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Towards Fishery Sustainability in the Asia Pacific Economic Cooperation: A Critical Analysis of Effectiveness of International Legal Regimes

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Abstract

This thesis identifies the provision of subsidies as being the principal contributor to the depletion of fish, which is undoubtedly the most significant issue amidst all of APEC's pressing fisheries issues. APEC is one of the intergovernmental organisations significantly discussing the regulation of fisheries in the context of trade liberalisation of fish and fishery products. This thesis examines how various regimes in international law and APEC curtail the depletion, and further evaluates the effects international law has on the fisheries issues in the APEC. The first focused area in this thesis is the effect that international environmental law and international law of the sea have on fishery sustainability. These regimes have limited effect on fishery sustainability because of their voluntary nature. These legal regimes have more effect on fishery management rather than controlling fisheries subsidies. The second area of focus is on the WTO-launched negotiations on the regulation of fisheries subsidies. The WTO originally published the Chair Text in 2007 so to clarify and improve the discipline of fisheries subsidies; in 2017 it vowed to complete an agreement of the regulation before the next WTO Ministerial Conference held in late 2019. However, there is no enforced regulation of fisheries subsidies by the WTO. The final focus is that APEC has made policy declarations to remove harmful fisheries subsidies; however, its governance has been criticised because of the voluntary nature of its forum. Nevertheless, the major undertaking of recent times has been the Comprehensive and Progressive Trans-Pacific Partnership Agreement (CPTPP) by eleven APEC member economies. Moreover, the environmental chapter in the CPTPP is the first regulatory standard of fisheries subsidies in the APEC region. Its regulation of fishery subsidies integrates fisheries rules and the WTO Subsidy and Countervailing Measures Agreement. Particularly, CPTPP eliminates harmful fisheries subsidies that lead to the depletion of fish. In conclusion, this thesis argues that, compared to international environmental law on fisheries and international law of the sea, the international trade regime contributes a more significant impact on resolving fisheries issues in APEC. This is because of the long-standing, in-depth and up-to-date negotiations on the regulation of fisheries subsidies at the WTO. Furthermore, the CPTPP paves the way for fishery sustainability because of its binding effects of the regulation of fisheries subsidies and its environmental dispute settlement.

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Abbreviations

ACP: African, Caribbean and Pacific

AB: Appellate Body

ADB: Asian Development Bank

AIIB: Asian Investment and Infrastructure Bank

APEC: Asia Pacific Economic Cooperation

CBD: Convention on Biological Diversity

CFP: Common Fishery Policy

CITES: Convention on International Trade in Endangered Species of Wild Fauna and Flora

COP: Conference of Parties

CPTPP: Comprehensive and Progressive Agreement for Trans-Pacific Partnership

CTE: Committee on Trade and Environment

DDA: Doha Development Agenda

DSB: Dispute Settlement Body

DSM: Dispute Settlement Mechanism

EDB: Environmental Database

EEZs: Economic Exclusive Zones

EMFF: European Maritime and Fisheries Fund

EU: European Union

FAO: Food and Agriculture Organisation

FTAs: Free Trade Agreements

FOC: Flags of Convenience

GATT: General Agreement on Tariffs and Trade

GFT: Government Financial Transfer

ICRW: International Convention for the Regulation of Whaling

IUCN: International Union for Conservation of Nature

IUU Fishing: illegal, unreported and unregulated fishing

LDCs: Least Developed Countries

MEAs: Multilateral Environmental Agreements

MFNs: Most Favoured Nation

MPA: Marine Protected Area

NGOs: Non-governmental Organisations

NGR: Negotiating Group on Rules

NTB: Non-tariffs Barriers
OECD: Organisation for Economic Co-operation and Development
OFWG: Ocean and Fisheries Working Group
PTAs: Preferential Trade Agreements
PSMA: Port State Measures Agreement
RFMOs: Regional Fishery Management Organisations
RTAs: Regional Trade Agreements
SBSTTA: Subsidiary Body on Scientific, Technical and Technological Advice
SCM Agreement: Subsidies and Countervailing Measures Agreement
S&DT: Special and Differential Treatment
SPS Agreement: Sanitary and Phytosanitary Agreement
SDGs: Sustainable Development Goals
SVEs: Small and Vulnerable Economies
TBT Agreement: Technical Barriers to Trade Agreement
TPP Agreement: Trans-Pacific Partnership Agreement
UN: United Nations
UNCLOS: United Nations Convention on the Law of the Sea
UNCTAD: United Nations Conference on Trade and Development
UNEP: United Nations Environmental Programme
UNFSA: United Nations Fish Stocks Agreement
USTR: United States Trade Representative
VCLT: Vienna Convention of the Law of Treaties
WTO: World Trade Organisation
WWF: World Wide Fund

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Chapter One Introduction

Towards Fishery Sustainability in International Law and APEC: A Recognised Evolutionary Approach

1. Introduction

In international law[1], regulations and policy makers are thriving to find out problematic economic structures and their causes that incentivise overexploitation of fish stocks. Hence, the regulations and policy makers are incrementally committed to seeking a best enabling framework to tackle this overexploitation issue that has a clear effect on fishery sustainability. Fishery sustainability is enshrined in fisheries regulations under international law owing to the latter's essential concern for sustainable development of both the environment and human beings.

A series of rules in different regimes in international law intend to ensure fishery sustainability. These fisheries rules can be essentially found in the international law of the sea, international environmental law on fisheries, and international trade law. In the international law of the sea, the United Nations Convention on Law of the Sea 1958 (UNCLOS) and its implementing agreements as well as the Food and Agriculture Organisation (FAO) agreements on fisheries are the main rules governing fishery sustainability. As for international environment law, fisheries-related multilateral environmental agreements, such as, the Convention on International Trade in Endangered Species (CITES) and the Convention on Biological Diversity (CBD) dedicate to protecting fisheries.

Concerning international trade law, although the mandate of the World Trade Organisation (WTO) is not focused on sustainable development of the marine environment and fish stocks, its case-law recognises the linkage between trade liberalisation and environmental protection, which includes fishery sustainability. The US *Shrimp and Turtle* case and the US *Tuna II* case are both illustrative

[1] International law referred to in this thesis does not mean 'public international law', which serves as a framework for the practice of organised, solid and stable international relations between nations. Instead, the term is used more generally to cover and refer to all international rules governing nations.

trade disputes with a focal point on sustaining fisheries while liberalising trade. Additionally, WTO members launched negotiations on the regulation of fisheries subsidies in the Doha Round in 2001, the reason for which was, in part, fishery sustainability. Further in 2007, the Negotiating Group of Rules of the WTO provided the Chair Text to clarify and improve the disciplines set on fisheries subsidies.

Fisheries rules enacted and governed by different regimes of international law exhibit the separation which exemplifies the fragmentation of international law. This fragmentation is likely to arise from the different perspectives that stakeholders in the regimes of international trade, fisheries and sustainable development hold. In other words, all of these regimes have their own specialisation yet appear incongruent to each other.[2] Hence, having considered the context that shares an identical goal of fishery sustainability, the relationship between the international law of the sea, international environmental law, and international trade law is an illustrative case that presents the fragmentation of international law.

Given issues arising from the fragmentation of international law, harmonisation of international regulations is necessary.[3] Moreover, there are increased examples showing this necessary kind of integration. For instance, the United Nations (UN) and the WTO have recently shown clear progress in working interdependently with each other to achieve their identical goal of fishery sustainability.[4] Nonetheless, this progress in effective interdependency still has limitations in guaranteeing fishery sustainability due to, for example, the difficulty of achieving consensus at the WTO and countries' lack of ability to comply with international treaties and agreements ratified by the UN.

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[2] Gerhard Hafner, 'Pros and Cons Ensuing from Fragmentation of International Law' (2004) 25(4) Michigan Journal of International Law 849, 852–853.

[3] ibid.

[4] The UN established the 2030 Agenda adopting 17 sustainable development goals (SDGs) in September 2015. SDG 14 concerns protection of the marine environment and recognises the special and differential treatment of developing and least developed countries at the WTO negotiation on fisheries subsidies. With respect to the WTO, its recent Ministerial Conference in December 2017 significantly discusses the regulation of fisheries subsidies and decides on concluding negotiations for an agreement on the regulation of fisheries subsidies with recognition of SDG 14.6 by the end of 2019.

In addition to international fishery rules, the APEC has established the 'Blue Economy' policy to combat destructive fishing along with its degradation of marine ecosystems and fishery resources, reflecting on the insufficiency of its endeavour to tackle marine ecosystem problems incurred by economic growth.[5] Nevertheless, as a voluntary forum, the APEC lacks binding legal power, enabled only to create guidelines and provide policy suggestions to advance the goal of fishery sustainability. APEC encourages its member economies to modify their domestic regulatory frameworks. The significance of capacity building reflects the wide disparity among APEC member economies in terms of their capability to implement policy.[6]

Despite these circumstances, on the 8th of March 2018, eleven of twenty-one APEC member economies[7] signed a mega-regional trade agreement, the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP).[8] These eleven CPTPP signing parties are also major stakeholders in the WTO negotiations on the regulation of fisheries subsidies.[9] The CPTPP came into force on the 30th of December 2018 upon its signing by six of the eleven signing parties.[10] The environmental chapter of the CPTPP is widely

[5] APEC, High-Level Policy Dialogue on Food Security and Blue Economy Plan of Action, Annex B – Plan of Action, available at: <https://www.apec.org/Meeting-Papers/Annual-Ministerial-Meetings/2015/2015_amm/annexb> accessed 8 January 2019.

[6] See Takao Suami, 'Informal International Lawmaking in East Asia – An Examination of APEC' in Ayelet Berman, Sanderijn Duquet, Joost Pauwelyn, Ramses A Wessel and Jan Wouters (eds), *Informal International Lawmaking: Case Studies* (Torkel Opsahl 2012) 78–79.

[7] There are twenty-one member economies in APEC, including Australia, Brunei Darussalam, Canada, Chile, China, Hong Kong – China, Indonesia, Japan, Republic of Korea, Malaysia, Mexico, New Zealand, Papua New Guinea, Peru, Philippines, Russia, Singapore, Chinese Taipei, Thailand, United States, and Vietnam. CPTPP signing parties include eleven of APEC member economies: Australia, Brunei, Canada, Chile, Japan, Malaysia, Mexico, New Zealand, Peru, Singapore, and Vietnam.

[8] Department of Foreign Affairs and Trade, Australian Government, Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP), available at: <https://dfat.gov.au/trade/agreements/in-force/cptpp/Pages/comprehensive-and-progressive-agreement-for-trans-pacific-partnership.aspx> accessed 8 January 2019.

[9] In the Hong Kong Ministerial Conference, three groups of voices were set up and categorised by the WTO negotiations on the regulation of fisheries subsidies. The first group, called 'Friends of Fish,' includes the US, New Zealand, Australia, Iceland and Peru. The second group is the 'Core Five Countries,' including Japan, Korea, Canada, Taiwan and the EU. The final group is the 'Emerging Fishing Countries' and includes China, Brazil, Mexico and India. Except for Iceland, the EU and Brazil, the rest of the countries in these three groups are APEC member economies.

[10] Australia was the 6th country to ratify the deal on the 31st of October. Six countries ratified the CPTPP and caused it to come into force on the 30th of December 2018. Vietnam was the 7th nation to ratify on the 15th of November 2018. Therefore, at present, seven signing parties have ratified the CPTPP.

regarded as remarkable evidence of the linkage between trade liberalisation and environmental protection at a regional level. Furthermore, its environmental chapter stipulates fishery regulations, and, for the first time, the regulation of fishery subsidies in the APEC region. Therefore, it is considered to be an initial regime [11] integrating the standards and concepts of fishery sustainability embedded in international law of the sea into international trade law.

Given the novel and developmental approach illustrated by the CPTPP, as well as the aforementioned progress of international law in ensuring fishery sustainability, an evolution in international law is identifiable. This thesis aims to explore the means through which this evolution is taking place. First, this thesis enquires as to how international law and APEC respond to and resolve issues within the fisheries sector in APEC.[12] Then, this thesis will perform an evaluation of the impact had by international law on fishery sustainability and of APEC's policy on issues of sustainability within the fisheries sector.

This introductory chapter delineates the research background of this thesis. The background containing a discussion of fishery sustainability under international law frames research questions, objectives, and methods of this thesis. An outline of this thesis is illustrated at the end of this chapter.

2. Discussion of Fishery Sustainability as Enshrined in International Law for the Conceptual Framework of the Thesis

2.1. Fragmented International Fisheries Rules

Prior to in-depth analysis of the origins and effects of fragmentation of

[11] In this thesis, 'regimes' is a group of rules that 'denotes a special set of secondary rules under the law of State responsibility that claims primacy to the general rules concerning consequences of a violation. In a broader sense, the term is used to refer to interrelated wholes of primary and secondary rules, sometimes also referred to *as "systems" or "subsystems" of rules* [emphasis added] that cover some particular problem differently from the way it would be covered under general law […] Sometimes whole fields of functional specialisation, of diplomatic and academic expertise, are described as self-contained (whether or not that word is used) in the sense that special rules and techniques of interpretation and administration are thought to apply [footnote omitted]'. Cited in Margaret Young, *Trading Fish, Saving Fish* (CUP 2011) 19–20, footnote 83.

[12] Other than APEC, the EU is another pivotal region worth researching due to its Common Fishery Policy and to the EU's more sophisticated supranational governance and institutions in relation to fisheries. However, due to the scope, limited resources and timeframe, this research project confines its focus to the APEC.

international law, it might be useful to first address that of particular interest to this thesis's discussion on the fragmentation is the reference to the International Law Commission's 2006 documentation and discussion on the fragmentation of international law which is primary source.[13] The fragmentation of international law started at the end of the Cold War due to a set of various accountable reasons, such as the proliferation and specialisation of international regulations.[14] Other factors consist of increasing political fragmentation, the regionalisation of international law and the emancipation of individuals from States.[15]

The fragmentation of international law contains both positive and negative effects. The positive effects could bring an increasing specialised rules and regimes to international law, whereas the negative effects tend to jeopardise the authority, credibility, and reliability of international law.[16] The fragmentation would further lead to the particular problem of *Lex Specialis* which causes the issue in determining priority when successive treaties contain an identical object.[17]

The Vienna Convention of the Law of Treaties (VCLT) is the essential treaty that determines this issue of priority, although it may not be completely satisfactory. According to the VCLT, Articles 30, 40, 41 and 59 of the treaty – particularly Article 30 – provide rules and solutions to the problem of conflicting treaty norms. However, Article 30 refers to more applicability of the general rule of *lex posterior* rather than the principle of speciality.[18] Moreover, VCLT does

[13] International Law Commission (ILC), UN Doc No A/CN.4/L.702, 'Report of the Study Group, Fragmentation of International Law: Difficulties arising from the Diversification and Expansion of International Law: Conclusions' (18th July 2006); UN Doc No A/CN.4/L.682 and Corr.1, 'Analytical Study finalised by the Chairman' (13th April 2006).
[14] Hafner discovers five reasons leading to the fragmentation. See Hafner, (n2), 849–850.
[15] ibid.
[16] Hafner, (n2), 856–860.
[17] ibid, 860.
[18] Article 30 in VCLT 'Application of successive treaties relating to the same subject matter':
1. Subject to Article 103 of the Charter of the United Nations, the rights and obligations of States Parties to successive treaties relating to the same subject matter shall be determined in accordance with the following paragraphs.
2. 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.
3. 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.

not focus on providing solutions to the issue of conflicting duties owed by one State to different other subjects of international law.[19] Considering all these deficiencies that VCLT has, Article 103 of the Charter of the United Nations appear to be the most suitable rule to determine the priority of one regime.[20]

Given fast growing integration of international legal regimes, Hafner argues an increasing necessity to take measures to make sure the unity of these legal regimes.[21] To a further extent, in light of the fragmented rules governing the fisheries sector, such fishery rules' status as a fragmentation under international law, conflicts commonly occur between the applicable and effective regulations belonging to competing interests due to the underlying biased views of different regimes.[22] This fragmentation is hence discussed here as a normative type occurring between different legal regimes, such as international trade law, international environment law, and the international law of the sea. As presently construed, the target of fishery sustainability under international law suffers from a lack of coherence in definitions of sustainable development and disagreements between regimes over the concept's correct usage.[23]

Though the international regimes in question share the same identical target of fishery sustainability in common, and though these regimes conjointly envisage fishery-related regulations and management through the international law of the sea, these regimes have conceived and developed independently their notions of the international law of the sea, of international environmental law, and of international trade law.[24] Regardless of all regimes placing regulations on fisheries, they regulate the challenges posed by the linkages between

4. When the parties to the later treaty do not include all the parties to the earlier one:
(a) as between States Parties to both treaties the same rule applies as in paragraph 3;
(b) as between a State party to both treaties and a State party to only one of the treaties, the treaty to which both States are parties governs their mutual rights and obligations.
5. Paragraph 4 is without prejudice to article 41, or to any question of the termination or suspension of the operation of a treaty under article 60 or to any question of responsibility which may arise for a State from the conclusion or application of a treaty the provisions of which are incompatible with its obligations towards another State under another treaty.

[19] Hafner, (n2), 861.
[20] ibid.
[21] ibid.
[22] Gregory Messenger, 'Sustainable Development and the Commodities Challenges' (2017) 9(2) Trade, Law and Development 54, 62.
[23] ibid, 66.
[24] Young, (n11), at 3.

fishery trade and fishery sustainability in fundamentally different ways, and each has its own views on how properly to conceptualise the challenges involved.[25]

2.2. Fishery Sustainability under the International Law of the Sea and International Environmental Law

A brief account of international law of the sea and international environmental law on fisheries unfolds how these regimes work towards fishery sustainability.

Treaties and agreements embedded in international law of the sea, including UNCLOS, the United Nations Fish Stocks Agreement (UNFSA)[26], and voluntary FAO codes[27], aim to govern fisheries conservation and management also being essential components of international environmental law on fishery regulations. Concerning international environmental law on fishery regulations, the Convention on International Trade of Endangered Species (CITES) is progressively relevant to the trade in endangered marine species, whereas the Convention on Migratory Species refers to the conservation obligations, and the Convention on Biological Diversity (CBD) concerns biodiversity of marine living resources.

Sustaining fisheries plays a key role in sustainable development of the environment and human beings. For the environment, the oceans and seas, the location of fisheries, constitute an essential component of the Earth's ecosystem. Hence, the correlation exists between fishery sustainability, the marine environment and the earth.[28] Regarding sustainable development for human beings, fish is an important traded commodity, being the source of food, foreign exchange earnings and the generation of employment in the fisheries

[25] There are indeed divergences and variations of conceptualisation existing within legal systems. Fiona Smith presents an account of these variations in her work. See Fiona Smith, *Agriculture and the WTO: Towards a New Theory of International Agricultural Trade Regulation*, Chapter 2 (Edward Elgar 2009).

[26] The full name is: 'The United Nations Agreement for the Implementation of the Provisions of UNCLOS relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks'.

[27] IPOA–IUU, the Code of Conduct and the Compliance Agreement.

[28] Miguel De Serpa Soares, 'Achieving SDG 14: the Role of the United Nations Convention on the Law of the Sea' (2017) 1&2 UN Chronicle, available at: <https://unchronicle.un.org/article/achieving-sdg-14-role-united-nations-convention-law-sea> accessed 8 January 2019.

sector.[29] Additionally, fish protein is also estimated to account for almost 20% of the total global supply of animal protein intake. For some developing and least developed countries, this percentage increases more. However, fishery resources, far from being inexhaustible, are already overexploited according to current estimates.[30]

Since 1982, the UN has developed a number of resolutions in the aim of achieving fishery sustainability.[31] Additionally, the UN recognises the importance of the oceans for sustainable development in a series of documents.[32] Recently, the most important action came in September 2015, when global leaders pledged at the General Assembly to adopt 17 SDGs, which, considered together, comprise the 2030 Agenda for Sustainable Development. Of these 17 SDGs, SDG 14 sets target goals for the conservation and sustainability of the oceans, seas, and natural resources in the marine areas. The measure most relevant to the issue of fisheries subsidies is SDG 14.6, which specifically prohibits forms of fisheries subsidies that contribute to overcapacity and overfishing, eliminates subsidies that contribute to IUU fishing, and requires that countries refrain from introducing or using such subsidies. Moreover, SDG 14.6 recognises that special and differential treatment for developing and least developed countries should be an integral section of agendas in WTO fisheries subsidies negotiations.[33]

2.3 The Linkage between International Trade, Fisheries, and Sustainable Development

Given the adverse effects of fishery trade and production as well as fisheries

[29] Food and Agriculture Organisation (FAO), *The State of World Fisheries and Aquaculture* (SOFIA) (FAO 2014) 4–6.
[30] ibid.
[31] UN Division for Oceans Affairs and the Law of the Sea, available at: < https://www.un.org/Depts/los/general_assembly/general_assembly_resolutions.htm> accessed 8 January 2019.
[32] These documents include the Johannesburg Declaration on Sustainable Development and the Rio+20 outcome document, 'The Future We Want'. 'The Future We Want' is integrated with the essential commitments that the UN member states have made, its contents particularly reflected in chapter 17 of Agenda 21.
[33] SDG 14.6's targets include: to effectively regulate fishery harvesting; to end overfishing, IUU fishing and destructive fishing practices; and to implement science-based management plans. All of these targets serve the end of restoring fish stocks in the shortest feasible time, at least to the level that can produce a maximum sustainable yield. See Targets and Indicators of SDG 14, available at: <https://sustainabledevelopment.un.org/sdg14> accessed 8 January 2019.

subsidies on fishery resources, the demand is pressing that the WTO also recognise the linkage between international trade and fishery sustainability. Though this relationship remains controversial within the WTO, aspects of it have been under discussion by the organisation since the beginning of negotiations on the regulation of fisheries subsidies at the Doha Round in 2001. Debates around the linkage between fisheries subsidies and fisheries sustainability remain subject to contention at the WTO, ramifying from the debate on the linkage between trade liberalisation and environmental protection at the Doha Round in 2001.[34]

The WTO recognises the goal of sustainable development and explicitly claims it as one of its objectives set in the preamble of the Agreement Establishing the WTO.[35] It is contestable that the WTO is changing and shifting from a primarily commercial interest (as narrowly understood by the WTO case-law)[36] to a position of broader and – importantly – greater regard for the significance of sustainable development as a prominent objective[37], which further shows that the WTO adjusts to support the global agenda aiming for sustainable development, from both of normative and institutional perspectives.

Discussions continue surrounding how WTO law can be leveraged to bring the international community together to prevent environmental problems, including the crisis of depletion of fish stocks.[38] In promoting liberalised international

[34] Michael Sheng-ti Gau, 'Asian Perspectives on Fishery Subsidy Issues and Linkages with Environment' (2006) Asia Journal WTO & International Health Law and Policy, 143, 181.

[35] Preamble of the Agreement Establishing the WTO, 15th April 1994: '[…] Being desirous of contributing to these objectives by entering into reciprocal and mutually advantageous arrangements directed to the substantial reduction of tariffs and other barriers to trade and to the elimination of discriminatory treatment in international trade relations […]', available at: <https://www.wto.org/english/docs_e/legal_e/04-wto.pdf> accessed 8 January 2019.

[36] For instance, the WTO Appellate Body Report of the *Japan–Taxes on Alcoholic Beverages* case, indicates 'that the GATT 1994 is a commercial agreement, and the WTO is concerned, after all, with markets'. See WTO Doc WT/DS8/AB/R, WT/DS10/AB/R, WT/DS11/AB/R25, 1st November 1996.

[37] Explicitly mentioned in para 6 of the Doha Declaration. WTO Doc WT/MIN(01)/DEC1. In addition, the Appellate Body in the WTO affirms in the *Shrimp–Turtle* case that the WTO Agreement explicitly recognises the objective of sustainable development. See Appellate Body Report, United States–Import Prohibition of Certain Shrimp and Shrimp Products, para 129, WTO Doc WT/DS58/AB/R (adopted 6th November 1998). Same in the *EC-Tariff Preferences* dispute, sustainable development is a goal of the WTO. See Appellate Body Report, European Communities–Conditions for the Granting of Tariff Preferences to Developing Countries, para 94, WTO Doc WT/DS246/AB/R (7th April 2004).

[38] Markus W Gehring and Marie-Claire Cordonier Segger (eds), *Sustainable Development in World Trade Law* (Kluwer Law International 2005); Mitsuo Matsushita, Thomas J.

trade, the WTO has established agreements that have effects on the trade in fish and fish products in numerous ways, while current WTO negotiations on fisheries subsidies aim to focus on diminishing the impact of trade law and measures on fisheries sustainability in the future.

This section starts with a discussion of the linkage between trade liberalisation and environmental protection at the WTO, followed by a brief overview of WTO negotiations on the regulation of fisheries subsidies since the Doha Round in 2001.

2.3.1 The Linkage between Trade Liberalisation and Environmental Protection at the WTO

The linkage between trade liberalisation and environmental protection has emerged as a complex issue,[39] and interlocutors continue to dispute whether the two are mutually beneficial or have inherently opposed interests.[40] For instance, increased free trade, though a source of economic growth, could cause environmental problems through polluting the environment and its natural resources.[41] In addition, if the promotion of trade interests is a states' sole focus, it is highly likely that this could negatively affect their environmental governance and regulatory autonomy.[42] Moreover, a merely trade-supportive policy can often lead to environmental harms, as witnessed in China and South Korea in the 1990s. In China, promoting trade so as to let economy develop harms the environment by causing pollution. Additionally, impressive leaps in export-led development seem to correlate with worrying increases in pollution. South Korea, too, has faced severe environmental pollution during its soaring

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Schoenbaum, Petros C Mavroidis, and Michael Hahn (eds), *The World Trade Organisation – Law, Practice and Policy* (3rd edn, OUP 2015). Fiona Macmillan has devoted a serious of issues surrounding WTO law and its leverage to protect the environment. See Fiona Macmillan, *The WTO and the Environment* (Sweet & Maxwell 2001).

[39] I-Ju Chen, 'An Analysis of Establishing Regional Environmental Governance Through a Mega Regional Trade Agreement: The Asia-Pacific Practice' (2019) 20(1) Vermont Journal of Environmental Law 1, 4–6.

[40] Steve Charnovitz, 'The World Trade Organisation and the Environment' (1997) 8(1) Yearbook of International Environmental Law 98, 98–99; Patricia Goff, 'The Environmental Goods Agreement: A Piece of the Puzzle' (2015) 2 CIGI Papers, available at: <https://www.cigionline.org/sites/default/files/cigi_paper_no.72.pdf> accessed 8th January 2019.

[41] ibid.

[42] Sébastien Thomas, 'The Necessity of Trade-Restrictive Measures Aimed at Protecting the Environment' (unpublished master thesis, RUG 2004) 3.

economic development, including sulphur dioxide emissions from industry and contaminated tap water.[43]

With respect to the WTO, which is the principal institution governing international trade with a chief objective of promoting trade liberalisation[44], it has been criticised for giving little concern to the social issues related to non-tariff barriers to trade (NTBs),[45] including environmental protection,[46] since the establishment of the WTO in the 1990s. These issues persist despite the efforts of certain member states, during the final period of the Uruguay Round between 1986 and 1994, to draw attention to a number of environmental issues.[47]

However, the benefits of trade liberalisation are diminished where natural resource management institutions are not adequate domestically – a scenario that well describes many of international fisheries – showing that the WTO's objectives may be aligned with improved resource sustainability.[48] At the same time, one of the main trends in the fisheries market is that fishing itself results in increased trade, indicating that trade and sustainability are opposed interests.[49]

2.3.2 The Linkage between Trade Liberalisation in Fish and Fishery Products and Fishery Sustainability

Fishery issues, particularly related to the linkage between trade liberalisation

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[43] M Ali Khan, 'Free Trade and the Environment' (2006) 5 Journal of International Trade and Economic Development 113, 118.

[44] See preamble of the Agreement Establishing the WTO on 15th April 1994: 'Recognising that their relations in the field of trade and economic endeavor should be conducted with a view to […] while allowing for the optimal use of the world's resources in accordance with the objective of sustainable development, seeking both to protect and preserve the environment […]'.

[45] Social issues of the non-tariff barriers to trade include labor, sustainable development and human rights protection. See Lorand Bartels, 'Social Issues: Labor, Environment and Human Rights' in Simon Lester, Bryan Mercurio and Lorand Bartels (eds), *Bilateral and Regional Trade Agreements: Commentary, Analysis and Case Studies* (CUP 2015) 364.

[46] Michael M Weinstein and Steve Charnovitz, 'The Greening of the WTO' (2001) 80 Foreign Affairs 147; Firehiwot Wujira, 'Non-Trade Concerns in Interpreting General Exception Clauses of WTO Agreements' (2010) 4(1) Mizan Law Review, available at: < https://www.ajol.info/index.php/mlr/article/viewFile/145495/135022> accessed 8th January 2019.

[47] Goff, (n40).

[48] Frank Asche and Martin D Smith, 'Trade and Fisheries: Key Issues for the World Trade Organisation' (2009) Staff Working Paper ERSD-2010-03, 26, available at: < https://www.wto.org/english/res_e/reser_e/ersd201003_e.pdf> accessed 8 January 2019.

[49] ibid, at 15.

and fishery sustainability, has been a pivotal agenda in the WTO, since there have been a number of disputes concerning fishery products before the dispute settlement body (DSB) of the WTO that have been animated by concern with fishery conservation or sustainability.[50]

One of the most eminent disputes was the US *Shrimp and Turtle* case.[51] In this case, the WTO Appellate Body clarified that member states in the WTO could take measures for conservation of endangered species, and they further should implement the measures to protect endangered species.[52] The Appellate Body (AB) also quoted multilateral environmental agreements to conserve sea turtles, for example, the CITES, since the sea turtles' exhaustibility would not have been easy to contest. The underlying reason of referring to this CITES is that all of the seven recognised species of sea turtles are currently listed in Appendix 1 of CITES – 'all species threatened with extinction which are or may be affected by trade'.[53] Therefore, the AB decided that trade measures that are adapted for marine species protection (species here mean sea turtles in this case) fall within the scope of Article XX of the GATT because trade measures are taken for conservation of an 'exhaustible natural resource'.[54] More recently, the *US-Tuna II* case disputed in 2008 concerned the US regulatory requirements to use the label of 'dolphin safe' on tuna sold in the market in the US, which constitutes a technical barrier to trade pursuant to the WTO Agreement on Technical Barriers to Trade.[55] The *EC-Seal Products* case[56] initiated in 2009 focused on a technical regulation that prohibited the sale of the seal-made products on the European market, apart from a specific set of conditions, which includes where these Seal goods had been produced in particular ways, such as becoming part of management of marine resource efforts or as a result of hunting activities by indigenous communities.[57]

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[50] Christophe Bellmann, Alice Tipping and U Rashid Sumaila, 'Global Trade in Fish and Fishery Products: An Overview' (2015) Marine Policy 5–6.
[51] WT/DS58/AB/R, 12 October 1998.
[52] ibid.
[53] WTO, (n51), para 132.
[54] WTO, (n51).
[55] WT/DS381/AB/R, 16 May 2012.
[56] WT/DS400/AB/R, 22 May 2014.
[57] That is because of the behaviour of culling seals in order to decrease their predation on fish stocks mainly for commercial use.

According to the AB's reports of these disputes, along with their provided interpretations of the exceptions stipulated in Article XX of the GATT, that is fishery sustainability, AB suggests that while the WTO rules preserve space for members to take trade-related measures aimed for environmental protection[58], these measures will still have to be closely scrutinised to ensure that they are not adapted for discrimination that would unfairly affect imports from other members.[59]

In addition to the WTO case-law concerning fishery sustainability, the ongoing discussion on fisheries management at the WTO, considered within the context of the negotiations on the regulation of fisheries subsidies, makes significant contributions to fishery sustainability. The advances represented by the discussion are evidence of emergent recognition of the linkage between trade liberalisation and environmental protection at the WTO, serving as demonstrations of how the WTO can be best leveraged to address non-trade issues such as environmental protection.

2.3.3 WTO Launched Negotiations on the Regulation of Fisheries Subsidies for Fishery Sustainability: From Seattle Ministerial Conference to the Landmarked Doha Ministerial Conference

The Seattle Ministerial Conference shapes the negotiations on the regulation of fisheries subsidies initiated in the Uruguay Round. Fishery issues were on the agenda of negotiations at the Seattle Ministerial Conference. Although agriculture and services were absent from the agenda, WTO members negotiated a series of issues at the Seattle Ministerial Conference.[60]What is more, however, the Seattle Ministerial Conference elevated fisheries subsidies to a level of importance higher than all other fisheries-related issues as a result

[58] One might disagree and argue that it is rather trade-restrictive, given the concern of the environment while taking measures of trade liberalisation.
[59] See, for example, Appellate Body Report of the *US Shrimp and Turtle* case, WT/DS58/AB/R, para 186.
[60] These included, for example, tariffs, investment measures, trade facilitation, anti-dumping, subsidies, safeguards, competition policy, electronic commerce, intellectual property rights protection, fisheries, transparency in government procurement, capacity building and technical assistance, and other developmental issues. See WTO, available at: <https://www.wto.org/english/thewto_e/minist_e/min99_e/min99_e.htm> accessed 8 January 2019.

of submissions of the issue of fisheries subsidies that several WTO members, including Australia, New Zealand, the US (note that these three are APEC member economies), and Iceland, made to the Committee on Trade and the Environment (CTE)[61] and later at the General Council.[62] These WTO members' submissions on the issue of fisheries subsidies to the WTO stressed the elimination of all subsidies that lead to overfishing and overcapacity, thus comprising one of the earliest formal recognitions of the negative impact of fisheries subsidies. Even so, although these members all registered their scepticism of the use of fisheries subsidies with the WTO, they still made different claims as to the extent of the regulation called for and as to its required characteristics.

As a summary of the submissions of the US, Australia, New Zealand, and Iceland, as well as Japan, it may be offered that several APEC member economies acted, insofar as the WTO's for a were concerned, as pioneers in the seeking for a solution to the crisis of the depletion of fish. The contours of the debate they initiated and the concerns they raised, including the effects of open access of fish stocks, effectiveness of fishery management and the impact of fisheries subsidies on trade and the environment, closely correspond to present knowledge of the causes of the depletion of fish in APEC. Therefore, the APEC's acute vulnerability to fishery depletion has been reflected in greater agitation for improvement from its member states at the WTO, who have taken actions, especially to address unsustainable fisheries subsidies.

However, at the end of the Seattle Conference, there was no consensus on the necessity of establishing fisheries subsidies regulations within the WTO legal framework. The WTO functions by the principle of consensus and by unanimity

[61] The CTE, established by the WTO General Council in January 1995, has undertaken issues of fisheries subsidies.

[62] WTO Doc WT/CTE/W/51, 'Submission by the United States to the Committee on Trade and Environment, Environmental and Trade Benefits of Removing Subsidies in the Fisheries Sector' 19 May 1997; WT/CTE/W/105, 'Submission by Australia to the Committee on Trade and Environment, Trade Liberalisation and the Environment: A Positive Agenda for Trade Reform' (2 February 1999); WT/CTE/W/121 'Submission by New Zealand to the Committee on Trade and Environment, Benefits of Eliminating Trade Distorting and Environmentally Damaging Subsidies in the Fisheries Sector' (28 June 1999);WT/GC/W/229 (6 July 1999); WT/CTE/W/111 'Submission by Iceland to the Committee on Trade and Environment, On the Environmental Impact of Fisheries Subsidies' (11 March 1999) para 18.

voting. For obvious reasons, a consensus decision-making process involving 164 members can tend to result in delay and detention. For this reason, the WTO's voting and decision-making principles have often come in for criticism and suggestions for improvement, as well as support in response. [63] Due to popular demonstrations against the Seattle Ministerial Conference that drew negotiations to an unexpected close, Seattle Round may be properly referred to only as the launching pad for fisheries subsidies negotiations. Its principal value was clearly depicting the broad and wide recognition that fisheries subsidies problems were coming to attract.[64] In spite of the failed attempt of the Seattle Ministerial Conference to launch and set parameters for new multilateral trade negotiations, efforts at Seattle had established a Working Group on fisheries subsidies, established so as to identify any subsidy that might have adverse effects on trade, the environment, or on sustainable development as well as to identify any subsidy that might have positive effects in these areas.[65]

Following the Seattle Ministerial Conference, the Doha Round Negotiations aimed to reshape and change the development norms in international trade in order to uphold the developing and least developed countries at the WTO.[66] Moreover, the small and vulnerable economies (SVEs) gained significance in the Doha Round, which resulted in much attention on particular issues that were faced by SVEs.[67] Accordingly, the agenda established in the Doha Round, also called the Doha Development Agenda, was composed of two interrelated focuses. The first focal point endorsed the significant influence of developing countries and the action plans to improve the countries. The second pivot claimed developing countries' interests and needs as priority of the Doha's

[63] See generally Kateřina Říhová, 'Why Should the WTO Preserve the Consensus Rule', Masaryk University Faculty of Law Paper, available at: <https://www.law.muni.cz/sborniky/dp08/files/pdf/mezinaro/rihova.pdf> accessed 8 January 2019; Jeffrey J Schott and Jayashree Watal, 'Decision-Making in the WTO' (2000) Peterson Institute for International Economics Policy Brief 00-2; Jaime Tijmes-Lhl, 'Consensus and majority voting in the WTO' (2009) 8 World Trade Law 417.

[64] Thorir Ibsen, 'Iceland's Proposal about Fisheries Subsidies' in Myron H Nordquist and John Norton Moore (eds), *Current Fisheries Issues and the Food and Agriculture Organisation of the United Nations* (Kluwer Law International 2000) 473.

[65] WTO Doc WT/CTE/W/132, para 8.

[66] Para 2, WTO Doha Ministerial Declaration.

[67] Yenkong Ngangjoh Hodu and Xuan Gao, 'Implications of Concluding the WTO Doha Round Fisheries Subsidies Negotiations on SVEs' (2009) 6(3) Manchester Journal of International Economic Law 93, 94.

Work Programme.[68]

The Doha Round continued the discussions on the link between fisheries subsidies, overcapacity and overfishing that had been interrupted during the Seattle Ministerial Conference. Specifically, the Doha Round tried to explore whether or not well-functioning fisheries management practices could decrease the effects of (or help states avoid entirely) problems of over-exploitation, fishing fleet capacity, and overfishing arising from the use of fisheries subsidies.[69]

In their preparations for the Doha Round and in the proposals issued at the Conference, member states experienced success in advancing the terms of negotiation on fisheries subsidies regulations. For the purposes of this dissertation, negotiations can be said to have advanced principally in three areas, the first of which was that the WTO became newly accommodative of those WTO members that still sought new fisheries subsidies rules under the WTO framework.

In addition to the first area of advancement — the improved opportunity granted to the countries opposed to fisheries subsidies to enlarge on and therefore to improve their positions — the second area in which negotiations advanced was in the proposal of WTO to take a compound approach to fisheries subsidies. Despite the fact that several members urged the elimination of fisheries subsidies, for example New Zealand, Iceland, Australia, Argentina, Chile, Hong Kong, China and Peru,[70] the remaining members at the WTO, led by Japan and Korea, expressed that discussions on fisheries subsides at the CTE should await the results of ongoing discussion in other organisations, that is APEC, the FAO, and the OECD. Japan and South Korea proposed that the action appropriate for regulating fisheries subsidies should be considered as contingent on the results of this work; a comprehensive factual analysis of

[68] WTO, (n 66).
[69] Gareth Porter, 'Fisheries Subsidies and Overfishing: Toward a Structured Discussion' (UNEP Fisheries Workshop, Geneva, 12 February 2001) 13.
[70] WTO Doc No PRESS/TE/033. Also see papers by Australia WTO Doc No WT/CTE/W/105; Iceland WTO Doc WT/CTE/W103 and WT/CTE/W11; New Zealand WTO Doc No WT/CTE/W121; and the US WTO Doc No WT/CTE/W/154.

fisheries management and fisheries should precede any attempt to intervene in the practices of the sector, therefore.[71] South Korea, for its part, also emphasised the importance of employment arising in the fisheries sector, while Japan requested concrete examples of harmful fisheries subsidies, attempting to complicate its opponents' position and enforce difficult standards of proof upon them. Moreover, Japan indicated that there were likely other factors at play in fishery depletion of which member countries were unaware. For this reason, the FAO should be asked to implement technical work that the CTE could then adopt on a case-by-case basis to scrutinise under which circumstances certain fisheries subsidies had negative effects on fishery resources.[72]

2.4 APEC's Fishery Policy and Preferential Trade Agreements in the APEC Region in Relation to Fishery Sustainability

Study shows that the link is apparent between fishery trade and production, on the one hand, and depletion of fish stocks on the other hand, as long as increased fishery trade and production negatively affect fishery sustainability.[73] While internationally traded fish embraces approximately 40% (by volume) of total global fishery production, international trade in fish almost entirely shapes the use of fish in the fisheries sector, and the pressures of international trade are a major factor of depletion of fish. Thus, fishery trade, production and depletion of fish are closely interrelated and interdependent.[74] Meanwhile, study indicates that subsidies cause trade distortions along with devastation of ecological system since the amount of fisheries subsidies (approximately as high as USD 35 billion per year) largely enhanced fishing vessel capacity and

[71] WTO Doc No PRESS/TE/033, 8.
[72] WTO Doc No WT/CTE/W/173 paras 6 and 7.
[73] Caroline Dommen, 'Fish for Thought: Fisheries, International Trade and Sustainable Development' (1999) Natural Resources, International Trade and Sustainable Development Series No1, 2–3, available at: <https://www.files.ethz.ch/isn/92829/1999_Fish_for_Thought.pdf> accessed 8 January 2019. This piece of work addresses perceptions that international trade has an adverse effect on fish stocks; however, note that empirical evidence of the negative effect describes is lacking in this debate.
[74] Aaron Parke, 'The Opportunities and Challenges for Trade in Fish and Seafood' (2014) Issue Paper for the Caribbean Regional Fisheries Mechanism Secretariat and the Caribbean Network of Fisherfolk Organisation No4, 1, available at: <http://crfm.int/~uwohxjxf/images/Opportunities_and_Challenges_for_trade_in_fish_and_seafood_-_issues_paper_-_Final.pdf> accessed 8 January 2019.

infrastructures to capture finite fishery resources.[75] As a result, ineffective fisheries management, compounded by governments' subsidies to fisheries production, further aggravate the situation of unsustainable exploitation, especially in cases where fisheries subsidies have a demonstrable link to overfishing or overcapacity.[76] In sum, unsustainable exploitation of fish, together with increased fishery trade and production as well as environmentally harmful fisheries subsidies, increases the crisis of depletion of fish. The APEC region has global dominance in fishery trade and production.[77] Since some of its member economies have faced the problem of unsustainable exploitation of fish or have adopted subsidies policies for the fisheries sector for years, what is required in the APEC region are effective fisheries regulations and fishery management policies. Moreover, these regulations and policies have to be soundly based on the prohibition of the unsustainable exploitation of fish and on the discipline imposed to mitigate the adverse effects of increased fishery trade and fisheries subsidies on fish stocks.

Discussions on effective fisheries regulations and policies have to take place at the intergovernmental level, since fish stocks and fishing vessels move across borders. Furthermore, individual countries' competence is exceeded by the tendency of this discussion to involve complex legal, social, political and policy-making issues. Therefore, engagement of the situation requires intergovernmental collective efforts and such cooperation as can only be facilitated by international organisations. In addition, APEC is expected to address these issues in multilateral fora, such as the World Trade Organisation (WTO), where it must propose initiatives and make an attempt to find what balance between long-term fishery sustainability and the exploitation of fish will

[75] Ussif Rashid Sumaila, Vicky Lam, Frederic Le Manach, Wilf Swartz and Daniel Pauly, 'Global Fisheries Subsidies' (Directorate-General for Internal Policies Policy, Department B: Structural and Cohesion Policies 2013) 10, available at: <http://www.europarl.europa.eu/RegData/etudes/note/join/2013/513978/IPOL-PECH_NT(2013)513978_EN.pdf> accessed 8 January 2019.

[76] Alice V Tipping, 'A 'Clean Sheet' Approach to Fisheries Subsidies Disciplines' (E15Initiatives 2015), available at: <http://e15initiative.org/wp-content/uploads/2015/04/E15_Subsidies_Tipping_final.pdf> accessed 8 January 2019; Gau, n34, 191.

[77] APEC member economies accounted for nine of the top ten global fish producers. See the introduction to the APEC's Oceans and Fisheries Working Group (OFWG), available at: <http://www.apec.org/Groups/SOM-Steering-Committee-on-Economic-and-Technical-Cooperation/Working-Groups/Ocean-and-Fisheries.aspx> accessed 8 January 2019.

best promote sustainable fishery production and trade.[78]

Given its abundant fisheries resources and its dominance on the global fish market, APEC and its member economies[79] are essential voices in advocating for fisheries reform. Although reforms designed to regulate fisheries subsidies in the SCM Agreement have not yet been adopted, one mega-regional trade agreement in the APEC region, the CPTPP, has come into force and already stipulated the provisions of fisheries subsidies. CPTPP is a signed agreement enforced by seven out of the eleven signing parties' domestic ratification, which means its provisions on fisheries subsidies are a breakthrough in comparison with the draft proposal of the regulation of fisheries subsidies in the WTO. As a result of such innovation from the CPTPP environmental chapter, the provisions preserving the oceans are able to restrict fisheries subsidies via enforcing compliance with the relevant provisions on international instruments, and promoting the sound fishery management. Therefore, the CPTPP is a valuable example through which to examine those environmentally impactful features of free trade that have proved to be supportive of fisheries sustainability.

2.5 Summary

Given the marine ecosystem problem arising from fishing, fishery trade and fisheries subsidies, development of the linkage between international trade and fishery sustainability in international law and APEC is a significant project. The linkage has been a complex issue not just because of the contrasting objectives inherent to the positions of different actors in international trade and fishery sustainability, but also due to the fragmentation of efforts to achieve fishery sustainability under international law. The complexity of the linkage enables wide-ranging academic discussion, so the linkage appears like an old and

[78] Huani Zhu and Carlos Kuriyama, 'Trade of Fishery Products and Fisheries Subsidies in APEC', Policy Brief No 16. See also where the APEC Leaders' Declaration in 2013 recognises that '[…] being mindful of the grave economic consequences of natural and human-caused disaster (for example, climate change), the Leaders commit to pursuing cross-sectoral work under the APEC Initiative on Mainstreaming Ocean-related Issues, that will maintain the health and sustainability of the ocean and coastal resources […]', available at: <https://www.apec.org/Meeting-Papers/Leaders-Declarations/2013/2013_aelm> accessed 8 January 2019.

[79] APEC member countries collectively engage in responsible practices in the trade in fish, which results in a significant impact on fisheries sustainability.

repetitive topic for research.[80] This thesis argues that this perception must be changed for two main reasons.

The primary reason is that there has been remarkable development in reconciling international trade and fishery sustainability in the APEC and under international law, in particular in the framework of international trade law. The other reason is that, despite progressive changes, there remains a lack of complex linkages between international trade and fishery sustainability in APEC and in international law, which prevents these two regimes from working effectively towards fishery sustainability. Obstacles to the development of such coordination possibly arise from the diverse nature and objectives of international regimes as well as states' contrasting political interests or their unequal ability to comply with rules ensuring fishery sustainability as they are enshrined in international law. Accordingly, fresh academic discussion on these matters promises to be valuable.

There are several legal issues underlying this thesis upon which it is worth conducting research. First, international laws on fishery sustainability have become case studies in international law fragmentation. However, the development of international law overall actually shows a shift from fragmentation towards integration. Second is the puzzle of contradictions surrounding the regulation of fisheries subsidies, which might have to be regulated due to their adverse effects on fishery sustainability. Hence, if regulation is necessary, creating a thoughtful and broader series of regulations of fisheries subsidies under regimes of the international law of the sea or international environmental law might be the first option, as these are the primary legal regimes aiming to achieve fishery sustainability. Finally, international trade law has witnessed a number of initiatives designed to manage fisheries subsidies since the Doha Round. As it stands, international trade law thus contains and is partly comprised by a series of attempts, directly and indirectly, to regulate environmentally harmful fisheries subsidies at the

[80] Existing academic discussion can be divided into two focused areas: one area is intent to evaluate the rationales of regulating fisheries subsidies at the WTO and WTO negotiations on fisheries subsidies. The other tends more to analyse the implementation of fisheries management and policy established in international law of the sea and evaluate its results.

WTO and in the mega-regional trade agreement of the CPTPP.

Overall, the linkage between free trade and environmental protection is most obvious from the fact that trade law serves as an effective tool for promoting sustainability. In other words, trade law has been a vehicle to seek the conditions under which trade in fishery resources can contribute to achieving key elements of SDG 14 in the Agenda 2030. Hence, the ultimate goal of this research is to present to policy makers and the international development community, especially in the APEC region, the circumstances under which trade law and policy in fish and fish products can be created to help them achieve their fishery sustainability goals.

3. Research Questions

This thesis enquires one main question along with several sub-questions. Essentially, this thesis aims to explore the extent to which international trade law can provide enhanced regulations of the fisheries sector in APEC with a view towards fishery sustainability. What are the reasons that international trade law works better than international law of the sea and international environmental law on fisheries, even though these two legal regimes are the primary law governing fisheries management and policies whose mandate is to ensure fishery sustainability? Can international trade law serve as an effective tool for promoting sustainable development? In other words, this thesis intends to explore the conditions under which international trade in fishery resources can contribute to meeting essential components of the SDG 14.6 in the Agenda 2030, that is removing certain forms of fisheries subsidies which contribute to overfishing and overcapacity, eliminating subsidies that contribute to IUU fishing as well as refraining from introducing such subsidies to the fisheries sector.

4. Objectives and Importance of this Thesis

The presentation of this thesis will be structured according to three objectives. First of all, this research aims to examine the fisheries sector in the APEC region to identify the issues and factors that endanger fisheries sustainability. Second, this research analyses how international trade law, the international law of the sea and international environmental law on fisheries tackle the

identified issues and their motivations in so addressing them. Concomitantly with its second objective, this research will evaluate the extent to which the current preferential trade agreements and regional initiatives of APEC to achieve sustainable development. The third objective, which is a critical section of this research, is to carry out an analysis of where international law and APEC can tackle fisheries issues in APEC. This research aims to make suggestions for improvement in these legal regimes that will prevent problems to the marine environment and fishery resources.

To conclude, the research outcomes of this thesis would be important for scholars and policymakers in international trade law, international law of the sea and international environmental law. In addition to these groups, political economists are likely to benefit from the contributions of this thesis inasmuch as their work concerns regional economic integration in the APEC.

5. Methodology and Sources of Information

In evaluating the effectiveness of a number of regimes under international law on tackling fisheries issues, this thesis extensively conducts qualitative research. Qualitative research focuses on phenomenon in relation to quality of researched objects, such as investigating causes, motivations or rationales behind.[81] Therefore, this thesis reviews primary and secondary sources to explore answers for research questions.

This research collects data surrounding the fishery trade and fisheries subsidies from APEC's official documents to review fishery policies in the region, including types of trade measures, types and effects of fisheries subsidies. Other fishery policies, such as state of fish stocks and employment in the fisheries sector, in relation to APEC are derived from surveys and reports published by the FAO, think tanks, economists and legal scholars. In executing a legal analysis of international legal regimes, this research also reviews provisions and case law in the General Agreement on Tariffs and Trade (GATT), the SCM Agreement, and in international fishery regulations in the United Nations Convention on the Law of the Sea (UNCLOS), the United Nations Fish

[81] C R Kothari, *Research Methodology: Methods and Techniques* (2nd edn, New Age 2012) 2–5.

Stocks Agreement (UNFSA) and FAO's fishery management associated codes.

5.1 Textual Analysis

This thesis analyses texts in PTAs and the Subsidies and Countervailing Measures Agreement (SCM Agreement). An analytical research method requires adequate fact and further provides in-depth analysis and a critical evaluation based on factual information.[82]

This research describes and further evaluates the WTO negotiations on the regulation of fisheries subsidies through a textual analysis of the WTO public official documents. This research also identifies environmental features of preferential trade agreements (PTAs) in the APEC region, including the CPTPP, by way of a qualitative approach in which an assessment will be made of environmental provisions and the contents of negotiations on the environmental provisions in the PTAs.

5.2 Comparative Method

This thesis adopts comparative research method.[83] This thesis selects and compares three legal regimes in international law, that is the international law of the sea, international environmental law on fisheries and international trade law. Moreover, the variables underlying this comparative method conform with the factors that lead to depletion of fish as identified in the Chapter Two of this thesis.

5.3 Chronological and Historical Approach to Describe Research on the Regulation of Fisheries Subsidies

This thesis chronologically describes the history and negotiations on the regulation of fisheries subsidies at the WTO. In addition, it reports, as narratives, what has happened or what currently happens at the WTO negotiations on the regulation. A descriptive research method merely presents the state of facts and affairs as they exist, which describes the phenomenon or situation under

[82] ibid.
[83] J Paul Lomio, Henrik Spang-Hanssen, and George D Wilson, *Legal Research Methods in a Modern World: A Coursebook* (3rd edn, DJØF Publishing 2011) 55.

research and its characteristics.[84] Therefore, a descriptive approach usually does not focus on exploring the factors and causes of the phenomenon or situation underlying research.[85]

Given a purpose of presenting the state of affairs during negotiations on the regulation of fisheries subsidies at the WTO, this thesis takes a descriptive approach with a further objective to find out drivers and challenges underlying each negotiation on the regulation at the WTO.

5.4 Case-Study Approach Aimed for Solutions

This thesis is a case study with a main focus on issues of the fisheries sector in the APEC, particularly on an analysis of the regulation of fisheries subsidies in different regimes in international law and in APEC policy.

This research aims at finding solutions for depletion of fish stocks in the APEC region that is an immediate problem. One research method essentially focuses on discovering actions or solutions for pressing problems.[86] Hence, this research adopts a case-study approach based on a practical context for solutions. This research confines itself to the APEC, as it is the main regional economic and trade forum established in 1989 and also carries out noticeable environmental governance in the context of trade liberalisation. Also note that, there is a wide variety of regional economic institutions and forums in the APEC region, including the Asian Investment and Infrastructure Bank (AIIB) and the Asian Development Bank (ADB), which all have limited institutional capacity such as insufficient funding, lack of technical expertise, and fragmented institutional arrangements.[87] Moreover, critics observe that these institutions can be 'frustratingly bureaucratic,' which may prevent them from successfully integrating environmental standards into institution policies.[88]

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[84] Kothari, (n81).
[85] ibid.
[86] Suleiman Ikpechukwu Oji, *Introduction to Legal Method* (Ababa Press 2011) 77–79.
[87] Hongying Wang, 'New Multilateral Development Banks: Opportunities and Challenges for Global Governance' (2017) 8 Global Policy 113, 116.
[88] Jisan Kim, Regulating Economic Development: Environmental and Social Standards of the AIIB and the IFC, (April 2016) Harvard International Law Journal, available at: <http://www.harvardilj.org/2016/04/regulating- economic-development-environmental-and-social-standards-of-the-aiib-and-the-ifc/> accessed 25 February 2019.

6. An Overview of APEC

APEC was established in 1989 in Canberra, Australia with twelve member economies. When it first developed, there was an anticipated risk that it would come to be viewed as a forum for vacuous conversation, namely a kind of talk-shop.[89] While the APEC has been criticised for its talk-shop nature, the high-profile dialogue it facilitates has fortified the APEC's relevance and operation in global governance.[90] With regard to its institutional structure, the APEC does not contain an organisational structure or a large and strong bureaucracy, as the APEC was intended as a less rigid forum and as a grouping of diverse economies.

The APEC began with a modest programme of sectoral and trade negotiations. Its original objectives reflect the strong hope of its member economies to strengthen economic growth, foster and promote trade, while, in the meantime, considering social issues.[91] APEC consists of three main pillars. The first pillar is trade and investment liberalisation, the second is economic and technical cooperation, and the final pillar is economic and technical cooperation.[92] The annual meeting of APEC leaders in the US since 1993 has become a significant feature of APEC. One year after this meeting, APEC leaders took action to make another historic step at their meeting in Bogor, Indonesia. The Bogor Declaration addressed that, by 2020, the goal of creating the world's largest area of free trade and investment. As a result of this plan, developed member economies would achieve trade liberalisation by 2010 and developing economies would follow in 2020. The Bogor Goals have influenced APEC's leaders' meetings as well as the domestic economic policies of the member

[89] APEC pursues the concept of open regionalism and possesses unique features that make it economically and geopolitically significant. For instance, APEC offers a trans-regional dialogue platform for East and Southeast Asia, North and South America, and the Pacific.
[90] Pasha Hsieh, 'Reassessing APEC's Role as A Trans-Regional Economic Architecture: Legal and Policy Dimensions' (2013) 16 Journal of International Economic Law 119, 123–124.
[91] See APEC mission statement, available at: <http://www.apec.org/About-Us/About-APEC/Mission-Statement> accessed 25 February 2019. The APEC Secretariat is located in Singapore and consists of 23 diplomats seconded from APEC member economies.
[92] APEC has an objective to reach trade liberalisation before 2020. Therefore, APEC lately aims to establish a free trade area in Asia-Pacific Region (FTAAP, a type of regional economic integration), in spite of the existing FTAs between APEC member economies.

economies.

However, APEC has functioned as a *de facto* institution and has lacked an establishment treaty conferring to it an international legal personality. It has, therefore, suffered a serious credibility crisis because of its failure to achieve 'Early Voluntary Sectoral Liberalisation (EVSL)', a situation that was compounded by its inability to assist its member economies during the Asia's financial crisis occurring in the 1990s.[93] The fisheries sector was one of the 15 sectors established for EVSL and, within the 15 sectors, the fisheries sector was one of the 9 sectors selected as speed-up candidates for accelerated trade liberalisation.[94]

The failure to achieve EVSL has been attributed to several causes.[95] The major cause was the diverse economic scales of the APEC's twenty-one member economies, which have led to obstacles to integration.[96] The developed countries – USA, Canada, Australia and New Zealand – believed EVSL was another scheme aimed at lowering or reducing tariffs. However, the developing countries, including China and a few members of ASEAN, claimed EVSL should include measures of trade facilitation, technical assistance and economic cooperation. This incoherent understanding and support regarding the EVSL resulted in difficulties in the process of deciding which sectors demanded inclusion in EVSL.[97]

Additionally, in order to differentiate the use of terms in this thesis, APEC is taken to mean the institution itself, whereas, as a terminological note, the term 'the APEC region' in this thesis considers the term to comprise the area described by the map below – as representing the geographic scope of the

[93] Hsieh, (n90), 120.
[94] APEC, *Study into the Nature and Extent of Subsidies in the Fisheries Sector of APEC Members Economies*, (October 2000) 1.
[95] Chen, (n39), 11–16.
[96] Hsieh, (n90), 122.
[97] EVSL was based on the principle of voluntarism and the establishment of mutually beneficial packages. In 1997, APEC discussed the implementation of the EVSL in 15 potential sectors to positively influence trade, investment and economic growth in both of the individual APEC members and the region. However, EVSL failed because of major conflicts between the participants. The two essential factors – financial crisis of 1997-1998 in East Asia and domestic resistance and lobbying – both decelerated trade liberalisation in the affected economies, see APEC Glossary, available at: <http://www.apec.org/Glossary> accessed 25 February 2019.

Pacific Ocean, extending from the Arctic in the north to the Antarctic in the south and is bounded by Asia and Australia in the west and the Americas in the east. This is where the APEC is located.

Map of 21 APEC Member Economies[98]



7. Limitations of this Thesis

Limitations in scope and in the sources for answering research questions of this thesis can be divided into three parts as follows.

First of all, it is difficult for this research project to explore and summarise subsidy programmes, policy and regulations of each APEC member economies. This difficulty remains despite APEC's publication in October 2000 of a report that includes an appendix providing an inventory of the support programmes in the fisheries sector of nineteen APEC member economies, presented with their available and collectable information.[99] There are two reasons for the difficulty involved in collecting information on each member economies' subsidies programmes. One reason is that it is not easy to quantify subsidies because of

[98] This map is adapted from APEC, *Harvesting Currency: The Importance of Fisheries and Aquaculture for APEC Economies* (APEC 2009) 2.

[99] Appendix A: Inventory of Support Programmes in the Fisheries Sector of APEC, APEC, *Study into the Nature and Extent of Subsidies in the Fisheries Sector of APEC Members Economies*, (October 2000). Additionally, appendix B in this APEC report is an example of the survey instruments used for collecting data on these support programmes in the fisheries sector in APEC.

a lack of transparency in states' subsidies notifications and because of obstacles in the way of appropriately defining subsidies. The second reason is that some member economies in the APEC do not provide access to fishery support and data written in English. Nevertheless, the APEC report cited above has successfully reviewed a wide range of subsidy programmes used and maintained by APEC member economies despite a number of programmes that might not be considered as granting subsidies.[100]

Second, it is worth pointing out that empirical evidence is lacking in discussions of the possible negative effect of international trade on fish stocks due to deficient knowledge as well as difficulties in defining the effects that trade in fish takes on depletion of fish stocks.[101] It is difficult to collect data to prove a direct link between increased fishery trade and production and depletion of fish stocks in the APEC region. Further data collection issues are difficulties that exist in the collection of the WTO and the CPTPP negotiation details, entailed by their confidentiality. Information and contents in international trade negotiations have to be confidential since trade negotiators and government delegates claim that disclosure would reduce the effectiveness and efficiency in ongoing trade negotiations. Moreover, for the concern of tariff reduction negotiation, confidentiality of trade negotiations might help trade negotiators have more leeway and space to conclude trade agreements.[102]

8. Outline of this Thesis

Chapter Two

This chapter identifies and evaluates issues facing the fisheries sector in APEC. It starts with analysing the economic and socio-economic significance that the fisheries sector brings to APEC, followed by pointing out the critical marine problem that the sector faces. Finally, this chapter finishes with a number of discovered causes leading to the marine problem and an assessment of how the current fishery management and policy tackle the problem.

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[100] APEC, (n98), 3.
[101] Dommen, (n73).
[102] Luigi Pedreschi, 'Can trade negotiations be transparent and effective?' (*Linklater*, 11 September 2018), available at: <https://www.linklaters.com/en/insights/blogs/tradelinks/can-trade-negotiations-be-transparent-and-effective> accessed 8 January 2019.

Chapter Three

This chapter focuses on how international fishery framework under the international law of the sea and international environmental law, which are the primary fishery regimes and require, resolve the identified fisheries issues and causes resulting in the depletion of fish stocks in the APEC. In light of the sustainable development goal concerning preserving fishery resources, this chapter further evaluates the effectiveness of these international legal regimes.

Chapter Four

In Chapter Two, provisions of subsidies to the fisheries sector is the significant cause leading to the depletion of fish stocks among all the identified factors. This chapter, therefore, shapes an analytical framework that provides categories and current status of fisheries subsidies in APEC. It also evaluates definition, effects and political economy issues of fisheries subsidies. Finally, given problems that fisheries subsidies bring, this chapter analyses and then presents economic rationales underlying the regulation of fisheries subsidies in the framework of the WTO.

Chapter Five

The WTO launched the negotiation on the regulation of fisheries subsidies in the Doha Ministerial Conference in 2001. WTO negotiations on the regulation of fisheries subsidies have lasted for several years since 2001. Chapter Five charts the negotiations from the history and several main themes, such as major stakeholders in the negotiations and three articulations involved in the drafted regulation of fisheries subsidies. The last section of this chapter evaluates challenges that the fisheries subsidies negotiators at the WTO have faced. During this assessment, this thesis also concludes drivers moving forwards the fisheries subsidies disciplines at the WTO.

Chapter Six

Chapter Six reflects the case study of the regulation of fisheries subsidies in APEC. This chapter consists of three parts. The first part is analyses in PTAs in the APEC region to explore its environmental feature and measures aimed to protect fisheries. Moreover, this thesis evaluates the regulation of fisheries subsidies in the CPTPP, the mega regional trade agreement in the region, since

the trade agreement is binding and broadly recognised as more feasible approach compared to APEC, which is open regionalism and functions based on non-binding policies. These analyses are followed by a reference to EU state aid law on fisheries subsidies to seek suggestions for the CPTPP.

Chapter Seven

This chapter summarises research results of previous chapters and addresses implications of this thesis for international law and broader areas. At the end of this chapter, it delineates a future research project enlightened by this thesis.

Chapter Eight Conclusions

While the enforced regulation of fisheries subsidies is pending, Chapter Eight analyses the applications to fisheries subsidies of the WTO Agreement on Subsidies and Countervailing Measures (SCM Agreement). This chapter starts with analysing the WTO SCM Agreement, which was developed from the subsidies regulations of the GATT 1947. In addition, there is an overview of the current subsidies regulations and its function. This chapter also explores other suitability of the WTO Agreements for the regulation of fisheries subsidies.

Chapter Two

An Analysis of the Fisheries Sector in APEC: Identifying the Issues with the Sector

1. Introduction

The oceans and fish stocks are common property resources entailing characteristics of open access, which enables fishing companies or fishermen to openly to participate in competing for fishery capture. Approximately 90% of fish stocks were estimated to be overexploited or fully exploited.[1] This threat of fishery depletion is a serious issue in particular for the APEC on account of the massive and varied marine environment and biodiversity that the region sustains and relies on.[2] 1994 estimate found that fisheries were overexploited in the APEC region,[3] and in 2017 a high percentage of overexploitation among or outright collapse of fisheries was discovered.[4] Overexploitation undermines the ability of fish stocks, including marine fish stocks, aquaculture and freshwater fish stocks, to sustain and support food security, – research shows that the dramatic increase in fishery capture in China, Australia and New Zealand in the 1980s could never have been sustained[5] – leading some fisheries to become nearly completely depleted. All these discovery shows the collapse of fish stocks increasingly to be a critical marine ecosystem problem confronting the fisheries sector in the APEC, confirming the urgency with which the sector must move to resolve the marine problem of fishery sustainability.[6]

The principal contributing factor to the depletion of fish stocks is the unsustainable exploitation of fish. As a result, the unsustainable exploitation of fish, such as continued overexploitation, creates significant challenges for

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[1] FAO, *The State of the World Fisheries and Aquaculture* (SOFIA) (FAO 2016) 38.
[2] The Pacific Ocean is the largest biota, covering over 165 million square kilometers. See APEC's Oceans and Fisheries Working Group, *APEC Marine Sustainable Development Report* (APEC 2014) 16.
[3] André Dua and Daniel C Esty, 'Chapter 3: Environmental Problems Confronting APEC's Members' *Sustaining the Asia Pacific Miracles* (Peterson Institute for International Economics 1997) 42.
[4] Huani Zhu and Carlos Kuriyama, 'Trade of Fisheries Products and Fisheries Subsidies in APEC' (2017) 16 *Policy Brief* 6.
[5] Dua and Esty, (n3).
[6] ibid, 33.

fishery sustainability in the APEC. Additionally, most of the APEC member economies have rapidly growing populations, and fish is a vital commodity in these economies. An increased demand for fish is accompanied by an associated increase in fishery trade and production, resulting in severely affected fish stocks.[7] Furthermore, and crucially, many of the worlds' major fishing countries are found in the APEC, most of which have adopted fisheries subsidies policies.[8] If these global major fishing countries were to adopt environmentally harmful fisheries subsidies, this could lead to the severe depletion of fish stocks. It is this chapter's intention to substantiate these claims through an evaluation of the major issues within the fisheries sector, which will encompass the causes of the depletion of fish, ineffective fisheries management policies, and the issues surrounding subsidies to the fisheries sector in the APEC. This discussion will necessitate and pave the way for the following chapters, in which this thesis will discuss the impact of international law on these issues.

This chapter, describing the research background of the fisheries sector in the APEC, analyses the marine problem facing the fisheries sector and also identifies the major issues with the sector. This chapter is structured in three parts. The first part aims to explore the causes of the depletion of fish. The second part reviews fishery management policies and enumerates several key challenges facing the fisheries sector in the APEC. The last part of this chapter examines fisheries subsidies policies in the APEC.

2. An Overview of the Fisheries Sector in the APEC

Fish is both a food provider and an employment and income creator, being the basis of the fisheries sector. Moreover, fish is a contributor to food security, to the economic growth of States, and to the regional development of the APEC

[7] Caroline Dommen, 'Fish for Thought: Fisheries, International Trade and Sustainable Development,' 1 *Natural Resources, International Trade and Sustainable Development Series* no 1 (1999) 2–3.

[8] Globally, the major five fishing countries that capture fish on the high seas are China, Taiwan, Japan, South Korea and Spain, accounting for 85% of high seas fishing. Except for Spain, all are member economies of APEC and all have fisheries policies that significantly involve subsidies. See David A Kroodsma, Juan Mayorga and others, 'Tracking the global footprint of fisheries', 359 Science, 904–908, available at: < <http://science.sciencemag.org/content/359/6378/904.full> accessed 10th March 2019.

region. Therefore, fishery sustainability is a significant goal in the APEC. However, the APEC is facing the crisis of a depletion of its fish stocks.

The research background of this thesis begins with an overview of the fisheries sector in APEC in section 2.1 in order to demonstrate the importance of fisheries for the region and for its member economies and clearly show the marine problem faced by the fisheries sector. Section 2.2 will be dedicated to a description of this critical marine problem confronting the fisheries sector and of its main causes.

2.1 The Importance of the Fisheries Sector in the APEC

The importance of the fisheries sector to the APEC is twofold. The first is economic growth. The richness of fishery resources in the Pacific Ocean enables a strong and profitable fisheries sector that generates regular increases in fishery production, trade and economic growth across the APEC region.[9] The second is socio-economic development and regional integration in the APEC region. The fisheries sector in the APEC is essential for socio-economic development as it provides employment opportunities for fishermen, particularly in developing and least developed member economies. Both the economic and the socio-economic development delivered by the fisheries sector have a further influence on the prosperity yielded by regional integration efforts within the APEC, as political economy issues encountered by the fisheries sector cause disputes that affect regional integration and development.

The succeeding part of this section details the importance of the fisheries sector in the APEC, sequentially emphasising the sector's economic significance, the importance of the fisheries sector for socio-economic development, and its importance to the regional integration in the APEC.

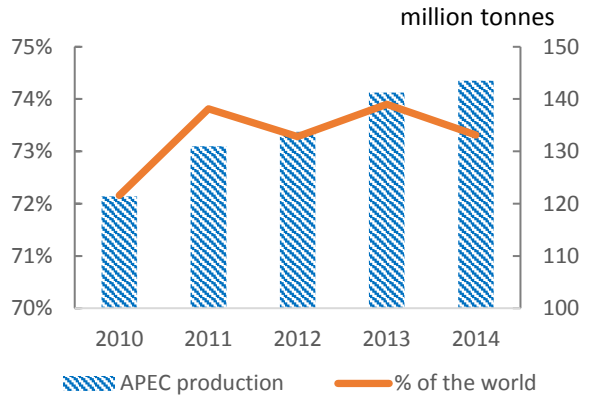
2.1.1 Economic Significance

The profits generated by fisheries production and trade in the fisheries sector contribute to significant economic growth to APEC member economies. Figure 1 compares the volume (in million tonnes) of fisheries production in the APEC

[9] APEC's Oceans and Fisheries Working Group, (n2), 21.

with the percentage that APEC production represents of global fisheries production during the period from 2010 to 2014. As shown in figure 1, between 2010 and 2014, fisheries production in APEC member economies accounted for 72% and above of global fisheries production.[10]

Figure 1: Fisheries Production in APEC between 2010 and 2014



Source: FAO Fisheries and Aquaculture Statistics, APEC Secretariat, Policy Support Unit calculations

APEC member economies account for approximately half of the world's fish exports.[11] In terms of fishery trade within the APEC region, China is by far the lead fish exporter to other APEC member economies, followed by Thailand.[12] Fish imports are concentrated in a few APEC member economies, for example Japan and the US obtain about 81% of their imports from other APEC member economies.[13] Fisheries also significantly account for approximately one fifth of agricultural GDP in several APEC member economies.[14] Given the volume of the trade in fisheries products across the APEC region, intraregional trade and exports of fisheries products are of central importance. Thus, international trade measures, including tariffs and non-tariffs barriers to trade (NTBs), have a considerable effect on the fisheries sector in the APEC. The following explains

[10] Zhu and Kuriyama, (n4), 1.
[11] China is the world's leading fisheries producer and largest exporter of fish and fisheries products. China emerged as the world's dominant producer—its production consisting of more than half of regional fisheries production and 39% of world production—in 2014. Meanwhile, Vietnam became the third major exporter, overtaking Thailand. See ibid; FAO (2016), (n1), 7.
[12] Other fish exporting member economies within the APEC region include Russia, Canada, the US, Chile, Vietnam, Indonesia, Taiwan, Peru, and Japan. APEC, *Harvesting Currency: The Importance of Fisheries and Aquaculture for APEC Economies* (APEC 2009) 2.
[13] ibid.
[14] ibid.

these trade measures and their effects on the fisheries sector, starting with tariffs.

First, the average most favoured nation (MFN) tariff for fisheries products in APEC is 6.8%. Pursuant to Article I of GATT, with regard to any border restrictions, the rule requires member states in the WTO to treat all other member states on an MFN basis. MFN is one of essential non-discrimination principles which requires that a good produced in one member country being treated no less preferably than a like product (or very similar) that originally made in any other country.[15] Moreover, the average tariff for fisheries products in the APEC region is generally much higher in its developing countries (8.4%) than in the industrialised countries in the region (1.7%).[16]

The APEC witnesses persistent tariff escalation. APEC member economies impose higher tariffs on processed fisheries products as opposed to on raw fish. Table 1 shows that tariff escalation is particularly noticeable amongst APEC-industrialised economies, in which tariffs on processed fishery products exceed more than twice those imposed on raw fishery products. Researchers argue that tariff escalation acts as one kind of protectionism, since it deters the competition of foreign producers in processed fisheries products markets by promoting domestic value-adds amid higher tariffs on processed fisheries products.[17]

Table 1: Tariff Escalation in APEC

	Raw Products	Processed Fisheries Products
APEC	6.5	8.2
APEC-Industrialised economies	1.4	3.4
APEC-Developing economies	8.1	9.8

[15] Bernard M Hoekman and Petros C Mavroidis, *The World Trade Organisation: Law, Economics, and Politics* (Routledge 2007) 16.

[16] A study and also survey of MFN tariffs imposed by APEC member economies and individual fishery products displays a wide variety of differences in the levels of tariff levied on most fishery products within the APEC region. See Zhu and Kuriyama, (n4), 2.

[17] U R Sumaila, Christophe Bellmann and Alice Tipping 'Fishing for the Future: Trends and Issues in Global Fisheries Trade' (2014) *E15 Initiatives* 20.

Source: WTO Tariff Database. APEC Secretariat, Policy Support Unit calculations[18]

Second, a number of NTBs pose hurdles to trade in fisheries products in the APEC. One of the initiatives of the Global Trade Alert[19] creates an independent database that stores data and information on all government measures that might affect trade. The database includes data and information about the economies implementing the measures (distributed in 22 NTBs listed in table 2) and those economies being affected by them.[20]

Table 2 Global Trade Alert NTBs Categories

Bailouts (state aid measures)	Non-tariff barriers (not otherwise specified)
Competitive devaluations	Other services sector measures
Consumption subsidies	Public procurements
Export subsidies	Quotas (including tariff rate quotas)
Export taxes or restrictions	Sanitary and phytosanitary measures
Import bans	State trading enterprises
Import subsidies	State-controlled companies
Intellectual property protections	Sub-national government measures
Investment measures	Technical barriers to trade
Local content requirements	Trade remedies
Migration measures	Trade finance

Currently, there are thirty-six NTBs affecting the trade of fisheries products amongst APEC member economies.[21] The most commonly used NTBs include state aid measures and sub-national government measures.[22] Table 3 lists the

[18] Both of this table and the tariff calculation are adapted from Zhu and Kuriyama, (n4).
[19] The Centre for Economic Policy Research, a policy and academic research think-tank, implements this 'The Global Trade Alert' project. See 'Global Trade Alert', available at: <www.globaltradealert.org> accessed 8 January 2019.
[20] APEC Policy Support Unit, *Perceptions on the Use of Non-Tariff Measures Within the APEC Region* (APEC 2014), 12.
[21] ibid.
[22] Sub-national governments measure includes other twenty-one categories of NTBs, presented in table 2 in this chapter, adopted by sub-national government.

remaining NTBs, showing a wide range of measures from import tariffs and quotas to export taxes.

Some NTBs have a harmful effect on fishery resources, as they encourage overfishing that eventually leads to fish stock depletion. In developing countries, specific trade measures such as state aid and tax incentives result in overfishing when the fisheries sector increases fish exports, using the support of governments to purchase vessels, equipment, storage rooms, and other facilities.[23]

Of all NTBs, state aid is the primary measure adopted in connection with fisheries products by the APEC, and fisheries subsidies are the most common form of state aid measures. Fisheries subsidies have provoked controversy in the fisheries sector on both a global level and within the APEC for their economic wastefulness; as observers emphasize, if applied to fisheries, they can exacerbate existing problems of biological overexploitation.[24] Typical examples of fisheries subsidies include vessel construction, foregone government revenue on income and fuel taxes.[25] Fisheries subsidies in the APEC are estimated to be around USD 22.9 billion, accounting for around 65% of global fisheries subsidies.[26]

Table 3: NTBs on Fisheries Products Used in APEC

Type of NTBs	Number of NTBs
Bailout/state aid measures	10
Sub-national government measures	5
Non-tariff barriers (not otherwise specified)	4
Export incentives	3
Import bans	3

[23] UNCTAD, *Fishery Exports and The Economic Development of Least Developed Countries: Bangladesh, Cambodia, The Comoros, Mozambique, Myanmar and Uganda* (UN 2017) 10.
[24] Frank Asche and Martin D Smith, 'Trade and Fisheries: Key Issues for the World Trade Organisation' (2009) *Staff Working Paper ERSD-2010-03* 24, available at: < https://www.wto.org/english/res_e/reser_e/ersd201003_e.pdf> accessed 8 January 2019.
[25] ibid.
[26] This table is retrieved from Zhu and Kuriyama, (n4), 3.

Public procurement localisations	2
Import quotas	1
Technical barriers to trade	1
Import tariffs	1
Localisation requirements	1
Trade finance	1
Public procurement preference	1
Sanitary and phytosanitary measure	1
Investment measure	1
Export taxes or restriction	1

Source: The categories of NTBs listed in this table are in accordance with those created by Global Trade Alert.[27] APEC Secretariat, Policy Support Unit calculations[28]

2.1.2 Importance of the Fisheries Sector for Socio-Economic Development and Regional Integration in APEC

The importance of the fisheries sector for socio-economic development derives from the number of people working as fish farmers in the sector and from the sector's mass employment of fishermen. So, too, do regional food security concerns stemming from the fishery trade have impacts upon socio-economic development.[29] Globally, fish is one of the most traded commodity products.[30] Consequently, the fisheries sector encourages expanded regional trade in fish across the APEC region. This increasing trade in fish and fisheries products, entailing high commercial profits, has further intensified fish catch competition and caused political tension in the APEC, such as the South China Sea dispute.[31] The South China Sea is a maritime area full of rich and valuable

[27] See table 2 and Global Trade Alert, (n19).
[28] This table and source are retrieved from one of the APEC's publications: Zhu and Kuriyama, (n4), 3.
[29] APEC, 'The fourth APEC Ocean-Related Ministerial Meeting (AOMM4): "Towards New Partnership through Ocean Cooperation in the Asia Pacific Region"' para 10-22, available at: <https://www.apec.org/Meeting-Papers/Sectoral-Ministerial-Meetings/Ocean-related/2014_ocean> accessed 8 January 2019.
[30] Fisheries exports are higher than all other major agricultural commodities combined, including meat, tobacco, rice, and sugar. See FAO, (n1), 7.
[31] South China Sea Territorial Disputes, Peace Palace Library, available at: <https://www.peacepalacelibrary.nl/library-special/south-china-sea-territorial-disputes/> accessed 8 January 2019.

fishery resources. However, the Sea is also a contentious region in which many States have disputed and claimed for their territorial sovereignty over islands on the Sea. The South China Sea involved both maritime and island claims among some member economies within the APEC region, namely Brunei Darussalam, China, Malaysia, the Philippines, Taiwan, and Vietnam.[32] Hence, the political tension in the APEC arose from difficulties and controversy to determine territorial sovereignty over islands on the South China Sea which stores profitable and valuable fishery resources.

The health of the fishing industry remains essential to food security, a significant factor in overall global economic health, and a bulwark protecting local employment levels in many communities.[33] Commercial fishing operations underwent varying stages of change since the last half century, as modernisations of fishing technology have broken through restrictions that formerly kept the fishing industry a mostly local and coastal business affair.[34] Finally, fish represents a significant source of foreign exchange.[35]

In APEC member economies, employment in the fisheries and aquaculture sector is approximately 26.2 million, which composes 60% of the global fisheries workforce.[36] This number is significant, as aquaculture operations in the APEC increasingly strive to meet the global demand for fish and fisheries products. Exclusively within the fish farming sector, the APEC already contributes half of the world's food fish supply.[37]

Consequently, the socio-economic development impact and importance of the fisheries sector for APEC member economies cannot be understated. The APEC is expected to have the capacity and the mandate to facilitate the

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[32] ibid.
[33] Yumiko Kura, Carmen Revenga, Eriko Hoshino and Greg Mock, *Fishing for Answers: Making Sense of the Global Fish Crisis* (World Resources Institute, 2004), available at: < http://pdf.wri.org/fishanswer_fulltext.pdf p.1> accessed 8 January 2019.
[34] ibid.
[35] In 2014, exports of fisheries products accounted for USD 156.4 billion. See Zhu and Kuriyama, (n4), 5.
[36] Furthermore, the numbers of fisheries employment vary broadly, from more than 12 million in China and 4 million in Vietnam to 110 thousand in Malaysia and 16 thousand in Papua New Guinea. APEC, (n12), 3.
[37] ibid.

cooperation necessary to maintain healthy and sustainable economic growth.[38] In recent years, twenty-one APEC member economies have recognised the importance of the fisheries sector for food security, sustainable economic benefits, and the maintenance of socio-economic and environmental development. The APEC has furthermore begun a series of initiatives to enhance and promote fishery sustainability. These initiatives include establishing the Ocean and Fisheries Working Group, the convening of three ocean-related ministerial meetings, and the establishment of the APEC Marine Sustainable Development Centre.[39]

In remote and rural locations, employment in the fisheries sector comprises a significant share of overall employment, a consequence of limited opportunities in these locations.[40] The fisheries sector in the Asia-Pacific region also represents and provides a significant portion of required food — particularly animal protein — in low-income and food-deficit member economies.[41] These facts indicate that, since fisheries areas are a necessary source of quality animal protein, they are vital for regional food security in the APEC region. With 90% of fish harvesters and fish farmers that are employed in small-scale sizes and activities in the APEC, the sector plays a significant role in ensuring the livelihood of 24.2 million people.[42] The fisheries sector also contributes significantly — at almost one fifth — to agricultural GDP in some APEC member economies.[43] Specifically, the fisheries employment markets of China, Indonesia, Thailand, Vietnam, and Japan compose the majority of the overall fisheries employment market in the APEC region, as Figure 2 illustrates.

Figure 2:

[38] APEC's Oceans and Fisheries Working Group, (n2), 22.
[39] ibid, 4–11.
[40] ibid.
[41] Annex B - APEC High-Level Policy Dialogue on Food Security and Blue Economy Plan of Action, available at: https://www.apec.org/Meeting-Papers/Annual-Ministerial-Meetings/2015/2015_amm/annexb accessed on 9 March 2019.
[42] APEC, (n12).
[43] This share, for example, is significantly higher in Chile at 64% and in Peru at 25%. While the average share of fish versus agricultural exports is 15% in the Asia-Pacific region, this figure is 67.5% in Brunei Darussalam and more than 40% in Chile, Japan, Peru and Vietnam. This share is similar to the share of fish in total merchandise exports by APEC member economies. APEC, (n12).

Australia	16,000
Brunei Darussalam	6,000
Canada	80,000
Chile	120,000
China	12,100,000
Hong Kong, China	18,000
Indonesia	2,400,000
Japan	210,000
Republic of Korea	130,000
Malaysia	110,000
Mexico	270,000
New Zealand	1,500
Papua New Guinea	16,000
Peru	125,000
Philippines	2,000,000
Russian Federation	370,000
Singapore	400
Chinese Taipei	350,000
Thailand	3,691,000
United States	140,000
Viet Nam	4,000,000
TOTAL	**26,153,900**

Source: Employment figures based on data from The State of the World Fisheries and Aquaculture (SOFIA) and the UN Food and Agriculture Organisation (FAO) fisheries country profile, available for different years.[44]

Fishery trade also represents a large section of the economy for many developing countries, as fish is one of the most traded commodities in the global food sector, with estimates suggesting 78% of fishery products are traded internationally.[45] Statistically, between 1976 and 2014, developing economies in the APEC saw their share of total fisheries export value rose from 37% to 54% and experienced a growth of 60% in export quantities (live weight of fish) by 2014. In 2014, the value of fisheries exports from developing countries were at USD 80 billion, and their fisheries' net export revenues (that is exports minus imports) reached USD 42 billion, higher than other major agricultural commodities, such as tobacco, rice, meat, and sugar combined.[46]

Hence, if the fisheries sector is not well managed, non-renewable fishery resources loss will be the result. When a reduction in fish occurs, economic damage ensues for the communities that depend on sustainable and healthy fish.[47] An assertive response to this issue is, therefore, critical to all developing

[44] The figure is adapted from APEC, (n12), 3.
[45] FAO, (n1), 5.
[46] ibid, 7.
[47] OECD, 'Chapter 2: A Sustainable Development Framework for Assessing Effects of Government Financial Transfers' in *Financial Support to Fisheries: Implications for Sustainable*

countries that are also major fishing countries, such as China, Indonesia, Taiwan, Thailand and Vietnam.

It is widely acknowledged that the challenges involved in meeting the food demands of the global rising population require developed markets, open and fair trade, and sustainable development, which means that fishery resources are vital to ensuring food security in the APEC and globally.[48] With respect to the APEC, as member economies in the region expand according to predictions, their populations' diets will keep diversifying — generating larger necessity for fish as a source of nutrition and placing greater pressure on the fisheries sector and on fishery resources.[49] Given such additional need, stakeholders in the fisheries sector have stressed the importance of sustainable development in the APEC region, and the APEC has included the sustainability of the marine environment among its three major policies for sustainable development in the region.[50] The critical role of the ocean on food security and food-related trade is, then, at least formally recognised.[51] Nevertheless, vulnerabilities within the APEC to fish resource depletion are harsher for certain member economies, such as Thailand and Vietnam, where fisheries resources provide essential element and traditional ingredients in the populations' daily diets, for example fish sauce and other fish-based condiments. Several member economies in the APEC region place unique importance on fish in their entire protein intake.[52] For example, in Indonesia, Japan, Malaysia, and the Philippines, fish intake is more frequent than people do with other animal proteins in meeting their animal protein demands.[53]

Unsustainable fishing practices are also likely to have dramatic impacts on employment.[54] A Philippine-commissioned report published in 1997 indicates

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Development, 53.

[48] Sustainable food supply chains from resilient resources for inclusive growth, available at: <https://www.apec.org/Meeting-Papers/Annual-Ministerial-Meetings/2015/2015_amm/annexb> accessed 8 January 2019.

[49] APEC's Oceans and Fisheries Working Group, (n2), at 28.

[50] Chen-Tung Arthur Chen, Jacques C J Nihoul (eds), *Oceanography* (Volume III) 23.

[51] Trade of Fisheries Products and Fisheries Subsidies in APEC, available at: <https://www.apec.org/Publications/2017/01/Trade-of-Fisheries-Products-and-Fisheries-Subsidies-in-APEC> accessed 8 January 2019.

[52] APEC, (n2), 27–28.

[53] (n12), at 3.

[54] FAO, (n1).

that 120,000 Filipino fishermen's livelihoods and employment would be negatively affected by 2000 unless access to fisheries resources was restricted.[55]

Moreover, in APEC developing member economies, small-scale fishing still accounts for the majority of fishing practice. This kind of fishing is vulnerable, and employment of fishermen at this level tends of be precarious and unstable. In recognition of these vulnerabilities, the APEC has taken action to add resilience to the forms of employment available in the fisheries sector. The 4th APEC Ocean-related Ministerial Meeting, for instance, has suggested the creation of a critical forum of discussion to find solutions to global challenges involving the ocean.[56] The Xiamen Declaration in APEC also emphasises the need for concrete and efficient actions to solve marine issues, such as incentives to enhance cooperation and joint research in marine technology.[57]

Concerning the importance of the fisheries sector for regional integration in the APEC region, the discussion herein acknowledges its dual aspects. First, APEC regional integration leads to significant interdependence across the region. APEC regional integration features and implements interaction through economic activities and non-economic means.[58] Additionally, regional integration also involves regional cooperation through cross-border activities, including information exchanges, intergovernmental dialogue, regional institution building, and provision of regional public goods.[59] Hence, establishing regional integration with a particular focus on environmental governance such as ocean governance and fishery sustainability abrogates complexities arising from diverse economic and national development in APEC.[60]

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[55] The Philippine-commissioned report was cited in FAO, ibid.
[56] APEC, (n29).
[57] See Marine Technology and Innovation, 16, in the 4th APEC Ocean-Related Ministerial Meeting in Xiamen, 28 August 2014.
[58] Roda Mushkat, 'Creating Regional Environmental Governance Regimes: Implications of Southeast Asian Responses to Transboundary Haze Pollution' (2013) 4 Washington and Lee Journal of Energy, Climate, and the Environment 103, 111.
[59] ibid.
[60] John Davis, Regional Economic Integration, the Environment and Community: East Asia and APEC (2003) 17 International Review of Applied Economics 69, 71.

On a second aspect, however, any solution to the complexity of the marine problem will demand a level of coordination between stakeholders and their dissimilar areas of focus in the fisheries sector that could only be provided within the APEC's framework of interdependency.

2.2 The Critical Marine Ecosystem Problem Facing the Fisheries Sector in APEC and Required Intergovernmental Cooperation

The depletion issues facing the fisheries sector in the APEC are numerous. They could be marine pollution, open access to fishery resources, overfishing of fishing fleets, overcapacity of fishing resources, fish by-catch mortality, inappropriate fisheries management practices, and increased ultra-violet radiation on marine food chains.[61] By 1994, the Pacific Ocean fisheries had already been reported as rapidly depleted.[62] In 2010, eleven out of eighteen APEC member economies with available data and information reportedly faced a situation in which half of their fish stocks were either over-exploited or in a state of collapse.[63]

Since the APEC region has global dominance in fishery production and trade, an increase in the kinds of fishery production and trade in the APEC that have uniquely adverse effects on fish stocks only leads to greater depletion. More than other causes of the depletion of fish, the most critical contributor is governments' fisheries subsidies, whose causal connection to overfishing and overcapacity is clearly established. In consideration of the vital role played by fisheries and their production in economic growth and in socio-economic development as well as regional integration in the APEC, it is essential that a well-structured fishery management plan is developed and implemented to resolve the transnational marine problem in the near future.

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[61] See UNEP, 'The Role of Trade Policies in the Fishing Sector: Summary Report', UNEP/WWF Workshop on 'The Role of Trade Policies in the Fishing Sector' (UNEP 1997). Note that the negative results of destructive fishing activities become cumulative as the effects worsen of global climate change, such as ocean warming, ocean acidification, shifting currents, reduced mixing and decreasing oxygen levels, available at: <https://unchronicle.un.org/article/global-marine-governance-and-oceans-management-achievement-sdg-14> accessed 8 January 2019.

[62] FAO, (n1).

[63] Zhu and Kuriyama, (n4), 5.

3. Evaluating the Causes of the Critical Marine Problem of the Depletion of Fish in APEC

In 1994, the Pacific Ocean fisheries were already reported as severely depleted.[64] In 1996, it was estimated that nearly all fisheries in the Pacific Ocean were overfished and at risk of the depletion.[65] In 2010, eleven of the APEC member economies (using estimates based on data provided by these member economies) reported that more than half of their fishery stocks were either overexploited or in a state of collapse.[66] The alarming increase in the overexploitation of fisheries between 1994 and 2010 clearly indicates that many of the APEC member economies are simultaneously confronting the crisis of the depletion of fish and are struggling to explore sustainably effective approaches for fishery conservation. In response, this section examines the causes of the depletion of fish in the APEC, categorised its analysis into the following four areas: the effects of open access and climate change on fish stocks; the unsustainable exploitation of fish; increased fishery production and trade; and fisheries subsidies, providing an assessment of the link each phenomenon has on overfishing and overcapacity.

3.1 The Effects on Fishery Stocks of Open Access and of Climate Change

The oceans are considered publicly owned; therefore, marine areas beyond the limits of any State's jurisdiction can be comprehended as a global commons.[67] This shared ownership of the oceans shapes a larger structural characteristic of the fisheries sector – functioning as the 'open access regime' or 'the common property resource'.[68] In the kind of open access regime that governs the oceans, the fisheries sector has no exclusive property rights; moreover, fishing companies or fishermen compete for catches or shares from the same identical

[64] Institute for International Economics, 'Chapter 3: Environmental Problems Confronting APEC's Members', *Sustaining the Asia Pacific Miracles* (PIIE) 42, available at: <https://piie.com/publications/chapters_preview/37/3iie2504.pdf> accessed 10th March 2019.
[65] ibid.
[66] Zhu and Kuriyama, (n4), at 5.
[67] Margaret Young, *Trading Fish, Saving Fish* (CUP 2011) 36.
[68] Gareth Porter, 'Natural Resource Subsidies, Trade and Environment: The Cases of Forests and Fisheries' (1998) Centre for International Environmental Law 68, available at: <http://www.ciel.org/Publications/NaturalResourceSubsidies.pdf> accessed 10th March 2019.

fisheries stocks. Consequently, this common property resource regime causes what is famously described as 'the tragedy of the commons' by Hardin, in the version of which we see in the oceans today fishing companies assume that other fishing companies will capture any fisheries stocks they leave in the ocean.[69] Hence, in the competition for fishery capture, fishing companies are propelled to exploit fishery resources as rapidly as possible, without guaranteeing fishery sustainability by way of adopting measures of fishery conservation.[70]

Garrett Hardin first introduced the concept of 'the tragedy of the commons' in 1968.[71] He develops the tragedy of the commons in a specific series of approaches. He first assesses some natural resources cases to analyse sustainability. In an example concerning sustaining cattle used in his work, Garrett Hardin found out that, expectedly, every herdsman will try to conserve as many cattle as possible on the commons. For centuries, such an arrangement for sustainability likely works reasonably satisfactorily. Some factors, such as wars and disease, let the numbers of human beings and beast significantly go below the containing capacity of the land. Eventually, however, comes the day when the long-desired sustainable development goals become a reality. Hence, in sense of this point, the intrinsic logic of the commons leads to tragedy.[72] As a consequence, in Hardin's theory, even though resources such as those of fisheries are finite and exhaustible, the tragedy of the commons is not inevitable.[73]

Garrett Hardin further claims that the only means we can use to preserve and

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[69] See Garrett Hardin, 'The Tragedy of the Commons' (1968) 162 (3859) Science 1243–1248.
[70] Porter, (n68), 69–70. Besides which, an exceptional example of the oceans' open-access nature can be found in the 'customary marine tenure systems' that are discovered in many countries located in Japan and the South Pacific. See Marjo Vierros, 'Global Marine Governance and Oceans Management for the Achievement of SDG 14,' UN Chronicle 1&2 (2017), available at: <https://unchronicle.un.org/article/global-marine-governance-and-oceans-management-achievement-sdg-14> accessed 10th March 2019.
[71] See Hardin, (n69).
[72] ibid, 1244.
[73] Elinor Ostrom describes certain measures that can mitigate problems arising from the tragedy of the commons. She finds that, for example, individuals' ability to comply with rules is itself tied to their ability to participate in amending the rules and in overseeing compliance with them. Hence, improved institutions for collective action can be one way to alleviate the tragedy of the commons. See Elinor Ostrom, *Governing the Commons: The Evolution of Institutions for Collective Action* (CUP 1990).

nurture other and more valuable freedoms from the tragedy of the commons in the case of sustaining cattle and lands is through giving up the freedom to breed cattle in a short time. By doing so, Hardin believes that it is possible to close an aspect involved in the tragedy of the commons, that is, 'Freedom is the recognition of necessity'. In addition, education plays an essential role in releasing to all the significance of abandoning the freedom to breed.[74]

Given the advancement of proper governance of the marine environment and of fishery resources, the tragedy of the commons is avoidable, an imperative that must be recognised by policy and regulatory decision-makers as well as by the international community, all of whom constitute ocean stakeholders since they all depend on the oceans for their survival.[75] Similarly, achieving sustainable development of the marine environment and, hence, fishery resources conservation must be the objective of the oceans and fishery governance apparatus of the APEC.

Besides the effects of the open-access nature of the ocean on fishery stocks, global climate change also affects the marine environment, biodiversity, and fishery stocks. Irreversible marine environmental problems caused by climate change have already occurred.[76] As a result, climate change will also have impacts on the marine ecosystem and its biodiversity, which possibly jeopardises the sustainable development goals to which the international community has committed.[77] Fishery stocks may shift, expand, or contract with climate change, and ocean productivity may decrease or increase as a consequence, yet the effects might be heterogeneous. Moreover, since fishery stocks have transnational movement and fish may migrate as a result of climate change, existing international agreements that focus on fisheries management may be undermined.[78] Considered together, all of these impacts have the

[74] Hardin, (n69).
[75] Vierros, (n70). Also see Section 2.2 in Chapter One for the importance of fisheries for the environment and human beings.
[76] For instance, ocean acidification and warming, sea level rise, and sea-ice melting in the Arctic area. APEC Intergovernmental Panel on Climate Change Workshop Report in March 2014, in Akima Umezawa (eds), *APEC Workshop on the Climate Change Impact on Oceans and Fisheries Resources* (APEC 2015), 303.
[77] Markus Gehring, 'From Fisheries Subsidies to Energy Reform under International Trade Law' (2018) No 188 CIGI Paper 1.
[78] Rögnvaldur Hannesson, 'Do Buyback Programmes Make Sense?' in Rita Curtis and Dale

potential to affect trade, which means that climate mitigation policy could also affect fisheries. The future status of the flow of fish products will therefore depend on whether or not important fisheries are operating on the backward-bending segment of the supply,[79] (which means the long-term fish catch supply, according to the bioeconomic theory established by Copes[80]).[81]

The APEC has recognised the threat posed by climate change on fish stocks and its causal role in the depletion of fish. In 2014, the APEC Intergovernmental Panel on Climate Change Workshop found that climate change had become a threat to the oceans and marine resources of the seas and oceans, which would contribute to growing uncertainties in fishery resources.[82] The goals of this panel, aimed to concentrate greater attention and awareness upon the effects of climate change on the oceans, were as follows.

The first goal was to establish an integrated framework to share the knowledge of experts and scientists, to promulgate beneficial practices around impact mitigation, and to identify successful cases in which stakeholders adapted to the situation with inventive and distinctive approaches. The second objective was to enhance recognition of the increasing number of vulnerable fisheries and to establish preparatory measures in these vulnerable fisheries sectors to help them sustain the depletion. The final goal was to reinforce the overall coherence of fishery policy in order to ensure economic activities were proportionate to ocean resources in an approach of sound economic and social-economic adaptation.[83]

3.2 The Unsustainable Exploitation of Fish: Overcapacity, Overfishing, and Illegal, Unreported and Unregulated Fishing

Both in the world and in the APEC region, fisheries resources are undergoing

Squires (eds), *Fisheries Buybacks* (Wiley 2007), 55–56.

[79] Frank Asche and Martin D Smith, (2010) 'Trade and Fisheries: Key Issues for the World Trade Organisation' (2009) Staff Working Paper ERSD-2010-03 26.

[80] Parzival Copes, 'The Backward-Bending Supply Curve of the Fishing Industry' (1970) 17(1) Scottish Journal of Political Economy, February 69–77.

[81] Frank Asche and Martin D Smith, (2010) 'Trade and Fisheries: Key Issues for the World Trade Organisation' (2009) Staff Working Paper ERSD-2010-03 26.

[82] Umezawa, (n76).

[83] ibid.

a crisis of fisheries depletion agitated by certain preventable practices in the unsustainable exploitation of fish, which further undermine fishery sustainability every year. Specifically, the crisis of depleted fish arises from unsustainable fishing activities such as discards, by-catch, overfishing, overcapacity and illegal, unreported and unregulated (IUU) fishing, all of which have immediate effects that endanger the ocean, fishery resources, and the marine ecosystem.[84] As a result of unsustainable fishing activities, the breadth and capacity of the global fishery catch continues to grow beyond historic records, to such an extent that global fisheries are presently in danger of collapse.[85] Research indicates that large fishing fleets are hauling in catches that exceed the biological limits of fish stocks in every ocean; as a result, global fishing capacity[86] is 250% higher than the sustainable yield that the oceans can collectively produce (also called the 'maximum sustainable yield').[87] Additional signs of concern show that the sufficient rate of replenishment of fishery stocks is usually exceeded by by-catch capacity.[88]

In 2013, the majority of the most productive global fishery stocks were fully captured without potential for growth in production, whereas projections suggested that the rest, though overfished, would be forced to sustain increases in production. However, the reproduction of fisheries is only possible after successful and effective stock restoration.[89] By 2016, measures upheld earlier estimates, indicating that 31.4% of fish stocks were overexploited.[90]

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[84] Daniel Pauly, *In a Perfect Ocean: The State of Fisheries and Ecosystems In The North Atlantic Ocean* (2nd edn, Island Press 2003) 75–83.

[85] Fabrizio Meliado, 'Fisheries Management Standards in the WTO Fisheries Subsidies Talks: Learning How to Discipline Environmental PPMs?' (2012) Journal of World Trade 46(5) 1089.

[86] Young, (n67), 87–88. 'Capacity' is a contested term. 'Fishing capacity' has been defined as 'the amount of fish or fishing effort that can be produced over a while (such as a year or a fishing season) by a vessel or a fleet if fully utilised and for a given resource condition.' Capacity grows not merely because of the number of vessels, but also because of their increasing size and more sophisticated technological capabilities. Amidst growing awareness that there is too much 'fishing capacity' in the oceans, there is increasing attention to the economics of the fishing industry and greater recognition that marine fisheries operate globally at a net economic loss. Economists have shown that government practices contribute to preserving incentives for vessel production.

[87] Oceana, Estimating Overcapacity in the Global Fishing Fleet, available at: <https://oceana.org/sites/default/files/reports/Towards_Sustainable_Fishing_Paper_Nov071.pdf> accessed 8 January 2019. Also note that in Section 4 of this Chapter, there is explanation of the term of maximum sustainable yield and maximum sustainable yield.

[88] Simon Jennings, Michel Kaiser and John Reynolds, *Marine Fisheries Ecology* (Blackwell 2006) 10.

[89] FAO, (n1), 6.

[90] This figure has tripled since records started in 1974. ibid, 38.

UNEP's research predicts that, in the near future, the impending collapse of fisheries, occurring as a result of unsustainable fishing, may arrive as the first of many lessons teaching us the costs involved in failing to respect and consider the limits of the natural resources of our planet.[91] Since the ocean, fishery resources, and the marine ecosystem are disrupted by widespread and extensive unsustainable exploitation of fish, livelihoods in the most vulnerable communities in developing countries suffer from a lack of stable food security and employment. Consequently, any suitable, durable, and equitable solution to the problem of overfishing will require transnational effort not only to preserve stocks, but to construct, in addition, a new sustainable economy in the fisheries sector, which means altering the current system of economic incentives that lead fishermen and merchants on an unsustainable race for dwindling fishery stocks.[92]

As mentioned, unsustainable fishing constitutes a severe threat to fisheries, to the marine environment, and to the means of support of populations relying on fishery resources, leading to a broad array of sustainable development concerns.[93] Among all unsustainable fishing activities, overfishing and illegal, unreported and unregulated (IUU) fishing perhaps severely incur the risk either of the overexploitation or full exploitation of fishery resources.[94] Moreover, any proper response to the problem of overfishing and IUU fishing will have to stress the necessity of action at intergovernmental levels, further complicating coordination efforts.[95]

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[91] Anja Von Moltke (ed), *Fisheries Subsidies, Sustainable Development and the WTO* (UNEP 2011) 1.
[92] ibid.
[93] ICTSD, Advancing Multilateral Trade Negotiations on Fisheries Subsidies, 1.
[94] Asche and Smith, (n79), 9. Scientists predict that the collapse of numerous seafood-producing species stocks will occur by 2048. They also point out that 63% of globally assessed fish stocks will need to be rebuilt, and much lower exploitation rates are required to reverse the collapse of vulnerable fisheries species. See Boris Worm et al., 'Impacts of Biodiversity Loss on Ocean Ecosystem Services' (2006) 314 Science 787 (defining collapse as 10% of unfinished biomass).
[95] Meliado, (n85). In fact, the numbers are worse for some of the ocean's most valuable fish, with no foreseeable let-up in sight. For example, in the global tuna market, some 41% of the main tuna species are overfished and market demand remains high. Evidence indicates that there is significant overcapacity in the tuna fishing fleet. See Ricardo Meléndez-Ortiz, World Economic Forum, 06 Jun 2017, 'We have a Window of Opportunity to Save Our Oceans, But It's Closing Fast', available at: <<https://www.weforum.org/agenda/2017/06/fisheries-subsidies-need-urgent-reform-heres-why/> accessed on 10th January 2019.

In the case of overfishing, one of the most critical challenges facing the oceans and marine ecosystems in the APEC region at the present time, a reduced stock of fish results from excessive rates of fish capturing and hunting.[96] Although it is a fact that fish populations are able to renew through biological reproduction, the productive capacity of the ocean is limited. Overfishing threatens to lead to the tragedy of the commons, where, in the absence of property rights over specified fish stocks, fishermen harvest more than the optimal amount for future sustainability.[97] Overcapacity and habitat destruction are also regarded as the main threats to global marine biodiversity, fish stocks, and fishermen's livelihoods.[98] As early as the years between 1997 and 1999, both the FAO and independent experts specialising in fisheries identified fishing fleet overcapacity as either an essential cause of unsustainable fishing or as a major threat to fishery resources.[99] In consideration of the scale of the collapse of fish identified by the FAO studies,[100] the issue of the depletion of fish is likely to have consequences of similar severity, including, particularly in developing countries, on ecology, global food security, and economic prosperity.

IUU fishing, as an analogous but distinct problem, is a widespread ecological phenomenon that undermines fishery sustainability as well as ocean governance, especially those measures and efforts relevant to its control.[101] Activities defined as IUU fishing include illegally harvested fish from regulated fisheries, unreported or misreported fishing activities, and unregulated fishing by vessels with no flag or a flag of convenience. The past few decades have

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[96] Asche and Smith, (n79), 15.
[97] Eric M Singer, 'Towards a Sustainable Fishery: The Price-Cap Approach' (2011) 24 *Tulane Environmental Law Journal* 254.
[98] Asche and Smith, (n79), 25.
[99] See (1) FAO research: FAO, *The State of World Fisheries and Aquaculture in late 1990s*; FAO, *Report of the FAO Technical Working Group on the Management of Fishing Capacity*, (1998); (2) Individual experts: Daniel V Pauly, V Christensen and others, 'Fishing Down Marine Food Webs', 279(6) *Science*, 1998; D Greboval and G Munro, 'Overcapitalisation and Excess Capacity in World Fisheries: Underlying Economics and Methods of Control', in D Greboval (ed), *Managing Fishing Capacity: Selected Papers on Underlying Concepts and Issues* (FAO 1999); J Kirkley and D Squires, 'Measuring Capacity and Capacity Utilisation in Fisheries', in D. Greboval (ed), *Managing Capacity: Selected Papers on Underlying Concepts and Issues* (FAO 1999).
[100] FAO, (n1).
[101] Diane Desierto, 'First Global Treaty Against Illegal, Unreported, and Unregulated (IUU) Fishing Entry into Force' Blog of the European Journal of International Law (9 June 2017), available at: <https://www.ejiltalk.org/first-global-treaty-against-illegal-unreported-and-unregulated-iuu-fishing-enters-into-force/> accessed10th January 2019.

witnessed IUU fishing become an increasing concern for analysts, as research has shown that a significant amount of catch now arises from IUU fishing. IUU fishing across all fisheries in the world has been estimated to be worth between USD 10 and 23.5 billion annually.[102] Moreover, it causes annual global losses estimated at approximately USD 23.5 billion for developed and developing countries.[103] This analysis has led to the emergence of international bodies, such as the High Seas Task Force,[104] where discussion has sought to determine whether or not fishing must be illegal, unreported, and unregulated to cause a problem or whether it is adequate that the fishing practices concerned meet just one of these criteria.[105] For the purposes of this thesis, any fishing accepted to be the main cause of the depletion of fish will be required to have all three characteristics.[106]

The destructive impacts of IUU fishing on fisheries include the 'extinction or high risk of extinction of the resource and/or the productive ecosystem and its biodiversity.'[107] As it is difficult to put an end to IUU fishing directly, various initiatives to prohibit market access for fisheries have been advocated, consisting varyingly of eco-labels, traceability requirements on products, and other measures that disclose relevant information about how the fish has been captured. These kinds of trade measures entail the likely instigation of trade disputes, as several of them also restrict market access for certain species of fish especially for developing countries already affected by poor reporting infrastructure.[108]

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[102] David Agnew, John Pearce, Ganapathiraju Pramod, Tom Peatman, Reg Watson, John R Beddington and Tony J Pitcher, 'Estimating the Worldwide Extent of Illegal Fishing' (2009) 4 PLOSOne 2, available at: <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0004570> accessed 10 January 2019

[103] ibid.

[104] It was created at a roundtable of the OECD in 2003 with government ministers from the Australia, Canada, Chile, New Zealand, Namibia, and the UK.

[105] Asche and Smith, (n79), 30.

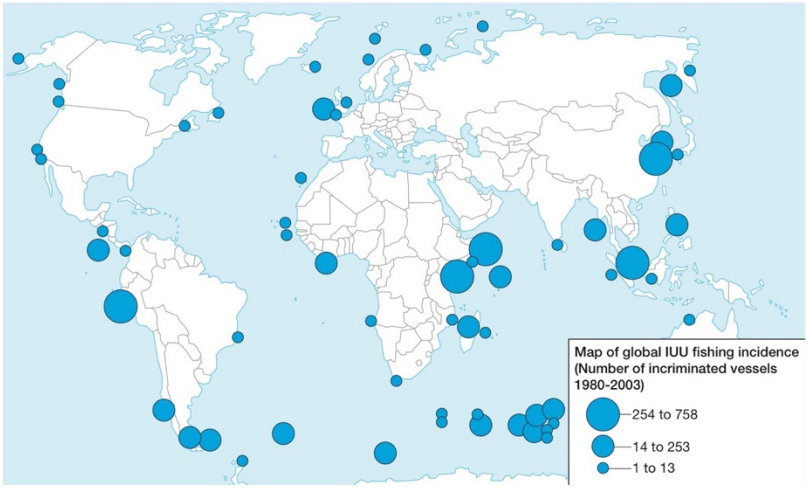
[106] ibid. Note that fisheries practices in developing countries without infrastructures or facilities to report catch are generally not perceived as illegal, unreported and unregulated fishing. The identical is right for by-catch.

[107] FAO, *Report of FAO/UNEP Expert Meeting on Impacts of Destructive Fishing Practices, Unsustainable Fishing, and Illegal, Unreported and Unregulated (IUU) Fishing on Marine Biodiversity and Habitats* (2010) 7.

[108] Asche and Smith, (n105).

Figure 3 illustrates the prevalence of global IUU fishing, showing that the regional hotspots for IUU fishing are in the Northwest Pacific, the Eastern Pacific, Southeast Asia and the Pacific Islands, all surrounding the Pacific Ocean. Hence, in many developing countries in APEC, IUU fishing threatens food security, community livelihoods and marine environments. Indeed, by 2010, more than a quarter of the total fisheries catches in APEC were still unreported, which indicates that continued efforts are required in the monitoring of IUU fishing activities as to manage effectively the sustainability of ocean and fisheries resources.[109]

Figure 3



Source: http://regardssurlaterre.com/sites/default/files/rst/EN-C9–Figure1.jpeg adopted from Diane Desierto, 'First Global Treaty Against Illegal, Unreported, and Unregulated (IUU) Fishing Entry into Force,' *Blog of the European Journal of International Law* <https://www.ejiltalk.org/first-global-treaty-against-illegal-unreported-and-unregulated-iuu-fishing-enters-into-force/> accessed: 10th January 2019.

3.3 The Adverse Effects of Increased Fishery Production and Trade on Fishery Stocks

International trade in fish has strong effects on fishery sustainability, as this section will endeavour to demonstrate. Above all other impacts, two main issues arising from the effects of the fishery trade are worthy of particular consideration.[110] The first issue is whether or not market access and trade

[109] Zhu and Kuriyama, (n4).
[110] ICTSD, 'Fisheries, Trade and Sustainable Development: Post-2015 Development Agenda' (2014) 1 Briefing Series. Fisheries depletion caused by fisheries subsidies draws much attention on social, biological equity and justice.

liberalisation in fisheries affect fishery sustainability. The other question focuses on whether or not government subsidies in support of the fisheries sector cause the depletion of fish stocks. This section merely discusses the first issue; government subsidies and their adverse effects on fish stocks will be discussed in Section 3.4.

Increased trade in fish, with its potential negative effects on fish stocks, raises the question of whether or not trade aggravates current problems with unsustainable fishing operations or opens avenues for the gradual improvement of fishery sustainability. The latter may be a consequence of the expectation, imposed by international bodies, that fishermen meet the enhanced environmental requirements and standards of importing countries.[111] Further to the effects brought on by the international trade in fish, expanding population size also leads to an imbalance between food demand and supply that causes further deterioration in fishery sustainability. As available supplies of fish and seafood become increasingly unable to meet growing demand, fishermen are given a perverse incentive to hunt more fish. Because fish is not inexhaustible and the population in the APEC is expected to increase dramatically in coming years, the demand for food such as fish is highly likely to soar, as well.

Although relationships of causation firmly establishing the negative effects of increased international trade in fish on fish stocks have been hard to prove, certain such relationships have been more clearly substantiated, for example, the connection between the ascending increase in the international trade in sharks and the significant decline in shark species (of which several are currently critically endangered). Observers have witnessed an extravagant decline in shark populations. In addition to being captured to satisfy huge and expanding necessity for shark fins meat and meat, oftenly, sharks are killed indirectly as by-catch by swordfish longline and tuna fisheries. Additionally, sharks are influenced by marine pollution and by the disappearance of their natural prey by way of other instances of overfishing. Even further issues ensue

[111] Yumiko Kura, Carmen Revenga, Eriko Hoshino and Greg Mock, *Fishing for Answers: Making Sense of the Global Fish Crisis*, (World Resources Institute 2004) <http://pdf.wri.org/fishanswer_fulltext.pdf> 1, 69. accessed 8 January 2019.

from the fact that, often, numbers of sharks' population are unable to recover because of the fish's slow rate of growth and reproduction. In other words, sharks are more vulnerable than other fish, as they have long reproductive cycles, bear typically small litter sizes, and take decades to mature.[112]

A proliferation of responses in regulations and law has followed the increase in international trade in fish and fishery products, along with growing attention to the crises of the oceans.[113]

3.4 Fisheries Subsidies as Linked to Overfishing and Overcapacity

Evidence suggests a link between increases in fishery exploitation and fluctuations in governments' subsidies to support their fisheries sectors.[114] Notably, fisheries subsidies in 2009 amounted to the considerable sum of USD 35 billion, of which around USD 20 billion were given to enhance fishing capacity.[115] Even in 2015, USD 30 billion was spent on fisheries subsides, 60% of which went directly to encourage unsustainable or even IUU fishing.[116] Such subsidies have persisted even though government subsidies for fishing[117] have been identified as a significant contributing factor permitting for and encouraging unsustainable overfishing and overcapacity.[118]

Regulating fisheries subsidies is actually not an unprecedented action, and voices have advocated for the prohibition of subsidies, especially of subsidies

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[112] In 2009, the Guardian reported that the first IUCN red list of oceanic sharks had named 64 species as endangered. See available at: <https://www.theguardian.com/science/2009/jun/25/sharks-extinction-iucn-red-list> accessed 8 January 2019. As for IUCN Red List, see available at: <http://www.iucnredlist.org> accessed 8 January 2019.

[113] Young, (n67), 5–6.

[114] U Rashid Sumaila, Vicky Lam, Frederic Le Manach, Wilf Swartz and Daniel Pauly, 'Global Fisheries Subsidies', An Updated Estimate, (2016) *Marine Policy* 189–190.

[115] U Rashid Sumaila, Vicky Lam, Frederic Le Manach, Wilf Swartz and Daniel Pauly, Global Fisheries Subsidies, (2013) *Directorate-General for Internal Policies Policy Department B: Structural and Cohesion Policies* 27.

[116] Oby Ezekwesili, 'Why we need to end fisheries subsidies,' World Economic Forum available at: <https://www.weforum.org/agenda/2015/10/why-we-need-to-end-fisheries-subsidies/> accessed 2nd October 2019.

[117] ibid. Some general examples of subsidies to the fisheries sector include subsidies that target the support of research and development as well as the provision of unemployment insurance of fishermen.

[118] Kura, Revenga, Hoshino and Mock, (n111), 1.

linked to the forms of IUU fishing that frequently result in fisheries depletion.[119] It is widely claimed by researchers that a fundamental change in the way that governments currently employ subsidies to the fisheries sector will be necessary to forestall and reverse fisheries depletion.[120]

Powerful evidence from economic modelling and case studies suggests that subsidies to fishing can constitute incentives for overcapitalisation of the fisheries sector and unsustainable levels of fishing effort.[121] According to the World Bank, not only has fishing effort increased over the last four decades, depleting resources, but global fishing capture productivity has considerably fallen.[122] These trends have created a situation in which enabling an optimal and sustainable state in fishery stocks and returning equilibrium to the fisheries sector would require a 44% reduction in total fishing effort.[123]

Nevertheless, fisheries management policy could, to a certain extent, restrain the effects of overfishing and overcapacity. However, even good policy is rarely enforced effectively and can be undermined by the political tension and pressure exerted by overcapitalised fishing fleets.[124] Reducing or reforming subsidies to the fisheries sector is therefore necessary in order to remove the distorting effects of subsidies policies, which incentivise overfishing and overcapacity.[125]

The link between depleted fishery stocks and the use of fisheries subsidies has also been observed in the APEC. Chapter Four offers a detailed analysis of issues surrounding the adoption of fisheries subsidies in APEC.

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[119] Among the UN's sustainable development goals, SDG 14.6 promotes fisheries sustainability by prohibiting certain forms of fisheries subsidies. The explicit rationale for the prohibition of these subsidies is that they contribute to overcapacity, overfishing, and illegal, unreported and unregulated (IUU) fishing.
[120] Anja Von Moltke, (n91), 1.
[121] ICTSD, 'Advancing Multilateral Trade Negotiations on Fisheries Subsidies' 1.
[122] World Bank, 'The Sunken Billions Revisited: Progress and Challenges in Global Marine Fisheries' (2017) Washington DC, World Bank, Environmental and Sustainable Development Series.
[123] ibid.
[124] Anja Von Moltke, (n91), 40–42.
[125] World Bank, The Sunken Billions Revisited: Progress and Challenges in Global Marine Fisheries, Washington DC, World Bank, Environmental and Sustainable Development series (2017).

3.5 Conclusions

Depletion of fish stocks is the most critical problem confronting the fisheries sector in the APEC, as other problems tend to ramify from the phenomenon of depletion, such as increased ecological costs which are the costs of the environmental burden of a product with accordance with the underpinning of prevention of that burden and real social welfare losses. Across the APEC region, such costs must be weighed against the economic benefits and material gains resulting from fishery trade liberalisation before the latter can be soundly advised.[126] Altogether, these problems — unsustainable fishing activities resulting from ineffective fisheries management policies — may be adequately characterised by the expression, 'Too many boats chasing too few fish.' The simplicity of this expression belies the complexity of the solutions and the scale of international cooperation required to combat the issue it describes. Certainly, however, and as this chapter has tried to emphasise, the problem of the depletion of fish cannot be resolved without paying sufficient attention to subsidies, which are one of the problem's most critical contributing factors. Any lasting solution will also have to account for increased fishery trade and production and its possible adverse effects on fish.

As the observations and research of this chapter attests, in order to permit sustainable fishery supply in the APEC it will be vital to carry out a deeper review of fishery management and policy. It is to such a policy review that the larger part of the following section will be dedicated.

4. A Review of Fishery Management Policies in APEC: Responding to the Crisis and Causes of the Depletion of Fish

Fishery use intrinsically represents a central point of contact between humanity and nature through which they are mutually interwoven, which suggests the key importance that must be assigned to fishery sustainability in considering improved management of the fisheries sector.[127] Fisheries resources and their movement are universal, meaning that fish do not tend to stay in one fixed

[126] Institute for International Economics, (n64), 33.
[127] FAO, n1, 6. 'Sustainable fisheries: International Trade, Trade Policy and Regulatory Issues' (2016) UNCTAD 1.

habitat but instead have a tendency to cross between different regulatory bodies' areas of influence and their regimes of concern. Therefore, the tragedy of depleted fish stocks emerges in various stages, in various locations: it can happen at the national level, where deficient fisheries management is noticeable, or can sometimes take place in areas of open access on the high seas, which are beyond any individual states' territory and jurisdiction.[128] Hence, an effective fisheries management policy that considers the transboundary nature of fisheries is essential for fisheries sustainability.

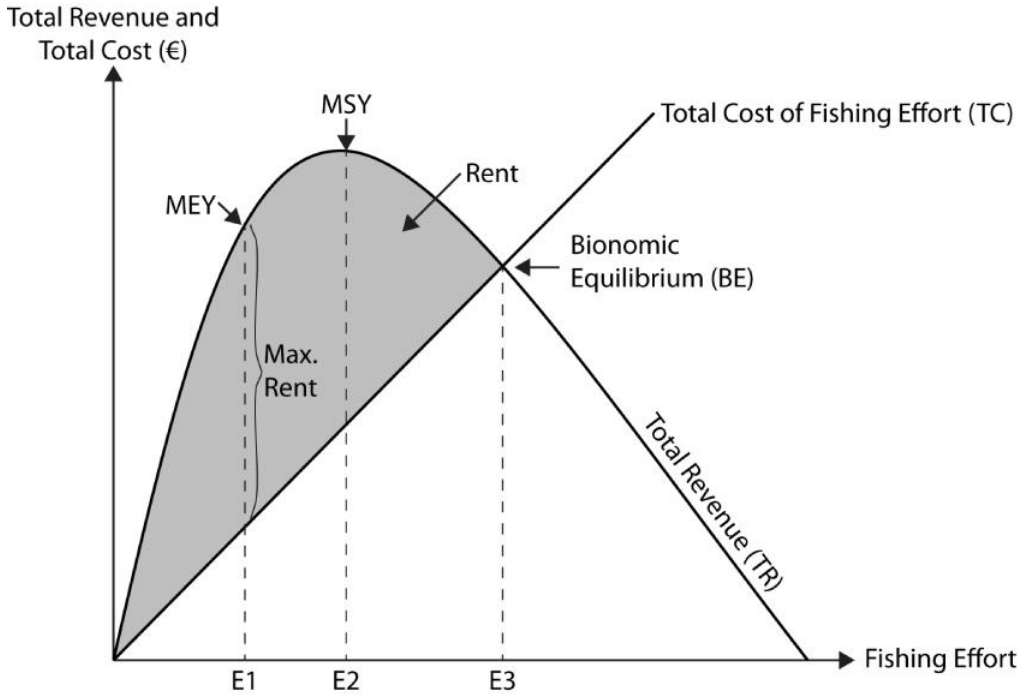
Fishery management attempts to contain the impact of the inefficiency of the international fish trade on fisheries. Well-functioning fishery management efforts, theoretically, will successfully eliminate the commons problem for fisheries.[129] Most fisheries economists are convinced that the pivotal cause of inefficiency in the international trade of fisheries is that fishermen have a lack of secure property rights to the resource. In this analysis, the starting point for explaining and understanding how efficiency might be improved by property rights is H Scott Gordon's analysis. He argues that fisheries overexploitation resulted from a principally economic phenomenon, namely by the open access to natural resources since no fisherman is excluded from the general terms of access to fisheries resources. Thus, fishermen will consume the resource until average revenues equal average cost, instead of until marginal revenue equals marginal cost.[130] Following the assumptions of the Gordon-Schaefer Bioeconomic Model,[131] which was used as a basis for constructing Figure 4 below, the total revenue curve corresponds to fish stock of a fishery; it is an inverted U-shaped curve since a growth in fishing effort beyond a certain level does not enable the stock sufficient time to replenish itself and further leads to a situation where the final fish is caught. As the stock falls to zero, the potential revenue is equal to zero as well.

To counter this potential outcome, the Gordon-Schaefer Bioeconomic Model

[128] World Economic Forum, (n95).
[129] Asche and Smith, (n79), 24.
[130] H Scott Gordon, 'Economic Theory of a Common Property Resource: The Fisheries' (1954) 62 Journal of Political Economy 130.
[131] Gordon developed this bioeconomic model based on Schaefer's model. The underlying assumptions of the model are that prices are fixed and production costs constantly increase with the increase of fishing effort. ibid, 124–142.

introduces the concepts of 'maximum sustainable yield' (MSY) and 'maximum net economic yield' (MEY), both of which would ensure the optimum utilisation of fishery resources.[132] The point at which total cost equals total revenue is commonly seen as the bioeconomic equilibrium, at which both fishery resource rents and the fisheries sector's business profits have been completely dissolved.

Figure 4 The Gordon-Schaefer Bioeconomic Model



Source: adopted from U Rashid Sumaila, Vicky Lam, Frederic Le Manach, Wilf Swartz and Daniel Pauly, 'Global Fisheries Subsidies', (2013) *Directorate-General for Internal Policies Policy Department B: Structural and Cohesion Policies* 23.

To achieve sustainable fisheries, there have been and continues to be regional efforts of APEC towards marine conservation; however, such efforts are lacking in fundamental academic research, in overall volume of conservation activity, and in the effectiveness of their results.[133] Research points out that there had been 'little or no coordinated regional effort to identify knowledge gaps and

[132] Gordon, (n130).
[133] Aldo Chircop, 'Regional Cooperation in Marine Environmental Protection in the South China Sea: A Reflection on New Directions for Marine Conservation' Ocean Development & International Law 337.

provide useful solutions' in research on marine biodiversity.[134] Furthermore, the APEC region has not specified any one dedicated marine environmental regime that can coordinate its efforts. Instead, various regimes exist for particular purposes.[135]

Contemporary theories of the open-access nature of fishery resources and fisheries management focus on recent developments and attempt to account for the inseparable link between the current fish catch and future levels of fishery stocks.[136] One leading theory of this group, the bioeconomic theory of optimal and functioning fisheries management, originates from an analysis performed by Anthony Scott, published one year after Gordon's theory was established in 1954.[137] His research, in combination with additional studies, suggests that any estimation of how modern fisheries management policy evolves and functions requires well-designed modelling of the rules of the fisheries sector. Moreover, fishery rules cannot be viewed as or reduced to simple production barriers; by contrast, they must be considered to emerge out of intentional institutional behaviour.[138] Rules in most of the fisheries sector should follow a two-stage process in their development, these sources recommend. First, target harvests should be determined as a result of a politico-economic process that reflects and considers the notion of safe or sustainable biomass levels. Second, policy tools must be prescribed that will support efforts to meet the target.[139]

However, the fact remains that fisheries lying within exclusive economic zones (EEZs) are not managed at a satisfactory level, either, resulting in some debate as to whether or not fisheries management is a successful strategy in achieving fishery sustainability. Primarily, the necessity remains that EEZs develop

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[134] Peter K L Ng and K S Tan, 'The State of Marine Biodiversity in the South China Sea', *Raffles Bulletin of Zoology* (2000).
[135] The ocean is an essential conduit for 90% of global trade and connects markets, people, and livelihoods, as well as offering ecosystem services in the APEC region. Chircop, (n133), 343–344. Further details of the RFMOs in the APEC region will be discussed in Chapter 3, whose subject will be the analysis of international fisheries regulations.
[136] Asche and Smith, (n79), 17.
[137] Anthony Scott, 'The Fishery: The Objectives of Sole Ownership' (1955) 63(2) Journal of Political Economy 116–24.
[138] Frances R.Homans and James E Wilen, 'A Model of Regulated Open Access Resource Use' (1997) 5 Journal of Environmental Economics and Management 32.
[139] ibid.

improved fisheries management policies connected to the open-access nature of the ocean and fisheries resources as well as to the liberalisation of trade in fish and fishery products.[140] In addition, the development of suitable responses to depletion, and conversations about conserving marine biodiversity more generally, are further afflicted by a tendency of the voices involved to confound efficiency and equity issues. Wealthier, and more developed countries attach higher value to these public goods than more impoverished and developing countries and thus are more willing to abandon extractive use or pay a higher price for fisheries products.[141] The only solution, then, seems to be to enable better frameworks for international cooperation, such as those achieved by an RFMO. Regional fisheries management organisations (RFMOs) can play an essential role in the conservation of marine biodiversity,[142] and present researchers claim that this distinguished institutional design may prove crucial in ensuring the economic efficiency of international agreements in managing marine resources.

The necessity to manage and understand the interactions and the accumulative effects of multiple perspectives on economic activities, fishery sustainability, and the socio-economic development of the fisheries sector has been identified as one of the most critical questions in today's marine-related research.[143] Strategies and policies for fisheries conservation and management are often developed and implemented by a wide variety of stakeholders; thus, cumulative impacts cannot adequately be managed in isolation. Hence, comprehensive and integrated fisheries management is required.[144]

A fresh concept, the marine protected area (MPA), has gained attention among researchers.[145] The MPA is a widely emerging tool and form of classification adopted to protect the ocean, numerous examples of which can now be found

[140] Asche and Smith, (n79), 29.
[141] ibid.
[142] ibid, 30.
[143] Vierro, (n70).
[144] ibid.
[145] For example, Stephen C Jameson, Mark H Tupper, Jonathon M Ridley, 'The Three Screen Doors: Can Marine "Protected" Areas Be Effective?', Marine Pollution Bulletin, 44(11) November 2002, 1177–1183; M Tundi Agardy, Advances in marine conservation: the role of marine protected areas, 9(7) *Trends in Ecology and Evolution*, 1994, 267–270.

across the APEC region.[146] Some confusion and debate still surrounds the precise meaning of the MPA. One meaning of MPAs is areas closed to all kinds of human activities, while the other interpretation is of particular areas set aside for recreation (for example, national parks) or to sustain commercial use (for example, fisheries management areas).[147] These are, overall, merely a few examples of the various types of MPAs. In reality, in the US, for instance, the MPA's concept may be considered to encompass a variety of conservation and management methods.[148] MPAs expand a wide range of habitats, including coastal areas, inter-tidal zones, the open oceans, estuaries and the Great Lakes. In addition, they vary widely in legal authority, agency, management approach, level of protection, purpose, and the restrictions they place on human beings' use.[149] Despite the innovations of the MPA concept, some member economies in APEC lack sufficient budgets to create them, even though these economies may formally recognise the necessity for MPAs in their official agendas. For the most part, the establishment of MPAs remains a new direction for action, one whose unique manner of protecting the marine environment, including fishery stocks, introduces new forms of response to the depletion of fisheries resources.

Another promising development is the growing complexity of theory and action surrounding integrated 'ecosystem approaches'.[150] A certain number of innovative fishery management strategies present a comprehensive view of the connections between every living creatures and their environment. In doing so, they express what has been termed an 'ecosystem approach to fisheries'.[151] The definition of the approach is an extended conventional fisheries management with the recognition of more explicit interdependence between human beings and ecosystem and the demand to maintain ecosystems productivity for many generations. Hence, examples of the ecosystem

[146] Chircop, (n133).
[147] ibid.
[148] Chircop, (n133).
[149] What is a marine protected area?' (National Ocean Service, US Department of Commerce) available at: <https://oceanservice.noaa.gov/facts/mpa.html> accessed 8 January 2019.
[150] One FAO's publication dedicated to introducing theory and practice of the ecosystem approach. See SM Garcia, A Zerbi, C Aliaume, T Do Chi, G Lasserre, 'The Ecosystem Approach to fisheries. Issues, terminology, principles, institutional foundations, implementation and outlook' (2003) FAO Fisheries Technical Paper No 443.
[151] Vierro, (n70).

approaches consist of critical natural habitats conservation, pollution reduction and degradation, endangered species protection and decreasing and minimising waste.[152] In addition, many instruments and strategies can be utilised to apply an ecosystem approach to the ocean governance, including bioregional classification, consistent systems of marine managed or protected areas, ocean zoning, and fisheries management. Both environmental impact assessments and strategic environmental assessments guarantee that proposed marine activities do not lead to undue environmental degradation.[153]

New actions must also contend with the effects of rapidly developing fishing technologies on the fisheries sector. The fact that so many fleets currently fish for the enormous majority of the global fish stocks indicates that too much capturing power already exists or little further catching power can be added without increasing the threat to fishery sustainability.[154] Technological advancement, however, has little regard for this fact. Enlarged fleets, giant factory vessels, and fish-tracking sonar that can capture and process in all kinds of waters mean that fish can be easily targeted with greater accuracy and harvested with unprecedented speed. The result of new fishing technologies has been a fast depletion of crucial fish stocks along with severe disruption in, damage to, and abasement of the marine ecosystems in which they live. Meanwhile, the revolution in fishing technology has not been experienced at the same level in every nation in the world. A significant number of fishermen in developing countries still conduct their fishery trade at a smaller scale, use small-size craft and equipment, and consume their fish catch or sell it locally. Additionally, it is worth noting that as ocean catches have diminished. Aquaculture — specifically, the practice of farm raising fish and shellfish — has recently increased over the past years in order to take up the slack in meeting food and income needs in developing countries and the demand for expensive seafood. As a result, fishing today is not just a single activity but is carried out at various scales, including capture by various groups of fishermen with economic returns and differing operating equipment.[155]

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[152] FAO, (n150).
[153] ibid.
[154] Gareth Porter, 'Fisheries Subsidies and Overfishing: Toward a Structured Discussion' UNEP 8.
[155] Kura, Revenga, Hoshino and Mock, (n111), 1.

Nevertheless, small-scale fishing operators and fishermen that are usually ignored in many considerations of the fisheries sector are also a key contributor to fisheries capture. Since developing countries continue to support the modernisation of large-scale and industrial fishing, small-scale fishing is in need for changes in order to respond to the challenges arising from being forced to compete with well-developed fishing technology. Traditionally, small-scale fishing operators and fishermen catch a variety of species of fish merely for domestic consumption, including low-valued and small pelagic species and more valuable and useful demersal species. By contrast, large industrial fishing vessels or fleets of vessels tend to concentrate only on finding and catching the most valuable and profitable species, such as demersal fish that is suitable for export and shrimp.[156] As this kind of fish capture takes large-size industrial fleets close to shore, this often causes direct conflict between large fleets and with small-scale fishers.[157] Such conflicts are becoming increasingly prevalent in the APEC region, with a result of small-scale fishermen gradually losing.[158]

APEC's practices, insofar as it has sought to provide protection via institutional controls to small-scale fishing operators, have involved APEC's high-level officials (in-charge of food security in APEC member economies) moving to protect the interests of small-scale fishermen and fish farmers in order to integrate them into global food supply chains.[159] Fishing in the region is gradually becoming modernised, and industrial fishing fleets are amplifying in their capacities.[160] Hence, the presence of industrial fleets will continue to have an outsized impact on small-scale fishing operators and fishers, though small-scale fishers will at the same time remain major contributors to the marine catch in some member economies in APEC. In Southeast Asia, the majority of fishers

[156] Benoît Horemans, *The state of artisanal fisheries in West Africa in 1997* (1998) IDAF/WP/122.
[157] When massive industrial vessels (particularly trawlers) fish the coastal waters in proximity with shore, they can degrade habitat on the sea bottom and amend the species configuration of coastal ecosystems to a point where the local fish catch seemingly drops steeply. Kura, Revenga, Hoshino and Mock, (n111), 39.
[158] ibid.
[159] Lucy Towers, '10 Ways APEC can Protect Small-Scale Fishermen, Fish Farmers, The Fish Site', available at: <https://thefishsite.com/articles/10-ways-apec-can-protect-smallscale-fishermen-fish-farmers> accessed 8 January 2019.
[160] Kura, Revenga, Hoshino and Mock, (n111), 38.

are small-scale, usually operating in the type of family-run operations with low-technology fishing gear and boats. Their production consists of a significant proportion of the whole regional fish capture. For example, during the period between 1986 and 1997, the combined production of small-scale fishermen annually in Malaysia, the Philippines, Thailand and Taiwan was approximately 1.4 million metric tons or a quarter of the entire marine fisheries production in these countries. In its economic value, the small-scale fishery catch in these four nations was even larger, reaching a point of nearly USD 2 billion in 1997 or more than one-third of the entire value of production in these countries.[161]

To conclude this section, it may suffice to observe that insufficient efforts in the conservation and the management of fisheries resources are among the most severe challenges facing fisheries management policymakers in the APEC. Proper response efforts remain hampered by the pressures both within and external to industry practices discussed in the foregoing material.

5. Conclusions

The analysis carried out by this chapter has found that the current fishery management frameworks in the APEC region require enhancement. Because fish stocks are non-renewable if not well managed, the problem could be large enough to cause damage to the whole of the ecosystem and to the biodiversity of the world's oceans broadly considered.

In addition, because the problems and policy issues mentioned above do not fall within a single international legal regime, it is all the more vital to review fisheries management and policies, especially in relation to fishery trade and subsidies, for fishery sustainability. In the next chapter, this thesis will proceed to delineate and evaluate international fishery regulations provided under the international law of the sea and international environmental law with a view towards fisheries sustainability.

[161] ibid.

Chapter Three
Towards Fishery Sustainability: An Analysis of International Fisheries Regulations

1. Introduction

As addressed in Chapter Two, the fisheries sector in the APEC faces three main problematic areas. The first is the marine problem — perhaps more aptly termed the crisis — of depleted fish stocks, which must be considered together with the causes of the depletion. Second are the inadequacies of the present fisheries management framework for preventing the unsustainable exploitation of fish resources. Finally, the APEC must contend with the use of government subsidies throughout the fisheries sector, which, this thesis has endeavoured to show, directly result in overcapacity, overfishing, and illegal, unreported and unregulated fishing (IUU fishing). In response to the scale of these three co-constitutive problems and the attention they have drawn, international law has instituted a series of provisions to ensure fishery sustainability, and it is with a summary of these that this article will begin.

The international law of the sea remains one of the most effective instruments through which fishery management can be exercised.[1] Fishery management pertaining to the conservation of fish stocks[2] and the use of fishery resources, as well as to the management of fishing practices in the maritime zones,[3] has been negotiated and taken shape in various regulations, forms of governance, and institutional frameworks, culminating in the United Nations Convention on the Law of the Sea (UNCLOS). Parallel to UNCLOS, the Food and Agriculture Organisation (FAO) develops goals to ensure food security that focus on the utilisation of fish and fishery products, regulation of which fishery management is inclusive. Hence, the rules of the FAO are as much a part of the international law of the sea as they are important instruments of fishery management. With

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[1] Margaret Young, *Trading Fish, Saving Fish* (CUP 2011) 3.

[2] The types of fish stocks include straddling and highly migratory fish stocks, anadromous stocks, marine mammals, catadromous species, and sedentary species. See UNCLOS, Article 63–68.

[3] 'The maritime zones' denotes the following: exclusive economic zones (EEZs); internal waters; archipelagic waters; territorial seas; continental shelf areas; and high seas. Chen-Ju Chen, *Fisheries Subsidies under International Law* (Springer 2010) 19. Also see Figure 1 of this chapter for an illustration of the maritime zones.

regard to international environmental law, several multilateral environmental agreements (MEAs) protect endangered species or focus on the conservation of biodiversity, a measure closely connected to that of fishery sustainability. By the admission of the agreements themselves, these international laws seek to govern fisheries management, with interrelated and overlapping provisions and, sometimes, contradictory effects.[4]

This chapter has two primary objectives in its legal review of the regulation of fisheries under these international laws. First, the legal review to follow will offer an overview of international fisheries regulations that is conditioned to the research questions set out by this thesis. Namely, the review will seek to determine whether or not subsidies-related provisions exist under the international law of the sea and international environmental law. As its second objective, this thesis' legal review will try to establish and discuss the key elements of fisheries management and governance as they relate to the APEC's fishery policies and to those of its member economies.

Following the review of the international law of the sea and international environmental law on fisheries, this article will analyse the efficacy of the measures established by these international regimes in resolving the issues with the fisheries sector in APEC.

2. An Overview of the International Law of the Sea

The open-access and common-pool nature of the oceans and seas frequently led to States' disputation in the international law of the sea. This is the reason why the norms and fundamental principles of the international law of the sea can be traced back to Grotius and why his theory of 'the freedom of the sea' continues to underpin them.[5] Crucially for this thesis, the international law of

[4] As Chapter One addresses, this separation of international regimes on fisheries provides a vivid example of the fragmentation of international law. Shigeru Oda further comments that this fragmentation receives special treatment under international law. See Shigeru Oda, 'Fisheries under the United Nations Convention on the Law of the Sea' (1983) 77(4) The American Journal of International Law 750.

[5] See Donald R Rothwell and Tim Stephens, *The International Law of the Sea* (Hart Publishing 2010); Rachael L Johnstone, Book Review of Rothwell and Stephens, (2017) 12 1 Nordicum-Mediterraneum, available at: <https://nome.unak.is/wordpress/volume-12-no-1-2017/book-review-volume-12-no-1-2017/donald-r-rothwell-tim-stephens-international-law-sea-london-bloomsbury-2016-2nd-ed/> accessed 8 January 2019.

the sea is also the primary and most representative regime under international law to govern marine areas as well as fishery resources and their associated issues. Several international treaties and agreements establish the fundamental legal framework of the international law of the sea. UNCLOS, in close company with a number of international agreements, is the principal source for these laws.[6] The FAO and its agreements[7] also fall within the framework of the international law of the sea.

2.1 UNCLOS and its Relevant Implementing Agreements

2.1.1 UNCLOS

The legal foundation for the conservation and management of fisheries resources, as created by UNCLOS, correspond to the established maritime zones and to the types of fish stocks living and appearing (in other words, non-living) in these zones.[8] UNCLOS also sets out the general obligations states have to 'protect and preserve the marine environment'[9] and to participate in international or regional cooperation to 'formulat[e] or elaborat[e] international rules, standards, and recommended practices and procedures' for the achievement of the goal of marine environment protection.[10] A significant number of states are parties to UNCLOS (at present, UNCLOS comprises 168 states). However, there are some notable exceptions, such as the US, which signed the Convention yet did not ratify it.[11] Additionally, it is important to note that the rules of customary international law have influenced UNCLOS; indeed, most of UNCLOS provisions are viewed as codifying customary international

[6] These agreements are the Geneva Convention on the Territorial Sea and Contiguous Zone of 1958, the Geneva Convention on the Continental Shelf of 1958, and the Geneva Convention on the High Seas of 1958. See, generally, William Burke, *The New International Law of Fisheries: UNCLOS 1982 and Beyond* (Clarendon 1994). Also note that UNCLOS did not obtain the obligatory 60 signatures necessary to come into force until 1994. See Melanie King, 'Coastal Communities and the International Fishery Framework' (2008) 1 Sea Grant Law and Policy Journal 16.

[7] The Agreement to Promote Compliance with International Conservation and Management Measures by Fishing Vessels on the High Seas, FAO Code of Conduct for Responsible Fisheries, and The Agreement on Port State Measures to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing.

[8] UNCLOS Preamble.

[9] UNCLOS Article 192.

[10] UNCLOS Article 197.

[11] Pursuant to the Vienna Convention on the Law of Treaties, in the event that a state signs a treaty but does not ratify it, that state must refrain from any acts or implementations that would undermine the purpose and object of the treaty. See Article 18 of the Vienna Convention on the Law of Treaties.

law and the Convention as a means to bind all of its signing parties thereto.[12] For instance, the principle of the freedom of the high seas, embedded in UNCLOS, allows states unrestrictedly to capture fish without regulations on the high seas.[13] Although UNCLOS later amended this principle slightly,[14] it has still been recognised for the customary international law principle as which it originated. Another example is the exploration of conceptual agreements on EEZs, which has come to be considered as much a part of UNCLOS as of customary international law.[15]

What remains of this section will provides an overview of the rights and obligations that are held by states and regulated in the international law of the sea. In doing so, this section will support an understanding of the key concepts and terms used by international fishery regulations and their management framework.

First of all, the definition of the territorial sea and the Exclusive Economic Zones must be recognised as perhaps the single most significant contribution of UNCLOS to fishery management. UNCLOS transformed the legalistic context of fisheries management in supplying innovative definitions for these two maritime areas,[16] which may be described as follows. UNCLOS defines the territorial sea as a state's extension of its sovereignty reaching 12 nautical miles

[12] Alan Boyle, 'Soft Law in International Law-Making' in Malcolm D Evans (ed) *International Law* (4th edn OUP 2014) 126–127. Because of the state practice of *opinio juris*, with which UNCLOS is in accordance, the Convention is subject to customary international law and thus has a binding effect on states parties.

[13] Research has found that this principle may have originated from the principle of freedom of navigation adopted and practised by states to promote maritime trade and commerce between them as far back as 3000 BC. See Yoshifumi Tanaka, *The International Law of the Sea* 383 (2nd edition CUP 2015). As for historical evidence, see RP Anand, *Origin and Development of the Law of the Sea: History of International Law Revisited* (Martinus Nijhoff 1982) 10. Much later, in the 1600s, Grotius referenced this principle to support his principle of 'the freedom of the sea'. Grotius's theory of 'the freedom of the sea' (note that it was not originally developed as a legal precept) points out that 'the sea is common to all, because it is so limitless that it cannot become a possession of any one, and because it is adapted for the use of all'. Quotes from Hugo Grotius, *The Freedom of the Seas, or the Right Which Belongs to the Dutch to Take Part in the East Indian Trade* (first published 1609, Ralph Van Deman Magoffin tr, OUP 1916).

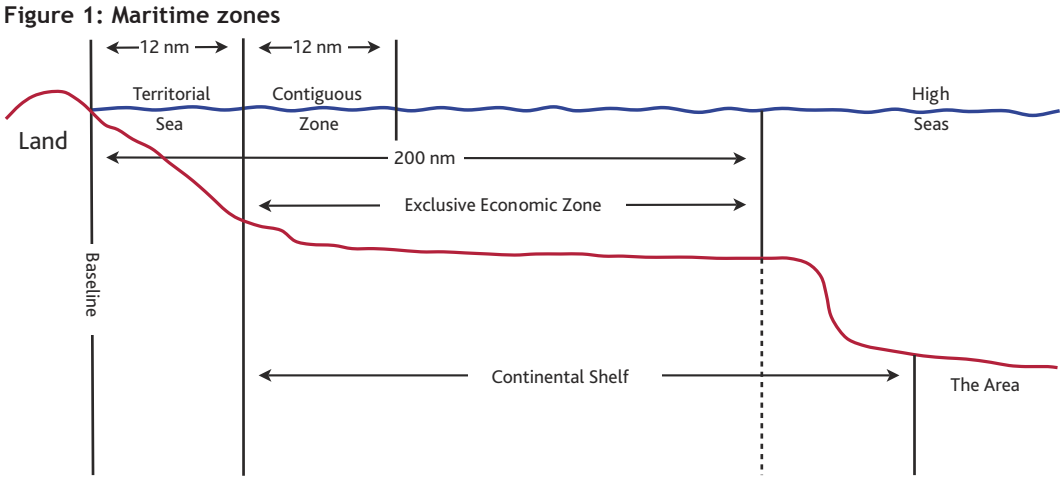
[14] This modification recognises states' right to carry on with their fishing practices in the high seas, yet retains additional duties for the conservation of the species of fisheries in the high seas applying these states. See UNCLOS Article 87.

[15] Continental Shelf (Libyan Arab Jamahiriya/Malta) 1985, ICJ Rep 13, 34.

[16] This summary of the definition of these maritime areas refers to Margaret Young's work. See Margaret Young, 'The "Law of the Sea" Obligations Underpinning Fisheries Subsidies Disciplines' (2017) ICTSD Reference Paper 6–8.

seaward from a state's territorial baseline (see Figure 1 for an illustration).[17] The state is to have sovereignty over its territorial sea,[18] as well as having rights and obligations stipulated by UNCLOS and by other fields of international law. [19] Furthermore, UNCLOS established that states have duties and obligations in the territorial sea in addition to rights. One significant such obligation is that states must grant a permit of innocent passage to other states' fishing vessels.[20] Additionally, UNCLOS installed obligations concerning the marine environment conservation and management [21] that applied to the territorial sea. Therefore, while states could enjoy sovereignty within their territorial sea, including sovereignty over the natural resources contained within the zone, their rights could also be restricted.

Figure 1[22]



Source: Rothwell and Stephens (2016), online edition.

With regard to the Exclusive Economic Zones (EEZs) defined in UNCLOS, the EEZ is defined as an area that extends 200 nautical miles seaward from a state's territorial baseline as shown in Figure 1. While the 200 nautical miles in question is not considered as the territory of the state in the same manner as

[17] UNCLOS Part II: Territorial sea and contiguous zone.
[18] The states also have sovereignty over and rights, and duties pertaining to the seabed, the water column, and the airspace contained within this zone.
[19] UNCLOS Article 2(3). Donald R. Rothwell and Tim Stephens provide examples of areas of international law such as food security, hygiene and, more importantly, human rights. See Donald R. Rothwell and Tim Stephens, *The International Law of the Sea* (2nd edn, Hart 2016)
[20] UNCLOS Article 17.
[21] See especially UNCLOS Articles 192 and 194.
[22] This graph is adapted from Young, (n1). The graph is based on online edition of the work of Rothwell and Stephens. See Rothwell and Stephens, (n5).

is the territorial sea, the zone still provides 'sovereign rights' to coastal states 'for the purposes of exploring and exploiting, conserving and managing the natural resources, whether living or non-living, of the waters suprajacent to the seabed and of the seabed and its subsoil'.[23] Additionally, States are required to have cooperation with international organisations and other states in making sure that the marine resources are optimally utilised, including with States that have habitually had fishing practice in those marine zones.[24] Moreover, it is the obligation of parties to UNCLOS to ensure that they sustainably exploit or use resources within their EEZs.[25]

Maritime states that tended to fish in distant waters were required to seek agreements or permission authorising the stable and continuous exploitation of these marine areas, or otherwise to ban their fishing practices to the remaining high seas.[26] Fish stocks within the EEZs are, in general, more commercially crucial than high sea stocks,[27] although the introduction of the EEZs has seen a growth in high seas fishing by fishing states previously reported as fishing in more distant waters.

In view of the foregoing explanation of the definition of the territorial sea and the EEZs, it may be concluded that UNCLOS powerfully clarifies the rights and obligations held by states, especially those rights and duties that apply to the territorial sea and the EEZs.

A review of the fisheries provisions set out in UNCLOS shows that the regulations cover the protection and preservation of the marine environment, the optimal use of fisheries resources, and the conservation and management

[23] UNCLOS Article 56(1)(a).
[24] UNCLOS Article 61 and 62. Also note that these two provisions, as well as Article 63–4 – the rules relating to highly migratory and straddling fish stocks in the EEZs and high seas were further clarified by UNFSA. Moreover, all these provisions have been interpreted by the dispute settlement mechanism of UNCLOS, including International Tribunal for the Law of the Sea, other tribunals and the International Court of Justice.
[25] Young, (n1), 8.
[26] UNCLOS Part V: Exclusive Economic Zone.
[27] Research found that <0.01 % of the value of commercial fish taxa and quantity is received from harvest taken exclusively in the high seas. See U Rashid Sumaila, Vicky WY Lam, Danna D Miller and others, 'Winners and Losers in a World Where the High Seas Is Closed to Fishing' (2015) 5 Nature, Scientific Reports 8481.

of the living natural resources in the EEZs and in the high seas.[28] The impact of UNCLOS' recognition of the EEZs has been commensurate to its innovativeness, particularly for states that had been keen on and in need of more profitable opportunities lawfully and exclusively to exploit the natural resources alongside their coasts.[29] The EEZ's invention has even helped to ensure the livelihoods of many communities in these states, as what is contained within the EEZ (belonging to a state's jurisdiction) comprises the majority of the global commercially valuable natural resources of fisheries.[30] What is contained in the EEZ together with the rights and obligations stated in UNCLOS have significantly made the zone a great impact to fishery management.

For the reasons described above, fishery regulations concerning the natural resources of maritime zones qualify as a set of UNCLOS provisions designated as form a 'special legal regime'.[31] In a special legal regime, states are encouraged to maximise and enjoy the results of optimal utilization. However, they are also required to take into account the best available scientific information, using the best bioeconomic analyses, to maintain the maximum sustainable yield (MSY),[32] which should additionally consider 'the economic needs of coastal fishing communities and the special requirements of developing states'.[33] UNCLOS requests that states follow the best available scientific information — not the best existing scientific information, whereas Donna Christie perceives a concession to fisheries management by UNCLOS, which believes that the management, in fact, allows States to regulate fishing even in a situation of scientific uncertainty.[34] Other commentaries, given by Donald R Rothwell and Tim Stephens, are further indications of the widespread expectation among academics and observers that the establishment of these

[28] See Articles 61–64 in Part V, Section 2 of Part VII and Part XII of UNCLOS.
[29] For a history of this topic, see Deborah Cass, 'The Quiet Revolution: The Development of the Exclusive Economic Zone and Implications for Foreign Fishing Access in the Pacific' (1987) 16 Melbourne University Law Review 83.
[30] Anja Von Moltke (ed), *Fisheries Subsidies, Sustainable Development and the WTO* (UNEP 2011) 6.
[31] UNCLOS Article 55–75, particularly Article 55 and 57. See Young, (n1), 36.
[32] See the Gordon-Schaefer Bioeconomic Model in Chapter Two for description.
[33] UNCLOS Article 61(3).
[34] Donna Christie, 'It Don't Come EEZ: The Failure and Future of Coastal States Fisheries' 14 Journal of Transnational Law and Policy 10.

maritime areas — composing, in total, one-third of the oceans on the planet — will allow for and even result in better marine resource management.[35]

Nonetheless — and perhaps not surprisingly, due to the considerable amount of valuable and profitable resources within them — conflicts within EEZs between coastal states and other states have not ceased for a long period of time. In the interest of settling such disputes, UNCLOS has made important resolutions in accordance with the principle of equity.[36] However, these conflicts are infamously resistant to settlement through the binding dispute settlement mechanism.[37] Notably, this obligatory system of dispute settlement is acclaimed as a significant part of enforcement armoury of UNCLOS,[38] in which it establishes the International Tribunal for the Law of the Sea together with avenues for obligatory dispute settlement mechanisms under other *ad hoc* tribunals and the International Court of Justice. However, the coastal state's exercise of its discretionary powers within the EEZ regime, including setting out the terms and conditions of its management and conservation regulations and laws, is not subject to this compulsory system without its consent. This thus curtails the ability of states (as well as governance of international law) to address the failures of a coastal state to execute its responsibilities under the EEZ regime.[39] Moreover, any kind of direct institutional support does not exist in UNCLOS for the implementation of its fisheries provisions.[40]

2.1.2 The United Nations Fish Stocks Agreement (UNFSA)

The implementation of UNCLOS is accompanied by (in some circumstances, it relies on) more highly specialised fish-related treaties, such as UNFSA. UNFSA which came into force in 1995, is an implementing agreement on fish stocks[41] that has the important aim of responding to and resolving issues of high seas

[35] Rothwell and Stephens, (n5), Chapter 4.
[36] UNCLOS Article 59.
[37] UNCLOS: Part XV: Settlement of Disputes.
[38] Natalie Klein, *Dispute Settlement in the UN Convention on the Law of the Sea* (CUP 2005) 185.
[39] Richard Barnes, 'The LOSC: An Effective Framework for Domestic Fisheries Conservation?' in David Freestone, Richard Barnes and David Ong (eds), *The Law of the Sea: Progress and Prospects* (OUP 2006) 246.
[40] The UN Division of Ocean Affairs and the Law of the Sea provides assistance and advice for issues relating to the implementation of UNCLOS. However, the Division does not have specific functions in relation to fisheries. Young, (n1), 38.
[41] Fish stocks regulated in UNFSA consist of straddling and highly migratory fish stocks.

fishing that are not appropriate to UNCLOS or that it cannot adequately regulate or bring to a point of settlement. Therefore, in an endeavour to reinforce fisheries management, especially as it relates to high seas fishing as well as to the effectiveness of regional fishery management organisations (RFMOs),[42] UNFSA has emerged as a major supplementary agreement to UNCLOS. Such have been its outcomes and its level of involvement that UNFSA is today considered to be 'a major improvement to the international framework for sustainable fishing'.[43]

UNFSA's objective is to facilitate and enhance the implementation of specific provisions of UNCLOS concerning the management and conservation of straddling fish stocks and highly migratory fish stocks by way of addressing ongoing problems for such fish stocks. Specifically, it establishes minimum international regulatory standards for the management and conservation of highly migratory species and straddling stocks over the long term.[44] For the sake of fair procedure, UNFSA also requires its parties to ensure transparency during the decision-making process and during other activities conducted by the relevant regional fishery management organisations (RFMOs).[45] UNFSA requires intergovernmental cooperation[46] and seeks to improve cooperation between States and the high seas fishing operations affecting its species of concern 'either directly or through appropriate subregional or regional fisheries management organisations or arrangements'.[47] In particular situations, UNFSA requires States fishing or capturing for these species either to become RFMOs' members or to agree to apply the management and conservation measures established by such organisations. As an enforcement mechanism for this requirement, UNFSA only allows those States that have compliance with these requirements to have access to the relevant fisheries resources. The

[42] The concept of RFMOs began in the early XXth century as a result of large and growing competition between States to fish in areas outside of national jurisdiction. This contest had led to the creation of RFMOs. Alternative acronym that is often used for this kind of organisation is RFBs, standing for 'Regional Fishery Bodies'.
[43] Rothwell and Stephens, (n5), Ch 13.III.F.
[44] UNFSA preamble.
[45] UNFSA Article 12(1).
[46] Cooperation involves coastal states and states fishing on the high seas, coordinating them in the adoption of necessary conservation and management measures, in the protection of biodiversity in the marine environment, in the collection and sharing of data on fishing activities, and in undertaking effective monitoring, control, and surveillance. See UNFSA, Article 5.
[47] UNFSA Article 8(1).

reason underlying this specific access is to strengthen UNFSA's legislative objectives to protect particular fisheries resources. UNFSA also offers the application of a precautionary principle together with an approach to the management, conservation, and exploitation of highly migratory and straddling fish stocks.[48] Overall, UNFSA is considered to have been a major impetus of the change occurring within many RFMOs, prompting their efforts to modernise and change their operations in conformance with the unprecedented and evolving international norms promoted in the agreement.

Despite the progress made by UNFSA in the management and conservation of fish stocks in the high seas, international efforts to manage and regulate fishing activities have been undermined by illegal, unreported and unregulated fishing (IUU fishing). Evidence proves that IUU fishing has devastating effects on marine and fishery resources, and it has been estimated to reach a value of more than USD 10 billion annually.[49] For this reason, Margaret Young supports the view that, while UNFSA is equipped with the proper instruments (that is RFMOs) to utilise port state measures to combat IUU fishing, and although it has shown a clear willingness to exercise them, UNFSA's mission to combat IUU fishing must be strengthened lest it begin continually to fall short of its targets. This is particularly significant after the Agreement on Port State Measures (PMSA), which entered into force in June 2016.

2.1.3 An Overview of Regional Fishery Management Organisations (RFMOs) in the APEC Region

Provided that the significance of RFMOs in UNCLOS and UNFSA is accepted as aforementioned, RFMOs could be conceived as part of the legal regimes of the international law of the sea. However, it would be additionally useful to consider how RFMOs may simultaneously function as independent regional regimes. For instance, the General Assembly calls for more states' participation in RFMOs through its resolution.[50] This dual function, as this section will put

[48] UNFSA Article 6.
[49] Fabrizio Meliado, 'Fisheries Management Standards in the WTO Fisheries Subsidies Talks: Learning How to Discipline Environmental PPMs?' (2012) 46 Journal of World Trade 1089.
[50] United Nations, A/RES/65/38 (27 December 2010); A/RES/66/231 (14 December 2011).

forward, would be due to the nature of their normative and institutional basis, issues that have come to be considered purely as the jurisdiction of RFMOs.[51]

Formerly, RFMOs were considered to be forums that allowed states to determine 'who gets access and to how much instead of forums for cooperation on conservation matters.[52] Nevertheless, some voices in legal scholarship now suggest that RFMOs have become critical and significant in facilitating international cooperation for fisheries management and conservation. Still, however, the inability and a lack of efficiency of a number of them effectively to tackle or mitigate the issue of overfishing has left them open to criticism and comments and their proper role in fisheries management a subject of some conjecture. As demonstrated, one of the main factors threatening the sustainability of fisheries resources is overfishing,[53] and overfishing happens when there are excessive levels of harvesting capacity, particularly in areas without well-defined property or user rights such as the high seas.[54] In regulating overfishing, RFMOs have suffered from, *inter alia*, a lack of national cooperation between members, a lack of effective and useful mechanisms of enforcement, and ineffective treaty provisions such as those allowing members to oppose to particular fishery management measures and thus opt out of these provisions. Accordingly, strengthening RFMOs remains a significant challenge in international efforts to promote fisheries sustainability.[55]

Most APEC member economies are parties to the bodies that wield the most important international fisheries instruments. A number of APEC's member economies, such as Brunei Darussalam, Indonesia, China, Malaysia, Philippines, Singapore, Vietnam, and Taiwan, have committed to conserving

[51] Stuart Kaye, *International Fisheries Management* (Springer 2001) 312–313.
[52] M J Peterson, 'International Fisheries Management' in Peter Haas, Robert Keohane and Marc Levy (eds) *Institutions for the Earth: Sources of Effective International Environmental Protection* (MIT Press 1993) 260.
[53] Chih-Hao Hsieh, Christian S Reiss, John R Hunter, John R Beddington, Robert M May and George Sugihara, 'Fishing Elevates Variability in the Abundance of Exploited Species' (2006) 443 Nature 859–862. This study responds to 'alleged uncertainty about whether the decline in fisheries is due to fishing, to environmental change, or to some combination of these effects'.
[54] J M Ward, JE Kirkley, R Metzner and S Pascoe, 'Measuring and Assessing Capacity in Fisheries: 1 Basic Concepts and Management Options' (2004) FAO Fisheries Technical Paper No 433/1.
[55] Amanda Rologas Tsangalis, 'Fisheries Subsidies under the Trans-Pacific Partnership: Towards Positive Outcomes for Global Fisheries Sustainability and Regime Interaction under International Law' (2016) 17(2) Melbourne Journal of International Law 10.

marine environment and ecosystems by employing specific spatial and functional tools provided by those instruments and also to achieving international status for certain protected ocean areas.[56] Nevertheless, there is no dedicated RFMO in the APEC region. Instead, most states are parties to the Asia-Pacific Fishery Commission.[57]

2.1.4 Summary of UNCLOS and UNFSA

The high seas, also called 'marine areas beyond national jurisdiction',[58] along with the principle of the freedom of the sea, pose particular challenges to ocean governance. [59] Although the necessity for integrated and consistent approaches to address and confront a wide variety of threats to the oceans had long been recognised, there remained prior to UNCLOS no well-constructed institutional framework that bears duties for the overall management of marine areas beyond national jurisdiction. Still today, with the exception of UNCLOS, the contemporary international fisheries regulations along with the institutional arrangements supporting them are sectoral.

It was in recognition of this problem that the General Assembly's Resolution 69/292 decided in 2014 to set up a preparatory committee for providing recommendations to the Assembly on drafting an international legally binding instrument, proposed as a draft text under UNCLOS, whose focus would be the conservation of resources and sustainable use and exploitation of marine biodiversity in the marine areas beyond national jurisdiction. It is widely believed that this decision represents a great opportunity to significantly enhance ocean governance.[60]

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[56] Aldo Chircop, 'Regional Cooperation in Marine Environmental Protection in the South China Sea: A Reflection on New Directions for Marine Conservation' (2010) 41(1) Ocean Development and International Law 337.
[57] ibid, 344.
[58] According to Part XI of UNCLOS and a specific implementing agreement, apart from the high seas, there is one additional area beyond national jurisdiction, called 'the Area', meaning the ocean floor and deep seabed.
[59] Chen-Ju Chen shares the same opinion. She argues that problematic high seas fishing practices have presented strong challenges for UNCLOS, even though there are many well-designated fishery management regulations under UNCLOS. Chen, (n 3), 19.
[60] Marjo Vierros, 'Global Marine Governance and Oceans Management for the Achievement of SDG 14,' 1&2 UN Chronicle (2017), available at: <https://unchronicle.un.org/article/global-marine-governance-and-oceans-management-achievement-sdg-14> accessed 8 January 2019.

Nevertheless, the legal regime of the high seas, including for straddling and highly migratory fish stocks, continues to suffer from a lack of institutional support, even with strong dispute settlement procedures in place. RFMOs remain weak and ineffective.[61] A critical shortcoming is that there is no global body with oversight over their operation,[62] identified as a key problem in achieving sustainability in marine areas beyond national jurisdiction.[63]

In conclusion, the norms and institutions of the international law of the sea have generally proved ineffective in achieving fisheries sustainability. UNCLOS' insufficient provisions for fisheries conservation are considered to be the Convention's chief deficiency.[64] Moreover, UNFSA was unsuccessful in fully remedying UNCLOS' problems due to poor implementation by States and RFMOs.[65] These weaknesses have brought new forms of ocean governance under an alternative body of the UN,that is the FAO.

2.2 FAO and its Fish-Related Agreements

Further to UNCLOS and its agreements, the FAO also has fisheries regulations in place that exert efforts to protect fish and fishery products. Global, the FAO is the only institution that compiles fisheries statistics, the Fisheries and Aquaculture Department in the FAO being the associated regulating body.[66] This functionality makes the FAO one of the few organisations able to give a whole picture of global fish stocks and to recommend approaches to improve sustainability of the fishing industry, which provides some sense of its importance. A commonly identified shortcoming of the FAO framework; nonetheless, is that the FAO is reliant for its data on member nations' catch reports; moreover, those countries must rely on individual vessels' reports. Both

[61] FAO, SOFIA (2006) 53–54; FAO SOFIA (2008) 9.
[62] The functions of the UN Division of Ocean Affairs and the Law of the Sea include the provision of advice, studies, research and technical assistance on the implementation of UNCLOS to the UNGA on the law of the sea and ocean affairs. Young, (n1), 38 footnote 40.
[63] Rosemary Rayfuse and Robin Warner, 'Securing a Sustainable Future for the Oceans Beyond National Jurisdiction: The Legal Basis for an Integrated Cross-Sectoral Regime for High Seas Governance for the 21st Century' (2008) 23 The International Journal of Marine and Coastal Law 399.
[64] Patricia Birnie, Alan Boyle and Catherine Redgwell, *International Law and the Environment* 390–392 (3rd edn, OUP 2009).
[65] Committee on Fisheries, COFI, FAO Fisheries Report No 780 (2005) 2, para 13.
[66] Reg Watson and Daniel Pauly, 'Systematic Distortions in World Fisheries Catch Trends' (2001) 414 Nature 29.

the individual vessels and the reporting states have motivations and incentives to underestimate catches as to exceed the quotas limiting them under different and various regional agreements. Although the reporting nation wishes to report honestly and transparently, its fishermen are unlikely to be similarly inclined. This leads to systemic violations of fishery catch quotas, both by dishonest or corrupting fishermen and by complacent nations.[67]

2.2.1 The Agreement to Promote Compliance with International Conservation and Management Measures by Fishing Vessels on the High Seas (The Compliance Agreement)

The Compliance Agreement was approved by the FAO Conference on 24 November 1993. The FAO determined upon this agreement as a measure designed to solve flag-state problems, requiring each state party 'to ensure that fishing vessels entitled to fly its flag do not engage in any activity that undermines the effectiveness of international conservation and management measures'. [68] In ensuring the free exchange of information about the authorisation of vessels, the Compliance Agreement also establishes mechanisms for the exchange.[69]

The Compliance Agreement consists of several requirements. Under the Agreement, each party must permit to fish on the high seas only the vessels bearing its flag that it has authorised to catch fish, and prevent all others from fishing on the high seas must control its vessels authorised to fish on the high seas. Therefore, all applicable rules about ocean are observed; must collect data on its vessels authorised to fish on the high seas and on their catches; must submit to the FAO a list of vessels authorised to fish on the high seas; and must maintain such a list as vessels are added or deleted. If an authorisation to fish is withdrawn for misconduct, the party state must report the specifics of the misconduct and any punitive measures taken to the FAO.

[67] King, (n6), 24.
[68] Compliance Agreement, Article III (a).
[69] Compliance Agreement, Article VI: 'Exchange of Information'.

2.2.2 FAO Code of Conduct for Responsible Fisheries (FAO Code of Conduct)

In 1995, the FAO adopted the FAO Code of Conduct, of which the Compliance Agreement is an integral part. The FAO Code of Conduct is a voluntary code addressed to states, intergovernmental organisations, non-governmental organisations, and 'all those involved in fisheries'.[70] Aiming to suggest responsible fishing practices that will protect fisheries, with a particular focus on the rights of subsistence fishermen, the Code of Conduct stipulates that 'States should appropriately protect the rights of fishermen and fish workers, particularly those engaged in subsistence, small-scale and artisanal fisheries, to a secure and just livelihood, as well as preferential access, where appropriate, to traditional fishing grounds and resources in the waters under their national jurisdiction'.[71]

To further the implementation of the FAO Code of Conduct, members have adopted international plans of action (IPOAs) on specific species and issues.[72] These urge members to adopt national plans for the conservation of seabirds and sharks and for the management of fishing capacity and IUU fishing problems.[73] IPOAs are elaborated within the framework of the FAO Code of Conduct and countries are to implement them, notifying the FAO of their 'national plans of action' on a voluntary basis.

The International Plan of Action for the Management of Fishing Capacity (IPOA-Capacity) includes provisions related to fisheries subsidies. The IPOA-Capacity recognises the potential role of subsidies in causing overcapacity, a problem that, as this dissertation has demonstrated, contributes substantially to overfishing and to the degradation of fisheries resources.[74] According to the IPOA-Capacity, when preparing and implementing national plans, states should assess not just subsidies but all factors for how they may contribute to excess fishing capacity, distinguishing between these factors and those that produce a

[70] FAO Code of Conduct, Annex 2: 'Resolution'.
[71] FAO Code of Conduct Article 6.18.
[72] FAO, Fisheries and Aquaculture Department, About the IPOA-Capacity, available at: <http://www.fao.org/fishery/ipoa-capacity/about/en> accessed 8 January 2019.
[73] FAO, Three International Plans of Action, available at: <http://www.fao.org/3/X3170E/X3170E01.HTM> accessed 8 January 2019.
[74] Para 1, IPOA-Capacity.

positive effect or are neutral. Once a cause of overcapacity has been identified, also it is incumbent upon states to reduce and progressively eliminate its influence, including that of subsidies, insofar as it directly or indirectly contributes to excessive fishing capacity and undermines the sustainability of marine living resources.[75]

Another IPOA adopted and endorsed in the FAO is the IPOA-IUU. The IPOA-IUU sorts IUU fishing into the following categories. First, illegal fishing is defined as fishing activities conducted by vessels of states that are parties to an RFMO but that are operating in violation of its rules, in a state's waters without permission, or in contravention of its laws and regulations.[76] Second, under the IPOA-IUU, unreported fishing is defined to mean fishing activities that have not been reported or that have been misreported to the relevant national authorities or RFMOs.[77] Finally, unregulated fishing is defined as fishing activities operated by vessels without nationality or by vessels flying the flag of states that are not parties to the relevant RFMOs and that therefore consider themselves not bound by their rules.[78]

In accordance with these definitions, the IPOA-IUU 'targets, prevents, deters and eliminates' IUU fishing through a number of principles and strategies.[79] Further to this, the IPOA-IUU provides measures for implementation by calling upon States, in their domestic law if necessary, to avoid granting economic support, including subsidies, to companies, vessels, or persons that are involved in IUU fishing. The IPOA-IUU applies trade restrictions on IUU fishing so as to prevent IUU fishermen from benefiting financially from their illegal activity and to reduce the volume of IUU-caught fish being trans-shipped, landed, and laundered. The FAO collects information and data that might serve as a basis for analysing the contributions made by subsidies to increased IUU fishing.[80] Encouragement from the FAO also rouses developed nations to

[75] Para 25–26 IPOA-Capacity.
[76] Para 3.1 of the IPOA-IUU.
[77] Para 3.2 of the IPOA-IUU.
[78] Para 3.3 of the IPOA-IUU.
[79] These include a phased implementation of national plans of action, conservation, participation and coordination, a comprehensive and integrated approach, transparency and non-discrimination. See para 9, FAO IPOA-IUU.
[80] Para 88 of the IPOA-IUU.

'support training and capacity building and consider providing financial, technical, and other assistance to developing countries, including in particular the least developed amongst them and small island developing States', ensuring equality in countries' capacities to comply with international obligations and combat IUU fishing.[81]

Limitations both structural and external still prevent the FAO from fully occupying the role for which it was initially imagined. While the FAO advocates what are widely considered the best management practices for the fisheries sector, such as the precautionary approach and ecosystem management, the FAO acknowledged in a report in 1994 that '[I]n practice, we do not yet know how to manage ecosystems'.[82] Additionally, the FAO actually has no authority to compel UN member states to adopt any fisheries policies or agreements for ocean governance. [83] Uncertainty therefore pervades FAO policy recommendations on fishery management. For their part, the IPOAs operate against the perception that their voluntary nature and their reliance on a model of unilateral action by fishing countries renders them ineffectual as an international instrument. Despite their innovations, they remain especially unable to provide the legal foundation necessary effectively to regulate fisheries subsidies.[84] Taken together, these facts indicate that the fisheries management governed by the FAO constitutes a wider scope of policies and strategies that, in fact, overlaps with those of other international regimes, such as international environmental law and WTO law.[85]

[81] IPOA-IUU, para 85.
[82] FAO, 'Precautionary approach to fisheries', *FAO Fisheries Technical Paper* No 350, Part 2, 1996. This series of paper was prepared for the technical consultation on the precautionary approach to capture fisheries (including species introductions) held in Lysekil, Sweden, 6–13 June 1995. Available at: <http://www.fao.org/docrep/003/w1238e/w1238e00.htm> accessed 8 January 2019.
[83] FAO Constitution Article 14.
[84] Chen, (n3), 28.
[85] Young, (n1), 46.

2.2.3 The Agreement on Port State Measures to Prevent, Deter and Eliminate Illegal, Unreported, and Unregulated Fishing (Port State Measures Agreement, PSMA)

In an effort to combat IUU fishing through port state measures, the FAO adopted the Agreement on Port State Measures to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing (PSMA) in 2009.

As establishment of the PSMA neared finalisation, prospects mounted that it would emerge to play a key role in regulating IUU fishing beyond the existing framework of the international law of the sea. Indeed, PSMA is a landmark global marine environmental agreement. The first meeting of the parties of the PSMA was held on 5th June 2017, after the agreement's entry into force, at the time of which it drew acclaim as a 'landmark treaty'.[86] According to the preamble of this, the first global treaty ever to combat IUU fishing, the PSMA recognises that 'measures to combat IUU fishing should build on the primary responsibility of flag States and use all available jurisdiction in accordance with international law, including port State measures, coastal State measures, market-related measures, and measures to ensure that nationals do not support or engage in IUU fishing'.[87] The PSMA is also designed 'to prevent, deter and eliminate IUU fishing through the implementation of effective port State measures, and thereby to ensure the long-term conservation and sustainable use of living marine resources and marine ecosystems'.[88] The PSMA makes innovative contributions in combating IUU fishing, as well, in that it stipulates that port States may deny the entry of vessels into its port if the vessel fails to confirm that it has not engaged in IUU fishing or related activities in support of such fishing.[89]

[86] 'Beginning of end for rogue fishing', says UN agency as more States back landmark treaty' (*UN News*, 1 June 2017) available at: <https://news.un.org/en/story/2017/06/558532-beginning-end-rogue-fishing-says-un-agency-more-states-back-landmark-treaty> accessed 8 January 2019; 'Director-General hails landmark treaty as beginning of end for rogue fishing' (*FAO*, 1 June 2017) available at: <http://www.fao.org/news/story/en/item/890013/icode/> accessed 8 January 2019.
[87] PSMA, Preamble, para 3.
[88] PSMA, Article 2.
[89] PSMA, Article 9.

Annex B to the PSMA outlines the ten mandatory procedures that inspectors must follow in conducting vessel inspections whose purpose is to ascertain if the vessel has engaged in IUU fishing activities. Notably, the PSMA also takes into account the special requirements of developing States, which may not be equipped with comparable port facilities or with the capability to implement PSMA measures. To this end, the PSMA allows for the provision of technical and financial assistance to developing countries or other such cooperative arrangements such as are necessary to enable them to join the PSMA. This way, the PSMA rallies countries internationally to innovate and adapt their respective ports for implementation of PSMA measures, providing mechanisms to overcome otherwise insufficient resources.[90]

2.3 Relevance of International Law of the Sea to Negotiations on the Regulation of Fisheries Subsidies at the WTO 11th Ministerial Conference

The interface between the WTO and the FAO on the regulation of fisheries subsidies has been presented and framed by an overlap in membership[91] and differences in their institutional support and resources: fisheries specialisation and robust compliance capabilities.[92] Therefore, it is worth noting that the membership of the UNFSA, is not as extensive as UNCLOS, though broad with 86 ratifications. Approximately half of the WTO membership is party to the UNFSA. Yet, some of the WTO members that have not ratified the UNFSA, such as Peru,[93] have co-authored textual proposals for subsidy rules in the recent Buenos Aires negotiations held in 2017. Of the countries within the groups of the least developed countries and African, Caribbean, and Pacific countries, most have not ratified the UNFSA.

[90] Diane Desierto, First Global Treaty Against Illegal, Unreported, and Unregulated (IUU) Fishing Entry into Force, Blog of the European Journal of International Law, 9 June 2017, available at: <https://www.ejiltalk.org/first-global-treaty-against-illegal-unreported-and-unregulated-iuu-fishing-enters-into-force> accessed 11 March 2019.

[91] Attachment One of this thesis presents a comparing table of the WTO and FAO's membership.

[92] Jon Birger Skjærseth, Olav Schram Stokke and Jørgen Wettestad, 'Soft Law, Hard Law, and Effective Implementation of International Environmental Norms' 6(3) Global Environmental Politics 112.

[93] TN/RL/GEN/187/Rev.2.

Nevertheless, UNFSA's comparatively limited membership has not prevented the WTO from developing influential policy in international fisheries rules. In the 11th WTO ministerial conference, the PSMA model, whereby access to ports by vessels engaged in IUU fishing is denied (as stipulated in Article 9.4 PSMA[94]) has been suggested for more widespread adoption as part of the conventional disciplines on fisheries subsidies.[95] Gregory Messenger points out 'that the exact mechanics of this under WTO law is unclear, in particular considering the obligations under Article V GATT on freedom of transit'.[96] Even so, from a broader perspective, it is interesting to consider how such proposals would tie the WTO into the fisheries management systems in a novel manner. A common thread throughout the proposals in the 11th WTO ministerial conference, for instance, is their dependence on a legal network of fishing obligations (such as the PSMA), as well as their reliance on RFMOs to fulfil member countries' obligations to monitor and evaluate fish stocks. While standard-setting bodies have become integral to the settlement of questions arising in response to technical barriers to trade or to sanitary and phytosanitary measures, reliance on RFMOs and the structures of fisheries management would mean the emergence of a wholly new dynamic between the WTO and other international organisations. Given the limited ability of RFMOs to manage the high seas, and their variable effectiveness more generally, this new dynamic would not be without its challenges. However, in the current situation of limited alternative options, innovations aiming to achieve the good, rather than the best — that is that acknowledge the myriad restraints on action in the sector — may prove most productive.[97]

3. An Overview of International Environmental Law on Fisheries

Though oceans and fishery resources may primarily be governed under the international law of the sea, international environmental law can also be applied to ensure fishery sustainability. Sustainable development of the marine

[94] Article 9.4 PSMA.
[95] See the New Zealand and others proposal, TN/RL/GEN/186, para 3.8.
[96] Gregory Messenger, 'Protecting the Environment at the World Trade Organisation: the Eventual 'Greening' of Trade?', Blog of the European Journal of International Law, 20 June 2017, available at: <https://www.ejiltalk.org/protecting-the-environment-at-the-world-trade-organization-the-eventual-greening-of-trade> accessed 11 March 2019.
[97] ibid.

environment and the protection of fisheries have been a cardinal goal of international environmental law since the Stockholm Declaration 1972.[98] The UN General Assembly Resolution 2398, convened in 1972 with a mandate and supplied in the form of a set of reports from the UN Secretary General, suggests that the UN Conference to focus on 'stimulating and providing guidelines for action by national government and international organisations' and to face emerging environmental issues.[99] After the Stockholm Declaration 1972, the protection of fisheries and the marine environment advanced further through intergovernmental conferences, meetings, state practice, and specific case-law.

The current structure of international environmental law constitutes a large number of multilateral environmental agreements (MEAs). Some treaties have addressed environmental issues such as the protection of biological diversity by deploying a range of MEAs, for examples, the the Convention on Biological Diversity (CBD), the International Treaty on Plant Genetic Resources for Food and the Agriculture and the Convention on the Conservation of Migratory Species of Wild Animals.[100] Other treaties address the over-exploitation of marine resources by focusing on particular species such as whales through the International Whaling Convention 1946.

The first MEA to be discussed here is the Convention on International Trade in Endangered Species (CITES).[101] CITES is the principal international environmental law that makes prohibitions and policy instructions in the trade of fish by way of controlling trade in identified endangered species. CITES was developed in the early 1970s, as is widely known, initially to combat trends in the trade of wildlife and plants, which were threatening certain species exposed to danger. CITES, for example, disciplined the destruction of tigers and elephants by making trade in ivory and game-trophies illegal. CITES is

[98] 1972 Stockholm Conference on the Human Environment, Report of the UN Conference on the Human Environment, UN Doc A/Conf.48/14 (1972), 11 ILM 1416 (Stockholm Report).
[99] Elizabeth DeSombre, *Global Environmental Institutions* (Routledge 2006) 22–23.
[100] Julian Roberts, *Marine Environment Protection and Biodiversity Conservation* (Springer 2010) 32–40.
[101] CITES is developed from a resolution of the members of International Union for Conservation of Nature (IUCN). Note that the IUCN has state and non-state members. Its functions include the compilation of a 'Red List of Threatened Species', on which an increasing number of commercial fish species such as the Golden Line Fish are beginning to appear. See, available at: <http://www.iucnredlist.org> accessed 10 March 2019.

responsible for keeping the list of species that are being depleted at unsustainable levels, including marine species. As a result, CITES is often cited in support of the argument that intergovernmental organisations and non-governmental organisations, instead of States, can be the driving forces of regime formation.[102]

Several of the CITES parties have increasingly moved toward protecting endangered marine species, such as bluefin tuna, sharks, and seahorses, by making proposals for their inclusion on CITES' listings.[103] Nevertheless, the majority of fishing countries do not support this kind of Convention intervention, considering CITES to be an inappropriate instrument to manage and conserve marine species.[104] Some of CITES listings can have implications that can cross legal frameworks, as seen in the case of the International Convention for the Regulation of Whaling (ICRW), for which Article XIV of the CITES carries significance.[105]

The second MEA of concern to this thesis is the CBD.[106] While the CBD was still in the early stages of development, its Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA)[107] recommended making explicit reference to fisheries subsidies and reviewing the role of government subsidies in contributing to overcapacity.[108] However, the Conference of Parties (COP) later decided that the mission of the Convention would be better served by a focus on pollution issues instead of on fisheries issues.[109] Consequently, at the conventional level, there is no explicit provision regulating fisheries subsidies.

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[102] Oran Young, 'The Politics of International Regime Formation: Managing Natural Resources and the Environment' (1989) 43 International Organisation 349, 353–354.
[103] Young, (n1), 7 and 57.
[104] The CITES Secretariat relies on the support of the FAO and on its expertise supporting making proposals for the listing marine species, although this collaboration between the Secretariat and FAO was brought into question by some countries given clear difficulties surrounding the approval of a Memorandum of Understanding between these two intergovernmental organisations. See Young, (n1), 7.
[105] Alexander Gillespie, *Conservation, Biodiversity and International Law* (Edward Elgar 2011) 459.
[106] Roberts, (n100), 32.
[107] Article 25, CBD.
[108] Para 7, the Recommendation I/8 of the SBSTTA.
[109] Annex to Decision II/10 of the COP.

4. Effectiveness of the International Law of the Sea and International Environmental Law on Fisheries Issues

4.1 Subsidies' Law-Making Issues in International Law

Skjærseth, Stokke and Wettestad discovered that, from substantive perspective of international law, it is less difficult to reach agreements on ambitious soft law than on hard law. By contrast, this ease and possibility did not just arise from more lenient domestic processes of evaluation or from lower focuses on the costs of compliance.[110]

Taking soft-law instruments of the FAO as examples, these regulatory instruments have clearly articulated the norm that capacity-enhancing subsidies are not desirable. In other words, these regulatory instruments are explicit on the undesirability of subsidies that produce overcapacity.[111] For example, the 1995 Code of Conduct on Responsible Fisheries encourages States to ensure that 'excess fishing capacity is avoided and […] the economic conditions under which fishing industries operate promote responsible fisheries'. The FAO instruments have thus strengthened negotiators and their means to favour a renegotiation of fishery subsidy discipline in the WTO.[112] In addition, incorporation of this FAO soft-law norm integrating into WTO's hard law might strengthen its implementation and would largely solve fishery depletion problem.[113] Nevertheless, only a finite batch of indirect or direct governmental financial transfer to the fisheries sector is expressly stipulated under WTO rules. Moreover, conceptual unclarity implies a poor flow of information on the extent, nature and objective of subsidies. Among the reasons for this difference is that FAO norms have been largely hammered out by fisheries diplomats in the context of growing resource management problems, whereas impacts on fair trade have pre-dominated in the WTO.[114]

4.2 Effectiveness Assessment

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[110] Skjærseth, Stokke and Wettestad, (n 92), 115.
[111] ibid.
[112] Skjærseth, Stokke and Wettestad, (n92), 112.
[113] ibid.
[114] Olan Shrem Stokke and Claire Coffey, 'Institutional Interplay and Responsible Fisheries: Combating Subsidies, Developing Precaution', in Sebastian Oberthür and Thomas Gehring (eds), Institutional Interaction in Global Environmental Governance: Synergy and Conflicting Among International and EU Policies (MIT Press 2006).

Effectiveness of international environmental law has long been a matter of concern causing commentators to focus on various aspects of normative design and implementation.[115] Chambers notably focuses on the robustness of environmental treaty regimes and notes that many have 'built-in […] scientific mechanisms or effectiveness review systems' as well as 'additional built-in systems that allow treaty renegotiation [to] take on deeper commitments'.[116] Observations offered by Leary and Pisupati also comment that the complex interlinkages between international environmental law and other fields, such as international trade law, worrying that traditionally, '[f]ailure to see these interlinkages has also undermined the effectiveness of international law'.[117] Leary and Pisupati express concern that 'the effectiveness of international environmental law […] will also be partly dependent on us breaking out of the pernicious influence of the pervasive concept of State sovereignty in international law', and warn that rigid adherence to traditional understandings of the sources and processes of the formation of law in this field 'is to deny the reality that a range of non-state actors now shape world affairs and responses to the major global environmental challenges of our times'.[118] Thus, thinkers concerned with the problem of effectiveness appear to forecast shifting law-making patterns in international environmental law.[119]

The preceding review of the international law of the sea and international environmental law pertaining to fishery regulations set in Sections 2 and 3 indicates that this legal regime suffers from clear weaknesses. Moreover, while this legal regime remains in this state, unsustainable fishing practices are likely to have more dramatic impacts on fisheries that will become increasingly

[115] See for example, Peter H Sands (ed), *The Effectiveness of International Environmental Agreement* (Grotius 1992); Daniel Bodansky, *The Art and Craft of International Environmental* Law (Harvard University Press 2010); Elli Louka, *International Environmental Law: Fairness, Effectiveness and World Order* (Cambridge University Press 2006); Jürg Vollenweider, 'The effectiveness of international environmental agreements' (2013) 13(3) International Environmental Agreements: Politics, Law and Economics 343–367.

[116] W B Chambers, *Interlinkages and the Effectiveness of Multilateral Environmental Agreements* (UNU Press 2008) 128–129.

[117] David Kenneth Leary, Balakrishna Pisupati, The Future of International Environmental Law (UNU Press 2010) 8.

[118] ibid, 9–10; Edith Brown Weiss, 'International Law in a Kaleidoscopic World' (2011) Asian Journal of International Law 21–32.

[119] Owen Mc Intyre, 'Changing Patterns of International Environmental Law-Making: Addressing Normative Ineffectiveness', 189, in Sandrine Maljean-Dubois (ed) *The Effectiveness of Environmental Law* (Intersentia 2018).

difficult to counteract. Issues surrounding fisheries subsidies are especially critical, and yet the international law of the sea and international environmental law on fisheries have limited effectiveness in the regulation of fisheries subsidies.

Margaret Young claims that the current legal environment, in which more than one international regime is responsible for ensuring fishery sustainability, has the following unique effects. First, she points to the growing multilateral effort to discipline fisheries subsidies that have harmful environmental effects. Second of her claims is the decision by participating States to restrict trade in certain endangered marine species through CITES. Finally, Young names the use of unilateral trade measures for the preservation of marine species.[120] Though, as Young suggests, increasing interrelatedness and coordination between international regimes has provided distinct benefits, the overview provided above of the international law of the sea, international environmental law, and the impacts each has on the regulation of fisheries has also suggested that these international legal regimes have weaknesses that hinder efforts to achieve fishery sustainability. These vulnerabilities imply that other legal regimes under international law might be in similar need of an analysis that accounts for how their current structures and conventions may place the goal of fishery sustainability further from reach.

In addition to its voluntary nature and obvious weakness, international law of the sea and international environmental law on fisheries function with limits for the goal of fishery sustainability in the APEC region. The principal factor leading to this finite effectiveness is the issue of States' compliance with these regimes in the practice of the international law of the sea and international environmental law on fisheries.

According to *pacta sunt servanda*, signing parties are obliged to comply with international treaties by transferring these international treaties to domestic laws and regulations. Results of successful transfer shall lead to good fishery management. However, the transferring process takes a long time in some

[120] Young, (n1), 5–6.

countries with no ratification of new regulations in the end. Additionally, in dealing with disputes, the practice of international law of the sea would face two particular issues: treaties do not produce rights and obligations to bind the third states as well as the limits of international law. Thus, international law of the sea and international environmental law on fisheries have limited effectiveness.

Besides, concerning the function of dispute settlement mechanism under the international law of the sea, disputes within states' EEZs are not subject to the mechanism without the consent. Therefore, this means that while most disputes take place in the EEZs, the effect of international law of the sea on resolving disputes is not widely convinced.

5. Conclusions

International fisheries regulations, as the primary regime of ocean governance and conservation and management of fishery resources, have contributed to fishery sustainability through its series of designated rules, such as the rights and obligations within the maritime zones and definition of fishing activities, including IUU fishing. With respect to the role of RFMOs, the organisations have been challenged for its non-binding effects on any third States.[121] After research, in an agreement with previous analysis, this thesis argues that to resolve fisheries issues in APEC, the effect of current international fisheries regulations is finite, not only because of the voluntary nature of these regulations, but also in terms of practice of the regulations, States in the APEC do not show good compliance with the law.

[121] WTO Doc, Committee on Trade and Environment, Communication from the Secretariat of the International Commission for the Conservation of Atlantic Tunas, WT/CTE/W/87(16 July 1998). Note by the Secretariat, Existing form of Cooperation and Information Exchange between UNEP and the WTO, Revision, TN/TE/S/2/Rev.2, 4 (16 January 2007).

Chapter Four

An Analysis of Issues Surrounding Subsidies to the Fisheries Sector in the APEC

1. An Overview of Subsidies in the Fisheries Sector in the APEC

Research points out the fact that it is a hard and politically complex and sensitive attempt to classify fisheries subsidies.[1] Nevertheless, according to the APEC's 2000 report, subsidies could amount to at least a quarter of the value of revenues in the fisheries sector.[2] Japan, the US, China and South Korea contribute to 70% of global fisheries subsidies. These transfers leave thousands of fishing-dependent communities struggling to compete with subsidised rivals and threaten the food security of millions of people as industrial fleets from distant areas deplete their oceanic stocks.[3] In general, compared to APEC's industrialised economies, APEC's developing economies grant a larger percentage of subsidies to capacity-enhancing activities, except for subsidies aimed toward the development of and support to fisheries and the modernisation of ports.[4]

According to the APEC's 2000 study, there are three dimensions that are considered when categorising subsidies to the fisheries sector in APEC.[5]

The first dimension concerns modalities which mean mechanisms of subsidies in the fisheries sector. In other words, the dimension of modalities for categorising fisheries subsidies refers to how the subsidies operate.[6]

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[1] Margaret Young, 'Energy Transitions and Trade Law: Lessons from the Reform of Fisheries Subsidies', Melbourne Legal Studies Research Paper, 3–6.
[2] 'APEC Study into the Nature and Extent of Subsidies in the Fisheries Sector of APEC Member Economies' (2000) 11.
[3] Oby Ezekwesili, 'Why we need to end fisheries subsidies,' World Economic Forum, available at: <https://www.weforum.org/agenda/2015/10/why-we-need-to-end-fisheries-subsidies/> accessed 8 January 2019.
[4] Huani Zhu and Carlos Kuriyama, 'Trade of Fisheries Products and Fisheries Subsidies in APEC' (2017) 16 Policy Brief.
[5] APEC Study, (n 2), 8–9.
[6] ibid.

The below is a list of modalities, adapted from the 2000 study, classifies subsidies into six categories as follows:
(i) Direct assistance to fishers and fisheries workers;
(ii) Lending support programmes;
(iii) Tax preferences and insurance support programmes;
(iv) Capital and infrastructure support programmes;
(v) Marketing and price support programmes; and
(vi) Fisheries management and conservation programmes.

The second dimension concerns applications which refer to distinctions in the place in which the programme or subsidy is operated. A list of application areas, adapted from the APEC's study, is as follows:
(i) Capture fisheries (naturally available fish biomass, taken from the seas);
(ii) Aquaculture (fish grown through an artificial process); and
(iii) Fish processing (the transformation of any fish into food products).

Finally, the third and last group of categories classifies fisheries subsidies according the scale of subsidies. These categories make distinctions between small scale subsidies, referring to programmes with funding allotments less than USD 10 million, and large-scale subsidies, referring to programmes with funding allotments larger than USD 10 million.

In addition to the six modalities, three application areas, and two scales that are discussed in the APEC's study, as described above, there is one more categorisation of fisheries subsidies in APEC. Table 3 shows the different types of subsidy as divided by the levels of intensity according to which the APEC study discerns them, intensity being represented by the ratio of total subsidies over the total landed value of fish caught by APEC member economies.

The table shows three types of fisheries subsidies. First, beneficial subsidies cover subsidies for fisheries management, fishery research and development, and the maintenance of marine protected areas. Second, capacity-enhancing subsidies include fuel subsidies, port construction and renovation, boat modernisation, tax exemption, fishing access agreements, marketing support and storage infrastructure, and fishery development and support. Last,

ambiguous subsidies are fishery assistance, vessel buyback and rural communities development.[7]

Table 3: Categories of Fisheries Subsidies in Member Economies in the APEC

% of landed value	APEC	APEC-industrialised economies	APEC-developing economies
Overall	28.8%	39.7%	23.5%
Beneficial	9.7%	17.7%	5.8%
Capacity-enhancing	15.2%	14.4%	15.6%
Ambiguous	3.9%	7.6%	2.1%

2. An Analysis of Issues Surrounding Subsidies to the Fisheries Sector in APEC

Subsidies play an important role in the fisheries sector, as they can allow fishermen to pursue fish for greater distances, across larger areas and for longer periods of time, sometimes straining fish populations beyond the limits necessary to maintain healthy population levels. The positive effects of fisheries subsidies include the fact that some subsidies are used to improve fisheries management and are hence able to enhance fisheries sustainability to a certain extent. Not all subsidies are necessarily harmful for fishery resources as such. Nevertheless, the majority of these payments go to industrial fisheries where they are used to defray costs for fuel, new gear, and vessel construction, among other things.

Two main arguments exist in relation to fisheries subsidies and their environmental impact. The first argument claims that subsidies reduce cost, thereby increasing effort in fisheries.[8] As most fisheries operate on the

[7] These categories of fisheries subsidies are a summarised result of three pieces of work written by Sumaila and others. See U R Sumaila, L The, R Watson, P Tyedmers and D Pauly (2008), 'Fuel Prices, Subsidies, Overcapacity, and Resource Sustainability' (2008) 65 ICES Journal of Marine Science 832–840; U R Sumaila, A Khan, A Dyck, R Watson, G Munro, P Tyedmers and D Pauly, A Bottom-up Re-estimation of Global Fisheries Subsidies' (2010) 12 Journal of Bioeconomies 201–225; U R Sumaila, V Lam, F Le Manach, W Swartz and D Pauly (2013), *Global Fisheries Subsidies*, European Parliament.

[8] Yutaro Sakai, Nobuyuki YagiUssif and Rashid Sumaila, 'Fishery Subsidies: The Interaction

backward-bending part of the supply schedule, this leads to more overfishing than in an open-access equilibrium. Hence, the subsidy is a problem because it reduces fish stocks to lower levels than without the subsidy and possibly to lower levels than the open access equilibrium. The second argument claims that subsidies might give fishermen an unfair competitive advantage[9] and should, therefore, be abolished.[10] As long as most fish stocks are over exploited or entirely exploited, increased effort will lead to lower landings in the long run and higher prices because of the backward-bending supply schedule. Accordingly, the subsidy will in most cases improve the position of competitors on the market.[11]

The following subdivision within this section analyses additional issues surrounding fisheries subsidies, consisting first of a discussion on definition of fisheries subsidies and secondarily of an exploration of their effects. The third component of the following section will examine the political-economic issues that underlie fisheries subsidies policy.

2.1 Defining and Categorising Fisheries Subsidies: Various Discussions at International Organisations

Intergovernmental organisations have adopted various positions on subsidies' linkage to fish depletion. Policies that have the aim of increasing fisheries subsidies have led to significant demand for analytical work that can underpin international debate and negotiations. Apart from the APEC's report, some intergovernmental organisations such as OECD, the FAO, and the UNEP have sought improved forms of definition and categorisation for fisheries subsidies. In addition, the World Bank, the UNEP, the FAO, the WWF, and OECD have made attempts to quantify fisheries subsidies for the purposes of proper management.[12] Over time, each has differentiated itself from the others in its focus and priorities. At present, however, none of the categories created by international organisations or by States have been determined to be legally

Between Science and Policy' (2019) 85(3) Fisheries Science 439–447.

[9] Chen-Ju Chen, *Fisheries Subsidies under International Law* (Springer 2010) 1.

[10] Note that this latter argument is of limited relevance to this thesis.

[11] Frank Asche and Martin D Smith, 'Trade and Fisheries: Key Issues for the World Trade Organisation' (2009) Staff Working Paper ERSD-2010-03, 24, available at: <https://www.wto.org/english/res_e/reser_e/ersd201003_e.pdf> accessed 8 January 2019.

[12] Chen, (n9), 5.

binding, except, of course, for those a state has established self-reflexively for controlling its own operations. Further complicating matters, the actual level of fisheries subsidies differs from what governments officially report to international organisations, which presents obvious difficulties for the finalisation of measures for the management of fisheries subsidies.

The following parts in this section describe and include figures for the definitions and categories commonly used by OECD, the FAO and the UNEP.[13]

2.1.1 OECD's Categories of Fisheries Subsidies

In the interest of deepening its analytic work on policy reforms, the OECD Ministerial Council Meeting requested in 2001 that the Secretariat undertake work in order to identify how to overcome obstacles to such instruments, in particular to the better use of market instruments and to the reduction of environmentally harmful subsidies. In 2002, the OECD Ministers renewed their commitment to reduce trade-distorting and environmentally harmful fisheries subsidies.[14]

In 1965, 1971, 1980 and 1993, the OECD Committee for Fisheries created inventories of economic assistance and financial support to the fisheries sector in OECD countries.[15] In 1993, the OECD members held the view that the concept of financial and economic assistance to the fisheries sector should lie in the definition of all government interventions (or lack thereof) that affect and distort the allocation of resources in that country in relation to their efficient resources' allocation. In recent OECD studies,[16] government financial transfers

[13] This thesis refers to the work of Chen-Ju Chen for its discussion of the definition of fisheries subsidies at international organisations. See Chen, (n9), 6–16.
[14] OECD, Final Communiqué, OECD Council at Ministerial Level, 17 May, Paris, 2001c; OECD, Final Communiqué, OECD Council at Ministerial Level, 16 May, Paris, 2002.
[15] Anthony Cox and Carl-Christian Schmidt, 'Subsidies in the OECD Fisheries Sector: A Review of Recent Analysis and Future Directions' 1, available at: < http://www.oecd.org/greengrowth/fisheries/2507604.pdf> accessed on 9 March 2019.
[16] The Committee recently undertook a more systematic effort to define and measure government financial transfers (GFTs) to the fisheries sectors in member countries. As part of a three-year study, entitled *Transition to Responsible Fisheries*, the Committee examined GFTs and their impact on resource sustainability. A central feature of the study was the development of a classification system for GFTs and the collection of detailed information on GFTs for 1996 and 1997. Following the publication of the *Transition to Responsible Fisheries* study, the Committee decided to continue to collect GFT data on an annual basis as part of the regular statistical reporting undertaken by member countries. In addition, in following up the *Transition*

(GFTs), whether or not they are from local, regional, or central governments' intervention, are defined as the monetary value constituents of interventions associated with fishery policies. In general, a subsidy is an outcome of a governmental action that confers financial benefits and economic assistance to consumers or producers as to lower their costs or support their income. OECD analysts working on subsidies to the fisheries sectors have an objective to adopt the GFT as the default measure, regardless of difficulties remaining in assessing a given GFT's size because of the fact that several government transfers are not posted as expenditures or because the amounts involved are relatively low.[17]

All of the above intergovernmental agencies have a diverse membership, with each member country's own perspectives and interests. The diversity of the agencies' views and the idiosyncrasies of their enforcement clearly demonstrate that subsidies are what each member country considers them to be.[18] Although the GFT is the OECD's most important categories, it must be noted that subsidies do take additional forms as the OECD anticipates them. These exceptional subsidies categories consist of: (i) direct payments, (ii) cost-reducing transfers, (iii) general services, (iv) market-price supports, and (v) cost recovery.[19]

2.1.2 FAO's Categories of Fisheries Subsidies

The FAO, for its part, hesitates to affirm the linkage of subsidies with overcapacity and overfishing, though the organisation's official position is nonetheless that, without restrictions on overfishing, the ocean's natural resources will be exhausted. FAO further clarifies in its Guide that there is difficulty to identify and allocate reasonable values to fisheries subsidies from current relevant regulations and a lack of States' intervention. Moreover, it is particularly difficult to identify and define industry values of fisheries subsidies since these value identification process affects the conditions under which firms

to Responsible Fisheries study in the 2000–2002 Programme of Work, the Committee set out to fulfil the ambitious goal of further analysing the linkages between subsidies and other policies having a bearing on markets and trade. See ibid, Cox and Schmidt, 2.

[17] FAO Doc Fisheries Technical Paper No 437, 3.

[18] Chen, (n9), 9.

[19] Chen, (n9), 11.

operate and have no direct link to one distinguished subsidies recipients.[20]

The FAO divides fisheries subsidies into six simple categories: (i) direct government payments to the fisheries sector, (ii) service and indirect financial transfer, (iii) implicit payments to or charges against the fisheries sector, (iv) regulations, (v) general programmes that affect fisheries, and (vi) lack of government intervention into the fisheries sector.[21]

2.1.3 UNEP's Categories of Fisheries Subsidies

UNEP has concluded, as part of a consensus found in their workshop discussion forum, that improperly designed fisheries subsidies are among the direct causes of fisheries overexploitation, particularly in the deficiency of effective fisheries management regimes.[22] UNEP has developed a matrix approach for assessing the impact of fisheries subsidies on fisheries resources under various management and bio-economic conditions.[23] This matrix can serve as an analytical basis for designing new or improved fisheries subsidies regulations that will better protect fisheries resources, although there are difficulties in translating a matrix approach into clear and enforceable rules and obligations due to the very complexity that the matrix approach reveals.[24]

The matrix approach adopted by UNEP is based on a framework with two principal dimensions. The first sorts fisheries into idealised fisheries management regimes, including open access, catch control (with no property rights), and an effective management system (with both catch control and property rights), and the second assigns them to a status of fisheries resources category, a group that includes overcapacity, full capacity, and less-than-full capacity.[25] In accordance with this matrix, UNEP analyses fundamental types of fisheries subsidies under various bio-economic conditions and fisheries management. A list of the subsidies conventions identified by UNEP and

[20] FAO Doc Fisheries Technical Paper No 348, 43–44.
[21] ibid.
[22] UNEP, 'Chairman's Summary, UNEP Fisheries Subsidies Workshop Geneva, 12 February 2001', 4.
[23] UNEP, 'Analysing the Resources Impact of Fisheries Subsidies: A Matrix Approach' (2004) 4–18.
[24] Chen, (n9), 13.
[25] ibid.

UNEP's assessment of their effects on fishery resources is presented in box 1 below.

Box 1[26]

(i)	Subsidies for fisheries infrastructure or facilities are expected to be harmful to fishery resources, subject to exceptions where incentives for stopping overfishing are provided by an effective fishery management system or where clearly the fishery is less than fully exploited.
(ii)	Subsidies for access to foreign waters can be harmful to fishery resources, apart from the fisheries that are covered by the fishery access agreement are clearly under-exploited. Unfortunately, in the real world, bilateral fisheries access agreements have nearly always involved host-country fisheries in which fishery exploitation levels or fishing capacity are already high and/or whose fishery management operations are weak or absent.
(iii)	Subsidies to capital costs are expected to be harmful in all conditions, unless an effective fishery management system is operating in place. These subsidies can be harmful to the fisheries that are even less than fully exploited, where subsidies to capital costs stimulate the modernisation or adoption of much more powerful fishing technologies, hence, potentially resulting in an excess of fleet capacity largely beyond a biologically sustainable level.
(iv)	Subsidies to income, particularly for owner of fishing vessel, could be harmful if the fisheries are fully or overexploited and suffers a lack of economic incentives to end overfishing or when the open-access nature of fishery resources prevails. Income subsidies in the form of 'laying up' subsidies, which is payable to the vessel owner to compensate for temporarily retiring a vessel, are likely to have the

[26] This analytical list of the UNEP's matrix approach is adapted from Chen, n9, 13–16, based on UNEP, (n23), 10–43.

effect of discouraging reductions in fishing capacity that would otherwise be financially more attractive.

(v) Price support subsidies are expected to be harmful in most circumstances unless the fisheries have a number of appropriate economic incentives to eliminate incentives for overfishing, for example community-based management or property rights. Price support has had a clear impact on levels of fishing effort and can facilitate the transition from a state of less-than-full exploitation to overexploitation.

(vi) Subsidies for the decommissioning of vessels and license retirement are provided for fisheries that are already fully capitalised and usually overexploited to reduce fishing capacity and pressure on fish stocks, as well as to increase the profitability of fishing practices. In most fisheries, the possibility of actually reducing either capacity or effort through a decommissioning programme is low, and simultaneously the danger of aggravating the state of the fish stock is significantly greater.

(vii) Subsidies to variable costs offer an incentive to fishing vessel owners to utilise more powerful and less fuel-efficient engines and are expected to be harmful unless an effective fishery management exists or the fishery is less than fully exploited. These subsidies are similar to subsidies to capital costs in their potential impact for harm.

2.2 APEC's Categories of Fisheries Subsidies

Box 2 Inventory of Global Generic Types of Subsidies in the Fisheries Sector

1. Direct Assistance to Fishers and Fisheries Workers: These include all revenue enhancing transfers to fishers and fisheries workers from government budgets.

• Income Support Programs – payments to supplement the incomes of fishers and fisheries workers

• Unemployment Insurance – payments targeted specifically for unemployed

fishers and fisheries workers • Worker Adjustment Programs – payments to assist displaced fishers and fisheries workers to find alternative employment • Fisher Retraining – to assist fishers and fisheries workers to find alternative employment • Other Direct Payments to Fishers
2. Lending Support Programs: These include all government-funded loans, loan guarantees, and loan restructuring at below commercial lending rates to the fisheries sector. • Loan Guarantees - including loans provided by private lenders and guaranteed by government • Subsidised Loans – loans at below market rates (calculated as the difference between market interest rates and low interest rates, applied to the total value of the outstanding loans) • Loan Restructuring • Other Lending Support Programs
3. Tax Preferences and Insurance Support Programs: These include all tax preferences and government-funded insurance support programs that benefit the fisheries sector. • Fuel Tax Exemption – for fishing vessels • Income Tax Deferral – for fishers • Accelerated Depreciation – for taxation of fishing vessels and gear • Favourable tax rates on specific inputs or outputs • Vessel Insurance and Reinsurance Programs • Other Tax Preference and Insurance Support Programs
4. Capital and Infrastructure Support Programs: These include all government-funded capital inputs and infrastructure investments to the fisheries sector

• Development Grants – for fisheries enterprises • State Investments – in state-owned enterprises and cooperatives in the fisheries sector • Fleet Renewal and Modernisation • Foreign Access Payments – for deep sea fishing fleet access to foreign fishing waters • Bait Services – provided to fishers • Provision of fish auctions or other sales facilities and services • Aid to Shipyards – to support fishing boat construction • Fishing Port Infrastructure Enhancement – to provide port improvements for fishing fleets • Harbour Facilities and Moorage – provided free or at low rates for fishing fleets • Other Capital and Infrastructure Support Programs
5. Marketing and Price Support Programs: These include all government-funded marketing and price support programs • Export Marketing Programs – to enhance seafood exports • Fish Product Promotion Programs – including seafood product promotion, labelling and quality enhancement for either domestic or external markets • Market Price Support – government support to ensure minimum prices or to keep domestic prices above world prices • Other Marketing and Price Support Programs
6. Fisheries Management and Conservation Programs: These include all government-funded programs that are designed to enhance the fisheries resource base • Vessel Buybacks – payments for the permanent withdrawal of fishing vessels • Permit Buybacks or License Retirement (all types) – payments for the permanent withdrawal of fishing permits or licenses

• Stock Enhancement Programs – including fish habitat improvements, release of juveniles, etc. • Fisheries Management Programs • Fisheries Enforcement Programs • Programs to Assess Fish Stocks • Programs to Identify and Develop New Fisheries • R&D – to develop new fisheries technologies • Other Fisheries Management and Conservation Programs

Source: Appendix A: Inventory of Support Programs in the Fisheries Sector of APEC, APEC, Study Into the Nature and Extent of Subsidies in the Fisheries Sector of APEC Members Economies October 2000

2.3 Effects of Fisheries Subsidies on Market Distortion, the Marine Environment, and Sustainable Development

In addition to their effects on fisheries management and on overcapacity and overfishing, fisheries subsidies have the additional effect of inducing market distortions and of negatively influencing the marine environment.

Before continuing, it is important to preface the following section by noting that the issue of fisheries subsidies is a complicated matter, portrayed so far as having three main dimensions. The first is environmental protection. It is undeniable that the depletion of fisheries stocks causes harm to the environment. Subsidies that result in overfishing and overcapacity should be regulated purely on the basis of their influence on the ocean and on biodiversity. Second, fisheries subsidies that lead to overfishing have negative impacts on trade liberalisation. The third dimension is related to development. [27] Considering that a large number of developing and least-developed countries are engaging in the fisheries sector, and are mostly dependent on it, fisheries subsidies provided by relatively developed countries may have a negative impact on the socio-economic development of under-developed countries.[28]

[27] It is essential to understand both the opportunities and challenges related to sustainability standards from a development perspective. 'Spotlight on Sustainability Standards' 6(7) Bridges Africa, available at: <https://www.ictsd.org/bridges-news/bridges-africa/news/spotlight-on-sustainability-standards> accessed 8 January 2019.

[28] Youngjeen Cho, 'Revisiting WTO Fisheries Subsidies Negotiations' (2015) Beijing Law Review 1.

Another effect of fisheries subsidies, however, is market distortion. The distorting effects subsidies have upon the market are, in fact, a key factor underlying long-term mismanagement of the global fisheries markets.[29] The World Bank calculates the cost to the global economy resulting from this market distortion to be USD 83 billion.[30] With regard to fishery trade distortion, according to economic theory, the economic consequences caused by subsidisation reflect the fishery resources conservation effects in that they stimulate over-production and also delay market-balancing adaptation.[31]

Sustainable development in turn supports strong economic and social development, in particular for people with a low standard of living. The impact of fisheries subsidies on fisheries sustainability depends on the management systems in place and their enforcement. Fisheries subsidies leading to increased effort and catches may also result in increased by-catches, the catching of non-targeted species.[32] With regard to social sustainability, fisheries subsidies have been used in many countries, particularly in small and vulnerable coastal states in the Pacific and Indian Oceans and in the Caribbean Sea to solve problems of regional development, community support, and unemployment in fishing communities. The negative impact of subsidies, however, threatens to offset the social sustainability benefits subsidies offer to small-scale fisheries.[33] How, then, can the undesirable effects of subsidies be anticipated and counteracted by subsidies policy?

The exact consequences of fisheries subsidies depend on the way they are implemented and the way they interact with other government policies. This being the case, subsidies may distort the efficient allocation of resources and the pattern of international trade. Fisheries subsidies, as discussed, have

[29] Oby Ezekwesili, 'Why We Need to End Fisheries Subsidies' World Economic Forum, available at: <https://www.weforum.org/agenda/2015/10/why-we-need-to-end-fisheries-subsidies/> accessed 8 January 2019.
[30] 'The Sunken Billions Revisited', available at: <http://www.worldbank.org/en/topic/environment/brief/the-sunken-billions-revisited-progress-and-challenges-in-global-marine-fisheries> accessed 8 January 2019.
[31] Ezekwesili, (n29).
[32] Chen, (n9), 18.
[33] Chen, (n9), 17.

negative impacts on trade,[34] the environment, and sustainable development, compounding the impacts on all of the above of fish stock depletion from overexploitation of fisheries resources. Of course, once there is a reduction or a collapse in fisheries resources, that consequence cannot be reversed due to the fundamental level at which changes are occurring in today's marine ecosystems.[35]

With respect to subsidies' environmental impact, whereas the FAO has found it difficult to prove the relationship in which subsidies cause overcapacity and then overcapacity causes overfishing, this thesis aims to discover and demonstrate findings albeit difficulties. Two pieces of work defend that a clear connection exists between fisheries sustainability, fisheries management and how fisheries subsidies turn out as a stumbling block for achieving SDGs.[36] The evidence presented up to this point suggests that overfishing cannot take place without overcapacity, and moreover that overcapacity has very likely been assisted by fisheries subsidies, in particular by subsidies for the construction and modernisation of fishing fleets.[37] Beyond the findings of the FAO, numerous other studies based on qualitative analysis have affirmed this thesis' position in concluding that fisheries subsidies have a negative impact on the environment.[38]

2.4 Political Economy Issues Surrounding Fisheries Subsidies in APEC

The imposition of effective disciplines upon fisheries subsidies has been

[34] Three impacts of fisheries subsidies could undermine conventions surrounding the liberalisation of international trade. These include (i) improving the exportability of goods to an importing country, (ii) enhancing the subsidising countries' exports to a third country, therefore negatively affecting the exports of another country, and (iii) limiting imports into the subsidising country. Chen, (n9), 12.

[35] Gareth Porter, 'Natural Resource Subsidies, Trade and Environment: The Cases of Forests and Fisheries' (1998) Centre for International Environmental Law 99.

[36] Colin W Clark, Gordon R Munro and Ussif Rashid Sumaila, 'Subsidies, Buybacks and Sustainable Fisheries' (2005) 50 Journal of Environmental Economics and Management 47–58; Anja von Moltke (ed), *Fisheries Subsidies, Sustainable Development and the WTO* (Earthscan Publishing 2010).

[37] ibid,von Moltke 69.

[38] Chen, (n9), 13.

obstructed by issues of political economy and by difficulties that have emerged in properly defining such disciplines.[39] Because multiple interest groups of various stakeholders are involved in the political economy issues of the fisheries sector in the APEC region, it is necessary before proceeding to identify these stakeholders in order to better assess their individual impacts.[40]

APEC member economies have different and sometimes conflicting positions with respect to subsidising the fisheries sector. Indeed, a number of associated legal and political issues and trade disputes are currently unfolding as a consequence, in the midst of which complexity. Any discussion of fisheries subsidies disciplines must be situated. Although, for example, it is widely recognised that subsidies that lead to overfished fish stocks and vessels or operators engaged in illegal, unreported and unregulated fishing should be prohibited, the question of when, precisely, fisheries subsidies will negatively affect the sustainable management of fisheries is contested.

APEC has some of the fastest emerging and growing economies in the world.[41] Each APEC member economy, like each country in the world, has to resolve a unique series of issues arising from its stage and pace of national development, economic development, and industrial structure. Fisheries depletion is the most significant environmental problem varying in severity from country to country and confronting these countries across the APEC region. APEC's emerging countries are usually major global fishing countries, such as China and Mexico, and they in fact have a weak ability to comply with international regulations focused on ocean and fishery protection, whereas developed countries with higher environmental standards aimed at fisheries sustainability tend to import fish and fish products. In examining environmental problems, including fisheries depletion, research differentiates between local and national problems, regional issues, and global harms for two reasons. First, the optimal policy response and level of required government intervention vary depending on the geographic scope of the harm. Second, the scale of the problem often helps to

[39] Porter, (n35), 1.
[40] Young, (n1), 24.
[41] APEC's Oceans and Fisheries Working Group, 'APEC Marine Sustainable Development Report' (APEC 2014) 23.

determine the complexity that will be involved in addressing the issue.[42]

Accordingly, the following is a non-exhaustive list displaying a number of the stakeholders typically involved in informal and formal discussion of issues within the APEC's fisheries sector:[43]

(i) Participating States of the APEC, CPTPP, and those States' participation at international organisations, in particular the WTO, the FAO, the CITES, OECD and UNEP;

(ii) NGOs;

(iii) Individual fishermen and fishing companies;

(iv) Individual consumers and their representatives on the fishery market

2.5 Economic Rationales for the Regulation of Fisheries Subsidies

The reasons and forms in which governments grant subsidies are as various as these subsidies' effects. For this reason, subsidies disciplines must often be as complex as the practices they are intended to regulate.[44]

Fisheries subsidies were development-minded economic State policies of the 1950s to mid-1970s that sought either to restrict imports, so as to encourage domestic production, or stabilise prices.[45] Economics provides a compelling explanation for why subsidies may need to be regulated internationally and, more specifically, for why the fisheries subsidies of individual countries should be given the attention of the international community.[46] Such explanations have been provided despite the difficulties economic literature has encountered

[42] Institute for International Economics, 'Chapter 1: Introduction', *Sustaining the Asia Pacific Miracles* 7, available at: <https://piie.com/publications/chapters_preview/37/1iie2504.pdf> accessed on 9 March 2019.

[43] Note that this list refers to Margaret Young's research, in which she develops a similar list. See Young, (n1), 24–28.

[44] Luca Rubini, *The Definition of Subsidy and State Aid: WTO and EC Law in Comparative Perpsective* (OUP 2009) 3.

[45] Gregory Messenger, 'Sustainable Development and the Commodities Challenge: The Eventual 'Greening' of the World Trade Organisation?' (2017) 9(54) Trade, Law and Development 63.

[46] In general, the economic and legal aspects of trade in natural resources are extensively covered by the World Trade Report 2010. See WTO, *Trade in Natural Resources* (World Trade Report, 2010) 40–159, available at: <https://www.wto.org/english/res_e/booksp_e/anrep_e/world_trade_report10_e.pdf> accessed 8 January 2019.

in finding a static definition for the term 'subsidy'.[47] Indeed, subsidies can take so many different forms that many experts claim there cannot be an overarching definition for them.[48]

Economic models suggest that subsidies can have various effects, the diversity of which has been offered by policymakers as reason enough in itself for their regulation internationally. First, both for investors and producers, a production subsidy can lower the domestic price of a good and help domestic industries to be competitive both at home and internationally, with the side effect of nullifying tariff cuts and distorting original comparative advantages structures and investment decisions.[49] An export subsidy, on the contrary, can raise the domestic price of a good, creating an incentive to export, while artificially improving the terms of trade of the exporting country.[50] Export subsidies, especially, have implications whose broad reach offers a strong argument for (and explanation of) the extent of current international regulation of them.[51]

Second, another justification for regulating subsidies internationally is offered by the argument, in the field of political economy, that subsidies are demand-driven. This means that subsidies can be used by politicians to gain or maintain political support from a given group of voters.[52] In this case, sound international disciplines can help achieve a more efficient allocation of resources even at the national level by facilitating or commanding the withdrawal of subsidy programmes which are based less on economic requirement than on political opportunism. Such reforms would most probably not be politically viable in the

[47] Subsidies are rather referred to as an evolving concept whose definition varies through time while being inherently elusive. See, for example, R P Steenblik, *Subsidy Measures and Classification: Developing a Common Framework, Environmental Harmful Subsidies: Policy Issues and Challenges* (OECD 2003) 104–109.

[48] This is clearly reflected in the obscurity of the formulations given by subsidies-related provisions in international agreements. Article 1.1 of the SCM Agreement provides one example.

[49] These potential 'adverse effects' have been fully recognised by international lawmakers and are covered by the SCM Agreement, Part III.

[50] WTO, *Exploring the Links Between Subsidies, Trade and the WTO* (World Trade Report 2006) 55–64.

[51] Fabrizio Meliado, 'Fisheries Management Standards in the WTO Fisheries Subsidies Talks: Learning How to Discipline Environmental PPMs?' (2012) Journal of World Trade 1087.

[52] Stephen Coate and Stephen Morris, 'On the Form of Transfers to Special Interests' (1995) Journal of Political Economy 1210–1235.

absence of those international disciplines.[53]

Finally, the third economic reason for the presence of international disciplines on subsidies relates to the fact that subsidies can exacerbate and multiply negative externalities.[54] This observation is real for fisheries subsidies just as it is for any other sector.[55] This is because most fisheries subsidies should not be censured outright.[56] Economists support that when a transaction is able to generate positive externalities – that is positive effects extending to actors not directly participating in that transaction – domestic regulators should subsidise that transaction.[57] This fact attests to the inherent ambiguity of subsidies. It further suggests that, in terms of welfare and environmental economics, there can be good and bad subsidies. Moreover, whether they are good or bad subsidies in nature depends on a series of complex and shifting circumstances.

The debate on 'good' and 'bad' subsidies is ongoing in economic and legal research. The distinction is indeed crucial in drafting those rules and regulations aimed at disciplining the use of subsidies by public authorities. The fisheries subsidies negotiations at the WTO are fully reflective of the difficulties involved in characterising subsidies in the fisheries sector and determining their advisability.[58]

Research done by South Centre provides the contents of the good and bad subsidies in the fisheries sector, and it also develops what are involved in the definition of ambiguous subsidies.[59] The good or beneficial Subsidies are those subsidies that can be beneficial to fishery sustainability, such as, those financial benefits for fisheries management programmes, services, and fishery research

[53] Meliado, (n51), 1088.
[54] Negative externalities, as one typology of market failure, are negative effects of a transaction that work to the detriment of non-parties to the said transaction.
[55] Meliado, (n51).
[56] ibid.
[57] World Trade Report 2010, (n46), 186–188.
[58] On the general debate on good and bad subsidies, see JN Bhagwati and others (eds), *The Generalised Theory of Distortions and Welfare, in Trade, Balance of Payments and Growth: Papers in International Economics in Honor of Charles P Kindleberger* (North Holland Publishing Company 1971) 96–110.
[59] The South Centre also summarised the seven proposal into an analytical list. See South Centre's Trade for Development Programme, 'The WTO's Fisheries Subsidies Negotiations' (2017) SC/AN/TDP/2017/5 South Centre Analytical Note 16.

and development. Exemplified good subsidies contain: crew safety support, support for processing by local populations, value addition enablement, facilitation of the establishment of fish stocks management systems, financing less harmful fishing methods, and the adoption of more sustainable fishing technologies. As a consequence, it can be concluded that good subsidies are those providing for the rehabilitation and restoration of ecosystems.[60]

The bad subsidies are those effort and capacity-enhancing subsidies that could lead to overcapacity and overfishing. Capacity-enhancing subsidies refer to all moulds of capital inputs, infrastructure investments form, and public sources that enhance revenue or reduce cost. The bad subsidies in the fisheries sector, therefore, include boat modernisation programmes and construction renewal, fishing port renovation programmes and construction, fishery research and development projects and relative support services, and tax exemption programmes. Moreover, effort-enhancing subsidies are those contributing to reducing operating or variable costs. Accordingly, effort-enhancing fisheries subsidies include fuel subsidies and subsidies for bait refrigeration facilities on the vessel and other facilities.[61]

The ambiguous subsidies, as their name suggests, are those subsidies whose impact on fishery sustainability is unclear since they consist of subsidies that can lead to positive impacts (for example, resource enhancement programmes) or to negative impacts (such as resource overexploitation). Hence, fisheries subsidies in this category include fishery assistance programmes, fishing vessel buyback programmes, and rural fishermen community development programmes. Moreover, they also include decommissioning fishing vessels and facilitating a shift for fishermen to other economic activities.[62]

[60] ibid.
[61] ibid.
[62] ibid.

Chapter Five

WTO Negotiations on the Regulation of Fisheries Subsidies: Progress for Consensus

1. Introduction

Over the past decade, the regulation of fisheries subsidies has become a recurrent controversial subject at the WTO Ministerial Conferences. It also became the subject of the legal reform that began with WTO's original concerns about the suitability and sufficiency of the SCM Agreement to be the forum of the regulation of fisheries subsidies. Till now, the WTO and its member states adopt the regulation of fisheries subsidies as commonly acknowledged priority.

At its earliest stages, however, discussion even of preliminary questions, such as the need for new fisheries subsidies regulations under WTO law, tended rapidly to run aground. The history of fisheries subsidies regulations is thus a study in the recriminations and reconciliations occurring between WTO member states, whose 164 diverse and contrasting points of view have repeatedly complicated the decision-making process and delayed satisfying agreement and action on fisheries subsidies regulations.

Recognition of the need for new fisheries subsidies regulations proved elusive until the mandates of the Doha Ministerial Declaration and the Hong Kong Ministerial Declaration, which permitted discussions to move on to the precise nature of the regulations to be introduced after the period of inaction incurred by the debate over their necessity.[1] This debate, once it had begun, centred upon whether the structure of fisheries subsidies regulations should be built using a 'top-down' or 'bottom-up' approach. Discussions also moved increasingly toward more detailed scrutiny of the sub-categories of fisheries subsidies and more fully dimensionalised legal texts on their regulation. Heeding the new ground broken by the discussions, the Chair of the Negotiating Group on Rules proposed novel fisheries subsidies regulations in November 2007, integrating the ministerial discussion's recommendations into the Chair

[1] See Doha Ministerial Declaration, para 28 and 31; Hong Kong Declaration para 30–32.

Text 2007.[2]

The Buenos Aires Ministerial Conference, recently held in 2017, showed the Ministerial Conferences building on previous outcomes with key advances that might even determine the success of reform efforts moving forward.[3] The observations of experts perceive the 2017 Ministerial Conference as having recognised that effective subsidies reforms are built upon five elements: the development of alternatives that can replace any subsidies that encourage overfishing; meticulous academic, scientific and policy background analysis; the leadership of key countries and of the WTO; inter-regime learning; and engagement by civil society and by the private sector.[4] As the WTO perceives them, these five elements, or 'reform drivers', should be present in any successful fisheries subsidies reform agreed upon at the WTO. Consensus upon the character of effective reforms, some suggest, will impose greater coherence on a potentially disorderly array of reforms.[5]

To examine how the WTO advanced to this point from an early position of stasis and contention, this chapter will provide a chronology of the negotiations surrounding the regulation of fisheries subsidies taking place at the WTO between the Seattle Ministerial Conference in 1999 and the Buenos Aires Ministerial Conference in 2017.

This chapter analyses WTO negotiations on fisheries subsidies regulations by carefully following their development through progressive stages,[6] with

[2] WTO Doc TN/RL/W/213, Draft Consolidated Chair Texts of the AD Agreement and the SCM Agreement (30 November 2007).
[3] WT/MIN(17)/64. WTO news, available at: <https://www.wto.org/english/news_e/news17_e/fish_11sep17_e.htm> accessed 9 January 2019.
[4] Markus Gehring, 'From Fisheries Subsidies to Energy Reform under International Trade Law' (2018) 188 CIGI Paper 7.
[5] ibid. Markus Gehring notes that he draws the 'drivers of reform' he identifies both from his personal experience with WTO law as well as from the literature on fisheries subsidies. Moreover, he clarifies that his reform drivers are meant more as hypotheses on the criteria that will structure future action at the WTO instead of empirical claims on what it really intends to do or will do.
[6] Chen-Ju Chen extensively analysed each WTO negotiation on the regulation of fisheries subsidies between the Uruguay Round and the Hong Kong Round by reviewing the official documents of the WTO. His sources are mostly undisputed. Hence, this chapter will partially build on Chen's analysis for its overview of the WTO negotiations on the subsidies. See Chen-Ju Chen, *Fisheries Subsidies under International Law* (Springer 2010) chs 2 & 3.

observations and comments. Additionally, this chapter will assess how closely these negotiations have paralleled the real issues facing the fisheries sector in the APEC, exploring the extent to which the steps made in the negotiations were effectively adapted to actually existing fisheries crises.

2. WTO Negotiations on the Regulation of Fisheries Subsidies: Progress and Standstill

The inception of the SCM Agreement in the Uruguay Round first signalled that the regulation of fisheries subsidies would have a place on the agenda of negotiations at the WTO in the ensuing years. In fact, as the content of the succeeding section will attest, the discussion of fisheries subsidies rules under the WTO framework is viewed as representing, in itself, a remarkable change in the political and economic context surrounding the issue — a change that the discussions' progress both expressed and reinforced. As an associated effect, the changing importance assigned to fisheries subsidies reform granted renewed energy, too, to the confrontation with the environmental impacts of the international trade in fish, originally seen to be an issue beyond the mandate of the WTO and that of trade organisation more generally.[7]

Since the end of the Uruguay Round, issues of fisheries subsidies have been significant in the WTO negotiations. Concerns about unsustainable fisheries subsidies that diminish the viability of fishery resources and distort trade flows and competition of fishery markets have reflected a recognition of the linkage between trade and the environment at the WTO.[8] Prior to the Committee on Trade and Environment's (CTE) establishment, several fisheries subsidies programmes of WTO members states were stored in the Environmental Database (EDB).[9] After its establishment,[10] the CTE launched discussions to

[7] Gareth Porter, 'Fisheries Subsidies and Overfishing: Toward a Structured Discussion' (UNEP 2001) 4.

[8] Roman Grynberg and Jan Yves Remy, 'Small Vulnerable Economy Issues and the WTO', in Ivan Mbirimi, Bridget Chilala, and Roman Grynberg (eds), *From Doha to Cancun: Delivering a Development Round* (The Commonwealth Secretariat 2003) 283.

[9] The EDB is the storage system in which diverse environment-related notifications are to be archived and classified. It was established in 1996 in compliance with the requirements of WTO regulations. The CTE followed, intended to further improve the transparency of trade-and-environment measures that had the purpose of environmental protection and environmental measures that had significant trade effects.

[10] The CTE was established by the WTO General Council in January 1995. CTE is a non-negotiating body and aims for environmental protection and implication of trade.

remove subsidies in the fisheries sector.[11] Given a request by the members of the CTE, the Secretariat replied in a note indicating that fisheries subsidies had a variety of forms and were primarily provided to reduce the operating and capital costs of capture.[12]

Negotiations on the regulation of fisheries subsidies at the WTO officially began at the Doha Ministerial Conference in 2001. Members were anxious to begin negotiations that would 'aim to clarify and improve WTO disciplines on fisheries subsidies, taking into account the importance of this sector to developing countries'.[13] The contention was mainly concerned to encourage the WTO to make meaningful contributions to the sustainable use of fisheries by way of modifying WTO Agreement on Subsidies and Countervailing Measures (the SCM Agreement) and regulating or prohibiting certain harmful subsidies that permitted for overcapacity and overfishing. However, due to the complexity of the agenda,[14] the Doha Round did not succeed in achieving the consensus of all the member states necessary for the agenda's implementation, failing to modify the SCM Agreement.

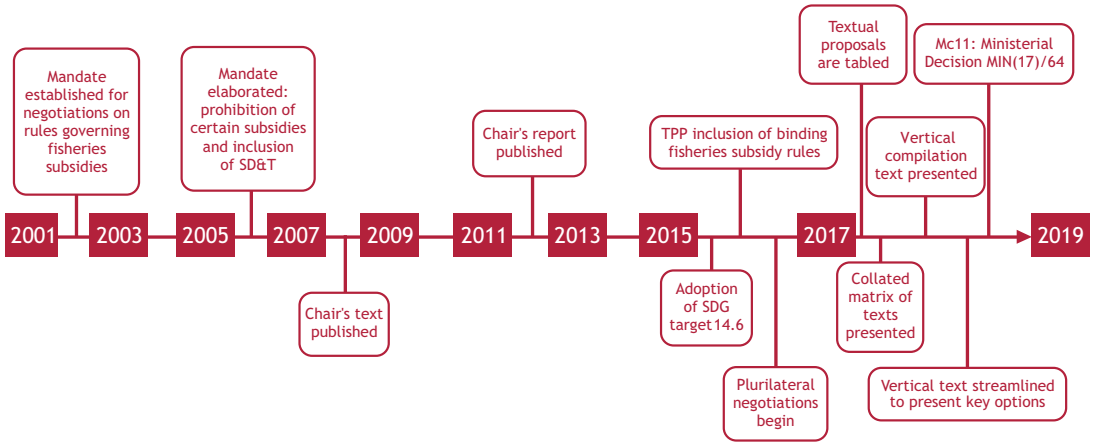
The 11th Ministerial Conference represented a significant milestone for the WTO negotiations on fisheries subsidies after the Doha Round, as the topic was firmly back on the WTO agenda. WTO member states showed themselves to be making serious efforts urgently to address their concerns, with influential coalitions of countries calling for measures to contain fisheries subsidies.[15]

To recapitulate, the negotiation on the regulation of fisheries subsidies has

[11] WT/CTE/W/51 – 'Environmental and Trade Benefits of Removing Subsidies in the Fisheries Sector' (United States).
[12] WTO Doc No WT/CTE/W/67, 'Note by the Secretariat to the Committee on Trade and Environment, Environmental Benefits of Removing Trade Restrictions and Distortions' (7 November 1997), para 91.
[13] See WT/MIN(01)/DEC/1 (Nov 20th, 2001) (Ministerial Declaration adopted on Nov. 14, 2001) (Doha Declaration) paras 28, 31. By launching a trade negotiation based on concerns for environmental conservation and sustainable development – not merely for traditional trade concern – the WTO took a concrete step towards realising its goal of sustainable development.
[14] The obstacle leading to the suspension of the Doha Round Agenda was believed to be the issue of political economy, that is, the diversity of the member states in the WTO and their incoherent national development of economy and social protection.
[15] WT/MIN(17)/64. WTO news, available at: <https://www.wto.org/english/news_e/news17_e/fish_11sep17_e.htm> accessed 9 January 2019.

continued for more than a decade since it was officially launched during the Doha Round in 2001. Since then, negotiations have been characterised both by progress and by deadlock, taking over for each other at various stages and times. For an understanding of the negotiations' inconsistent pace, Figure 1 draws WTO negotiations on the regulation of fisheries subsidies from the Doha Round in 2001 to the 11th WTO Ministerial Conference in 2017 in chronological order.

Figure 1



Source: adapted from ICTSD, Advancing Multilateral Trade Negotiations on Fisheries Subsidies, Policy Brief March 2018, 2.

2.1 An Analysis of Main Stakeholders' Initiatives

2.1.1 US

In the Seattle Ministerial Conference, the US, for its part, was concerned with the negative effects of fisheries subsidies on fishery sustainability as well as with market distortion. Early in the Uruguay Round, the US had drawn the WTO's attention to the need for fisheries subsidies regulations, and, because since its action could not find broad-based support, the US formally raised the issue again in 1997. The US's proposal centred in large part around its claim that fisheries subsidies might incentivise overfishing, which, so the US feared, might undermine fishery sustainability.[16] As well as for their adverse impacts on the international community from the standpoint of sustainable development, the US rebuked subsidies practices for enabling the misallocation of

[16] Submission by the US to the Committee on Trade and Environment.

government financial resources that could otherwise be employed more efficiently, a phenomenon, it claimed, that was exacerbating and compounding existing problems in global fisheries management.[17] The US also argued that subsidies were leading to the distortion of markets in the fishery trade, along with decreased production efficiency, pointing primarily to the misallocation of fishery resources (as well as of governmental resources), to structural overcapacity, and to the distortion of the market equilibrium as the burden of adjustment shifted onto non-subsidised producers.[18]

In the Doha Round, the US based its position on the cost/revenue impacts of fisheries subsidies. According to the US' analysis, subsidies encouraged overfishing and overcapacity since they enhance incomes and revenues, reduce fixed and variable costs, and mitigate risks.[19] With reduced costs, risks, and enhanced revenues, fishing vessels are likely to fish at an unsustainable level. These harmful subsidies tend to have the worst environmental effects in open-access fisheries, fewer negative effects in regulated open-access fisheries, and the fewest negative effects in rights-based fisheries.[20]

Nevertheless, whether or not it supported a counterproductive negotiating strategy, the US position's analytical sophistication was evident in its decision to append an analysis of certain types of fisheries subsidies and their impacts to its submission. The classification system offered by the US added a new dimension to the negotiations by identifying categories of fisheries subsidies that were environmentally harmful and trade-distorting, as in Table 1, lending to the negotiations an improved and commonly understood vocabulary.

Table 1

Subsidies that reduce capital and operating costs (i): Domestic Fisheries
Government-funded commercially applicable research and development; government loans and loan refinancing at below market rates; government loan guarantees that facilitate below market rate loans; government

[17] ibid, 2.
[18] ibid, 3–4.
[19] WTO Doc WT/CTE/W/154 para 8.
[20] ibid, para 9.

forgiveness of government-funded loans; investment tax credits; income tax deferrals/accelerated depreciation allowances; exemption from national sales and fuel excise taxes; government-supported marine insurance at below market rates where such insurance is commercially available; government ownership/management of fishing enterprises, if inconsistent with market terms; state trading if inconsistent with market terms and customary business practices; assistance to ship-building when the benefits accrue specifically to fishers.
Subsidies that reduce capital and operating costs (ii): International Fisheries Government-funded foreign access payments; government assistance to foreign fishery joint ventures; government-supported fishing vessel exports; government-supported below-market risk insurance for foreign fishery investments.
Subsidies that support incomes and prices: Domestic price support programmes; government purchases for above-market remuneration; rebates of certain taxes on inputs if the finished product is exported; government-funded export subsidies; sector-specific income maintenance programmes; regional economic development, if fisheries of which support is effective is sector-specific.

Source: adapted from Chen-Ju Chen, *Fisheries Subsidies under International Law*, 53. Based on WT/CTE/W/154, 'Communication from the United States to the Committee on Trade and Environment, Environmentally-Harmful and Trade-Distorting Subsidies in Fisheries' (4 July 2000) 4–5.

2.1.2 Australia and New Zealand

Unlike the US's emphasis on disciplining the adverse effects of fisheries subsidies, Australia highlighted the importance of fishery management in containing environmental damage and trade impacts, suggesting that transparency be globally enhanced in management practices and that more formal and serious assessments of and surveillance practices on fisheries subsidies be established, such as on the scale and types of the subsidies.

Australia's package of fisheries management reinforcements also the recommended a threshold measurement be applied, which could be used to assess the impact of fisheries subsidies on trade and the environment and to adjudicate during interventions.[21] Australia's proposal is thus one of the earliest examples of support for the environmental impact assessment and its adoption into practice. In this case, though the argument at hand was for the integration of the assessment into fisheries subsidies regulations for the specific purpose of avoiding the depletion of fish, Australia's example shows how advances in fisheries subsidies regulations have come to represent advances in the enforcement of ecological responsibility upon WTO members more broadly considered.

In recognition of subsidies' significance for the fisheries sectors of developing countries, New Zealand, by contrast, stressed its support for the FAO IPOA-Capacity and for the nuance this regulation granted to the discipline of fisheries subsidies. New Zealand also suggested a review and an analysis of the existing WTO regulations that would explore forums suitable to the regulation of fisheries subsidies.[22]

Following its position at the Seattle Ministerial Conference, New Zealand continued encouraging other WTO members to contribute their own analyses and national experiences of fisheries subsidies' effects in order to facilitate and formalise the still nascent discussion.[23] New Zealand pushed the position that the WTO was properly to be considered instrumental in controlling the issue, given that, in the absence of concerted unilateral action by members to reduce and eliminate fisheries subsidies with adverse effects, the WTO offered one of the only venues in the world through which compensatory measures could be enacted.[24]

2.1.3 Iceland

[21] Australia also adumbrated two additional areas of interest, urging the investigation of whether existent WTO regulations could limit the adverse effects of fisheries subsidies and whether creating additional regulations could reduce these negative impacts. WTO Doc WT/CTE/W/105, 2 February 1999.
[22] WTO Doc WT/CTE/W/12; WTO Doc. WT/GC/W/229 (6 July 1999).
[23] WTO Doc WT/CTE/W/134 para 1.
[24] ibid, para 17.

Iceland's submission amplified the proposal of the United States, containing researches that showed, using bioeconomic models of analysis, that fisheries subsidies were encouraging fishing fleet efforts and capacity. Hence, Iceland argued, the use of fisheries subsidies exacerbated the critical marine problem of the tragedy of the commons.[25] Given the open-access nature of fishery resources, Iceland found, subsidies to fishing generally (and also inevitably) caused more economic waste and a sharper risk of the depletion of fish stocks. In Iceland's view, however, the ecological impacts of fisheries subsidies could largely depend on improved fisheries management practices that could, if properly implemented, obviate the need for a new regime of fisheries subsidies.

Iceland's approach sought newly to rely on the WTO Secretariat, which Iceland bade to conduct research on the impact of fisheries subsidies in close cooperation with the FAO, regional fishery management organisations (RFMOs), and other international organisations. None of this, Iceland argued, should be taken to preclude the WTO Secretariat from taking into account the differential importance of the fisheries sector for developing countries and least developed countries. Iceland also proposed that the factual studies in which the WTO Secretariat's efforts would culminate should focus on the impact of fisheries subsidies on market distortions in the fishery trade, on fisheries management practices, on overcapacity and overfishing, and also on the marine environment, taking a holistic view of the interrelationships underpinning the problem.[26]

Japan led the opposing group of members, emphasising by contrast that more was at play in guaranteeing the sustainable utilisation of fisheries resources than merely their widespread subsidisation. A productive response to the fisheries subsidies issue demanded a more holistic approach that would address other hindrances to the sustainable use of fisheries. These included, in Japan's view, ineffective and inadequate fisheries management, a lack of insufficient enforcement, fishing capacity control, and IUU fishing activities, including the operations of flags of convenience (FOC) fleets that did not abide

[25] WTO Doc WT/CTE/W/111 (11 March 1999) para 18.
[26] WTO Doc WT/CTE/W/132 paras 9 and 10.

by international conservation rules.[27] Japan concluded that any effort to improve fishery management required technical expertise that necessitated the involvement and leadership of the FAO.[28]

2.2 The Landmarked Doha Ministerial Conference

In addition to the two areas of progress — the strengthening in the position opposed to subsidies first, and the holistic approach advocated by defenders of a moderate approach to their regulation second — the final shift forward that occurred during discussions ahead of the Doha Round focused on cooperation with other international organisations, such as the FAO and UNEP. These organisations had researched the nature, extent, and implications of fisheries subsidies in the context of the transition to sustainable fisheries management, but there did not yet exist at this time the proper mechanisms to coordinate information-gathering efforts between the organisations.

In acknowledgement of the potential applicability of these organisations' work to its mandate, the CTE undertook to assess the work conducted by them, recognising that such work may serve to complement and guide its discussions, and proposed a system for the regular overview of fisheries subsidies.[29] In addition, the CTE held a session with the Secretariats of other multilateral environmental agreements (MEAs), in coordinating with whom it would strengthen the links between multilateral trade and environmental agendas as well as to build awareness of the use of trade-related measures in MEAs. The CTE thus saw fit to obey increasing pressure from the Convention on Biological Diversity, at which urging the CTE would improve its focus on the opportunities to link trade liberalisation and environmental protection, especially through eliminating restrictions and distortions of trade in the fisheries sector. The CTE further stated that nothing should be considered explicitly to prevent the WTO from exploring the link between multilateral trade and environmental agendas by removing environmentally harmful fisheries subsidies.[30] The CTE's

[27] WTO Doc WT/GC/W/221 (28 June 1999) para 28. Japan elaborated on the factors at play in depletion of fisheries resources in a further submission after the Seattle Ministerial Conference. See WTO Doc WT/CTE/W/173 (23 October 2000).
[28] ibid, WTO Doc WT/GC/W/221 para 26.
[29] WTO Doc No WT/CTE/W/167 and WTO Doc No. WT/CTE/W/167/Add.1.
[30] WTO Doc No PRESS/TE/033; WTO Doc No WT/CTE/W/149.

commitment could serve expediently to satisfy both groups of countries, condoning greater action on fisheries subsidies regulations at the same time as the CTE acknowledged the need for greater interagency coordination to fill gaps in its technical knowledge.

As described previously, the FAO compiles and disseminates information on fisheries subsidies at a global level. In December 2000, in the wake of intensifying negotiations on fisheries subsidies regulations, the FAO provided a report to the WTO on the results of its expert consultation on economic incentives and responsible fisheries[31] — the first inter-institutional meeting where the WTO and the FAO collaborated on the issue of fisheries subsidies. The FAO Sub-Committee on Fish Trade also committed itself to ensuring that future multilateral trade negotiations should be based on the SCM Agreement under the WTO legal framework.[32] The general consensus at the inter-institutional meeting was that fisheries subsidies negotiations were the exclusive competence of the WTO. The role of the FAO and its Sub-Committee, therefore, should be limited to trade problems, in which it could play a role only subsequent to the specific request of WTO member states.[33] Moreover, although the observer status of the FAO at the WTO did not allow for direct participation, its technical expertise could be called upon by the negotiating parties and might be of great value.

The United Nations Environment Programme (UNEP) is another of the leading intergovernmental bodies whose operations have become crucially supplementary and supportive of the WTO's own efforts to respond to harmful fisheries subsidies, its case since 1997. The UNEP carries out its role through

[31] WTO Doc No WT/CTE/W/189.

[32] One FAO document made special mention of the fact that the WTO Agreement of Agriculture contains regulations dealing with subsidies in the agricultural sector that are less strict or that permit more delay in implementation than the rules of the SCM Agreement. See FAO Doc COFI: FT/VII/2000/5 'Item 7.1 of the Provisional Agenda, Committee on Fisheries, Sub-Committee on Fish Trade, Seventh Session, Bremen, Germany' 22–25 March 2000; 'Implementation of World Trade Organisation Agreements and Multilateral Trade Negotiations: Agreements on the Application of Sanitary and Phyto-sanitary Measures, Technical Barriers to Trade and on Subsidies and Countervailing Measures' (FAO 2000).

[33] FAO Doc COFI: FT/VII/2000/6 'Item 7.2 of the Provisional Agenda, Committee on Fisheries, Sub-Committee on Fish Trade, Seventh Session, Bremen, Germany' 22–25 March 2000; 'Implementation of World Trade Organisation Agreements and Multilateral Trade Negotiations: Ongoing Multilateral Trade Negotiations and FAO Training Programme' (FAO 2000) para 1.

regular meetings with the relevant secretariats of international organisations and RFMOs to explore areas in which joint work between them may be of mutual benefit.[34] The UNEP technical workshop in 2001, the goal of which was to combine the objectives of minimising trade distortions, protecting the environment and natural resources, and enhancing development opportunities for developing countries, suggested placing the fisheries subsidies issue on the agenda of the WTO Doha Ministerial Conference in order to negotiate stronger regulations for fisheries subsidies.[35] Overall, the enhanced role played by UNEP is another example of the interagency collaboration now viewed as instrumental in properly corroborating action on fisheries subsidisation.

In light of the above, then, it can be concluded that the Doha Round made definitive, structural changes that have shaped the current state of negotiations on fisheries subsidies. Primarily by building on vigorous discussion among WTO members and guiding them toward concrete resolutions, the Doha Ministerial Conference succeeded in embedding fisheries subsidies reform within the WTO framework as a priority.[36] Whereas previously their positions were blatantly opposed, members of the WTO have agreed to negotiate in order to 'clarify and improve WTO disciplines on fisheries subsidies, taking into account the importance of these sectors to developing countries to clarify and improve disciplines applicable to fisheries subsidies'.[37] Its other innovative contribution has been to recognise the functional role of interaction between the WTO and other intergovernmental fora and agreements, such as the FAO,

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[34] UNEP, 'A UNEP Update, United Nations Environmental Programme, Division of Technology, Industry and Economics, Economics and Trade Branch', 2004, 1; UNEP, 'UNEP Workshop on Fisheries Subsidies and Sustainable Fisheries Management, Geneva, 26-27 April 2004, Summary of the Chairs', 6–7.

[35] UNEP, 'Chairman's Summary, UNEP Fisheries Subsidies Workshop Geneva (UNEP 2001) 5.

[36] Doha Ministerial Declaration, WTO Doc WT/MIN/(01)/DEC/1 (20 November 2001, adopted on 14 November 2001), para 31.

[37] WT/MIN(01)/DEC/1 (20 November 2001) para 28: 'In light of experience and of the increasing application of these instruments by Members, we agree to negotiations aimed at clarifying and improving disciplines under the Agreements on Implementation of Article VI of the GATT 1994 and on Subsidies and Countervailing Measures, while preserving the basic concepts, principles and effectiveness of these Agreements and their instruments and objectives, and taking into account the needs of developing and least-developed participants. In the initial phase of the negotiations, participants will indicate the provisions, including disciplines on trade distorting practices, that they seek to clarify and improve in the subsequent phase. In the context of these negotiations, participants shall also aim to clarify and improve WTO disciplines on fisheries subsidies, taking into account the importance of this sector to developing countries. We note that fisheries subsidies are also referred to in paragraph 31.'

in addressing global fisheries challenges.[38]

In its response to the United States' subsidies classifications, as previously presented,[39] Japan argued that the categories proposed should not be addressed under the WTO. The WTO, after all — so Japan suggested — served as an international trade organisation, a forum for the settlement of disputes. As such, it was unsuited to the technical work involved in analysing food production and the practices of food procurement and supply industries.[40] Japan claimed that, provided appropriate fishery management and conservation were implemented, the adverse effects of fisheries subsidies could be alleviated without the need to resort to the lightening or the suspension of key government subsidies.[41] Moreover, fisheries subsidies found to be trade-distorting could be regulated under the SCM Agreement as long as the negative trade effects came under the meaning of 'adverse effects' stipulated in Article 5 of the SCM Agreement.[42]

Japan's position did receive support from numerous countries, rendering the impression more acute that the WTO was dividing into two large groups on the issue. Along with Japan, Tunisia, the EC, Canada and Norway agreed that the central issue for sustainable fisheries was sound fisheries management — a competence of the FAO — and that the CTE should request that the FAO should strive to improve its knowledge of sound management practices, as a basis for its further study of fisheries subsidies, and determine if fisheries resources were at all responsive to the improved practices.[43] Support, of

[38] WT/MIN(01)/DEC/1 (20 November 2001) para 31: 'With a view to enhancing the mutual supportiveness of trade and environment, we agree to negotiations, without prejudging their outcome, on: (i) the relationship between existing WTO rules and specific trade obligations set out in multilateral environmental agreements (MEAs). The negotiations shall be limited in scope to the applicability of such existing WTO rules as among parties to the MEA in question. The negotiations shall not prejudice the WTO rights of any Member that is not a party to the MEA in question; (ii) procedures for regular information exchange between MEA Secretariats and the relevant WTO committees, and the criteria for the granting of observer status; (iii) the reduction or, as appropriate, elimination of tariff and non-tariff barriers to environmental goods and services. We note that fisheries subsidies form part of the negotiations provided for in paragraph 28.'

[39] WTO Doc No WT/CTE/W/154, (n19).

[40] WTO Doc No WT/CTE/W/173, para 10 and 11.

[41] WTO Doc No WT/CTE/W/173.

[42] ibid, para 12.

[43] WTO Doc No PRESS/TE/034, 8.

course, later concentrated more heavily around the position of Iceland, which earned the support of Australia, Canada, Chile, New Zealand, Norway, Peru, the Philippines, Thailand, the US and others in calling on the WTO to address sustainability as part of its mandate, which was in fact inclusive of fisheries subsidies even if the conservation was not explicitly so.[44]

On the other hand, Korea, on the basis of its national experience, opted to locate the bone of contention elsewhere than in a dispute as to the appropriateness of WTO intervention in matters of environmental concern. Korea asked why some fisheries subsidies might not, in fact, play a positive role in conserving fisheries resources and improving the marine environment. Members would do well to consider, for instance, that support for local industry and the welfare of small, fishery-dependent communities could in fact constitute a form of environmental protection in itself.[45] A comprehensive approach, taking into account the socio-economic needs of the fishing industry and coastal communities, the unique domestic environment, and the development needs of countries, would lead to constructive discussions on fisheries subsidies in the CTE.[46] For this reason, Korea attempted to circle back to the kind of definitional debates that originally obstructed progress on fisheries subsidies.[47] The lack of such a definition would be confusing and misleading in the further discussion of fisheries subsidies.[48]

2.3 The Hong Kong Ministerial Conference: Three Articulations in Fisheries Subsidies Negotiations

The Hong Kong Ministerial Conference is technically preceded by its chronological antecedent, the Cancun Ministerial Conference, at which WTO members managed to further narrow the gaps separating their positions—ensuring that the Hong Kong MC would behold a WTO closer to an accord than at any time previously. First, it was agreed at Cancun for the first time that fisheries subsidies that had negative impacts on the environment should be regulated, without qualification or conditionality. Second, Cancun recognised

[44] ibid.
[45] WTO Doc No WT/CTE/W/175, para 20.
[46] ibid.
[47] WTO Doc No WT/CTE/W/175, n45, para 18.
[48] Chen, (n6), 55.

that a new set of rules to regulate fisheries subsidies effectively must be in the offing. However, WTO countries at Cancun were nonetheless reluctant to adhere to a strong, shared position on the best way to regulate fisheries subsidies, even if they could perceive its necessity. Because the members failed to resolve their differences, the negotiations at Cancun resulted in a stalemate that lasted until the Hong Kong Ministerial Conference in 2005, where a mandate was finally elaborated that would oversee negotiations on rules governing fisheries subsidies.

At the Hong Kong Ministerial Conference, members reaffirmed their commitment to strengthening the discipline of fisheries subsidies. In addition, they mandated that the chairman of the Rules Negotiating Group should prepare a consolidated text that would provide the basis for further negotiations. The chairman of the Rules Negotiating Group circulated this consolidated text in November 2007. This attempt to describe a set of types of disciplines for fisheries subsidies was introduced as Annex VIII to the SCM Agreement. Although the text adopted a bottom-up approach[49] on the surface, in reality its approach would more closely be described as top-down approach[50] as it widened the scope of prohibited subsidies. In addition to subsidies that had negative impacts on fisheries stocks, Annex VIII prohibited subsidies for vessel construction and repair, operating costs, port infrastructure and facilities, transfer fees, price support for fisheries products and income supports. Friends of Fish, Australia, Chile, New Zealand, Peru, the Philippines, and the US, were satisfied with the text. Canada, the EU, and Norway had always supported stringent regulation of fisheries subsidies, but Japan, Korea, and Taiwan criticised the draft text for tilting too heavily in favour of a disciplinary at the expense of a developmental stance. Indeed, the more strongly regulatory position only specified a few programmes that would be exempted from the WTO's neutral position of blanket prohibition. Japan, Korea, and Taiwan regretted that the WTO could not instead have devised a text comprised

[49] The 'Bottom-Up' Approach, advocated by Korea, Japan, Taiwan, the EC (at the time) and several developing countries, is comprised of a positive list of prohibited subsidies. Chen, (n6), 72–76.

[50] The 'Top-Down' Approach, led by New Zealand with support of the US, the Philippines, Peru, Ecuador, Argentina and Chile, lists a wide scope of restrictions accompanied by exceptional conditions. Chen, (n6), 70–72.

primarily of restrictions according to which these countries' fishing practices may be accordingly modified.

Nevertheless, it is possible that Annex VIII might still have been more severe. Though, for example, the WTO members disagreed over whether it was necessary to introduce new rules in order to regulate fisheries subsidies, rules negotiations added fisheries subsidies-specific provisions, largely because of the group 'Friends of Fish'. For a combination of reasons based in trade, environment, and development, the Friends of Fish envisaged a more harshly restrictive body of law even than that agreed to at the Hong Kong Ministerial Conference.[51]

In Annex VIII's final form, WTO members agree on the prohibition of certain subsidies that contribute to overcapacity and overfishing, to enhanced transparency, and to the inclusion of appropriate and effective special and differential treatment for developing and least developed country members. They also agree to set aside the issue of the structure of regulation for a perhaps unspecified length of time, instead of which WTO members will begin to assess specific fisheries subsidies programmes in order to ascertain whether or not certain programmes should be prohibited. Members shared the position that subsidies for illegal, unregulated, and unreported fishing and subsidies for vessel construction that directly increase fishing capacity should be prohibited in principle. The negotiations in 2005 faced technical challenges, particularly in building subsidies disciplines that seemed poised sufficiently to address the sustainability of fish stocks. As previously, political challenges resulting from the fishery sector's outsized economic importance to both of developed and developing countries continued to mar the comprehensiveness of agreements.

The schisms separating the Hong Kong MC countries split the WTO along lines that should be familiar from the preceding analysis. Three major voices can be identified as involved in the WTO fisheries subsidies negotiations in 2007, all having concrete material interests at stake in defending their positions. The remaining section outlines the articulations into which these groups settled

[51] Youngjeen Cho, 'Revisiting WTO Fisheries Subsidies Negotiations' (2015) Beijing Law Review 10–14.

during negotiations in concluding its discussion of the Hong Kong Ministerial Conference of 2007.

2.3.1 The Friends of Fish Position

The Friends of Fish included Australia, Chile, New Zealand, Peru, the Philippines, and the US. This group's position is premised on its conviction that the link between enhanced subsidy disciplines and trade, environment, and development is pronounced and decisive. These countries proposed a general prohibition on all fisheries subsidies that supported fishing enterprises, with limited exceptions. The exceptions were to include subsidies that were concerned with preventing overfishing, such as subsidies for decommissioning vessels and supporting social programmes to retrain fish workers for other industries.[52]

2.3.2 The Core Countries Position

Certain East Asian countries, for example Korea, Japan and Taiwan presented forceful arguments contesting the link between subsidies and environmental damage.[53] With Canada, too, taking this position, these countries asserted that inadequate fisheries management was the main cause of unsustainable fishing. They contended that subsidies were not dangerous to fishery resources if fisheries were properly managed. They also claimed that the work performed by fisheries management regimes had yet to be fully discredited by the evidence cited by the Friends of Fish, entailing that further reliance on the existing fisheries management system was perfectly valid.[54]

Nevertheless, the pressure applied by the international community compelled the Core Five Countries, including the EU, Canada, Japan, South Korea and Taiwan, to re-think the impacts of fisheries subsidies, especially on the environment. Of special harm to the Countries' position was the low degree of internal cohesion among them, in light of which the group never collectively proposed a negotiation on fisheries subsidies, let alone agreed to recognise a

[52] Margaret Young, *Trading Fish, Saving Fish* (CUP 2011) 95.
[53] Michael Sheng-ti Gau, 'Asian Perspectives on Fisheries Subsidy Issues and Linkages with Environment' (2006) 1 Asian Journal of the WTO and International Health Law 193.
[54] Young, (n52), 96.

single legislative agreement. As one example, the proposal offered by South Korea was intensely contested by Japan and the EU. One reason for this might be the diversity of the member countries' levels of development, which featured a mixture of developed and developing countries. This diversity led to pronounced opposition among the member countries especially when discussing special and differential treatment during the fisheries subsidies negotiation.

2.3.3 Emerging Fishing Countries' Position

China and Mexico were the emerging fishing countries, occupying a primarily neutral or observational position in the debates.

2.3.4 Comparison of the Three Groups

Below is a table comparing the positions held during the fisheries subsidies negotiations of the Doha Round by the three major groups of countries in the Doha Round.

Table 2

Critical Issues	**Friends of Fish**	**Core Five Countries**	**Emerging Fishing Countries**
Prohibited Subsidies and Category of General Exception	General prohibition is to be enforced on subsidies with too broad a scope. Fish products and shipments should also be prohibited.	Only subsidies that lead to overcapacity or overfishing should be prohibited.	
Structural Provisions	The US proposes that government subsidies should	Korea proposes the divisions as following: 1. Subsidies	

	not harm any natural fishery resources or affect other countries' interests. The concept of 'actionable subsidies' should be established.	that lead to overcapacity or overfishing should be prohibited. High seas fishing should be included among prohibited subsidies. 2. 'Actionable subsidies should be established. 3. General exceptions.	
S&DT Application	S&DT should not be extended to developing countries.		This group of countries stressed the need for S&DT, among which should be included subsidies to the small fishing sector, the high seas, and fish harbour construction. S&DT could be applied to developing countries' high seas fishing.
Fishery Management	Fisheries management should use	Effective fishery management can prevent	Fishery management should neither become the condition nor the

	fishery resources assessment based on science to restrict fishing. Success depends on effective implementation.	subsidies from causing overfishing.	burden negating the applied S&DT effects.

Source: This table is a translated and modified version completed by the author of this thesis. The original version of the table was written in Chinese and part of the publication of the Taiwan Trade Negotiation Office in 2009.

3. From the Chairs Text 2007 to the Buenos Aires Ministerial Conference in 2017

In continuing the discussion and, importantly, seeking an agreement with the mandates of the Doha[55] and Hong Kong[56] Ministerial Declarations, the Chair of the WTO Negotiating Group on Rules created a draft text on the regulation of fisheries subsidies in November 2007 (the Chair's Text 2007).[57] The Chair's Text 2007 is indeed an important innovation in the history of the negotiations of the regulation of fisheries subsidies, given the WTO's attempt to integrate fishery management embedded in international fishery regulations into a multilateral trade agreement.[58] By contrast, the Chair Text 2007 was

[55] The mandate of the Doha Round is a significant milestone as it was the first time for the WTO to link together its chief aim of trade liberalisation and its pursuit of positive outcomes for sustainable development, such as its purported aim of the conservation of fisheries. Significance of the Doha Round was also recognised by NGOs, for example World Wildlife Foundation. See WWF, *Turning the Tide on Fishing Subsidies: Can the World Trade Organisation Play a Positive Role*? (2002 WWF) 1.

[56] WTO Doc WT/MIN(05)/DEC the Hong Kong Ministerial Declaration, annex D, para. 9. (The Hong Kong Ministerial Conference made progress of the discussion of the regulation of fisheries subsidies by affirming WTO members' commitment to 'enhancing the mutual supportiveness of trade and the environment'. It also explicitly mentioned that the prohibition of harmful subsidies is inclusive in the linkage of trade and the environment.)

[57] WTO Doc TN/RL/W/213, Draft Consolidated Chair Texts of the AD Agreement and the SCM Agreement (30 November 2007). Note that there is a subsequent report released by the Chair of the Negotiating Group of Rules in 2011.

[58] Bilsky agrees that the Chair Text 2007 does entail a novelty and adapt a comprehensive approach to integrate fishery sustainability into a multilateral trade agreement. Yet he stresses

challenged and criticised by WTO member states, which could be evidence by the Working Document of the Chair Text.[59] Due to sharply-contrasting views of WTO members in the negotiations, the draft was eventually unsuccessful. Consequently, the Chair Text 2007 has been on the shelf and did not have development until 2008.

3.1 An Innovation of the Chairs Text 2007: Reflecting the Mutual Supportiveness of Fish Trade and Fishery Sustainability

The Chair's Text 2007 clarifies general rules on the use of fisheries subsidies and further develops, for instance a specified list of certain fisheries subsidies for prohibition with general exceptions, a sophisticated application of the special and differential treatment. It also references regulations of the UN and FAO for fishery management. Finally, a dispute settlement was established in the Chair's Text 2007 for resolving issues of fisheries subsidies.

The Chair Text 2007 was viewed as an ambitious attempt because of its fishery conservation goals, its provision for a systematic check as well as its balance of considering to apply sustainability criteria for fisheries subsidies.[60] The innovations of the Chair's Text 2007 further demonstrate that international standards of an environmentally and economically sustainable approach to catch fish could be established and integrated into the WTO legal framework.[61] Moreover, it shows that the WTO could be the forum coordinating and integrating various international organisations' discussion on fisheries subsidies.[62] This is because of the sustainability criteria drafted in Article I and II considering the sustainable benchmarking drawing on the principles and concepts highlighted in key international fisheries agreements such as the FAO Code of Conduct and the UNFSA[63] and proposed by other international

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that this innovative approach of the WTO does not mean a compromise to enlarge the mandates of the WTO for environmental protection. See Eric A Bilsky, 'Territory Without Boundaries: Colonising Natural Resources: Conserving Marine Wildlife through World Trade Law' (2009) 30 Michigan Journal of International Law 632, 633.

[59] TN/RL/W/232, May 2008.

[60] Fabrizio Meliado, 'Fisheries Management Standards in the WTO Fisheries Subsidies Talks: Learning How to Discipline Environmental PPMs?' (2012) Journal of World Trade 1097.

[61] ibid 1083.

[62] Chen-Ju Chen, *Fisheries Subsidies under International Law* (Springer 2010) 113.

[63] Vina Ram-Bidesi, 'Fisheries Subsidies Negotiations under the WTO and Likely Policy

organisations, such as the UNEP and the WWF[64], and also owing to the role of advisory information and observer status that some of other international and non-governmental organisations (NGOs)[65] play in the Chair's Text 2007.

3.1.1 An Analysis of the Chairs Text 2007

The Chairs Text 2007 served as the focal point of discussion of the regulation of fisheries subsidies, so there was a considerable number of research analysing the Chairs Text 2007 after its establishment. This section summarises the observation of the text, from three focused areas.

First, the draft provisions sought to protect fisheries through prohibiting certain subsidies. The texts provided a list of the purposes for the restriction of subsidies, including: subsidies for acquisition of vessels, construction of new fishing vessels, support on operating costs of fishing and fish landing-based activities, repair or other kinds of modification, transfer of vessels to third countries, port infrastructure exclusively or predominantly for fish-related activities, income and price support for marine wild capture fishing, and acquisition of fishing access to foreign waters.[66] The Chair Text 2007 also proposed a prohibition on subsidies to vessels that are engaged in IUU fishing, which had the general support of most WTO member states.[67] What appeared controversial, however, was Article I.I.2 including a further prohibition on any other types of subsidies (not already displayed in the prohibited list in Article I.I.1) that were provided in respect of any vessel or fishing activity affecting fish stocks already in an 'unequivocally overfished condition'.[68] Article I.I.2 was therefore faced with strong objection from WTO member states, who argued that such a prohibition is way too broad.[69] WTO member states also expressed

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Implications for the Pacific Island Countries' in Q Hanich and M Tsamenyi (eds) *Navigating Pacific Fisheries: Legal and Policy Trends in the Implementation of International Fisheries Instruments in the Western and Central Pacific Region* (Australian National Centre for Ocean Resources and Security 2009) 64.

[64] UNEP and WWF jointly commissioned a study on establishing the sustainable criteria. See David K Schorr and John F Caddy, *Sustainability Criteria for Fisheries Subsidies, Options for the WTO and Beyond* (UNEP and WWF 2007).

[65] These at least include UNEP, ICTSD, OCEANA and WWF.

[66] The Chair Text 2007, (n57), Article I.I.1.

[67] ibid, Article I.I(h); WTO Doc TN/RL/W/254, Annex 'Negotiations on Subsidies and Countervailing Measures – Report by the Chairman', para. 43.

[68] The Chair's Text 2007, (n66), Article I.I.2.

[69] It is a fact in fisheries science that precisely assessing a state of fish stocks is difficult. Hence, the linguistic use of 'unequivocally overfished' is a vague and also subjective idea for

concern as by whom and to how the over-captured fish stocks subject to the prohibition would be identified.[70]

Exemptions from the list of prohibited subsidies in Article I of the Chair's Text 2007 were recognised as 'good' subsidies and set out in Article II.[71] Exceptional examples of prohibited subsidies included larger exceptions for small-scale fishing close to seashore or adjacent to coast and narrower exceptions for larger-scale fishing, improvements in selective fishing techniques to reduce environmental impacts, re-education and retraining of fishermen, crew and vessel safety, and vessel decommissioning and buy-backs.[72] However, the Chair Text 2007 did not create a set of standards used for assessing these exceptions. Rather, the text referred to a series of international fisheries regulations under international law of the sea, such as UNFSA, the FAO Code of Conduct, the Compliance Agreement and as a kind of criteria.[73]

Second, the draft required States benefiting from exceptions to operate effective fishery management and conservation. In other words, member states seeking any of the exemptions stated in Article II had to operate a fisheries management system based on 'internationally-recognised best practices for fisheries management and conservation'. Best practices of fishery management and conservation would be subject to peer review conducted by the FAO.[74] As for a state that was not a member of the FAO, the peer review would be conducted by 'another relevant international organisation'.[75] Observation indicates that the use of peer review shows discretionary independence, a flexible and open manner for experts' opinion for best practice of fishery management, which could avoid doubts or issues about how to

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interpreting a legal text. Moreover, the prohibition of subsidies for fishery sustainability based on a too broad scope in a way is against the precautionary principle for environmental protection. This is because preventing unsustainable exploitation of fish (involving the precautionary principle), such as prohibit fisheries subsidies, encompasses many uncertainty and complexity. Therefore, legal response or actions for fishery sustainability, such a complex environmental matter shall be cautious and precise to stipulate regulations to implement measures.

[70] WTO Doc TN/RL/W/254, para 40.
[71] The Chair's Text 2007, n57, Annex Articles I-III.
[72] The Chair's Text 2007, n57, Article II.
[73] The Chair's Text 2007, n57, Article IV.
[74] The Chair's Text 2007, n57, Articles V.1.
[75] ibid.

operate a good fishery management.

Third, with respect to developing and least developed countries, Article III stipulates the concept of 'special and differential treatment' to be recognised and applied to these countries and to effectively allow them to continue to apply those subsidies set out in Article I where certain conditions had been met.[76] However, member states had doubt on the scope of applying 'the special and differential treatment' provisions for developing countries and small-scale fishing.[77]

The Chair Text 2007 did not receive much support from WTO member states, although the text did show novelty and endeavour to improve the discipline of fisheries subsidies. The underlying factors of this unsuccessful result arose from a number of WTO members' concern surrounding the assessing the general rule of exceptions and the possibility of *de minimis* exceptions, the role and best practice of fishery management and conservation, as well as how to define the scope of applying the special and differential treatment.[78] The joint research conducted by UNEP and WWF provided a series of sustainability criteria for fisheries subsidies. The Chair Text 2007 referred to this research and established the sustainable criteria of fisheries subsidies.

3.1.2 Progress After the Chair Text 2007

In response to this pending development and particularly to concerns and critiques raised about the Chairs Text 2007, the Chairman of the Negotiating Group of Rules published a second version of texts in December 2008 which was commented to be more careful and conservative.[79] This revised set of

[76] For example, the prohibition on vessel construction set out in Article I.I.1(a) will not be prohibited for a member state where its vessels are used exclusively for fishing activities in respect of particular identified target stocks within that state's EEZ and such stocks have been subject to prior scientific assessment 'in accordance with relevant international standards'. See Chair's Text 2007, (n57), Article III.2(b)(3).

[77] See WTO Doc No. TN/RL/GEN/163(2010) 'Communication from Brazil, China, India and Mexico, "Fisheries Subsidies – Special and Differential Treatment"'; TN/RL/GEN/155/Rev.1(2008) 'Submission by India, Indonesia and China, Need for Effective Special and Differential Treatment for Developing Country Members in the Proposed Fisheries Subsidies Text.

[78] Gregory Messenger, 'Sustainable Development and the Commodities Challenge: The Eventual 'Greening' of the World Trade Organisation?' (2017) 9(54) Trade, Law and Development 74.

[79] Yenkong Ngangjoh Hodu and Xuan Gao, Implications of Concluding the WTO Doha Round

texts outlined a 'Roadmap for Discussions' instead of providing an amended negotiating text.[80] This roadmap also raised issues that SVEs face in the negotiations.[81] Most recent version of the Chair Texts 2007 is the Chairman's 2011 report providing a summary of the previous development of the Chairs Texts 2007.[82] By March 2011, there was little tangible and notable progress on the key issues addressed in the Chair Text 2007 being made. Thus, it was the Director-General of the WTO, acting as the chairman of the Trade Negotiation Committee, submitted a chairman's report. The report identified some of greater convergence, such as the idea of restricting subsidies to IUU fishing.[83] After this 2011 Chair's report, however, the Negotiating Group of Rules had appeared less engaged with the fisheries subsidies discipline. There was a three-year-long hiatus in the Negotiating Group of Rules. In 2014, the Chair's view turned to be soberer, in particular after the Bali Ministerial Conference, the Chairman proposed to seek a way and a basis of a determining threshold of any or all of the rule issues in the next stage of work of the Negotiating Group of Rules.[84]

The Nairobi Ministerial Conference in 2015 reignited the negotiations on the fisheries subsidies discipline after a submission seeking a recalibrated result of the discipline in the lead up to the conference.[85] Consensus was still uneasy to achieve at the end of the conference, although several substantive elements of proposals were on the table, such as transparency of subsidies.[86] In spite of the setback at the Nairobi Ministerial Conference, SDG 14.6 released in 2015 requires the prohibition of subsidies that lead to overcapacity and overfishing and to eliminate subsidies linking to IUU fishing by 2020. Hence, continuing

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Fisheries Subsidies Negotiations on SVEs, (2009) 6(3) Manchester Journal of International Economic Law 95.

[80] WTO Doc No TN/RL/W/236, 'New Draft Consolidated Chair Texts of the AD and SCM Agreements' (19 December 2008), Annex III: Fisheries Subsidies – Roadmap for Discussion.

[81] ibid.

[82] Since the Chair's Text 2007 has progressed little, this 2011 report only summarised the status of discussions and proposals set out since 2007. See Communication from the Chairman, WTO Doc TN/RL/W/254 (21 April 2011).

[83] WTO Doc TN/RL/W/254, n70, 'Communication from the Chairman' (21 April 2011).

[84] TN/RL/W/255, 'Report by the Chairman of the Negotiating Group on Rules', para 1.3.

[85] TN/RL/W/258 'Elements for Effective Disciplines on Fisheries Subsidies in the Post-Bali Work Programme' (Argentina, Iceland, New Zealand, Norway, Peru, and Uruguay).

[86] TN/RL/W/264 'Draft Decision on Fisheries Subsidies' (Peru); TN/RL/W/266 'Ministerial Decision of December 2015' (Australia); TN/RL/W/267 'Fisheries Subsidies – ACP Proposal' (ACP); TN/RL/W/269 'Draft Decision on the Developmental and Food Security Aspects of Fisheries Subsidies Disciplines – ACP Proposal (ACP).

negotiations on the fisheries subsidies discipline was advocated by the 28 Member Statement to be at the top of the agenda of the Negotiating Group of Rules.[87] Finally, the negotiations on the regulation of fisheries subsidies were on the agenda of the 11th Ministerial Conference in Buenos Aires.

3.2 Recent Negotiation on the Regulation of Fisheries Subsidies at the Buenos Aires Ministerial Conference in 2017

The Buenos Aires Ministerial Decision of 13 December 2017 on the issue of fisheries subsidies marked more than two decades since the issue was first raised in negotiations at the WTO in the Uruguay Round in 1994.

In the lead-up to the Buenos Aires Ministerial Conference, a broad range of legal proposals, covering an essential set of fisheries subsidies disciplines with different focus, conceptual and textual approaches,[88] were prepared by seven groups of WTO members (also called the seven proposals). Since the end of 2016, a group of 16 WTO members have negotiated amongst themselves a multilateral agreement on the discipline of fisheries subsidies. They later submitted proposals to the WTO Negotiating Group on Rules. These member states and their seven proposals are: New Zealand and others: Iceland, New Zealand, Pakistan; Indonesia; Norway; EU; ACP Group: African and Caribbean, and Pacific Group of States; Argentina and others: Argentina, Colombia, Costa Rica, Panama, Peru, Uruguay, and finally LDC Group.[89] Following the submission of these seven proposals, WTO negotiations on fisheries subsidies at the Buenos Aires Ministerial Conference proceeded based on two working documents. The first document developed a vertical compilation of the seven proposals on the table as of autumn 2017,[90] and the second consolidated work

[87] WT/MIN(15)/37/Rev.1 'Ministerial Statement on behalf of Argentina, Australia, Brunei Darussalam, Canada, Colombia, Costa Rica, Fiji, Haiti, Iceland, Mexico, New Zealand, Norway, Pakistan, Papua New Guinea, Paraguay, Peru, Senegal, Solomon Islands, Switzerland, United States, Uruguay, Vanuatu and OECS Economic Union WTO Members (Antigua and Barbuda, Dominica, Grenada, St Kitts and Nevis, St Lucia, and St Vincent and the Grenadines)'.

[88] Bryce Williams, Rusudan Gergauli and Hamid Gholizadeh Nojehdeh, *Fisheries Subsidies Buenos Aires and Beyond* (TradeLab 2017) 6.

[89] TN/RL/W/273 'Fisheries Subsidies Compilation Matrix of Textual Proposals Received to Date' (28 July 2017). The South Centre also summarised the seven proposal into an analytical list. See South Centre's Trade for Development Programme, 'The WTO's Fisheries Subsidies Negotiations' (2017) SC/AN/TDP/2017/5 *South Centre Analytical Note* 29.

[90] WTO Doc. RD/TN/RL/29/Rev.3. This vertical textual document is a conversion of transferring a horizontal matrix of the seven proposals into a vertical textual compilation. Note that there is

streamlined texts demonstrating the major substantive components of the fisheries subsidies disciplines.[91]

3.2.1 Progress in the Buenos Aires Ministerial Conference

There is significant progress in the recent negotiations at the Buenos Aires Ministerial Conference, despite the conference ended with no final agreements concerning substantive issues on the regulation of fisheries subsidies under the framework of the multilateral trade.[92] The progress can be divided into two folds, a set of general provisions of the fisheries subsidies regulations, including preamble, definitions and institutional arrangements, as well as a key set of substantive components of the discipline, that is prohibited subsidies, special and differential treatment and transparency. In particular, the Negotiating Group on Rules at the WTO efficiently worked to analyse and streamline texts on prohibited subsidies with a link to IUU fishing and on overfished fishery stocks.[93] Moreover, since all the seven proposals suggest that only specific subsidies would be subject to the application of the SCM Agreement, the SCM Agreement serves as the conceptual and legal framework for the negotiation of the fisheries subsidies discipline.[94] In other words, any fishery subsidy with the inclusion of financial contribution by governments or by private companies but directed by governments, and the subsidy confers benefits to recipients will be covered by the SCM Agreement (Article 1.1) and that fall within the scope of the final agreement under the negotiations.

One of the remarkable developments in Buenos Aires Ministerial Conference is member states' emphasis on restricting fisheries subsidies based on their effects, particularly subsidies leading to IUU fishing[95] and subsidies to fish

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no open access to this document.

[91] WTO Doc TN/RL/W/274/Rev.2. This consolidated work is based on vertical texts of the document 'RD/TN/RL/29/Rev.3'.

[92] WTO Director-General Roberto Azevedo, MC Closing Ceremony (13th December 2017), available at: <https://www.wto.org/english/news_e/spra_e/spra209_e.htm> accessed 8 January 2019.

[93] See WTO official document TN/RL/W/274, (n91).

[94] WTO Doc TN/RL/W/273, 11. It is noteworthy that this confirmation of the scope of the application of the SCM Agreement is also consistent with the mandate of the Doha Round. The Doha Declaration states that the objective of the negotiations on the SCM Agreement is to clarify and improve disciplines while preserving the fundamental concepts, principles and effectiveness of the agreement. See Doha Declaration, para 28.

[95] Prohibition of IUU fishing has been a focal issue since the lead-up to the negotiations at the Buenos Aires Ministerial Conference in 2017.

stocks that are already overfished.[96] Therefore, these two types of prohibited fisheries subsidies are viewed to be the key types of prohibited fisheries subsidies to be covered in a final agreement at the WTO negotiations, because of a result of members' general support of recognising these destructive effects of subsidies on fishery resources, especially IUU fishing.[97] Thus, the fisheries subsidies discipline prohibiting subsidies to IUU fishing and subsidies to fish stocks that are already overfished could easily and equally apply to all WTO members.[98] In determining the prohibition, members also suggested to consider the type of cost that fisheries subsidies target, such as vessel construction and facilities installation (capital costs) or fuel (operating costs)[99]. It is noteworthy to address that the special and differential treatment is applied to the proposed prohibition of subsidies as broad exemptions to be granted to developing countries' small-scale fishing, and fishing practices within the EEZs of these members.

Several of the seven proposals suggested for exceptions to the restrictions of fisheries subsidies, and some of these exceptions are also similar to those exceptions in the Chair's Text 2007.[100] Subsidies used for compensating natural disasters are also proposed by the EU as well as Argentina and others as an exception.[101] However, the subsidy regime for the natural disaster exemption proposed and formulated by Argentina and others was commented to be 'very onerous' for developing countries to implement.[102]

Given this various range of members' submission, negotiations on the fisheries

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[96] Williams, Gergauli and Nojehdeh, (n88), 7.
[97] ICTSD, 'Advancing Multilateral Trade Negotiations on Fisheries Subsidies', *Policy Brief* (March 2018) 3.
[98] ibid. Nevertheless, this general support and understanding among WTO members does not mean that members will firmly reach consensus of the fisheries subsidies discipline.
[99] Fuel subsidies, in particular, have been a very difficult issue to negotiate. Research found that governments' support for fuel composes of approximately 22% of total value of global fisheries subsidies, which is seriously considered to increase fishing capacity. U Rashid Sumaila, Vicky Lam, Frederic Le Manach, Wilf Swartz and Daniel Pauly, 'Global Fisheries Subsidies', (2013) Directorate-General for Internal Policies Policy Department B: Structural and Cohesion Policies 23.
[100] EU, ACP Group, Indonesia, Argentina and others suggested for exceptions. See South Centre, (n89), 35.
[101] WTO Doc TN/RL/GEN/181/Rev.1: EU's proposal and WTO Doc TN/RL/GEN/187/Rev.2: Argentina, Colombia. Costa Rica, Panama, Peru and Uruguay.
[102] ibid. This is particularly for small island economies since they regularly face natural disasters, for example cyclones.

subsidies discipline have made much progress at the Buenos Aires Ministerial Conference. Moreover, a number of research has categorised the progress.[103] Thus, an analysis of these areas, in particular prohibition of the use of fisheries subsidies, is provided as follows.

3.2.1.1 Subsidies to IUU Fishing

As discussed in Chapter Two, the term IUU fishing covers a wide variety of fishing, most of which is illicit. However, no formal and multilaterally agreed legal definition of IUU fishing exists to constitute IUU fishing activities. Since 2002, the issue of IUU fishing has appeared in the negotiations on the regulation of fisheries subsidies by Japan[104] and South Korea[105]. IUU fishing is also a central concern at the Buenos Aires Ministerial Conference. In the members' proposals, there are two key issues in relation to IUU fishing, the definition, the process and impact of IUU fishing, and what shall be listed on an IUU fishing list.

On the issue of defining IUU fishing, two approaches were proposed in the seven proposals. First, a majority of the seven proposal suggested the reference of the definition in Article 3 of the IPOA-IUU.[106] The second approach, proposed by the African, Caribbean and Pacific Group (ACP), was providing for a new definition in an annex to the final agreement of the negotiation. The annex, however, closely reflects the definition of the IPOA-IUU.[107] Even if IPOA-IUU defines IUU fishing, these rules only generally describe IUU fishing activities and provide for a guideline. Commentary further pointed out the description of Article 3 of IPOA-IUU could be a reference; however, to apply this definition would require more accurate information to identify an IUU fishing prohibited in the discipline.[108] By contrast, since the Agreement on Port State Measures to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing (Port State Measures Agreement, PSMA) is effective in 2016, this

[103] For example, ICTSD, Advancing Multilateral Trade Negotiations on Fisheries Subsidies, Policy Brief March 2018, 3-9. Williams, Gergauli and Nojehdeh, n88, 9–22. The South Centre, The WTO's Fisheries subsidies Negotiations, SC/AN/TDP/ 2017/5, 2017.
[104] WT/CTE/W/226.
[105] TN/RL/W/17.
[106] TN/RL/W/273, 6–8.
[107] ibid.
[108] ICTSD, n103, 3.

thesis suggests a point of reference shall turn to the PSMA, which is the primary and up-to-date rule regulating IUU fishing.

With regard to IUU fishing list determination, the seven proposals clearly show a divergence among WTO members to the range of associated authorities in charge of establishing IUU list determinations and whether IUU list determination would exactly take effect directly.[109] However, there are some options for this IUU list determination.

The first option would, according to Article 3.1 of 274/Rev.2, require WTO members to identify IUU fishing based on their capacities as subsidising governments, coastal or flag states. This option shows that it would depend on a member's national legislation to identify what kind of fishing activity qualifies for 'illegal, unreported or unregulated fishing'. Schmidt addresses that since very few WTO members list IUU fishing and vessels, and they also do not frequently maintain the list, the scope of IUU fishing identified by WTO members' national lists would be finite.[110] Schmidt also proposed to identify IUU vessels by relevant governments according to their implementation of the PSMA, entering into force in 2016.[111]

Another option in the seven proposal is to identify IUU fishing, for the reason of the subsidy rules, through the IUU vessel list of the FAO or an RFMO. However, currently there is no IUU vessel list managed by the FAO.

3.2.1.2 Subsidies that Lead to Overcapacity and Overfishing

Some proposals suggested for inclusion of prohibition on subsidies that lead to overcapacity and overfishing, which involves a general wide range.[112] Among the seven proposals, the Indonesia and least developed countries (LDC) Group suggested to have the most expansive range of prohibition, whereas the EU has the narrowest prohibition.

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[109] Williams, Gergauli and Nojehdeh, (n88), 11.
[110] Carl-Christian Schmidt, 'Issues and Options for Disciplines on Subsidies to Illegal, Unreported and Unregulated Fishing' (2017) ICTSD.
[111] ibid.
[112] See paragraphs 3.11-13 of 274/Rev.2.

With regard to a fundamental definition of fishing capacity, it means the ability of a fishing fleet to capture fish; however, no method is agreed for how fishing capacity should be measured. Overfishing takes place when an increased number of fish stocks are captured than the population can replenish in time through natural production.[113]

The seven proposals showed various forms of subsidies for the discipline consideration, yet they are regulated based on their impact on vessels' capability and ability to find and catch fish. One option for negotiations suggested to offer a generalised prohibition on subsidies that would allow or increase maintenance of the fishing capacity of vessels or fleet of vessels.[114] Other suggestions include prohibition of subsidies for acquisition of infrastructure or facilities that help improve a vessel or fleet of vessels to discover and catch fish, to the modification and construction, or importation of vessels, and subsidies for operating costs which lead to overfishing, such as the use or provision of fuel.[115]

With respect to fuel subsidies, 2013 estimates indicate that over 90% of fuel subsidies are granted to a large-scale fisheries sector through the form of fisheries to marine diesel. By contrast, because of the limited capability of upgrading vessels to marine diesel engines, small-scale fishermen are significantly prohibited from benefits of this fuel subsidies.[116]

In response to regulate fuel subsidies, one suggestion on the proposal is to list fuel subsidies nearby other operating costs. The underlying reason is if the fisheries subsidies discipline in a final agreement of the negotiations will be in accordance with the SCM Agreement, definitions and specificity requirement of the SCM Agreement would therefore restrain the restriction to those fuel subsidies that are specific and can confer benefits to the fisheries sector.[117] Another alternative choice is to control all fuel subsidies that might offer

[113] Williams, Gergauli and Nojehdeh, (n88), 13.
[114] Paragraph 3.11(i) of 274/Rev.2.
[115] Paragraph 3.11(ii)-(iv). of 274/Rev.2; TN/RL/W/273, 6–9.
[116] W Swartz, U R Sumaila, and R Watson, 'Global Ex-Vessel Fish Price Database Revisited: A New Approach for Estimating "Missing Prices"', (2013) 56 Environmental and Resource Economic 467–480.
[117] Paragraph 3.11(v) of 274/Rev.2.

advantages to the fisheries sector.[118] This option includes those fuel subsidies that will not be subject to the requirement of specificity in the SCM Agreement. A third option, proposed by the EU, is to give a complete exemption of fuel de-taxation schemes from the fisheries subsidies discipline.

In the prohibition of subsidies contributing to overcapacity and overfishing, a final set of options on the proposal are to prohibit subsidies to fishing in areas beyond the national jurisdiction of the subsidising member. In other words, the prohibition of subsidies does not apply to fisheries for fishing on the high seas and fishing solely in EEZs of other members.[119] One suggestion on the proposal would include a qualifier, constraining the restriction to subsidies in these marine zones that damaged overfished stocks.[120] Another alternative would exclude from the restriction of subsidies for fishing of RFMOs quota, and another option would aim to discipline subsidies that improve the capacity of large-scale fishing industry outside the subsidising member's jurisdiction.[121]

3.2.1.3 Prohibition on Subsidies to Overfished and Unassessed Stocks

The prohibition of subsidies for fishing stocks that are already overfished associates the concern of subsidies affecting some specific stocks or stocks in a vulnerable state that is overfished stocks. Overfished stocks are in a crisis requiring fishing to be prohibited so as to allow the stocks to be back to the maximum sustainable yield.[122] Hence, several members proposed to include the prohibition of these subsidies to respond to the depletion of fish (approximately 90% fisheries are overfished or fully-fished)[123].

The seven proposals adopt different approaches to determining the elements of the discipline, such as the definition of overfished fish stocks, the determination of adverse effects of the subsidies on fish, the assessment of fish stocks, and finally exemption of subsidies.

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[118] Paragraph 3.11(vi) of 274/Rev.2.
[119] Para 3.12 of 274/Rev.2
[120] ibid.
[121] Para 3.12ALT of 274/Rev.2
[122] Williams, Gergauli and Nojehdeh, (n88), 12.
[123] FAO, *The State of the World Fisheries and Aquaculture* (FAO 2016) 38.

With regard to assessing the state of fish stocks, how to assess has presented a challenge in the negotiations. Hence, some proposals suggested a member in which there is fishing operation to use 'best scientific evidence' for the assessment, whereas other members noted there is already obligation to assess fish stocks to be at or above sustainable levels.[124]

In the negotiations, proposals suggested that where there is insufficient information to create an assessment of fish stocks, one alternative is to assume that the fish stock is overfished. A differentiating alternative is that the restriction would not apply until a member obtained the capacity and ability to survey the stock. A third alternative may be, in the situations that formal assessments are not available, to encourage members to apply the fisheries subsidies discipline, by using indirect and informal indicators of fish stock status such as declining capture per unit of effort.[125]

4. Challenges and Drivers for the Fisheries Subsidies Discipline at the WTO

This chapter has analysed the negotiations on fisheries subsidies discipline at the WTO from the Seattle Ministerial Conference to the Buenos Aires Ministerial Conference. It is clear that the WTO has gone through various stages to advance the negotiation on the discipline, though there has been no consensus achieved among the WTO members.

In the period of twenty years, there has been development and deadlock in the negotiations of the regulations of fisheries subsidies at the WTO. Hence, this section aims to analyse challenges and drivers that are involved in the negotiations.

4.1 Challenges

This research found that challenges arising from the negotiations on the regulation of fisheries subsidies generally entail the perspectives of the substance and horizontal issues of inter-regime cooperation and institutional

[124] Williams, Gergauli and Nojehdeh, (n88),12.
[125] Para 3.6 of 274/Rev.2.

arrangement.

First, with respect to the substantive issues, UNEP's 2011 research addressed several challenges that the fisheries subsidies disciplines confronts.[126] After comparing the progress of the Buenos Aires mandate in 2017 with those identified challenges, it is clear that there is significant development in the recent negotiation in considering equity and sustainable growth[127] for developing countries since the special and differential treatment used for exception of the prohibition of the fisheries subsidies has been suggested to a deep degree. Additionally, members' proposals for the recent negotiation also show the recognition of policy integration and coherence enhancement[128] since the proposals often referred to international fishery regulations. The proposals also suggested to use the concepts in the FAO and the RFMOs, and this demonstrates an attempt to increase inter-institutional innovation.[129] With regard to members' capacity building and enhancement[130], the proposals include a programme of technical assistance and capacity building. Finally, the recent negotiations reflect to enhance transparency[131] by using the notification stated in Article XIV:1 of the GATT and Article 25 of the SCM Agreement.

The comparison also indicates that some challenges still remain. For example, there should be discussion on how to assess and implement sustainability criteria.[132] The Chair Text 2007 referred to and established the sustainable criteria of fisheries subsidies. However, there is no discussion on the criteria at the recent negotiation. Finally, the WTO still faces challenges to improve the stakeholder's coordination and involvement in member states' domestic processes.[133]

Next to the UNEP's research, another challenge presented to the negotiation

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[126] Anja Von Moltke, *Fisheries Subsidies, Sustainable Development and the WTO* (UNEP 2011) 307–315.
[127] ibid, Challenge 2 Pursing Equity and Sustainable Growth for Developing Countries
[128] ibid, Challenge 4 Improving Policy Integration and Coherence
[129] ibid, Challenge 5 Increasing Inter-institutional Innovation Internationally
[130] ibid, Challenge 3 Strengthening Capacities for National and Regional Action
[131] ibid, Challenge 7 Improving Transparency and Accountability in Subsidies Programmes
[132] ibid, Challenge 1 Improving Fisheries Management and Implementing Sustainability Criteria
[133] ibid, Challenge 3 Strengthening Capacities for National and Regional Action

of fisheries subsidies is the reluctance of some member states to defer to the standards and processes of other international regimes governing fisheries, particularly in circumstances where there is not uniform, or parallel, membership between the WTO and these other regimes. For example, the proposal discussed in 2007 whereby member states seeking exemptions to the proposed prohibited subsidies would subject their fisheries management systems to review by the FAO[134] was rejected by Taiwan, which expressed concern about the involvement of an international organisation to which not all WTO member states are party.[135] Other member states also expressed concern about giving another international organisation the authority to review the adequacy of their management system.[136] It is this issue of parallel membership that has obstructed regime interaction and given states that are not parties to particular regimes 'a power of veto over the evolution of international law'.[137] It has done so by effectively preventing the WTO from making any significant progress on establishing binding disciplines on fisheries subsidies – despite many years of negotiations and draft proposals – through effective interaction with the other relevant international regimes discussed in the previous chapter.

4.2 Drivers that Lead to Progress of the Fisheries Subsidies Discipline

Except for challenges and suggestions, there is considerable progress (and could even be called successful changes) achieved in the reform of the fisheries subsidies discipline at the WTO. Markus Gehring has identified five significant drivers leading to this progress.[138] Moreover, these significant factors have also been stressed by commentators on the contribution made to the reform of the discipline.[139]

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[134] The Chair Text 2007, (n57), Article V.1.
[135] Working Document from the Chairman, WTO Doc TN/RL/W/232 (28 May 2008) Annex C-60; Margaret Young, 'Fragmentation or Interaction: The WTO, Fisheries Subsidies and International Law' (2009) 8 World Trade Review 503.
[136] Ibid WTO Doc TN/RL/W/232 (28 May 2008) Annex C-61.
[137] Margaret Young, *Trading Fish, Saving Fish* (OUP) 269.
[138] Markus Gehring, 'From Fisheries Subsidies to Energy Reform under International Trade Law', CIGI Paper No188, 1.
[139] See generally Amrita Narlikar, *Deadlocks in Multilateral Negotiations: Causes and Solutions* (CUP 2010); ICTSD, 'WTO Negotiators Debate Revisions to Integrated Fisheries Text' (9 November 2017) 21 BRIDGES 37.

Gehring thinks that the first driver is the leadership, willingness and action of some major member states to negotiate on the issue of fisheries subsidies.[140] Research of this thesis shows that this is the most influential factor of the reform of the fisheries subsidies discipline. In the recent negotiations in 2017, the seven proposals submitted for resuming the negotiations after many years on the fisheries subsidies discipline is the most recent and convincing example showing some member state's eagerness for the discipline.

Moreover, in the WTO itself, there is high-level political endorsement, for example between 2007 and 2011, the Chair of the Negotiating Group of Rules had largely engaged with drafting and updating the regulation of fisheries subsidies. Hence, the Chair Text 2007, a published roadmap in 2008 and a review report in 2011 were produced. Additionally, this kind of active attitude can also be found in the WTO Ministerial Statement in 2005, noting that the Negotiating Group of Rules has the obligation to reinforce the fisheries subsidies disciplines through the prohibition of certain fisheries subsidies that lead to overcapacity and overfishing.[141]

Secondly, continuously and even meticulously, there has been an analysis and discussion on the regulation of fisheries subsidies in the areas of legal scholarships, fishery scientific research, and policy making.[142] This preceded WTO negotiations and further helped with advancing the negotiations. Both academics and practitioners have also made contribution to the progress of the fisheries subsidies discipline, for example by establishing a classification methodology that enables distinction between beneficial subsidies, capacity-enhancing subsidies and ambiguous subsidies. This kind of careful analysis has completed the task of demonstration without doubt that fisheries subsidies have perverse effects on social, economic and the environmental levels.[143]

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[140] Gehring, (n138), 7.
[141] WTO, Ministerial Declaration of 18 December 2005, WTO Doc WT/MIN(05)/DEC(2005), Annex D(1)(9).
[142] Gehring, (n138), 7.
[143] UNEP, Analysing the Resource Impact of Fisheries Subsidies: A Matrix Approach (Geneva: UNEP, Economics and Trade Branch, Division of Technology, Industry, and Economics, 2004); Lena Westlund, 'Guide for Identifying, assessing and reporting on subsidies in the fisheries sector' (2004) FAO Fisheries Technical Paper No 438; FAO, 'Report of the Technical

The third significant factor driving the successful developments in the negotiations is engagement by the international community and key private sector actors both of which have an interest in decreasing fisheries subsidies for fishery sustainability.[144] There are plenty of examples of these engaging actors, such as the Global Ocean Commission;[145] the Global Partnership for Oceans; [146] and Oceana, led by a group of leading environmental foundations.[147]

The fourth driver is the achievement of a turning point in the development of alternatives to subsidies that encourage and lead to overfishing. The fisheries sector at present faces the challenge of identifying widely accepted alternatives to subsidies.[148] These alternatives could include different types of subsidies to small-scale fishing that support its operations and the livelihood of communities. They could also include other approaches of addressing the losses incurred by large-scale fishing operations as a result of fisheries subsidies reform. [149] Fisheries subsidies, furthermore, shape an opportunity to dedicate the amounts presently attributed to subsidies to support fishing communities in coping with the effects of climate change.[150] This well reflects socio-economic concern that the WTO, as a world trading system, not merely focuses on liberalising trade.

The last driver is inter-regime learning experience.[151] Markus Gehring claims that trading nations should gain comfort with the idea of including, in any given negotiation setting, decisions or concepts that have emerged in other regimes.

Consultation on the Use of Subsidies in the Fisheries Sector' (2004) FAO Fisheries Report No 752.

[144] Gehring, (n138), 7.

[145] Founded in 2013 by former leaders of states, government officials and business.

[146] The World Bank's 'Global Partnership for Oceans' offers a forum to assemble UN agencies, governments, civil society organisations, associations, research institutions, private sector, development banks and foundations. See World Bank Brief (1 July 2015).

[147] Established in 2001, Oceana is led by Oak Foundations, the Pew Charitable Trusts, the Rockefeller Brothers Fund and Marisla Foundation (previously Homeland Foundation). The aim of Oceana is to achieve measurable changes by specific and science-based campaigns with articulated goals along with rigid deadlines.

[148] Gehring, (n138), 7.

[149] Michael J Trebilcock, *Dealing with Losers: The Political Economy of Policy Transitions*, (OUP 2015).

[150] Clare Shelton, 'Climate Change Adaptation in Fisheries and Aquaculture: Compilation of Initial Examples', (2014) No 1088 FAO Fisheries Aquaculture Circular.

[151] Gehring, (n138), 8.

He also mentions that international organisations can be linked together through the harmonisation and the sharing goals that they seek, the cross-referencing of developments of the norms and rules that their membership sets up, and the formal or informal connection of the processes and mechanisms that are established in the advancement of their sharing goals. Additionally, Margaret Young argues that this beneficial inter-regime experience should not be confronted by negotiating parties at the WTO,[152] since 'models that link authority and contestability, and ensure a "thick stakeholder consensus" in the underlying rules, provide legitimacy for states'.[153] As for the case of the fisheries subsidies discipline, remarkable headway in creating fisheries subsidies rules along with combating IUU fishing has been achieved and found in non-binding declarations which fully address the necessary link between sustainable development and adopted regional trade agreements (RTAs). Given the importance of the inter-regime cooperation, the Buenos Aires Ministerial Conference has achieved the full profit of these measures, which, according to Gehring, should inform the negotiation groups in the lead-up to the next WTO Ministerial Conference in 2019.[154]

5. Conclusions

Although there have been many meetings and proposals since the Doha Round and despite the strong consensus among member states as to the nature and extent of the problem and the urgency of a solution, no firm disciplines on fisheries have been agreed yet.[155] Hence, the 11th ministerial conference in December 2017 explicitly agreed to keep the negotiations on the regulation of fisheries subsidies before the 12th ministerial conference in 2019 which carries an objective to establish the regulation of fisheries subsidies that prohibit certain types of subsidies leading to overcapacity and overfishing as well as eliminate subsidies leading to IUU fishing.[156]

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[152] Margaret Young, Energy Transitions and Trade Law: Lessons from the Reform of Fisheries Subsidies (2017) University of Melbourne Legal Studies Research Paper, No 746, 387.
[153] Joost Pauwelyn, Ramses Wessel and Jan Wouters (eds) *Informal International Lawmaking* (OUP 2012).
[154] Gehring, (n138), 8.
[155] Amanda Rologas Tsangalis, 'Fisheries Subsidies under the TPP: Towards Positive Outcomes for Global Fisheries Sustainability and Regime Interaction under International Law', (2016) Melbourne Journal of International Law 2.
[156] WT/MIN(17)/64, WTO Ministerial Decision of 13th December 2017on Fisheries Subsidies.

As the debate on the regulation of fisheries subsidies continues in the WTO and members 'seek to reinvigorate' the negotiations in this area,[157] another trading regime – mega-regional trade agreement – has emerged on the regional level in the APEC region, in particular.[158] This will be discussed in next chapter.

[157] Fisheries Subsidies Ministerial Statement on behalf of Argentina et al. (Revision), WTO Doc WT/MIN/(15)/37/Rev.1 (7 January 2016) para 1 (Nairobi Fisheries Declaration).
[158] Amanda Rologas Tsangalis, 'Fisheries Subsidies under the TPP: Towards Positive Outcome for Global Fisheries Sustainability and Regime Interaction under International Law' Melbourne Journal of International Law 2.

Chapter Six

An Analysis of the Regulation of Fisheries Subsidies in the APEC Region: A Novel Regime

1. Introduction

APEC is one of the intergovernmental organisations significantly discussing the regulation of fisheries in the context of trade liberalisation of fish and fishery products. Apart from APEC's discussion on the regulation of fisheries subsidies, the preferential trade agreements (PTAs) signed in the APEC region include environmental provisions in relation to fishery sustainability. With time and value that international community pursues, the PTAs in the APEC region have transformed. Moreover, the Comprehensive and Progressive Trans-Pacific Partnership (CPTPP), as an unprecedented mega regional trade agreement in the region, regulates fisheries subsidies, which is an innovation that deserves a legal analysis. CPTPP is a revision of the Trans-Pacific Partnership (TPP) after the US's withdrawal in January 2017.[1]

One policy report indicates that APEC could lead efforts to address these issues in the multilateral fora and to initiate to explore a suitable balance between the exploitation and the long-term sustainability of the fishery resources.[2] Recognising the important role of the ocean on food security and food-related trade, APEC leaders called for the elimination of fisheries subsidies that contribute to overfishing at the 2014 APEC ocean-related ministerial meeting.[3]

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[1] Memorandum from the US Trade Representative on Withdrawal of the U.S. from the Trans-Pacific Partnership Negotiations and Agreement (January 23, 2017), https://www.whitehouse.gov/the- press-office/2017/01/23/presidential-memorandum-regarding-withdrawal-united-states-trans-pacific (9 March 2019).

[2] Since fish stocks and vessels have a transboundary movement, solutions for fisheries issues do not merely fall in one single legal regime and are expected to be implemented on a global or regional levels. Huani Zhu and Carlos Kuriyama, 'Trade of Fishery Products and Fisheries Subsidies in APEC', *Policy Brief* No 16.

[3] The fourth APEC Ocean-Related Ministerial Meeting (AOMM4): "Towards New Partnership through Ocean Cooperation in the Asia Pacific Region", available at: <https://www.apec.org/Meeting-Papers/Sectoral-Ministerial-Meetings/Ocean-related/2014_ocean.aspx> 10 March 2019, 'Joint Statement Regarding Fisheries Subsidies'; In September 2016, 13 economies, including 8 from the APEC region, issued a joint statement in the WTO to eliminate harmful fishing subsidies, available at: <https://ustr.gov/sites/default/files/09142016_STATEMENT_joint_statement_fisheries_partners_FINAL.pdf> 10 March 2019.

Early PTAs, signed in 1990s, attempted to contain environmental provisions, such as the principle of sustainable development. Compared to many of the US PTAs, the environmental chapter of the CPTPP may not appear to contain a significant improvement.[4] However, compared to many Asian PTAs, the CPTPP represents a drastic difference in the level of commitment required by participants.

2. Preferential Trade Agreements in the APEC Region in Relation to Fishery Sustainability

This research explores the environmental provisions of PTAs signed by 21 member economies in APEC between 1995 and 2015. After analysis, this section shows the evolution of provisions of PTAs in relation to fishery sustainability as well as an analysis of a new approach of the CPTPP towards the reform on the regulation of fisheries subsidies in the APEC region.

For an overview of the PTAs assessed in this research, Box 1 lists the total PTAs.

Box 1

AUSFTA 2005: Australia and the US Free Trade Agreement entered into force in 2005
ACFTA 2009: Australia and Chile Free Trade Agreement entered into force in 2009
BJEPA 2008: Brunei and Japan Economic Promotion Agreement entered into force in 2008
CCFTA 1997: Canada and Chile Free Trade Agreement entered into force in 1997
CMFTA 1999: Chile and Mexico Free Trade Agreement entered into force in 1999
CCnFTA 2005: Chile and China Free Trade Agreement entered into force in

[4] Deborah also addressed other chapters of the TPP (the precedent of the CPTPP) are not a significant improvement compared to the US PTAs. See Deborah Kay Elms, 'The Trans-Pacific Partnership Trade Negotiations: Some Outstanding Issues for the Final Stretch', Asian Journal of WTO and International Health Law and Policy, 383.

2005
CPFTA 2009: Canada and Peru Free Trade Agreement entered into force in 2009
CnPFTA 2010: China and Peru Free Trade Agreement entered into force in 2010
CAFTA 2015: China and Australia Free Trade Agreement entered into force in 2015
CKFTA 2015: Canada and Korea Free Trade Agreement entered into force in 2015
JMEPA 2006: Japan and Malaysia Economic Promotion Agreement entered into force in 2006
JAEPA 2015: Japan and Australia Economic Promotion Agreement entered into force in 2015
KCFTA 2004: Korea and Chile Free Trade Agreement entered into force in 2004
KSFTA 2006: Korea and Singapore Free Trade Agreement entered into force in 2006
KORUS 2012: Korea and US Free Trade Agreement entered into force in 2012
KAFTA 2014: Korea and Australia Free Trade Agreement entered into force in 2014
MAFTA 2013: Malaysia and Australia Free Trade Agreement entered into force in 2013
NAFTA 1994: The North American Free Trade Agreement entered into force in 1994
SAFTA 2003: Singapore and Australia Free Trade Agreement entered into force in 2003
SEP 2006: Trans-Pacific Strategic Economic Partnership Agreement between Brunei, Chile, New Zealand and Singapore entered into force in 2006
SCFTA 2009: Singapore and China Free Trade Agreement entered into force in 2009
TAFTA 2005: Thailand and Australia Free Trade Agreement entered into force in 2005

USSFTA 2003: US and Singapore Free Trade Agreement entered into force in 2003 UPTPA 2009: US and Peru Trade Promotion Agreement entered into force in 2009 UCFTA 2004: US and Chile Free Trade Agreement entered into force in 2004 VCFTA 2015: Vietnam and Chile Free Trade Agreement entered into force in 2015

2.1 An Evolution of PTAs and Their Environmental Impact on Issues of the Fisheries Sector in APEC

This section will explore the PTAs' environmental features towards fishery sustainability. The reasons underlying this analysis are to first demonstrate the dynamics of PTAs' environmental provisions, and second show the evolutionary development of the environmental regulation in relation to fishery sustainability in the APEC region.

Since 1999-2000, the APEC region has been experiencing a boom in regional and bilateral free trade agreements, with the result that trade regimes are increasingly significant for rebuilding economy and fostering better living environment in the region through the form of PTAs and regional economic integration.[5] PTAs in the APEC region are mostly free trade agreements in which tariffs are removed among parties, but countries maintain their tariff structure with non-member countries.[6]

The US reaffirmed PTAs' function for environmental protection and their environmental effects for fisheries sustainability, particularly to combat the IUU fishing.[7] It is worth noting that, in the US, the Office of the Trade Representative (USTR) negotiates trade agreements. USTR is an executive branch agency, and it should be noted that Congress has ultimate authority over all treaties as

[5] Gueye Kamal and Kenichi Imai, 'Harmonising Trade and Environment in Recent Free Trade Agreements in the Asia-Pacific Region' (2003) 4(2) International Review for Environmental Strategies 265.
[6] ibid, 266.
[7] Recommendations (National Ocean Council Committee on IUU Fishing and Seafood Fraud, US), available at: <https://www.iuufishing.noaa.gov/RecommendationsandActions.aspx> accessed 9 March 2019.

well as control of the purpose. In the past, Congress essentially delegated its authority to USTR to negotiate over trade on its behalf, through what used to be called fast-track and is now called the Trade Promotion Authority (TPA).[8] The US was operating without TPA for negotiation of the TPP.[9]

The number of the PTAs in the APEC region had increased more than tenfold in comparison to the PTAs signed before 1997 when the Asian financial crisis occurred.[10] At the same time, the increasing reliance on trade among the member economies in the APEC region has led to the growing pressure on the environment and the use of natural resources, including fish. The proliferation of PTAs also indicates that the member economies in the APEC region converted their attitudes to adopt PTAs for intergovernmental cooperation with other economies.[11] One of the factors underlying this dependence arise from the challenges and complexity of dealing with environmental problems a country would suffer. Therefore, member economies in the APEC region have looked for support from other members.[12]

This thesis conducted legal text analysis to explore to what extent the PTAs demonstrate an environmental feature. After assessment, this research has identified four major features that are key factors related to fishery sustainability.

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[8] Under TPA, USTR is required to notify Congress of its intent to negotiate with any new countries and provide a 90-day period to collect comments. At the end of this window, USTR must use the comments to help formulate a strategy for negotiating and keep Congress actively informed of progress. Once negotiations are completed on the agreement, Congress promises to either accept or reject the entire package without making amendments. This portion of TPA is essential, otherwise, Congress is likely to start amending the first line of any agreement and probably would not stop making changes until the very last sentence. The TPA expired in the US in 2007; however, USTR has chosen to operate under the TPP as if it were active. This is because the USTR planned to have the TPA in place before the final ratification vote on the agreement, and they did not want Congress to fail to vote on either the TPA or the TPP itself because proper procedures were not followed along the way.

[9] Deborah Elms describes that USTR officials were confident that the absence of TPA would not be a problem for the final ratification of the TPP agreement. They have, after all, scrupulously followed the rules of TPA all along. See Elms, n4, 385.

[10] Take FTAs completed in East Asia as an example, by May 2010, East Asia had 45 FTAs in enforce and 84 FTAs were under negotiation. Zhiyong Zhang, 'Economic Integration in East Asia' (2013) 4 Peking University Journal of Legal Studies 272.

[11] Nina Arbabzadeh and Heribert Dieter, 'Trade Integration in Asia: Is the Region Pursuing a Convincing Strategy for the 21st Century?' (2010) No 79/10 GARNET Working Paper, 8, available at: <http://www2.warwick.ac.uk/fac/soc/pais/research/researchcentres/csgr/garnet/workingpapers/7910.pdf> accessed on 27 February 2019.

[12] John Davis, 'Regional Economic Integration, the Environment and Community: East Asia and APEC' (2003)17(1) International Review of Applied Economics 69, 74.

A presentation of the survey with observation is as follows.

Environmental Feature 1: Principle of Sustainable Development

The Appellate Body Report in the *US Shrimp-Turtle* dispute stated that the objective of sustainable development is explicitly recognised by the WTO Agreement and affirmed that sustainable development is subject to and within the interpretation of objectives of the WTO Agreements.[13] The Appellate Body Report also recognised the important social dimension of sustainable development.[14] In the *EC-Tariff Preference* dispute, the WTO Appellate Body Report referred to its report in *US Shrimp-Turtle* and affirmed that sustainable development is a goal of the WTO.[15]

PTAs' impact on protecting fisheries enshrines the principle of sustainable development and makes the principle into practice in the fisheries sector. Most of the PTAs parties recognise the principle of sustainable development in their preambles, and this also affirms their commitment to environmental protection. There are fourteen PTAs making their commitments in the preamble to protect the environment.[16] It could be a simple and basic commitment claiming that 'the trade agreement is consistent with sustainable development and environmental protection and conservation'[17] or admitting that 'expanding the economic relationship can assist in promoting sustainable development in its economic, social and environmental dimensions'.[18] Moreover, the wording of the commitments might be recognising the role of PTAs in reinforcing and supporting environmental protection.[19] To a further extent, some preambles

[13] Appellate Body Report, United States — Import Prohibition of Certain Shrimp and Shrimp Products, para. 129, WT/DS58/AB/R (6 Nov 1998).
[14] ibid, footnote 107.
[15] Appellate Body Report, European Communities — Conditions for the Granting of Tariff Preferences to Developing Countries, para. 94, WT/DS246/AB/R (7 April 2004).
[16] Trans-Pacific Strategic Economic Partnership Agreement between Brunei, Chile, New Zealand and Singapore 2006, Australia and Chile Free Trade Agreement 2009, Korea and Australia Free Trade Agreement 2014, Australia and the US Free Trade Agreement 2005, Canada and Chile Free Trade Agreement 1997, Canada and Korea Free Trade Agreement 2015, Canada and Peru Free Trade Agreement 2009, Chile and China Free Trade Agreement 2005, US and Peru Trade Promotion Agreement 2009, US and Chile Free Trade Agreement 2004, The North American Free Trade Agreement 1994, Korea and Chile Free Trade Agreement 2004, China and Peru Free Trade Agreement 2010, Vietnam and Chile Free Trade Agreement 2015.
[17] Preamble in Australia and Chile Free Trade Agreement 2009.
[18] Preamble in Korea and Australia Free Trade Agreement 2014.
[19] SEP 2006, Vietnam and Chile Free Trade Agreement 2015.

demonstrate solid commitments to 'strengthen the development and enforcement of environmental laws and regulations'.[20]

Environmental Feature 2: MEAs in the PTAs

Apart from the provisions regarding the principle of sustainable development, a certain number of the PTAs address the relationship with MEAs to reaffirm their objective of protecting the environment.[21] Also it is because of those PTAs signing countries' aim to take measures to comply with MEAs trade obligations.[22]

Amongst APEC member economies, the US is an eminent country that significantly transfers the obligations in the MEAs into their PTAs, due to its internal agreement between the US Congress and the administration – Bipartisan Trade Deal — in 2007.[23] This internal agreement requested the US PTAs to implement a list of MEAs,[24] most of which stress fishery sustainability including the Convention on International Trade in Endangered Species (CITES) and the Convention on the Prevention of Marine Pollution and the Ramsar Convention on Wetlands, Inter-American Tropical Tuna Convention, International Whaling Convention, and Convention on Conservation of Antarctic Marine Living Resources.[25]

This thesis explored that there are no developing member economies signing

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[20] The North American Free Trade Agreement 1994, Canada and Chile Free Trade Agreement 1997, Canada and Korea Free Trade Agreement 2015.

[21] They are KAFTA 2014, AUSFTA 2005, CCFTA 1997, CKFTA 2015, CPFTA 2009, UPTPA 2009, UCFTA 2004.

[22] Fiona Macmillan, WTO and the Environment (Sweet & Maxwell 2001) 14.

[23] Bipartisan Trade Deal was concluded in May 2007. It was aimed to restore the bipartisan consensus on trade with Peru, Colombia, Panama and Korea, available at: <https://ustr.gov/sites/default/files/uploads/factsheets/2007/asset_upload_file127_11319.pdf> accessed on 9 March 2019.

[24] The Administration and Congress of the US have agreed to incorporate 7 MEAs into their PTAs, including the Convention on International Trade in Endangered Species, Montreal Protocol on Ozone Depleting Substances, Convention on Marine Pollution, Inter- American Tropical Tuna Convention, Ramsar Convention on Wetlands, International Whaling Convention, and Convention on Conservation of Antarctic Marine Living Resources 2, available at: <https://ustr.gov/sites/default/files/uploads/factsheets/2007/asset_upload_file127_11319.pdf> accessed on 9 March 2019.

[25] Kenneth Heydon and Stephen Woolcock, *The Rise of Bilateralism: Comparing American, European, and Asian Approaches to Preferential Trade Agreements* (United Nations University Press 2009) 133.

PTAs incorporating MEAs into trade agreements. This is because developing countries are often not members of MEAs due to the costs they face in their compliance with MEAs obligations. [26] Moreover, developing countries' reluctance to the recognition of MEAs trade obligations may be considered as part of strategies to advance and upgrade the competing trade agenda of developing countries.[27]

Environmental Feature 3: Article XX of GATT 1994, the Technical Barriers to Trade Agreement (TBT) and Sanitary and Phytosanitary (SPS) Agreements

Environmental considerations are incorporated into the preamble of WTO Agreement, Article XX(b)(g) of the GATT,[28] SPS Agreement. The SPS deals with the sanitary and phyto-sanitary measures as to ensure food safety and to protect human, animal and plant health based on the scientific principles and sufficient scientific evidence. Moreover, there is TBT Agreement. The TBT envisages the use of standards, including the use of environmental standards. TBT Agreement therefore serves to consider environmental protection.

Another important environmental feature on fisheries sustainability that PTAs have is the reference to Article XX of GATT 1994, the Technical Barriers to Trade Agreement (TBT) and Sanitary and Phytosanitary (SPS) agreements. Most PTAs in the Asia-Pacific region adopt these environment-related WTO agreements. These provisions in the PTAs do not differ from the acquis of rights, obligation and procedures under Article XX of GATT 1994, the TBT and SPS. In other words, they contain identical or similar language to the environment-related WTO agreements on these environmental products.

In terms of incorporating general exceptions,[29] nearly every PTAs in the Asia-

[26] Macmillan, (n22).
[27] Steinberg, cited in Macmillian, (n22), 243–244.
[28] Article 20 stipulates exceptions for measures that are: '(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.'
[29] The clause of general exceptions in the GATT 1994 stipulates the measures that are not considered as arbitrary or unjustifiable discrimination on international trade, including environmental measures necessary to protect human, animal or plant life or health (Article XX(b) of GATT 1994) and in relation to the conservation of exhaustible natural resources (Article XX(g)

Pacific region (except SAFTA 2003) adopt the provision of general exceptions in accordance with Article XX of GATT 1994. In particular, in the USSFTA 2003, the US and Singaporean governments clarified that they understood the provision of general exception also applies to cover, *inter alia*, air and water, as they are now considered as exhaustible natural resources.[30]

Secondly, the TBT envisages the use of standards as non-tariff barriers to trade measures which would impede trade, including the use of environmental standards. The level of the countries' domestic environmental standards in comparison to international standards is therefore subject to the application of the TBT. In my analysis, several significant features of the TBT in the PTAs in the APEC region are identified. Regarding the requirement of transparency in the standards-setting procedure, private standards-setting bodies in the US are not subject to such a rule, as the US only operates a soft and weak central standard-setting system by the American National Standards Institute.[31] Other countries in the APEC region, such as Canada, Peru, Singapore and South Korea[32], are compliant with the principle of transparency. With respect to mutual recognition of standards in the TBT, this rule appears frequently in the PTAs in the APEC region.[33]

Finally, the SPS agreement deals with sanitary and phytosanitary measures as to ensure food safety and to protect human, animal and plant health based on the scientific principles and sufficient scientific evidence. My survey concludes that most PTAs reaffirm the rights and obligations under the SPS and reiterate the entire provisions in the SPS.[34]

Environmental Feature 4: Procedures and Enforcement of the PTAs'

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of GATT 1994).

[30] See Memorandum of Intent on Cooperation in Environmental Matters between US and Singapore on 14 June 2003.

[31] See Heydon and Woolcock, (n25), 54.

[32] Article 605 of the CPFTA 2009; Article 6.6 of the CKFTA 2015; Article 8.10 of the SEP 2006.

[33] For example, the JMEPA 2006 deems the mutual recognition as a general aim, by stating that each party is able to start negotiation for particular (sector by sector) mutual recognition agreements. The NAFTA also establishes a certain number of sector standardization committee to show its support for adopting mutual recognition.

[34] For example, chapter 6 in the UPTPA 2009, chapter 6 in the UCFTA 2004, chapter 7 in the SCFTA 2009.

Environmental Provisions

The US PTAs enclose provisions that aim to oblige the parties to enforce its domestic environmental law. Particularly, the USSFTA 2003, the UCFTA 2004 and the AUSFTA 2005 have exceptional conditions where the party are not seen to fail to effectively enforce their environmental laws and regulations.[35] The KAFTA 2014 adopts the same provision. Moreover, the KAFTA 2014 recognises the parties' right to exercise reasonable discretion with regard to investigatory, prosecutorial, regulatory, and compliance matters in the enforcement of its environmental laws, regulations and policies.

The Canada-Peru Agreement on environmental cooperation 2009 also imposes that each party shall effectively enforce, through the government action, its environmental laws.[36] The Canada-Chile Agreement on Environmental Cooperation 1997 plans out a series of the governmental enforcement action to achieve high levels of environmental protection and compliance with its environmental laws.[37]

While dealing with environmental matters, some PTAs admit the importance of public participation and make a series of action to support it. The hearing proceeding can be open to the public under the CKFTA 2015. The Canada-Peru Agreement on environmental cooperation sets a range of public participation and make the trade-environmental information open to the public.[38] The USSFTA 2003 ensures the availability of opportunities for public participation in the discussion of matters by developing or maintaining public dialogue.

Most PTAs in the APEC region indicate the incorporation of an arbitral tribunal

[35] One of exemplified provisions is article 18.3 of the KAFTA: 'reflects a reasonable exercise of their discretion with respect to investigatory, prosecutorial, regulatory, and compliance matters and to make decisions regarding the allocation of resources to enforcement with respect to other environmental matters or results from bona fide decisions to allocate resources to enforcement in respect of other environmental matters determined to have higher priorities.'

[36] Article 2 The Canada-Peru Agreement on environmental cooperation 2009.

[37] Article 5 Canada-Chile Agreement on Environmental Cooperation 1997.

[38] The public participation measures contain, for example, laws, regulations, and administrative rulings under this agreement are promptly published. Additionally, each Party shall ensure that its environmental assessment procedures provide for the disclosure of information to the public and shall allow for public participation in such procedures.

to resolve disputes arising from the PTAs, including the environment-related trade disputes under the PTAs. However, the Canada-Peru Agreement on environment and the environmental chapter of the KAFTA 2014 and VCFTA 2015 create the consultation to particularly deal with environmental disputes.

The PTAs that provide available proceedings to remedy and violation of environmental laws as well as establish dispute settlement mechanisms (DSMs) can be divided into three categories: judicial, quasi-judicial and administrative.[39] Consultation belongs to the DSM. Not many PTAs indicate this type of dispute settlement procedure. The KAFTA 2014 and the VCFTA 2015 represent the examples that consist of the consultation focusing on solving environmental disputes. The consultation process aims for dealing with environmental matters. In line with the KAFTA 2014, if such consultations fail to resolve the matter, and a party assists that the matter needs further discussion, that party may request the establishment of an ad hoc committee.[40] As for the transparency, the KAFTA 2014 highlights the importance of transparency during the consultation.[41]

Summary of the PTAs' Environmental Features of Sustainable Fisheries

The findings based on consolidating and mapping the environmental provisions in the PTAs have shown that PTAs appear to be comprehensive in regulating the environment as well as to be an effective tool to protect the environment, including the ocean protection and fishery sustainability.

Amongst all the PTAs, the NAFTA firstly incorporated specific environmental provisions in 1994, since then, a number of the PTAs in the APEC region have contained the provisions with an objective to protect the environment. Since 2005, PTAs in the APEC region have witnessed significant development of incorporating environmental protection. These forms of environmental provisions are the demonstration of the PTAs parties' commitments and cooperation for sustainable development that is widely recognised as an

[39] Petros Mavroidis and Andre Sapir, 'Dial PTAs for Peace: The Influence of Preferential Trade Agreements on Litigation between Trading Partners' (2015) 49(3) Journal of World Trade 351, 357.
[40] Article 18.7 KAFTA 2014.
[41] Article 18.6 KAFTA 2014.

objective of regional trade law and policy, including the APEC region.[42] For example, SAFTA 2003 adopts a chapter on the environment. Canada-Peru Agreement on Environmental Cooperation 2009 was drafted along with its CPFTA 2009.[43]

2.2 CPTPP's Novel Regulation of Fisheries Subsidies

This section will first describe the TPP as it was the original version among 12 APEC member economies. Later in this section, legal textual analysis will be based on the CPTPP, which is the revised version of the TPP.

Following five years of negotiations, the text of the TPP (former version of the CPTPP) was concluded on 5th October 2015. During the complex negotiations of the TPP, at the very beginning, the TPP was expected to be an opportunity to reflect on some of the issues that will soon become apparent and significant as countries shift from the day-to-day technical work in resolving differences among member states to the higher level politically and economically sensitive issues.[44] The TPP, at the time, represented the most comprehensive regional PTA signed to date, excluding the EU.[45] It consisted of 30 chapters, including traditional areas such as goods, services, investment and intellectual property and its much-anticipated environmental chapter. More importantly in the context of the discussion on fisheries subsidies, the TPP parties accounted for eight of the global top twenty fishing nations.[46] Accordingly, there was positive and optimistic discussion in academia[47] that TPP would be an opportunity to

[42] See the APEC 26th ministerial meeting held in Beijing China in 2014. The joint ministerial statement, para 23, 79 and 85 in which state the objectives of sustainable development, available at: <http://mddb.apec.org/Documents/2014/MM/AMM/14_amm_jms.pdf> accessed 18 April 2016. The 27th APEC ministerial meeting reaffirms these objectives in para 19, 45, 63 and 95 of the joint ministerial statement.

[43] Marie-Claire Cordonier Segger, 'Sustainable Development in Regional Trade Development', in Lorand Bartels and Federico Ortino (eds), *Regional Trade Agreements and the WTO Legal System* (OUP 2006) 314.

[44] Deborah Kay Elms, The Trans-Pacific Partnership Trade Negotiations: Some Outstanding Issues for the Final Stretch (2013) 8(2) Asian Journal of WTO and International Health Law and Policy, 372.

[45] ibid, 375.

[46] ICTSD, Trans-Pacific Partnership Trade Pact Text Published, Environmental Chapter Scrutinised (12 November 2015), available at: <https://www.ictsd.org/bridges-news/biores/news/trans-pacific-partnership-trade-pact-text-published-environment-chapter> accessed on 9 March 2019.

[47] Rémi Parmentier, Harmful Incentives: The Case of Fisheries Subsidies, Trade and Environment Review 2016 United Nations Conference on Trade and Development; Amanda Rologas Tsangalis, 'Fisheries Subsidies under the Trans-Pacific Partnership: Towards

address the issue of fisheries subsidies, which is exactly what has happened – the environmental chapter of the TPP included several provisions relating to fisheries management and fisheries subsidies, including a prohibition on the granting of certain types of subsidies.[48]

From the earliest days of the TPP negotiations, it has been touted as a 'high quality, XXIst century's agreement.[49] Part of this commitment has included the baseline statement of 'no exclusions'. This was especially true for market access in goods, which was supposed to achieve a 100% coverage.[50] The most recent mega-regional trade agreement in the APEC region, the TPP, first time established provisions regulating fisheries subsidies in the region.

After the US withdrew in January 2017, the environmental chapter of the CPTPP does not have any amendments. Hence the regulation of fisheries subsidies is still an important case for fishery sustainability. The CPTPP consists of 11 countries, including Australia, Brunei, Canada, Chile, Japan, Mexico, Malaysia, New Zealand, Peru, Singapore, Vietnam. These 11 participants represent nearly USD 13.5 trillion of the global economy.[51] CPTPP is the updated agreement after the US' withdrawal. The legally verified text of the CPTPP was released on 21 February 2018. The CPTPP text indicates the provisions in the Agreement's Chapters that have been suspended and therefore will not apply between the signing parties. In addition, schedules and annexes specific to the United States have not been listed in the CPTPP, as the United States is not part of the CPTPP. Some references to the US may appear throughout the rest of the Chapters, but will also have no practical application.

Whilst there is a divergence of opinion amongst conservation groups regarding

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Positive Outcomes for Global Fisheries Sustainability and Regime Interaction under International Law' (2016) 17(2) *Melbourne Journal of International Law*, 10.

[48] TPP, the Environmental Chapter.

[49] C L Lim and others, (eds), *The Trans-Pacific Partnership: A Quest for a 21st Century Trae Agreement* (CUP 2012) 3.

[50] Elms, (n44), 383.

[51] 'Overview and benefits of the CPTPP' available at: <https://international.gc.ca/trade-commerce/trade-agreements-accords-commerciaux/agr-acc/cptpp-ptpgp/overview-apercu.aspx?lang=eng> accessed 9 March 2019.

the potential effectiveness of the fisheries subsidies provisions and the environmental chapter in general,[52] there is no doubt that these provisions have the potential to make a significant contribution to ongoing negotiations to reform fisheries subsidies disciplines and reduce overfishing.[53]

The CPTPP has 6 parties' domestic ratification, which means its provisions on fisheries subsidies are breakthrough, in comparison with the draft proposal of fisheries subsidies being negotiated in the WTO. With such innovation of the CPTPP environmental chapter, the provisions preserving the oceans are able to restrict fisheries subsidies with compliance to the relevant provisions of international instruments[54] and promote sound management of fisheries.[55] As a result, the CPTPP is a valuable example to examine environmental features of free trade that reflects and supports fisheries sustainability.

2.2.1 An Analysis of the CPTPP's Fisheries and Fisheries Subsidies Clauses

Article 20.16(5) dealing with the issue of fisheries subsidies is the significant provision of the CPTPP's environmental chapter.[56] It further prohibits parties from granting the following subsidies to fishing industries: '(i) subsidies for fishing that negatively affect fish stocks that are in an overfished condition[57]; and (ii) subsidies provided to any fishing vessel while listed by the flag State or a relevant RFMO or Arrangement for IUU fishing in accordance with the rules

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[52] Sierra Club, 'A Dirty Deal: How the Trans-Pacific Partnership Threatens Our Climate' (Report, December 2015), available at: <https://content.sierraclub.org/creative-archive/sites/content.sierraclub.org.creative-archive/files/pdfs/1197%20Dirty%20Deals%20Report%20Web_03_low.pdf> accessed 9th March 2019; World Wildlife Fund, 'WWF Statement on the Close of the Trans-Pacific Partnership Negotiations' (Press Release, 5 October 2015), available at: <https://www.worldwildlife.org/press-releases/wwf-statement-on-the-close-of-the-trans-pacific-partnership-negotiations#> accessed 9th March 2019.

[53] Tsangalis, (n47), 3.

[54] These instruments include United Nations Convention on the Law of the Sea in 1982 (UNCLOS), the UN Fish Stocks Agreement and FAO Code of Conduct, FAO Compliance Agreement and the IUU Fishing Plan of Action in 2001.

[55] Jeffrey Schott, 'TPP and the Environment', (2016) 16–4 Chapter 3 in Peterson Institute for International Economics Briefing 34, available at: <https://piie.com/system/files/documents/piieb16-4.pdf> accessed 9th March 2019.

[56] Article 20.16(5): 'the implementation of a fisheries management system that is designed to prevent overfishing and overcapacity and to promote the recovery of overfished stocks must include the control, reduction and eventual elimination of all subsidies that contribute to overfishing and overcapacity'.

[57] ibid, CPTPP Article 20.16(5)(a).

and procedures of that RFMO or arrangement […].'[58]

Below is an analysis of Article 20.16(5) of the CPTPP, with reference to current evaluation of others.[59]

(1) Reference to the SCM Agreement for the Definition

Definition of subsidies in Article 20.16(5) references Article 1.1 of the SCM Agreement and requires that the subsidies under this provision have to satisfy the specificity requirements established in Article 2 of the Agreement.[60] It also provides 'the best scientific evidence available' to be used and determined for adverse effects on the fish stocks as referred to in paragraph (a).[61] Adopting the application of the SCM Agreement for the definition allows a very wide use of this term; hence, CPTPP is likely to cover most fisheries subsidies. Moreover, in implementing its prohibitions on fisheries subsidies, the prohibition of the CPTPP is based on the nature of the subsidised fishing activity instead of the type of subsidy, which has a specified scope. In other words, Article 20.16(5) has a very specifically identified conditions for the prohibition of fisheries subsidies.

CPTPP's approach reflects the general consensus of WTO members that has recently come out on the seven proposals at the WTO Buenos Aires Conference in December 2017 as well as well as the Nairobi Ministerial Conference in December 2015.[62] Despite the reference of the definition subject to the SCM Agreement, the CPTPP failed to prohibit those specified subsidies that contribute to overcapacity and overfishing, such as fuel subsidies[63] and

[58] CPTPP Article 20.16(5)(b).
[59] See Tsangalis, (n47), 19–31.
[60] CPTPP Article 20.16(5); Article 2 of the SCM Agreement.
[61] CPTPP Article 20.16(5)(a).
[62] Nairobi Fisheries Declaration, WTO Doc WT/MIN/(15)/37/Rev.1 (7 January 2016). See also the following recent submissions: Draft Decision on Fisheries Subsidies, WTO Doc TN/RL/W/264 (21 October 2015) (Communication from Peru); Elements for Effective Disciplines on Fisheries Subsidies in the Post-Bali Work Programme, WTO Doc TN/RL/W/258 (19 June 2015) (Communication from Argentina, Iceland, New Zealand, Norway, Peru and Uruguay) para. 3.1; Fisheries Subsidies, WTO Doc TN/RL/W/267 (13 November 2015) (Communication from African, Caribbean and Pacific Group of States) ('ACP Group Proposal'); Draft Decision on the Developmental and Food Security Aspects on Fisheries Subsidies Disciplines, WTO Doc WT/MIN(15)/W/40 (17 December 2015) (Communication from the African, Caribbean and Pacific Group of States and Peru).
[63] Of the estimated 60 percent of global fisheries subsidies found to be capacity-enhancing, 23

those provided for vessel construction and facilities maintenance.[64] Against the CPTPP's prohibition, the proposals for the Buenos Aries Conference have demonstrated more rigour to include the specific subsidies that lead to vessels modernisation and operation cost, like fuel. It is also interesting to address that parties of the CPTPP have some overlapping with those involved in the seven proposals at the Buenos Aries Conference. For example, New Zealand and Peru.

The CPTPP requires its parties to have their 'best efforts' to refrain from introducing or even adopting any new subsidies (or from improving or extending current subsidies).[65] Research found that this reference to overcapacity and overfishing would clearly cover fuel subsidies and a number of other fisheries subsidies recognised as harmful.[66] Yet, note that there is no definite obligation imposed on the CPTPP parties to refrain from introducing such subsidies. By contrast, an obligation exists to require parties for the use of their 'best efforts'. Tsangalis thinks that 'this provision nonetheless acknowledges the existence of further subsidies which contribute to overfishing and overcapacity beyond those set out in Article 20.16(5) and could perhaps be used as a base from which to eventually provide an outright prohibition on these types of subsidies'.[67]

(2) Subsidies to Fish in an Overfished Stock

CPTPP prohibits subsidies to fish in an 'overfished condition' in Article 20.16(5)(a). How to assess a state of stocks is regulated in a footnote to the provision. Texts in a footnote state that: 'If the stock is at such a low level that mortality from fishing needs to be restricted to allow the stock to rebuild to a level that produces maximum sustainable yield (MSY) or alternative reference points based on the best scientific evidence available'.[68] It further explains that a location of a fish stock will also be considered overfished if the nation in which

percent constitute fuel subsidies. See U R Sumaila, 'A Bottom-Up Re-Estimation of Global Fishing Subsidies' (2010) 12 Journal of Bioeconomics 215.

[64] Gareth Porter, Analysing the Resource Impact of Fisheries Subsidies: A Matrix Approach, UNEP Report, 47, 2004.

[65] CPTPP Article 20.16(7).

[66] Tsangalis, (n47), 21.

[67] ibid.

[68] CPTPP Article 20.16(5)(a), FN 16.

the relevant fishing activity is occurring or a relevant RFMO recognises it.[69]

In its formulation of Article 20.16(5)(a), the CPTPP tries to find a balance between these two views.[70] CPTPP has adopted and applied the general language proposed by the EU (though with the omission of the word 'unequivocally') yet the CPTPP has eliminated much of the ambiguity by including an accurate definition of what a meaning of 'overfished' fish stock shall be.[71]

Although the CPTPP did not use 'the best scientific evidence available' as the appropriate reference point set up in UNCLOS and FAO[72], it does reference to the use of scientific evidence, which implies the conformity with both UNCLOS and the FAO. The CPTPP has also recognised the significant role that RFMOs and states themselves can play in the process of determining the state of fish stocks within their particular jurisdiction. Nevertheless, it is not clear from this CPTPP's formulation what kind of standards have to be adopted by an RFMO for the purposes of evaluating what is 'overfished', and further how incoherencies between RFMOs in the application of the standards might be addressed. It is noteworthy that although a majority of RFMOs have clear and detailed scientific assessment procedures in practice,[73] member states still have disagreements over scientific advice, which unfortunately turned out to be another important factor impairing efforts of RFMOs to combat overfishing to date.[74]

Regardless of a sort of compromise, some argue that Article 20.16(5)(a) could have progressed further in conserving fish stocks.[75] This is because the CPTPP currently prohibits subsidies only to those fish stocks already in an

[69] CPTPP Article 20.16(5)(a), Footnote 16.
[70] Tsangalis, (n66).
[71] CPTPP Article 20.16(5)(a).
[72] Both of which mandate a role for proper scientific evidence and assessment in their approach to fisheries management.
[73] For example, NAFO operates a 'Scientific Council' which is tasked with providing information in relation to stock management, and the advice from which forms the basis of NAFO's conservation and management measures. See Organisation for Economic Co-operation and Development, Strengthening Regional Fisheries Management Organisations (OECD Publishing 2009), 99.
[74] ibid, OECD, 56–57, 99–100.
[75] Tsangalis, (n70).

'overfished condition'. Thus, this regulation would not apply to those stocks that are assessed 'fully fished', as well as the minor portion of fish stocks considered to be underfished.[76] Wold comments, by adopting this restriction instead of simply prohibiting those subsidies that lead to overexploitation and overcapacity, the CPTPP 'has missed an extraordinary opportunity' and its fisheries subsidies provisions 'must be viewed as inadequate to meet the challenges of fisheries management'.[77] On the contrary, it might be argued that the prohibition targeting the most weak, vulnerable, and already overfished stocks was a good place for the CPTPP to start. Therefore, the CPTPP has not failed to recognise the significance of working towards eliminating all kinds of subsidies contributing to overfishing and overcapacity.

2.2.2 General Analysis

One of the CPTPP's priority is to counter illegal, unreported, and unregulated (IUU) fishing by putting the restriction on trade in unlawfully reaped fish and hinder the trans-shipment at sea of such products. According to the environmental chapter, although CPTPP members 'endeavour to improve cooperation internationally'[78], it does not require its members to adopt and implement the FAO. This research claims that such a legal reform of fisheries subsidies amplifies implications to both national and regional levels.

Other committed content includes to have cooperation more closely to strengthen environmental management of these resources, as requested by MEAs, such as the CITES.[79] The strongest obligations in the environmental chapter might pertain to the broad subject of conservation and trade. According to Article 20.17.2, each CPTPP country shall adopt, maintain and implement laws, regulations and any other measures to achieve its obligations under the CITES.

Concerning CPTPP's environmental protection, the last covered area in the

[76] FAO Report estimated in 2013, 31.4 percent of fish stocks were overfished. 58.1 percent were fully fished and 10.5 percent were underfished. See FAO, *The State of the World Fisheries and Aquaculture* (2016) 38.
[77] Chris Wold, 'Empty Promise and Missed Opportunities: An Assessment of the Environment Chapter of the TPP' (Report, 4 January 2016), 16.
[78] Article 20.12: Cooperation Frameworks in the CPTPP.
[79] CPTPP, Chapter 20, Article 20.17.

CPTPP environmental chapter regards biodiversity conservation. CPTPP countries have important objectives yet differing priorities concerning the use and protection of biological diversity. This can also be augmented with a few of provisions existing in the bilateral FTAs between some of the CPTPP countries. Article 20.13.2 in the CPTPP requires that each member 'shall promote and encourage the conservation and sustainable use of biological diversity, in accordance with its law or policy.' CPTPP environmental chapter also requires transparency of government programmes and activities 'related to the conservation and sustainable use of biological diversity' and establishes commitments to cooperate on 'the protection and maintenance of ecosystems' and 'access to genetic resources and the sharing of benefits arising from their utilization'.[80] It also recognises the importance of 'respecting, preserving and maintaining knowledge and practices of indigenous and local communities embodying traditional lifestyles'.[81]

Apparently, the CPTPP is considered as an unprecedented single 'greenest' trade agreement, as it pertains to a wide scope of law that discourages abusive environmental practices. Nevertheless, the environmental chapter still faces criticism. First of all, during its negotiation, the environmental groups in the US had protested the CPTPP as a fast track without any transparency and environmental consideration.[82] One of the criticisms states on the weaker legal texts. For example, the Sierra Club suggested the adoption of the regulations that are abided by the regional fishing management organisation in the TPP. However, the CPTPP fails to do so, and also fails to mention the regulations arising from the fishing MEAs, that is, the 2009 FAO Agreement. One more concern that has drawn a lot of attention on the CPTPP is the absence of the climate change legal regime. The CPTPP failed to adequately address the challenges to trade and economic growth posed by global warming. In conclusion, the CPTPP as a regional level trade agreement, it is expected to do a lot more as opposed to the existing PTAs.

[80] Article 20.13.6 in the CPTPP.
[81] Article 20.13.3 in the CPTPP.
[82] Sierra Club, TPP Text Analysis: Environment Chapter Fails to Protect the Environment, (2015) 1,1, available at: <https://www.sierraclub.org/sites/www.sierraclub.org/files/uploads-wysiwig/TPPanalysis.pdf> accessed 9 March, 2019.

Concerning current impact that the CPTPP's fishery provisions have on fishery sustainability in the APEC region, observations address that impact of the CPTPP could make a contribution to cutting down the provision of subsidies that lead to fishing capacity enhancement.[83] Moreover, global large fishing countries and essential fishery subsidisation countries are the signing parties of the CPTPP. Hence, the CPTPP's successful outcome would be a vivid model that sustains fisheries resources in the APEC region and beyond.[84]

Other opinion points out that CPTPP's fisheries subsidies provisions are ambitious texts comparing to the WTO Chair Text in 2007, and the texts are also much more specific than the UN SDGs.[85] CPTPP attempts to establish the fisheries subsidies discipline when fishery stocks face 'overfished condition'. Particularly, CPTPP's environmental chapter provides a specified definition of overfished stocks and further offers respect to definitions of the fishery stocks developed by national fishery management bodies and RFMOs.[86] The environmental chapter of the CPTPP requests that signing countries should report any kind of subsidy within one year of the CPTPP's entry into force and every two years thereafter. The environmental chapter of the CPTPP establishes an environmental committee, which reviews prohibited fisheries subsidies at regular base in light of 'the objective of eliminating subsidies that contribute to overfishing and overcapacity'.[87] Furthermore, dispute settlement in the CPTPP's environmental chapter is subject to hard law. This dispute settlement mechanism shows some extent of enforcement power that the CPTPP carries to eliminate harmful fisheries subsidies. For example, some steps, including consultation mechanisms, are required before a signing party can make use of the dispute settlement body.[88]

3. APEC's Initiatives of Regulating Fisheries Subsidies

In the fourth APEC Ministerial Meeting on Food Security in September 2016,

[83] U R Sumaila, Subsidies Weaken the Sustainability of Global Fisheries While Increasing Inequality Among Fishers, 68.
[84] ibid.
[85] Liam Campling and Elizabeth Havice, 'Fisheries Subsidies, Development and the Global Trade Regime' 75.
[86] ibid, 76.
[87] ibid.
[88] Article 28 of the CPTPP's environmental chapter.

APEC leaders also reinforced their determination to prevent, deter and eliminate IUU fishing.[89] Additionally, the Chair of the 4th APEC Ocean-Related Ministerial Meeting reaffirmed that 'We are facing many challenges, including damage of the marine coastal environment and depletion of fishing stocks.'[90]

As all previous chapters discussed, since the Doha Round, several international organisations commenced the negotiation of the regulation of fisheries subsidies. In addition to other intergovernmental discussion and their suspended efforts of regulating fisheries subsidies, APEC is believed to be potentially a favourable forum for dealing with fisheries subsidies. It is worth pointing out that in the APEC context, subsidies can be considered in the context of far-reaching trade liberalisation without the fear of trade sanctions that inevitably accompany the subject in the WTO. APEC is committed to integrating environmental considerations 'in all sectors and at all levels' of its work. This process moves forward against the backdrop of the 'Osaka Action Agenda'[91], aimed at trade liberalisation and facilitation.

Ministers from the 21 economies APEC alliance meeting in Xiamen, China in August 2014 depicted a new partnership framework that would establish closer regional collaboration around ocean-related challenges and policies.[92] This Xiamen Declaration establishes an integrated and sustainable joint oceans-strategy for APEC member economies with a particular focus on four key priority areas. These include: coastal and marine ecosystem conservation and disaster resilience; food security and food-related trade; marine science, technology and innovation, as well as the blue economy. The blue economy, including trade in both wild and farmed fish stocks, is a key sector for the APEC region that counts nine of the world's top ten fishing nations in its ranks. Essential measures identified by the declaration include scaling up marine protected areas, collaboration on navigating the effects of climate change, tackling illegal fishing activities, and facilitating sustainable regional trade in fish

[89] Trade of Fisheries Products and Fisheries Subsidies in APEC, 5.
[90] APEC Ministers outline new partnership framework on oceans, Xiamen, China 29 August 2014. Issued by the 4th APEC Ocean-Related Ministerial Meeting, available at: <https://www.apec.org/Press/News-Releases/2014/0829_xiamen> accessed 10 March 2019.
[91] APEC, How APEC Operates, available at: <https://www.apec.org/About-Us/How-APEC-Operates/Action-Plans> accessed 10 March 2019.
[92] n90.

and fisheries products.[93]

The Ocean and Fisheries Working Group (OFWG) in the APEC, formed in 2011, specifically addresses marine issues. It also helps economies respond to these market access challenges by supporting the development and regional implementation of global fisheries and aquaculture practices across the seafood value chain. The vision of the OFWG is well-managed and sustainably used fisheries and aquaculture that yield optimal economic value to APEC economies. It actively pursues regional capacity building projects and other activities related to issues, such as: 'Destructive fishing practices, Illegal, unregulated and unreported fishing, Impacts of marine pollution on coastal habitat, Coral reef conservation, Sustainable development of aquaculture'. Overall, any major initiative or project to address fisheries issues would start at the OFWG level in the APEC. The strength of APEC is in its focus on regional collaboration and consensus about problems and their solutions, particularly, as they relate to the promotion of economic growth through a commitment to open trade, investment and economic reform. This includes the fisheries sector.[94]

The OFWG has set its goals during year 2016 to 2018.[95] Objectives include promoting the conservation of the marine environment and the sustainable use of fisheries, aquaculture and ocean ecosystems in the APEC region. This is to ensure long-term economic benefits; enhancing the understanding of the role of oceans, sustainable fisheries, responsible development of aquaculture and sustainable use and management of marine resources to regional food security.

The OFWG economies will do this by working to facilitate free and open trade in the region and promoting sustainable use of fisheries, aquaculture, and marine ecosystem resources and related goods and services. The OFWG will promote cooperation amongst its members, governments, academia, private

[93] Xiamen Declaration, Fourth APEC Ocean-Related Ministerial Meeting-AOMM4 Towards New Partnership through Ocean Cooperation in the Asia Pacific Region, available at: <http://mddb.apec.org/Documents/2014/MM/AOMM/14_aomm_jms.pdf> accessed 9 March 2019.

[94] APEC Harvesting Currency, The Importance of fisheries and aquaculture for APEC economies, 4.

[95] APEC, Ocean and Fisheries Working Group, Strategic Plan 2016–2018.

industry, and regional and international organizations to advance this process. The OFWG will continue to implement the directives of the Seoul Oceans Declaration (2002), the Bali Plan of Action (2005), the Paracas Declaration and Action Agenda (2010) and the Xiamen Declaration (2014) through research, capacity building, information and best practices sharing and dissemination, and cooperation with other APEC fora.

Apart from the OFWG, the APEC institution that appears to be most appropriate to deal with the issue of fisheries subsidies in the context of both economic and environmental policies is its Economic Committee. The Economic Committee is a forum for dialogue on both trade liberalisation and sustainable development in APEC member economies. Subsidies are certain to intrigue political sensitivities in the APEC Economic Committee, as it does in every other international forum. Nevertheless, due to its broad and cross-sectoral mandate, the Economic Committee could consider the subject of fisheries subsidies without having to put the term on its work programme.[96]

Three advantages arising from the adoption in the Economic Committee include firstly it would locate the discourse in the context of fisheries management and sustainable development in general, rather than in the arena of trade liberalisation. In other words, it would deal with the problem in the context of economic instruments rather than as a trade policy issue, thus steering clear of the contentious problem of trade sanctions. The economic instruments approach should lend itself well to cooperation among economists and fisheries management specialists, thus depoliticizing the issue. Secondly, the concept of using economic instruments to manage fisheries and the environment is one with which APEC member economies have already become comfortable. Economic instruments use market signals rather than direct regulation to manage environmental problems, modifying relative prices through taxes, charges or other economic incentive measures, including subsidy removal. It would be more difficult for representatives of member economies in the Economic Committee to reject an economic instruments approach than a directly trade-related approach to fisheries subsidies. Thirdly,

[96] Gareth Porter, 'Natural Resource Subsidies, Trade and Environment: The Cases of Forests and Fisheries', Centre for International Environmental Law (1998), 68.

the economic instruments approach could take as a point of departure basic principles on natural resource pricing that have been agreed to over the past decade both in APEC Agenda 21 and within the OECD. As noted above, OECD ministers have endorsed the 'User-Pays Principle' as part of national pricing policies aimed at economising on the use of the natural resource. They have also adopted a pricing rule for renewable resources that the price should cover both the resource itself and the externalities associated with its production and use as well as the depletion cost of short-run consumption. In the Agenda 21, it clearly committed to integrating environmental costs in the decisions made by both of consumers and producers. It also committed to overturning the tendency to consider the environment as a 'free food' and to passing these costs on to other countries, other parts of society, or to future generations. The Agenda 21 further committed to moving more extensively towards integration of social and environmental costs into social and economic activities. Hence, it is highly likely that prices will reasonably reflect the correlative scarcity and whole value of resources and then contribute towards the prevention of environmental degradation.[97]

This economic instrument approach would make it possible to raise the issue of implicit subsidies. By focusing on the pricing of natural resources, government officials and NGOs would be able to broaden the discussion of subsidies well beyond the formal definition that will be used by the OFWG for its data-collection work.[98]

The most urgently needed subsidy reform in the fisheries sector, therefore, is to eliminate the system under which fishermen must compete against each other for shares of the catch.[99] In order to mitigate the issue, a number of international fora have considered the importance of reforming natural resource management policies and practices that directly or indirectly subsidise extraction or harvesting of the resource and contribute to resource depletion as well as distorting trade in many cases.

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[97] Gareth Porter, 'Natural Resource Subsidies, Trade and Environment: The Cases of Forests and Fisheries', Centre for International Environmental Law (1998), 68.
[98] ibid.
[99] ibid.

In terms of APEC region's reform on fisheries subsidies, there are several member economies that have expressed continuous support for subsidies disciplines in the WTO and other fora. Nonetheless, there was also a comparable group of major Asian fishing countries who were opposed to broad fisheries subsidies disciplines at the WTO. In August 2014, during the fourth APEC Ocean-Related Ministerial Meeting, the ministers outlined a new non-binding framework for closer collaboration on ocean-related challenges. The declaration calls for improved transparency and the reporting of existing fisheries support programs to the WTO, the eventual elimination of programmes that contribute to overcapacity and overfishing, and an abstention from introducing new subsidy programmes. This new framework was endorsed by APEC leaders in Beijing, China in November 2014.[100]

Considering the differences among members related to how fisheries subsidies should be addressed, a unilateral declaration and/or trade agreement is unlikely. A more realistic outcome would be for OFWG to keep highlighting the impacts of negative fisheries subsidies, which will encourage all APEC members to consider fisheries subsidies reforms. The OFWG can produce technical papers and declarations to inform APEC members and drive overall strategy. More importantly, the OFWG appears to have the capacity to support a reform process, both at the national and regional level.[101]

APEC's Initiative: Reform on Fisheries Subsidies

The following are some other activities APEC could undertake.[102] APEC could produce non-binding declarations, commitments, or joint statements that make recommendations on state policies and activities involving their respective fisheries and fisheries subsidies. APEC could conduct data gathering surveys and research on its member countries concerning economic subjects, including fisheries subsidies. APEC, through the OFWG, could produce guidelines to incentivise and help countries implement their own plans to reform or reduce

[100] Andrew Rubin, Eric Bilsky, Michael Hirschfield, *Paths to Fisheries Subsidies Reform* 41, available at: <http://oceana.org/sites/default/files/732/rockefeller_report_final_web-version_lowerrez.pdf> accessed on 9 March 2019.
[101] ibid.
[102] ibid, 42.

harmful subsidies to their domestic fisheries.

4. Reference to EU State Aid Law that Regulates Fisheries Subsidies

4.1 Different Approaches that Provide Support to the Fisheries Sector in the EU

The first support is state aid in the EU, which is under EU competition law and regulations. EU member states have more flexibility and freedom in providing state aid to the fisheries and aquaculture sectors, in the structure of grants, interest subsidies, loans, capital injections, risk finance measures or guarantees. Hence, EU member states do not have to notify the EU if such aid is within *de minimis* levels. During 2014-2010, the maximum accumulating amount of *de minimis* aid to the fishery and aquaculture that may be granted by all EU member states is EUR 271 million per year (that is, this amount can be provided by EU member states without notifying the European Commission).[103] Therefore, for the fisheries subsidies that have been informed, merely few disagreements have been raised to the European Commission. Among the few cases that the European Commission further looked into, the outcome showed a less optimistic decision with no recovery (that is: the EU member state does not have to redeem the offered state aid from the beneficiary).[104] This indicates that there has been no single case where informed state aid in the fisheries sector has been penalised. After the Council Regulation No 744/2008, between the period of 2008-2010, public aid to the fisheries sector was exempted from EU competition rules, which serves as an interim specific action with an aim to promote the restructure of EU fishing fleets that are affected by the financial crisis.[105]

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[103] Commission Regulation (EU) No 717/2014 on the application of Articles 107 and 108 of the Treaty on the Functioning of the European Union to de minimis aid in the fishery and aquaculture sector.

[104] The South Centre also summarised the seven proposal into an analytical list. See South Centre's Trade for Development Programme, 'The WTO's Fisheries Subsidies Negotiations' (2017) SC/AN/TDP/2017/5 South Centre Analytical Note 19; also see EU database of competition cases, available at: <https://ec.europa.eu/competition/elojade/isef/index.cfm> accessed 9 January 2020.

[105] Council Regulation (EC) No 744/2008 instituting a temporary specific action aiming to promote the restructuring of the European Community fishing fleets affected by the economic crisis.

Other support consists of three types of approaches.[106] First of all, it is subsidies provided through the European Maritime and Fisheries Fund (EMFF) during 2014-2020, European Parliament has approved new spending rules for a fund dedicated to help support the bloc's fisheries industry.[107] The EMFF supports to implement EU's Common Fisheries Policy and supersedes the European Fisheries Fund for the years 2007-2013. Accordingly, the entire allocated amount under EMFF is EUR 6.4 billion during 2014-2020 which transfers into EUR 800 million per year.[108]

Secondly, during the period between 2014 and 2020, Horizon 2020 is the EU Research and Innovation Programme (with a total available grant of EUR 80 billion). Within the Horizon Work Programme 2016-2017, 'Blue Growth – Demonstrating an ocean of opportunities' is one focal area which carries the objective of more job creation and growth in the EU's fisheries sector. For 2016-2017, this 'Blue Growth programme' under Horizon 2020 has a total budget of EUR 130.40 million (EUR 82 million for 2016 and EUR 42.40 million for 2017 separately).[109]

Thirdly, pursuant to Article 14 of Council Directive 2003/96/EC,[110] fuel subsidies for fishers within the EU are mainly composed of nationally defined fuel tax exemptions with regard to the excise taxes directed at specific fuels. In addition, based on a study for the European Parliament, the overall annual

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[106] The South Centre also summarised the seven proposal into an analytical list. See South Centre's Trade for Development Programme, 'The WTO's Fisheries Subsidies Negotiations' (2017) SC/AN/TDP/2017/5 South Centre Analytical Note 18–19.

[107] EU Commission, European Maritime and Fisheries Fund (EMFF), available at: <https://ec.europa.eu/fisheries/cfp/emff_en> accessed on 9 March 2019.

[108] EU Commission, The European Maritime and Fisheries Fund 2014–2020, available at: <https://ec.europa.eu/fisheries/sites/fisheries/files/docs/body/2015-cfp-funding_en.pdf> accessed on 9 March 2019.

[109] Small-scale fisheries and 'Blue Growth' in the EU, study for the European Parliament's Committee on Fisheries, Section 2.3 – Support provided for Blue Growth, April 2017, available at: <https://www.europarl.europa.eu/RegData/etudes/STUD/2017/573450/IPOL_STU(2017)573450_EN.pdf> accessed on 9 March 2019.

[110] Council Directive 2003/96/EC of 27 October 2003 restructuring the Community framework for the taxation of energy products and electricity: '[…] Member States shall exempt the following from taxation under conditions which they shall lay down for the purpose of ensuring the correct and straightforward application of such exemptions and of preventing any evasion, avoidance or abuse: ...(c) energy products supplied for use as fuel for the purposes of navigation within Community waters (including fishing), other than private pleasure craft, and electricity produced on board a craft. […]'.

foregone revenues as a result of the fuel tax exemptions and reductions for fishermen during 2002-2011 are estimated at between EUR 1.05 and 1.3 billion.[111]

4.2 An Overview of EU State Aid Law Focusing on Fisheries Subsidies

Despite these various approaches, EU Parliament addressed that 'the measures that had been in place from 1992 to 2002 Regulation (EEC) No 3760/92 were not sufficiently effective to halt overfishing, and the depletion of many fish stocks continued at an even faster rate'.[112] The Parliament further affirms that the essential objective of the 2002 reform was to ensure a sustainable fishery by guaranteeing stable jobs along with incomes for fishermen, and supplying healthy fisheries sources to consumers, while conserving the vulnerable equilibrium of the ocean environment and marine ecosystems. Hence, the 2002 reform successfully introduced a long-term sustainable approach to fisheries management, which includes the preparation of urgent measures and involves multiannual recovery plans for fishery stocks outside safe biological limits and develops multiannual fishery management plans for other stocks.[113]

The critical situation of fishery stocks led to a reform consisting of three regulations. The first regulation regards framework. Regulation (EC) No 2371/2002 is on the conservation and sustainable exploitation of fisheries resources, which repeals Regulation (EEC) No 3760/92 and (EEC) No 101/76. The second regulation is Regulation (EC) No 2369/2002 states the detailed rules and arrangements regarding structural assistance in the fisheries sector in the European Community, which amends Regulation. The final regulation is Regulation (EC) No 2370/2002 establishing an emergency Community measure for scrapping fishing vessels.[114]

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[111] Fuel subsidies in the EU fisheries sector, study for the European Parliament's Committee on Fisheries, July 2013, available at:< https://www.europarl.europa.eu/RegData/etudes/note/join/2013/513963/IPOL-PECH_NT(2013)513963_EN.pdf> accessed on 9 March 2019.

[112] EU Parliament, available at: <https://www.europarl.europa.eu/ftu/pdf/en/FTU_3.3.1.pdf> accessed on 9 March 2019.

[113] ibid.

[114] ibid and the South Centre also summarised the seven proposal into an analytical list. See

Whilst construction fisheries subsidies were originally prohibited in 2002 over concerns that Europe's fishing fleet was already overcapacity, a proposal to have construction subsidies reintroduced scraped through the parliament's Fisheries Committee. Prohibition on subsidies on new fishing boats is another new movement introduced by the EU Parliament and Commission in October 2013 to improve its Common Fisheries Policy (CFP). Parliamentarians voted on 23rd October 2013 to allow the EUR 6.5 billion EMFF to be spent on the modernisation of engines and selective fishing equipment; however, the parliamentarians notably rejected a controversial proposal to reintroduce vessel construction subsidies.[115]

Critics, including Oceans2012, countered that vessel modernisation and construction subsidies remained or even generated overfishing. [116] Nevertheless, proponents of overturning the ban on vessel modernisation and construction subsidies – including the legislation's rapporteur Alain Cadec – argued that the EU's outdated and ageing fleets created a lot of risks for fishermen's safety, the marine environment as well as fishery resources.[117]

Regardless of the debate, several other fisheries subsidies were approved by the EU Parliament. Enhancement of the replacement and modernisation of engines of fishing vessel was amongst all these measures since the new engine is at least 40% less powerful than the engine it replaces. In addition, EU Parliamentarians signed off on a proposal to assess the needs and authorise bids of up to EUR100,000 to help young fishermen enter and engage in the fishing industry with small-scale fishing industry, in particular, second-hand fishing vessels.[118]

South Centre's Trade for Development Programme, 'The WTO's Fisheries Subsidies Negotiations' (2017) SC/AN/TDP/2017/5 South Centre Analytical Note 23.

[115] ICTSD, BIORES 7(4) European Parliament upholds ban on fishing vessel construction subsidies <http://www.ictsd.org/bridges-news/biores/news/european-parliament-upholds-ban-on-fishing-vessel-construction-subsidies> accessed on 9 March 2019.

[116] 'Overfishing is a problem across the EU', available at: <https://www.dw.com/en/overfishing-is-a-problem-across-the-eu/a-17181163> accessed on 9 March 2019.

[117] ICTSD (n115).

[118] ibid; EU Commission, 'Public expenditure in the fishery and aquaculture sector', available at: <https://ec.europa.eu/fisheries/cfp/state_aid_en> accessed on 9 March 2019.

The approved subsidies were, however, also contested by critics – who argued that the modernisation expenses would undermine the CFP's goal of improving the sustainability of fishing and fishery resources.[119] The Green-European Free Alliance coalition voted as a group against the proposals, and they claim that the subsidies will lead to over-equipment of fishing fleet.[120] Moreover, Tony Long, the Director of the WWF's European Policy Office mentioned in a statement: 'Funding for fleet renewal ended in 2002 and a reintroduction of these subsidies would have dangerously increased the capacity of the fleet, given boats a longer range and resulted in the destruction of the few remaining healthy fish stocks'.[121]

Furthermore, there was wider support for grants that would enhance fishery management in the EU. Concerning efforts to reduce bycatch – non-target fish that is discarded by fishing vessels – funds will therefore be available to subsidise the purchase of selective fishing equipment. Funds will also be utilised to gather and store better data about the health of the EU's depleted fish stocks.[122] Finally, environmental protection organisations were optimistic about the overall package. For example, WWF, which closely engages with fisheries subsidies policy, stated that refusing the construction subsidies proposal was significant to help ensure European fisheries sector remain sustainable.[123]

4.3 Implications of EU State Aid Law on Fisheries to Establish Regulations of Fisheries Subsidies in the APEC Region

EU state aid law on the fisheries sector works as a reference for the regulations of fisheries subsidies in the APEC for two main reasons. One is EU is a long-standing and supranational regional body. While APEC functions based on soft-law approach and faces criticism to solve fishery problems, EU's institutional structure and its regulations and associate implementation can be a reference

[119] ICTSD (n115).
[120] ibid.
[121] ibid.
[122] ibid.
[123] ibid.

for the regulation of fisheries subsidies in APEC. The other factor is the regulations in EU state aid law on the fisheries sector are binding and advanced regional rules.

EU has various new approaches to support the fisheries sector through EMFF and state aid of member states. The Regulation No 508/2014 of the Parliament[124] directs EU member states how to use European Maritime and Fisheries Fund and repealed a series of Regulations. Article 11 of the Regulation can be a helpful reference to the regulation of fisheries subsidies in the APEC region. The provision restricts six fishing activities in the EMFF. These rules include: operations increasing the fishing capacity of a vessel or equipment increasing the ability of a vessel to find fish; the construction of new fishing vessels or the importation of fishing vessels; he temporary or permanent cessation of fishing activities, unless otherwise provided for in this Regulation; exploratory fishing; the transfer of ownership of a business; direct restocking, unless explicitly provided for as a conservation measure by a Union legal act or in the case of experimental restocking. These prohibited operations can apply to the APEC region since several major fishing countries adopt these behaviours and face similar ecosystem problems.

5. Conclusions

This chapter has demonstrated regulations in relation to fisheries in the trade regimes in the APEC region, specifically, this chapter analyses environmental provisions of PTAs in the APEC as well as the policy declaration on fishery governance in APEC (acted as a regional trade forum with notable environmental governance). In response to the identified causes of depletion of fish, such as increased fishery trade and production, analysis in this chapter has also showed that the environmental provisions of PTAs are functional instruments for environmental protection. This is because the PTAs in the APEC region has evolved with time and the dynamic of the international community to integrate a wider scope of environmental protection. Moreover, this scope also shows a range of environmental issues that are core elements of regional environmental governance in APEC. Hence, the evolution of the

[124] Regulation No 508/2014 of the European Parliament and of the Council of 15 May 2014, L149/1.

environmental provisions of the PTAs, as proved in this chapter, clearly addresses trade regimes' function for environmental protection.

In addition, Article 20.16.5 of the CPTPP is a regulatory standard of fisheries subsidies in APEC. Given the CPTPP is ratified and entered into force in 6 of 11 parties of the Agreement, the fisheries subsidies discipline can be expected to be implemented in a near future. Since the CPTPP prohibits subsidies to fish stocks that is in an 'overfished condition', only specific fisheries subsidies, relying to the definition of the FAO and RFMOs, will be subject to this provision. Despite that CPTPP does not seem to be as ambitious as the WTO negotiations on the fisheries subsidies discipline, due to – most importantly – commitments in the environmental chapter of the CPTPP are subject to 'hard law' of environmental dispute settlement, this thesis argues that the CPTPP is not only a novel regime of the fisheries subsidies discipline, but also provides a workable discipline of fisheries subsidies in the APEC region.

The CPTPP has important fisheries subsidies regulations. Given the signed legal texts in the CPTPP and other legal reform efforts made to refine the fisheries discipline, the regulations of fisheries subsidies of the CPTPP could be effective for sustaining the fisheries sector. The reasons underlying this effectiveness, according to Young, consist of development of inter-regime and the open and transparent deliberation by influenced stakeholders in negotiations of the WTO and in the current prohibitions in institutions, such as the FAO. This development requires outreach between international trade and other regimes, which shows less reliance on uniform membership by the entire States in international regimes.[125] Moreover, this regime interaction stimulates innovative changes to the convention of sovereign underpinnings of international law since the inter-regime concept leads to legitimacy that arises from transparency, open negotiation and deliberation.[126]

[125] Margaret Young, 'Energy Transition and Trade Law: Lessons from the Reform of Fisheries Subsidies', Melbourne Legal Studies Research Paper No 746, 3.
[126] ibid.

Chapter Seven Implications of the Thesis

1. Introduction

This thesis has six chapters to answer the main research question, which enquires the extent to which international trade law can provide enhanced regulations of the fisheries sector in APEC with a view towards fishery sustainability. As described in Chapter One, the fisheries sector is essential for food security and economic growth of fishery trade. The analysis completed in Chapter One further showed that fishing remains an industry supporting significant local employment in many APEC member economies, in particular developing economies. In addition to its economic and socio-economic significance, the fisheries sector is also crucial for regional integration in the APEC. Its outsised importance in regional integration can be attributed to geopolitics, as outlined below, and to challenges arising from fisheries management policies in the APEC. It follows, then, that because the fisheries sector and the marine environment in the APEC region are presently being affected by a number of issues, including unsustainable marine uses, expanding populations[1] and economic activities,[2] so too do these issues affect the regional integration of the APEC.

As Chapter One discusses, the fisheries sector in APEC faces a crisis in the depletion of fish, which could lead to permanent changes in the marine ecosystem as well as to the extinction of several fish species. According to its assessment of the state of the world's major fish stocks in 2008 (based on the information then available), FAO concluded that 52% of fishery resources were already fully exploited and that 19% were overexploited, with fishery depletion accounting for 8% of the total loss of capacity.[3] Eight years later, measures of the state of fish stocks show more worrying signs. Today, approximately 90%

[1] The APEC region's population is predicted to increase twice over within three decades, which results in environmental issues such as resource exploitation, pollution and the loss of habitats. Aldo Chircop, 'Regional Cooperation in Marine Environmental Protection in the South China Sea: A Reflection on New Directions for Marine Conservation', Ocean Development & International Law, 336–337.

[2] ibid. For example, there are major trade routes across the region; as a result, shipping might be a source of pollution of the marine environment, despite the fact that the effects of spills have been described as moderate.

[3] FAO, The State of World Fisheries and Aquaculture (SOFIA) (FAO 2008) 30.

of total fish stocks are estimated as overexploited or fully exploited.[4] The APEC and its fisheries sector is similarly confronted by the acute marine problem of the depletion of fish. Estimates of fish stocks in the APEC region indicate that many fish stocks are either in a condition of collapse or are overexploited.[5] Aside from its status as an urgent marine problem, the exhaustion of fishery resources promises also to cause devastation to the economies of those APEC communities whose livelihoods significantly depend on prosperous and healthy fisheries and on fisheries-related resources.[6]

In Chapter Two, since APEC confronts the crisis of depletion of fish, this thesis examined the causes of the critical environmental problem. Therefore, four causes have been identified, including the effects of the open-access nature of fishery resources, unsustainable exploitation of fish, an increased fishery trade and production and the most significant issue, use of subsidies to the fisheries sector. Next to the causes identification, this thesis reviewed the current fishery management and policy in APEC. Pursuant to these identified causes, Chapter Three and the following chapters were legal analysis of effectiveness of legal regimes in international law towards fishery sustainability.

Chapter Three explored the effectiveness of the international law of the sea and international environmental law on sustaining fishery in the APEC region. This chapter pinpointed important fishery rules in relation to key elements of fisheries management and governance. The review of these rules determined whether or not subsidies-related provisions exist under the international law of the sea and international environmental law. The conclusion in this chapter addressed that there is limited effectiveness in the international law of the sea and international environmental law due to its voluntary nature and obvious weakness of the international law of the sea and international environmental law on fisheries in the APEC region. Other reasons include the issue of States' compliance with these regimes in the practice of the international law of the sea

[4] FAO, The State of World Fisheries and Aquaculture (SOFIA) (FAO 2016) 38.
[5] All these alarming figures highlight the urgency with which international action and cooperation must protect the sustainability of marine fisheries resources. Huani Zhu and Carlos Kuriyama, 'Trade of Fisheries Products and Fisheries Subsidies in APEC,' APEC Policy Support Unit, 16 Policy Brief 4–6.
[6] Chen-Ju Chen, *Fisheries Subsidies Under International Law*, Springer, 5.

and international environmental law on fisheries. Moreover, concerning the function of dispute settlement mechanism under the international law of the sea, disputes within states' EEZs are not subject to the mechanism without the permission. Therefore, this means that while most disputes take place in the EEZs, the effect of international law of the sea on resolving disputes is not widely convinced.

Chapter Four analysed issues with fisheries subsidies in APEC, from perspectives of various and intense discussions on subsidies' definition at international organisations, such as OECD, FAO and UNEP; specified categories of fisheries subsidies in APEC; effects of fisheries subsidies on the environment, market distortion and sustainable development, as well as political economy issues along with involved stakeholders surrounding the regulation of fisheries subsidies. This chapter has paved way for next chapter discussing the regulation of fisheries subsidies at the WTO's negotiations.

Chapter Five described the WTO negotiations on fisheries subsidies. It highlighted milestones and notable achievements in the selected negotiations, such as Doha Round, which agreed on the linkage between fishery trade and fishery sustainability and Hong Kong Round. This chapter analysed the three grouped voices structured in Hong Kong Round – 'Friends of Fish', 'Core Countries' and 'Emerging Fishing Countries'. The final section evaluated the 11th ministerial conference and retrieved significant points from the new seven proposals submitted to the WTO. The significances consist of prohibition on IUU fishing, prohibition on subsidies to overfished and unassessed stocks and subsidies that lead to overcapacity and overfishing. Despite these proposals and progress made at the 11th ministerial conference, there is still no consensus on achieving the regulation of fisheries subsidies at the WTO.

Chapter Six evaluated the extent to which international trade law can provide enhanced regulations of the fisheries sector in APEC. This chapter selected PTAs made into fore between 1995 and 2015 to assess their environmental provisions' impact on fishery sustainability followed by an examination of environmental chapter of the mega regional trade agreement, CPTPP. In addition, this chapter examined APEC's initiatives in protecting fisheries and

reforming the fisheries subsidies discipline. Next to CPTPP and APEC is a reference to EU fishing and state aid law on the fisheries sector. This thesis analysed current approaches to (financially) support the fisheries sector and since the development of EMFF and the Council Regulation (EU) 508/2014, this chapter made suggestion to consider integrating Article 11 of the Regulation into the regulation of fisheries subsidies in the APEC region.

2. Implications for International Law and the Fisheries Sector in the APEC

This thesis explored that there is an evolution of the regulation of fisheries under international law. From the SDG 14.6 in 2015 to the WTO recent negotiations on the regulation of fisheries subsidies at the Buenos Aires Conference, international law has experienced a change from fragmentation of international law to integration of international law, in the context of the fisheries subsidies discipline.

This thesis concludes four points of implications for international law and the fisheries sector in the APEC. These four implications unfold as below.

2.1 Cooperation of International Legal Regimes

The first implication of this thesis is it has discovered a shift from fragmentation of international law to integration of international legal regimes with a goal to achieve fishery sustainability. Moreover, there is further cooperation of various international legal regimes. As the Chair Text 2007 and the new seven proposals submitted for the 11th WTO Ministerial Conference clearly demonstrate, the forthcoming regulation of fisheries subsidies is an example of integrating various international legal regimes, in particular incorporating the international law of the sea into the fora of international trade law and the CPTPP.

2.2 Intensify Intra-regional Cooperation in APEC

As the analysis of Chapter Two shows, this thesis suggests a necessity to intensify intra-regional cooperation for fishery sustainability amongst member economies in APEC. The primary reason is at present there is an absence of this cooperation along with results of poor regional fishery management, and

that the depletion of fish stocks is a critical problem. Moreover, the APEC region has witnessed a number of severe marine disputes. Based on these rationales, this thesis claims to intensify intra-regional cooperation in APEC.

2.3 Require stakeholders' Political Wills and Commitment

Given findings of this research, this thesis suggests more concrete stakeholders' political wills and commitment to avoid the crisis of depleted fish stocks. Since depletion of fish stocks is not inevitable, stronger and committed government action would be necessary. Thus, considering this depletion crisis along with evidence found in this research, one of this thesis's implications is advocating specific delegates' political wills and commitment.

2.4 Coordinate and Consider Domestic Voice in Relation to Fisheries Issues in APEC Member Economies

In addition to necessary stakeholders' political wills and commitment, a final implication of this thesis argues to consider domestic voices, such as fishing industry and environmental NGOs, in all APEC member economies. Domestic voice significantly matters to sustain fisheries by reflecting and responding their needs and actual problems to regulators in the fisheries sector. Hence, the last implication that this thesis addresses is to coordinate and consider domestic voice.

3. Future Research

For future research, this thesis aims to commence a new project on evaluating law-making issues in the fisheries subsidies discipline at a multilateral level. Drawing from the discussion and research outcomes of the previous chapters, it is clearly difficult to establish the regulation of fisheries subsidies at the WTO. In addition, there is limited effectiveness of the international law of the sea and international environmental law on fishery sustainability. Given the emergency of preserving fish stocks and fishery natural resources, it is necessity to develop the fisheries subsidies discipline at a multilateral level.

Law-making approaches in the fisheries subsidies discipline at the WTO is a heated debate. Legal positivists distinguish between hard and soft law with a

binary binding/non-binding dichotomy.[7] Hard law is therefore defined as enforceable rules with precise condition and a tough enforcement system, while soft law, non-binding law, means indicative standards. Gregory Shaffer, Robert Wolfe and Vinhcent Le argue that informal law can help regulate fisheries subsidies whilst the WTO has not achieved consensus on the binding regulation of fisheries subsidies. They advise that informal legal approaches, such as trade policy review mechanisms of member states and notifications on fisheries subsidies at the WTO, can possibly achieve an objective of disciplining fisheries subsidies. In other words, informal law can function as complements with existing subsidies rules in the SCM Agreement towards fishery sustainability.

According to the intense discussion on law-making approaches in the fisheries subsidies discipline, a new project will focus on the extent to which informal law functions in the discipline of fisheries subsidies at a multilateral level towards fishery sustainability.

[7] Gregory C Shaffer and Mark A Pollack, 'Hard Vs. Soft Law: Alternatives, Complements, and Antagonists in International Governance', 94 Minnesota Law Review 706(2010), 712–717.

Chapter Eight Conclusions

1. Introduction

In this thesis, Chapter Three analysed the international law of the sea and international environmental law on fisheries — both of which are non-trade regimes — for how they prevent the depletion of fish stocks and address its causes. Based on this analysis, Chapter Three concluded that both the international regimes discussed have limited effects on fishery sustainability in APEC because of their voluntary nature. Additionally, these non-trade legal regimes incline more toward the management and conservation of the oceans and fishery resources rather than toward disciplining fisheries subsidies.

Besides the international law of the sea and international environmental law on fisheries, fishery sustainability is also enshrined in international trade law, despite the fact that sustainability is not the principal objective of the international trade regime.[1] As Chapter Two identifies, the use of environmentally harmful subsidies to the fisheries sector in APEC is the single most aggravating influence upon the depletion of fish stocks, necessitating that every possible implementation is explored and its disciplinary utility assessed. For this reason, international trade law, as much as the two regimes in the WTO and the APEC region aforementioned, warrants discussion for the forms of subsidies regulations it might uniquely offer in the effort to discipline the use of fisheries subsidies and contain depletion. Such will be the focus of this chapter's conclusions will analyse, especially, how the WTO (the chief institution governing international trade) regulates subsidies of governments. More specifically, Chapter Eight will indicate how subsidies regulations can doubly function as fisheries subsidies disciplines. The acknowledged diversity of issues in the area of fisheries subsidies has invited a concomitant explosion in legal responses, as should be recalled from Chapter Two. In turn, these responses have implicated and invoked international trade law by virtue of their sheer variety, such that any appraisal of existing fisheries subsidies regimes forgetful of international trade law must be considered crucially incomplete.

[1] See Chapter One for discussion of the linkage between fishery trade liberalisation and fishery sustainability.

Subsidies, as market interventions performed by governments, have existed for numerous reasons since the XVIII century.[2] Basically, subsidies act as governments' means of influencing market access.[3] Historically, subsidies have been adopted at times when governments have perceived the need to reinforce the economy of a country through assisting its domestic industries.[4] For some countries, a subsidy can be a legitimate instrument and/or a policy of government used to enhance the economic ability of countries.[5] A repeated subject of controversy, subsidies have an occasionally indeterminate legitimacy in international law. Equally do subsidies disciplines. Especially, some subsidising states dispute international law's authority to interfere in and control governments' subsidisations, criticising such actions as violations of state autonomy. However, given the potential role of subsidies in causing market distortions in international trade — as is supported by economic evidence — subsidies-related disputes have been a fixture of the multilateral trading system since its inception following the Second World War.[6] Discussion on why and how to regulate subsidisation, including consideration of its definition and effects, began with the establishment of the GATT 1947. In the decades since the GATT's inauguration, members in the GATT 1947 and eventually the WTO continued to negotiate to improve subsidies disciplines.[7] These improvements aimed particularly to establish sound governance over the use of subsidies and hence to manage their potentially distortive effects on international markets.

Results ensuing from negotiations in the GATT and the WTO display a clear evolution taking place in subsidies regulations, one that has seen the subsidies

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[2] Adam Smith's itemisation of the types of subsidies, the rationales of governments to adopt them, and their causes occupies a full chapter of his *The Wealth of Nations*. See Adam Smith, *An Inquiry into the Nature and Causes of the Wealth of Nations* (first published 1776, Capstone Publishing 2010).

[3] Subsidies and their effects on market access is an essential topic in the discussion of the subsidies disciplines and can be frequently found in the literature. See, for example, Luca Rubini, *The Definition of Subsidy and State Aid: WTO and EC Law in Comparative Perpsective* (OUP 2009) 38–41; Wolfgang Müller, *WTO Agreement on Subsidies and Countervailing Measures A Commentary* (CUP 2017) 1–4.

[4] S Alessamdrini, 'Subsidies, Strategic Trade Policies and the GATT' in J H J Bourgeois (eds), *Subsidies, Strategic Trade Policies a European Lawyer' s Perspective* (Kluwer 1991) 5.

[5] ibid.

[6] With the objective of rebuilding the world economy, 'General Agreement on Tariffs and Trade (GATT)' was initiated and signed in 1947 to function as a guiding legislation for the multilateral trading system after the Second World War.

[7] Andrew L Stoler, 'The Evolution of Subsidies Disciplines in GATT and the WTO' (2010) 44 Journal of World Trade 797.

regulations of the GATT 1947 give way to a new regulation: 'the WTO Agreement on Subsidies and Countervailing Measures (SCM Agreement)'.[8] The SCM Agreement is the current form of subsidies regulation, covering subsidies granted for all products at the WTO. As such, fisheries subsidies would appear to fall well within the scope of the SCM Agreement's trade regime. However, some WTO members have seen reason to exclude from this scope on the basis that fisheries subsidies, they argue, rather belong to a particular category of subsidies (due to their effects on trade and beyond)[9] that should be considered separately from the general subsidies regulations of the SCM Agreement and given special and differential treatment. Giving special attention to these issues and how they have divided the WTO's fora on the subject of fisheries subsidies regulations, this Chapter will also intervene in the debate about the suitability of the SCM Agreement as a regulatory measure on fish subsidies and consider other options available to WTO members should they be unable to attain consensus on this point.

The main points of this conclusion unfold in three parts. In answering what are the applicable provisions under international trade law that currently regulate fisheries subsidies (one of the research questions of this thesis), first of all, the conclusion describes subsidies regulations within the framework of the GATT and the WTO. Secondly, it analyses to what extent the current subsidies regulations can apply to fisheries subsidies. Since WTO members have not yet agreed to apply the SCM Agreement to fisheries subsidies. This conclusion will also evaluate the alternatives offered by academics in case of continued disagreement. Finally, it concludes remarks, observing especially that, since the current iteration of the SCM Agreement does not apply to fisheries subsidies, there remains an obvious necessity to find the appropriate means of regulating them (especially environmentally harmful subsidies). Hence, Chapter Eight insists that WTO members must continue negotiations on the regulation of

[8] ibid. Stoler finds the story of this evolution to be an interesting case study in legislative deliberation within the international trade regime. Stoler especially notes that the specific stages in the evolution of the Agreement can be tracked according to corresponding shifts in the attitudes of member states toward the adoption of subsidies, as they accept disciplines on subsidies as needful in order to prevent or minimise their distortive effects on markets.

[9] The effects of fisheries subsidies, as Chapter Four's research shows, consist of market distortions in international trade and harmful impacts on the conservation of the marine environment and on sustainable development.

fisheries subsidies and achieve consensus in the very near future.

2. An Overview of Subsidies Regulations in the GATT and the WTO

Subsidies have been varyingly defined. From an economic perspective, a subsidy is any instance of a government granting money to reduce costs that producers and consumers would otherwise have to bear in a market.[10] In the view of international trade, a subsidy is a governmental policy for stimulating exports. Therefore, subsidies policies, to be considered as such, focus on assisting export industries through providing economic or financial aid.[11] A definition inclusive of both perspectives might describe a subsidy as an approach or a plan of government purposed to benefit or aid domestic industries for the benefit of producers and consumers or to incentivise exporting products in international trade.[12]

Under the definition of a subsidy programme provided above, such a programme is undertaken on the national level, as a national policy or legal instrument, encouraging the view that subsidisation is among the sovereign rights of countries. Subsidies, however, are elevated to the international level as a result of their adverse effects in causing market distortion in international trade. Specifically, government subsidies to exports might result in a lower market price for the goods concerned, introducing disadvantages to industries in importing countries. Stark price differentiations and the disadvantages they impose to certain other countries overturn competition in international markets, causes market distortions, and lead to the inappropriate allocation of resources. As such, subsidy issues become a concern of international trade, and international trade regimes have established subsidies disciplines in order to settle disputes amid countries and ensure fairness. Additionally, John Jackson and other experts point out that governments' subsidy programmes not only cause market distortion but also constitute a type of trade protectionism for industries in exporting countries, negatively impacting trade liberalisation.[13] On

[10] Michael Parkin, *Economics* (7th edn, Addison–Wesley Publishing 2000) 136.
[11] Rubini, (n3), 93, 95, 190–193, 195.
[12] Alessamdrini, (n4).
[13] John Jackson, W J Davey and A O Sykes Jr, *Legal Problems of International Economic Relations: Cases, Materials and Text on the National and International Regulation of*

such lines do experts and officials justify their claim that, because greater protectionism arises from the more widespread use of subsidies, subsidies disciplines in international trade law are not just useful but necessary. This academic opinion had a clear influence on how the GATT moved to discipline government subsidies in the 1970s.[14]

With these facts in mind, Section Two will expose the mechanics of subsidies regulations in the GATT 1947 and in the WTO SCM Agreement, with special attention given to how subsidies regulations have changed and to the essential elements involved in the amendment process. As for the latter, Section 2.2 will explore the 'Traffic Light Classification' system, examine the special and differential treatment given to developing and least-developed countries by the SCM Agreement, and reflect on subsidies practice under the Agreement, looking particularly at how provision is made for counterparts to notify each other as to changes in their subsidies policies and at the opportunities the Agreement makes available to opposing countries in the area of dispute settlement.

2.1 The Provision of Subsidies in the General Agreement on Tariffs and Trade (GATT)

The earliest version of subsidies disciplines was provided by the subsidies provisions of the Havana Charter of the International Trade Organisation, which, though never to be ratified, was to inform many provisions later integrated into the GATT 1947. The GATT 1947 adopted the term 'subsidy' without stipulating a definition for it.[15] Prior to the entry into force of the WTO Agreements, the provisions of Article XVI of the GATT 1947 were the fundamental rules governing the regulation of subsidies.

Article XVI of the GATT 1947 pertained to the regulation of two types of subsidies. These were generalised subsidies (in Section A of the provision) and export subsidies (in Section B). Section A of Article XVI of the GATT 1947 required subsidising contracting parties to fulfil two kinds of obligations,

Transnational Economic Relations (3rd edn, West Publishing St Paul Minn 1995) 757–758.

[14] ibid.

[15] Article XVI, GATT 1947.

whereas Section B required contracting parties to look for ways to avoid subsidising the export of their primary products. The first obligation stipulated in Section A required that all parties shall provide written notification to their counterparts upon altering their subsidies programmes,[16] stipulating also the information that must be provided as part of these notifications.[17] It must be noted that, in practice, this requirement was rarely honoured, as contracting parties proved reluctant to provide the required subsidies information to other parties. The practice instead became common that a new subsidy was identified only when the contracting parties found out that another party was using subsidies and brought the controversial use of subsidy into discussion under the general mechanisms for dispute settlement under the GATT 1947.[18]

The second obligation required that, if a contracting party should grant a subsidy resulting in or threatening serious prejudice to the interests of another contracting party, the contracting parties shall discuss (upon request) the possibility of restricting the subsidisation with the other contracting party or parties that might be affected.[19]

Subsidies regulations in the GATT 1947 underwent two reviews and amendments separately in 1955 and 1960.[20] After the establishment of the WTO along with the WTO Agreements entering into force in January 1995, discussions on Article XVI of GATT 1994 still continued.[21] Later in the negotiations, during the Tokyo Round and the Uruguay Round, significant changes to the regulation of subsidies occurred.

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[16] Article XVI.1 of the GATT 1947: 'If any contracting party grants or maintains any subsidy, including any form of income or price support, which operates directly or indirectly to increase exports of any product from, or to reduce imports of any product into, its territory […]'.
[17] ibid. Article XVI.1 of the GATT 1947: '[…] the extent and nature of the subsidisation, of the estimated effect of the subsidisation on the quantity of the affected product or products imported into or exported from its territory and of the circumstances making the subsidisation necessary […]'.
[18] Gustavo E Luengo Hernandez de Madrid, *Regulation of Subsidies and State Aids in WTO and EC Law* (Kluwer Law International 2007) 199.
[19] Article XVI.1 of the GATT 1947.
[20] Article XVI of the GATT 1947, Analytical Index of the GATT, available at: <https://www.wto.org/english/res_e/publications_e/ai17_e/gatt1994_art16_gatt47.pdf> accessed on 9 March 2019.
[21] For example, in *Brazil-Desiccated Coconut*, both the panel and the Appellate Body clarified and confirmed that the SCM Agreement had not replaced Article XVI of GATT 1994, which provided the legal foundation for the disciplining of countervailing measures at the WTO. See WTO/DS22/R, para. 227; WTO/DS22/AB/R, 14.

The Tokyo Round negotiations, with the participation of one hundred and twenty countries, took place between 1973 and 1979, having as their aim the continuation of GATT's commitments and the reduction of tariffs. Participating countries in the Tokyo Round were divided into two groups. One group, led by the US, found that the increasing use of subsidies for their trade competitors' domestic production was creating excessively difficult economic conditions. The other group of countries, led by the EU (at the time the European Community), confessed their disturbance at seeing the US's rapid and growing use of countervailing duty actions. The resolution found by these two groups in the Tokyo Round created the 'Agreement on the Interpretation and Application of Articles VI, XVI and XXIII of the GATT' (also called the Subsidies Code),[22] which clarified the use of regulations as expressed in the GATT 1947, in particular the regulation of subsidies.

The Subsidies Code established in the Tokyo Round was viewed as a 'dual-track solution'. This dual track solution meant that the US, in return for other countries' restraint of their subsidies practices, would use an injury test to prohibit the reach of its countervailing duty laws and regulations.[23] The dual-track approach used in the Tokyo Round was carried through to the WTO Agreement on Agriculture.[24] Despite the success of its overall approach, the Subsidies Code was in effect only temporarily and was signed by merely one-third of the parties to the GATT 1947.[25]

Irrespective of its temporary function, the Subsidies Code tightened the regulation of subsidies under Article XVI of the GATT 1947. Moreover, it drew a distinction between primary and non-primary products in determining export subsidies. Beyond these contributions, it also prohibited its signatories from

[22] The Agreement on Interpretation and Application of Articles VI, XVI, and XXIII of the GATT (Subsidies Code) is one of a series of international agreements concerning non-tariff barriers to trade to come into effect as a result of the negotiations on the interpretations of the regulations in the GATT 1947. Articles VI, XVI, and XXIII of the GATT 1947 contain the major relevant provisions regulating subsidies for the serious prejudice to the interests of other contracting parties that they might inflict.
[23] See Robert O'Brien, *Subsidies Regulation and State Transformation in North America, the GATT and the EU* (Palgrave 1997) 113.
[24] Stoler, (n7).
[25] Richard H Snape, 'International Regulation of Subsidies' (1991) 14 World Economy 139, 150.

adopting subsidies for non-primary products.[26] Signatories also agreed not to grant subsidies for certain primary products in those circumstances when such subsidies might lead the signatory granting subsidies to gain more than its equitable market share in the global export trade.[27] The Subsidies Code noted that, for the purposes of the Agreement of Articles VI, XVI and XXIII of the GATT, 'certain primary products' was to denote any forestry, farm, or fishery products. However, note that the Subsidies Code did not cover mineral products.[28]

The Uruguay Round negotiation, launched by 'The Punta del Este Decision'[29] in 1986, introduced a new regime of subsidies regulations for both agricultural and non-agricultural products. The Uruguay Round's main significance was to have initiated a discussion that established the specific regulations on fisheries subsidies adopted by the WTO, jumping off from the Negotiating Group on Natural Resource Based Products' discussion of fishery trade. There was, however, no consensus on how to address the issues in submissions to the Negotiating Group on Natural Resource Based Products, including tariffs, non-tariff to trade measures, subsidies, and access to fishery resources. Finally, the decision was made to initiate a broader negotiation that would be allowed to negotiate fishery trade along with trade of other natural resource-based products, moving the negotiation on fishery trade to the Market Access Group. [30] However, the Group did not fulfil its negotiating goals. This was due to the European Communities; Japan and Korea, for their part, insisting on linking access to natural resources with access to markets. It is helpful to note that, at the beginning, 'European Communities' was the official name in used for all WTO business for legal reasons. However, 'European Union' has been the official name used in the WTO since 1 December 2009.[31]

Concurrently during this round of negotiations, the Negotiating Group on

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[26] Article 9.1 of the Subsidies Code.
[27] Article 10.1 of the Subsidies Code.
[28] Interpretative Note 29 to the Subsidies Code.
[29] See 'General Agreement on Tariffs and Trade (GATT) Punta del Este Declaration', (Ministerial Declaration, 20 September 1986) <http://www.sice.oas.org/trade/Punta_e.asp> accessed on 10th March 2019.
[30] See Chen-Ju Chen, *Fisheries Subsidies under International Law* (Springer 2010) 45–46.
[31] See the explanation from the WTO: 'European Union or Communities?' <https://www.wto.org/english/thewto_e/countries_e/european_union_or_communities_popup.htm> accessed 10th March 2019.

Agriculture took for one of its goals the enhancement of competition in the agricultural sector, to be achieved through tightening disciplines on the use of all implicit and explicit subsidies as well as through other measures that directly and indirectly affect agricultural trade. The Punta del Este Decision states that negotiations shall aim to achieve greater liberalisation of trade in agriculture and to bring all measures affecting import access and export competition under strengthened and more operationally effective GATT rules and disciplines. Negotiations should take into account, too, the general principles governing the negotiations by improving the competitive environment through increased discipline on the use of all direct and indirect subsidies and other measures affecting agricultural trade directly or indirectly, including the phased reduction of their negative effects and dealing with their causes.[32] It is especially noteworthy that even though the US proposed that fisheries subsidies be discussed by the Negotiating Group on Agriculture, little support was granted by other countries for this proposal. As a result of the failure of the proposal to include fisheries subsidies, even though most primary products, according to Chapters 1 to 24 of the Harmonised System Code,[33] are covered by the Agreement on Agriculture, fish and fish products remain a notable exception.[34] The long-term objective of the Agreement is progressively to ensure considerable reductions in agricultural protection and support over an agreed period of time. Essentially, the provision is designed to prevent restrictions on and distortions in agricultural markets, qualities that would have suited the Agreement well to the regulation of fisheries subsidies had they not been excluded. [35]

However, the Uruguay Round did not finish without some success as far as subsidies disciplines were concerned. The objectives of the Negotiating Group on Subsidies and Countervailing Measures in the Uruguay Round were aimed to improve relevant subsidies provisions in the GATT, for example.[36] As an

[32] 'The Punta del Este Decision', (n29).
[33] 'Harmonised System Codes (HS codes) Chapter 01 to 97' <https://howtoexportimport.com/harmonized-system-codes-hs-codes-chapter-01-to-97-811.aspx> accessed on 10th March 2019.
[34] Article 1 of Annex 1 of the Agreement of Agriculture.
[35] Preamble of the Agreement of Agriculture.
[36] The Punta del Este Decision, (n29). Here the Decision states that negotiations on subsidies and countervailing measures shall be proceeded based on a review of Articles VI, XVI, and the

effort to meet these goals, the WTO Agreement on Subsidies and Countervailing Measures was created, which built on and further elaborated the provisions in relation to subsidies and countervailing measures in the GATT 1947 and in the Subsidies Code in the Tokyo Round.[37]

To conclude, the fact that many of the negotiations in relation to fisheries subsidies in the Uruguay Round were inconclusive had as its main effect the near total exclusion of fisheries subsidies regulations from WTO legislation, so that such measures had to be included for discussion instead under the remit of the SCM Agreement.[38] More positively, WTO members further committed to reductions in the use of agricultural subsidies in the Agreement on Agriculture.

2.2 An Overview of the Agreement on Subsidies and Countervailing Measures (SCM Agreement)

Currently at the WTO, the SCM Agreement is the primary regulation applicable as a discipline of its members' use of certain subsidies. The reason is because it is endowed with greater uniformity and certainty in the implementation of the SCM Agreement.

The SCM Agreement represented progress in subsidies regulation in several ways, many of which were fundamental. For example, prior to the SCM Agreement, there was difficulty achieving consensus in the international community on precisely how to define a subsidy.[39] The difficulty arises from three causes. The first cause, also the most challenging, is the controversy that surrounds subsidies disciplines generally speaking. Since a subsidy is, on the one hand, a government or public body's legitimate instrument or policy, and on the other hand a non-tariff barrier to trade measure, states are naturally inclined to favour a narrower definition and the international community a broader one so as to maximise or minimise, respectively, the total allowable

MTN Agreement on subsidies and countervailing measures and shall have as its objective the improvement of GATT disciplines relating to all subsidies and countervailing measures that affect international trade.

[37] See the Agreement on Interpretation and Application of Articles VI, XVI and XXIII of the GATT'.

[38] Gareth Porter, 'Fisheries Subsidies and Overfishing: Towards a Structured Discussion' (2001) Working Paper for the UNEP Fisheries Workshop 3–4.

[39] R Behboodi, *Industrial Subsidies and Friction in World Trade* (Routledge 1994) 8.

subsidisation activity. As long as the controversy remains, there will remain challenges, too, in any attempt to agree upon a definition. The second cause is the significant work any definition of subsidisation must do in condensing a basically very multifarious phenomenon into a coherent definition. Since a subsidy entails a wide variety of types, effects, and purposes, it is already difficult to differentiate and categorise a subsidy. Hence, it is also complex precisely to define a subsidy, together with its countervailing measures, in a rigid textual form in a way that is sufficiently specific without inadvertently excluding certain subsidisation practices that may not readily be identifiable as such. Finally, the complexity of politico-economic issues among nations constitutes its own cause. Economic ability and political power are both shared unequally among nations, which leads to tension or even conflicts in their interests. Such tensions are reflected by the difficulty experienced in the effort to define a subsidy. Any definition conceived must consider the power imbalances that form its context and to which it may serve as a reaction.

The SCM Agreement overcomes this elusiveness of definition to clearly stipulate the meaning of subsidies in Article 1.[40] A subsidy will be 'deemed to exist' on the condition of a financial contribution that grants a benefit on a 'specific' domestic industry given by a government or other public body.[41] This definition has been considered sufficiently broad to capture and cover most significant categories of fisheries subsidies, to which the conditions of the SCM Agreement therefore apply.[42]

First of all, the SCM Agreement imposes a discipline that prohibits any subsidy that will have an adverse effect on the goods of WTO members. The Agreement also installs processes of discipline for taking countervailing measures, with the aim of ensuring that they do not unjustifiably obstruct trade and that they provide relief (in a legitimate form) for products adversely affected by

[40] According to Article 1.1 of the SCM Agreement, a subsidy requires: (1) a financial contribution by (2) a government or any kind of public body in a member state and that (3) benefits recipients.
[41] Articles 1 and 2 of the SCM Agreement.
[42] David K Schorr, 'Healthy Fisheries, Sustainable Trade: Crafting New Rules on Fisheries Subsidies in the World Trade Organisation' *Position Paper and Technical Resource* (World Wildlife Fund, 2004) xiii. This work references David K Schorr, *The Footprint of Distant Water Fleets on World Fisheries* (World Wildlife Fund 1998) Chapter 3.

subsidies.[43] The remaining section examines the most significant disciplinary processes of the SCM Agreement.

Requirements of specificity is a core element in Article 1. To fall within the scope of the SCM Agreement, Article 1 requires that a subsidy shall be specific to an industry, enterprise or a group of enterprises or industries. The fundamental principle underlying this requirement is that any subsidy that distorts competition in a market — specifically, the allocation of resources within an economy — should be subject to the discipline. Where a subsidy is widely available to all competitors within an economy and is supplied equally, such a distortion in the allocation of resources presumably does not occur. Thus, only specific types of subsidies are subject to the SCM Agreement.

2.2.1 Three Types of Specificity in the SCM Agreement's Subsidies Regulations

According to Article 2.1 of the SCM Agreement: 'a subsidy should be considered "enterprise-specific" on the condition that a government has a particular target of a company or companies for subsidisation'. Industry-specificity is understood to occur 'where a government targets a particular sector or sectors for subsidisation'.[44] Regional specificity is expected to take place 'where a government targets producers in specified parts of its territory for subsidisation and is regulated',[45] and prohibited specificity is 'where a government targets export goods or goods using domestic inputs for subsidisation'.[46] If a subsidy does not meet any of these required conditions, there are other explicitly stated circumstances under which specificity of subsidies can be assumed. These particular circumstances are the 'use of a subsidy programme by a limited number of certain enterprises, predominant use by certain enterprises, the granting of disproportionately large amounts of subsidy to certain enterprises, and the manner in which discretion has been exercised by the granting authority in the decision to grant a subsidy'.[47]

[43] Part V of the SCM Agreement.
[44] ibid.
[45] Article 2.2 of the SCM Agreement.
[46] Article 2.3 of the SCM Agreement.
[47] See Article 2.1(c) of the SCM Agreement.

Subsidies' Three Classifications

The SCM Agreement further classifies its own approach to regulation, referring to subsidies using what it terms a 'traffic light' approach to regulation. Under this approach, prohibited subsidies are referred to as red light subsidies, actionable subsides as amber light, and green light applies to non-actionable subsidies. Details of these classified subsidies are provided below.

Red Light Subsidies

Subsidies subject to the red-light regime of prohibition are those that are designated to directly affect trade and that are therefore 'most likely' to have adverse effects on other countries. Article 3 of the SCM Agreement regulates 'domestic content subsidies' to restrict subsidies that are granted conditionally on the use of domestic in favour of imported products.[48] The scope of these prohibitions application is relatively narrow[49], and they are entitled to an accelerated dispute settlement process for consultation with other members, and any member found to grant or maintain such a subsidy must withdraw it without delaying an action.[50]

Amber Light Subsidies

All kind of subsidies are actionable subject to an exception of prohibited subsidies and non-actionable subsidies. Part III of the SCM Agreement, including Articles 5 to 7, applied to regulate actionable subsidies, hence the traffic light approach over here is an amber light between red (prohibition) and green (non-actionable subsidies).

A large portion of subsidies fall into the scope of this amber light zone. If subsidies have negative effects on the interests of other members, legal action can be taken against their violation. Adverse effects are deemed to take place when any of the following three elements is constituted: (a) an injury to another member state's domestic industry; (b) nullification or impairment of benefits emanating under the GATT 1994;[51] or (c) severe prejudice to the interests of

[48] Article 3.1(a) and (b) of the SCM Agreement.
[49] Chen-Ju Chen, *Fisheries Subsidies under International Law* (Springer 2010) 34.
[50] Article 4 of the SCM Agreement.
[51] Nullification or impairment arises most typically where the improved market access presumed to flow from a bound tariff reduction is undercut by subsidisation.

another member.[52] Serious prejudice is deemed to occur in the following circumstances[53]: when subsidies are granted to exceed 5% of the ad valorem of a product; when subsidies entail an intention to cover operating losses which are sustained by an enterprise or industry[54]; or when subsidies directly forgive debts.

These cases of subsidisation can be challenged by countervailing measures or through the dispute settlement procedure at the WTO. If the subsidising member does neither take appropriate measures to remove the adverse effects of the subsidy nor withdraw the disputed subsidy, the complaining member is entitled to use dispute settlement mechanism to take countermeasures.[55] However, in practice, a complaining member seeking countermeasures commensurate with the nature and degree of the negative effects of the subsidy usually finds it difficult to demonstrate and prove the adverse effects caused by these subsidies.

Green Light Subsidies

Under specific circumstances stated in part IV of the SCM Agreement, subsidies for research and for social and environmental causes can be justified as non-actionable subsidies. Part IV, Article 8 and 9 of the SCM Agreement disciplines non-actionable subsidies, consisting of non-specific subsidies and subsidies that are (a) granted for research activities conducted by higher education, by firms, or by a contract-basis research establishments with firms; (b) granted to, based on a generalised framework of regional development and non-specified within qualified regions, disadvantaged regions within a member state's territory; (c) granted to promote the adaptation of current facilities (meaning that the facilities have been in operation for at least two years when new environmental requirements are imposed)[56] to new environmental

[52] Article 5 of the SCM Agreement.
[53] Annex IV of the SCM Agreement details information of total amounts of ad valorem subsidisation. It is noteworthy that, according to Article 31, Article 6.1 should apply for a period of five years, commencing on the date of entry into force of the WTO Agreement. A required renewal of Article 6.1 did not occur.
[54] Note that the one-time restructuring measure is the exception in this case.
[55] Article 7.9 of the SCM Agreement.
[56] Interpretative Note 33 to the SCM Agreement.

protection requirements.[57]

Moreover, notification must be provided to the SCM Agreement Committee in advance of any implementation of these subsidies, and yearly updates must be provided.[58] If a member believes that a subsidy notifying programme does not satisfy the criteria set out in Article VIII or that the conditions set out in a notified programme have been breached, that member may request for binding arbitration.[59]

The green light category no longer has any legal status because its applicability expired at the end of 1999,[60] and no renewal of the green light approach has been made under Article 31 of the SCM Agreement. Several members believe that no extension of Article 8 should happen unless members agree to improve regulatory requirements and enforce a higher quality upon the notifications provided by states.[61]

2.2.2 Notifications on Subsidies to the Fisheries Sector

Fisheries subsidies notifications provided under the SCM Agreement in theory could be an important source of data, enhancing transparency and governmental accountability in the granting of fisheries subsidies.[62] For example, it was on the basis of the notifications submitted to the SCM Agreement Committee from 1 January 1995 that the Committee on Trade and Environment (CTE) was able to develop a survey enumerating the following four broad categories of subsidy that impact the fisheries sector:[63] '(1)

[57] Article 8.2 of the SCM Agreement.
[58] Article 8.3 of the SCM Agreement.
[59] Article 8.5 of the SCM Agreement.
[60] Article 8 and 31 of the SCM Agreement.
[61] Paul C Rosenthal and Robert Vermylen, 'Review of Key Substantive Agreements: Panel II E: Antidumping Agreement (AD) and the SCM Agreement: the WTO Antidumping and Subsidies Agreements: Did the US Achieve Its Objectives During the Uruguay Round?' (2000) 31 Law and Policy in International Business 871, 896.
[62] UNEP, 'Chairman's Summary' UNEP Fisheries Subsidies Workshop (Geneva, 12 February 2001) 4.
[63] WTO Doc WT/CTE/W/80, 'Note by the Secretariat to the Committee on Trade and Environment, GATT/WTO Rules on Subsidies and Aids Granted in the Fishing Industry' (9 March 1998); WTO Doc. No. WT/CTE/W/80/Add.1, 'Note by the Secretariat to the Committee on Trade and Environment, GATT/WTO Rules on Subsidies and Aids Granted in the Fishing Industry, Addendum' (21 September 1999); WTO Doc. No. WT/CTE/W/80/Add.2, 'Note by the Secretariat to the Committee on Trade and Environment, GATT/WTO Rules on Subsidies and Aids Granted in the Fishing Industry, Update of Notifications under the ASCM, Addendum' (1

subsidies to the harvesting sector; (2) subsidies to the shipbuilding industry;[64] (3) subsidies to the processing industry; and (4) various other subsidies, in particular those related to research and development or marketing'.[65] Note that subsidies to the aquaculture and infrastructure sector are not identified. The foregoing itemisation gives some sense not only of the types of subsidies about which WTO members received notifications, but also of the explanatory value of the notification mechanism itself, which institutes a valuable source of transparency. If improved, the notifications mechanism would provide a much-needed evidentiary basis for disciplinary interventions in the fisheries sector.[66]

2.2.3 Remedies under the SCM Agreement

Two types of remedy are available under the SCM Agreement to a WTO member that reasonably believes its interest is being adversely affected by the use of a prohibited or actionable subsidy by another member. A unilateral remedy, the first option, is the imposition of countervailing measures against subsidised imports from other WTO members, an action permissible following a confirmatory investigation. If a member determines that subsidised imports are causing 'material injury' [67] to its domestic industry, it can impose countervailing measures in keeping with the substantive and procedural requirements under Part V (Articles 10–23) of the SCM Agreement. Second, a multilateral remedy may be pursued via recourse to the WTO dispute settlement mechanism (DSM), through which a WTO member may secure the withdrawal of the subsidies or the removal of their adverse effects. Effectively, through the DSM, if a member suspects that a prohibited subsidy is being used or that an actionable subsidy is resulting in adverse effects, it can initiate a dispute settlement procedure before the Dispute Settlement Body (DSB).[68]

It should be noted that unilateral and multilateral remedies can be declared

June 2001).

[64] With regard to subsidies to the shipbuilding industry, there is no clear indication as to whether these subsidies include fishing vessels. WTO Doc. No. WT/CTE/W/80 (9 March 1998), 12.

[65] Chen, (n49), 37–38.

[66] ibid, para 32. Besides, Article 25 of the SCM Agreement states the WTO members' legal obligations for notification requirements.

[67] Article 15 of the SCM Agreement.

[68] Chen, (n49), 40.

simultaneously and carried out parallel to each other.[69] However, whichever course is taken, only one action of two can be determined upon as a remedy to the effects that a subsidy has on the domestic market of the importing member. A member may either apply a countervailing duty from Part V or a retaliatory measure pursuant to Article 4 (for prohibited subsidies) and Article 7 (for actionable subsidies) of the SCM Agreement. In addition, non-actionable subsidies are subject neither to dispute settlement nor to countervailing measures. The SCM Agreement also instructs WTO members to avoid overlapping anti-dumping duties and not to apply countervailing duties against another WTO member state's measures, thus discouraging the accumulation of duties on imports of the same product.[70]

Transparency and clarity are the determining factors of the procedure for the adoption of countervailing duties. Predictability in the adoption of countervailing duties has improved, enhancing their utility as a preventative rather than merely retaliatory mechanism and assuring that the reasons for the imposition of countervailing duties are likely to be well understood. Members can reach a compromise through consultations,[71] and individuals can use the domestic procedures of the importing members for appeal.[72]

The DSM, as one of the principal achievements of the Uruguay Round negotiations, was established to ensure compliance with WTO law.[73] Innovatively, rulings by the DSB are legally binding on WTO members, whereas commentators had previously found that GATT contracting parties in breach of GATT provisions were mostly ignored in the GATT panel rulings.[74] For reasons such as its improved standards for compliance, the DSM has been considered more efficient and more effective than the former GATT resolution procedure, which was more a diplomatic than a legal process and it has therefore been more widely respected.[75]

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[69] Interpretative Note 35 to the SCM Agreement.
[70] Hernandez de Madrid, (n18), 188.
[71] Article 13 of the SCM Agreement.
[72] Article 23 of the SCM Agreement.
[73] Chen, (n49), 41.
[74] Konstantinos Adamantopoulos and Maria J Pereyra-Friedrichsen, *EU Anti–Subsidy Law & Practice* (Palladian Law Publishing 2001) 27.
[75] Until, that is, recent years, in which the DSM has come to be regarded as ineffective.

Nonetheless, the DSM has been found deficient in some respects, chief among which is the lack of direct access it provides to individuals: the DSM is exclusively reserved for WTO members.[76] The only recourse private parties possess under this regime is to convince their governments to take up their case. However, only in rare cases do the interests of a particular national industry coincide with the global interests of its government closely enough that the latter adopts the former's priorities.

The DSM has rendered many complex judgments on the SCM Agreement.[77] Nevertheless, on the issue of fisheries subsidies, there have been so far almost no cases concerning countervailing duties on fish and fish products initiated and further no fisheries subsidies disputes brought to the DSB pursuant to the regulations established by the SCM Agreement.[78] One relevant case can be traced back to the GATT in 1980s. At that time, circumstances surrounding the export of fresh Atlantic groundfish from Canada to the US caused the US government to question whether or not Canada's unemployment insurance to fishers constitutes using a fishery subsidy. The judgment provided by the DSB, however, determined that the unemployment insurance provided to fishers by the Canadian government was part of Canada's general system of unemployment insurance. Because the unemployment insurance was determined not to be specific to fisheries, it was therefore exempted from the countervailing rules of GATT.[79]

2.2.4 Transparency Issue in the Notification Process

Lorenzo Formenti conducted research on transparency of subsidies notification policy at the WTO.[80] He extracted the notifications texts to analyse policies adopted by WTO member states. His consolidated assessment of the WTO subsidies notification framework discovered the major shortcomings that can be classified into three parts. The first deficiency concerns content-related

[76] Hernandez de Madrid, (n18), 198.
[77] Müller, (n3).
[78] Chen, (n49), 41.
[79] FAO Doc FAO Fisheries Technical Paper No 437, 33–34.
[80] Lorenzo Formenti, Transparency in Fisheries Subsidies: Notification-Driven Analytics of Country Performance and Disclosure Requirements, UNCTAD Research Paper No 36, 2019, 13–15.

issues, which point out a shortage of a harmonised and fisheries-specific notification framework. This deficiency further indicates that contents of notification requirement of fisheries subsidies, such as concepts and methods used in the notification process, are partially appropriate. Specifically, there is a lack of a classification and nomenclature of forms used for administration in the process of subsidies notification. Moreover, Lorenzo found that standardised categories for qualitative report and fisheries-specific notification requirements are absent. There is also a lack of statistical guidelines for the calculation of quantitative information.[81]

The second shortcoming regards an institutional aspect involving limited use and integration of publicly available data sources. Given purposes of impact quantification, statistical data allowing an examination of the trade effects of a subsidy are listed among the SCM Agreement's notification requirements. According to the examination, this information is rarely tied with notifications. Moreover, if offered, it is of penurious quality and low informative and useful value. By contrast, Lorenzo stresses that a batch of information permitting impact assessment, which is composed of data of import and export and catch by fish species, is actually gradually reported by international organisations at a regular base, instead of States governments. For instance, the FAO and Statistics Division in the UN, have acquired political legality to generate harmonised national figures in accordance with well-established statistical frameworks. In most cases, decade-long times series are available. Finally, Lorenzo suggests that better and more beneficial inter-agency cooperation along with the leadership of the WTO would effectively help integrate this information. Such cooperation directly feeds the information into the notification process that decreases the burden of notification on States.[82]

Finally, there are technological issues in the notification policy that is outdated reporting mechanism with limited technology contents. Notifications are usually submitted in the format of texts entitled on 'Questionnaire Format for Subsidy Notifications'.[83] Once received, the notifications are published by the WTO

[81] ibid.
[82] ibid.
[83] ibid.

Secretariat within weeks, and then the notified information is permanently stored in their online repository. Additionally, no analysis is performed in-house using notification. Replacing unrestricted text notifications with an electronic notification template would not only increase and enhance standardisation and decrease transaction costs, but also facilitate analyses of the type of notification. This would, therefore, enable extracting insight of policy from information that would continue to stay, otherwise, dormant. Lorenzo discovered and suggested that a possibility of changes could arise from the development of a user-friendly web interface where notification process practitioners directly input information by answering yes, no or multiple-choice questions. Finally, for every notification requirement, the utilisation of open-ended questions would be decreased at the minimum and a finite number of options be made available. His another advice is that subsidy amount calculator may also be established.[84]

3. The Special and Differential Treatment Applying to Developing and Least-Developed Countries

Fish and fisheries products, from the perspective of trade circles, have increasingly become connected to development concerns, as it is developing countries that are most dependent on their export. Insufficient diversification has hampered such developing economies with a lack of alternative resources for export.[85] This and similar circumstances, such as those surrounding the food crisis and the difficulty for consumers incurred by the spike in food prices that followed it, have repeatedly served to reinforce the importance of special and differential treatment.[86] Though the WTO has acted in recognition of this importance, its laws have had the tendency also to treat fish like all other goods, giving special treatment only inconsistently and often without logical underpinnings.[87] Since WTO members do recognise, however, that subsidies may play an important role in the economic development programmes of

[84] ibid.
[85] Gregory Messenger, 'Sustainable Development and the Commodities Challenge' (2017) 9 Trade, Law and Development 63.
[86] ibid, 59. Messenger thinks that, following the *China-Rare Earths* and *China-Raw Materials* case at the WTO, derivative markets may also play a role in applying special and differential treatment, despite their unclear effects. See the WTO Panel Report, China-Rare Earths, WTO Doc. WT/DS431/R/Add.1 (26 March 2014) and the WTO Panel Report, China-Raw Materials WTO Doc. WT/DS394/R, WT/DS395/R, WT/DS398/R (5 July 2011).
[87] Messenger, (n85), 64.

developing country members,[88] part VIII of the SCM Agreement allows for a more flexible approach to arbitration involving these members. In this approach, some subsidies are tolerated for their role in encouraging the economic development of certain members, and due consideration can be afforded to these subsidies' importance to the welfare of developing country members relative to the limited effects that they have on trade distortion.[89]

For this reason, does the SCM Agreement see fit, under Article 27, to grant exemptions from regulations to the subsidies of some developing countries. For example, the SCM Agreement grants developing country members referred to in Annex VII[90] full exemption from the prohibition of export subsidies.[91] In addition, exemption from the prohibition of domestic content subsidies[92] is granted for eight years from the date of entry into force of the SCM Agreement. Other developing country members (not included in Annex VII) are granted exemption from the prohibition of export subsidies for eight years and from the prohibition of domestic content subsidies for five years.[93] During this period of time, these members are expected to progressively work toward eliminating such export subsidies.[94] The eight-year transition period provided for this group of developing country members can be extended subject to approval by the SCM Agreement Committee.

Many developing country members have been unsatisfied with the special and differential treatment granted to them by Article 27 of the SCM Agreement. As a matter of fact, these countries seldom benefit from the special and differential treatment Article 27 bestows. Available evidence indicates that the expected benefits fail to transpire primarily because of the fact that the exemptions provided by the Article refer to subsidies for all kinds of export products and, additionally, because the production and export of products by developing country members does not represent a large share of total global trade. Thus,

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[88] Article 27.1 of the SCM Agreement.
[89] Hernandez de Madrid, (n18), 201.
[90] According to Annex VII of the ASCM, these countries are the least-developed countries as so designated by the UN.
[91] Article 3.1 (a) of the SCM Agreement.
[92] Article 3.1 (b) of the SCM Agreement.
[93] Article 27.2 and 27.3 of the SCM Agreement.
[94] Article 27.4 of the SCM Agreement.

the impact of the exemptions is not very significant in practice.[95] Moreover, Article 27 restricts the right of developing countries to use subsidies as a developmental policy instrument even as it conditionally condones them since it ultimately requires the complete phasing out of subsidies. Countries have protested that the phase-out period is too short to revoke subsidies without incurring economic harms. Even if extensions are granted, complex application procedures need to be followed,[96] and many developing country members were still unable to face competition on the global market when the phase-out periods ended.[97] Additional time and support have been required in most instances. Finally, due to the fact that Article 6.1 has not been renewed,[98] the provision exempting developing country members from the presumption of serious prejudice is no longer effective.

4. Discussion on Regulating Fisheries Subsidies under the Legal Framework of the SCM Agreement: An Analysis of the Suitability of the SCM Agreement for Regulating Fisheries Subsidies

As discussed, the WTO was equipped with the structure necessary to address fisheries subsidies issues by the implementation of the SCM Agreement. Nevertheless, the SCM Agreement is limited in its ability to prevent harmful fisheries subsidies.[99] WTO members admitted as much in the Doha Round, concluding that the SCM Agreement fundamentally lacks suitability in the regulation of fisheries subsidies.[100]

In its dual function, the SCM Agreement addresses, first, multilateral disciplines regulating the provision of subsidies and, second, the use of countervailing measures to offset injury caused by subsidised imports. Through modifying the

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[95] Hernandez de Madrid, (n18), 204.
[96] WTO Doc. No. WT/MIN(01)/17, 'Implementation-Related Issues and Concerns, Ministerial Conference, Fourth Session, Doha, 9–14 November 2001' (20 November 2001), paras. 10.5–10.6, referring to the procedures for extensions under Article 27.4 to WTO Doc. No. G/SCM/39, 'Procedures for Extensions under Article 27.4 for Certain Developing Country Members' (20 November 2001).
[97] Frank J Garcia, 'Beyond Special and Differential Treatment', (2004) 27 Boston College International and Comparative Law Review 306.
[98] Articles 6.1 and 31 of the SCM Agreement.
[99] Mitsuo Matsushita, *The World Trade Organisation – Law, Practice and Policy* (OUP 2003) 601.
[100] Doha Ministerial Declaration, WT/MIN(01)/DEC/1, paras 28, 29 and 31.

SCM Agreement, the WTO has been enabled to make meaningful and legitimate contributions to the sustainable use of fisheries, regulating or prohibiting certain harmful subsidies that are said to have led to overcapacity and overfishing (and which, in turn, deplete fishery resources).[101] Nevertheless, the SCM Agreement remains controversial at the WTO because the WTO is not an environmental organisation. As such, it is without any mandate to regulate or interfere with environmental policy and laws at the national and international levels.[102] This lack of environmental mandate has proven to be the source of problems when applying current WTO regulations to fisheries subsidies disputes.[103]

Primarily, the SCM Agreement was created to deal with market distortions resulting from subsidies. Although fisheries subsidies can lead precisely to the types of market distortions the SCM Agreement was designed to contain, they can also have negative impacts on trade, the environment, and sustainable development, none of which is covered by the SCM Agreement. The fisheries sector is unique in the sense that its productive activity in many instances depends on an area shared by many countries and competitors. The resources of these areas are limited and can be depleted if not fished in a responsible manner. The SCM Agreement does not cover this type of environmental impact, even though it can be aggravated by aggressive subsidisation.

In addition to the negative impact on the environment, the very nature of a common production facility (the shared fishing area) means that the irresponsible or subsidised behaviour of one particular country in the area can have significant adverse effects on the catch of another. In manufacturing industries, such as those that the SCM Agreement was primarily conceived to oversee, this kind of direct impact on another country's production capacity does not exist, freeing the Agreement of the need to effectively prevent subsidisers from activities having such sprawling, unbounded, and uncertain effects. Disruptions of this type to the production output of another country alter

[101] Sheng-ti Michael Gau, 'Asian Perspectives on Fisheries Subsidy Issues and Linkages with Environment' (2006) 1 Asian Journal of the WTO and International Health Law 194.
[102] ibid 193.
[103] Chen, (n49), 42.

trade flows and markets in ways the SCM Agreement is only poorly equipped to anticipate.

Last, the SCM Agreement does not consider the developmental dimension in how countries may cope or seek to remedy their own limited production capacities. For instance, developing countries' ability to set up their own fishing fleets and, as a result, their own ability to participate in the fishing industry can be impaired by distant water fleets from other countries whose governments have purchased access rights to the EEZs of developing countries. The SCM Agreement simply does not possess provisions adapted to a situation such as this.

Moreover, the SCM Agreement struggles definitely to prove serious prejudice under Article 6 or material injury under Article XV. Primarily responsible for such a deficiency are the great diversity of fish and fisheries products, the many different ways by which countries can support their fisheries sector, and the unique nature of the trade/market distortions described above.

The problems identified in the previous section are further aggravated by the poor quality of notifications for the fisheries sector that the WTO receives from its members. The notification requirement, in the case of fisheries subsidies, is manifestly disregarded 90% of the time.[104] The system, as it exists in practice, is ineffective at delivering reliable data on fisheries subsidies.[105] Furthermore, the information provided in the majority of these notifications does not comply with the requirements established by the WTO's standard questionnaire.[106]

Given that transparency is essential not only in the process of definition and categorisation but also in supporting the implementation of current or future international commitments,[107] the notification requirement needs special

[104] World Wildlife Fund, *Turning the Tide on Fishing Subsidies, Can the World Trade Organisation Play a Positive Role?* (WWF 2002) 10.
[105] Some members are unwilling to notify the WTO of their programmes, even in cases when the subsidies would not explicitly contravene WTO rules. Chen, (n49), 42, footnote 218.
[106] Tracey M Price, 'Negotiating WTO Fisheries Subsidy Discipline: Can Subsidy Transparency and Classification Provide the Means Towards an End to the Race for Fish?' (2005) 13(141) Tulane Journal of International and Comparative Law 166.
[107] UNEP Chairman's Summary, (n62), 4.

improvement, especially in two areas. First, legal consequences must be established in the absence or inadequacy of notification. Second, members must be required to provide a detailed list giving the identity of subsidised enterprises, the way subsidies are applied, the particular fisheries affected by a given subsidy, and the amount of subsidies on a vessel, fleet, and fishery basis.[108] Due to the lack of transparency in the fisheries sector, it is difficult to obtain accurate statistics on its subsidies programmes, and any action by one member against another is severely constrained if the data on the subsidies programmes involved can only be estimated or if they must be calculated from doubtful data.

Thus, the SCM Agreement has proved distinctly lacking in its ability to address the issue of fisheries subsidies.[109] Primarily, the lack of WTO litigation on this issue has been attributed to uncertainty as to applicability to fisheries subsidies of the prohibited and actionable categories of subsidies described above.[110] For example, the test set out in Article 3.1(a) that determines prohibited subsidies is difficult to satisfy; governments do not often make their fisheries subsidies contingent upon exports,[111] and therefore net importers of fish such as Japan (whose subsidies programmes are generally designed to promote domestic fish supply rather than exports) would not fall within the scope of this prohibition.[112]

Similarly, such subsidies programmes would not be caught under Article 3.1(b), as this provision is primarily aimed at subsidies to producers who use parts in their production procedure rather than at subsidies to domestic suppliers.[113] The way in which this category of subsidies has been defined has been criticised for prohibiting subsidies based on their design rather than on their actual effects, hence even the most harmful types of subsidies are not prohibited.[114] While there are certainly some advantages to having a design-based system of subsidies classification—for example, it can be applied without

[108] WWF, *What's the Catch?* (WWF 2005) 8-9.
[109] Margaret Young, *Trading Fish, Saving Fish* (CUP 2011) 91–93.
[110] ibid, 92.
[111] Schorr, (n42), 39.
[112] Young, (n109).
[113] Schorr, (n42), 40.
[114] Schorr, (n42), 38.

extensive empirical research or analysis[115] — the main drawback is that such a system does not succeed to take into account the actual effects of the subsidies. For this reason, the provision overlooks the fact that similarly designed subsidies can have different impacts in practice.[116]

Similarly, the 'adverse effects' test, which targets the actionable subsidies described in Articles 5 and 6, is considered to constitute a 'heavy evidentiary burden' upon the complaining state, requiring that state to provide extensive data to demonstrate the harm it has suffered and demanding a causal link to the relevant subsidies.[117] For instance, in the context of fisheries subsidies in particular, any likely adverse effects such subsidies may cause will be in resource availability rather than export prices, and these effects will be spread over a number of various subsidies products that may be difficult to identify for the purposes of demonstrating such adverse effects.[118] Perhaps the uncertainty described above as to the applicability of the SCM Agreement to fisheries subsidies is not, after all, so surprising. Ultimately, the SCM Agreement was created to address the trade-distorting consequences of subsidies, not their potential environmental impacts. Such inapplicability — arising, essentially, from the WTO's constitutive orientation toward trade, rather than toward the environment — would do much to explain not just the SCM Agreement's deficiency in this area but also the lack of any other WTO litigation on fisheries subsidies to date.

In reaction to the WTO's apparent immobilisation before fisheries subsidies issues, Bartels and Morgandi propose and evaluate five different legal forms that successful disciplines on fisheries subsidies could take within the framework of the WTO.[119] The first two possibilities they propose are merely standalone agreements. This refers to a new discipline that can be a legally binding multilateral agreement, either in the form of an annex to the SCM Agreement (Option A) or a novel multilateral agreement to be included

[115] Schorr, (n42), 34.
[116] ibid. This again highlights the desirability of the UNEP scheme, which applies a matrix approach to subsidies classification.
[117] Schorr, (n42), 42.
[118] Young, (n109), 92.
[119] Lorand Bartels and Tibisay Morgandi, 'Options for the Legal Form of a WTO Agreement on Fisheries Subsidies' (2017) ICTSD.

alongside the existing Multilateral Agreements on Goods (Option B). The suggestion also notes that an agreement in either of these forms would absolutely be enforceable through the WTO's dispute settlement system. Moreover, under Option A, members could more flexibly reference current definitions in the SCM Agreement and more easily utilise the existing subsidies committee to administer the agreement. In conclusion, according to Bartels and Morgandi, under either Option A or Option B, in filing dispute action, members would need to decide to use the general rule of 'countermeasures' in dispute settlement or the more flexible rule of the SCM Agreement. It should be noted that adoption of these options would require consensus or a two-thirds majority vote among WTO members.[120]

A third set of options depend on WTO Ministerial Decisions, which can establish authoritative interpretations (Option C.1) or waivers (Option C.2), both of which are less relevant in the context of fisheries subsidies, or signal legal changes (Option C.3.), the last of which is the most relevant form of Ministerial decision of the three for fisheries subsidies. Beyond these, Ministerial Declarations (Option C.4) have been adopted to a similar effect. Declarations are usually for the high-level political persons' expression of factual agreements, while both Decisions and Declarations can equally signal a political commitment to enable or undertake certain conduct. However, Decisions and Declarations have the same legal status, which, though centrally and essentially interpretative, carries strong political weight. Thus, using one or the other appears to be a significantly diplomatic choice. Their adoption also requires consensus or a simple majority vote among WTO members.[121]

A fourth option (Option D) would pursuant to a Ministerial Decision see members individually inserting commitments on fisheries subsidies into their schedules of concessions on trade in goods. The main challenge in implementing this approach is political. Because the commitments would be enforceable, the members making them might want to coordinate, so that commitments among a 'critical mass' of members would enter into effect at the

[120] ibid, 3–6.
[121] ibid, 6–10.

same time.[122]

Finally, members could choose to adopt a plurilateral agreement on fisheries subsidies (Option E) to be added to the WTO Agreements. While this agreement would be enforceable only between members who joined it, it could establish more ambitious disciplines among willing members and act as a benchmark for multilateral negotiations.[123]

From a purely political standpoint, it must be concluded from this analysis that there is an obvious trade-off between enforceability and political feasibility at work even in the best options of these five.[124] A stand-alone multilateral agreement would establish commitments for all members that would be enforceable under the WTO dispute settlement system, but first it would require consensus. Members could also consider building towards an enforceable new agreement via a trajectory from a Declaration to a Decision and finally to a formal amendment to the WTO Agreements.[125]

This chapter concludes to delineate the current applicable subsidies rules of the WTO Agreement on Subsidies and Countervailing Measures (SCM Agreement) to regulate fisheries subsidies. It started with introducing underlying principles and rationales of the subsidies rules of the SCM Agreement. Since there is no specific fishery subsidy rule, this thesis explored the suitability of different fora under the WTO Agreements, including, to regulate fisheries subsidies. These discovered optional fora are: providing an annex to the SCM Agreement; creating a novel multilateral agreement to be included alongside the existing Multilateral Agreements on Goods; a dependent option of WTO Ministerial Decisions on authoritative interpretations, waivers and signal legal changes. The rest fora, depending on a ministerial decision, is member states' inserting commitments on fisheries subsidies into their schedules of concessions on trade in goods. The final choice is adopting a plurilateral agreement on fisheries subsidies.

[122] ibid, 10–12.
[123] ibid.
[124] ibid.
[125] ibid, 12–15.

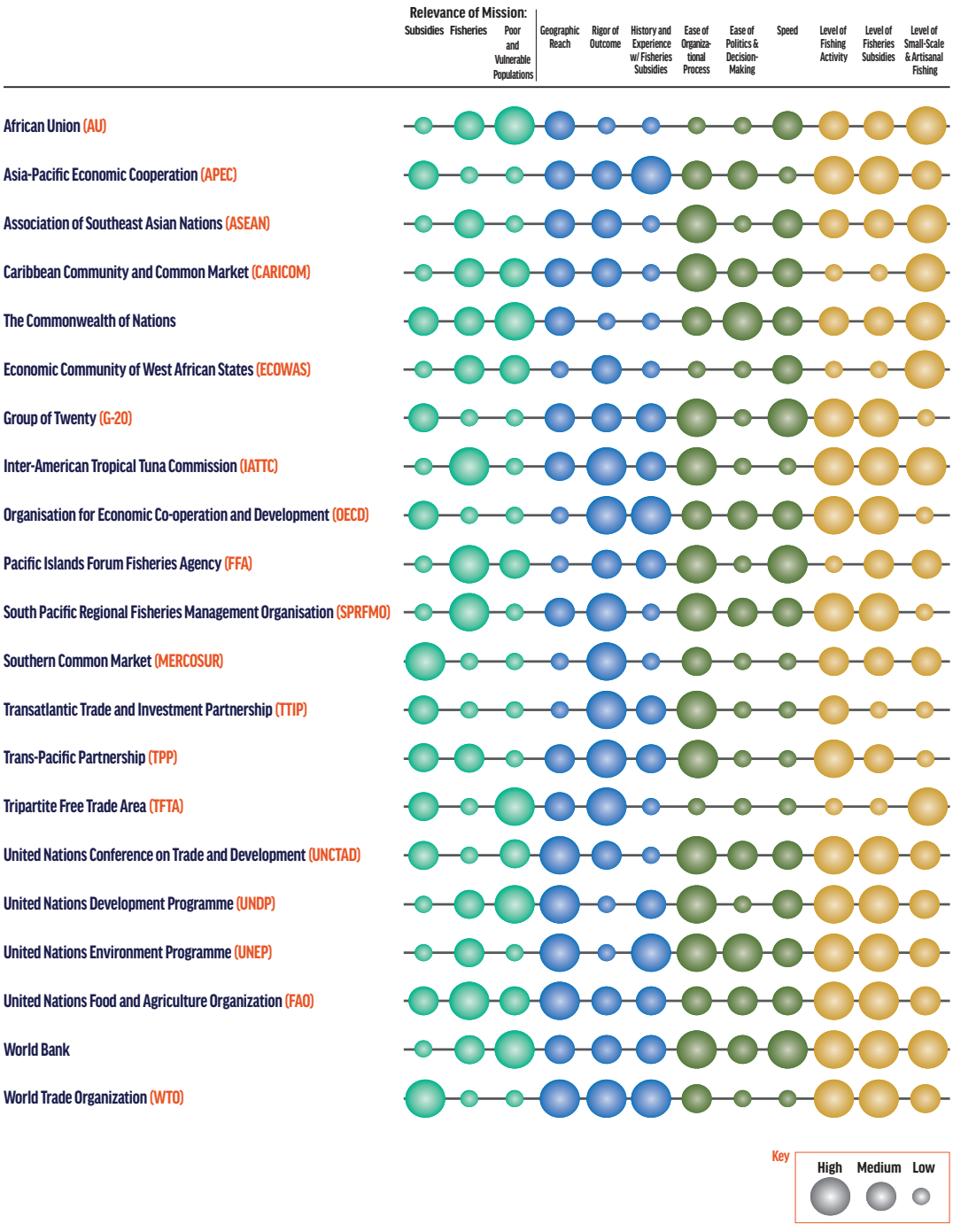
Attachment 1

Membership Fisheries-Related Organisations and Agreements

	WTO	FAO	FAO Compliance Agreement	UN FSA	UN CLOS	APEC	CPTPP
Australia	V	V	V	V	V	V	V
Brunei Darussalam	V				V	V	V
Canada	V	V		V		V	V
Chile	V	V	V	V	V	V	V
Taiwan	V					V	
China	V	V		V Signed 1996, yet no ratified	V	V	
Hong Kong	V					V	
Indonesia	V	V		V	V	V	
Japan	V	V	V	V	V	V	V
Korea	V	V	V	V		V	
Malaysia	V	V			V	V	V
Mexico	V	V	V		V	V	V
New Zealand	V	V	V	V	V	V	V
Papua New Guinea	V	V		V	V	V	
Peru	V	V	V			V	V
The Philippines	V	V		V	V	V	
Thailand	V	V		V	V	V	
Russia	V	V		V	V	V	
Singapore	V				V	V	V
United States	V	V	V	V		V	With dra

							w 201 8
Vietnam	V	V			V	V	V

Attachment 2



This graph displays important relevance of fishery sustainability, such as the relevance of fishery trade, fisheries subsidies and level of fishing, in various intergovernmental organisations. Source: <https://oceana.org/sites/default/files/732/rockefeller_report_final_web-version_lowerrez.pdf> accessed 9 March 2019.

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