. We now turn in details in the next chapter, and look at whether, and if yes, how conflicts between the WTO Agreements and the Protocol can be avoided at the domestic level.

Chapter 7

Avoiding Treaty Conflicts through Domestic Integration: The Principles behind Systemic Integration Can and Should be Relied upon by States in the Process of Domestic Law-making and Treaty Implementation

1. Introduction

The review and evaluation of international treaties and the relationship between them should be based not only on the textual analysis of treaty provisions, but also on the analysis of the implementation of the treaties. International rules can be both a response to, as well as an impetus for, the development of national regulation.[1] The implementation of WTO Agreements and the Cartagena Protocol relies on a wide range of domestic legislative measures regulating the use of GMOs within member states' territories, including international trade in GMOs.

So far, this thesis has argued that potential conflicts between the WTO Agreements and the Protocol can be avoided by judicial bodies and relevant international institutions. This chapter aims to examine the extent to which the principles that lie behind systemic integration, including the principles of mutual supportiveness, good faith, cooperation, and harmonisation as discussed in previous chapters, can be relied upon to avoid conflicts between the treaties at the domestic level.

The integrity of law is often examined in legislation and in adjudication.[2] Building upon the traditional way of considering treaty conflicts from the perspective of judicial bodies, this chapter offers an original approach by examining the relationship between the WTO Agreements and the Protocol from the perspective of states' implementation process, a perspective that has hitherto remained largely unexplored. This approach may produce new insights and opportunities to exploring the potential conflicts between the treaties, and the ways in which the aim of sustainable development can be achieved.

[1] D French, 'The Regulation of Genetically Modified Organisms and International Law: A Call for Generality', in L Bodiguel and M Cardwell (eds), *The Regulation of Genetically Modified Organisms: Comparative Approaches* (Oxford University Press, 2010), 357.
[2] R Dworkin, *Law's Empire* (Harvard University Press, 1986), 167.

The heart of the world's efforts to achieve sustainable development is the 'cohesive nationally owned sustainable development strategies'.[3] It is hoped that looking at the implementation and interpretation of treaties by states may provide additional support and guidance for conflict avoidance and resolution, a practical solution on how potential conflicts between the treaties can be avoided, and a new way to contribute to the integration of international law. The importance and practicality of this approach will also be tested against the findings of the empirical study conducted as part of research for this thesis.

This chapter starts with explaining the need to examine conflicts between the WTO Agreements and the Protocol from the perspective of states. It then takes the EU as a case study to draw some preliminary conclusions, and elaborates on the practical dilemma faced by states regarding whether or not they could utilise and implement the WTO Agreements and the Protocol without violating either of them. The chapter then argues that such tension may be managed, minimised or avoided under the principles behind systemic integration, which require states to avoid treaty conflicts in the process of both domestic law-making and treaty implementation. It then examines whether, and if yes, the extent to which the principles behind systemic integration have been reflected in states' practice, followed by discussion on how better domestic integration can be achieved.

2. Why look at the relationship between the treaties from the perspective of states?

States play a dominant role in the international community and are the most important actors in the international legal system. They are involved in the drafting of treaties and are the ones to whom implementation of treaty obligations fall. Even in the case of disputes before judicial institutions, states play the most important role in fact-finding and providing relevant proofs and documents.

Since international law is consent-based, the avoidance and resolution of conflicts of international law are formed upon the contractual freedom of states. The success of avoiding conflicts between the WTO Agreements and the Protocol as proposed in Chapters 5 and 6, be it judicial or institutional integration, eventually relies on the willingness of states. Even so, states are obviously guided by the general principle of good faith in international law which limits their actions and sovereignty. States are also prohibited by the principle of

[3] UN, *Transforming Our World: the 2030 Agenda for Sustainable Development*, Report of the UN Sustainable Development Summit 2015, A/RES/70/1, adopted on 25 September 2015, para 63.

estoppel from taking up any legal position that contradicts their previous representations or conduct.[4]

As stated by organisation delegate AO2 in the empirical research carried out in the course of this research, it was the job of states, not WTO judges or any other judicial institution, to deal on a permanent basis with treaty conflicts, because neither the WTO Agreements nor the WTO judges could go against the will of the states. Even if the WTO judges wanted to give priority to the Protocol over the WTO Agreements, they did not have the power to do so.[5]

There is a wide gap between decision-making or law-making at the global scale and the urgent need for local/domestic actions. International environmental law lacks strong enforcement mechanisms. No matter how environmental law is improved, it would not have great practical implications if it could not be effectively enforced. Enforcement is a weak link in many MEAs, such as the Protocol, particularly if there are potential conflicts between the MEAs and international trade rules.[6]

Within the existing legal and institutional structure of international law, potential conflict of norms may be immediately dealt with in the implementing process of treaties. That is to promote the substantive coherence through the reconciliation of treaties at both the international and domestic levels. As argued by Roch and Perrez, the international environmental regime must promote cooperation and coordination both at international level and domestic level. Moreover, states should make more sufficient commitments to MEAs by ratification, implementation, enforcement of the MEAs, closure of existing gaps, and strengthening of core environmental principles.[7]

Another important point is that there are no authoritative actors to ensure the implementation of, and compliance with, international treaties at the international level. States play a crucial role in the implementation of treaties. The effectiveness of international rules and the international legal order mostly depends on the extent to which states fulfil their

[4] The principles of good faith and estoppel were discussed in detail in Chapter 4, section 4.3 of this thesis.
[5] Interview, Respondent A of Organisation 2, September 2012.
[6] A Gupta, 'Governing Trade in Genetically Modified Organisms: The Cartagena Protocol on Biosafety' (2000) 42(4) *Environment* 22, 25.
[7] P Roch and FX Perrez, 'International Environmental Governance: The Strive Towards a Comprehensive, Coherent, Effective and Efficient International Environmental Regime' (2005) 16 *Colorado Journal of International Environmental Law and Policy* 1, 18-9.

international obligations. States normally have significant discretion in determining the degree and methods, standards, and timetable of national implementation, which will eventually determine how successful an international treaty is.[8]

Both the WTO Agreements and the Protocol rely on member states for their implementation. States are free to decide how to deal with GMOs and biosafety at the national level, although domestic legislation has to be consistent with the treaties to the extent that they affect international trade and biosafety. This is particularly true for the Protocol as it grants the Parties significant discretion in their interpretation and implementation. Its implementation largely depends on the Members' efforts in terms of drafting domestic biosafety regulations, making relevant decisions, and improving the capacity and efficacy of their biosafety laws and institutions.[9] For example, states enjoy greater regulatory flexibility under the Protocol than under the WTO Agreements in respect of taking into account the precautionary principle and socio-economic considerations in the decision making processes.[10] The more discretion Parties have, what rights and obligations they have under the Protocol is less certain. The success of the Protocol requires effective implementation at both the international and domestic levels, the latter of which is particularly more important.

What is more, the rights and duties of states under a treaty are potentially affected by interactions between the treaty and other instruments.[11] Looking at the implementation of the treaties from a norm conflict perspective, government policy-makers face a bigger challenge than judicial institutions and treaty organs, and may encounter a practical dilemma when their respective obligations under the treaties cannot be fulfilled at the same time. It will thus not be a complete map without also examining the conflicts and relationship between the WTO Agreements and the Protocol from the perspective of states' implementation of treaties.

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[8] P Birnie, AE Boyle and C Redgwell, *International Law and the Environment* (3rd edition, Oxford University Press, 2009), 10.
[9] P Kameri-Mbote, 'The Development of Biosafety Regulation in Africa in the Context of the Cartagena Protocol: Legal and Administrative Issues' (2002) 11(1) *RECIEL* 62, 65-6.
[10] This was discussed further at Chapter 2, sections 73 & 7.4 of this thesis.
[11] MA Young, 'Regime Interaction in Creating, Implementing and Enforcing International law', in MA Young (ed) *Regime Interaction in International Law: Facing Fragmentation* (Cambridge University Press, 2012), 91.

Treaty interpretation is not something that is solely the preserve of judicial institutions.[12] It is also a natural part of the implementation of international rights and obligations in the domestic sphere of member states.[13] All treaties are constantly being interpreted domestically by government policy-makers in member states, either intentionally or unintentionally. As Aust argues, 'treaty interpretation forms a significant part of the day-to-day work of a foreign ministry legal adviser'.[14]

The parties to a treaty are competent to interpret the treaty provisions, reflected only by state practice during the implementation process, although it is disputable as to whether such interpretation is treaty interpretation in a legal sense.[15] When implementing treaties, it is crucial for a state to identify what the law is; what obligations and rights it has under the law; and what interpretation an international tribunal has given to treaty provisions if such a tribunal exists in a given area.[16] How states interpret their rights and obligations under a treaty largely affect the implementation of the treaty.

Furthermore, national courts may appear to be better placed than international judicial institutions in balancing and integrating international treaties. Different international institutions take their own particular approach to interpretation, and insist on their own approach when resolving conflicts. If the law-applier is part of the same regime as one of the treaties to be interpreted, there is no doubt that this treaty will be the starting point and focus of the interpretation. For example, a WTO Panel and the AB will inevitably focus on interpreting the WTO Agreements, and are very likely to give primacy to the WTO Agreements over other relevant instruments.

In addition, compared to treaty institutions, states can be counted as a third party which may be able to interpret the treaties in a rather impartial way without focusing on only one treaty, considering that they are also parties to other relevant treaties. However, this may

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[12] D French, 'Treaty Interpretation and the Incorporation of Extraneous Legal Rules' (2006) 55 *International and Comparative Law Quarterly* 281, 287.

[13] N Matz-Lück, 'Norm Interpretation across International Regimes: Competences and Legitimacy', in MA Young (ed), *Regime Interaction in International Law: Facing Fragmentation* (Cambridge University Press, 2012), 213.

[14] A Aust, *Modern Treaty Law and Practice* (2nd edition, Cambridge University Press, 2007), 230.

[15] N Matz-Lück, 'Harmonization, Systemic Integration, and "Mutual Supportiveness" as Conflict-Solution Techniques: Different Modes of Interpretation as a Challenge to Negative Effects of Fragmentation?' (2006) 17 *Finnish Yearbook of International Law* 39, 49.

[16] J Pauwelyn, 'Bridging Fragmentation and Unity: International Law as a Universe of Inter-Connected Islands' (2003-04) 25 *Michigan Journal of International Law* 903, 907-8; and D Shelton, 'International Law and "Relative Normativity"', in M Evans (ed), *International Law* (3rd edition, Oxford University Press, 2010), 142.

not always be the case. If government policy-makers are aware that certain disputes will be resolved by a specific judicial institution (such as the WTO DSB), they will most likely focus on and give preference to the treaty which is associated with that judicial institution. Yet, states may largely stand in a more neutral position than a particular treaty institution when it comes to treaty interpretation.

3. The practical dilemma faced by governmental policy makers at the domestic level

Having argued in the previous paragraphs that the relationship between the WTO Agreements and the Protocol should be examined from the perspective of states, this section examines whether a state, which is parties to both the treaties, faces any practical dilemma when utilising and implementing the treaties in practice. In this connection, it takes the EU as a case study, and examines the EU's GMO legislative framework and whether it might lead to any potential trade disruptions, particularly regarding the adoption of precautionary measures.

3.1 The risks associated with or originated from risk regulation

As discussed previously in Chapter 2, the process of risk analysis involves functionally separated scientific issues of risk assessment, political issues of risk management, and risk communications between them.[17] Chapter 2 also found that the similar requirements for risk assessment under the SPS Agreement and the Protocol are not likely to result in any conflicts, however, the treaties' different approaches towards risk management may lead to potential conflicts, particularly regarding the adoption of precautionary trade-restrictive measures which has a much greater leniency under the Protocol than under the SPS Agreement.[18]

Deliberative decision-making and collaboration within multilateral regimes, such as between the Codex and the WTO as discussed in the preceding chapter, is most likely where the focus in on issues of scientific risk assessment, but less likely in relation to deeply politicised question of risk management, which are made primarily at the national or regional level.[19]

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[17] This was discussed in detail in Chapter 2, section 6.2 of this thesis.
[18] This was discussed in detail in Chapter 2, section 7.2 of this thesis.
[19] MA Pollack and GC Shaffer, *When Cooperation Fails: The International Law and Politics of Genetically Modified Foods* (Oxford University Press, 2009), 174-6.

There are risks on all sides of social situations.[20] Risk regulation itself may generate or increase aggregate risks for the whole community, including ancillary 'replacement' risks resulted from regulation of a particular risk, the loss of 'opportunity benefits' as a result of risk regulation, and indirect risks created by the economic costs of regulation.[21] In practice, people tend to be closely attuned to the losses resulted by any newly introduced risk (such as risks caused by GMOs), but far less concerned with the benefits that are forgone (such as economic interests) as a result of regulation.[22]

The case is particularly true when states are taking precautionary measures which may serve as a great source of potential conflicts between trade and environmental rules.[23] The precautionary principle may ban what it simultaneously mandates, since the regulation that this principle requires may rise to risks of its own.[24] For example, the ban on GMOs may result in poverty and deaths; hence the precautionary principle seems to argue both for and against banning GMOs.[25] Sunstein thus argues that if the precautionary principle is taken literally against the regulation of GMOs, it can produce palpably absurd results in terms of regulation, since precautionary measures taken against the risk associated with GMOs may give rise to substitute risks (such as starvation and expensive regulation), in the form of hazards that materialise, or are increased, as a result of regulation.[26]

Consequently, the precautionary principle should not lead to aggressive regulation of risks, as unjustified fear often lead to policies and laws that do far more harm than good.[27] Rational regulators should not only rule on the 'target' risk, but also on the systemic, risk-related effects of being precautionary, and even on the risk-related consequences of risk reduction.[28] This may be achieved by a state by seeking coordination among its governmental sectors so that a sector operating in one risk domain does not increase risks in another domain.[29] This reaffirms the previous argument that trade and environmental concerns cannot be separated from one another, but are rather mutually reinforcing.[30] That is to say, in the

[20] CR Sunstein, *Laws of Fear: Beyond the Precautionary Principle* (Cambridge University Press, 2005), 4.
[21] CR Sunstein, *Risk and Reason: Safety, Law, and the Environment* (Cambridge University Press, 2004), 135-6.
[22] Sunstein (n 20), 42.
[23] This was discussed in detail in Chapter 2, section 7.2 of this thesis.
[24] Sunstein (n 20), 14.
[25] Sunstein (n 21), 104.
[26] Sunstein (n 20), 32.
[27] *Ibid*, x & 224.
[28] *Ibid*, 49.
[29] Sunstein (n 21), 134-5.
[30] See Chapter 4, section 2.3 of this thesis.

process of risk regulation, the principles that lie behind systemic integration require states to promote the mutual supportiveness between trade and environment, to act in good faith while making risk management decisions, and to harmonise different yet relevant concerns.

The precautionary principle thus calls for a form of cost-benefit balancing, with an emphasis on risk aversion.[31] Its application against particular risks include four important factors: '(a) the level of uncertainty that triggers a regulator response, (b) the magnitude of anticipated harm that justifies such a response, (c) the tools that will be chosen when the principle applies, and (d) the margin of safety that applies in the face of doubt.'[32]

Cost-benefit analysis focuses on the actual effects of regulation, promotes a better understanding of the actual consequences of risk regulation,[33] and ensures that an accurate assessment of those consequences plays a larger role than it now does.[34] It may thus serve as a useful tool and a natural corrective to the precautionary principle and lead to more sensible regulation.[35] Cost-benefit balancing also calls for sustainable development because it requires consideration of the interests of future generations, and strongly supports sustainability as a desirable goal.[36]

The empirical research carried out in the course of this research studied the question of whether conflicts between the WTO Agreements and the Protocol have been encountered by the governmental and organisational delegates in practice. Looking into their daily work in relation to the regulation of GMOs, all 6 interviewees (AO1, BO2, AJ1, AO2, BJ1, and AJ2) who commented on this question had not experienced any conflicts between the treaties.[37] The reasons for not encountering any conflicts for respondents from international organisations seemed to be connected to the limited authority of the organisations in this field. However, 4 interviewees (BO2, AO2, BJ1, and AJ2) out of 6 were

[31] Sunstein (n 20), 57.
[32] *Ibid*, 119-20.
[33] Sunstein (n 21), 291.
[34] *Ibid*, 295.
[35] *Ibid*, 34-5 & 120.
[36] *Ibid*, 106.
[37] E.g. Agency AJ1 specifically claimed not to have experienced any tension or potential conflicts between the treaties, see Interview, Respondent A of Jurisdiction 1, November 2012. Comments made by the other interviewees will be discussed in detail in the following paragraphs.

concerned about the relationship between the treaties and envisaged that potential conflicts might arise in the future.[38]

More specifically, in relation to whether practical conflicts had been experienced during the respondents' daily work, agency AO1 had not encountered any conflicts between the WTO Agreements and the Protocol in its everyday work, because organisation 1 only examined how its treaty was being implemented by member states, regardless of the treaty's relationship with other international agreements.[39] Based on similar reasons, agency BO2 had not experienced any conflicts between the treaties, because organisation 2 only discussed issues relevant to its treaty, and only a small portion of such issues were relevant to GMOs.[40]

Although the respondents claimed not to have encountered any treaty conflicts in practice, agency BO2 pointed out that the possibility for GMO-related conflicts might increase as a result of the growing international trade in GMOs.[41] Agency AO2 envisaged that the overlap and tension between the treaties would possibly constitute obstacles for their implementation.[42]

As for state respondents, agency BJ1 was concerned about the potential conflicts that may arise from the WTO Agreements and the Protocol and had had discussions with representatives from other countries regarding the use of the precautionary principle in GMO import/export decision-making.[43] Similar concerns were shared by agency AJ2 which had not experienced any conflicts between the treaties in domestic practice, but was aware of the WTO *EC-Biotech* case which was relevant to the Cartagena Protocol.[44] In addition, AJ2 pointed out that the biggest problem of domestic regulation of GMOs was the difficulty and ambiguity of the coordination between domestic governmental sectors. It was not always clear who was in charge of what, how it should be regulated, or who oversaw the process.[45]

[38] Comments made by these interviewees will be discussed in detail in the following paragraphs.
[39] Interview, Respondent A of Organisation 1, July 2012.
[40] Interview, Respondent B of Organisation 2, November 2012.
[41] *Ibid*.
[42] Interview (n 5).
[43] Interview, Respondent B of Jurisdiction 1, December 2012.
[44] Interview, Respondent A of Jurisdiction 2, July 2012.
[45] *Ibid*.

3.2 A case study of the EU's legislative framework on GMOs and potential trade disruptions

3.2.1 A brief look at the EU's legislative framework on GMOs

The EU comprehensively regulates the intentional movements of GMOs within its jurisdiction, as well as imports of GMOs into the EU. It aims to ensure a high level of protection of human life and health, environment and consumer interests, while establishing an internal market for GM products to ensure the free movement of safe and healthy GM products within the EU.[46] The conditions for the development (including field trials and commercial cultivation), food safety, and marketing of GM products are governed both at the EU level and by international agreements. EU-wide legislation on GMOs (mainly in the form of Directives and Regulations) is issued at the EU level and implemented by Member States.

The EU issued its first Directive governing the deliberate release into the environment of GMOs in 1990,[47] its first food safety Regulation in 1997,[48] and its first food labelling Regulation in 1998.[49] The early EU GMO legislation was amended between 2000 and 2003. The current EU GMO legal framework mainly consists of the 2001 Directive (Deliberate Release)[50] which was later amended by Directive 2015/412,[51] Directive 2009/41/EC (Contained Use),[52] Regulations 1829/2003[53] and 503/2013[54] (Food and Feed),

[46] EC Directive 2001/18/EC on the deliberate release into the environment of genetically modified organisms and repealing Council Directive 90/220/EEC [2001] OJ L 106/1. (Hereinafter the 2001 Directive), Article 2(3)(4); and EC Regulation 1829/2003 on genetically modified food and feed [2003] OJ L 286/1. (Hereinafter Regulation 1829/2003), Preamble (2) & (43) &Article 1(a).
[47] EC Directive 1990/220/EEC on the deliberate release into the environment of genetically modified organisms [1990] OJ L 117/15.
[48] EC Regulation No 258/1997 concerning novel foods and novel food ingredients [1997] OJ L 43/1.
[49] EC Regulation No 1139/1998 concerning the compulsory indication of the labelling of certain foodstuffs produced from genetically modified organisms of particulars other than those provided for in Directive 79/112/EEC [1998] OJ L 159/4.
[50] (n 46).
[51] EC Directive 2015/412 amending Directive 2001/18/EC as regards the possibility for the Member States to restrict or prohibit the cultivation of genetically modified organisms (GMOs) in their territory [2015] OJ L 68/1. (Hereinafter Directive 2015/412).
[52] EC Directive 2009/41/EC on the contained use of genetically modified micro-organisms [2009] OJ L 125/75. (Hereinafter Directive 2009/41/EC).
[53] (n 46).
[54] EC Implementing Regulation 503/2013 on applications for authorisation of genetically modified food and feed in accordance with Regulation (EC) No 1829/2003 of the European Parliament and of the Council and amending Commission Regulations (EC) No 641/2004 and (EC) No 1981/2006 [2013] OJ L 157/1.

Regulation 1830/2003 (Traceability and Labelling),[55] and Regulation 1946/2003 (Transboundary Movements).[56]

The 2001 Directive outlines the principles for, and regulates, the deliberate release into the environment of GMOs for research or commercial purposes in the EU. It sets out a centralised authorisation process (for both cultivation and marketing) at the EU level for considering all applications to release GMOs for research[57] or for commercial purposes.[58] It requires that prior to any field trial, commercial planting or importation into the EU, a GMO or a food product derived from a GMO must gain official authorisation based on scientific assessments of the risks to human health and the environment.[59] The import of GMOs or GM products must also comply with the authorisation procedures.[60] It adopts a case-by-case approach towards the authorisation of GM products.[61]

Importantly, once authorised at the EU level, GM products can be placed on the whole EU market (including free circulation and import), unless a safeguard procedure is invoked in case of risks to human health or the environment.[62] However, Member States have the right to restrict or prohibit the domestic cultivation of EU-approved GM crops. In the past, this was achieved by Member States having recourse to the safeguard clauses,[63] emergency measures,[64] and the notification procedure[65] embedded in the EU legislative framework.[66]

Furthermore, in order to improve the GMO authorisation process and ensure the freedom of choice of stakeholders, the newly adopted Directive 2015/412 gives Member

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[55] EC Regulation 1830/2003 concerning the traceability and labelling of genetically modified organisms and the traceability of food and feed products produced from genetically modified organisms and amending Directive 2001/18/EC [2003] OJ L 268/24. (Hereinafter Regulation 1830/2003).
[56] EC Regulation 1946/2003 on transboundary movements of genetically modified organisms [2003] OJ L 287/1. (Hereinafter Regulation 1946/2003).
[57] The 2001 Directive (n 46), Articles 5-11.
[58] *Ibid*, Articles 12-24.
[59] *Ibid*, Article 4.
[60] *Ibid*, Preamble (11).
[61] *Ibid*, Preamble (18) & (19).
[62] *Ibid*, Preamble (56) & Article 23; and Consolidated Version of the Treaty on the Functioning of the European Union (TFEU), [2012] OJ C326, Articles 34, 36 & 216(2).
[63] The 2001 Directive (n 46), Article 23.
[64] Regulation 1829/2003(n 46), Article 34.
[65] TFEU, Article 114(5) and (6).
[66] Directive 2015/412 (n 51), Preamble (7); MR Grossman, 'Coexistence of Genetically Modified, Conventional, and Organic Crops in the EU: The Community Framework', in Bodiguel and Cardwell (eds) (n 1), 123 & 149; and N Thayyil, *Biotechnology Regulation and GMOs: Law, Technology and Public Contestations in Europe* (Edward Elgar, 2014), 45-9.

States more flexibility in deciding whether or not to cultivate GMOs within their territory.[67] Member States may restrict or ban the domestic cultivation of GMOs either in the course of the authorisation procedure (by demanding the geographical scope of the authorisation be adjusted to the effect that all or part of the territory of the Member State is to be excluded from cultivation), or thereafter providing that the restriction or prohibition are in conformity with the EU law,[68] reasoned, proportional, non-discriminatory, and based on compelling grounds.[69] Directive 2015/412 is based on Article 114 of the Treaty on the Functioning of the European Union (TFEU), but it also mentions Article 2(2) of the TFEU in the recitals which is the first time that any EU act has done so, showing that the EU may possibly take a step back and allow the repatriation of EU competences.[70] The cultivation of GMOs is essentially 'the first field covered by EU law in which the competence to regulate is returned to Member States'.[71]

3.2.2 The EU's practice and potential trade disputes regarding the authorisation and risk assessment of GMOs

According to the 2001 Directive and Regulation 1829/2003, a GMO release into the EU environment and import into the EU will only be allowed if scientific risk assessments suggest that the release will be safe for human health and the environment and the competent authority grants the authorisation.[72] The EU GMO authorisation process involves multi-level governments (from domestic to EU level) and multi-actors (both political and expert actors).[73] The EU adopts a comprehensive system of risk assessment and risk management which reflects a crucial distinction between the two phases.

Risk management is separated from risk assessment in the European food safety system. The risk managers are the EC, Member States authorities and the European Parliament. They are responsible for developing policies, authorising products, and making

[67] Directive 2015/412 (n 51), Preamble (8).
[68] *Ibid*, Article 26(b)(1).
[69] *Ibid*, Article 26(b)(3).
[70] S Poli, 'The Reform of the EU Legislation on GMOs: A Journey to An Unknown Destination?' (2015) 4 *European Journal of Risk Regulation* 559, 562-563.
[71] Poli, *Ibid*, 566.
[72] For more details on the authorisation procedure and risk assessment, see: EU, 'First Regular National Report on the Implementation of the Cartagena Protocol on Biosafety' (2007) sections 11, 15 & 28, available at http://www.cbd.int/doc/world/eur/eur-nr-cpb-01-en.pdf, last accessed on 30 April 2017.
[73] J Scott, 'European Regulation of GMOs: Thinking About Judicial Reviews in the WTO' (2004) 57(1) *Current Legal Problems* 117, 119.

laws on GM food and feed, based on the independent scientific advice of the European Food Safety Authority (EFSA).[74]

Within the EU, authorisation applications are first submitted to the competent authority of a Member State which will be forwarded to the EC and the other Member States. The EFSA then carries out risk assessment of GM food and feed as well as the assessment of environmental risks. The EFSA was set up in January 2002 specifically to deal with and provide independent scientific advice and clear communication on risks associated with the food chain.[75] It is the cornerstone of EU risk assessment regarding food and feed safety.[76] Based on the EFSA opinion, it is normally the EC which decides whether or not to grant an EU-wide GMO authorisation; and such individual GMO authorisations are valid throughout the EU for ten years and are renewable.[77]

In 2013, the EC Implementing Regulation (IR) 503/2013 was published (within the framework of Regulation 1829/2003) to set out details on applications for authorisation of GM food and feed.[78] It incorporates the existing 2011 EFSA Guidance for the risk assessment of food and feed from GM plants,[79] a revision of an earlier document (EFSA, 2006).[80] IR 503/2013 explains the EU risk assessment strategy, information required in applications, and risk characterisation of GM products. It is now mandatory to submit applications concerning GM plants and their derived food and feed products in accordance with its requirements. IR

[74] EFSA, 'Risk Assessment vs Risk Management: What's the Difference?', available at: http://www.efsa.europa.eu/en/press/news/140416, last accessed on 30 April 2017.
[75] EFSA, 'About EFSA', available at: http://www.efsa.europa.eu/en/aboutefsa, last accessed on 30 April 2017.
[76] Ernst & Young, 'European Food Safety Authority: External Evaluation of EFSA', Final Report (2012).
[77] The 2001 Directive (n 46), Preamble (28) & Article 6; USDA FAS, 'Lisbon Treaty-Delegated and Implementing Acts', 4 August 2010, available at: http://gain.fas.usda.gov/Recent%20GAIN%20Publications/Lisbon%20Treaty%20-%20Delegated%20and%20Implementing%20Acts_Brussels%20USEU_EU-27_4-8-2010.pdf, last accessed on 30 April 2017; and C Viju, MT Yeung and WA Kerr, 'The Trade Implications of the Post Moratorium European Union Approval System for Genetically Modified Organisms' (2012) 46(5) *Journal of World Trade* 1207, 1227-30.
[78] (n 54).
[79] EFSA Panel on GMOs, 'Guidance for the risk assessment of food and feed from GM plants', (2011) 9(5) *EFSA Journal* 2150, available at: https://www.efsa.europa.eu/en/efsajournal/pub/2150, last accessed on 30 April 2017.
[80] EFSA Scientific Panel on GMOs, 'Guidance Document for the Risk Assessment of Genetically Modified Plants and Derived Food' (2009), available at https://www.efsa.europa.eu/en/efsajournal/pub/99, last accessed on 30 April 2017.

503/2013 is seen to be likely to increase the length of time that EFSA takes to evaluate GMO approval applications.[81]

As discussed above, the proposal for amending Regulation 1829/2003 in 2015 seeks to allow the Member States to restrict or prohibit the use of GM food or feed approved at EU level. This proposed amendment has already sparked trade concerns. A number of countries have raised specific trade concerns to the SPS Committee, claiming that this measure would cause potential negative impact on trade and enable Member States to create unnecessary barriers to international trade.[82] As of August 2016, the SPS Committee has not reported on these concerns yet.[83]

In practice, according to the study carried out by the EC, the EU GMO authorisation system, including risk assessment, is not efficient, time-limited or transparent, but is rather dysfunctional, especially as in the 10 years since the 2001 Directive and Regulation came into force (until March 2010), the EU 'did not adopt a single decision, positive or negative, on an application to cultivate a GMO'.[84] However, one might argue that the system was not dysfunctional but actually reflective of a general EU desire not to cultivate GM crops. A US report also finds that there are substantial delays in the EU GMO approval system.[85] The authorisation systems in major GMO exporting countries, such as the US, Brazil, and Argentina which take 1.5 to 2 years for a GMO approval, are much more efficient than the EU authorisation system which takes an average of 3.7 years for an import approval.[86]

It is this author's submission that the inefficiency of the EU GMO authorisation system is likely to cause international trade problems in relation to asynchronous

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[81] M Froman, '2014 Report on Sanitary and Phytosanitary Measures', report for Office of the United States Trade Representative, (2014), 44.
[82] The SPS Committee, 'Specific Trade Concerns: Note by the Secretariat', 23 February 2016, G/SPS/GEN/204/Rev.16, 58-9.
[83] *Ibid*, 58.
[84] European Policy Evaluation Consortium (EPEC) for DG SANCO, 'Evaluation of the EU Legislative Framework in the Field of Cultivation of GMOs under Directive 2001/18/EC and Regulation (EC) No 1829/2003, and the Placing on the Market of GMOs as or in Products under Directive 2001/18/EC', Final Report, March 2011, 73, available at: http://ec.europa.eu/food/plant/docs/plant-gmo-cultivation_report_en.pdf, last accessed on 30 April 2017.
[85] Froman (n 81), 45.
[86] EuropaBio Report: 'How do EU Policies on Biotech Crops Impact Trade and Development?' (Brussels, 7 March 2013), available at http://www.seedquest.com/news.php?type=news&id_article=34725&id_region=&id_category=&id_crop=, last accessed on 30 April 2017.

authorisations between the EU and the major GMO exporting countries. The EU GMO regulatory process may negatively affect the trade interests of major GMO producer countries, and cause potential trade disputes between the EU and exporting countries.[87]

The institutionalized cooperation on the regulation of GMOs has been impeded by the overlapping regimes themselves and by distributive conflicts between the world's two economic superpowers of the US and the EU.[88] The ineffectiveness of the EU legislation suggests that the delays might be deliberate; in fact, the WTO DSB confirmed that the EU's authorisation and approval procedure of GMOs was too lengthy and constituted a *de facto* moratorium in the *EC-Biotech* case.[89] The trade dispute in the *EC-Biotech* case seems to have influenced the EU's domestic decision-making. The EU had not authorised any commercial planting or importation of GM crops by 2004. Following the pressure of this case, in 2004, the EC granted its first GMO (Bt11 maize) authorisation since 1998.

To sum up, states, such as the EU in this case study, may face a practical dilemma on whether they could utilise and implement the WTO Agreements and the Protocol without violating any of them. However, such tension may be managed, minimised or avoided. In this connection, the following paragraphs will study whether states should, and if yes, how to avoid conflicts between the treaties.

4. The principles that lie behind systemic integration can and should be relied upon by states to avoid conflicts between the treaties

4.1 Both the WTO Agreements and the Protocol are equally important for states?

Both as international treaties, the WTO Agreements and the Protocol have the same hierarchical status in international law. At least for countries which are member states of both the treaties, the WTO Agreements and the Protocol are both valid and equally binding in terms of regulating international trade in GMOs, and should be treated as a whole set of international rules which they must follow.[90]

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[87] C Talyor, 'Impossible Cases: Lessons from the First Decade of WTO Dispute Settlement' (2007) 28 *University of Pennsylvania Journal of International Economic Law* 309, 433; Poli (n 65), 559; Viju (n 97), 1236-7; and CE Hanrahan, 'Agricultural Biotechnology: The U.S.-EU Dispute' (2010) *University of Nebraska-Lincoln Congressional Research Service* Reports, Paper 69, 3-4.
[88] Pollack and Shaffer (n 19), 174-5.
[89] This was discussed in detail in Chapter 2, Section 4.3.1 of this thesis.
[90] Marceau (n 16), 127; Pauwelyn (n 16), 906-7.

This argument was reaffirmed by the empirical research carried out in the course of this thesis. Overall, 3 (AJ2, BJ1, and AO1) out of 6 interviewees who commented on this question stated that the WTO Agreements and the Cartagena Protocol were (at least at the theoretical level) equally important for a state which is a party to both treaties.[91] Agency AJ2 believed this was reflected by the Protocol savings clause.[92] Similarly, agency BJ1 believed that as a party to both treaties, a state always had an obligation to maximize the legal effects of the treaties in its domestic legal order.[93] However, a larger number of respondents, 4 interviewees (AO2, AO1, BO2, and CJ1) out of 6, appeared to be concerned about the political reality that trade rules tended to be prioritised over environmental rules in practice. More respondents from international organisations appeared to be cautious about this problem than state respondents.[94]

More specifically, Agency AO2, representative of an international organisation, stated that although states were supposed to be intelligent and act in good faith, they could only be *assumed* to be respecting and applying all their treaty obligations in good faith and in a cumulative manner. The different political reality, according to AO2, was that all governments, at some point or another, got into conflicts of obligations. Conflicts of rules should not be dramatised but should be carefully dealt with.[95]

In support, agency AO1, official of another international organisation, stated that, theoretically speaking for a state which was a member of both international treaties, the treaties should have equal standing as regards such a state in international law.[96] It would become legally inconsistent if the state gave more prominence or importance to one treaty rather than the other. However, AO1 pointed out that in real life practice, states tended to prioritise safeguarding trade rules over any other rules (including environmental issues and concerns). When it came to making choices between trade and environmental interests, trade interests mostly won in every political system and every jurisdiction. In practice, any violation of a trade rule would have severe consequences and might result in a dispute. On

[91] Comments made by the interviewees will be discussed in detail in the following paragraphs.
[92] Interview (n 44).
[93] Interview (n 43).
[94] Comments made by the interviewees will be discussed in detail in the following paragraphs.
[95] Interview (n 5). The emphasis was made by the author.
[96] Interview (n 39).

the contrary, any violation of environmental obligations had very few, and probably no consequences.[97]

Another organisational delegate, agency BO2 was of the opinion that whether the WTO Agreements and the Protocol were equally important would very much depend on each country.[98] BO2 commented that some might consider one treaty as more important than the other, but the reality was that there was no formal dispute resolution process under the Protocol while there was such legally binding process under the WTO Agreements.[99]

Similarly, another interviewee, CJ1, commented that the WTO Agreements and the Cartagena Protocol might be equally important from a policy point of view, but that the WTO was much more important from a lawyer's point of view, because the WTO had a compulsory and binding dispute settlement system and could thus be litigated effectively.[100]

4.2 The principles behind systemic integration require states to avoid treaty conflicts: in the process of both domestic law-making and treaty implementation

As argued in Chapter 4, the principles that lie behind systemic integration, including the principles of mutual supportiveness, good faith, cooperation, and harmonisation, calls for efforts to be made to avoid conflicts between the WTO Agreements and the Protocol; and the underpinning principles can be utilised not only by international judicial bodies, but also by international institutions and individual states.[101] At the domestic level, with the aim of avoiding conflicts between the treaties, the principles that lie behind systemic integration require states to act in good faith while regulating GMOs, to promote the mutual supportiveness and harmonisation of the treaties while implementing them, and to facilitate the cooperation between different governmental sectors while developing domestic GMO regulatory frameworks and making decisions on international trade in GMOs.[102]

It can be assumed that states, when developing trade and environmental regimes, do not wishfully create conflicting norms, but to set up mutually supportive rules which

[97] *Ibid*.
[98] Interview (n 40).
[99] *Ibid*.
[100] Interview, Respondent C of Jurisdiction 1, December 2012.
[101] This was discussed in detail in Chapter 4, Section 4 of this thesis.
[102] More discussion on the requirements of the underpinning principles is available at Chapter 4, sections 4.2, 4.3, 4.4 & 4.5 of this thesis.

complement one another.[103] Instead, states generally undertake treaty obligations with the intent of fulfilling them.[104] As a matter of fact, when negotiating for or acceding to a new treaty, a state unavoidably takes into account how the new treaty fits with both its national judicial system and other treaties that it has or will ratify.

According to the *pacta sunt servanda* principle, states must fulfil their treaty obligations in full and in good faith without violating their obligations under other existing instruments.[105] Member states are under the 'moral obligation' to adopt a 'harmonising approach', to take into account pre-existing commitments, and to interpret all potentially conflicting provisions under different treaties in a way as to make them compatible.[106]

If a state takes a Dworkinian view of the law that it is a whole web which one must try to make sense of, then it is imperative to argue that states have the legal obligation to implement treaties in the light of other relevant treaties.[107] This does not imply that the Dworkinian view is the right view. However, this may, to some extent, prove and provide support to the argument that states are obliged to take into account other treaties. Consequently, states tend, or have the obligation, to reconcile the treaties they are parties to with an aim of avoiding conflicts between them.

States by their nature have the competency to reconcile different international treaties, in the process of both domestic law-making and treaty implementation. The harmonisation of treaties depends on whether the parties are willing to apply two treaties in a mutually supportive way with an aim of preventing a disturbance of the system.[108] States have recognised that conflicts between overlapping treaties may be avoided when they are interpreting and implementing the treaties.[109]

At the domestic law-making level, collaboration and cooperation is needed when a state is drafting domestic/regional biosafety frameworks. Most developing countries are still

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[103] FX Perrez, 'The Mutual Supportiveness of Trade and Environment' (2006) 100 *American Society of International Law Proceedings of the Annual Meeting* 26, 27.
[104] M Ehrmann, 'Procedures of Compliance Control in International Environmental Treaties' (2002) 13(2) *Colorado Journal of International Environmental Law and Policy* 377, 387.
[105] This was discussed in detail in Chapter 4, section 4.3.1 of this thesis.
[106] CM Pontecorvo, 'Interdependence between Global Environmental Regimes: The Kyoto Protocol on Climate Change and Forest Protection' (1999) *Zeitschrift fűr ausländisches Őffentliches Recht und Vőlkerrecht* 705, 740-3.
[107] Dworkin (n 2), 251 & 411.
[108] Matz-Lück (n 15), 49.
[109] J Harrison, *Making the Law of the Sea, A Study in the Development of International Law* (Cambridge University Press, 2011), 267.

at the outset of developing domestic legislation on GMOs. An effective and workable national biosafety framework can help to ensure the safe use of biotechnology.[110] When strengthening and improving domestic biosafety frameworks, national policy-makers should reconcile the international trade and international environmental mechanisms, and take into account both WTO Agreements and the CBD and its Protocols.

At the implementation level, while making decisions on the regulation of international trade in GMOs, the principles that lie behind systemic integration require states to understand the potential conflicts between the WTO Agreements and the Protocol and to implement them in a 'mutually supportive' manner.[111] During the implementation of the treaties, states should take into account their rights and obligations under both treaties, and pursue a 'middle ground' for safety and productivity which 'maximise scientific inputs and minimize trade distortions'.[112] It is also likely that the treaties will 'develop in consistent ways' towards a 'jurisdictional balance'.[113]

The principles that lie behind systemic integration call for 'integration into the process of legal reasoning of a sense of coherence and meaningfulness'.[114] They require states, while implementing the WTO Agreements and the Protocol, to minimise or avoid conflicts between the treaties. States (through their government policy-makers) cannot implement the treaties without interpreting them. That is to say, the principles behind systemic integration require states to interpret the WTO Agreements and the Protocol in a mutually supportive way, in good faith, and in a manner that promotes the harmonisation and conformity of the treaties, which can be evidently achieved by interpreting the treaties in the light of one another.

Consequently, both requiring the treaties to be interpreted with reference to another, the principles that lie behind systemic integration achieve the same effect of conflict

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[110] UNEP-GEF Biosafety Unit, *Guidance Towards Implementation of National Biosafety Frameworks: Lessons Learned from the UNEP Demonstration Projects,* April 2008, available at: http://www.unep.org/biosafety/files/Final%20National%20Biosafety%20Frameworks.pdf, last accessed on 30 April 2017.

[111] R Mackenzie and others, 'An Explanatory Guide to the Cartagena Protocol on Biosafety', (2003) *IUCN Environmental Policy and Law Paper No. 46*, 225.

[112] SW Burgiel, 'The Cartagena Protocol on Biosafety: Taking the Steps from Negotiation to Implementation', (2002) 11(1) *RECIEL* 53, 61.

[113] S Oberthür and T Gehring, 'Institutional Interaction in Global Environmental Governance: The Case of the Cartagena Protocol and the World Trade Organisation' (2006) 6(2) *Global Environmental Politics* 1, 3.

[114] M Koskenniemi, 'Fragmentation of International Law: Difficulties Arising from the Diversification and Expansion of International Law', Report of the Study Group of the International law Commission, UN. Doc. A/CN.4/L.682, 13 Apr 2006, 17, 211, para 419.

avoidance at the domestic level as that is achieved by the principle of systemic integration at the international judicial level, when there are actual disputes and the treaties are interpreted by judicial institutions.[115] As argued by French, there seems to be no reason why the rule that treaties should be interpreted in the light of 'relevant rules of international law' should not be true for states.[116]

Reconciling the WTO Agreements and the Protocol may also contribute to the consistency and certainty of the treaties' interpretation by different states. States normally act to maximise their preferences.[117] They have the discretion and may interpret the same treaty provision in divergent ways based on their own interests. As argued by Shelton, 'each state is entitled initially and equally to interpret for itself the scope of its obligations and the means of implementation such obligations require.'[118] Their positions can quickly change with judicial interpretation and perhaps even through decisions taken by COP-MOPs. Also, a state might only be bound to change its interpretation and state practice if its understanding is challenged in dispute settlement.[119]

However, the diversity of states' interpretation may adversely affect the consistency and certainty of the treaties' interpretation and may cause further complexities and conflicts. To forestall this danger, requiring states to interpret a provision in the light of other relevant treaties may in effect restrict states' discretion, prevent states from interpreting the treaties in an unguarded way, enhance the unity and stability of treaty interpretation and promote the treaties' consistency and certainty. If international law is more coherent, states would also know more clearly their obligations to fulfil the expectations of the international community.

Practically, it appears the principles behind systemic integration are already being utilised at the domestic level. For example, they are being put into practice in the legislative process in the UK, particularly with respect to the 1998 Human Rights Act[120] and the 2009 Marine and Coastal Access Act,[121] where human rights and sustainable development

[115] Matz-Lück (n 13), 214.
[116] French (n 12), 287.
[117] JP Trachtman, 'Institutional Linkage: Transcending "Trade and …"' (2002) 96 *The American Journal of International Law* 77, 81.
[118] Shelton (n 16), 142.
[119] Matz-Lück (n 13), 214.
[120] Human Rights Act 1998 (UK), s 19(1)(a).
[121] Marine and Coastal Access Act 2009 (UK), s 44(1)(a).

compatibility statements are respectively attached to new legislation. Similarly, other states could also develop sustainable development compatibility statements attached to new legislation as a way of using the principles behind systemic integration to reconcile trade and environment.

It needs to be mentioned that the interpretation of a treaty by one particular state is not authoritative or binding, and does not have any judicial effect similar to interpretation by judicial institutions. It has limited direct influence on both the interpretation by another state and the meaning and development of international law as a whole. However, it may still contribute to the development of international law in different ways: it can provide evidence of the existence and content of customary law; it may be counted as state practice and/or *opinio juris* in a way that contributes to the formulation and development of customary international law; and it might be seen as the conception or misconception of international law by states.[122]

Finally, the empirical research carried out in the course of this thesis reaffirmed that states should proactively avoid conflicts between the WTO Agreements and the Protocol. In relation to the domestic regulation of GMOs, both international organisation respondents (AO1 and AO2) claimed that the potential conflicts between the treaties could and should be avoided at the domestic level.

Agency AO1 claimed that although there were potential conflicts between the treaties, they should not conflict with one another in terms of implementation and application.[123] As far as states were loyal to the objectives of the respective instruments and their treaty obligations, they should and could always find a way to achieve some kind of reconciliation or avoid the tension and conflicts while applying the two sets of treaty rules. AO1 indicated that domestic collaboration was where integration should start. It was easier to integrate the WTO Agreements and the Protocol at the domestic level than at the international level. In practice, without even knowing it, states tried to have some kind of integrated planning and approach to their main concerns of trade, development, environment, and health. The most important question was the extent to which states were successful in this.[124]

[122] AE Boyle and C Chinkin, *The Making of International Law* (Oxford University Press, 2007), 215.
[123] Interview (n 39).
[124] *Ibid.*

Similarly, agency AO2 stated that 'international law is back to states'. If a state is a party to both treaties, it must respect all its obligations under different treaties at the same time, in a cumulative manner. States, thus, should avoid clashes in their reading, interpretation, and implementation of their various treaty obligations.[125]

5. States have already made efforts to avoid conflicts between the treaties, although not necessarily to a satisfactory extent

Having argued that states are obliged to avoid conflicts between the WTO Agreements and the Protocol, this section will examine whether states have in practice already made efforts to reconcile the treaties with an aim of conflict avoidance, and if yes, whether such efforts have been made to a satisfactory extent. The assertions will be tested against both doctrinal and empirical evidences.

5.1 Existing domestic integration: doctrinal and empirical evidences

In practice, states/economic regions appear to have already made efforts to reconcile and avoid conflicts between the WTO Agreements and the Protocol. The Protocol has a trickle-down effect and greatly influences the public debates, domestic GMO regulatory frameworks, national policies on GMOs, and decision-making within its member states. The Protocol is the major driving force for the development of many National Biosafety Frameworks (NBFs), which are systems of legal, technical and administrative mechanisms that address biosafety for both the environment and human health.[126] This is particularly true for the majority of developing countries which have only started to develop NBFs after the conclusion of the Protocol.[127] NBFs may vary from country to country, but should all contain certain main elements including a legislative framework, a government policy, a domestic administrative system to handle notifications or requests for authorisation, and a system for public awareness and participation.[128]

Both at the international and domestic levels, biosafety regulations have been recently developed, and there is yet to be a common global approach on this issue. Different

[125] Interview (n 5).
[126] UNEP-GEF Biosafety Unit (n 110).
[127] J Falck-Zepeda and P Zambrano, 'Socio-Economic Considerations in Biosafety and Biotechnology Decision Making: The Cartagena Protocol and National Biosafety Frameworks' (2011) 28(2) *Review of Policy Research* 171, 171.
[128] More details are available at: http://www.unep.org/biosafety/Default.aspx, last accessed on 30 April 2017.

countries exhibit key differences as well as similarities in regulating GMOs. The nature of their domestic legislative and political systems varies from each other.[129] States have different domestic policy and regulation regimes in relation to GMOs based on different circumstances, such as cost and benefit evaluations on economic, environmental, health and safety concerns of GMOs; public and political reactions including consumers' preference and resistance to GM products; different levels of development of, and abilities to use biotechnology; productivity and the amount of exportation or importation of GMOs; different abilities to cope with the environmental, economic, and social risks presented by GM technologies, and different capacities in terms of risk assessment and management of GMOs.[130]

In relation to the case study of the EU, as discussed above, the precautionary principle serves as an underpinning principle of EU environmental policy.[131] The application of this principle also extends to the area of human health protection.[132] The EU and its Member States currently take a restrictive and precautionary approach towards international trade in GMOs. The 2001 Directive adopts the precautionary principle and requires that the principle must be taken into account during the implementation of the Directive.[133] Adopting the precautionary principle, the legitimacy of EU GMO decisions is not simply based on scientific data, but also based on the uncertainty of the existence and scope of the potential risk of GMOs.[134]

On the surface, since the EU GMO regulatory framework gives priority to safety issues and has the precautionary principle as an underpinning policy principle, this appears to reflect a fundamental difference from the WTO regime which seeks to base measures on pure

[129] A Gupta and R Falkner, 'The Influence of the Cartagena Protocol on Biosafety: Comparing Mexico, China and South Africa' (2006) 6(4) *Global Environmental Politics* 23, 25.
[130] D Lynch and D Vogel, 'The Regulation of GMOs in Europe and the United States: A Case-Study of Contemporary European Regulatory Politics', a report published by Council on Foreign Relations Press, 5 April 2001, 2-5.
[131] Treaty of Amsterdam amending the Treaty on European Union, the Treaties establishing the European Communities and certain related acts [1997] OJ C 340/255, Article 174(2).
[132] More discussions see Scott (n 73), 220; and F Sindico, 'The GMO Dispute before the WTO: Legal Implications for the Trade and Environment Debate' (2005) No. 11.05 *FEEM Working Paper* 1, 4.
[133] The 2001 Directive (n 46), Preamble (8), Article 1.
[134] ZK Forsman, 'Community Regulation of Genetically Modified Organisms: A Difficult Relationship between Law and Science' (2004) 10(5) *European Law Journal* 580, 583.

science. This difference in approaches may result in potential trade disputes depending on how the EU GMO law is implemented.[135]

However, this tension can be managed if the EU endeavours to proactively avoid conflicts between the WTO Agreements and the Protocol by interpreting and implementing the treaties in a mutually supportive manner, in good faith, and in a way that promotes the harmonisation of the treaties; and by integrating both the treaties into the regional/domestic GMO regulatory frameworks.

To implement the Protocol, the EU relies on its existing legislative framework on GMOs which predates the Protocol. As argued above, the EU GMO legislative framework was first established in the early 1990s, and revised in the early 2000s prior to the entering into force of the Cartagena Protocol in 2003. During the negotiation process of the Protocol, the EU advocated for stringent rules on GMOs which were in line with its internal rules. This was an opportunity for the EU to legitimise and internationalise its regional regulations. Some argue that the Protocol was a victory for the EU as it fulfilled the EU's policy preferences.[136] Thus, little effort was needed in terms of implementing the Protocol in the EU after its adoption.[137]

In practice, some argues that the EU has also integrated the WTO rules into the EU regulation on GMOs which bears the stamp of WTO influence and reflects the approach of the SPS Agreement in areas including requirement on risk assessment, creation of a separate agency, EFSA, and the formulation of the precautionary principle.[138]

Moreover, the EU Courts have integrated the WTO into their jurisprudence largely as a matter of routine through clear reference, transposition and consistent interpretation.[139] For example, they have shown signs of cooperation and convergence on a systemic level, through adjusting their jurisprudence on precautionary measures in a consistent way with the

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[135] T Spanggaard, 'The Marketing of GMOs: A Supra-national Battle over Science and Precaution', in H Somsen and others (eds) *Yearbook of European Environmental Law: Volume 3* (Oxford University Press, 2003), 123.

[136] M Rhinard and M Kaeding, 'The International Bargaining Power of the European Union in 'Mixed' Competence Negotiations: The Case of the 2000 Cartagena Protocol on Biosafety' (2006) 44(5) *Journal of Common Market Studies* 1023, 1033.

[137] Interview (n 43).

[138] N Krisch, 'Pluralism in Global Risk Regulation: The Dispute over GMOs and Trade' (2009) *Law, Society and Economy Working Papers 17*, 22-3, available at: www.lse.ac.uk/collections/law/wps/wps.htm, last accessed on 30 April 2017.

[139] F Snyder, 'The Gatekeepers: The European Courts and WTO Law' (2003) 40 *Common Market Law Review* 313, 362.

SPS Agreement.[140] As stated by Scott, 'the WTO Agreements may not have a direct effect in Community law, but it enjoys a significant, if still uncertain, capacity to influence strongly the interpretation of this body of law'.[141]

The argument that states have already made efforts to avoid conflicts between the treaties can be supported by findings of the empirical research carried out in the course of this thesis. As discussed in Chapter 6, the empirical research did not refer to the principles behind systemic integration since the original research plan focused only on systemic integration itself.[142] However, its findings did indicate that governmental decision-makers used analogies to systemic integration at the domestic level, and the principles behind systemic integration had already been utilised to certain extent by decision-makers in jurisdictions 1 and 2, although rather unintentionally and arguably not to a fully satisfactory extent.

The national/regional biosafety frameworks in jurisdictions 1 and 2, which adopted the precautionary approach and in some cases even took into account socio-economic considerations, also showed a willingness to take into account trade rules and avoid any conflicts.[143] The regulation of GMOs was divided up among different domestic authorities, and there seemed to be a certain degree of domestic collaboration among the relevant legislators and governmental sectors in both of the investigated jurisdictions. The respondent from J3 chose not to comment on this question as a result of limited availability of human resources and time.[144]

More specifically, governmental representative AJ2 stated that domestically, GMOs were regulated by a number of different governmental sectors, each having their own departmental regulations and standards.[145] The highest executive body of Jurisdiction 2 set up a Joint-Ministerial Conference for Biosafety Management of Agricultural GMOs comprising different ministries in relation to GMO legislation and regulation. This Conference normally met once a year, and was designed to discuss and coordinate major issues in the legislation

[140] Scott (n 73), 228-9 & 233; and Krisch (n 138), 21.
[141] Scott (n 73), 223.
[142] Available at Chapter 6, section 3 of this thesis.
[143] Interview (n 37); Interview (n 44); Interview (n 43); and Interview (n 100).
[144] Communication from Respondent A of Jurisdiction 3 to the author, dated October 2012.
[145] Interview (n 44).

and biosafety management of GM agricultural products. How successful this mechanism appeared to be was yet to be seen.[146]

Similarly, during the GMO legislative processes in Jurisdiction 1, regular consultations also took place among different governmental sectors, including trade and environment departments.[147] Governmental official BJ1 stated that the responsibility of regulating GMOs had shifted among different ministries, and consequently affects the effectiveness and authority of departmental regulations.[148] Since Jurisdiction 1 was a collegiate institution, all kinds of decisions and proposals adopted by Jurisdiction 1 were formally coordinated and agreed between all the jurisdictional services.[149] Agency BJ1 added that, one reason which made this possible was that relevant staff may work in different sectors, and the movement of staff seemed to be easier and more frequent within this jurisdiction than others because of its traditions and special structure.[150]

In support, agency AJ1, another governmental official of Jurisdiction 1 who worked in the administrative sector that was in charge of environmental issues, stated that whenever new legislation or communication on GMOs were being sought, AJ1's working department would always consult with other relevant administrative sectors, including trade departments.[151] There existed a Working Group on the issue of biosafety including representatives from environmental and trade departments. There were also coordination between environmental and trade sectors in relation to the regulation of GMOs.[152]

In the same vein, agency CJ1, the third governmental official of Jurisdiction 1, claimed to be reconciling international treaties in their everyday work.[153] CJ1 stated that this approach was certainly being used in relation to the international relationship between the WTO Agreements, whether it was used between the WTO Agreements and other rules depended on the cases. If a treaty was relevant and carried some weight in WTO litigation, it would probably be brought into the litigation. CJ1 also stated that to some extent, the reconciliation of treaties would help to avoid the conflicts between the WTO Agreements and

[146] *Ibid.*
[147] Interview (n 37), and Interview (n 43).
[148] Interview (n 43).
[149] *Ibid.*
[150] *Ibid.*
[151] Interview (n 37).
[152] *Ibid.*
[153] Interview (n 100).

the Cartagena Protocol in more subtle ways, but that this did not necessarily mean the Protocol was an applicable law before WTO dispute settlement body.[154]

5.2 Conflicts between the treaties could and should be better avoided by governmental decision-makers

The empirical results discussed above also indicated that the investigated jurisdictions did not see much success in avoiding conflicts between the WTO Agreements and the Protocol at the domestic level for two reasons. Firstly, the principles that lie behind systemic integration were rather unintentionally used. Relevant decision-makers seemed to lack training on either the other treaty or how to avoid treaty conflicts in international law. The respondents' relevant knowledge was acquired largely through personal channels instead of work-related training. For example, BJ1 gained knowledge on the other treaties mainly as a result of personal academic background, personal interest, communication with colleagues from other governmental departments, and self-motivated research.[155]

Secondly, states' efforts to avoid treaty conflicts were not considered satisfactory by the respondents because there still was large potential for the treaties to conflict in practice. This view mainly arises from the political difficulties in applying this approach. Agency AO1 claimed that the issues of fragmentation and conflict were still present in most countries, likely because for every government the priority was obviously economic development and trade interests.[156]

Similarly, agency BJ1 also claimed that legally speaking, the potential conflicts between the treaties could be avoided if they were implemented and interpreted in a mutually supportive way.[157] However, in practice whether this was acceptable depended on the relative standing of a state because international law was the result of political activity. Member states had different levels of standing and always took into account political or economic interests in practice. States tended to cherry pick among the laws from trade and environmental perspectives, and only picked certain pieces and ideas from each agreement

[154] *Ibid*.
[155] Interview (n 43).
[156] Interview (n 39).
[157] Interview (n 43).

and might argue that those picked by them were the synergetic interpretation of the treaties.[158]

6. Better domestic integration: states can avoid treaty conflicts by consulting with the epistemic community composed of both trade and environmental experts

Having argued that states are obliged to avoid conflicts between the WTO Agreements and the Protocol under the principles that lie behind systemic integration, and found that states have already made efforts to avoid such conflicts in a rather unintentional and unsatisfactory way, this section endeavours to study how such conflicts can be better avoided. It examines the extent to which epistemic communities have succeeded in facilitating the adoption of coordinated policies and in a sense avoiding norm conflicts in other areas of international law. Subsequently, the following paragraphs studies whether and how conflicts between the WTO Agreements and the Protocol can be better avoided by consulting with the epistemic community composed of both trade and environmental experts in the treaty implementation process.

6.1 The importance of epistemic community in international law

Cooperation on the regulation of GMOs may also be generated and understood with a focus on epistemic communities. As argued above, one of the difficulties for domestic integration is the fact that GMOs are normally regulated at the domestic level by different governmental sectors which do not necessarily have the capacity and expertise in addressing issues out of their working area.[159] As a collective of individual experts, epistemic communities may involve not only experts specialised in trade, but also in environment. Epistemic communities may thus have a role in facilitating the adoption of coordinated GMO policies and decisions which take into account both trade and environmental values, and contributing to the avoidance of conflicts between the WTO Agreements and the Protocol at the domestic level.

An epistemic community is a transnationally organised network of knowledge-based technical and academic experts who have an authoritative claim to policy-relevant

[158] *Ibid.*
[159] See section 4.2 of this chapter.

knowledge.[160] Such experts come from a variety of disciplines and backgrounds and have a shared set of normative and principled beliefs, shared causal beliefs, shared notions of validity, and a common policy enterprise.[161] According to the widely accepted definition by Haas, an epistemic community is 'a network of professionals with recognised expertise and competence in a particular domain and an authoritative claim to policy-relevant knowledge within that domain or issue-area'.[162]

Epistemic communities provide consensual knowledge which can influence collective policy-making, may contribute to policy coordination and more comprehensive policies, and may be generally learned from by international organisations and national governments.[163] Members of epistemic community are less impeded by institutional rigidities and disciplinary blinkers.[164] They can become strong actors both at the international and national levels because decision-makers may consult them, particularly under conditions of technical uncertainties.[165] They can influence and transform states' interests and practices,[166] and may introduce new policy alternatives and lead their governments to pursue them.[167] The decision-making authority is, thus, influenced by a group of elite specialists.[168]

Epistemic communities have often proved to be significant actors in shaping international policies and leading to the adoption of concordant state policies.[169] For example, the WTO committees in some cases become part of broader networks of associations and organisation which create (soft) international standards and norms.[170] In particular, the WTO Committee on Trade in Financial Services serves not only as a venue for information exchange among WTO members, but also facilitates the cooperation between these Members and representatives from other international organisations. The inter-organisational

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[160] JK Sebenius, 'Challenging Conventional Explanations of International Cooperation: Negotiation Analysis and the Case of Epistemic Communities' (1992) 46(1) *International Organisation* 323, 351.
[161] PM Haas, 'Obtaining International Environmental Protection through Epistemic Consensus' (1990) 19(3) *Millennium Journal of International Studies* 347, 347; and PM Haas, 'Introduction: Epistemic Communities and International Policy Coordination' (1992) 46(1) *International Organisation* 1, 3, 16 & 17.
[162] Haas (1992), *ibid*, 3.
[163] *Ibid*, 23 & 29.
[164] Haas (1990) (n 161), 349.
[165] Haas (1992) (n 161), 21.
[166] *Ibid*, 4; and PM Haas, 'Do regimes matter? Epistemic Communities and Mediterranean Pollution Control' (1989) 43(3) *International Organisation* 377, 398.
[167] Haas (1989) (n 166), 402.
[168] Haas (1992) (n 161), 24.
[169] Haas (1990) (n 161); and Haas (1992) (n 161), 35.
[170] A Lang and J Scott, 'The Hidden World of WTO Governance' (2009) 20(3) *The European Journal of International Law* 575, 589.

discussions contribute to the creation of a shared knowledge base, which helps to 'develop common frameworks for describing and making sense of problems' even if no single solution was agreed.[171] Such discussions do not necessarily have 'hard' legal authority, but they reflect common understandings and shape expert knowledge in the relevant area, which may provide a background for the interpretation of WTO obligations.[172] This seems to the author to be a successful example of the WTO regarding how epistemic communities could and have worked in relation to dealing with 'trade-and' issues.

However, while epistemic communities may be able to assist states in adopting coordinated policies, there are also dangers in this approach, such as legitimacy and accountability concerns with such technocratic governance.[173] Epistemic communities composed of certain technical experts may be industry driven and represent the interests of the minority. Thus whether epistemic communities would make positive contributions in practice depends on the international structure of state governance and the regulatory approach taken by individual states.

The role of epistemic communities in this regard also has considerable relevance for other areas of public international law. For example, the International Law Commission has played a major role with significant input from seconded academics such as Professors Koskenniemi and Crawford.[174] In the field of humanitarian law, epistemic communities had been prominent in developing soft laws, such as the Paris Minimum Standards of Human Rights Norms in a State of Emergency which include 16 articles intending to ensure that the rule of law is upheld even after a *bona fide* declaration of a state of emergency.[175] The Paris Minimum Standards were adopted by the International Law Association in 1984. They were built upon earlier studies by a number of academics including Judge Buergenthal, Professors Hartman and Higgins; special rapporteurs of the UN body, Nicole Questiaux and Erica-Irene Daes; and publication of the International Commission of Jurists.[176]

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[171] *Ibid*, 579-82.
[172] *Ibid*, 587.
[173] D Toke, 'Epistemic Communities and Environmental Groups', (1999) 19(2) *Politics* 97, 101.
[174] Koskenniemi (n 114); ILC, *Draft Statute for an International Criminal Court with Commentaries* (1994), 26, para 89, available at: http://legal.un.org/ilc/texts/instruments/english/commentaries/7_4_1994.pdf, last accessed on 30 April 2017.
[175] RB Lillich, 'The Paris Minimum Standards of Human Rights Norms in a State of Emergency' (1985) 79 *The American Journal of International Law* 1072, 1072.
[176] *Ibid*.

Serving as epistemic communities, individuals also get to act as the archive of international law. In addition to scholarly work, some academics, such as Professors Crawford,[177] Sands,[178] and Marceau,[179] also work for the International Law Commission and the WTO, and act on behalf of states and appear in cases before the International Court of Justice, the WTO Dispute Settlement Mechanism, and other international tribunals. Their careers, thus, represent and provide evidence of, in the opinion of this author, what international law should be.

Another example of an epistemic community in action is the Mediterranean Action Plan (the Med Plan). Developed under the auspices of UNEP, the Med Plan is a regime designed for the progressive control of Mediterranean marine pollution which (as regional scientists agree) contributed to the improvement of the quality of the Mediterranean. The success of the Med Plan is attributable to the epistemic community which set the international agenda, developed coordinated and convergent regional policy, directed national policies and practices, and contributed to the domestic compliance with the regime.[180]

At the international level, the epistemic community related to the Med Plan was composed of UNEP officials, secretariat members from international organisations, national governmental officials from a variety of disciplines and backgrounds, and relevant scientists who were involved in their individual capacities. Different groups of experts focused on differing issues which may even give rise to mutually exclusive policy proposals, but the shared political values of protecting the Mediterranean enabled them to develop research and policies that could satisfy each group individually while avoiding a direct confrontation between them.[181]

International epistemic communities may have impact at the domestic level, while national epistemic communities in various fields may also have international influences.[182] Regional groupings such as the EU, the Association of Southeast Asian Nations, and the Organisation of African Unity, could also develop regional initiatives which might spur

[177] See http://www.law.cam.ac.uk/people/academic/jr-crawford/19, last accessed on 30 April 2017.
[178] See https://www.laws.ucl.ac.uk/people/philippe-sands/, last accessed on 30 April 2017.
[179] See http://www.unige.ch/droit/transnational/professeurs/marceau.html, last accessed on 30 April 2017.
[180] Haas (1989) (n 166), 401.
[181] *Ibid*, 386.
[182] E Adler, 'The Emergence of Cooperation: National Epistemic Communities and the International Evolution of the Idea of Nuclear Arms Control' (1992) 46(1) *International Organisation* 101, 105.

global action.[183] In relation to the example of the Med Plan, at the domestic level, the scientists provided congruent policy advice through consultations and shaped their own governments' policies in convergent ways, and eventually reinforced the regime's support internationally.[184] The countries which have the strongest involvement of the epistemic community in domestic policy-making have been the most supportive of the Med Plan.[185]

Epistemic communities have a particular role in international environmental governance due to the complexity and interconnectedness of global environmental issues, and the fact that decision-makers do not always necessarily understand the technical aspects of environmental issues.[186] An epistemic community's influence on the process of regime creation and interest recalculation may be generalisable, particularly on other contemporary environmental regimes such as the 1987 Montreal Ozone Protocol and the 1979 Geneva Convention on Long-Range Transboundary Air Pollution.[187] This, however, does not indicate that epistemic communities will work without problems in all situations.

6.2 Domestic regulation on GMOs should rely on the epistemic community composed of both trade and environmental experts

Epistemic communities may play an important role for states to reconcile the WTO Agreements and the Protocol during their implementation process. In aiming to avoid potential conflicts between the WTO Agreements and the Protocol, collaboration and cooperation at the domestic level could and should be achieved by decision-makers by intentionally using the principles that lie behind systemic integration in practice. Governmental sectors should be bound to show that they are doing more good than harm for the well-being of the community as a whole.[188]

When drafting domestic legislation or making decisions regarding international trade in GMOs, decision-makers may consult the epistemic communities which compose experts from governmental sectors that are in charge of implementing both the WTO agreements and the Protocol, and experts of both treaties from outwith Government, such as

[183] J Scott, 'European Regulation of GMOs and the WTO' (2002-2003) 9 *Columbia Journal of European Law* 213, 228.
[184] Haas (1989) (n 166), 387.
[185] *Ibid*, 388.
[186] Haas (1990) (n 161), 347-9.
[187] Haas (1989) (n 166), 402.
[188] Sunstein (n 21), 104.147-50.

academics, environmental groups, biologists, economists, indigenous peoples, and business.[189] This may serve as an effective way of correctly re-imagining the aim of sustainable development not only from the perspective of environment, but also from the perspective of trade, as argued in previous chapters.[190] It would of course also be beneficial if such epistemic communities are also consulted at the international level by, for example, international organisations and judicial institutions.

The epistemic communities may also facilitate the cooperation and coordination between domestic governmental sectors, which is an important way of avoiding treaty conflicts by individual states. Even for states which are parties to both the WTO and the Cartagena Protocol, the individuals in the national delegations under the regimes are different. National representatives in the WTO negotiations and meetings are normally from ministries of trade and foreign affairs; while the ones in the Protocol negotiations and COP-MOPs are generally from ministries of environment, forestry and health. In addition, the domestic implementation of the WTO Agreements and the Protocol are generally dealt with by different governmental sectors. Yet the separate ministries often lack communication with one another to deal with overlapping issues.

That is to say, the coordination between domestic governmental sectors should not be limited to departments in charge of implementing the Protocol, but should also include departments in charge of implementing the WTO Agreements. Similarly, when decisions on international trade in GMOs are being made, reference should also be made to the Protocol by consulting the departments in charge of its implementation.

In order to implement the treaties, draft GMO policies, and facilitate inter-departmental coordination on nationwide biosafety issues, different governmental sectors which are in charge of drafting legislation and making decisions on international trade in GMOs should cooperate and coordinate with one another to find synergies. This may be achieved by states setting up a 'cross-departmental biosafety coordinating commission at the national level headed by a competent national authority involved in the Cartagena

[189] S Charnovitz, 'A World Environment Organisation' (2002) 27 Columbia Journal of Environmental Law 323, 351.
[190] This was discussed in detail in Chapter 4, section 4.2.2 of this thesis.

Protocol';[191] or by creating a new sector or entrusting an existing sector with the power to assess and compare risks, to coordinate regulatory policy, and to ensure reasonable priority-setting in the risk regulation process.[192]

The argument that different governmental sectors of a state should cooperate and collaborate with one another to avoid conflicts between the treaties can be supported by findings of the empirical research carried out in the course of this thesis. During the empirical research, 3 interviewees (CJ1, AO1 and BO2) stated that reconciliation of the treaties should not only happen at the international level, but should also take place at the domestic level where different ministries within one state normally compete with one another and raise potential conflicts.[193]

Domestically, governmental official CJ1 responded that the counter points between trade interests and environmental interests did not just occur in WTO litigation. It occurred in international law more generally and also occurred within the municipal jurisdiction. Different ministries competed for their own interests and raised tensions. It would be best for them to work out the balance and deal with any tension, and ensure better coordination between governmental sectors. If not, they were likely to run into a problem.[194]

Regarding how conflicts between the treaties can be avoided at the domestic level, organisational representative AO1 claimed that states needed to be always cautious in setting domestic rules and applying them. States had to make sure that one rule they were adopting and implementing was not neglecting another rule to which they were equally responsible for under international law. Moreover, states had to make sure different governmental sectors worked together in a coordinated and synergized manner that helps in avoiding conflicts.[195]

Similarly, agency BO2, official of another international organisation, stated that at the domestic level, some countries such as Australia and New Zealand had created a ministry for biosecurity which handled both the CBD and WTO issues. BO2 believed this provided a

[191] D Xue and C Tisdell, 'Effects of the Cartagena Biosafety Protocol on Trade in GMOs, WTO Implications, and Consequences for China', (2000) No. 48 The University of Queensland Working Papers on Economics, Ecology and the Environment, 24.
[192] Sunstein (n 21), 104.150-1.
[193] Comments made by the interviewees will be discussed in detail in the following paragraphs.
[194] Interview (n 100).
[195] Interview (n 39).

lot more collaboration and coordination, and 'at least a lot more information sharing than where there are very separate ministries involved'.[196]

7. Limitations of domestic integration: Political difficulties

It is worth mentioning that although the principles that lie behind systemic integration require states to avoid conflicts between the WTO Agreements and the Protocol at the domestic, states will not necessarily make such efforts to avoid the treaty conflicts.

Indeed, there exist the obvious political difficulties that states normally prioritise trade over environment. States are self-interested and there are always hidden 'political motivations' behind the conflicting treaty provisions.[197] Internationally speaking, the current political values indicate that economic interests generally prevails over environmental values due to states' unwillingness to suspend the WTO treaty obligations on the ground of environmental protection, which can hardly be said to accord with the aim of sustainable development.[198]

At the domestic level, different states have divergent circumstances in the level of development of, for example, science and biotechnology, financial resources, and institutional structure of GMO regulation. These are all reflected in their regulation of GMOs both at the international and domestic levels. In practice, some states tend to make only symbolic gestures rather than being willing to implement an international treaty fully. For example, the implementation of international environmental treaties might require modification of domestic economic policies. Government policy-makers may be reluctant to make such changes if the modifications are perceived as inhibiting economic development and growth. Consequently, avoiding conflicts between the WTO Agreements and the Protocol may meet political difficulties in practice. However, if states recognise the need to reconcile the treaties as argued in Chapter 4, it may be useful in overcoming the political difficulty at the international level.

Moreover, states will not necessarily always prioritise trade over environment. They may instead recognise or be persuaded that there is the need to balance and reconcile trade and environmental interests, with an aim of achieving sustainable development which is

[196] Interview (n 40).
[197] French (n 12), 360.
[198] M Poustie, '*Environment*', in E Moran and others (eds), The *Laws of Scotland: Stair Memorial Encyclopaedia Reissue* (Butterworths LexisNexis, 2007), 41.

widely accepted by the international community. In order to do so, a state may take the decision to sacrifice certain economic interests in order to combat environmental problems. Moreover, GMOs pose distinctive reasons for concern and have attracted strong public concerns. This might be taken into account by decision makers, which might subsequently reduce the political difficulties faced by the use of systemic integration.

8. Conclusion

This chapter adopted a relatively new approach and examined the relationship between the WTO Agreements and the Protocol from the perspective of states' implementation of treaties. As argued in Chapter 2, the potential conflicts between the treaties are more likely to occur or materialise during treaty implementation than when one is simply examining the wordings of the treaty. This argument was reaffirmed by the case study of the EU's GMO regulatory frameworks and the resulted possible trade disruptions.

Therefore, this chapter argued that the principles that lie behind systemic integration require government policy-makers to avoid the treaty conflicts at the domestic level, when they are drafting domestic GMO legislation and making decisions on international trade in GMOs.

Both doctrinal and empirical research suggested that the principles that lie behind systemic integration have already been used at the domestic/regional level (e.g. between domestic governmental sectors), although rather unintentionally and not to a satisfactory level. Both doctrinal and empirical research finding also indicate that the principles behind systemic integration should be better used in a proactive and intentional manner with an aim of avoiding conflicts between the treaties at the domestic/regional level.

In order to do so, states can avoid treaty conflicts by, for example, promoting the cooperation and collaboration between relevant governmental sectors, and consulting with the epistemic community composed of both trade and environmental experts in the implementation and decision-making process regarding GMOs.

Chapter 8

Conclusion

This thesis has attempted to consider a particular phenomenon of the fragmentation of international law: the conflicts between treaties which deal with overlapping areas from different perspectives. Specifically, it deals with the unclear and potentially conflicting nature of the relationship between the WTO Agreements and the Cartagena Protocol, especially as it relates to the regulation of international trade in GMOs, and how such potential conflicts may be resolved or avoided at the international and domestic levels, both theoretically and practically. It looked at the means of reconciling or balancing the competing norms, and considered how government policy-makers may respond to the challenges induced by treaty proliferation and conflicts.

The issue of biosafety has been dealt with under different international institutions which employ various mechanisms to achieve rather different conclusions and results. Both the WTO Agreements and the Protocol are international treaties which belong to different sub-systems of international law - international trade law and international environmental law. The respective functional scope of the WTO Agreements and the Protocol overlap with one another, particularly on the issue of regulation of international trade in GMOs, and this sows the seed for conflicts in this regards.

The emerging challenges to the regulation of international trade in GMOs falls into the broad field of international law, but also poses distinctive reasons for concern. The potential conflicts between the WTO Agreements and the Protocol are rooted in the inevitable fragmentation of international law, and are also subject to the general international rules on conflict of norms, which encompasses conflict resolution and conflict avoidance techniques.

What is clear from this thesis is that there is real potential for conflicts between the WTO Agreements and the Protocol. The treaties overlap with one another as they both regulate international trade in GMOs. They may conflict with one another when they are both valid and applicable in a situation, but provide incompatible directions on how to deal with the same set of facts. In particular, the treaties may be in conflict if any one of them cannot be implemented without violating each other. This is bound to be the case, largely because, as it relates to international trade in GMOs, the WTO Agreements mainly focus on ensuring that

states can engage in liberal and unrestricted trade, while the Protocol, with biosafety as its focus, gives its parties the right to restrict or prohibit the import of GM products.

A state which is a party to both instruments may ban the import of GMOs for an environmental reason which is perfectly legitimate under the Protocol; however, such a ban might violate the state's WTO obligations to ensure free trade. More specifically, the GATT and the Protocol might conflict on the basic WTO principles. Import bans on GMOs taken under the Protocol may be challenged under the SPS Agreement, especially as it relates to the issues of sound scientific evidence in risk assessments, and the precautionary principle. Moreover, labelling requirements and socio-economic considerations in accordance with the Protocol could be challenged under the TBT Agreement.

Recognising the existence of potential conflicts, the important question was how should the potential conflicts between the treaties be dealt with? This query resulted in a detailed inquiry as to whether, how and to what extent, the conflicts should be resolved or avoided. In a bid to unravel this question, a test of the general conflict resolution techniques as they relate to the relationship between the WTO Agreements and the Protocol found that neither the principles of *lex posterior* nor *lex specialis* could provide a definitive solution to conflicts that might arise between the WTO Agreements and the Protocol. Moreover, the 'savings clause' in the Protocol could not be relied upon to resolve such disputes; instead, it indicated that the treaties should be systematically integrated. Thus, no definitive answers could be found regarding how the treaty conflicts should be resolved, especially as the research revealed that there was hardly a suitable and appropriate forum for the resolution of such disputes in an acceptable manner.

This thesis then argued that ignoring potential treaty conflicts and trying to resolve them when they actually happen may not be the best way to deal with the relationship between the treaties. Instead, the potential conflicts between WTO Agreements and the Protocol should be proactively avoided rather than resolved when disputes actually arise.

The balancing of different interests may be an overall technique of conflict avoidance and defragmentation of international law.[1] In particular, the balancing and integration of trade and environment is required by the aim of sustainable development

[1] A van Aaken, 'Defragmentation of Public International Law through Interpretation: A Methodological Proposal' (2009) 16 *Indiana Journal of Global Legal Studies* 483, 493.

within the international legal system and is generally adopted by WTO law and the Protocol. In order to reconcile trade and the environment, the international legal system must strike a balance in its management of both. However, the questions left unanswered are: who should adjudge the balance between trade and environment, and how does one strike the balance between trade and environmental protection?

To this end, it was argued that although fragmentation is inherent in the current nature of international law, international law can still be consistent. At the practical level, one needs to find out how to deal with the co-existence of specific sub-regimes and how they can influence one another. The integration of international law should be advocated by finding the appropriate relationship between international treaties, such as between international trade law and international environmental law. Trade and environment should be integrated through a more coordinated approach at an international judicial level, at the institutional level and at the domestic level, so as to achieve the aim of sustainable development and the cross-fertilization of international law.

The avoidance of conflicts between the WTO Agreements and the Protocol can and should be achieved by using the principle of systemic integration and the principles that lie behind systemic integration, including the principles of mutual supportiveness, good faith, cooperation, and harmonisation, which provide an immediate and viable way of dealing with potentially conflicting rights and obligations.

The principle of systemic integration is generally examined at the judicial level and applied by international judicial institutions with the aim of reconciling relevant international treaties. The principles that lie behind systemic integration, though, can also be applied by international organisations and individual states in order to avoid conflicts between the treaties. In particular, this thesis argued that the relationship between the WTO Agreements and the Protocol should be further clarified and developed intentionally by states when they are implementing the treaties and regulating international trade in GMOs. Coordination and cooperation across regimes is not the only way in which positive interplay between sub-systems of international law can be achieved. This writer's submission is to improve the explicit coordination and cooperation between the organs of the WTO and the Cartagena Protocol, between different states (through, for example, the Biosafety Clearing-House), and between different governmental sectors within a state (through, for example, a domestic Biosafety Clearing-House).

This thesis also undertook a case study and examined the regional GMO regulatory frameworks and practice in the EU. The case study suggested that there existed potential conflicts between the WTO Agreements and the Protocol, particularly during the implementation process of the treaties. It also indicated that the EU had used analogies to systemic integration at the domestic/regional level, albeit in a rather unintentional and unsatisfactory manner.

Importantly, the empirical research undertaken in the course of this thesis found that interviewees from both the selected jurisdictions and international organisations were concerned about the potential conflicts between the WTO Agreements and the Protocol. Some government policy-makers were also cautious about the practical difficulties caused by treaty conflicts during the implementation of the treaties. The empirical results also suggested that the potential treaty conflicts could and should be avoided. In practice, some of the selected jurisdictions and organisations had already been using the principles that lie behind systemic integration to avoid treaty conflicts, although in a rather unintentional way. Moreover, the empirical research reaffirmed and provided empirical evidence for the doctrinal arguments that conflicts between the treaties can and should be avoided at three levels: by judicial bodies, by institutional cooperation and coordination, and by states.

Due to the time and financial limits of PhD research, the author was unable to look at a number of questions in detail in the empirical research. For example, the empirical study did not explore the question of 'non-parties' in detail, as the selected jurisdictions are all parties to both the WTO and the Protocol.[2] Thus, the study cannot provide empirical evidence to the complicated question of the extent to which, if at all, rules on conflict of norms can be applied to deal with the relationship between the treaties as it relates to countries which are not members of both treaties.

The empirical study also did not specifically focus on the question of the political difficulties faced by government policy-makers which, although briefly discussed, is one of the particular limitations to the doctrinal arguments made in previous chapters, claiming that potential conflicts between the WTO Agreements and the Protocol should be avoided.[3] Further questions on the political difficulties which need to be examined more fully (through both doctrinal and empirical methods) include, for example, what political difficulties may

[2] Doctrinal study on this question was carried out in Chapter 5, Section 7 of this thesis.
[3] Doctrinal study on this question was carried out in Chapter 5, Section 5 of this thesis.

occur (if any), who faces such difficulties, and to what extent do political difficulties impact on the decision-makers' choice of whether or not to systemically integrate the treaties?

Moreover, this thesis was also unable to examine a wider range of jurisdictions than the EU, UK, and China in the empirical study. It (unavoidably) does not represent the totality of the world's practice of regulating international trade in GMOs through both the WTO Agreements and the Protocol. However, the limitations on both the questions examined and the selection of jurisdictions might serve as the basis of further studies.

That is to say, the selection of interviewees from the EU, UK, and China can be seen as a pilot study. It can be expanded to provide a fuller picture of the wider practice in regulating trade in GMOs through the WTO Agreements and the Protocol and dealing with the relationship between the treaties. This could serve as the basis of a future research project comprehensively examining a wider range of jurisdictions to review the emerging issues and lessons learned in the course of domestic regulation of GMOs, and the spill over effects that international treaties can have on domestic legislation, policies, and decision-making. It could benefit from both examining domestic legislative frameworks on GMOs and conducting further empirical research with a broader selection of jurisdictions, which could include at least one state from each of the five major negotiation groups of the Protocol. Further empirical research can also include interviews with more representatives from the WTO, the CBD, relevant NGOs, industry, stakeholders and academics.

The significance of applying the principle of systemic integration and the principles that lie behind it in order to avoid conflicts between overlapping international regimes is not limited to the relationship between the WTO Agreements and the Protocol. For example, although traditionally talked about in the context of trade and environment debate, the principle of mutual supportiveness can be used in accommodating and dealing with the relationship between the WTO and non-WTO law and values at large.[4] Avoiding treaty conflicts under the principle of systemic integration and the principles behind it may also work for other biosafety related MEAs, such as the CBD.

Moreover, it may extend beyond the area of international regulation on GMOs and also fit in other MEAs regulating issues such as climate change, tropical deforestation, and

[4] R Pavoni, 'Mutual Supportiveness as a Principle of Interpretation and Law-Making: A Watershed for the "WTO-and-Competing-Regimes" Debate?' (2010) 21(3) *European Journal of International Law* 649, 651.

hazardous wastes. How the relationship between the WTO Agreements and the Protocol is dealt with will likely serve as a source of 'precedent' for future MEAs that impact international trade.[5] In the past, states largely focused on international trade and economic development. But states have now started to take into account other values including environment and social values. The principles that lie behind systemic integration could and should be adopted to integrate these different values while negotiating new MEAs and implementing (existing and new) MEAs in the future.

Furthermore, the techniques discussed in this thesis could also be used for treaties in wider areas of international law. As far as this writer is concerned, this research could also shed light on how the relationship between the WTO Agreements and international treaties dealing with other global issues, such as human rights and foreign investment,[6] should be dealt with. Such international regimes also require a high level of cooperation and coordination between them on overlapping issues. For example, a WTO panel should interpret the WTO provision by taking into account the relevant human rights law with a view to avoiding conflict.[7]

That is to say, the arguments made in this thesis are not limited to the regulation of GMOs, but have wider influence and will also shed light on the relationship between trade and other environmental concerns, and provide evidence about how treaty conflict in general international law should be dealt with. The findings of this thesis suggest that the principle of systemic integration and the principles that lie behind it can be used to view international law as a whole when dealing with treaty conflicts, as well as avoid conflicts between international norms. They also suggest that efforts at conflict avoidance should not only be made by international judicial institutions and treaty organs that are more frequently talked about by existing literature, but can and should also be made by individual states when implementing international treaties, as this may well be an even more effective way of achieving the reconciliation of international norms.

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[5] PE Hagen and JB Weiner, 'The Cartagena Protocol on Biosafety: New Rules for International Trade in Living Modified Organisms' (2000) 12 *Georgetown International Environmental Law Review* 697, 716.

[6] F Jacquemont and A Caparrós, 'The Convention on Biological Diversity and the Climate Change Convention 10 Years After Rio: Towards a Synergy of the Two Regimes?' (2002) 11(2) *RECIEL* 169, 169; and SA Aaronson and MR Abouharb, 'Is More Trade Always Better? The WTO and Human Rights in Conflict Zones' (2013) 47(5) *Journal of World Trade* 1091.

[7] G Marceau, 'WTO Dispute Settlement and Human Rights' (2002) 13(4) *European Journal of International Law* 753, 795.

The conclusion of this thesis is that as a result, and a particular example, of the fragmentation of international law, there exist potential conflicts between the WTO Agreements and the Protocol, particularly in their implementation processes. No international rule can provide a definitive answer to how such conflicts should be resolved, and at the moment, no international dispute resolution forum is well suited to resolve acceptably such conflicts. With the aim of achieving sustainable development and the defragmentation of international law, the potential conflicts between the treaties should be intentionally avoided using the principle of systemic integration and the principles that lie behind it. This can be achieved by making efforts at an international law level, at the institutional level, and more importantly, at the domestic level when states are implementing the treaties and regulating international trade in GMOs. The three levels are intertwined with one another, and efforts can be made at the three levels independently and collectively in order to achieve the desired result of a reasonably harmonious relationship between the WTO Agreements and the Protocol which is vital for the effective regulation of the international trade in GMOs.

Appendices

Appendix I. Enquiry emails

Dear Sir or Madam,

My name is Jingjing Zhao. I am a PhD student at the University of Strathclyde Law School, under the supervision of Professor Mark Poustie who is also Head of the Law School.

My research topic is 'How General Rules on Conflict of Norms in International Law Relate to the Relationship between WTO Agreements (particularly the SPS Agreement and the TBT Agreement) and the Cartagena Protocol on Biosafety'. In the course of my research, I am hoping to investigate the practical difficulties and potential conflicts faced by government policy-makers when they are implementing WTO agreements and the Biosafety Protocol. I also intend to explore whether systemic integration would be a useful strategy to implement the treaties without conflicting with each other. As such, I am hoping to engage with civil servants and lawyers of relevant governmental sectors in EU, UK, and China, the WTO Secretariat, the Biosafety Protocol Secretariat, and relevant NGOs. If possible, I would prefer to pursue this through interviews. However, if this should not prove acceptable or possible, I am willing to utilize questionnaires. All information I collect as part of this process is for research and educational purposes only, and would be anonymous. Participants could also review any written material that refers to their statements or comments.

I obtained your contact information from the website/ the Second National Report on the Implementation of the Protocol. I am writing to enquire if you would be willing to participate in the proposed empirical research? If so, I would send you the formal invitation and relevant supporting documents. If you should be unwilling, are you aware of any people from your department who might be willing to participate?

The research in a form of interviews or questionnaires would commence early next year, I provisionally suggest xxx at a time that is convenient for you. I would be honoured if you could participate. It would be very helpful to my research efforts.

Thank you for your time. I look forward to hearing from you.

Yours sincerely,

Jingjing Zhao

Appendix II. Emails arranging Interviews

Dear xxx,

Following our previous emails, I would like to thank you again for provisionally agreeing to take part in my proposed empirical research. I would be honoured if you could participate. It would be very helpful to my research efforts.

I have been waiting for the ethical approval for my research from the University of Strathclyde, which I have now obtained. If possible, I would like to pursue this research through interviews as soon as possible.

In relation to the format of the interview, I provisionally suggest that we conduct the interview using the free on-line video calling service provided by Skype. We could each locate in an appropriate room with necessary facilities, at a time that is suitable for you. However, if this should not prove acceptable or possible, I am willing to take other formats of interviews, such as phone interviews or face-to face interviews at your office.

The interview will take approximately one hour. With your consent, I hope to record the interview with a digital voice recorder so that I do not have to take notes and miss things you said, but no one else apart from me will have access to this recording. All information I collect as part of this process is for research and educational purposes only, and would be anonymous. Participants could review any written material that refers to their statements or comments, or decide to withdraw from this research at any time. In order to provide more details of my proposed research, a formal invitation named 'Information Sheet' and a consent form have been attached to this email. Would you please check the attached documents?

In relation to the date for interview, I will be available at any time in xxx. Would you please be so kind as to let me know which day and time will be suitable for you?

Thank you for your time. I look forward to hearing from you.

Yours sincerely,

Jingjing Zhao

Appendix III. Information Sheet

Name of School: Law

Title of the study: How General Rules on Conflict of Norms in International Law Relate to the Relationship between WTO Agreements and the Cartagena Protocol on Biosafety

Dear Sir\Madam,

My name is Jingjing Zhao. I am a PhD student in the School of Law at the University of Strathclyde, locating in Glasgow, United Kingdom. I am writing to ask if you would be interested in participating in an empirical research for the above research project.

The purpose of the research

The purpose of this research is to look at how are and how should the conflicts between WTO agreements and the Cartagena Protocol on Biosafety be dealt with during the implementation process. I'm hoping to investigate whether states/regional economic organisation/relevant international organisations are aware of the potential conflicts between the treaties; examine how they are dealing with the potential treaty conflicts; and test whether they would consider interpreting the treaties in the light of each other (so called systemic integration) during the implementation process in order to avoid conflicts.

Why have you been invited to take part?

As part of research will be focused on how the potential conflicts between WTO agreements and the Biosafety Protocol during the implementation process are faced and dealt with by states/regional economic organisation/relevant international organisations, and you have been invited to take part in this research because of your own lengthy experience as a (governmental official/ WTO Secretariat member/ CBD Secretariat member/ relevant NGO member). I do hope I will learn a lot from your experience and practice in this field.

Your participation

Your participation in this research is voluntary. With your permission, I would like to come to your office (or talk online or over the phone) and ask you some question regarding your practice and experience which will take approximately one hour. I would like to record this interview so that I do not have to take notes and miss things you said, but no one else apart

from me will have access to this recording. Also, as the issue this research investigates involves no personally sensitive elements, there is no any risk if you decide to participate.

Right to withdraw

You have the right to decide not to take part in this study at any point. During the interview or afterwards, you have the right to withdraw at any time without giving a reason and ask for the recording to be destroyed.

Confidentiality

The information that will be recorded will not be shared with anyone in your department/organisation. All responses will be treated confidentially and every effort will be taken to protect your anonymity at all times. All data and transcripts will be kept in a password protected computer and accessed by the named investigators only. Data will be destroyed no later than five years after the completion of the thesis to allow time for publication and will be destroyed earlier if the publication is earlier.

When writing my thesis or in any publications, I will use representative identity indicators, such as State 1, Respondent A; Regional Economic Organisation Respondent A; International Organisation 1, Respondent A, when citing any extracts from your answers to protect your identity. Draft transcripts will be sent to you so you can check the accuracy of what was said. The results of this research will be published in a relevant peer reviewed journal or presented in my PhD thesis.

If you have any questions before you decide to take part or later on, at any point during the study, please do not hesitate to contact me,

Jingjing Zhao

School of Law

Graham Hills Building

50 George Street

Glasgow

G1 1QE

Tel: 07760980969

Email: jingjing.zhao@strath.ac.uk

Or you can contact my supervisor:

Professor Mark Poustie

School of Law

Graham Hills Building

50 George Street

Glasgow

G1 1QE

Tel: (+44) (0)141-548-3400

E-mail: mark.poustie@strath.ac.uk

If you understand the information presented above and agree to become involved in this research, please sign the Consent Form on the following page. This is a standard requirement for all institutions participating in research with the University of Strathclyde, to grant permission for the research to proceed.

Thank you very much for your time and I hope to hear from you soon.

Best wishes,

Jingjing Zhao

Appendix IV. Consent Form

Name of School: Law

Title of the study: How General Rules on Conflict of Norms in International Law Relate to the Relationship between WTO Agreements and the Cartagena Protocol on Biosafety

- I agree to participate in this research which aims to investigate whether states/regional economic organisation/relevant international organisations are aware of the potential conflicts between the treaties; examine how they are dealing with the potential treaty conflicts; and test whether they would consider interpreting the treaties in the light of each other (so called systemic integration) during the implementation process in order to avoid conflicts.

- I confirm that I have read and understood the information sheet for this research and the researcher has answered any queries to my satisfaction.

- I understand that all the information I provide will be dealt with confidentially and every effort will be taken to protect my anonymity at all times.

- I also understand that I am free to withdraw from the study at any time without giving a reason and can request any data have been provided to be destroyed.

- I consent to being audio recorded as part of the research, and I know the recordings will be confidential to the researcher.

I (Print Name)_____Hereby agree to take part in the above research

Signature _____ Date _____ .

Appendix V. Sample Interview questions

Part 1. About the organisation where the interviewee is from.

1. What is your role and rank in the organisation?
2. How the regulation of GMOs is divided up in your country/ the EU/ your organisation?
3. What is the main responsibility of your organisation in relation to the domestic regulation of GMOs?
4. Which is the principal domestic legislation/EU legislation governing your work? (This question will not be asked for the WTO and the Biosafety Protocol interviewees).
5. Are WTO agreements (SPS Agreement or TBT Agreement) / Biosafety Protocol the most relevant international treaties to your work?
6. Which aspects/articles of the treaties are most relevant to your work (articles relevant to risk assessment, scientific evidence, precautionary principle, social-economic consideration, international standards, and so on)?

Part 2. Awareness of the content of the potentially conflicting treaty.

1. Do you think there are any other international treaties which are relevant to the treaty which principally governs your work (SPS Agreement/TBT Agreement and the Protocol)?
2. If yes, which treaty? Are there any particular provisions which you are aware that are relevant to the treaty which governs your work?
3. Do you know how to get access to that other treaty? Which governmental/EU department is responsible for administering the domestic/regional regime which implements that other treaty? ---Questions for EU, UK, and China interviewees.

   Do you know how to get access to the other treaty and organisation? Have you had any contacts with the other organisation in relation to that other treaty? If yes, regarding what issues? ---Questions for the WTO and the Protocol interviewees.
4. If you are not fully aware of the content of the other treaty, what do you think is the main reason? (Because other departments are responsible for it? Lack of understanding and training? Lack of communication between relevant departments?)
5. Do you think the WTO agreements and the Protocol are equally important for your country/the EU? ---Questions for EU, UK, and China interviewees.

Do you think that other treaty is also important for your organisation? If yes, is it as important as the WTO agreements/the Protocol for your organisation? ---Questions for the WTO and the Protocol interviewees.

6. In practice, do you think the treaty which principally governs your work is more important to your everyday work than that other treaty?

Part 3. Awareness of the potential conflicts between WTO agreements and the Protocol.

1. Do you think WTO agreements and the Biosafety Protocol are related with each other? If yes, in which areas?
2. Do you consider that there are overlaps between WTO agreements and the Protocol? What are they?
3. Do you see potential conflicts between WTO agreements and the Biosafety Protocol?
4. If yes, what are the specific examples of the potential conflicts? Can you please give me all the examples that you are aware of?
5. How did you find out about the potential conflicts between WTO agreements and the Protocol (everyday work/academic writings/other's advice, and so on)?
6. Do you think the potential conflicts are obstacles for the implementation of the treaties?
7. Do you think all the international treaties to which your country/the EU is a party, including WTO agreements and the Protocol, should not conflict with each other? Should all those treaties be equally treated as a whole set of international rules? ---Questions for EU, UK, and China interviewees.

   Do you think WTO agreements and the Protocol should not conflict with each other? Do you think the two treaty regimes are equally important for member states? Should the two treaty regimes be equally treated as a whole set of international rules by member states? ---Questions for the WTO and the Protocol interviewees.

Part 4. Practical difficulties faced by government policy-makers when implementing the treaties.

1. When drafting legislation, policy or making decisions in relation to GMOs, have you ever encountered conflicts with the other treaty?
2. If you have seen potential conflicts between the treaties, how did you deal with these?
3. Did you try to avoid the potential conflicts? And how?
4. Or did you leave the potential conflicts as they were?

Part 5. Would the principle of systemic integration be a useful technique to deal with the potential conflicts?

1. How do you think the potential conflicts between WTO agreements and the Protocol should be avoided or resolved?
2. Are you aware of any general international law rules on how to deal with conflicts between treaties, such as rules on how to avoid potential conflicts, or how to resolve the conflicts between treaties?
3. Before I contacted you regarding this project, have you heard of the principle of systemic integration?
4. If the answer to the above question is yes, would you please describe briefly your understanding about the principle of systemic integration? If the answer is no, could I give a brief introduction to this principle please?
5. Do you think the approach of systemic integration would help the implementation of the treaties? If yes, how?
6. Did you make use of systemic integration in the implementation of the treaties?
7. If not already, will you consider using the systemic integration technique to reconcile the treaties in implementation?
8. If yes, how will you use the systemic integration technique?
9. Do you think coordination between different governmental sectors/departments would be possible and necessary in relation to the implementation of the treaties when decisions regarding GMOs are being made?

Part 6. How could conflicts between the treaties be resolved?

1. Should conflicts between WTO agreements and the Protocol arise, how could they be resolved?
2. Is international judicial settlement a good way to deal with it?
3. If yes, which dispute settlement fora should the states utilise? And why?
4. Which of the following is better in dealing with the potential conflicts: to avoid conflicts at the implementation stage, or to ignore the potential conflicts and resolve it should any dispute arises?

Part 7. Other relevant issues.

1. Do you think systemic integration would contribute to the aim of sustainable development?
2. When making decisions regarding GMOs, do you make different arrangements according to whether the other country is a party to the WTO or the Biosafety Protocol or not?
3. Do you think research on how the potential conflicts should be dealt with would be helpful for you to fully implement the treaties?
4. Would you be interested in reading a work on the relationship between WTO agreements and the Biosafety Protocol?
5. Would you be interested in some guidance on the potential conflicts between the treaties' provisions?

Appendix VI. Enquiry emails (in Chinese language)

尊敬的XXX:

您好!

我叫赵晶晶，是英国斯特拉斯克莱德大学(The University of Strathclyde)法学院的一名博士生，我的导师是法学院院长马克.波斯蒂教授(Professor Mark Poustie) 。

我博士研究的课题是《如何适用一般国际公法的冲突规则来理解WTO各协定（SPS和TBT协定）与卡塔赫纳生物安全议定书之间的关系》。作为研究的一部分，我希望能调查一下中国，英国和欧盟在执行这些国际条约的实践中是否面临着不同条约规则之间不一致的情况。我还希望能研究在实践中将以上两个条约结合起来是否会有助于条约的执行。目前，英国和欧盟的相关人员已经同意了参与我的课题，并且已经完成了一部分的咨询。这项研究预计会以当面咨询的方式进行，如不能接受，也可以调查问卷的方式进行。我收集到的所有信息都只会用做科研用途，并且会采用匿名的方式。

我从XXX得到了您的联系方式,并真诚邀请您参与我的研究。如果您同意参加，我会尽快发给您正式的邀请信和相关材料。如您无法参加，请问您部门中是否有其他同事会对此项研究感兴趣?

相关的采访或调查问卷大致会在今年7月或者8月份进行，具体就看什么时间对您来说比较合适。如果您能参加，我将感到非常荣幸，并会给我的研究带来非常大的帮助。

非常感谢您读这封邮件，期待您的回信。

此致,

敬礼!

赵晶晶

2012年x月x日

Appendix VII. Information sheet (in Chinese language)

研究信息列表

学院名称: 英国斯特拉斯克莱德大学法学院

课题: 如何适用一般国际公法的冲突规则来理解WTO各协定(尤其是SPS Agreement和TBT Agreement)与卡塔赫纳生物安全议定书(The Cartagena Protocol on Biosafety)之间的关系.

尊敬的先生/女士:

我叫赵晶晶，是英国斯特拉斯克莱德大学法学院的一名博士研究生。在此真诚邀请您参与我关于以上博士课题的调查研究。

研究目的

这项研究的目的是从条约冲突的角度看各成员国如何在实践中执行世界贸易组织的相关条约和卡塔赫纳生物安全议定书. 我希望咨询的问题包括: 各国是否认为这两个条约之间存在可能的冲突; 各国如何处理可能出现的冲突; 以及各国是否考虑到通过在实践中有机地结合这两个条约从而避免可能的冲突.

为什么邀请您?

这项课题的一部分是要研究各国如何处理WTO协定和卡塔赫纳生物议定书之间的潜在冲突.由于您在(相关国家政府部门/WTO秘书处/生物多样性条约秘书处/相关非政府间国际组织)有较丰富的工作经历,我真诚邀请您参与这项研究.我相信我一定能从您的经历和经验中学到很多知识.

您的参与

您参与这项研究是自愿性质的.在您同意的前提下,我希望能拜访您的办公室(或者通过网络或电话),占用您大概一个小时的时间,向您咨询一些相关问题.我希望能对我们的谈话做一下录音记录,以避免我由于做笔记而遗漏您谈到的信息.除我之外,任何其他人不会接触到相关的录音.另外,如果您同意参加,基于这项研究自身的性质,您不会承担任何风险.

退出的权利

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保密性

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如果您了解以上的信息,并且同意参加这项研究,请在后附的同意书上签字.这些程序只是为了满足斯特拉斯克莱德大学允许进行相关研究的标准化要求.

非常感谢您的宝贵时间,并期待您的回信.

此致

敬礼

赵晶晶

Appendix VIII. Consent form (in Chinese language)

同意书

学院名称: 英国斯特拉斯克莱德大学法学院

课题: 如何适用一般国际公法的冲突规则来理解WTO各协定(尤其是SPS Agreement和TBT Agreement)与卡塔赫纳生物安全议定书(The Cartagena Protocol on Biosafety)之间的关系.

- 我同意参见这项研究,并了解这个课题的目的是研究各成员国如何在实践中执行世界贸易组织的相关条约和卡塔赫纳生物安全议定书,包括各国是否认为这两个条约之间存在可能的冲突; 各国如何处理可能出现的冲突; 以及各国是否考虑到通过在实践中有机地结合这两个条约从而避免可能的冲突.
- 我已经阅读并了解研究信息列表中的相关内容,并对研究人员就我相关问题的回答表示满意.
- 我了解我所提供的所有信息都会被进行保密处理,研究人员会竭尽所能对我进行匿名保护.
- 我了解我有权随时退出这项研究,并且不需要给出任何理由.我也有权要求我提供的所有信息被彻底销毁.
- 我同意对这项研究进行录音记录.所有记录只有研究人员在完全保密的情况下才可以使用.

我	同意参加以上的研究

(姓名,请用正楷书写)	
签名	日期

Appendix IX. Sample Interview Questions (in Chinese language)

咨询问题范例

第一部分:相关国际条约

7. 您所在单位在转基因产品管理方面主要负责那些方面(相关国际条约谈判/审批/贸易/等等)?
8. 与您工作最相关的国内法规是什么?
9. 与您工作最相关的国际条约是什么 (SPS Agreement /TBT Agreement / Biosafety Protocol)?
10. 相关条约中哪些条款相对来说比较重要(例如关于风险评估/科学证据/预防原则/社会-经济因素/等等相关条款)?

第二部分: 对可能冲突的条约内容的了解程度。

7. 您是否认为其它国际条约可能与您工作最相关的条约在内容上有冲突?
8. 如果有的话,是哪个(些)条约?哪些相关条款?
9. 您了解可能冲突的条约的具体内容吗?您知道哪些部门具体负责该条约的实施吗?
10. 如果您不了解可能冲突的条约的具体内容,您认为主要困难在哪?
11. 您认为WTO各项协定和卡塔赫纳生物议定书对成员国来说是同等重要还是某一个相对来说更重要?

第三部分: 对WTO各项协定和卡塔赫纳生物安全议定书可能存在的冲突的了解程度。

8. 您是否认为WTO各项协定和卡塔赫纳生物议定书之间有关联?
9. 您是否认为这两个条约之间存在互相重叠的内容?如果是的话,您是否了解在哪些方面两个条约的内容存在交叉?
10. 您是否认为WTO各项协定和卡塔赫纳生物议定书在条约内容上可能存在冲突?
11. 如果是的话,具体存在哪些可能的冲突?您是如何了解到这些可能的冲突的?
12. 您认为WTO各项协定和卡塔赫纳生物议定书之间可能存在的冲突会影响或阻碍这两个条约的实施?
13. 您是否认为一个国家签署的不同国际条约之间在内容上不应该存在冲突?

第四部分: 各国在实施国际条约的过程中遇到的实际问题。

5. 在进行关于转基因产品的国际条约谈判/国内立法/实际执行等的过程中,您是否遇到过WTO各项协定和卡塔赫纳生物议定书之间发生冲突的情况?
6. 如果遇到过两个条约冲突的情况,您是如何处理这些冲突的?
7. 您是否尝试去避免这两个条约间的冲突?如果是的话,是通过什么方法避免的?
8. 您是否认为这些条约间的冲突不是很严重,因而并没有对可能的冲突采取特殊的行动?

第五部分:将两个条约有机结合是否会有助于避免它们之间的冲突?

10. 您认为这两个条约间的可能冲突应如何解决?如何避免冲突?在实际发生冲突之后应如何解决?
11. 您是否了解国际公法上关于条约冲突的避免或解决得一些原则或规定?
12. 您是否认为一个国家所签署的不同国际条约都同等重要,且该国应该把所有条约当作一个整体来看待?
13. 您是否认为在实践中将两个条约有机结合会有助于避免它们之间的冲突?
14. 您在实践中是否运用'将两个条约有机结合'这样一种方式?
15. 如果没有,您是否愿意考虑运用'将两个条约有机结合'这样的方式来促进条约的实施?
16. 如果愿意考虑运用这种方式,您认为应该如何将两个条约有机结合?
17. 您是否认为在执行这两个条约和对转基因产品国际贸易进行监管的过程中,一国内不同政府部门之间可以,且应该进行更多的协调和沟通?

第六部分: WTO各项协定和卡塔赫纳生物议定书之间如果发生冲突应如何解决?

5. 如果WTO各项协定和卡塔赫纳生物议定书之间发生冲突,应如何解决?
6. 针对这种冲突,国际冲突解决机制是否为一种好的解决方法?
7. 如果是的话,哪个机构更适合解决这种冲突(WTO争端解决机制/国际法院/仲裁)?
8. 关于WTO各项协定和卡塔赫纳生物议定书之间可能的冲突,以下哪种处理方式更合适:在条约执行阶段尽量避免二者的冲突;还是在条约执行阶段先不考虑二者冲突问题,一旦真正发生冲突,再寻求解决的方法?

第七部分:其它相关问题.

6. 您是否认为将WTO各项协定(贸易条约)与卡塔赫纳生物议定书(环境条约)在实践中有机结合起来可以促进可持续性发展的目标?
7. 您的工作中涉及转基因产品问题是,所做的决定或政策是否会根据对方国家是否WTO或卡塔赫纳生物议定书的成员国而有所区别?
8. 您会有兴趣阅读一份关于WTO各项协定与卡塔赫纳生物议定书之间关系的文章吗?
9. 您会有兴趣阅读一份关于这两个条约间潜在冲突的文章吗?
10. 您认为一项关于WTO各项协定与卡塔赫纳生物议定书之间潜在冲突应如何避免或解决的研究会有助于这两个条约的有效实施吗?

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