Equity in Tuna Regional Fisheries Management Organisations: The Law and Practice on Differentiation in Western Pacific and Indian Ocean Tuna Fisheries

by

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STATEMENT REGARDING AUTHORITY OF ACCESS AND ETHICAL CONDUCT

 The research associated with this thesis abides by the National Statement on Ethical Conduct in Human Research and was approved by the Human Research Ethics Committee (Tasmania) Network under project number H0016394.

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LIST OF ACRONYMS AND ABBREVIATIONS

ABNJ	areas beyond national jurisdiction	GRT	gross registered tonnes
ACP	African, Caribbean and Pacific Group of States	GVC	global value chain
BBNJ	biodiversity in areas beyond national jurisdiction	IATTC	Inter-American Tropical Tuna Commission
CBDR	common but differentiated responsibilities	ICCAT	International Commission for the Conservation of Atlantic Tunas
CBF	IOTC Capacity Building Fund	IDDRI	Institute for Sustainable Development and International Relations
CCM	WCPFC member	IEL	international environmental law
CCSBT	Commission for the Conservation of Southern Bluefin Tuna	IFL	international fisheries law
CDQ	Community Development Quota	IO	Indian Ocean
CMM	WCPFC conservation and management measure	IOC	Indian Ocean Commission
DCS	developing coastal state	IOCs	Indian Ocean countries
DWFS	distant water fishing state	IOTC	Indian Ocean Tuna Commission
EEZ	Exclusive Economic Zone	IPOA	International Plan of Action
FAA	fishing access agreement	ISSF	International Seafood Sustainability Foundation
FAC	WCPFC Finance and Administration Committee	IUU	illegal, unreported and unregulated
FAD	fish aggregating device	LDCs	least developed countries
FAO	United Nations Food and Agriculture Organisation	MSC	Marine Stewardship Council
FDP	IOTC Fleet Development Plan	MSE	management strategy evaluation
FFA	Pacific Islands Forum Fisheries Agency	MSY	maximum sustainable yield
FR	Financial Regulations	mt	metric tonne
G16	Group of Like-Minded Coastal States in the IOTC	MTCs	Minimum Terms and Conditions for Foreign Fishing Access
GCC	global commodity chain	NC	WCPFC Northern Committee
GPN	global production network	nm	nautical mile

OFP	Oceanic Fisheries Programme of the Pacific Community
PICs	Pacific Island Countries
PICTs	Pacific Island Countries and Territories
PNA	Parties to the Nauru Agreement
RoO	Rules of Origin
ROP	Rules of Procedure
SBT	Southern Bluefin tuna
SC	Scientific Committee
SIDS	small island developing states
SPA	South Pacific albacore tuna
SPC	Secretariat of the Pacific Community
SRF	WCPFC Special Requirements Fund
SVE	small vulnerable economy
SWIOFC	Southwest Indian Ocean Fisheries Commission
SWIOFP	South West Indian Ocean Fisheries Project
TAC	total allowable catch
TAE	total allowable effort
TCAC	IOTC Technical Committee on Allocation Criteria
TCC	WCPFC Technical and Compliance Committee
TOR	terms of reference
TRP	target reference point
UNDOALOS	United Nations Division for Ocean Affairs and the Law of the Sea
UNGA	United Nations General Assembly
VDS	PNA Vessel Day Scheme
VMS	vessel monitory system
WCPFC	Western and Central Pacific Fisheries Commission
WCPO	Western and Central Pacific Ocean
WPEB	IOTC Working Party on Ecosystems and Bycatch
WPICMM	IOTC Working Party on the Implementation of Conservation and Management Measures
WPNT	IOTC Working Party on Neritic Tunas
WPTmT	IOTC Working Party on Temperate Tunas
WPTT	IOTC Working Party on Tropical Tunas
WTO	World Trade Organization
WWF	World Wide Fund for Nature

ABSTRACT

This thesis examines intragenerational equity for developing coastal states in transboundary tuna management. Intragenerational equity issues feature prominently in negotiations among members of intergovernmental organisations responsible for managing regional tuna stocks. Recent scholarship examining the performance of these organisations—referred to as the five tuna regional fisheries management organisations (TRFMOs)—demonstrates that disparities in economic development among members negatively impacts their effectiveness. This thesis builds on a developing thread in the TRFMO scholarship that views policy outcomes through the lens of distributive conflicts between developing coastal states and industrialised distant water fishing states.

In order to analyse intragenerational equity for developing coastal states, this thesis examines legal differentiation in treaty regimes that govern TRFMOs. Legal provisions in TRFMO treaty regimes commonly differentiate obligations between states on the basis of their levels of economic development. The purpose of these differentiated legal obligations is to address intragenerational equity for coastal states in developing regions where the majority of worldwide tuna stocks are located, and in doing so support equitable and effective transboundary tuna management. Despite the significance and pervasiveness of these differentiated legal provisions, there is currently little research into how they are designed and applied by the TRFMOs.

Through case studies of the Western and Central Pacific Fisheries Commission (WCPFC) and Indian Ocean Tuna Commission (IOTC), this thesis examines how TRFMOs address intragenerational equity (conceptualised as procedural and distributive equity) through the application of differentiation advantaging developing coastal state members to their law and practice. The thesis compares and evaluates six Policy Examples of differentiation to assess the equitability of policy outcomes observed in each TRFMO. Across Policy Examples, the thesis finds that both TRFMOs fail to adequately address intragenerational equity issues for developing coastal state members.

This thesis demonstrates that TRFMOs confront significant challenges to addressing intragenerational equity issues in their work. Differentiation in TRFMO treaty regimes does

not capture the full scope of procedural and distributive equity issues for developing coastal states and is repurposed to achieve compromises in negotiations rather than equitable management decisions. Distributional struggles, rather than legal commitments among states, tend to shape (liberate or constrain) the equitability of TRFMO management decisions. To address these issues, the thesis proposes that it is necessary to improve current formulations of differentiation within TRFMO treaty regimes and to introduce new elements to the TRFMO management model, such as a ‘Coastal State Development Quota’, thereby ensuring the delivery of concrete socio-economic benefits to developing coastal states.

PART I: EQUITY ISSUES IN TRFMOS AND LEGAL DIFFERENTIATION

INTRODUCTION

I THE GLOBAL TUNA INDUSTRY AND EQUITY FOR DEVELOPING COASTAL STATES

Tuna fisheries contribute over 40 billion USD to the global economy each year.[1] Concentrated in the equatorial band of tropical regions, most significant tuna fisheries are located offshore from developing states.[2] In the 1970s and 1980s, developing states gained resource rights to tuna fisheries after the introduction of Exclusive Economic Zones (EEZs) under the modern law of the sea regime. During this time, fisheries experts believed the new regime would transfer control over up to 90% of global fish stocks, including tuna, to coastal states—the majority of which were developing.[3] EEZ and other resource rights granted under the new regime were expected to represent the greatest redistribution of wealth to developing states in the history of international law.[4]

In the decade since 2010, states have seen the largest escalation of tuna catches to date. The largest tuna catch on record was taken in 2014.[5] For seven years, the third largest catch of fish species has been a tuna species.[6] As a result of this escalation, the United Nations Food and Agriculture Organisation (FAO) reports that nearly half of tuna fisheries are unsustainable.[7] Despite the transformations heralded by the modern law of the sea regime, developing states have received variable economic returns from tuna resources, and in many cases engagement with the tuna industry has not noticeably improved their national development outcomes.

Since declaring rights to tuna resources in their EEZs, many developing coastal states (DCSs) have pursued tuna-led economic development. However, their efforts are complicated by the

[1] Poseidon Aquatic Resource Management, Graeme Macfadyen, *Study of the Global Estimate of the Value of Tuna Fisheries—Phase 3 Report* (1059-GBR/R/03/D, 29 February 2016).
[2] FAO, 'Geographical Distribution', *Biological Characteristics of Tuna* (Web Page, August 2020) <http://www.fao.org/fishery/topic/16082/en#Distribution>. Significant fisheries for albacore and bluefin tuna species are further distributed in subtropical and temperate regions: ibid.
[3] R. P. Anand, 'The Politics of a New Legal Order for Fisheries' (1982) 11(3/4) *Ocean Development and International Law Journal* 265, 283 ('*A New Legal Order for Fisheries*').
[4] R. P. Anand, *Origin and Development of the Law of the Sea* (Martinus Nijhoff Publishers, 1983) 198–200 ('*Origin and Development of LOS*').
[5] FAO, *The State of World Fisheries and Aquaculture: Meeting the Sustainable Development Goals* (SOFIA No I9540, 2018) 4 ('*SOFIA 2018*').
[6] Ibid.
[7] Ibid 6.

unique political economy of tuna fisheries. Under the law of the sea regime, DCSs share rights and obligations to tuna stocks with industrialised distant water fishing states (DWFSs)[8] that are historically responsible for the development of the tuna industry.[9] Together, these states regulate the tuna industry through tuna regional fisheries management organisations (TRFMOs). This is a complex mandate, as the tuna industry is governed by multinational firms that oversee geographically sprawling production networks for harvesting, processing, trading, and retailing tuna products. Against the background of these competitive dynamics, DCSs have struggled to get their fair share from the tuna resources within and adjacent to their EEZs.

This thesis argues that international fisheries law (IFL) enshrines the principle of equity for DCSs to anticipate and remedy these distributional issues in tuna fisheries. It points to evidence of this principle in international fisheries instruments that differentiate legal obligations for states on the basis of their levels of economic development. These instruments include the *United Nations Convention on the Law of the Sea* (*UNCLOS*), its implementing agreement, the *United Nations Fish Stocks Agreement* (*UNFSA*) and the treaty law of TRFMOs that conserve and manage tuna stocks.[10]

This thesis examines how TRFMOs apply legal differentiation advantaging DCSs to tuna management decisions. In international law, legal differentiation advantages one state or group of states through the creation of different obligations within a treaty regime. In IFL, differentiated obligations advantaging DCSs address the broader objective of achieving effective and equitable transboundary tuna management. For example, TRFMO members are obliged under IFL to take into account the special requirements of DCSs in discharging their duty to cooperate in the conservation, management, and sustainable use of transboundary tuna stocks.[11] TRFMOs may address this obligation through different catch and/or effort

[8] This thesis uses the terms 'developing' and 'industrialised' states. The reason the term 'developed' states is not used is because one major DWFS—China—is still self-designated within the World Trade Organization (WTO) as a developing country.
[9] *United Nations Convention on the Law of the Sea*, opened for signature 10 December 1982, 1833 UNTS 397 (entered into force 16 November 1994) arts 64, 118 ('*UNCLOS*').
[10] *Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 Relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks*, opened for signature 4 December 1995, 2167 UNTS 3 (entered into force 11 December 2001) ('*UNFSA*').
[11] See *UNCLOS* (n 9) art 119(1)(a); ibid art 24.

allocations to DCSs for particular tuna stocks, as well as the provision of financial and technical assistance for capacity building activities in fisheries management.

This thesis will demonstrate that despite being codified in law, differentiation provisions continue to be the source of vigorous annual debate among TRFMO members. This thesis studies this contestation and the conditions under which it takes place, both in terms of how the law is written and designed, and the broader political economic context under which TRFMOs apply differentiation to their management decisions.

II BACKGROUND

A *Differentiation in International Fisheries Law*

Differentiated obligations for developing states depart from the assumption that the international legal system is based predominantly on reciprocal legal arrangements between equal sovereigns.[12] Despite being an exception to typical state practice, differentiation is becoming more prominent, particularly in international environmental law (IEL). In contemporary IEL, differentiation has been used to advantage developing states in treaty regimes which require cooperation between industrialised and developing states.[13] Given powerful asymmetries in perceived political power and levels of economic development, scholars describe differentiation as incentivising and facilitating the participation of developing states in solving contemporary international environmental problems.[14] Meanwhile, scholars have observed differentiation declining in other areas like international trade law, where industrialised states have resisted forms of differentiation that provide for broader commitments to economic justice for developing states.[15]

[12] Philippe Cullet, *Differential Treatment in International Environmental Law* (Ashgate Publishing, 2003) 15–7 ('*Differential Treatment*').
[13] See Lavanya Rajamani, 'The Changing Fortunes of Differential Treatment in the Evolution of International Environmental Law' (2012) 88(3) *International Affairs* 605 ('*Differential Treatment in the Evolution of International Environmental Law*').
[14] Anita Halvorssen, *Equity Among Unequals in International Environmental Law: Differential Treatment for Developing Countries* (Westview Press, 1999).
[15] See Cullet, *Differential Treatment* (n 12) 66-7; Lavanya Rajamani, *Differential Treatment in International Environmental Law* (Oxford University Press, 2006) 24-31 ('*Differential Treatment in IEL*').

This thesis shows that differentiation advantaging DCSs is a longstanding feature of law and practice in transboundary tuna management.[16] This thesis' analysis of key instruments identifies three objectives for differentiation in IFL. These objectives are derived from *treaty law provisions that differentiate obligations so as to directly or indirectly advantage or benefit DCSs.*

The first objective functions similarly to the use of differentiation in IEL. This is the objective of *facilitating the participation of DCSs in transboundary fisheries management*.[17] As in IEL, this objective is motivated by the goal of enhancing the overall effectiveness of transboundary fisheries management through increased cooperation between industrialised and developing states. It relates to multiple elements of transboundary fisheries management explored in this thesis, especially the need to consider the special needs, interests, and requirements of DCSs', including their effective participation in management processes and decisions.

The second objective for differentiation in IFL is to *protect vulnerable and fisheries dependent populations in DCSs*.[18] The thesis presents evidence of IFL providing protections for particular populations, including small-scale, artisanal, and indigenous fishers and fishworkers in DCSs, as well as considerations for relevant economic and social factors—such as their dependence on tuna resources for food security—within these states. This objective also relates to a critical function of transboundary fisheries management: determining the distribution of the burdens and benefits of conservation actions.

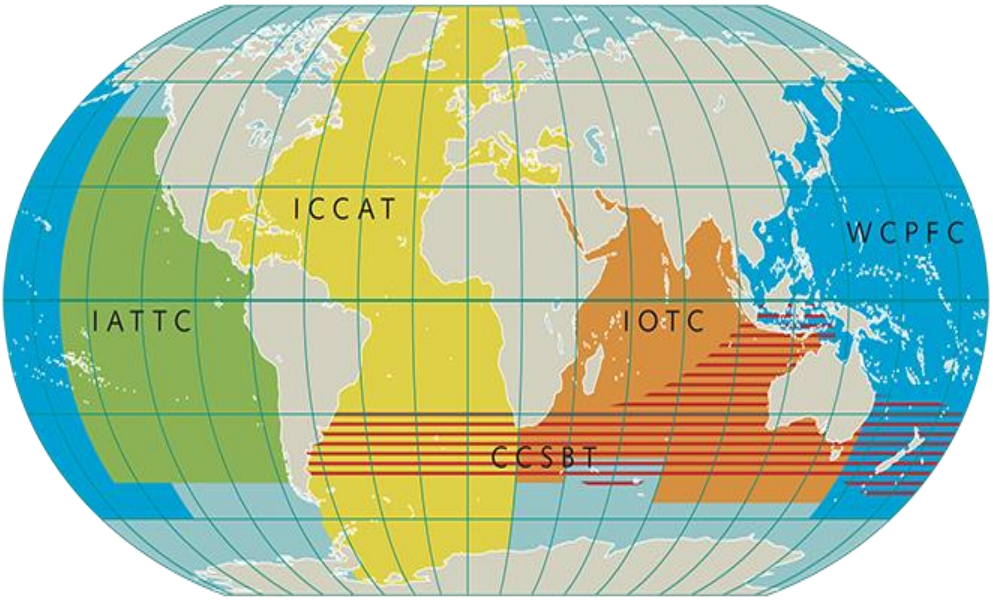
The third, and perhaps most contested, objective for differentiation in IFL is to *promote DCSs' access to high seas fisheries*.[19] The thesis provides evidence for this objective in recent IFL and describes related principles, such as transfer of marine technology to DCSs. Using these three objectives as an analytical framework, this thesis analyses how treaty regimes that carry out transboundary tuna management apply these objectives.

[16] Unless otherwise noted in this thesis, the term 'differentiation' refers to legal provisions advantaging DCSs.
[17] See *UNCLOS* (n 9) art 244(2); *UNFSA* (n 10) arts 24(1), 25 paras (1)(c), (2), (3), 26.
[18] See *UNCLOS* (n 9) arts 61(3), 62(3), 119(1)(a); *UNFSA* (n 10) arts 5(i), 24(2).
[19] See *UNCLOS* (n 9) arts 266, 268, 269; *UNFSA* (n 10) art 25(1) sub-paras (a), (b).

B *Tuna Regional Fisheries Management Organisations*

The governance architecture for global tuna management is comprised of five TRFMOs. Each TRFMO is an intergovernmental organisation that derives its management authority from treaty law adopted by its members. The majority of the five TRFMOs operate in tropical developing regions, where the greatest concentration of commercial tuna stocks is located. Clustered along the equatorial band of the Atlantic, Indian, and Pacific Oceans, TRFMO memberships primarily comprise coastal states from within these regions and fishing states from distant waters.[20] Three TRFMOs have large memberships containing DCS majorities in combination with the six principal DWFS powers (China, the European Union, Japan, South Korea, Taiwan, and the United States). Each of the TRFMOs was established independently of one another by states to manage the development of industrial tuna fisheries in the 20th and 21st centuries. Consequently, the TRFMOs emerged at different points in the historical development of IFL and represent a range of legal frameworks and memberships.

Figure 1: Areas of Application of the Five TRFMOs[21]



[20] The five TRFMOs are the Commission for the Conservation of Southern Bluefin Tuna (CCSBT), the Inter-American Tropical Tuna Commission (IATTC), the International Commission for the Conservation of Atlantic Tunas (ICCAT), the Indian Ocean Tuna Commission (IOTC), and the Western and Central Pacific Fisheries Commission (WCPFC).

[21] World Ocean Review, Tim Schröder, *The Future of Fish—The Fisheries of the Future* (WOR No 2013) 67.

Despite their diversity, TRFMOs share some fundamental similarities. Each TRFMO was established by the entry into force of a binding legal instrument negotiated by states. The TRFMOs are governed by treaty regimes, which include this founding legal instrument, as well as treaty law comprising a rules of procedure, financial regulations, and (binding and non-binding) conservation and management measures. In addition, TRFMOs share a similar institutional structure. A primary governing body typically sits on top of a number of subcommittees devoted to particular areas of TRFMO work, such as science, compliance, and finances and administration. While TRFMOs represent a substantial degree of diversity, they also exhibit key structural similarities in their legal and economic characteristics.

C *Legal Differentiation within TRFMOs*

1 *Overview*

Differentiation is a common feature of TRFMO treaty regimes. Reflecting the economic organisation of the tuna industry, TRFMO memberships typically present a diverse combination of states with different interests (coastal and fishing) and levels of economic development (developing and industrialised). In TRFMOs, differentiation has emerged to address these differences in their memberships and to guide areas of TRFMO work that are relevant to equitable fisheries management. Evidence from recent annual sessions of multiple TRFMOs indicates that DCSs have drawn attention to the need for these treaty organisations to address both procedural and substantive aspects of equitable fisheries management. These issues have been raised in the context of highly contested discussions on the role of differentiation in TRFMO law and policy.

This thesis argues that structural similarities have resulted in the rise of differentiation within TRFMO treaty regimes. DCSs in these regions are numerous and diverse. Collectively, they often represent relatively new postcolonial governments facing a number of governance challenges alongside marginalisation in the global economic system. Among these states, many have been identified and characterised by the United Nations system as economically vulnerable; the majority are small vulnerable economies (SVEs), least developed countries (LDCs), and/or small island developing states (SIDS). By contrast, the principal DWFSs represent the world's foremost industrialised economies. Most industrial-scale tuna fishing

vessels are built, owned, and operated by nationals from these states. Consequently, DWFSs have formed close historical ties with key actors in the tuna industry.

The interplay between broader economic relations among TRFMO members and the collective management decisions they produce has been acknowledged, but not directly analysed, in the scholarly literature on TRFMOs.[22] This thesis advances the premise that, as has been shown in other areas of international law, differentiation within TRFMOs speaks to underlying economic relations among TRFMO members. The thesis posits that contestation surrounding this class of legal provisions within TRFMOs provides insight into a combination of legal and economic drivers that inform state-led tuna management.

2 *Challenges*

TRFMO memberships face a number of challenges in applying differentiation to specific management decisions. To discuss these challenges, it is necessary to elucidate the mode of decision-making within most TRFMOs. The TRFMO management cycle often begins with scientific committees, which use the best available science to provide advice to members. TRFMO members then develop and propose regulatory measures on the basis of this scientific advice. The governing body of the TRFMO deliberates on proposed measures and traditionally adopts measures by consensus.

Three key aspects of this decision-making model pose issues for TRFMO members attempting to apply differentiation to management decisions. The first is that TRFMO decision-making is currently organised around ad-hoc deliberations on short-term regulatory measures. The scholarship on TRFMOs has identified this decision-making modality as a barrier to effective transboundary tuna management.[23] In response to advice from the scientific community, many TRFMOs have taken steps to retool their regulatory approaches and adopt recommended best practices. This has typically required instituting a Management Strategy Evaluation (MSE) process.[24] Despite ongoing changes in this direction, many

[22] Organisation for Economic Co-operation and Development (OECD), Anthony Cox, Leonie Renwrantz, and Ingrid Kelling, *Strengthening Regional Fisheries Management Organisations* (OECD Publication, 2009).
[23] Paul de Bruyn, Hilario Murua, and Martín Aranda, 'The Precautionary Approach to Fisheries Management: How This is Taken into Account by Tuna Regional Fisheries Management Organisations (RFMOs)' (2013) 38 *Marine Policy* 397.
[24] To describe an MSE process, it is necessary to define some fisheries management terms. A *harvest strategy* (also called a management procedure) is based on pre-agreed *management objectives*, which set out goals for the fish stock and associated fishery, and indicators for achieving these goals. Harvest strategies typically involve

TRFMOs continue to adopt regulatory measures based on ad-hoc scientific advice for periods of one to three years.

While it is less discussed in the literature, this lack of a long-term, systematic approach to decision-making also obstructs equitable transboundary tuna management. In the absence of a more structured approach to the adoption of regulatory measures, most TRFMOs base their management decisions on negotiations during annual sessions of their governing body. This means that decisions on how to apply differentiation are often negotiated—and typically agreed as a concession—in deliberations on proposed regulatory measures. This process results in the patchwork application of differentiation to TRFMO regulatory measures.

The second issue with this model is that TRFMO decision-making typically requires consensus among TRFMO members. While many TRFMO treaty regimes provide for voting procedures, TRFMOs generally seek to operate by consensus. A consensus-based approach to management decisions requires TRFMO members to remain flexible in their negotiating positions and produce policy outcomes that all members perceive as legitimate.[25] In the context of more sensitive areas of TRFMO work, which at times produce differing interpretations of treaty law among members, consensus-based decision-making may either produce a lowest common-denominator policy outcome or—worse—hamstring agreement altogether.[26] As will be shown, differentiation is often formulated within TRFMO treaty regimes in language with a substantial degree of ambiguity. Combined with differences

setting *reference points* and a *harvest control rule*. Two types of reference points—a *limit reference point* (LRP) and *target reference point* (TRP)—are critical. An LRP is a *biological* indicator for the *stock*, whereas a TRP is (generally) an *economic* indicator for the *fishery*—both are based on levels of fishing mortality and stock biomass. An LRP defines the (undesirable) point at which a stock requires immediate management action—generally fisheries managers avoid approaching LRP. A TRP sets the (desirable) point at which a stock can support long-term, sustainable exploitation and provide optimum catch levels. A *harvest control rule* (HCR) provides fisheries managers a pre-agreed rule for determining how much of a stock will be harvested based on its status. Finally, a *management strategy evaluation* (MSE) process enables fisheries managers to simulate and compare multiple potential harvest strategies according to their management objectives. For an explanation of MSEs in tuna fisheries, see PEW, *Management Strategy Evaluation* (Fact Sheet, 18 November 2016) <https://www.pewtrusts.org/-/media/assets/2019/07/harvest-strategies/hs_mse_update.pdf>. See also Shuya Nakatsuka, 'Management Strategy Evaluation in Regional Fisheries Management Organizations—How to Promote Robust Fisheries Management in International Settings' (2017) 18 *Fisheries Research* 127, 127–8.

[25] This thesis refers to TRFMO 'policy outcomes' rather than 'management outcomes'. This distinction highlights the difference between *TRFMO policy outcomes*, produced through management decisions, and *tuna management outcomes*, which are the material effects of management decisions on tuna stocks and fisheries.

[26] Robin Allen, 'International Management of Tuna Fisheries: Arrangements, Challenges and a Way Forward' (FAO Fisheries and Aquaculture Technical Paper No 536, 2010) 8.

among members as to the perceived legality of differentiation provisions, this ambiguity leads to extensive negotiations on how TRFMOs apply differentiation to regulatory measures.

The third issue is that TRFMO decision-making is almost wholly informed by biological data. While many TRFMO treaty regimes have provisions that point to the need to consider relevant social and economic conditions related to the management of tuna stocks, many TRFMOs have yet to collect this information. Therefore, there is currently limited provision of socio-economic data within TRFMOs to inform the application of differentiation to management decisions. This contributes to the status quo: most TRFMOs apply differentiation in the heat of negotiations, without an informed and systematic approach to integrating socio-economic considerations into their management decisions.

3 *Emerging Trends*

Emerging trends across the five TRFMOs indicate that differentiation will play a central role in future transboundary tuna management. The first of these trends has already been mentioned: most TRFMOs are currently undergoing a shift towards longer-term modes of decision-making. This shift has induced TRFMO members to adopt MSE processes and to initiate negotiations on the development of long-term allocation systems. While critical, many of these processes are ongoing.

Two core aspects of this shift are currently the subject of difficult negotiations within TRFMOs. These are identifying and defining: (i) management objectives and (ii) allocation criteria. While framed by IFL principles, these two aspects of long-term TRFMO decision-making continue to be subject to heated negotiations. DCSs have argued that these decisions must incorporate their special interests in regional tuna stocks through the application of differentiation. This thesis predicts that the systematic application of differentiation within the context of longer-term modes of decision-making is likely to become a core issue for TRFMOs in the future.

Another trend implicating differentiation within TRFMOs is the potential role for tuna stocks in coastal food security and livelihoods under future climate change scenarios. Recent research suggests that tuna stocks may play an essential role in the future food security of

coastal populations in Pacific Island countries (PICs).[27] This research is associated with studies that project management scenarios under which climate change impacts have substantially reduced tuna stocks and shifted their migrations.[28] As tuna resources diminish, TRFMOs will play a critical role in how the fallout from climate change impacts are managed. Under these management conditions, DCSs (and SIDS in particular) will require TRFMOs to consider differentiation in light of their particular vulnerabilities to climate change impacts and the need to secure coastal food security and livelihoods.

Finally, recent developments in international law concerning the high seas may impact future TRFMO management processes. Since 2017, the UN has convened negotiations under *UNCLOS* for an international, legally binding instrument to protect biological diversity in areas beyond national jurisdiction (BBNJ).[29] At the outset of negotiations, states agreed that the new instrument would not undermine existing institutional arrangements, including sectoral bodies such as the TRFMOs.[30] Crespo et al argue that 'This has generally been assumed to mean that the new instrument should complement and strengthen the existing framework and prevent the adoption of weaker or dissonant management measures'.[31] However, a minority of states continue to argue for the exclusion of commercial fisheries from the BBNJ instrument, voicing concerns that it will undermine the existing governance architecture of fisheries management bodies.[32]

It remains to be seen whether the adoption of a BBNJ instrument will enhance TRFMO obligations under *UNFSA* to monitor and manage the impacts of high seas fishing activities on associated, dependent, and ecosystem-related species. Scholars have noted that legal and

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[27] Johann Bell et al, 'Diversifying the Use of Tuna to Improve Food Security and Public Health in Pacific Island Countries and Territories' (2015) 51 *Marine Policy* 584.
[28] Inna Senina et al, *Impact of Climate Change on Tropical Tuna Species and Tuna Fisheries in Pacific Island Waters and High Seas Areas* (SPC-Conservation International Report for FAO Common Oceans ABNJ Program, No CI-3, 7 September 2018).
[29] See *International Legally Binding Instrument Under the United Nations Convention on the Law of the Sea on the Conservation and Sustainable Use of Marine Biological Diversity of Areas Beyond National Jurisdiction*, GA Res 72/249, UN Doc A/RES/72/249 (19 January 2018).
[30] Ibid para 7. See also Zoe Scanlon, 'The Art of "Not Undermining": Possibilities with Existing Architecture to Improve Environmental Protections in Areas Beyond National Jurisdiction' (2018) 75(1) *ICES Journal of Marine Science* 405.
[31] Guillermo Crespo et al, 'High-Seas Fish Biodiversity is Slipping through the Governance Net' (2019) 3 *Nature Ecology and Evolution* 1273, 1273.
[32] Ibid. The legal and institutional implications of a possible BBNJ instrument and existing RFMOs has also been explored by scholars. See, eg, Dire Tladi, 'The Proposed Implementing Agreement: Options for Coherence and Consistency in the Establishment of Protected Areas Beyond National Jurisdiction' (2015) 30 *The International Journal of Marine and Coastal Law* 654.

institutional changes ushered in by a possible BBNJ instrument could result in the adoption of more robust and precautionary management measures by TRFMOs.[33] These measures could in turn alter the extent and distribution of high seas tuna resources accessed by states. Notably, negotiations for a BBNJ instrument have taken place under broader shifts in discourse on the importance of equity for developing states.[34] Developing states have made clear that their capacity and development concerns must be addressed in order to adopt a BBNJ instrument.[35] Consequently, differentiation may have a future role to play in mediating the effects of a BBNJ instrument on the ways TRFMOs address the special interests and needs of developing members within the context of a shifting landscape for ocean governance.

III Research Objectives

This thesis is based on two premises: that IFL supports the broad objective of equitable transboundary fisheries management; and that, in the case of tuna, this objective is to be achieved through TRFMOs applying policies that use differentiation to advantage DCSs. Both of these premises are evidenced in IFL and current state practice within TRFMOs. Over the past decade, differentiation has developed into a critical feature of TRFMO treaty regimes. Emerging trends suggest that the role for differentiation within TRFMOs will only become more significant in the future.

As scholars have observed in other areas of international law, the application of differentiation is often highly contested among states in TRFMOs. In the context of transboundary tuna fisheries, differentiation touches upon sensitive issues for all TRFMO members, including procedural issues, such as the ability of DCSs to finance their participation in TRFMO management processes, and substantive issues, such as the allocation of tuna fishing rights among members.

[33] Crespo et al (n 31) 1276.
[34] Biliana Cicin-Sain et al, *Capacity Development as a Key Aspect of a New International Agreement on Marine Biodiversity Beyond National Jurisdiction* (Policy Brief, August 2018).
[35] Earth Negotiations Bulletin, Tallash Kantai et al, 'Summary of the Third Session of the Intergovernmental Conference (IGC) on the Conservation and Sustainable Use of Marine Biodiversity of Areas Beyond National Jurisdiction: 19–30 August 2019' (ENB Summary Report No 218, 2 September 2019).

To provide a fuller account of how TRFMOs design and apply differentiation, and the forces which underwrite this process, the thesis employs an interdisciplinary approach which integrates perspectives from the fields of international law and political economy. Ultimately, these perspectives enable the thesis to address multiple understandings of legal decision-making among states. Within the TRFMO context, this means describing differentiation in light of its function as mediating the legal and economic relations between DCSs and DWFSs.

The primary aim of this thesis is to describe how TRFMOs design and apply differentiation. Its secondary aim is to explain how the application of differentiation is underwritten by political-economic relations between DCSs and DWFSs in TRFMO memberships. The third aim is to determine whether the application of differentiation advantaging DCSs has manifested in equitable TRFMO policy outcomes.

IV Research Questions

To develop practitioner and scholarly understandings of how TRFMOs might improve their approach to equity issues associated with transboundary tuna management, this research examines how TRFMOs design and apply legal differentiation through the following research questions:

1 *Primary Research Questions*

(i) How do TRFMOs use legal differentiation to respond to equity issues for DCSs?

(ii) How is differentiation articulated in IFL and TRFMO treaty law?

2 *Secondary Research Questions*

(iii) What other factors might be responsible for shaping the equitability of TRFMO policy outcomes?

(iv) How might the economic interests of DCSs and DWFSs in tuna fisheries shape how TRFMOs apply differentiation to management decisions?

3 *Tertiary Research Questions*

(v) Does the use of differentiation produce equitable TRFMO policy outcomes for DCSs?

(vi) Does the application of differentiation respond to procedural and distributive equity issues for DCSs within TRFMOs?

(vii) How might TRFMOs improve their approach to equity issues for DCSs?

V RESEARCH DESIGN

This thesis examines how TRFMOs approach equity issues for DCSs through the design and application of differentiation to TRFMO policy. Positioned in relation to a sparse yet robust literature on equity issues in transboundary tuna management, this thesis addresses both descriptive and evaluative objectives. On the one hand, it sets out to conceptualise equity issues in TRFMOs by describing differentiation in IFL and TRFMO treaty law. On the other, it evaluates the extent to which the application of differentiation to TRFMO policy produces equitable outcomes for DCSs. These objectives are housed in an empirically grounded research design, largely as a result of the lack of both theoretical conceptualisation and empirical studies on equity issues in TRFMOs.[36] The reality is that, in contrast to numerous studies describing their effectiveness, little scholarly research has been published on the equitability of TRFMO policies.

A *Conceptualising Intragenerational Equity within TRFMOs*

This thesis focuses on intragenerational equity within TRFMOs to examine distributive conflicts at the forefront of negotiating conditions for TRFMO members. Intragenerational equity in international law refers to economic and environmental justice for developing states. It emanates from early IEL instruments and is core to the concept of sustainable development.[37] It is distinguished from other notions of equity, such as intergenerational

[36] Methodologically, this thesis adopts a constructivist perspective that views states (TRFMO members) and the structures in which they operate (TRFMOs and the global tuna industry) as mutually constitutive: Alexander E Wendt, 'The Agent-Structure Problem in International Relations Theory' (1987) 41(3) *International Organization* 335; Audie Klotz and Cecelia Lynch, *Strategies for Research in Constructivist International Relations* (ME Sharpe, 2007). However, it addresses contradictions often observed in constructivist research epistemology and methods through empirically grounded methods (participant-observation and document analysis) that analyse TRFMO members' legal obligations (commitments to differentiation in treaty law) and management decisions (application of differentiation to regulatory measures). See Vogler's description of 'institutional-constructivism': John Vogler, 'Taking Institutions Seriously: How Regime Analysis Can be Relevant to Multilevel Environmental Governance' (2003) 3(2) *Global Environmental Politics* 25, 27, 33–5.

[37] See, e.g., *Declaration of the United Nations Conference on the Human Environment*, UN Doc A/CONF.48/14/Rev.1 (16 June 1972), Principles 11–12 ('*Stockholm Declaration*'); *Rio Declaration on*

equity, in that it represents justice for present generations.[38] Intragenerational equity identifies the need for states to equitably distribute the burdens and benefits of environmental protection and resource management.[39] In the TRFMO context, intragenerational equity describes justice for DCSs with respect to how shared tuna resources are managed and how the economic benefits from these resources are distributed.[40]

This thesis conceptualises intragenerational equity within TRFMOs from both legal and normative perspectives. First, the thesis conceptualises intragenerational equity according to what states have committed to under treaty law. This legal conceptualisation refers to provisions in IFL and TRFMO treaty law that differentiate obligations to advantage DCSs. Developed by scholars of international environmental treaty regimes, analyses of differentiation draw attention to the particular ways in which legal provisions that advantage developing states provide for intragenerational equity within treaty regimes.[41] Furthermore, this legal framing of intragenerational equity articulates a set of standards which TRFMO members are legally obliged to address.

Second, the thesis' normative conceptualisation of intragenerational equity encompasses procedural and distributive equity for DCSs. Inspired by research into the function of 'fairness' in treaty regimes, this thesis views normative understandings of intragenerational equity through the lens of TRFMO members' perceptions and expectations.[42] Therefore, procedural equity is defined as members' perceptions of 'right process' and distributive equity as members' expectations of a just distribution of burdens and benefits.[43] Procedural

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Environment and Development, UN Doc A/CONF.151/26/Rev.1(Vol.I), annex I (14 June 1992), Principles 3–4, 6–7 ('*Rio Declaration*'). See also 'Introduction' in Alan Boyle and David Freestone (eds), *International Law and Sustainable Development: Past Achievements and Future Challenges* (Oxford University Press, 1999) 1, 15.

[38] See Dinah Shelton, 'Equity' in Daniel Bodansky, Jutta Brunnée and Ellen Hey (eds), *The Oxford Handbook of International Environmental Law* (Oxford University Press, 2008) 640, 641–3.

[39] Duncan A. French, 'International Environmental Law and the Achievement of Intragenerational Equity' (2001) 31(5) *Environmental Law Reporter News & Analysis* 10469, 10479.

[40] Rosemary Rayfuse, 'The Challenge of Sustainable High Seas Fisheries' in Nico Schrijver and Friedl Weiss (eds), *International Law and Sustainable Development: Principles and Practice* (Martinus Nijhoff Publishers, 2004) 467, 482–3.

[41] Cullet and Rajamani both associate differentiation with the realisation of substantive equality (that is, intragenerational equity) for developing states. See Cullet, *Differential Treatment* (n 12) 15, 29; Rajamani, *Differential Treatment in IEL* (n 15) 7.

[42] Thomas Franck, *Fairness in International Law and Institutions* (Oxford University Press, 1995) 7–9. See also Oran R. Young, 'Does Fairness Matter in International Environmental Governance? Creating an Effective and Equitable Climate Regime' in Todd L. Cherry, Jon Hovi and David M. McEvoy (eds), *Toward a New Climate Agreement: Conflict, Resolution and Governance* (Routledge, 2014) 16.

[43] Franck (n 42) 7.

equity for DCSs refers to their effective participation in tuna management activities (scientific research and MCS) and deliberative processes (attendance to and negotiating capacity within TRFMO meetings). Distributive equity for DCSs refers to their increased access to and preferential allocations of tuna resources. These understandings of procedural and distributive equity for DCSs reflect their differential capacities, needs, and interests with respect to participation in tuna management processes and deriving concrete economic benefits from tuna resources.

B *Selection of Western and Central Pacific Fisheries Commission and Indian Ocean Tuna Commission Case Studies*

The Western Pacific and Indian Oceans are home to the two largest and most valuable fishing grounds in the world. This thesis is designed as a comparative case study of two TRFMOs with mandates in these fisheries: the Western and Central Pacific Fisheries Commission (WCPFC)[44] and Indian Ocean Tuna Commission (IOTC)[45]. This thesis assumes that TRFMOs frequently encounter equity issues in their work because their memberships comprise majorities of DCSs and minorities of DWFSs. Furthermore, a *comparative* analysis of developing regions was elected to provide a combination of descriptive depth in each case study and evaluative insights across the two TRFMOs.

The WCPFC and IOTC were selected for their similarities and differences, as well as the pragmatic decision to select TRFMOs of which Australia is a member. Both TRFMOs have mandates in developing regions and possess large memberships, the majority of which are

[44] WCPFC member states are: Australia, China, Canada, Cook Islands, the EU, Federated States of Micronesia (FSM), Fiji, France, Indonesia, Japan, Kiribati, South Korea, Republic of Marshall Islands (RMI), Nauru, New Zealand, Niue, Palau, Papua New Guinea (PNG), Philippines, Samoa, Solomon Islands, Taiwan, Tonga, Tuvalu, the US, and Vanuatu. Participating Territories are: American Samoa, the Northern Mariana Islands, French Polynesia, Guam, New Caledonia, Tokelau, and Wallis and Futuna. Cooperating Non-Members are Curacao, Ecuador, El Salvador, Nicaragua, Panama, Liberia, Thailand, and Vietnam: WCPFC, *About WCPFC* (Web Page, 2020) <https://www.wcpfc.int/about-wcpfc> ('*WCPFC Website*').

[45] IOTC members are: Australia, Bangladesh, China, Comoros, Eritrea, the EU, France (Overseas Territories), India, Indonesia, Iran, Japan, Kenya, South Korea, Madagascar, Malaysia, Maldives, Mauritius, Mozambique, Oman, Pakistan, Philippines, Seychelles, Sierra Leone, Somalia, Sri Lanka, South Africa, Sudan, Tanzania, Thailand, UK (British Indian Ocean Overseas Territories), and Yemen. Cooperating Non-Members are Liberia and Senegal. Taiwan is considered an 'invited expert' by the IOTC: IOTC, *Structure of the Commission* (Web Page, 2020) <https://www.iotc.org/about-iotc/structure-commission> ('*IOTC Website*').

DCSs. Both were established under the modern law of the sea regime, after the entry into force of *UNCLOS* in 1994.

The WCPFC and IOTC also differ in subtle, though important, ways. One difference is the legal frameworks under which they operate, which reflect the distinct historical and institutional contexts in which they were adopted.[46] The WCPFC is younger than the IOTC by nearly a decade. The *IOTC Agreement* was negotiated under the auspices of the FAO in 1993. Negotiated contemporaneously with the adoption of *UNFSA*, the *IOTC Agreement* was based on general principles in *UNCLOS*, rather than modern principles for transboundary fisheries management introduced by *UNFSA*.[47] Conversely, the *WCPF Convention*, adopted in 2000, was the first TRFMO to model itself on provisions in *UNFSA*.[48] The WCPFC is also an intergovernmental organisation independent of the UN system.

The historical development of tuna fisheries management in both regions also differs. Whereas the WCPFC was established after nearly three decades of access relations between PICs and DWFSs (including a critical period of regional and subregional institutional development within the region), tuna management arrangements in the IO were relatively absent prior to the establishment of the IOTC.[49] As a result of these differences, the WCPFC possesses a more modern and developed legal framework than the IOTC. The IOTC has

[46] The WCPFC convened its first meeting in 2004 after states adopted the *WCPF Convention* in 2000: *Convention on the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean*, opened for signature 5 September 2000, 2275 UNTS 43 (entered into force 19 June 2004) ('*WCPF Convention*'). By comparison, the IOTC began operations in 1996 after the *IOTC Agreement* was adopted in 1993: *Agreement for the Establishment of the Indian Ocean Tuna Commission*, opened for signature 25 November 1993, 1927 UNTS 329 (entered into force 27 March 1996) ('*IOTC Agreement*').

[47] Negotiations for *UNFSA* occurred between 1993 and 1995—in the period after the *IOTC Agreement* was adopted. The timing of negotiations for the two instruments produced a situation whereby the *IOTC Agreement* lacked references to the reforms heralded by *UNFSA*. See JJ Kambona and SH Marashi, *Process for the Establishment of the Indian Ocean Tuna Commission* (FAO Fisheries Circular No 913, 1996). Allen describes the novel principles for transboundary tuna management codified in *UNFSA*, which among others, include the application of the precautionary approach, ecosystem-based management, and the elimination of overfishing and excess fishing capacity. Most importantly, *UNFSA* identifies (T)RFMOs as the primary mode of cooperation among states in transboundary fisheries like tuna: Allen (n 26) 3–4.

[48] See Sandra Tarte, 'The Convention for the Conservation and Management of Highly Migratory Fish Stocks in the WCPO: Implementation Challenges from a Historical Perspective' in Quentin Hanich and Martin Tsamenyi (eds), *Navigating Pacific Fisheries: Legal and Policy Trends in the Implementation of International Fisheries Instruments in the Western and Central Pacific Region* (Ocean Publications, Australian National Centre for Ocean Resources and Security, 2009) 204.

[49] See Chapter 4, Section III, C2.

identified this issue and, for over a decade, members have discussed potential revisions to its legal framework.[50]

Finally, the WCPO and IO tuna fisheries present a potentially significant juxtaposition of political geographies. The WCPO tuna fishery almost entirely supplies industrial fishing operations, while the IO tuna fishery sources a combination of artisanal, semi-industrial, and industrial fishing fleets. The majority of the WCPO tuna fishery—up to 80% of tuna resources—falls under the jurisdiction of PICs.[51] By contrast, while less fine-grained data is published about the distribution of the IO tuna fishery, it is widely agreed that regional tuna resources are roughly divided between areas under the jurisdiction of Indian Ocean countries (IOCs) and high seas.[52] Culturally, both regions differ in the level of shared regional identity among DCSs. Whereas PICs in the WCPO have built collective political organisations that refer to a shared 'Oceania' identity, IOCs come from a diverse representation of cultures (from East Africa, the Middle East, and South Asia) and exhibit limited political cohesion.

The similarities and differences between the two TRFMOs and tuna fisheries thus offer a rich opportunity to explore multiple strands of analysis. The case studies were selected on the basis of expository research showing similarly fraught relations between DCSs and DWFSs. In line with this preliminary observation, it was expected that these conflicted relations would manifest in equity issues for transboundary tuna management. Beyond this fundamental similarity, the thesis compares both TRFMOs to investigate how differences in legal frameworks, tuna fisheries, and political geographies may reveal factors that influence how TRFMOs approach equity issues and the extent to which their policy outcomes are equitable.

C *Sources and Data Collection*

The sources used in this thesis include both primary and secondary texts. Primary sources comprise international legal instruments and publicly available documents associated with their negotiating histories; reports and meeting summaries published on the public webpages

[50] See IOTC, Terje Lobach, *Analysis of the IOTC Agreement*, IOTC-2015-PRIOTC02-04, 2nd sess IOTC Performance Review Panel, 30 January 2015.
[51] WCPFC, Peter Williams and Chris Reid, *Overview of Tuna Fisheries in the WCPO Including Economic Conditions–2017*, WCPFC-TCC14-2018-IP05, 14th reg sess, 5 August 2018 ('*Overview of WCPO Tuna Fisheries 2017*').
[52] IOTC, *Review of the Statistical Data and Fishery Trends for Tropical Tunas*, IOTC-2018-WPTT20-08, 20th reg sess of WPTT, 16 October 2018 ('*IOTC Review of Data and Trends for Tropical Tunas*').

of the WCPFC and IOTC; and publicly available catch and effort data for the WCPO and IO. Catch and effort data are derived from reporting available on the public facing websites of both TRFMOs, as well as other regional development organisations.

Secondary sources include white and grey literature on equity in international law, legal differentiation, and TRFMOs. Political economic data on the global tuna industries, as well as the WCPO and IO regional tuna industries, have also been used extensively. This thesis does not provide original political-economic analysis but calls on existing analyses to inform its examination of equity issues in TRFMOs and their relationship to members' economic interests in tuna fisheries.

D *Event Ethnographies of the WCPFC and IOTC: Fieldwork and Interviews*

Fieldwork and interviews at the annual meeting of each TRFMO were conducted as part of the research for this thesis. Two 'event ethnographies' helped explore live equity issues for DCS members within the WCPFC and IOTC.[53] These issues informed the selection of comparative Policy Examples (described in Chapters 6 and 7), which were used to examine how each TRFMO applied differentiation. Access to interview participants and immersion within the TRFMO decision-making context were key to this work. Participant-observation on a government delegation and anonymity for interview participants were therefore critical elements of fieldwork. Furthermore, establishing and maintaining rapport with interview participants led to choices not to include direct quotations in this thesis and to provide and modify written transcripts of interviews in correspondence with interview participants.

Ethnographic methods are relatively new to the fields of international law and relations.[54] Scholars have explored ethnographic methods as part of broader methodological arguments advancing a constructivist perspective of organisations like the TRFMOs and the treaty law

[53] For an overview of event ethnography (also called 'collaborative event ethnography' in reference to research teams), see Lisa M. Campbell et al, 'Studying Global Environmental Meetings to Understand Global Environmental Governance: Collaborative Event Ethnography at the Tenth Conference of the Parties to the Convention on Biological Diversity' (2014) 14(3) *Global Environmental Politics* 1. See also generally Clifford Geertz, '*Thick Description*: Toward an Interpretive Theory of Culture' in *The Interpretation of Cultures* (Basic Books, 1973) 3.
[54] See Wanda Vrasti, 'The Strange Case of Ethnography and International Relations' (2008) 37(2) *Millennium: Journal of International Studies* 279.

they produce.[55] Constructivists view states and the structures in which they operate as mutually constitutive.[56] Constructivism also views policymaking outcomes through the lens of inter-subjective understandings established among policymakers.[57] An even newer methodological development has been the introduction of 'event ethnography', which enables teams of researchers to conduct ethnographies at intergovernmental meetings to produce deeper understandings ('thick descriptions' in ethnographic terms) of how delegates frame, discuss, debate, and contest problems to produce negotiating outcomes.[58] The use of event ethnography draws from work that acknowledges the significance of the social context operating within intergovernmental meetings.[59] It also pushes back against the use of ethnographies to address more critical analyses of IR and instead focuses on the way government delegations address problems and produce outcomes at individual meetings.[60] Thus, event ethnography enables researchers to generate thick descriptions of interstate negotiations and provides explanatory value for understanding how negotiation outcomes are reached.

Fieldwork was undertaken in 2017 at WCPFC and IOTC annual sessions. Approval for fieldwork and semi-structured interviews was received from the University of Tasmania Social Science Human Research Ethics Committee.[61] Participant observation was carried out at the 21st Annual Session of the IOTC in Yogyakarta, Indonesia in May 2017 and the 14th Regular Session of the WCPFC from November to December 2017. The researcher attended both meetings as a non-governmental observer on the Australian delegation. This included attendance to pre-meetings arranged by DCSs caucusing prior to the annual sessions, as well as meetings of working groups, subsidiary bodies, and technical committees convened prior to, and alongside annual sessions. The researcher's fieldwork produced over 100 pages of fieldnotes and daily audio journal recordings.

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[55] See Vincent Pouliot, '"Sobjectivism": Toward a Constructivist Methodology' (2007) 51 *International Studies Quarterly* 359.
[56] See above (n 36).
[57] Ibid.
[58] J. Peter Brosius and Lisa M. Campbell, 'Collaborative Event Ethnography: Conservation and Development Trade-offs at the Fourth World Conservation Congress' (2010) 8(4) *Conservation and Society* 245.
[59] Ibid 247.
[60] Joseph MacKay and Jamie Levin, 'Hanging Out in International Politics: Two Kinds of Explanatory Political Ethnography for IR' (2015) 17 *International Studies Review* 163, 165–78.
[61] Human Research Ethics Committee (Tasmania) Network, *Between Paper and Practice: The Role of Legal Commitments to Fairness in Regional Tuna Bodies* (Full Ethics Application Approval, No H0016394, 5 April 2017).

Semi-structured interviews were conducted with 22 participants. This encompassed 14 participants at the IOTC annual session and eight participants at the WCPFC annual session. The researcher leveraged the presence of meeting participants in the margins of both annual sessions to gain access to interviewees.[62] All interviewees (excluding one) chose to remain anonymous. Interviews were audio-recorded, transcribed, and approved in online correspondence with participants. In two cases, remote interviews were carried out by phone with fisheries management professionals.[63] Interviews were semi-structured and therefore covered a range of topics relevant to the thesis. Interviews were loosely organised around questions that were both comparable across the two TRFMOs and particular to the WCPFC and IOTC. The flexibility of the interview format allowed the researcher to locate and obtain the most information from interview participants based on their expertise and experience.

E *Thesis Limitations*

This thesis is limited in several important ways by its analytical scope. First, due to time and resource constraints, it does not include an analysis of *all* TRFMOs; it excludes a comparable TRFMO, ICCAT. This omission may provide an avenue for future research in this vein, discussed in the Conclusion.[64]

In addition, the fieldwork and interviews that informed this thesis were carried out in the context of one annual session for each TRFMO. While Policy Examples generally spanned multiple years of negotiations, the researcher was only able to observe negotiations in 2017. Although interviews, TRFMO meeting reports, and news publications were used to triangulate the researcher's impression of negotiations in other years, this posed a possible limitation.

The study is also premised on the current state of knowledge derived from recently published political-economic analyses and data on tuna fisheries. However, the quantity and quality of

[62] Practical considerations, as well as the objective of gaining access to interview participants, informed the researcher's choice to engage in participant observation in the annual sessions as an observer on a government delegation. See Kenneth Goldstein, 'Getting in the Door: Sampling and Completing Elite Interviews' (2002) 35(4) *Political Science and Politics* 669; Asif Efrat, 'Cross-National Interviewing at International Conferences: How to Make the Most of a Unique Research Opportunity' (2015) 16 *International Studies Perspectives* 302.
[63] These interviews provided points of clarification for TRFMO policy issues relevant to the thesis and were therefore not transcribed.
[64] See Conclusion Section IV B.

publications available for the WCPO and IO regions are not evenly distributed. There is a greater number of robust studies on the political economy of the WCPO tuna fishery, most likely as a result of the greater availability of fisheries and economic data on the region. While the WCPO tuna fishery is better studied, this thesis attempts to provide parity where possible by examining equivalent themes with respect to the political economy of both tuna fisheries. This presents a potential limitation for the thesis, which, again, does not contain any original political-economic analyses or data.

Finally, the scope of the thesis remains fixed on the behaviour of *states* in TRFMO negotiations concerning differentiation. State behaviour is considered in light of political-economic factors, which invariably concern non-state actors. While non-state actors, including firms, industry associations, and non-governmental organisations (NGOs) engage in TRFMO negotiations and are likely to inform the negotiating positions of TRFMO members, their behaviour falls outside the analytical scope of this thesis.

F *Thesis Contribution*

Despite the growing significance of differentiation in the field, there is limited understanding in the scholarly literature on transboundary tuna management about differentiation and relevant state practice within TRFMOs. Most importantly, there is currently no systematic study of how TRFMOs design and apply differentiation to tuna management; what conditions and/or factors shape this application; and whether the rise of differentiation has produced equitable outcomes within TRFMOs. This thesis addresses this knowledge gap. More than filling a gap regarding the application of a narrow class of legal provisions, this thesis examines the additional economic and institutional dimensions associated with differentiation.

The central contribution of the study is a detailed, empirically grounded analysis of how TRFMOs respond to equity issues for DCSs in their work. The study extends a growing body of literature on equity issues in transboundary tuna management and addresses the dearth of empirical data on current practices within TRFMOs.

Second, this thesis provides the first analysis of differentiation in IFL. While general surveys of differentiation have included IFL instruments,[65] this is the first attempt to systematically articulate differentiation advantaging DCSs in key binding IFL instruments, as well as the treaty law of two TRFMOs.

Finally, this thesis offers a constructivist methodology that synthesises research themes in multiple disciplines, including international law and political economy. The study reveals that inquiry concerning equity issues among states in resource sharing regimes such as the TRFMOs provides a rare opportunity to weave together questions concerning the role of legal obligations in interstate negotiations and the economic forces that inform state behaviour.

VI THESIS ROADMAP

This thesis employs a comparative, interdisciplinary approach to its examination of intragenerational equity within TRFMOs. This approach entails legal analyses of differentiation in treaty law, as well as political economy accounts of the economic interests that motivate member states within TRFMO negotiations. The thesis ultimately draws these strands together to formulate an in-depth description of how the WCPFC and IOTC currently address intragenerational equity for DCS members.

To accomplish this, the thesis is divided into three Parts, which correspond with the primary, secondary, and tertiary research questions asked in Section IV. Part I backgrounds the thesis' inquiry into equity for DCSs in transboundary fisheries. This requires setting out a legal policy analysis of differentiation in IFL and the treaty regimes of the WCPFC and IOTC. Part II examines the ways states operate as economic actors within tuna production and how this informs negotiating dynamics within the WCPFC and IOTC. Part III analyses Policy Examples to determine how the WCPFC and IOTC apply differentiation to management decisions. Drawing from this analysis, it assesses the equitability of the negotiating outcomes in these Policy Examples and points to possible improvements to how the WCPFC and IOTC approach equity issues for DCS members.

[65] See, e.g., Rajamani, *Differential Treatment in IEL* (n 15) 109.

Part I is comprised of Chapters 1 and 2 and responds to the thesis' primary research questions. Chapter 1 provides a literature review of fisheries management studies on TRFMO performance and backgrounds key concepts in the thesis, such as equity among states, legal differentiation, and global production networks. Chapter 2 describes the origins and development of differentiation in both broader international law and IFL. It shows that over time, differentiation in IFL has shifted away from being associated with redistributive justice for developing states and towards focused assistance that enables DCSs to participate in transboundary fisheries and their management. It then sets out a legal policy analysis of differentiation in IFL and the treaty law of the WCPFC and IOTC. This legal policy analysis establishes evidence for the three main objectives for differentiation in IFL. It demonstrates that these objectives address both procedural and distributive equity for DCSs. It also sets out 'differentiation frameworks' within WCPFC and IOTC treaty law.

Part II concerns Chapters 3, 4, and 5, all of which relate to the thesis' secondary research questions. These questions explore political economic factors that shape how TRFMOs apply differentiation to management decisions. Chapter 3 outlines the political economy of the global tuna industry. It shows how firms, states, and TRFMOs are imbricated in distributional struggles for value capture within tuna production chains. Chapters 4 and 5 provide overviews of how WCPFC and IOTC members are engaged in regional tuna production. The chapters introduce interference and cooperative strategies that have been employed by DWFSs and DCSs respectively to advantage their interests *through* the WCPFC and IOTC.

Part II demonstrates that TRFMOs are part of environmental conditions that impact on the economic interests of actors within tuna production. This consequently implicates TRFMOs in distributional struggles between DCSs and DWFSs. Chapter 3 identifies two common distributional struggles within TRFMOs that affect distributive and procedural equity for DCSs. These are: (i) region-wide allocations and (ii) funding for the effective participation of DCS members, respectively. These chapters conclude that distributional struggles between DCSs and DWFSs are likely to influence how the WCPFC and IOTC address equity issues for DCS members and apply differentiation to their management decisions.

Chapters 6, 7, and the Conclusion constitute Part III, which responds to the thesis' tertiary research questions. Chapter 6 examines how the WCPFC and IOTC apply differentiation to

their management decisions through six Policy Examples. Chapter 7 performs a comparative analysis of these Policy Examples and assesses the equitability of their outcomes for DCS members. Ultimately Part III finds that neither TRFMO responds fully to procedural and distributive equity issues for their DCS members. Part III describes how distributional struggles between DCSs and DWFSs appear to have a greater role in shaping policy outcomes than legal differentiation. Pointing to this finding, the thesis suggests that the WCPFC and IOTC incorporate explicit quotas for fisheries-based economic development in DCSs into their future long-term allocation systems. This material recommendation may provide a pathway for the WCPFC and IOTC to concretely address intragenerational equity for DCS members.

CHAPTER 1: INTRAGENERATIONAL EQUITY IN TRFMOS AND KEY CONCEPTS IN LAW AND POLITICAL ECONOMY

This chapter outlines the literatures and concepts that inform this thesis' examination of intragenerational equity within TRFMOs. Section I introduces the scholarly literature on TRFMOs, arguing that a fisheries management-specific neoliberal bias informs recommendations for TRFMOs to adopt rights-based management. It also introduces research by scholars who emphasise the need to study how TRFMO management decisions distribute the burdens and benefits of conservation action onto members. Section II begins with a discussion of previous studies of equity in IFL. It then reviews the scholarly literature on differentiation to discuss what it might offer to this thesis' analysis of the design of differentiation provisions advantaging DCSs in IFL and TRFMO treaty law. Section III introduces political economy research on the global tuna industry. It describes the concept of a tuna 'global production network' (GPN) and discusses how TRFMOs may be implicated in distributional struggles for value capture among firms and states. Political economy research provides insights into this thesis' examination of the external factors that shape how TRFMO members apply differentiation to their management decisions. Finally, Section IV concludes by introducing a preliminary comparison of the WCPFC and IOTC.

I EQUITY ISSUES IN TRFMOS MATTER

A *Reviews of TRFMO Performance*

Multiple studies have assessed the management performance of the five TRFMOs in view of evolving international standards.[66] The FAO carried out one early study in 2010 after it undertook a work programme expressly focused on management of global tuna fisheries.[67]

[66] See A Willock and M Lack, *Learning from Experience and Best Practice in Regional Fisheries Management Organizations* (WWF TRAFFIC Report, 2006); Michael Lodge et al, *Recommended Best Practices for Regional Fisheries Management Organizations: Report of an Independent Panel to Develop a Model for Improved Governance by Regional Fisheries Management Organizations* (Chatham House Report, 2007); Cox et al (n 22); Allen (n 26); Sarika Cullis-Suzuki and Daniel Pauly, 'Failing the High Seas: A Global Evaluation of Regional Fisheries Management Organizations' (2010) 34 *Marine Policy* 1036; De Bruyn, Murua, and Aranda (n 23); Kristina Gjerde et al, 'Ocean in Peril: Reforming the Management of Global Ocean Living Resources in Areas Beyond National Jurisdiction' (2013) 74 *Marine Pollution Bulletin* 540; Maite Pons, Michael C Melnychuk, and Ray Hilborn, 'Management Effectiveness of Large Pelagic Fisheries in the High Seas' (2018) 19(2) *Fish and Fisheries* 260; Maria José Juan-Jordá et al, 'Report Card on Ecosystem-Based Fisheries Management in Tuna Regional Fisheries Management Organizations' (2018) 19(2) *Fish and Fisheries* 321.
[67] Allen (n 26) iii.

The study concluded that states were unable to cooperate to effectively conserve, manage, and promote the sustainable use of tuna stocks through TRFMOs.[68] It showed that TRFMO members were often slow to respond to scientific advice and adopt appropriate regulatory measures for tuna stocks in need of management action.[69] Closer analysis of TRFMO management actions revealed that other factors, outside the adoption of regulatory measures, were often responsible for necessary reductions in fishing effort and tuna catches.[70]

The findings from the FAO study are situated within a broader literature on the performance of (T)RFMO[71]-directed transboundary fisheries management. This literature identifies a number of structural issues that undermine effective transboundary fisheries management, including: overcapacity;[72] the problematic use of maximum sustainable yield (MSY) as a measure of stock health;[73] and the slow uptake of best practices[74] (among others). This literature has instigated performance reviews of the five TRFMOs,[75] as well as initiatives by inter- and non- governmental organisations to improve TRFMO performance.[76]

Some studies from this literature, like the FAO study and another study by Chatham House, pivot from discussions of TRFMO effectiveness to their obligations with respect to DCS members.[77] These studies suggest that TRFMOs and their members are obliged to promote the aspirations of developing states to participate in tuna fisheries. They argue this obligation would require TRFMOs to reallocate tuna fishing rights from developed to developing

[68] Ibid 2.
[69] Ibid 29.
[70] Ibid 20.
[71] This refers to RFMOs in general, not just the five TRFMOs.
[72] Allen (n 26) 29–30; Martín Aranda, Hilario Murua, and Paul de Bruyn, 'Managing Fishing Capacity in Tuna Regional Fisheries Management Organisations: Development and State of the Art' (2012) 36 *Marine* Policy 985.
[73] Allen (n 26) 5–6, 30. See, e.g., Maggie Skirtun et al, 'Trade-Offs for the Southern Longline Fishery in Achieving a Candidate South Pacific Albacore Target Reference Point' (2019) 100 *Marine Policy* 66, 66–7.
[74] Allen (n 26) 30; De Bruyn, Murua, and Aranda (n 23); Juan-Jordá et al (n 66); Nakatsuka (n 24) 127–8. The Kobe Process—a policy initiative to share best practices among TRFMO Secretariats—convened three meetings in 2007, 2009, and 2011. Despite the establishment of two working groups, few meetings have been held in recent years.
[75] For the most recent reports of performance reviews of CCSBT (2014), IATTC (2016), ICCAT (2016), IOTC (2016), and WCPFC (2012), see Network of Tuna Agencies and Programs, *Tuna-org* (Web Page, 2020) <http://www.tuna-org.org/index.htm>.
[76] See, e.g., the Common Oceans ABNJ Program, a joint project between the FAO and Global Environment Facility: FAO-GEF, *Common Oceans ABNJ Tuna Project: A Partnership for Sustainability* (Brochure No I5163E/1/05.16, 2016).
[77] Allen (n 26) 30; Lodge et al (n 66) 90–102.

members.[78] To date, none of the five TRFMOs has undertaken such a redistribution of tuna fishing rights among its members.

Instead, the TRFMOs have included exemptions for DCSs in particular regulatory measures. The FAO study refers to this practice as an example of 'unsustainable development'.[79] DCSs which do not possess the level of fishing technology to undertake industrial-scale tuna fishing often enter into chartering or licensing arrangements with actors from DWFSs.[80] In this fashion, actors who were originally the target of regulatory measures are able to evade TRFMO fishing effort and catch restrictions. Therefore, these studies argue, the practice of exempting DCSs not only fails to address development aspirations, but often undermines TRFMO management actions.

Moreover DCSs are incentivised to use their exemptions to undermine regulatory measures because TRFMOs currently base their allocations of tuna fishing rights on historical catches.[81] This mode of allocation perversely encourages DCSs to generate a catch history for tuna stocks, many of which are at, or approaching, levels of full exploitation.[82] A number of studies contend that TRFMOs could address this problem by instituting rights-based management.[83] Raising issues with the idea of rights-based management as a panacea, scholars like Palma have argued that it may not provide a complete solution while TRFMOs and their members continue to address their obligations with respect to DCSs inadequately.[84]

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[78] Allen asserts that: 'Sharing of resources that are at or near full exploitation can only be done by reallocation of fishing opportunities from developed to developing countries': Allen (n 26) 30; Lodge et al (n 66) x-xi. See Andrew Serdy, *The New Entrants Problem in International Fisheries Law* (Cambridge University Press, 2016).
[79] Allen (n 26) 30.
[80] See Emily Crigler, 'Sub-Contracting on the Sea: Vessel Chartering and its Implications for Tuna Conservation Efforts in the Western and Central Pacific Ocean' (Master's Thesis, University of Washington, 2018). See also Chapter 3 Section II A-B.
[81] Maria Cecilia Engler Palma, 'Allocation of Fishing Opportunities in Regional Fisheries Management Organizations: A Legal Analysis in the Light of Equity' (LLM Thesis, Dalhousie University, 2010).
[82] *SOFIA 2018* (n 5).
[83] Allen (n 26); Robin Allen, James Joseph, and Dale Squires (eds) *Conservation and Management of Transnational Tuna Fisheries* (Blackwell, 2010).
[84] Palma (n 81) 282–7; Maria Cecilia Engler Palma, 'Allocation of Fishing Opportunities in Regional Fisheries Management Organizations: From Power to Law?' in Dawn A. Russell and David L. VanderZwagg (eds) *Recasting Transboundary Fisheries Management Arrangements in Light of Sustainability Principles: Canadian and International Perspectives* (Martinus Nijhoff Publishers, 2010) 473. See also Evelyn Pinkerton and Danielle N Edwards, 'The Elephant in the Room: The Hidden Costs of Leasing Individual Transferable Fishing Quotas' (2009) 33 *Marine Policy* 707.

One recent evaluation of TRFMO performance by Pons, Melnychuk, and Hilborn assesses and compares the five TRFMOs in the following four areas: research, management, enforcement, and socio-economics.[85] Combining scores for each TRFMO across these areas, the authors find that, overall, CCSBT scores the highest and IOTC the lowest, in terms of performance. Similar to the FAO's findings, Pons, Melnychuk, and Hilborn also demonstrate that the status of tuna stocks is strongly correlated to biological and economic factors external to TRFMO management actions.[86]

The results of Pons, Melnychuk, and Hilborn's study point to several factors that correlate with poor TRFMO performance. These factors include 'younger' tuna fisheries (more recently developed); a higher number of both overall vessels and smaller vessels; and members with lower average per capita GDP and high economic dependence on tuna fisheries.[87] The authors consequently argue that economic dependence on tuna fisheries is the single most important factor for explaining differences in performance among the five TRFMOs.[88]

The study by Pons, Melnychuk, and Hilborn clarifies that TRFMO management outcomes are shaped by external factors which point to the dependence of DCSs on tuna stocks, and the difficulty this presents for reducing fishing pressure. Perhaps most significantly, their study situates the relationship between DCSs and tuna fisheries at the centre of effective transboundary tuna management. These findings indicate that how TRFMOs address the special aspirations, interests, and needs of DCSs which are dependent on tuna stocks has significant implications for the efficacy of TRFMO regulatory measures.

B *Equity Issues in TRFMO Decision-Making*

Headed by the Australian Centre for Ocean Resources and Security at the University of Wollongong, Fisheries Equity Research Network ('FERN') researchers argue that the

[85] Pons, Melnychuk, and Hilborn (n 66).
[86] Pons, Melnychuk, and Hilborn observe that '[T]he most important factors determining stock status and trends were related to biological and economic variables external to the management system. Not surprisingly, economic variables were important drivers of fishing mortality and life-history attributes were important drivers of biomass': ibid 268.
[87] Ibid 263.
[88] The researchers determine economic dependency on tuna fisheries by calculating the average ratio of the landed value of 10 tuna species and the per capita GDP of each member state: ibid 262.

literature on (T)RFMO-directed transboundary fisheries management does not address distributional conflicts at the centre of decision-making by members.[89] Studies by FERN researchers assert that TRFMO members are fundamentally in the position of negotiating how the burden and benefits of tuna conservation are to be distributed.[90] Similar to Pons, Melnychuk, and Hilborn, FERN researchers conclude that how TRFMOs fulfil their obligations with respect to DCSs is integral to effective TRFMO regulatory measures. Hanich and Ota assert that:

> the primary cause of this impending [fisheries] crisis is the failure of States to transparently and equitably distribute the conservation burden and benefit, and thereby enable the adoption of sufficiently strong measures to reduce overfishing to sustainable levels and remove overcapacity.[91]

Similarly, Campbell and Hanich contend that while TRFMO members often agree to equitable principles in the abstract, they fail to apply these principles to management decisions in negotiations.[92] Campbell and Hanich suggest that TRFMOs use a procedural approach, or 'equity process', whereby members can systematically and transparently address the distribution of burdens and benefits contained within proposed regulatory measures.[93]

Similarly, Hanich and Ota propose a 'conservation burden methodology' for TRFMOs, which would allow members to incorporate equity considerations into their management decisions. The authors derive their methodology from IFL, arguing that it provides a framework—with four main factors—for states to consider in the process of distributing the burdens and benefits of transboundary fisheries management: (i) the location of fishing activity; (ii) the form and content of cooperation; (iii) the special requirements of developing states; and (iv) principles for fisheries conservation and management.[94] Hanich and Ota

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[89] Quentin Hanich et al, 'Research into Fisheries Equity and Fairness—Addressing Conservation and Burden Concerns in Transboundary Fisheries' (2015) 51 *Marine Policy* 302.
[90] Quentin Hanich and Yoshitaka Ota, 'Moving Beyond Rights-Based Management: A Transparent Approach to Distributing the Conservation Burden and Benefit in Tuna Fisheries' (2013) 28 *International Journal of Marine and Coastal Law* 135; Brooke Campbell and Quentin Hanich, 'Principles and Practice for the Equitable Governance of Transboundary Natural Resources: Cross-Cutting Lessons for Marine Fisheries Management' (2015) 14(8) *Maritime Studies* 1; Kamal Azmi et al, 'Defining a Disproportionate Burden in Transboundary Fisheries: Lessons from International Law' (2016) 70 *Marine Policy* 164. Bailey also touches upon the distributional and equity-related effects of TRFMO decision-making: Megan Bailey, 'Improving the Management of Global and Regional Tuna Fisheries' (PhD Thesis, University of British Columbia, 2012) 15.
[91] Hanich and Ota (n 90) 136.
[92] Campbell and Hanich (n 90) 5.
[93] Campbell and Hanich organise their proposal for an 'equity process' around the elements of responsibility, rights, and distributive justice: ibid 6.
[94] Ibid 139–47.

reflect that these factors provide little guidance for TRFMO members. Indeed, they identify a number of critical, equity-related issues for which IFL leaves open to state practice.[95] Pragmatically, Hanich and Ota argue that TRFMOs require a transparent and equitable methodology to balance core interests in transboundary fisheries. In this respect, they identify four core interests that are supported by IFL principles: coastal states; flag states/DWFSs; markets/consumers; and developing states.[96]

Hanich and Ota's conservation burden methodology would enter the management cycle after TRFMO members have been advised of the need for a conservation response and presented with a range of management options.[97] According to their methodology, TRFMO members would then examine the nature and extent of each of the four recognised interests in the fishery, assign a value to each interest, and use these values to guide a comparison of management options. This would allow TRFMO members to determine which option would least alter the weighted values already assigned to each interest.[98]

C *Rights-Based Management, Neoliberal Approaches to Fisheries Management, and Equity Issues for DCSs within TRFMOs*

Most reviews of TRFMO performance conclude that the central problem for managers is the 'open access' nature of tuna resources.[99] To remedy this problem, scholars and fisheries managers recommend the development of rights-based management within tuna fisheries. Mansfield argues that academics and fisheries managers who recommend rights-based management fail to recognise how power relations among resource users and the institutions they create shape the use and allocation of fisheries resources.[100]

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[95] Ibid 139–47, 150.
[96] Ibid 151. Note that the authors separate the interests of 'coastal states' from that of 'developing states'—DCSs represent a combination of these interests.
[97] Ibid 152.
[98] Ibid.
[99] See, e.g., Allen, Joseph, and Squires (n 83).
[100] See Becky Mansfield, 'Neoliberalism in the Oceans: "Rationalization," Property Rights, and the Commons Question' (2004) 35 *Geoforum* 313 ('*Neoliberalism in the Oceans*'). See also Rebecca Clausen and Brett Clark, 'The Metabolic Rift and Marine Ecology: An Analysis of the Ocean Crisis within Capitalist Production' (2005) 18(4) *Organization and Environment* 422; Chukwumerije Okereke, *Global Justice and Neoliberal Governance: Ethics, Sustainable Development and International Co-Operation* (Routledge, 2007).

Within the rights-based management model, fisheries require the application of some form of property right. Property rights limit access to the fishery, concretise incentives to conserve fisheries resources, and establish a market through which more efficient resource users can purchase rights from less efficient resource users (through transferable quotas), thereby rationalising overcapitalised fisheries—i.e. fisheries with unsustainable levels of fishing effort.[101] Two critical assumptions underpin this model: that economic rationality drives the behaviour of fisheries resource users; and that the solution to tuna's 'open access problem' is the privatisation of the fishery and marketisation of fishing rights.[102] Unsurprisingly, the implementation of rights-based management has been shown to favour well-capitalised and historically-established fisheries resource users, often concentrating property rights in the hands of a wealthy few.[103]

Mansfield chronicles how the dominant model for fisheries management developed over the second half of the 20th century following the introduction of economic analysis into fisheries policy.[104] She argues that the coupling of privatisation and marketisation within rights-based management represents a unique form of neoliberalism in oceans governance that is specific to fisheries policy.[105] Mansfield argues that a neoliberal approach to fisheries regulations forges the link between property rights and 'market rationality', but that this connection is neither inevitable nor empirically established.[106]

By contrast, Mansfield identifies examples of property rights systems that have been designed in a fisheries context to protect economically disadvantaged groups.[107] These property rights systems are not organised around the profit motives of fisheries resource users for the objective of economic efficiency, but rather to deliver economic and social benefits to communities.[108] According to Mansfield, what is specifically neoliberal about rights-based

[101] Ibid.
[102] Ibid 314.
[103] Pinkerton and Edwards (n 84).
[104] Mansfield, *Neoliberalism in the Oceans* (n 100).
[105] Ibid 314.
[106] Ibid.
[107] Mansfield provides the example of a 'Community Development Quota' (CDQ) for communities of Native Alaskans in the Bering Sea Region of the North Pacific: ibid 314.
[108] In her example of the Bering Sea CDQ system, Mansfield explains that 'This program guarantees these communities a set percentage of the annual fish catch, with the goal of providing economic and social benefits': ibid.

management approaches is their emphasis on markets to provide an economically rational basis for resource users to conserve fish stocks.

As Mansfield shows, it is possible to organise property rights systems around objectives other than economic efficiency. In the context of tuna fisheries, Barclay and Parris have proposed a similar rationale for the establishment of pole and line tuna fisheries, in which an economically inefficient fishery may be preferred on the basis that it provides broader social and environmental benefits to local fishers and fishworkers.[109]

Recent work by Finkbeiner et al and Lobo and Jacques furnishes additional evidence that neoliberal approaches continue to pervade fisheries regulation. These scholars show that, when framed by neoliberal assumptions, current approaches to fisheries management often neglect equity issues among fisheries resource users.[110] This is clearly evidenced in the approach of rights-based management to equity issues, which strips the participation of less efficient fisheries resource users to a side payment in exchange for transferring quota to more efficient users. Under rights-based management, inefficient fisheries resource users with less capital are encouraged to sell their fishing rights and exit the fishery.

While much has been written on the practical implementation of rights-based management at the TRFMO-level, little has been written on its equity implications.[111] Hanich and Ota argue that their proposal for a conservation burden methodology provides an equitable alternative to this focus on rights-based management.[112] They argue that the time-intensive and burdensome nature of negotiating initial allocations for such a system can often obstruct, rather than build on, momentum within management negotiations.[113] Alternatively, the authors suggest that their approach can depoliticise scientific advice provided to TRFMOs and enable members to transparently engage in deliberations on the equitable distribution of

[109] Kate Barclay and Hannah Parris, *Transforming Tuna Fisheries in Pacific Island Countries: An Alternative Model of Development* (Greenpeace Report, July 2013).
[110] Elena M Finkbeiner et al, 'Reconstructing Overfishing: Moving Beyond Malthus for Effective and Equitable Solutions' (2017) 18(6) *Fish and Fisheries* 1180; Rafaella Lobo and Peter J Jacques, 'SOFIA's Choices: Discourses, Values, and Norms of the World Ocean Regime' (2017) 78 *Marine Policy* 26.
[111] Cf Palma (n 81). Some fisheries economists discuss 'distributional' issues related to rights-based management systems, though they assume, if correctly designed, rights-based management will address these conflicts. See, e.g., Olivier Guyader and Olivier Thébaud, 'Distributional Issues in the Operation of Rights Based Fisheries Management Systems' (2001) 25 *Marine Policy* 103.
[112] Hanich and Ota (n 90) 148–9.
[113] Ibid 149.

conservation burden and benefit. While their methodology provides a pragmatic alternative to rights-based management and reflects IFL principles, it also merely relocates distributional conflicts among states, from the assignation of allocations, to the assignation of interest-values with the tuna fishery. In fact, this is what transpired when such a proposal was piloted at the WCPFC.[114]

This thesis argues that, while Hanich and Ota's conservation burden methodology represents an earnest attempt to respond to TRFMO equity issues and is distinct from rights-based management, it ultimately relies on the same logic—it seeks to respond to distributional conflicts among TRFMO members (the 'political' aspect of tuna management) through an economic (bureaucratic) framework.[115] This thesis asserts that, to fully examine equity issues in TRFMOs, it is necessary to look more closely at the distributional conflicts that present difficulties among TRFMO members in negotiations for management decisions.

Equity issues are closely coupled with distributional conflicts between DCSs and DWFSs within TRFMOs. FERN researchers have argued that these distributional conflicts impede the effectiveness of transboundary fisheries management.[116] Finkbeiner et al arrive at a similar conclusion, but across fisheries management contexts.[117] They argue that, to produce equitable *and* effective fisheries management, it is necessary to understand the 'mediating drivers' that currently motivate overfishing.[118] The authors identify four main drivers: technology and innovation; resource demand and distribution; marginalisation and equity; and governance and management.[119] They discuss how power relations play a key role in each driver, and argue that 'power and politics' shape how fisheries policy is designed and implemented.[120] Similarly, this thesis seeks to investigate the underlying drivers for TRFMO policy outcomes and thereby elucidate the role of power and politics in TRFMO decision-making. To achieve this, the thesis examines differentiation in light of distributional conflicts among TRFMO members.

[114] See Chapter 3 Section III A 2(a).
[115] See Palma (n 81) 3–4.
[116] Campbell and Hanich (n 90) 2; Hanich et al (n 89).
[117] Finkbeiner et al (n 110).
[118] Ibid 1.
[119] Ibid 3.
[120] Ibid.

II KEY LEGAL CONCEPTS: EQUITY IN INTERNATIONAL LAW, FAIRNESS AMONG STATES, AND DIFFERENTIATION IN IEL

This thesis addresses the relative silence concerning equity issues for DCSs within the literature reviewing TRFMO performance. In view of distributional conflicts between DCSs and DWFSs, this thesis focuses on particular legal and normative conceptualisations of intragenerational equity, described in the Introduction.[121] Though other formulations of equity exist in both hard and soft legal instruments in IFL, intragenerational equity—conceptualised as procedural and distributive justice for DCSs and operationalised as differentiation advantaging DCSs—serves as the principal focus of this thesis.

A *Equity in International Law*

Equity contains multiple meanings in international law.[122] It is generally defined against the concept of sovereign equality among states, which implies identical treatment of states regardless of wealth, size, or other factors.[123] By contrast, equity generally refers to the need for unequal treatment of states in cases where equal treatment would produce an unjust result.[124] Ultimately, equity represents a basic departure from the uniform application of rules within the international legal system.[125]

Legal scholars have provided overviews of equity in international law, demonstrating that it encompasses judicial, legislative, and generational forms of justice.[126] In international jurisprudence, judges are empowered to apply equity *infra legem* (within the law), *praeter legem* (outside of the law), and *contra legem* (against the law).[127] Different forms of equity

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[121] See Introduction Section V A.

[122] The many meanings of equity have led legal scholars to comment on the ambiguity that plagues this concept in international law. See Shelton (n 38) 640; M.W. Janis, 'The Ambiguity of Equity in International Law' (1983) 9(1) *Brooklyn Journal of International Law* 7, 33; Oxford Public International Law, *Max Planck Encyclopedia of Public International Law* (online at October 2020) 'Equity in International Law' [4]. See also Vaughan Lowe, 'The Role of Equity in International Law' (1992) 12 *Australian Year Book of International Law* 54.

[123] Cullet (n 12) 22–3.

[124] 'As traditionally conceived, equity seeks to influence results brought about by the application of a given rule of law which are deemed undesirable according to broader justice, moral or social concerns': ibid 29. Cullet describes the relationship between sovereign and substantive equality, equity, and differentiation in international law: at 21–32.

[125] 'What is critical is the attachment of equity to the conception of justice and its detachment from the rules of any particular legal system' Lowe (n 122) 54.

[126] See Shelton (n 38); Janis (n 122).

[127] For a concise explanation of the types of equity in international jurisprudence, see French (n 39) 10470–1.

govern each of these applications, whereby judges may appeal to: equitable principles (such as in the equitable allocation and utilisation of natural resources) *infra legem*; their discretion to adapt the law to specific circumstances *praeter legem*; and broader equity norms that fall outside the law *contra legem*.[128]

In modern international law, equity has developed into an important element of legal relations between developing and industrialised states. International development law introduced legal understandings of equity as redistributive justice for developing states during the postcolonial period following World War II.[129] More recently in the field of IEL, equity has expanded to refer to justice for present and future generations under the broader concept of sustainable development.[130] Ultimately, while this thesis acknowledges the chimerical nature of equity in international law, it grounds its analysis in the concept of intragenerational equity.

B *Equity in IFL*

Two scholars—Palma and Burgt—have conducted reviews of equity in IFL, including (T)RFMO treaty regimes. Palma reviews equity in view of the allocation of fishing rights within (T)RFMOs, whereas Burgt reviews equity in the context of how (T)RFMO's address the concept of human development (which includes not only equity but also poverty eradication and participation).[131] Palma and Burgt observe that equity is not a word that appears frequently in IFL instruments.[132] Palma cites the intentional deletion of 'equity' by states during negotiations of earlier drafts of *UNFSA*.[133] In their analyses, both scholars similarly argue that, while equity for developing states featured strongly in negotiations for the modern law of the sea regime, references to equity are practically non-existent in recently adopted IFL instruments.

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[128] Ibid. Legal scholars like French describe equity *contra legem* as the only invocation of equity in international jurisprudence that goes beyond the application of the law: see, e.g., ibid. This use of equity is typically discussed in the context of the ICJ's discretion to decide a case *ex aequo et bono* ('according to the right and good'): *Statute of the International Court of Justice* art 38(2). French demonstrates that the ICJ has generally avoided this use of equity: at 10473.
[129] Shelton (n 38) 649–52.
[130] Ibid.
[131] Palma (n 81); Nienke van der Burgt, *The Contribution of International Fisheries Law to Human Development* (Martinus Nijhoff, 2013) 9–10.
[132] Palma (n 81) 184–6; Burgt (n 131) 167–8.
[133] Palma (n 81) 184–6.

Palma and Burgt provide different arguments for the specific forms of equity articulated (though perhaps not named) in IFL. Palma concludes that the form of equity most supported by IFL instruments is 'autonomous' equity;[134] Burgt claims that soft and hard law instruments articulate forms equity that combine inter- and intra- generational equity.[135] Palma and Burgt agree that (T)RFMO treaty regimes include explicit articulations of equitable concepts—what Burgt refers to as 'indirect forms of equity'.[136] Palma argues that (T)RFMOs are responsible for developing 'equitable principles' and assigning normative content to equity in IFL through state practice.[137]

Burgt's analysis is more inclusive: she finds that intragenerational equity is generally supported within broader IFL and multiple (T)RFMO treaty regimes. Burgt finds (T)RFMO treaty regimes are primarily concerned with two requirements concerning intragenerational equity: (i) to take into account the interests and needs of developing states; and (ii) to provide assistance to developing states. In addition, Burgt finds evidence for related concepts, such as the need to have due consideration for local fishing communities in developing states, and the optimum utilisation of marine living resources (which she finds relates to equity insofar as it concerns broader food security objectives).[138]

Palma and Burgt suggest that multiple (T)RFMO treaty regimes are governed by the wider principle of common but differentiated responsibilities (CBDR).[139] As will be discussed, this thesis departs from both scholars on this point and turns instead to the broader idea of differentiation advantaging DCSs.[140] This is because, as it is articulated in most treaty regimes, CBDR concerns states' responsibility with respect to the environment and therefore almost exclusively relates to conservation objectives in light of equity for developing states.

C *Fairness Among States*

This thesis turns to intragenerational equity as a lens for studying distributional conflicts between DCSs and DWFSs within TRFMOs. This focus contrasts with an examination of

[134] Ibid 227–8.
[135] Burgt (n 131) 69–82. Cf Palma (n 81) 136–8.
[136] Burgt (n 131) 172.
[137] Palma (n 81) 245–53.
[138] Burgt (n 131) 190.
[139] Palma (n 81) 218–226; Burgt (n 131) 72–3, 175, 340–1.
[140] See Chapter 1 Section II D2.

intergenerational equity within TRFMOs, which would view their management decisions through the lens of impacts on the availability and integrity of tuna resources for future generations.[141] While research from this perspective would be relevant to the numerous studies on TRFMO effectiveness, this thesis is motivated by the observation that novel research is needed on how TRFMOs respond to intragenerational equity issues for DCSs.

This perspective, which emphasises equity between states with differing levels of economic development, is informed by the work of scholars who view equity as an integral feature—for practical and moral purposes—of modern international law and relations. One such scholar is Franck, who considers equity within the context of a broader discussion of fairness in international law.[142] Franck argues that the international legal discipline has evolved beyond ontological questions of whether international law matters.[143] He contends that the discipline ought to direct its attention to evaluative questions of whether international law is fair.[144]

Franck states that perceptions of fairness encourage voluntary compliance and provide a pathway for legal systems to evolve.[145] For Franck, fairness provides a 'rubric' for evaluating 'certain consequential values by which institutions and processes are judged: do they provide the consequences which people expect, by means of an appropriate discursive and distributive process?'.[146] From Franck's perspective, notions of fairness respond to the need for two basic elements within a legal system: (i) *legitimacy* or perceptions of right process and (ii) *distributive justice* or moral expectations of a just distribution of burdens and benefits.[147] In this fashion, fairness provides the flexibility for a legal system to develop on a path continuously in tension between the need for stability (legitimacy) and change (distributive justice).[148]

Albin is another scholar who studies the operation of notions of justice and fairness among states, but in international negotiations. Like Franck, Albin argues that fairness plays a

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[141] For discussions of intergenerational equity in IFL, see Rayfuse (n 40) 478–482; Palma (n 81) 136–8.
[142] Franck (n 42).
[143] Ibid 6.
[144] Ibid 9.
[145] Ibid 8.
[146] Ibid 7
[147] Ibid 7–8. Please note that these two elements correspond with this thesis' description of procedural and distributive equity: see Introduction Section VA.
[148] Ibid 7.

functional role in international negotiations. She observes that while notions of fairness are often a locus of conflict in negotiations, they also enable negotiators to reach agreement where their interests conflict.[149] Albin finds that in negotiating contexts like the TRFMOs, conflict occurs where broad principles are applied to specific decisions because states are considering how this application impacts on their interests.[150] According to Albin, these conflicts arise with respect to both procedural and substantive principles.[151] Negotiations in the context of these conflicts provide flexibility for negotiators to strike a balance in negotiating outcomes. She contends: 'Collectively, international negotiators employ such principles as a tool to reach an agreement. They are used to overcome conflicting interests and claims, and to build consensus on the nature of an acceptable outcome'.[152] In the heat of negotiations, Albin observes that these outcomes go beyond mere reflections of power inequalities or pursuit of self-interest.[153] She argues that under these conditions, justice or fairness is best defined procedurally, as a 'balanced settlement of conflicting claims'.[154] This thesis consequently views intragenerational equity from Franck and Albin's premise, that perceptions of fairness, justice, and equity among states enact a discursive process whereby states both affirm and challenge international law to arrive at negotiating outcomes.

D *Differentiation in IEL*

A basic definition of differentiation is the application of different standards to a state or grouping of states.[155] A particular manifestation of the many legal understandings of equity in international law, differentiation represents a basic departure from legal reciprocity in treaty relations between states.[156] In the context of intragenerational equity, differentiation

[149] Cecilia Albin, *Justice and Fairness in International Negotiations* (Cambridge University Press, 2001) 1 ('*Fairness in International Negotiations*').
[150] Cecilia Albin, 'Negotiating International Cooperation: Global Public Goods and Fairness' (2003) 29(3) *Review of International Studies* 365, 368 ('*Global Public Goods and Fairness*').
[151] Ibid 370. According to Albin, substantive principles are often specific to treaty regimes (and would appear to refer to differentiation within TRFMOs) while procedural principles are not: at ibid. Albin categorises principles into those that are external, internal, and impartial to the negotiating context: at 371–3.
[152] Albin, *Fairness in International Negotiations* (n 149) 15.
[153] Albin, *Global Public Goods and Fairness* (n 150) 375.
[154] Ibid 374–5; Albin, *Fairness in International Negotiations* (n 149) 16.
[155] Rajamani, *Differential Treatment in IEL* (n 15) 1.
[156] Cullet *Differential Treatment* (n 12) 35.

functions as a legal tool enabling developing and industrialised states to acknowledge and respond to their differing capacities to address international environmental issues.[157]

Rajamani and Cullet observe that differentiation provides developing and industrialised states opportunities to diverge from legal reciprocity to broker conflicting interests. Rajamani argues that developing states have deployed differentiation as 'levers of influence' in environmental negotiations with industrialised states.[158] She surmises that 'dissonance in international environmental dialogue is translated into differentiation in international environmental treaties'.[159] Similarly, Cullet argues that 'differentiation is the product of the convergence of different interests in international negotiations that offer a basis for diverging from the usual reciprocity of obligations'.[160] Precisely as a consequence of this role, differentiation provisions in fields like international trade and climate change law have often served as the source of conflict and resistance for industrialised states in their treaty relations with developing states.

In its examination of differentiation, this thesis engages closely with scholars who study differentiation.[161] These scholars observe a rising trend in the use of differentiation in IEL, though none provide more than a passing reference to differentiation in (T)RFMO treaty regimes.[162] These scholars agree on the basic form and function of differentiation as a departure from legal reciprocity and a method for brokering divergent interests, typically between developing and industrialised states. Despite basic agreement on the role for differentiation in treaty relations, these scholars differ in how they define differentiation and characterise its normative content. This section discusses how different scholars view differentiation; interrogates the relationship between differentiation and the principle of common but differentiated responsibilities (CBDR); and introduces this thesis' understanding

[157] Ibid 15.
[158] Rajamani, *Differential Treatment in IEL* (n 15) 88.
[159] Ibid 89.
[160] Philippe Cullet, 'Differential Treatment in Environmental Law: Addressing Critiques and Conceptualizing the Next Steps' (2016) *Transnational Environmental Law* 5(2) 305, 308 ('*Addressing Critiques and Next Steps*').
[161] Daniel Barstow Magraw, 'Legal Treatment of Developing Countries: Differential, Contextual, and Absolute Norms' (1990) 1(69) *Columbia Journal of International Environmental Law and Policy* 69; Cullet, *Differential Treatment* (n 12); Halvorssen (n 14); Rajamani, *Differential Treatment in IEL* (n 15).
[162] Rajamani, *Differential Treatment in IEL* (n 15) 109.

of differentiation, including a working definition, common categories for differentiation provisions, and its application to institutional *and* treaty law.

1 *Different Normative Understandings of Differentiation in IEL Scholarship*

Despite its ubiquity in IEL, differentiation has not yet achieved customary status in international law.[163] Though scholars argue that differentiation reflects a compact between developing and industrialised states to address differences in economic development and environmental vulnerability, they also show inherent ambiguities and tensions embodied in most forms of differentiation in IEL.[164] Perhaps as a reflection of this finding, scholars themselves exhibit differing views as to its normative meaning. These views fall on a continuum of understandings that motivate states to include differentiation (in varying forms) in environmental treaty regimes.

For example, Cullet argues that differentiation is based on broad notions of partnership and solidarity between developing and industrialised states which go beyond mere cooperation.[165] By comparison, Rajamani argues that differentiation (in IEL) is premised on a general recognition of industrialised states' historical responsibility for causing environmental issues *and* developing states' present lack of capacity to address them.[166] In contrast to both scholars, Halvorssen argues that differentiation shapes incentive structures within environmental treaty regimes to enable self-interested states to cooperate under conditions of interdependence.[167]

For most scholars, the normative understandings which determine differentiation depend largely on the measure of responsibility industrialised states take for their role in causing modern environmental crises. Rajamani argues that this determination can result in one of two premises for differentiation. The first is a culpability/entitlement premise, whereby themes of obligation and liability guide differentiation.[168] Under this premise, industrialised states are culpable for their part in creating environmental problems and developing states are

[163] Philippe Cullet, 'Differential Treatment in International Law: Towards a New Paradigm of Inter-State Relations' (1999) 10(3) *European Journal of International Law* 549, 579 ('*Towards a New Paradigm*').
[164] Ibid 551; Cullet, *Differential Treatment* (n 12) 18–9.
[165] Cullet, *Differential Treatment* (n 12) 181–3; Rajamani, *Differential Treatment in IEL* (n 15) 252–3.
[166] Rajamani, *Differential Treatment in IEL* (n 15) 130.
[167] Halvorseen (n 14) 3.
[168] Rajamani, *Differential Treatment in IEL* (n 15) 72–3, 86.

entitled to forms of financial and technological assistance and greater flexibility in their commitments.[169] The second is a consideration/capacity premise, whereby themes of morality, humanity, and goodwill predominate.[170] From this perspective, industrialised states consider the significant economic disadvantages faced by developing states and acknowledge that capacity to carry out environmental obligations differs among states.[171] This implies that industrialised states have a moral responsibility to address the special position of developing states.[172] Rajamani contends that industrialised states prefer the consideration/capacity premise because it opts for an a historical and discretionary rationale (as opposed to 'a legal or obligatory one') for assisting developing states.[173] She establishes a link between this premise and the articulation of differentiation provisions which set out soft legal commitments that cast industrialised countries in a benevolent light.[174]

The normative content of differentiation remains unsettled in international law. Multiple surveys of differentiation in IEL conclude that differentiation comes in many forms and with various rationales within environmental treaty regimes. For example, in comparison to Rajamani's dichotomy of premises for differentiation, Cullet identifies four potential rationales for differentiation.[175] Rather than understate this diversity, this thesis assumes that contrasting and even opposing normative understandings of differentiation coexist among states in international law.

2 *Differentiation and Common But Differentiated Responsibilities in IEL*

The normative confusion described above extends to differences scholars have concerning the relationship between differentiation and the established principle of CBDR in IEL. CBDR refers to the common but different responsibilities developing and industrialised states have with respect to the protection of the environment.[176] This understanding governs how differentiation is used to advantage developing states so as to create fair burden-sharing

[169] Ibid.
[170] Ibid 79, 86.
[171] Ibid.
[172] Ibid 81.
[173] Ibid 87–8.
[174] Ibid.
[175] Cullet's rationales for differentiation are: principles of justice, inequalities in economic development, contribution to environmental problems and capacity to respond, and self-interest: Cullet, *Differential Treatment* (n 12) 36–49.
[176] *Rio Declaration* (n 37) Principle 7.

arrangements within environmental treaty regimes. However, the relationship between differentiation and CBDR raises a question as to the normative content of differentiation within IEL. This question is whether differentiation relates merely to developing state participation in the protection of the environment, or whether it extends to developing states' economic development concerns with respect to the use of natural resources. That is, does differentiation advantage developing states with respect to both the burdens *and* benefits of environmental protection and resource management?

At first glance, Rajamani and Cullet appear to differ on this point. Rajamani argues that CBDR serves as the doctrinal basis for differentiation.[177] By contrast, Cullet argues that differentiation is broader than CBDR.[178] According to Cullet, CBDR narrowly focuses on states' responsibilities with respect to the environment, whereas differentiation applies widely to states' rights *and* responsibilities.[179] In particular, Cullet argues that differentiation may extend beyond environmental protection themes and procedural justice norms to economic development themes and distributive justice norms. However, it is possible this point of difference between Rajamani and Cullet is semantic because Rajamani defines CBDR broadly, to include distributive justice themes for developing states.[180] However, this difference highlights the normative tensions that abide within states' use of differentiation in IEL.

TRFMO treaty regimes concern not only states' responsibility to conserve transboundary tuna stocks, but also states' rights with respect to the exploitation of those tuna stocks. Therefore, this thesis proceeds on the assumption that an expanded concept of differentiation, which includes both rights *and* responsibilities, is required to analyse intragenerational equity within TRFMOs.

3 *The Use of Differentiation in this Thesis: Definition, Categories, and Institutional Law*

(a) Four Elements of Differentiation Provisions

[177] Rajamani, *Differential Treatment in IEL* (n 15) 133–50.
[178] Cullet, *Addressing Critiques and Next Steps* (n 160) 305.
[179] Cullet, *Differential Treatment* (n 12) 18.
[180] Cullet, *Addressing Critiques and Next Steps* (n 160) 314.

This thesis defines differentiation simply as legal provisions that create different obligations in response to inequalities among states.[181] However, most full definitions of differentiation address four elements; that is, whether differentiation provisions: (i) solely favour or advantage developing states, (ii) are explicit or implicit, (iii) are direct or contextual, and (iv) are formulated as hard or soft law.

The first element is whether differentiation is to be considered in the normative sense of 'favouring' developing states. Cullet and Rajamani differ on this element of differentiation. Cullet argues that differentiation only refers to 'non-reciprocal arrangements which seek to foster substantive equality in the international community'.[182] In comparison, Rajamani takes pains to describe examples where differentiation favours industrialised states, such as United Nations Security Council membership.[183] This thesis only examines differentiation provisions that favour or advantage developing states. However, it is important to note that this thesis focuses primarily on DCSs to reflect the regional contexts in which TRFMOs operate, where the majority of coastal states are developing states.[184]

The second and third elements of differentiation are related. This includes whether differentiation provisions *explicitly* name (and therefore directly apply to) developing states, or *implicitly* refer to factors that correspond with levels of economic development (and indirectly apply to developing states). The corollary to this distinction is whether differentiation provisions serve as legal obligations in their own right, or merely serve to contextualise other obligations. Magraw describes this as the distinction between 'differential' and 'contextual' treatment, respectively.[185] Explicit, differential treatment often provides a stronger legal basis for differentiation advantaging developing states than implicit, contextual treatment. This analysis considers both explicit and implicit, and direct and contextual instances of differentiation in IFL and TRFMO law.

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[181] This definition borrows heavily from Cullet's: '[Differentiation] refers to instances where, because of pervasive differences or inequalities among states, the principle of sovereign equality is sidelined to accommodate extraneous factors, such as divergences in levels of economic development or unequal capacities to tackle a given problem': Cullet, *Differential Treatment* (n 12) 15.
[182] Ibid.
[183] Rajamani, *Differential Treatment in IEL* (n 15) 34–7.
[184] Palma notes this distinction in IFL, and points out that legal scholars differ on whether Part VII *UNFSA* applies to developing states only 'insofar as they are coastal states': Palma (n 81) 100.
[185] Magraw (n 161) 73–5. Some scholars find this distinction more operable than others. See Halvorssen on the brighter line she draws between 'differential' (or 'asymmetrical') and 'uniform' norms: Halvorssen (n 14) 70.

Lastly the fourth element of differentiation is whether provisions are articulated as hard or soft law. This element governs whether differentiation is to be analysed solely in the context of binding treaty obligations, or whether it can also be considered within nonbinding instruments.[186] Most importantly, this element draws attention to the need to analyse the extent to which differentiation provisions are justiciable or enforceable.[187] This analysis focuses primarily on binding IFL instruments, though it examines some nonbinding instruments in TRFMO law to provide a deeper understanding of the WCPFC and IOTC's approaches to differentiation.

(b) Three Categories of Differentiation Provisions

Scholars have also observed distinct categories of legal provisions to which states apply differentiation. Rajamani neatly divides these categories into provisions differentiating: (i) central obligations; (ii) implementation; and (iii) assistance.[188] Rajamani defines central obligations as those 'that are central to the purpose of the treaty', and argues this form of differentiation is the rarest and most contested across treaty regimes.[189] In contrast to central obligations, provisions that differentiate implementation obligations for developing states are more common. Rajamani divides these differentiated implementation provisions into five additional categories, which: (i) provide context to implementation; (ii) ease time-frames for implementation or delay compliance schedules; (iii) permit the adoption of later base years; (iv) allow delayed reporting schedules; and (iv) create softer approaches to non-compliance.[190]

Rajamani distinguishes differentiated implementation provisions from provisions that grant assistance to developing states—differentiated assistance provisions.[191] In reality, these categories overlap, as assistance is often provided to developing states *for the purpose of* assisting with their implementation of treaty obligations. In any case, Rajamani divides differentiated assistance provisions into those related to: (i) financial assistance; (ii) technology transfer; and (iii) capacity building.[192] Under 'other forms of assistance',

[186] Rajamani, *Differential Treatment in IEL* (n 15) 91–3.
[187] Ibid 48.
[188] Ibid 93–4.
[189] Ibid 94.
[190] Ibid 96–107.
[191] Ibid 107–8.
[192] Ibid 107–13.

Rajamani identifies other differentiation provisions that provide funding to developing states to attend intergovernmental negotiations.[193] This thesis uses the categories identified by Rajamani as a starting point for thinking about how IFL and TRFMO treaty law design differentiation.

(c) Differentiation Provisions in Institutional Law

Differentiation scholars agree on one key area relevant to TRFMOs: the distinction between differentiation in treaty law and institutional law. Cullet and Rajamani provide brief explorations into how the rules and practices of international organisations differentiate between members, at times benefitting developing *and* industrialised states.[194]

Their typologies of differentiation in institutional law differ slightly. Each author claims that differentiation can be found in: costs of membership ('differential contributions'); voting arrangements ('differential decision-making'); and the eligibility of states to participate ('differential membership'). Rajamani includes a further category of 'differential enforcement' to describe how some international organisations modify monitoring and enforcement procedures for developing states.[195]

Cullet also describes special funds that support the participation of developing states in the meetings of some international organisations.[196] In contrast, Halvorssen does not consider financial support for meeting attendance as differentiation, but rather as an incentive for developing states to participate in negotiations.[197] This thesis views TRFMO treaty law as inclusive of institutional law and therefore includes this form of differentiation into its analysis—particularly of differentiation provisions concerning TRFMO 'internal processes' which encompass both administrative and institutional activities.

[193] Ibid 114
[194] Cullet, *Differential Treatment* (n 12) 72–6; Rajamani, *Differential Treatment in IEL* (n 15) 37–46.
[195] Rajamani, *Differential Treatment in IEL* (n 15) 46.
[196] Cullet, *Differential Treatment* (n 12) 76.
[197] Halvorssen (n 14) 87.

III Key Political Economy Concepts: Tuna GPNs, Competitive Industry Dynamics, and Distributional Struggles between DCSs and DWFSs

This thesis situates equity issues in TRFMOs within the broader political economy of the tuna industry. In doing so, it seeks to deepen understandings of the external drivers that motivate policy outcomes in TRFMOs. To address these drivers, the thesis borrows from a robust literature on the relationship between TRFMO decision-making and the tuna industry.

A *Applying GPN Theory to Analyses of the Tuna Industry*

Recent political economy studies describe how firms, states, and other actors interact through the production and consumption of global tuna products. These studies use GPN theory, first summarised by Coe and Yeung, to analyse the tuna industry.[198] According to Coe and Yeung, a GPN is 'an organizational arrangement, comprising interconnected economic and non-economic actors, coordinated by a global lead firm, and producing goods or services across multiple geographical locations for worldwide markets'.[199] Along with colleagues, Coe and Yeung developed the concept of a GPN to respond to theory-building around global commodity and value chain research.[200] They argue that 'organizationally fragmented and spatially dispersed production networks constitute a new form of economic structure that increasingly drives the complex global economy and its uneven development outcomes.[201]

In separate studies, Havice and Campling and Miller use GPN theory to discuss how firm and non-firm actors govern the global production and consumption of tuna.[202] To describe the 'tuna GPN', these scholars present the production chains for canned and sashimi tuna. They show that tuna production chains are spatially diffuse, incorporate a diversity of actors and industries, and are heavily shaped by lead firms. As part of their research on how production networks shape tuna governance, these scholars situate TRFMOs and their management

[198] Neil Coe and Henry Yeung, *Global Production Networks: Theorizing Economic Development in an Interconnected World* (Oxford University Press, 2015).
[199] Ibid 1–2.
[200] Jeffrey Henderson et al, 'Global Production Networks and the Analysis of Economic Development' (2002) 9(3) *Review of International Political Economy* 436.
[201] Coe and Yeung (n 198) 1.
[202] Elizabeth Havice and Liam Campling, 'Where Chain Governance and Environmental Governance Meet: Interfirm Strategies in the Canned Tuna Global Value Chain' (2017) 93(3) *Economic Geography* 292, 295 ('*Interfirm Strategies in the Canned Tuna GVC*'); Alice Miller, 'Governance Innovation Networks for Sustainable Tuna' (PhD Thesis, Wageningen University, 2014).

decisions in relation to tuna GPNs. In pursuing distinct research questions, they reveal different aspects of how TRFMOs are positioned with respect to tuna GPNs.

B *Havice and Campling: Competitive Dynamics in the Tuna Industry, TRFMOs, and Distributional Struggle*

Havice and Campling draw upon a research program on the political economy of the tuna industry that spans over a decade. This research focuses primarily on tuna governance in the WCPO and IO. In multiple studies, Havice and Campling describe the 'environmental conditions of production' for the tuna industry.[203] This concept refers to 'the ever-shifting combination of regulatory, commercial, and ecological conditions that shape and are shaped by dynamic resource extraction practices'.[204] In Havice and Campling's work, TRFMOs contribute to these conditions through their regulatory measures and the ripple effects these measures have on the behaviour of both firms and states. In addition, they show that the environmental conditions of production are mutually constitutive of TRFMO regulatory measures, as firms and states alike attempt to intercede to alter these conditions in their favour at the level of TRFMO negotiations.

In their study using GPN theory, Havice and Campling elucidate the connection between 'chain and environmental governance' by analysing interfirm strategies in the canned tuna GPN.[205] They provide a careful analysis of some specific strategies firms employ in TRFMOs to alter the environmental conditions of production to favour their interests. From this analysis, Havice and Campling conclude that TRFMOs are not solely engaged in regulating tuna fishing activity, but are also involved in managing interfirm relations—specifically,

[203] Elsewhere, Havice and Campling explain that, 'The particular characteristics of any natural resource—referred to here as the *environmental conditions of production*—are constituted through biological/geographical specificities in concert with the social priorities of any mode of production and commodity sector': Elizabeth Havice and Liam Campling, 'Articulating Upgrading: Island Developing States and Canned Tuna Production' (2013) 45 *Environment and Planning A* 2610, 2618 (emphasis in original)('*Articulating Upgrading*'). See also Havice and Campling, *Interfirm Strategies in the Canned Tuna GVC* (n 202) 294; Liam Campling and Elizabeth Havice, 'The Problem of Property in Industrial Fisheries' (2014) 41(5) *Journal of Peasant Studies* 724 ('*Problem of Property*'); Liam Campling, 'The EU-Centred Commodity Chain in Canned Tuna and Upgrading in Seychelles' (PhD Thesis, University of London, 2012) 43–5 ('*Upgrading in Seychelles*').
[204] Havice and Campling, *Interfirm Strategies in the Canned Tuna GVC* (n 202) 294.
[205] 'Interfirm strategies' is a concept introduced by Havice and Campling to refer to four firm strategies from GPN theory (intrafirm coordination, interfirm control, interfirm partnership, and extrafirm bargaining): ibid 296.

interfirm relations where lead firms located in certain nodes of tuna production chains exert competitive pressure on firms in other nodes.

Havice and Campling assert that this 'competitive dynamic' impacts on TRFMOs to the extent that they are, 'becoming more deeply politicized as downstream firms argue that the [T]RFMOs are the *principal* site for contending with deteriorating environmental conditions, even as those firms continue their own high-volume business models'.[206] Havice and Campling connect this finding to the 'well-documented failures of [TRFMOs]',[207] arguing that the literature on (T)RFMO performance fails to acknowledge that they 'are indirectly engaging in the management of interests across tuna value chains'.[208] Havice and Campling conclude that in this de facto role, TRFMOs 'are not structurally designed to engage with or regulate the competitive dynamics of capital'.[209]

In addition to their work on tuna GPNs, the thesis draws from a number of Havice and Campling's other studies of 'distributional struggles' between DCSs and DWFSs within *and* outside of the context of TRFMOs decision-making.[210] This thesis engages with Havice and Campling's contention that TRFMOs are implicated in distributional struggles within tuna GPNs and seeks to build on their work by examining legal differentiation within TRFMOs as a particular locus for these distributional struggles.

C *Miller: TRFMOs and Configurations of Power in Tuna GPNs*

Miller's study uses GPN theory to explore 'governance innovation networks' within tuna GPNs.[211] As a longer form piece of research, Miller has scope to explore, from a network perspective, the multiplicity of actors and instruments that are involved in shaping production and consumption practices within tuna GPNs. In her study, Miller describes how

[206] Ibid 309.
[207] Ibid 302.
[208] Ibid.
[209] Ibid 309.
[210] Havice and Campling refer repeatedly to 'distributional struggles' among economic actors in tuna production chains in their work. In one study, the authors frame fisheries access relations as the site of distributional struggles over ground-rent between coastal states and DWFSs: Campling and Havice, *Problem of Property* (n 203) 715. In another study, the term is used to describe competitive relations among firms: Havice and Campling, *Interfirm Strategies in the Canned Tuna GVC* (n 202) 294. Havice and Campling use the concept of distributional struggle to describe the contested dynamics that shape value capture among states and firms engaged in tuna GPNs.
[211] Miller (n 202) 13–6.

constellations of firm, state, and civil society actors have produced governance innovations within tuna GPNs, thereby generating new 'choreographies of [tuna] governance'.[212]

Miller shows how TRFMOs are implicated in this process through case studies in the WCPO. In two case studies, she shows distinct strategies pursued by different state actors to advance their interests in tuna GPNs. The first is a cartel of DCSs with control over the majority of WCPO tuna resources, collectively organised as Parties to the Nauru Agreement (PNA); and the second is the largest market actor in the region, the EU.[213]

Miller discusses how strategies pursued by these actors simultaneously challenge and reinforce power asymmetries within tuna GPNs (and consequently within TRFMOs). In the first case study, Miller explains how the PNA has leveraged subregionalism through its collective control over tuna resources to form a symbiotic relationship between their tuna fishing regulations and that of the relevant TRFMO, the WCPFC.[214] Miller claims the PNA's efforts show 'that for contested marine resources such as fisheries, international sub-regions can go beyond functional units to also present wider opportunities to shift power relations in the favour of small island states'.[215] Miller's work subsequently underscores the importance of considering tuna governance in view of distributional struggles among actors within tuna GPNs and how these dynamics reconfigure power in particular ways. Moreover, for the purposes of this thesis, Miller demonstrates that dynamics among states within the broader setting of tuna GPNs can play a powerful role in shaping TRFMO management decisions.

D *Connecting Distributional Struggle within Tuna GPNs to Differentiation within TRFMOs*

This thesis backgrounds its investigation of equity issues within TRFMOs with the findings of this small—but robust—literature on tuna GPNs. The studies on tuna GPNs clarify some of the 'mediating drivers' that shape TRFMO management decisions and how TRFMOs are implicated in broader distributional struggles between firms and states.[216] However, the

[212] Ibid 138.
[213] Miller (n 202) ch 2, 3. These chapters are also published as the following papers, which are the references used in this thesis: Alice Miller, Simon Bush, and Paul van Zweiten, 'Sub-Regionalisation of Fisheries Governance: The Case of the Western and Central Pacific Ocean Tuna Fisheries' (2014) 13(17) *Maritime Studies* 1–12; Alice Miller, Simon Bush, and Arthur Mol, 'Power Europe: EU and the Illegal, Unreported and Unreported Tuna Fisheries Regulation in the West and Central Pacific Ocean' (2014) 45 *Marine Policy* 138.
[214] Miller (n 202) 131.
[215] Ibid 181.
[216] Finkbeiner et al (n 110) 1.

analytical focus of this thesis remains distinct from this literature, in that it focuses on *state-led* transboundary tuna management. In contrast, the literature on tuna GPNs seeks to expand this analytical scope in studies of multiple types of actors and interactions through concepts like interfirm strategies and governance innovation networks.

This thesis agrees with the central assumption of the GPN literature—namely, that a wide variety of actors, institutions, and instruments are involved in tuna governance. While studies examining non-state actors are vital to TRFMO research, this thesis' methodological perspective remains focused on the relevance of power asymmetries between DCSs and DWFSs to differentiation within TRFMO treaty regimes.[217] While non-state actors and their dynamics influence TRFMO negotiations, they are not directly analysed within this thesis. Rather, the current state of political economic knowledge on these dynamics are summarised to provide *context and background* for this thesis's analysis of inter-state negotiations within TRFMOs concerning differentiation. Crucially however, this thesis remains premised on a basic insight of the tuna GPN literature: that TRFMOs are subject to competitive dynamics that occur within the broader scope of the tuna industry.

IV Overviews of WCPFC and IOTC

This section introduces the WCPFC and IOTC with an overview of each TRFMO's mandate, organisational structure, mode of decision-making, and regulatory system. A few observations emerge from an initial comparison of the two TRFMOs. Both have a mandate covering large oceanic regions that abut with other TRFMOs and both are tasked with managing stocks of migratory species beyond the four major commercial tuna species—albacore, bigeye, skipjack, and yellowfin. The objectives set out in their founding instruments differ slightly however, in that the WCPFC is to *ensure* proper conservation, management and sustainable use of stocks under its mandate, whereas the IOTC is merely to *promote cooperation* among members for this purpose.

The IOTC exhibits a more complicated organisational structure than the WCPFC, though both TRFMOs have a governing body that strives to adopt management decisions by consensus. While both TRFMOs have treaty law that provides for voting procedures, only the

[217] Vogler underscores the necessity of state-focused research, particularly in studying the environmental implications of relations between developing and industrialised states: Vogler (n 36) 34.

IOTC has applied them to an actual management decision. In terms of regulatory systems, the WCPFC is more developed, having adopted measures for all WCPO tuna stocks. In addition, both TRFMOs have initiated policy processes to systematise their regulatory approaches. Yet to be concluded in either TRFMO, these processes envision the implementation of MSEs and allocation systems to provide long-term frameworks for science-based decision-making and allocations of total allowable catch (TAC) and/or effort (TAE) among members.

A *WCPFC Mandate, Organisational Structure, Decision-Making, and Regulatory System*

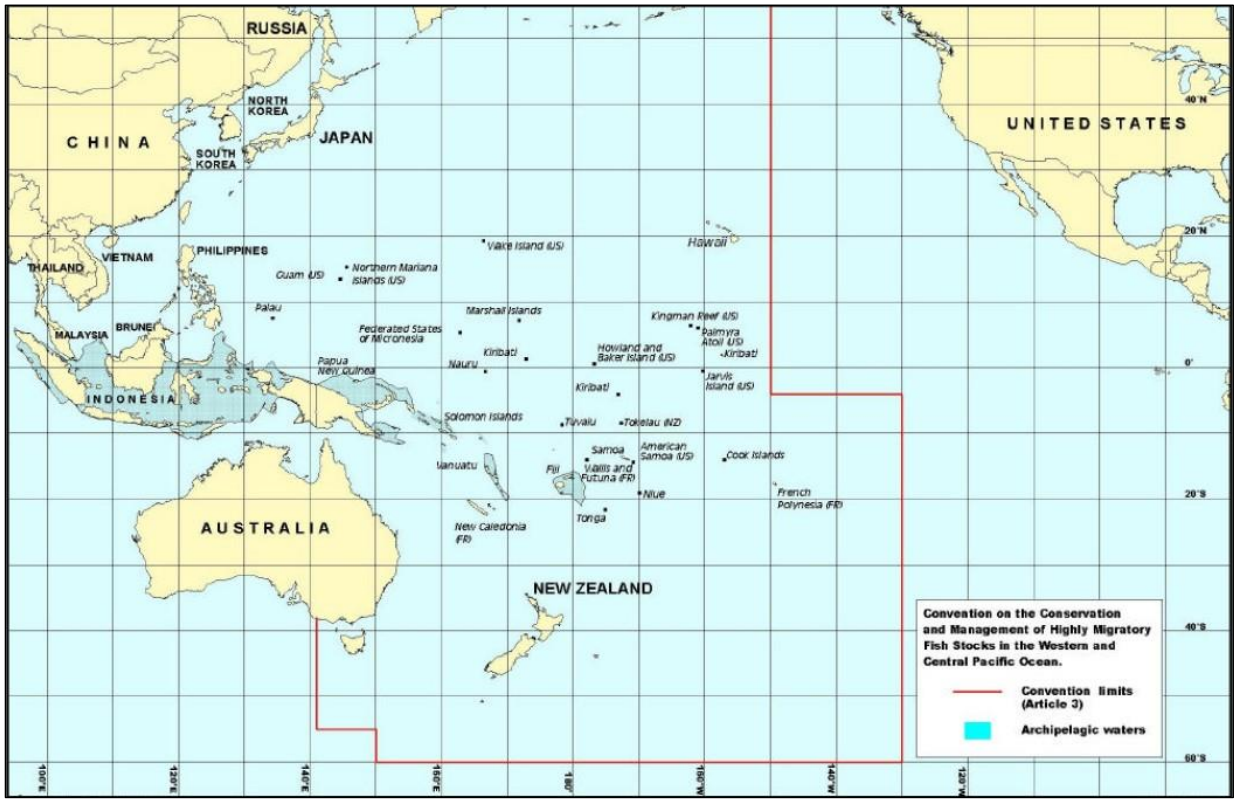
1 *WCPFC Mandate and Convention Area*

The WCPFC has operated for 16 years. At annual sessions of its governing body, the WCPFC adopts binding 'Conservation and Management Measures' (CMMs) and non-binding 'Resolutions'. The Commission has 26 member states, seven Participating Territories and eight Cooperating Non-Members—collectively referred to as 'CCMs'.[218] The *WCPF Convention* sets out the Commission's objective as follows: '[T]o ensure, through effective management, the long-term conservation and sustainable use of highly migratory fish stocks in the western and central Pacific Ocean in accordance with the 1982 Convention [*UNCLOS*] and the Agreement [*UNFSA*]'.[219]

[218] See above (n 44).
[219] *WCPF Convention* (n 46) art 2.

The WCPFC's area of application covers almost 20% of Earth's surface, as illustrated in the map below.

Figure 2: Map of WCPFC Area of Application[220]



All 'highly migratory fish species' in the WCPO fall under the WCPFC's mandate.[221] Over time, the Commission has expanded its regulatory framework beyond commercially significant tuna species in the region (albacore, bigeye, Pacific Bluefin, skipjack, and yellowfin) to include measures on species of marlin, swordfish, sharks, and sea turtles.

2 *WCPFC Organisational Structure and Decision-Making*

The WCPFC organisational structure comprises a Commission plenary, four subsidiary bodies, the WCPFC Secretariat, and the WCPFC Science Provider—the Oceanic Fisheries Programme of the Pacific Community (SPC-OFP). The WCPFC's subsidiary bodies are the

[220] WCPFC, *Convention Area Map* (Web Page, 2020) <https://www.wcpfc.int/doc/convention-area-map>. Ibid art 3. The eastern boundary overlaps with that of the IATTC.
[221] Ibid art 1(f).

Scientific Committee (SC), the Technical and Compliance Committee (TCC), the Northern Committee (NC) and the Finance and Administration Committee (FAC).[222]

At annual sessions of the Commission plenary, members adopt CMMs to build on the Commission's body of treaty law. CMMs are often the product of a program of work carried out by WCPFC subsidiary bodies, as well as various intersessional working groups and workshops convened on particular issues. Over the course of the year, these various groups forward recommendations to the Commission for consideration.

The Commission strives to make all decisions by consensus.[223] However, the only decisions where the WCPFC is legally obliged to adopt measures by consensus are those related to the allocation of TAC or TAE.[224] To date, the WCPFC has not instituted voting procedures contained in the *WCPF Convention*[225] and *WCPFC Rules of Procedure (ROP)*[226]. Where the WCPFC cannot reach consensus, voting procedures require a three-fourths majority of present and voting members. This majority is determined through a process that divides WCPFC members into two chambers according to whether they are members of the Pacific Islands Forum Fisheries Agency (FFA).[227]

The WCPFC Secretariat is based in the capital island of Pohnpei in FSM. The Secretariat provides administrative support to all aspects of the Commission's work.[228] The Secretariat's compliance division plays a pivotal role in acquiring, processing, and reporting compliance information to WCPFC members. Key elements of the WCPFC's compliance framework are maintained and housed by the Secretariat in cooperation with other regional organisations, such as the FFA and SPC. These include the WCPFC Regional Observer Program, Record of Fishing Vessels, Vessel Monitoring System (VMS), and IUU Vessel List.[229] To a lesser extent, the Secretariat also assists in compiling and disseminating scientific information to

[222] *WCPFC Website* (n 218).
[223] *WCPF Convention* (n 46) art 20(1).
[224] Ibid art 10(4).
[225] Ibid art 20(2).
[226] WCPFC, *Rules of Procedure*, 1st reg sess, updated 14 December 2018, r 22(2) ('*WCPFC ROP*').
[227] *WCPF Convention* (n 46) art 20(2). This voting system is one of few examples of differentiation within a TRFMO that advantages industrialised members.
[228] Ibid art 15(4).
[229] See WCPFC, *WCPFC Monitoring, Control and Surveillance (MCS) and Compliance Monitoring* (Web Page, 8 August 2019) <https://www.wcpfc.int/wcpfc-monitoring-control-and-surveillance-mcs-scheme>.

members. The Secretariat also publishes a quarterly newsletter reporting on recent activities of the Commission and maintains its website.

3 *WCPFC Regulatory System*

The WCPFC currently makes management decisions on an iterative, ad-hoc basis at its annual sessions. The Commission has yet to institute a pre-agreed system for deriving catch and effort limits or distributing allocations of these limits to its membership.[230] This means that, in relation to catch and effort limits, the Commission generally adopts short-term measures on the basis of the most recent advice from its SC.

The most powerful regulatory measure the WCPFC has adopted to date is its 'tropical tunas measure', which covers approximately 75% of tuna catches in the WCPO region.[231] This measure was first adopted in 2006 and has since been regularly revised by the Commission. Its current iteration, *CMM 2018-01*, outlines a complex regulatory system for the tropical purse seine and longline tuna fisheries in the WCPO.[232] This includes a combination of catch and effort limits for multiple gears, species, and geographic areas.[233] Crucially, *CMM 2018-01* incorporates EEZ catch and effort limits that PICs have adopted sub-regionally.[234] While the jurisdictional purview of the Commission over EEZ tuna resources remains a source of debate, the WCPFC's current practice is to incorporate these existing limits into the tropical tunas measure. The high seas catch and effort limits in *CMM 2018-01* are largely based on WCPFC members' historical fishing activities. This is common practice across TRFMOs and reflects the absence of systematic approaches to deriving and distributing long-term limits among members.

As the Introduction discussed, most TRFMOs, including the WCPFC, have made efforts to develop allocation systems and harvest strategies.[235] In this regard, *CMM 2018-01* commits the Commission to adopting a formal allocation system in the near term.[236] Since 2014, the

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[230] Cf above (n 24).
[231] *Overview of WCPO Tuna Fisheries 2017* (n 51).
[232] WCPFC, *Conservation and Management Measure for Bigeye, Yellowfin and Skipjack Tuna in the Western and Central Pacific Ocean*, CMM 2018-01, 15th reg sess, 10–14 December 2018 ('*CMM 2018-01*').
[233] Ibid att 1.
[234] Ibid.
[235] See above (n 24).
[236] *CMM 2018-01* (n 232) [28], [44].

Commission has embarked on a process to develop harvest strategies for all major commercial tuna stocks in the WCPO.[237] *CMM 2014-06* identifies specific elements of the Commission's harvest strategy approach.[238] While the Commission has made substantial progress on parts of the harvest strategy work program in recent years, two core elements where progress has stalled are the adoption of target reference points (TRPs) and management objectives.[239] While the WCPFC has approved limit reference points (LRPs) for the WCPO's four major commercial tuna stocks, members have only managed to agree to interim TRPs for skipjack and South Pacific albacore (SPA). The WCPFC has also not yet established important management objectives as part of the harvest strategies for these stocks, despite convening four Management Objectives workshops for this purpose between 2012 and 2014.[240]

B *IOTC Mandate, Organisational Structure, Decision-Making, and Regulatory System*

1 *IOTC Mandate and Area of Competence*

The IOTC has been the primary tuna management body in the IO for 24 years and is the only TRFMO established under the FAO legal framework. Like the WCPFC, the IOTC's governing body meets annually to adopt binding 'Resolutions' and non-binding 'Recommendations'. The IOTC was established through the *IOTC Agreement*, which sets out its mandate to 'promote cooperation among [its] Members with a view to ensuring, through appropriate management, the conservation and optimum utilization … and sustainable development of fisheries' for 16 tuna and tuna-like species in the IO.[241]

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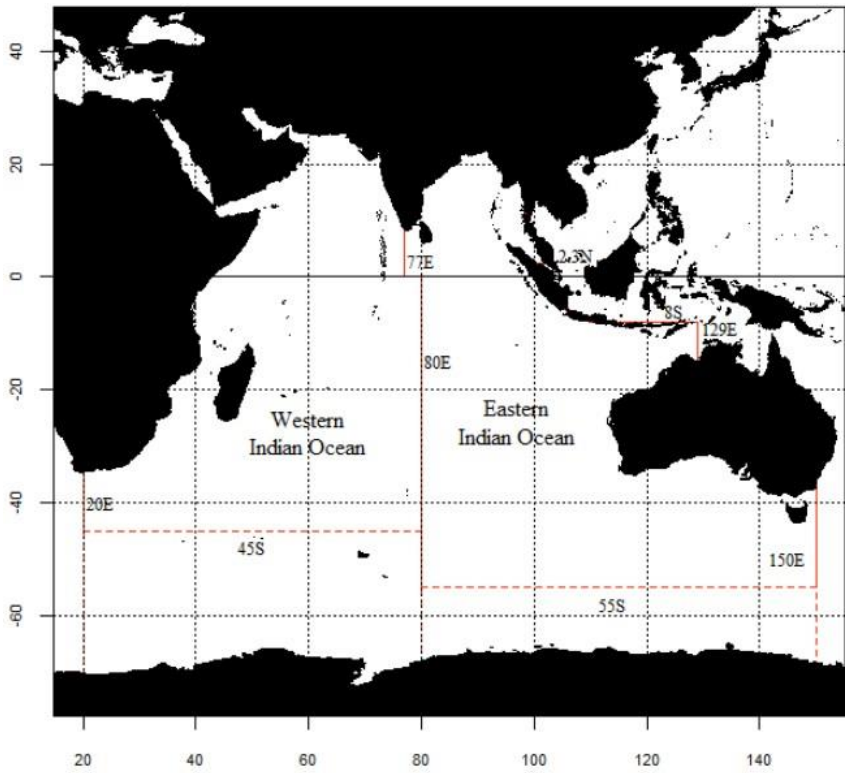
[237] See WCPFC, *WCPFC Harvest Strategy* (Web Page, 2 December 2019) <https://www.wcpfc.int/harvest-strategy>.
[238] WCPFC, *Conservation and Management Measure on Establishing a Harvest Strategy for Key Fisheries and Key Stocks in the Western and Central Pacific Ocean*, CMM 2014-06, 11th reg sess, 1–5 December 2014 ('*CMM 2014-06*').
[239] The Commission adopted a Harvest Strategies 'Workplan' in 2014 which has been regularly updated: WCPFC, *Work Plan for the Adoption of Harvest Strategies Under CMM 2014-06*, 15th reg sess, 10–14 December 2018. For an explanation of fisheries management terms see also above (n 24).
[240] WCPFC, Ian Cartwright, *Report on the Harvest Strategy Workshop (MOW4)*, 12th reg sess, 10 December 2015.
[241] *IOTC Agreement* (n 47) art V(1), ann B.

The IOTC's area of application is divided by the Commission into the Western IO and Eastern IO, illustrated in the map below.

Figure 3: IOTC Area of Competence[242]



The IOTC has 31 members and two Cooperating Non-Contracting Parties—referred to as 'CPCs'.[243] The IOTC has struggled to incorporate a major DWFS—Taiwan—into its membership as a result of its association with FAO, which does not recognise Taiwan's statehood as separate from mainland China.[244] With delegates attending IOTC meetings as 'invited experts', Taiwan is not officially subject to IOTC regulations, though it harvests the largest longline catch in the region.

2 *IOTC Organisational Structure and Decision-Making*

[242] IOTC, *IOTC Area of Competence* (Web Page, 2020) <https://www.iotc.org/about-iotc/competence>. Ibid art. II. The southern boundary overlaps with CCSBT.
[243] See above (n 45).
[244] See WR Edeson, 'An International Legal Extravaganza in the Indian Ocean: Placing the Indian Ocean Tuna Commission Outside the Framework of FAO' (2007) 22(4) *International Journal of Marine and Coastal Law* 485.

The IOTC exhibits a more complicated organisational structure than the WCPFC. It is comprised of a Commission plenary, three subsidiary bodies, two technical committees, eight working parties, and the IOTC Secretariat. The IOTC subsidiary bodies are the Scientific Committee (SC), Compliance Committee (CoC), and Committee on Administration and Finance (SCAF). The technical committees are the Technical Committee on Management Procedures (TCMP), and the Technical Committee on Allocation Criteria (TCAC). In addition, the IOTC has established eight standing working parties, which it divides into scientific and non-scientific subjects. Seven scientific working parties are administered by the SC, which oversees an extensive work program on the following topics: tropical tunas (WPTT); temperate tunas (WPTmT); neritic tunas (WPNT); billfish (WPB); methods (WPM); data collection and statistics (WPDCS); and ecosystems and bycatch (WPEB).[245] While SC meetings provide a forum to adopt recommendations for the Commission, its working parties are where most work is accomplished. An eighth, non-scientific working party was established in 2017 to promote implementation and compliance with IOTC measures (WPICMM).[246]

Similar to the WCPFC, annual sessions of the IOTC plenary adopt measures to elaborate IOTC treaty law. While the IOTC strives to adopt measures by consensus like other TRFMOs, it is the only TRFMO to have ever adopted a measure through voting procedures.[247]According to the *IOTC Agreement*, binding Resolutions must be adopted by a two-thirds majority of members present and voting.[248] Non-binding Recommendations on the other hand only require a simple majority.[249] Unlike other TRFMOs, the IOTC allows members to submit a formal objection, whereby they may choose not to be bound by a particular measure.[250]

The IOTC Secretariat began operations in 1998 and is located in Victoria, the capital of Seychelles, on the island of Mahé. It is involved in acquiring, processing, and disseminating scientific and compliance information that inform IOTC decisions as well as supporting their

[245] *IOTC Website* (n 243).
[246] IOTC, *Working Party on the Implementation of Conservation and Management Measures (WPICMM)*, Resolution 17/02, 21st reg sess, 22–26 May 2017 ('*Resolution 17/02*').
[247] IOTC, *Report of the Fourteenth Session of the IOTC*, IOTC-2010-S14-R[E], 1–5 March 2010, [49]–[52].
[248] *IOTC Agreement* (n 47) art IX(1).
[249] Ibid art IX(8).
[250] Ibid art IX(5).

implementation. The function of the Secretariat comprises six major areas: support to scientific activities; support to compliance activities; communications and public information; support to meetings; information technology; and administration.[251]

3 *IOTC Regulatory System*

Like the WCPFC, the IOTC does not systematise its management decisions, but adopts Resolutions on an ad-hoc basis at its annual sessions. Unlike the WCPFC, however, the IOTC does not have measures in place for most of the tuna and tuna-like species under its mandate. To date, the IOTC has adopted three active Resolutions that restrict catches of yellowfin, skipjack, and four species of billfish.

These Resolutions display varied management approaches. The yellowfin Resolution, which is part of an interim rebuilding plan, caps significant catches of yellowfin at different levels for various gears using 2014 and 2015 as reference years.[252] The skipjack Resolution sets a harvest control rule, along with a LRP and TRP, to generate a total catch allocation to be distributed among IOTC members.[253] The Resolution on species of billfish sets direct, annual limits for overall catches of striped, black, and blue marlin, and Indo Pacific Sailfish.[254]

To address this ad-hoc and sparse collection of Resolutions, two processes are underway at the IOTC to develop a more systematic approach to: (i) scientifically informed decision-making for setting TAC; and (ii) a transparent and equitable distribution of TAC among members. The technical committees mentioned above were established to address these two objectives. The IOTC established the TCMP in 2016 after a series of 'Science and Management Dialogue Workshops'.[255] It is tasked with systematising the IOTC's

[251] IOTC, *The Secretariat* (Web Page, 2020) <https://iotc.org/about-iotc/the-secretariat>.
[252] IOTC, *On an Interim Plan for Rebuilding the IO YFT Stock in the IOTC Area of Competence*, Resolution 19/01, 23rd reg sess, 17–21 June 2019, [5]–[8] ('*Resolution 19/01*').
[253] IOTC, *On Harvest Control Rules for Skipjack Tuna in the IOTC Area of Competence*, Resolution 16/02, 20th reg sess, 23–27 May 2016 ('*Resolution 16/02*'). Due to an objection, Australia is not subject to this measure.
[254] IOTC, *On Management Measures for the Conservation of the Billfishes: Striped Marlin, Black Marlin, Blue Marlin and Indo-Pacific Sailfish*, Resolution 18/05, 22nd reg sess, 21–25 May 2018.
[255] IOTC, *On Establishing a Technical Committee on Management Procedures*, Resolution 16/09, 20th reg sess, 23–27 May 2016 ('*Resolution 16/09*').

management approach through tools like MSEs. The TCAC was established in 2011 to guide negotiations on an IOTC quota allocation system.[256]

Finally, the IOTC has endeavoured to limit the number of fishing vessels, or 'fleet capacity' in the IOTC Area of Competence through four Resolutions. More recently, these negotiations have suffered a setback, partly due to stalled negotiations for allocation criteria. The currently active Resolution caps the number of vessels at 2003 levels.[257] In 2009, the IOTC required members with aspirations to develop or increase their fleet size to submit a 'Fleet Development Plan' (FDP).[258] As of 2018, 19 IOTC members had submitted FDPs, the majority of which were IOCs.[259] In 2018, *Resolution 15/11* elapsed, so that caps on fishing capacity reverted to those set out in *Resolution 03/01*.[260] It is unclear how the IOTC plans to address fishing capacity in the future.

CONCLUSIONS

This chapter draws on fisheries management, international law, and political economy literatures to illuminate different facets of intragenerational equity in TRFMOs. It demonstrates that the fisheries management literature on TRFMO performance understates the impact of distributional issues in tuna fisheries on policy outcomes. As a result, equity in TRFMOs is an underdeveloped area of inquiry. Hanich and Ota provide an early attempt to discuss TRFMOs' legal obligations with respect to equity issues. However, their conservation burden methodology is curiously similar to neoliberal solutions—such as rights-based management—offered by other studies. These solutions provide a technocratic response that elides, rather than addresses, intragenerational equity in TRFMOs.

Looking to the international law literature on equity in IFL and differentiation in international environmental treaty regimes, the chapter boundaries this thesis' analytical focus. As the Introduction states, this thesis' objective is to examine intragenerational equity in TRFMOs

[256] IOTC, For the Conservation and Management of Tropical Tuna Stocks in the IOTC Area of Competence, Resolution 10/01, 14th reg sess, 1–5 March 2010, [12] ('*Resolution 10/01*').
[257] IOTC, *On the Limitation of Fishing Capacity of Contracting Parties and Cooperating Non-Contracting Parties*, Resolution 03/01, 8th reg sess, 7–12 December 2003 [1] ('*Resolution 03/01*').
[258] Ibid [3].
[259] IOTC, *Status of the Implementation of Fleet Development Plans*, IOTC-2018-CoC15-05 Rev 1 [E], 22nd reg sess, 21–25 May 2018.
[260] IOTC, *On the Implementation of a Limitation of Fishing Capacity of Contracting Parties and Cooperating Non-Contracting Parties*, Resolution 15/11, 19th reg sess, 27 April–1 May 2015.

through the design and application of differentiation advantaging DCSs. This chapter distinguishes this analytical focus—which encompasses TRFMO members' rights *and* responsibilities with respect to tuna fisheries—from CBDR. The chapter also traces the outlines of finer distinctions among differentiation provisions as they apply to central obligations, implementation, assistance, and institutional law.

Finally, this chapter draws from political economy research to introduce the concept of a tuna GPN, showing that research indicates TRFMOs are implicated in distributional struggles among actors in the tuna industry. The chapter also sets out an initial overview and comparison of the WCPFC and IOTC, which demonstrates their distinct mandates and reveals that the WCPFC has a more developed regulatory system. The next chapter draws on this background to delve into the first phase of the thesis' analysis of how IFL and TRFMO treaty law design differentiation.

CHAPTER 2: DIFFERENTIATION ADVANTAGING DEVELOPING COASTAL STATES IN INTERNATIONAL FISHERIES LAW

Historically, differentiation has been enmeshed in the exercise of state power through international law. More recently, states have used differentiation as an instrument to stabilise legal relations between developing and industrialised states. In international environmental treaty regimes, differentiation plays an increasingly prominent role in brokering the diverging interests of these states.

Differentiation in IFL functions similarly to balance the interests of DCSs and DWFSs. However, scholars of differentiation struggle to provide a common definition and display a surprising variety of ways to conceptualise it. Recognising the mutable quality of differentiation in international law, this chapter analyses how *UNCLOS*, *UNFSA*, and the treaty law of the WCPFC and IOTC provide for differentiation advantaging DCSs.

This chapter argues that the development of IFL has led to a fragmented framework for differentiation. The fisheries instruments in this analysis set out distinct approaches to differentiation which have been heavily shaped by the historical periods in which they were adopted. *UNCLOS* and *UNFSA* display consistent, though separate, applications of differentiation to two topics: (i) conservation and management of transboundary fish stocks; and (ii) special assistance to developing states. While *UNCLOS* uses differentiation primarily to contextualise obligations, *UNFSA* establishes differentiation—in the form of the general principle of the 'special requirements of developing states'—as an independent obligation with its own legal force.

This chapter derives eight major principles for differentiation across *UNCLOS* and *UNFSA*. It then draws from these principles to identify three objectives for in IFL (first set out in this thesis' Introduction).[261] These objectives are: (i) the effective participation of DCSs in transboundary fisheries management; (ii) the protection of vulnerable and fisheries dependent populations within DCSs; and (iii) the promotion of DCSs' access to high seas fisheries.

[261] See Introduction Section II A.

This chapter assesses the treaty law of the WCPFC and IOTC and demonstrates that both TRFMOs apply differentiation to their management decisions, decision-making, and internal processes. Apart from this basic similarity, however, the WCPFC and IOTC exhibit contrasting differentiation frameworks. Grounded in principles of transboundary fisheries management from *UNFSA*, the WCPFC differentiation framework is modern and elaborate. It is based on a framework obligation in the *WCPF Convention* recognising the special requirements of developing members, particularly those that are SIDS, territories, and possessions. Furthermore, the WCPFC differentiation framework balances the application of differentiation to all three areas of WCPFC management decisions, decision-making, and internal processes. By comparison, the IOTC differentiation framework is modelled on *UNCLOS* and contains no reference to special requirements in the *IOTC Agreement*. In comparison to the WCPFC, the IOTC differentiation framework is less elaborate and heavily weighted to focus on IOTC internal processes.

Section I of this chapter chronicles how treaty regimes have used modern differentiation to achieve compromises in legal relations between developing and industrialised states. The section also reviews the differentiation literature to identify five central characteristics of differentiation in treaty regimes. Sections II and III set out detailed analyses of differentiation in IFL and WCPFC and IOTC treaty law. With a map of differentiation advantaging DCSs in hand, this chapter concludes with substantial legal evidence for TRFMOs and their members to address equity issues through differentiation in their work.

I Background on Differentiation in International Law

A *History of Differentiation in International Law*

Differentiation has a long and divisive history in international law. States have used differentiation where extra-legal factors require a treaty regime to strategically advantage one or more states. In early international law, differentiation served the interests of colonial powers.[262] More recently, it has addressed the special circumstances of developing states.[263] As a legal tool, differentiation has proven resilient to several transformations in international

[262] Matthew Craven, 'What Happened to Unequal Treaties? The Continuities of Informal Empire' (2005) 74 *Nordic Journal of International Law* 335.
[263] Alice De Jonge, 'From Unequal Treaties to Differential Treatment: Is There a Role for Equality in Treaty Relations?' (2013) 4 *Asian Journal of International Law* 125.

law and survives as a common practice in treaty regimes today. The following section argues three shifts can be observed in how states have historically used differentiation. These shifts provide evidence that differentiation has played a historical role in the exercise of state power through international law.

1 *Shift I: Early Uses of Differentiation in Unequal Treaties*

Differentiation was first used in unequal treaties in the mid to late 19th century. During this period, unequal treaties were imposed by powerful states as a form of legal subjugation.[264] The earliest examples of differentiation are set out in a series of unequal treaties concluded primarily between Western and East Asian states, including Japan, Siam (now Thailand) and China.[265] Craven examines similarities in the use of differentiation within these treaties to advantage Western states through favourable trade terms, the granting or leasing of land to foreign enterprises, and special protections for foreign nationals and missionaries.[266] Craven observes that multilateral differentiation—or the large-scale, non-reciprocal nature of these unequal treaties—distinguished them from earlier forms of legal subjugation found in treaties with the Ottoman Empire, North Africa, and Asia.[267]

While notable, the pre-modern use of differentiation in unequal treaties is not typically included in accounts of the history of differentiation in international law.[268] The reason for this omission may be attributed to a wider disciplinary understanding that unequal treaties are not considered valid agreements under modern international law.[269] Craven argues that legal

[264] Craven (n 262) 382.
[265] Ibid 343.
[266] Ibid 343–4.
[267] Ibid 344.
[268] See, e.g., Cullet, *Differential Treatment* (n 12) ch 3; Rajamani, *Differential Treatment in IEL* (n 15) ch 2. Cullet and Stone nevertheless point to examples of early differentiation in modern treaties. Cullet claims that reservations are a widespread and accepted form of differentiation. He asserts that 'The fact that treaty law provides a form of exception to the contractual basis of obligations indicates that differentiation has been a long-standing concern for the international community': Cullet, *Differential Treatment* (n 12) 58. By comparison, Stone points to examples of differentiation provisions in the early 20th century; first in the founding agreement of the International Labour Organisation, which recognises differences among states that preclude uniform labour conditions and later in post-World War I naval agreements, which provided different allowable tonnages for national fleets: Christopher Stone, 'Common But Differentiated Responsibilities in International Law' (2004) 98 *American Journal of International Law* 276, 278.
[269] See *Vienna Convention on the Law of Treaties*, opened for signature 23 May 1969, 1155 UNTS 331 (entered into force 27 January 1980) arts 51, 52. Craven summarises this understanding as the following: 'Since, it might be reasoned, the 19th Century "unequal" treaties were procured by dint of coercion, and since duress is now regarded as vitiating the legitimacy of any agreement, the problem has been legislated away': Craven (n 262) 339.

scholars are reluctant to revisit these treaties and the broader questions they invite concerning power asymmetries and notions of equality in treaty relations among states.[270] While differentiation is associated with unequal treaties, it is not typically considered in light of its role in colonial power relations by differentiation scholars like Rajamani and Cullet.

De Jonge discusses early differentiation in unequal treaties in her genealogy of scholarly discourse on 'equality and inequality in treaty relations'.[271] She tracks how states and scholars have discussed equality through time, from its negation in unequal treaties to its transformation into differentiation provisions within international trade and environmental treaty regimes. De Jonge claims that while international law has never sought to produce equality among states, over time it has evolved to prevent the most 'egregious forms of inequality', particularly in the areas of bargaining power and freedom of consent during treaty formation.[272] She argues that over this evolution, scholarly focus has shifted from 'highlight[ing] the injustices of the (mostly bilateral) "unequal treaties" signed during the pre-war colonial era' to 'the need to develop tools for ensuring that the burden of tackling global problems such as climate change were shared between parties in a manner that was perceived to be "just", if not technically "equal" by parties to the relevant (multilateral) treaty'.[273] This shift, highlighted in the historical arc drawn by De Jonge, demonstrates how historical uses of differentiation have often been enmeshed in the exercise of power and politics through international law.

2 *Shift II: Differentiation Favouring Developing States in the International Law of Development and New International Economic Order (NIEO) Movement*

Most scholarship on differentiation in international law begins with the mid-20th century as broader transformations were rippling through the inter-state system.[274] Decolonisation following World War II (roughly between 1945 and 1960) initiated a mass withdrawal of colonial rule and the formal emancipation of three dozen newly-formed states across Asia and Africa. The creation of these states introduced a new dimension to global politics, in

[270] Craven (n 262) 381.
[271] De Jonge (n 263) 126.
[272] Ibid.
[273] Ibid.
[274] Cullet and Rajamani provide detailed accounts of how differentiation developed as part of a collective political program among developing states following decolonisation: Cullet, *Differential Treatment* (n 12) 59–65; Rajamani, *Differential Treatment in IEL* (n 15) 13–20.

which complex and tense relations arose along a deep socio-economic fault line partitioning the newly branded 'international community'.[275] This division has been variously described as the difference between 'third and first worlds' or a 'global North and South' and remains, in various guises, a defining feature of the global political landscape today.[276] At the precipice of this transformation, formerly colonised and dependent states organised to pursue a collective political program that recognised their experiences of colonial rule and the disadvantages and obstacles to their economic development moving forward.[277]

Early examples of activism among these states were primarily focused on the achievement of substantive equality. Developing states highlighted a rupture between the traditional dogma of formal equality in international law and the persistence of unequal economic conditions and trade relations among states.[278] De Jonge points out that concerns for substantive equality emerged as early as the drafting and adoption of the UN Charter in 1945. De Jonge shows that both Mexico and Brazil raised issues concerning whether over time, treaties might 'become unjust' while appearing formally equal.[279] In two interventions, these states advised that the UN General Assembly (UNGA) be given powers to revise or terminate a treaty if such a case eventuated.[280] While unsuccessful, these arguments demarcate an early example of developing states drawing considerations of equality and justice into the orbit of formal international law.

Ultimately, the incorporation of formal differentiation into international trade law marked the earliest successes of developing state activism during this period. The gradual incorporation of 'special and differential treatment' provisions into international trade law began with the

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[275] R.P. Anand, *New States and International Law* (Vikas Publishing House, 1972); Georges Abi-Saab, 'Whither the International Community?' (1998) 9 *European Journal of International Law* 248.
[276] Roxanne Lynn Doty, *Imperial Encounters: The Politics of Representation in North-South Relations* (University of Minnesota Press, 1996) ch 7.
[277] For histories of 'third world' activism with a specific focus on environmental issues, see Adil Najam, 'Developing Countries and Global Environmental Governance: From Contestation to Participation to Engagement' (2005) 5 *International Environmental Agreements* 303; Marc Williams, 'The Third World and Global Environmental Negotiations: Interests, Institutions and Ideas' (2006) 5(3) *Global Environmental Politics* 48.
[278] Rajamani, *Differential Treatment in IEL* (n 15) 15.
[279] De Jonge (n 263) 140.
[280] *Amendments to the Dumbarton Oaks Proposals Presented by the Delegation of Mexico*, UNIO, UN Doc 2 G/7(c)(1) (1945) 181; *Brazilian Comment on Dumbarton Oaks Proposals Submitted to Inter-American Conference on Problems of War and Peace*, UNIO, UN Doc 2 G/7/(e) (1945) 239.

Havana Charter in 1948.[281] A few years later, between 1954 and 1955, the WTO modified an article of the *General Agreement on Tariffs and Trade (GATT*) to allow specific trade concessions for developing states.[282] The revision applied to developing states 'which can only support low standards of living and are in the early stages of development'.[283] Recognising that these states may 'implement programmes and policies of economic development designed to raise the general standard of living of their people', the modification applied to tariff protections for the establishment of new industries and quantitative restrictions for balance of payment purposes.[284] Notably, this example of differentiation was the first in international law to allow developing states to derogate from binding obligations on the basis of economic disadvantage.

Over the ensuing decade of the 1960s, developments in international trade regulation further advanced differentiation explicitly advantaging developing states.[285] These developments took place within a transformed international political and legal context, where theory and praxis on economic divisions within the international community had reached a critical mass and were emerging at the forefront of negotiations for various international legal instruments.[286]

In the 1960s, developing states and an emerging school of primarily French legal scholars began to advocate for a new 'international law of development', or *Droit International du developpement*.[287] This school presented a revised approach to international law and included differentiation as one of a number of key principles undergirding it.[288] At its core, the

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[281] *Havana Charter for an International Trade Organization*, opened for signature 24 March 1948 (never entered into force) art 15.
[282] *The General Agreement on Tariffs and Trade*, opened for signature 30 October 1947 (entered into force 1 January 1948) <https://www.wto.org/english/docs_e/legal_e/gatt47_01_e.htm> art XVIII ('*GATT*').
[283] Ibid.
[284] Ibid.
[285] In 1964, states established the United Nations Conference on Trade and Development (UNCTAD) and WTO Committee on Trade and Development. These bodies witnessed the formation of the G-77, a collection of developing states forming a united front in negotiations with industrial states on international economic matters. In 1965, Part IV on Trade and Development was also added to the *GATT*, which expressly recognised the link between the international trade system and economic development: ibid pt IV. For further elaboration of the development of special and differential treatment provisions within international trade law, see De Jonge (n 263) 142–5.
[286] Rajamani, *Differential Treatment in IEL* (n 15) 17–8.
[287] Ibid 14.
[288] A foundational aim of the international law of development was to establish 'need as a basis for entitlement', with the interrelated concepts of cooperation, solidarity, and mutual aid providing the premises for elaborating upon entitlements to developing states: ibid 12–7.

international law of development challenged former conceptions of sovereignty, equality, and substantive reciprocity in legal relations among states.

Indeed, in her account of the international law of development, Rajamani argues that differentiation was essential to the vision elaborated by legal scholars. She claims that a central figure, Maurice Flory

> envisaged that most multilateral treaties dealing with economic matters would distinguish between developed and developing countries, in order to settle different rules of treatment for each of them. Instead of one single set of regulations for all kinds of states and instead of a single body of rules, there would be a multiplicity of rules.[289]

Ultimately, the concept of differentiation as rule rather than exception invited some of the strongest challenges to advocates of the international law of development. Essentially, legal scholars were divided on how this use of differentiation complicated the relationship between international law and state practice. Rajamani documents how critics levelled accusations that the school confused *lex lata* and *lex ferenda* (that is, the law as it is, and the law as it should be) and in doing so undermined the stability of the international legal order.[290] In contrast, advocates claimed that differentiation was already so pervasive a practice within treaty regimes that this was merely an exercise in resolving *lex generalis* and *lex specialis* (that is, the law governing general and specific matters).[291]

Despite its critics, the movement to transform modern international law gathered momentum, and by the 1970s, developing states began calling for a 'New International Economic Order' (NIEO). Drawing from the political power of their voting majority in the UN General Assembly (UNGA), developing states facilitated the adoption of a number of international legal instruments within the framework of a concrete political program. This political program was inspired by a dawning reality that decades after decolonisation, many former colonies continued to experience underdevelopment despite continuing aid from former colonisers.[292]

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[289] Rajamani, *Differential Treatment in IEL* (n 15) 15.
[290] Ibid 17.
[291] Oscar Schachter, 'The Evolving International Law of Development' (1976) 15(1) *Columbia Journal of Transnational Law* 1, 2–3.
[292] Thomas M. Franck and Mark M. Munansangu, 'The New International Economic Order: International Law in the Making?' (Research Paper in Policy and Efficacy Studies No. 6, United Nations Institute for Training and Research, 1982).

Developing state cooperation formed the basis of the NIEO movement. During this period, developing states engaged in patterns of cooperation that strengthened their negotiating positions in international fora. Initially, this cooperation focused on international recognition of permanent sovereignty over natural resources. In 1962, developing state activism led to the adoption of a UNGA resolution entitled *Permanent Sovereignty over Natural Resources*.[293] By 1967, developing state cooperation was formalised in the first Ministerial Meeting of the G-77 and documented in the *Charter of Algiers*.[294] In 1974, the NIEO was formally promulgated in three nonbinding instruments passed by the UNGA. These instruments were the *Declaration on the Establishment of the NIEO*, the *Programme of Action on the Establishment of a NIEO*, and the *Charter of Economic Rights and Duties of States*.[295]

Through the NIEO program, developing states campaigned for an international legal regime that supported their economic needs and autonomy concerning trade and debt-related issues. This was to be achieved through positive discrimination and non-reciprocity in the law, both of which would take the form of express differentiation advantaging developing states.[296] Perhaps most notably, the NIEO movement proposed that differentiation would operationalise its call for distributive justice among developing and industrialised states.[297]

The NIEO movement was the first effort to address economic disparities between developing and industrialised states *through* international law. However, the fading of the NIEO movement underscored that industrialised states were not prepared to accept non-reciprocal legal obligations to address structural economic issues.[298] By the 1990s, the rhetoric of the NIEO movement lapsed into disuse in political discourse and was absent from even seemingly relevant UNGA resolutions on economic cooperation and development.[299]

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[293] *Permanent Sovereignty Over Natural Resources*, GA Res 1803 (XVII), UN GAOR, 17th sess, 1194th plen mtg, (14 December 1962).
[294] Group of 77, *Charter of Algiers*, 1st min mtg, 25 October 1967 <http://www.g77.org/doc/algier~1.htm>.
[295] *Declaration on the Establishment of a New International Economic Order*, GA Res 3201 (S-VI), UN Doc A/RES/3201 (S-VI) (adopted 1 May 1974); *Programme of Action on the Establishment of a New International Economic Order*, GA Res 3202 (S-VI), UN Doc A/RES/3202 (S-VI) (adopted 1 May 1974); *Charter of Economic Rights and Duties of States*, GA Res 3281 (XXIX), (adopted 12 December 1974).
[296] Rajamani, *Differential Treatment in IEL* (n 15) 18.
[297] Cullet, *Differential Treatment* (n 12) 63.
[298] French describes how developed states deliberately undermined the NIEO: 'What both sides can probably agree on is that the North very consciously—and arguably very successfully—negated giving the NIEO definitive normative status': Duncan French, '"From Seoul with Love"—the Continuing Relevance of the 1986 Seoul ILA Declaration on Progressive Development of Principles of Public International Law Relating to a New International Economic Order' (2008) 55 *Netherlands International Law Review* 10.
[299] Rajamani, *Differential Treatment in IEL* (n 15) 20.

Explanations for the demise of the NIEO movement include the declining legitimacy of UNGA resolutions, the debt crisis in 1982 and greater economic globalization and liberalization following the collapse of the Soviet Union.[300] Whatever the reason for its decline, the NIEO established a role for differentiation in legal contestation between developing and industrialised states.

3 *Shift III: Modern Uses of Differentiation in International Environmental Regimes*

Scholars contend that differentiation did not expire with the fading of the NIEO movement. Rather, Cullet and Rajamani claim that while differentiation has declined in the wider political landscape of general international law, it has been resurrected and is rising in importance within specific regimes in IEL.

After the NIEO movement, both scholars note the absorption of NIEO themes into the arena of human rights law and the gradual dilution of differentiation in international trade law.[301] During the same period, states began to formally recognise their increased ecological and economic interdependency.[302] The dual spectres of a rising number of international environmental issues and increasingly complex economic links forged through globalisation highlighted this interdependency at the close of the 20th century. Locked into conditions of interdependence, states realised their common need, but unequal capacities, to address environmental problems. Within this context, differentiation developed into a vital aspect of cooperation on international environmental problems between developing and industrialised states. Differentiation played an integral role in acknowledging and addressing asymmetries among states with respect to their financial and technological resources, levels of economic development, and contributions to environmental problems.[303]

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[300] Ibid 19–20; Cullet, *Differential Treatment* (n 12) 65.

[301] Cullet, *Differential Treatment* (n 12) 65–9; Rajamani, *Differential Treatment in IEL* (n 15) 48.

[302] Cullet notes the impact of these broader forces and the reframing of NIEO issues in new understandings of international cooperation:

> While the NIEO had emphasized the possibility of an alternative economic development path based largely on state intervention, the new economic environment and its accompanying policies were becoming less and less conducive to their realization. By 1990, following what came to be known as the lost development decade for many developing countries, the NIEO rhetoric had faded away and had given way to a new understanding of solidarity which emphasized the mutual responsibility of both developed and developing countries concerning the various international issues necessitating cooperation: Cullet, *Differential Treatment* (n 12) 65.

[303] Cullet, *Towards a New Paradigm* (n 163) 569.

The connection established in this period between environmental protection and economic development are evident in foundational instruments of IEL such as the *Stockholm Declaration* and the *Rio Declaration*.[304] For example, the 1972 *Stockholm Declaration* prefaces its list of Principles with an acknowledgement of the under-development of developing countries and its relationship to environmental problems; provides an early definition of the inter-related concepts of intergenerational and intragenerational equity; and calls on international cooperation to support developing states in addressing their environmental responsibilities.[305] Beyond these prefatory references, Principles 8 through 12 establish a basis for regarding environmental and economic development issues as inter-related.[306] In addition, Principles 20 and 23 set out early rationales for differentiation in IEL concerning the need for scientific research and development in developing countries and for considering whether the application of standards to address environmental problems would transfer an 'unwarranted social cost' onto developing countries.[307]

Decades later, the early thinking that braided environmental and economic concerns together in the Stockholm Declaration was further formalised in the Rio Declaration. Principles 3 and 4 asserted the 'right to development' and defined the concept of 'sustainable development' as a marriage of environmental protection and economic development.[308] Principle 6 prioritised the special situation and needs of developing countries, while Principle 11 restated the need to consider whether standards impose an 'inappropriate' and 'unwarranted economic and social cost' to developing countries in particular.[309] Lastly, the Rio Declaration instantiated the principle of CBDR in IEL for the first time in Principle 7, which stated that 'States have common but differentiated responsibilities' with respect to the global environment.[310] Cullet and Rajamani point to these and other important issue-specific instruments such as the Montreal Protocol and UNFCC as evidence of differentiation's roots in IEL. Against this historical backdrop, differentiation advantaging developing states has played a key role in shaping TRFMO treaty regimes today.

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[304] *Stockholm Declaration* (n 37); *Rio Declaration* (n 37).
[305] *Stockholm Declaration* (n 37) Preamble paras 2, 4, 6, 7.
[306] Ibid Principles 8–12.
[307] Ibid Principles 20, 23.
[308] *Rio Declaration* (n 37) Principles 3–4.
[309] Ibid Principle 11.
[310] Ibid Principle 7.

B *History of Differentiation in Negotiations for IFL Instruments*

Couched within the broader landscape of international law, international fisheries instruments show a subtle shift in how states have approached differentiation within the context of transboundary fisheries management. The following section examines the negotiating histories of *UNCLOS* and *UNFSA* to show how rules and principles regarding the application of differentiation to fisheries management have changed over time. A transition can be observed from more general calls for fish stocks to play a role in redistributing wealth among states in *UNCLOS* in the 1970s and 1980s, to focused and specific requests for assistance with implementation and capacity building in fisheries management in *UNFSA* in the 1990s. Some elements of differentiation in IFL have remained more constant however, such as references to the special interests and needs of developing states as defined by considerations for food security and coastal state dependency on fish stocks.

1 *UNCLOS III, Developing State Activism and Differentiation Based on Coastal State Dependence*

(a) Historical Context for UNCLOS Negotiations: UNCLOS III and the NIEO

The provisions on transboundary fish stocks within the 1982 *UNCLOS* are a product of a wider negotiation that occurred between developed and industrialised states concerning the distribution of ocean resources. To describe the contours of negotiations for these specific provisions, it is necessary to outline the broader negotiating context, of which living marine resources were only a part. The text of *UNCLOS* was negotiated over a nine-year period at the Third United Nations Conference on the Law of the Sea (UNCLOS III), between 1973 and 1982.[311] Contemporaneous with the rise of the NIEO movement, this period observed growing political activism among developing states for a more equitable global economic system. UNCLOS III heralded the Convention as a new legal order for the oceans and set the stage for developing state activism to permeate the area of oceans law.[312] Indeed, within

[311] See Tommy Koh, *Building a New Legal Order for the Oceans* (National University of Singapore Press, 2020).

[312] *Summary Records of Plenary Meetings 1st Plenary Meeting*, UN Doc A/CONF.62/SR.1 (3 December 1973) 3[4]. There is a sizeable literature that discusses the links between the NIEO and negotiating conditions for UNCLOS III. See, e.g., Lawrence Juda, 'UNCLOS III and the New International Economic Order' (1979) 7(3–4) *Ocean Development and International Law Journal* 221; Elisabeth Mann Borgese, 'The New International Economic Order and the Law of the Sea' (1977) 14(3) *San Diego Law Review* 584. Most of this literature focuses on the development of the legal framework for deep seabed mining however. For fisheries-focused discussions of the NIEO and UNCLOS III, see Anand, *A New Legal Order for Fisheries* (n 3); Manjula

oceans law, developing state activism at UNCLOS III distinguished negotiating conditions from earlier attempts to form a legal order for the oceans under the UN.[313]

(b) UNCLOS III Negotiations: Procedures, Food Security, and Coastal State Dependence

The altered political climate for UNCLOS III was apparent in how the Conference established its negotiating procedures. Okereke observes that these procedures reflected an aspiration to broker balanced negotiations between developing and industrialised states.[314] These included the notion of the Convention as a 'package deal', consensus decision-making, and developing state representation in the leadership of various committees.[315] Perhaps as a testament to their value, these procedures continue to be used within TRFMOs today.[316] As a result of the rise of developing state activism during UNCLOS III, one could argue (as Okereke has) that UNCLOS III 'was the very first global environmental conference where contestations for international justice played a major role in shaping discussions, text and policies'.[317]

Developing state activism during UNCLOS III concentrated on creating an equitable worldwide allocation of marine resources (both living and mineral). With respect to fisheries, this activism focused primarily on the special interests of developing states in fisheries resources due to increasing food security concerns.[318] Developing states argued that under conditions of rising populations and entrenched underdevelopment, it would be necessary to draw on fisheries resources to meet forecasted gaps in world food supply.[319] These concerns were poignantly captured in discussions about the equitable incorporation of land-locked and

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R. Shyam, 'The New International Economic Order and the New Regime for Fisheries Management' (1983) 8 *Ocean Management* 51.

[313] Anand argues there was a marked change in developing state participation during UNCLOS III in contrast to UNCLOS I and II:

> Although some of these newly independent developing countries [states throughout Asia, the Pacific and Africa] participated at the 1958 and 1960 Conferences on the Law of the Sea, they were not yet politically strong as a group to influence their decisions. In fact, these Conferences were characterised by an East-West confrontation between the Communist and non-Communist states, in which the issues were sharply divided and decided between these two groups with the developing countries playing a minor balancing role: Anand, *Origin and Development of LOS* (n 4) 236.

[314] Okereke (n 100) 61–3.

[315] 'The notion of a package deal refers to the proposal that the whole of the Convention with its 320 articles (covering sometimes divergent issues) be regarded by parties as a single document': ibid 61.

[316] See, e.g. *IOTC Agreement* (n 46) art VI(6).

[317] Ibid 56.

[318] Anand, *A New Legal Order for Fisheries* (n 3) 266–7; Borgese (n 312) 586–7.

[319] Ibid.

geographically disadvantaged states into the new legal framework.[320] During discussions of UNCLOS III's Second and Third Committees, developing states underscored the present and future significance of fisheries to their national food resources.[321]

Developing states' claims were framed by significant changes being made to extend coastal state jurisdiction at the time. The emergence of the EEZ concept leading up to UNCLOS III partly resulted from momentum generated by a series of individual and regional EEZ declarations issued by DCSs across Latin America, Africa, and the Middle East.[322] While these jurisdictional claims to the use of ocean space were made with the 'organic unity of living and non-living marine resources' in mind, fisheries resources were a core consideration for developing states.[323] Following the expansion of industrial-scale fishing practices after World War II, many DCSs were disturbed by the increasing number and efficiency of foreign fishing vessels operating off their coasts.[324] These states argued that coastal fishing communities, dependent upon fisheries resources and using traditional fishing technology, could not compete with foreign, industrial-scale fishing operations.[325]

The dual concerns for food security and coastal state dependence were not new issues to international fisheries negotiations. These concerns were raised as early as the first United Nations Conference on the Law of the Sea (UNCLOS I) in 1958.[326] Adopted at UNCLOS I, the *Convention on Fishing and Conservation of the Living Resources of the High Seas* prioritised food security in its objectives section (albeit in the non-binding phrase 'should') stating that 'Conservation programmes should be formulated with a view to securing in the first place a supply of food for human consumption'.[327] At the same Conference, states

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[320] See Okereke (n 100) 74.
[321] See *Summary Records of Meetings of the Second Committee 23rd Meeting*, UN Doc A/CONF.62/C.2/SR.23 (1 August 1974), 182 [9]; *Summary Records of Meetings of the Second Committee 30th Meeting*, UN Doc A/CONF.62/C.2/SR.31 (7 August 1974), 233 [24]; *Summary Records of Meetings of the Third Committee 7th Meeting*, UN Doc A/CONF.62/C.3/SR.7 (18 July 1974), 336 [8].
[322] See Satya Nandan, 'The Exclusive Economic Zone: A Historical Perspective' in FAO (ed), *The Law and the Sea: Essays in Memory of Jean Carroz* (FAO, 1987).
[323] Anand, *A New Legal Order for Fisheries* (n 3) 276.
[324] Ibid 275–6.
[325] Anand explains: 'Such fleets operated to the detriment of small native coastal fishing vessels, and many countries, such as Iceland, the new states of Africa and Asia and the west-coast countries of South America, became "alarmed at the actual or possible effect of such large-scale operations of foreign origin in the high seas areas off their coasts"': ibid 273.
[326] See *Summary Records of the 36th to 43rd Meetings of the Third Committee*, UN Doc A/CONF.13/C.3/SR.36-43 (16 April 1958), 108 [12], 127 [19].
[327] *Convention on Fishing and Conservation of the Living Resources of the High Seas*, opened for signature 29 April 1958, 559 UNTS 285 (entered into force 20 March 1966) art 2.

adopted a Resolution on 'Special situations relating to coastal fisheries'.[328] The Resolution described populations 'overwhelmingly dependent upon coastal fisheries for their livelihood or economic development' and recommended that measures to limit fish stocks, 'recognize any preferential requirements of the coastal State resulting from its dependence'.[329] The notion of preferential coastal state rights to fish stocks became an increasingly complicated point in future negotiations and remains a source of debate in negotiations on catch allocations in IFL today.[330]

(c) Differentiation in UNCLOS: The Zonal Approach and the Special Requirements of Developing States

UNCLOS III negotiators ultimately devised a highly ambiguous, and in places conflicting, legal framework for the conservation and utilisation of marine living resources that sought to strike a balance between DCSs and traditional DWFSs.[331] Widespread acceptance of the 200 nautical mile (nm) EEZ concept during UNCLOS III negotiations rendered questions surrounding shared fish stocks less relevant, as it was believed that the new regime would place up to 99% of fisheries resources under coastal state jurisdiction.[332] Negotiators believed management of the remaining 1% of high seas fish stocks would be unproblematic, merely posing a technical question for fisheries managers seeking to manage fish stocks throughout their range.[333] As for differentiation, *UNCLOS* introduced the foundational concept of the 'special requirements of developing states'.[334] These requirements were to be considered in state-led conservation and management of marine living resources *both* within EEZs and the high seas. The language of developing states' 'requirements', which reflects language from

[328] Quoted in Shigeru Oda, *The International Law of the Ocean Development: Basic Documents* (Sijthoff, Leyden, 1972) 28.
[329] Ibid.
[330] See Shigeru Oda, 'Fisheries Under the United Nations Convention on the Law of the Sea' (1983) 77(4) *The American Journal of International Law* 739.
[331] Ibid 750; Jose A. de Yturriaga, *The International Regime of Fisheries: From UNCLOS 1982 to the Presential Sea* (Martinus Nijhoff Publishers, 1997) 156; cf Edward L. Miles and William T. Burke, 'Pressures on the United Nations Convention on the Law of the Sea of 1982 Arising from New Fisheries Conflicts: The Problem of Straddling Stocks' (1989) 20 *Ocean Development and International Law* 343, 343–4.
[332] John Gulland, 'Developing Countries and the New Law of the Sea' (1979) 22(1) *Oceanus* 36.
[333] Ibid.
[334] See, e.g., *UNCLOS* (n 9) art 61(3).

the *Stockholm Declaration*, indicate how broader international discourse on the environment conditioned UNCLOS III negotiations.[335]

The zonal framework of maritime boundaries set out in *UNCLOS*, which included coastal state rights to EEZ fisheries resources and freedom of fishing on the high seas, helped shape the tenuous balance between coastal and DWFS interests. Negotiators feared that further elaboration of the framework on living marine resources would threaten the equilibrium devised in *UNCLOS* between these two groups. As a result, Balton claims, 'Relatively little attention flowed to the development of rules concerning fishing on the high seas or rules for living marine resources occurring in both areas'.[336] In the years after *UNCLOS* was adopted, it became increasingly apparent that the level of ambiguity within the provisions on living marine resources would come to threaten the stability of the overall *UNCLOS* legal framework.

2 *UNFSA Negotiations: Implementing Fisheries-Related Provisions within UNCLOS*

(a) Historical Context for UNFSA Negotiations

Similar to *UNCLOS*, *UNFSA* was shaped by the era and political context in which its text was negotiated. The need for an *UNCLOS* implementing agreement on fisheries emerged after a series of conflicts between coastal states and DWFSs revealed weaknesses in *UNCLOS* provisions concerning tuna and other migratory fish stocks.[337] *UNFSA* negotiations were instigated by states with existing interests in migratory fish stocks, which at the time were largely coastal states from the Northern hemisphere and Latin America.[338] Consequently, *UNFSA* negotiations tended not to contour around distributive issues for developing states as they had during UNCLOS III.[339]

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[335] *Stockholm Declaration* (n 37) Principle 12. See also Douglas M. Johnston, 'The New Equity in the Law of the Sea' (1975) 31(1) *International Journal* 79, 84.
[336] David A. Balton, 'Strengthening the Law of the Sea: The New Agreement on Straddling Fish Stocks and Highly Migratory Fish Stocks' (1996) 27 *Ocean Development & International Law* 129.
[337] See Evelyne Meltzer, 'Global Overview of Straddling and Highly Migratory Fish Stocks: The Nonsustainable Nature of High Seas Fisheries' (1994) 24 *Ocean Development and International Law* 256. Migratory fish stocks fall under two categories—'highly migratory fish species', or those identified in Annex I of UNCLOS, and 'straddling fish stocks', which are understood to be migrate between EEZs and/or high seas: *UNCLOS* (n 9) annex I.
[338] Balton (n 336) 133.
[339] In fact, the special interests of developing states were not included as a separate item in the Conference Chair's original list of issues to be discussed: see Earth Negotiations Bulletin, *First Session of the Conference*

UNFSA negotiations occurred towards the end of the 20th century, during the third shift in states' use of differentiation and the introduction of the concept of sustainable development. In particular, *UNFSA* negotiations were viewed by some negotiators as originating and operating under the broader context of the work on sustainable development being undertaken by the United Nations Conference on Environment and Development (UNCED).[340] Despite this setting, development issues were not the focus of negotiations. Instead distributive and procedural issues for developing states were discussed primarily in relation to the principle of the special requirements of developing states. Under this principle, states focused on specific areas of assistance for developing states which would enable them to participate both in the conservation and management, and crucially, in the sustainable use of migratory fisheries. Ultimately, differentiation in *UNFSA* reflects this focus on the special requirements of developing states and marks a shift away from NIEO-era themes of redistributive justice for developing states.

(b) Conflicts Between Coastal States and DWFSs Lead to UNFSA Negotiations

In the years following the adoption of *UNCLOS* in 1982, coastal states became increasingly frustrated with the actions of DWFSs concerning straddling fish stocks.[341] Coastal states argued that fisheries management undertaken in their EEZs was being undermined by fishing activities in adjacent high seas areas. A number of these coastal states proposed further extension of their marine jurisdiction to ensure adequate management of migratory fish stocks.[342] Frictions between coastal states and DWFSs escalated so that policy makers feared it may undermine the newly formed *UNCLOS* framework. During this time, Balton argued that 'Heightened tensions over straddling and highly migratory fish stocks represent the most destabilising force in the modern law of the sea'.[343]

Meanwhile, technological developments in the fishing sector that were not anticipated at the time of *UNCLOS* negotiations had also enabled DWFS fleets to significantly enhance their

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on Straddling Fish Stocks and Highly Migratory Fish Stocks Summary Issue (Summary Report, Vol. 7 No. 16, 12–30 July 1993) s X.

[340] *Agenda 21 of the United Nations Conference on Environment & Development*, UN Doc A/CONF.151./26/Rev.1 (3–14 June 1992), ch 17 [17.44]–[17.45] ('*Agenda 21*'). See also Earth Negotiations Bulletin, *Second Session of the Conference on Straddling Fish Stocks and Highly Migratory Fish Stocks Summary Issue* (Summary Report, Vol. 7 No. 30, 14–30 March 1994) s X.

[341] See Meltzer (n 337).

[342] Balton (n 336) 131, 134.

[343] Ibid 126.

efficiency and mobility.[344] Fleets supposedly displaced by the new zonal framework were now intensively harvesting high seas fisheries and accounting for a far greater percentage of world catch.[345] Furthermore, alarming trends in world fisheries were becoming increasingly apparent in the decade after the adoption of *UNCLOS*.[346] Consensus began to develop in policy making spaces that there was an impending 'crisis' in world fisheries.[347] For these reasons, several states, galvanised by Canada and Chile, began to consider negotiating an implementing agreement of *UNCLOS* for migratory fish stocks.[348]

(c) UNFSA Negotiation Process

The first step towards a migratory fish stocks agreement was undertaken through Agenda 21, a landmark document adopted by the UNCED in 1992.[349] Chapter 17 called for an intergovernmental conference to be convened on high seas fisheries.[350] Later that year, this request was followed up by the adoption of a UNGA Resolution. At its 47th session, the UNGA adopted Res 47/192, which contained a mandate for states to convene the 'United Nations Conference on Straddling Fish Stocks and Highly Migratory Fish Stocks'.[351]

Leading up to the Conference, tensions increased between coastal states and DWFSs with interests in migratory fish stocks.[352] Coastal states such as Argentina, Canada, Chile, Iceland, Norway, Peru, and Russia argued that a binding treaty should be negotiated at the Conference which would place new restrictions on high seas fishing activities.[353] Conversely, DWFSs such as EU, Japan, Korea, China, and Poland argued that the Conference should produce non-binding guidelines on fisheries management to apply within EEZs and high seas.[354] While non-Latin American DCSs were not hugely implicated in these conflicts, their interests were

[344] Meltzer (n 337) 261–2.
[345] Ibid.
[346] Balton (n 336) 130–1.
[347] Ibid.
[348] A. Charlotte de Fontaubert, 'The Politics of Negotiation at the United Nations Conference on Straddling Fish Stocks and Highly Migratory Fish Stocks' (1995) 29(1–3) *Ocean and Coastal Management* 79, 80.
[349] *Agenda 21* (n 340) ch 17.
[350] Ibid [17.49] (e).
[351] *United Nations Conference on Straddling Fish Stocks and Highly Migratory Fish Stocks*, GA Res 47/192, UN GAOR, UN Doc A/Res/47/192 (29 January 1993) [1].
[352] David Freestone, 'The Effective Conservation and Management of High Seas Living Resources: Towards a New Regime?' (1994) 5 *Canterbury Law Review*.
[353] Ibid 342.
[354] Ibid.

raised at two technical conferences held in preparation for the Conference, which noted the challenges developing states face to participating in high seas fisheries.[355]

With the stage set tenuously for an agreement, negotiations were convened over the course of six Conference sessions between 1993 and 1995. Initially, considerable debate was held over the legal status of the agreement to be negotiated. Some states argued that a new fisheries instrument might be inconsistent with the *UNCLOS* right of freedom of fishing on the high seas.[356] Coastal states and DWFSs were of considerably divergent minds regarding whether any agreement coming out of the Conference would be binding or non-binding.[357] Eventually, a compromise was reached. DWFSs agreed to the negotiation of a binding treaty. Coastal states agreed that the new treaty would require regulatory measures within their EEZs that were compatible with improved controls on fishing activities in the high seas.[358] In 1995, UNFSA was adopted at the final session of the Conference and entered into force in 2001.

(d) Developing State Scepticism and UNFSA

In contrast to UNCLOS III, developing states were not a major negotiating bloc in Conference sessions. After the adoption of *UNCLOS* in 1982, many developing states faced difficulties participating in fisheries for migratory fish stocks.[359] Lacking active fishing interests in the conflicts impacting migratory fish stocks, a large number of DCSs did not actively participate in *UNFSA* negotiations. Sydnes observes:

> Most developing countries had a low-key role during the UN Fish Stocks Conference...If one analyses the list of documents from the UN Fish Stocks Conference, Africa was virtually absent, as were the Asian coastal States without distant water fishing interests and a number of Latin American States.[360]

Sydnes argues that among DCSs, there was also 'a general scepticism towards the regional approach' espoused during *UNFSA* negotiations.[361] DCSs feared that entering into regional

[355] Palma (n 81) 57.
[356] De Fontaubert (n 348) 82.
[357] Ibid.
[358] In Balton's view, this compromise was essential to *UNFSA* negotiations: 'The decision of the conference to negotiate a [binding] treaty with conservation rules that applied to fish stocks wherever harvested made possible the negotiation and resolution of a multitude of other issues, though not before many teeth had been gnashed beyond recognition': Balton (n 336) 135.
[359] Francisco Orrego Vicuña, 'Toward an Effective Management of High Seas Fisheries and the Settlement of the Pending Issues of the Law of the Sea' (1993) 24 *Ocean Development and International Law* 81.
[360] Are K. Sydnes, 'Regional Fishery Organisations in Developing Regions: Adapting to Changes in International Fisheries Law' (2002) 26 *Marine policy* 373, 377.
[361] Ibid.

arrangements to manage migratory fish stocks with DWFSs would undermine their sovereign rights to living marine resources within EEZs. In the absence of the redistribution of economic benefits from marine resources heralded by states at UNCLOS III, *UNFSA* negotiations reflected the existing balance of power among fishing states at the end of the 20th century.

(e) Differentiation in UNFSA: The Principle of the Special Requirements of Developing States

Despite the conspicuous lack of developing state participation, differentiation was discussed during *UNFSA* negotiations and incorporated into the final agreement. At the second session of the Conference in July 1993, several PICs and Australia submitted a document on the 'Special requirements of developing countries in relation to straddling fish stocks and highly migratory fish stocks'.[362] This document represented the first attempt to define the special requirements of developing states in IFL.

This submission significantly influenced Part VII on the 'Requirements of Developing States' of *UNFSA*. The document is prefaced with references to the Rio Declaration and Agenda 21 which acknowledge the special needs of developing states, particularly SIDS.[363] In this respect, the document states that 'In exercising their rights and fulfilling their obligations with respect to living marine resources, including straddling fish stocks and highly migratory fish stocks, *developing countries have special requirements and need special assistance*'.[364] The document identifies types,[365] areas,[366] and means[367] of assistance to developing states.

The most discussed and controversial elements of the proposal related to distributive equity for developing states. This was best encapsulated in the last 'area' of assistance identified in

[362] *Special Requirements of Developing Countries in Relation to Straddling Fish Stocks and Highly Migratory Fish Stocks*, UN Doc A/CONF.164/L.24 (26 July 1993).
[363] Ibid paras 2, 3.
[364] Ibid para 1.
[365] Ibid paras (a)–(e). *Types* of assistance included: human resource development; financial assistance; technical assistance; technology transfer; and consultative and advisory services.
[366] Ibid paras ((a)–(e). The five *areas* of assistance are related to: data collection; scientific research; monitoring, control and surveillance activities; access to dispute settlement; and participation in fisheries for straddling and highly migratory fish stocks.
[367] Ibid (a)–(b). The two *means* for delivering this assistance are general, 'programmes of assistance' at appropriate regional and subregional levels; and a specific programme of this type to be administered through the FAO.

the proposal, which concerned developing states' access to high seas fisheries. Under this area, PICs had proposed preferential access rights to high seas fisheries for developing states and free market access.[368] The ensuing negotiations on this area of assistance produced a paragraph in article 25 of *UNFSA* which requires that states 'enable' developing states 'to participate in high seas fisheries…including facilitating access to such fisheries'.[369] Legal scholarship is divided on whether article 25 grants preferential rights to developing states in high seas allocations.[370] However, the reluctance with which states broached distributive equity concerns for developing states during *UNFSA* indicates how the political climate had shifted in IFL. Ultimately, this history informs the way differentiation is circumscribed in *UNFSA*, which provides limited guidance to TRFMO members for addressing distributive equity concerns for DCSs.

3 *Discursive Shifts on Differentiation in IFL: From Distributive to Procedural Equity for Developing States*

The negotiating histories of *UNCLOS* and *UNFSA* reflect discursive shifts in how states have approached differentiation in IFL. During UNCLOS III, developing states campaigned for explicit references to equity and emphasised distributive justice themes. By comparison, developing states were less engaged in negotiations at the negotiating Conference for *UNFSA*. Moreover, the Conference emphasised procedural justice themes and minimised specific obligations to advance developing state participation in high seas fisheries. This thesis will demonstrate that this trend in IFL characterises the approach taken by TRFMOs, which are reluctant to engage in discussions concerning distributive equity for DCSs.

II Legal Policy Analysis of Differentiation in *UNCLOS* and *UNFSA*: Three Principles

A *Sources of IFL*

While multiple sources of law govern TRFMOs, this chapter focuses on *UNCLOS*, *UNFSA*, and TRFMO treaty law.[371] The chapter assesses *UNCLOS* and *UNFSA* to identify the central

[368] Ibid (e) sub-paras (i), (iii).
[369] *UNFSA* (n 10) art 25(b).
[370] See Palma (n 81) 99–100. Cf Francisco Orrego Vicuña, *The Changing International Law of High Seas Fisheries* (Cambridge University Press, 1999) 223–4, 225 ('*Changing Law of High Seas Fisheries*').
[371] See *Statute of the International Court of Justice* art 38.

principles for differentiation in IFL. The chapter then analyses the WCPFC and IOTC's treaty and institutional law. This includes tuna fisheries regulations in conservation and management measures and administrative procedures and budgetary arrangements in rules of procedure and financial regulations. Consequently, this thesis relies primarily on binding treaty law to inform its analysis of differentiation in IFL.

A number of potentially relevant sources of law, examined in other analyses of equity in IFL, are excluded from this analysis.[372] For example, multiple international and regional non-binding legal instruments bear relevance to TRFMO work.[373] While helpful for elaborating best practices and region-specific principles for transboundary fisheries management, a scoping study for this thesis found that few refer to differentiation.[374] Moreover, no international legal cases have been brought, either to the International Court of Justice or International Tribunal for the Law of the Sea, to instruct states as to how TRFMOs should design and apply differentiation.

B *Preambular Language in UNCLOS and UNFSA: Historical Contexts*

The preambular paragraphs of *UNCLOS* and *UNFSA* introduce distinct approaches to differentiation, speaking to the historical eras in which they were adopted. Preambular language contextualises legal instruments and introduces the shared factual and normative understandings of signatories.[375] *UNCLOS* puts forth this stirring declaration:

> *Bearing in mind* that the achievement of these goals will contribute to the realization of a just and equitable international economic order which takes into account the interests and needs of mankind as a whole and, *in particular, the special interests and needs of developing countries, whether coastal or land-locked*.[376]

[372] See Palma (n 81) 164–72, 187–8; Burgt (n 131) 36–47.
[373] Under the Code of Conduct framework, the FAO has adopted four International Plans of Action (IPOAs) on the topics of seabirds, sharks, fishing capacity, and IUU fishing. These IPOAs have led to the adoption of regional and national plans of action addressing these topics: FAO, *Instruments Under the Code* (Web Page, 2020) <http://www.fao.org/fishery/code/instruments/en>.
[374] One exception is the non-binding *FAO Code of Conduct*, which references the special requirements of developing states: *FAO Code of Conduct for Responsible Fisheries* (adopted 31 October 1995), arts 5, 6.2, 7.2.1, 11.3.4, 12.1, 12.18, 12.20, ann 2 paras 2, 3, 4 <http://www.fao.org/documents/card/en/c/e6cf549d-589a-5281-ac13-766603db9c03/> ('*FAO Code of Conduct*').
[375] See Jan Klabbers, 'Treaties and Their Preambles' in Michael J Bowman and Dino Kritsiotis (eds), *Conceptual and Contextual Perspectives on the Modern Law of Treaties* (Cambridge University Press, 2018) 172.
[376] *UNCLOS* (n 9) Preamble para 6 (emphasis added).

This paragraph evokes the NIEO movement and developing states' calls for a fundamental restructuring of international economic relations.

In contrast, references to differentiation in *UNFSA*'s preamble are anchored in three specific, interrelated principles—specific assistance, effective participation, and sustainable use of fish stocks:

> Recognizing the need for *specific assistance*, including financial, scientific and technological assistance, in order that developing States can *participate effectively* in the conservation, management and *sustainable use* of straddling fish stocks and highly migratory fish stocks.[377]

Adopted in 1995, *UNFSA* shifts its focus away from themes of economic redistribution and instead emphasises assistance for developing states. The preamble provides a dual purpose for this assistance. One is procedural—for developing states to participate effectively in managing transboundary fish stocks, and the other is distributive—for developing states to participate effectively in the sustainable use of transboundary fish stocks. The preambles embody the dichotomy of approaches to differentiation presented by Rajamani.[378] The *UNCLOS* preamble describes the culpability/entitlement premise, whereas the *UNFSA* preamble indicates a shift to the consideration/capacity premise.[379] The differences in preambular language referring to differentiation in *UNCLOS* and *UNFSA* are a preview to differences in the main body of their texts.

C *Differentiation in UNCLOS*

Fisheries-related differentiation is expressed in three main topics within *UNCLOS*: (i) conservation and utilisation of marine living resources; (ii) marine scientific research; and (iii) transfer of marine technology.[380] The first topic differentiates central obligations, whereas the second and third topics are directed at implementation and assistance. Under these topics, *UNCLOS* contains repeated references to the special requirements of developing states, though it foregoes a definition. According to Magraw's distinction between

[377] *UNFSA* (n 10) Preamble para 9 (emphasis in original and added).
[378] Rajamani, *Differential Treatment in IEL* (n 15) 71–88.
[379] See Chapter 1 Section II D1.
[380] In addition to differentiation provisions, *UNCLOS* mentions principles of 'equity' and 'equitable utilisation'. In contrast to Palma and Burgt's studies of equity in IFL, this analysis does not review these provisions, focusing instead on specific formulations of differentiation in fisheries-related provisions of *UNCLOS*, *UNFSA*, and TRFMO treaty law.

differential treatment and contextual norms, the special requirements of developing states is a contextual norm to condition legal obligations in *UNCLOS*.

1 *Conservation and Utilisation of Marine Living Resources*

Differentiation concerning the conservation and utilisation of marine living resources apply to areas both within (EEZs) and outside (high seas) national jurisdiction in *UNCLOS*.

(a) Differentiation within EEZs: Coastal State Obligations to Take Measures to Achieve MSY and Distribute Surplus TAC

UNCLOS uses implicit and explicit differentiation to contextualise coastal state obligations within EEZs. *UNCLOS* vests coastal states with sovereign rights to explore, exploit, conserve, and manage living (and non-living) natural resources (such as fish stocks) within their EEZs.[381] Along with these rights, *UNCLOS* creates a duty for coastal states to set a TAC for EEZ living resources with a view to achieving MSY.[382]

This duty is qualified by differentiation that implicitly and explicitly favours developing states. According to article 61, the measures coastal states take to achieve MSY are to be 'qualified by relevant environmental and economic factors'.[383] *UNCLOS*'s characterisation of 'economic factors' includes the 'economic needs of coastal fishing communities and the special requirements of developing States'.[384]

Article 62 further applies differentiation to the utilisation of EEZ living resources and sets out several economic factors for coastal states to consider in utilising and distributing EEZ living resources.[385] Coastal states are bound in exercising their sovereign rights to EEZ living

[381] *UNCLOS* (n 9) art 56(1)(a).
[382] Ibid art 61(1), (3).
[383] Ibid art 61(3).
[384] Ibid. Differentiation is not the only factor that contextualises a coastal state's obligation to achieve MSY for EEZ living resources. Further considerations include: 'fishing patterns, the interdependence of stocks and any generally recommended international minimum standards, whether subregional, regional or global': ibid.
[385] Ibid art 62(3), (4). In the context of highly migratory species like tuna, article 62 should be read in light of article 64, which obliges coastal states to cooperate with other states 'with a view to ensuring conservation and promoting the objective of optimum utilization of such species throughout the region, both within and beyond the [EEZ]': at art 64(1). However, Burke indicates that this duty to cooperate only requires *consultation* with other states: 'This exception to coastal discretion affects only the required decision-making process; the coastal state might ultimately fix the same allowable catch as if no such obligation pertained': William Burke, 'Highly Migratory Species in the New Law of the Sea' (1984) *Ocean Development and International Law* 14(3) 273, 278.

resources by the duty to consider the rights and duties of *other states* to those resources.[386] In light of this duty, *UNCLOS* requires a coastal state to determine its capacity to harvest the TAC it has set within its EEZ.[387] In cases where the coastal state is unable to fully harvest the TAC, it is obliged to give other states access to the surplus catch.[388]

UNCLOS contextualises a coastal state's duty to provide other states access to surplus TAC with explicit differentiation advantaging developing states *and* implicit differentiation advantaging DWFSs.[389] *UNCLOS* obliges coastal states to grant access to surplus TAC according to 'all relevant factors'.[390] Among these factors, *UNCLOS* includes the special requirements of developing states 'in the subregion or region', as well as 'the need to minimize economic dislocation in States whose nationals have habitually fished in the zone or which have made substantial efforts in research and identification of stocks'.[391] This provision would refer to DWFSs that have historically targeted many commercially valuable fish stocks, including tuna.

Koh explains that during UNCLOS III, article 62 was intended to reconcile competing interests for EEZ fisheries resources.[392] This is reflected in the multiple interests coastal states are obliged to consider in determining TAC and distributing surplus TAC. However, article 62 ultimately leaves the determination of weighing these factors (including the national interests of the coastal state, the special requirements of developing states, and the fishing interests of DWFSs) to the discretion of the coastal state. As a result, Burke concludes that 'The message could hardly be clearer—in choosing those states to be allowed access to its fisheries the coastal state is entitled to select on the basis of which will provide the most benefit to its interests'.[393] Consequently, legal scholars argue that article 62 has little relevance to actual state practice.[394]

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[386] *UNCLOS* (n 9) art 56(2).
[387] Ibid art 62(2)
[388] Ibid.
[389] Ibid art 62(3).
[390] Ibid.
[391] Ibid.
[392] Tommy Koh, 'Negotiating a New World Order for the Sea' (1984) 24(4) *Virginia Journal of International Law* 761, 769–770.
[393] Burke (n 385) 280.
[394] Where conflicts within coastal state EEZs, *UNCLOS* requires that they be 'resolved on the basis of equity': ibid art 59.

(b) Differentiation on the High Seas: The Duty to Cooperate to Conserve High Seas Living Resources

Differentiation provisions concerning the high seas in *UNCLOS* mirror differentiation provisions contextualising coastal state obligations within EEZs. For migratory fish stocks, *UNCLOS* links obligations within EEZs to the high seas.[395] While guaranteeing the traditional freedoms of fishing on the high seas to all states, *UNCLOS* qualifies these freedoms with the need to conserve living resources.[396] *UNCLOS* entrenches the duty to cooperate between coastal and fishing states in the conservation and management of high seas living resources.[397] *UNCLOS* provides that measures to conserve high seas living resources are to be 'qualified by relevant environmental and economic factors'—including the special requirements of developing states (as within EEZs).[398]

In summary, *UNCLOS* contextualises states' obligations to conserve, manage, and utilise marine living resources with differentiation that implicitly and explicitly favours developing states. This differentiation takes the form of the obligation to consider the special requirements of developing states in the conservation and management of EEZ and high seas living resources. However, differentiation is included among a range of other factors to be considered by states in these articles and provides only the weakest expressions of differentiation for developing states' benefit.

2 *Marine Scientific Research and Transfer of Marine Technology*

Two other *UNCLOS* topics contain provisions expressing differentiation—marine scientific research and transfer of marine technology. Recent scholarship links states' abilities to effectively exploit and regulate fish stocks with their capacity to carry out marine scientific research and to access fishing technology.[399] From this perspective, Parts XIII and XIV are related in that they regulate differentiation with respect to marine research and technology. Salpin et al and Morgera and Ntona argue that these provisions are part of a greater

[395] *UNCLOS* (n 9) arts 63, 64.
[396] Ibid arts 116–9.
[397] Ibid art 118.
[398] Ibid art 119(1)(a).
[399] Elisa Morgera and Mara Ntona, 'Linking Small-Scale Fisheries to International Obligations on Marine Technology Transfer' (2018) 93 *Marine Policy* 295, 295.

international legal commitment to the sustainable development of DCSs.[400] These scholars contend that *UNCLOS* enshrines enhancing the marine scientific research and technological capacities of developing states.

This section assesses differentiation provisions on marine scientific research and technology transfer in *UNCLOS*, which primarily focus on assistance for developing states. These provisions are couched in language that softens legal obligation, evident in the repeated use of 'promote' as opposed to a straightforward statement of legal obligation.[401] At the same time, they provide strong support for explicit differentiation. Article 266 provides one striking example, obliging states to promote marine scientific and technological capacity 'with a view to accelerating the social and economic development of the developing States'.[402]

Morgera and Ntona discuss technology transfer provisions in *UNCLOS* in light of their poor implementation by states. The authors note that these provisions were intended to devise 'a technology transfer regime based on the diffusion of scientific and technological expertise and the creation of a policy environment to facilitate the transfer of useful marine technologies at the regional level'.[403] They review debate among legal scholars as to the bindingness of these provisions.[404] The authors also note the lack of an administrative system within UNCLOS to facilitate technology transfer.[405] Morgera and Ntona argue for shifting away from current fragmented, ad hoc approaches to technology transfer and 'towards a more concerted, partnership-based and integrated approach'.[406]

(a) Part XIII Marine Scientific Research: Transfer of Knowledge to Developing States

UNCLOS uses explicit differentiation to contextualise states' obligations with respect to marine scientific research. Under article 244, all states are obliged to 'promote' the sharing (publication and dissemination) of data, information, and knowledge resulting from marine

[400] Ibid; Charlotte Salpin et al, 'Marine Scientific Research in Pacific Small Island Developing States' (2018) 95 *Marine Policy* 363.
[401] Morgera and Ntona (n 399) 299.
[402] *UNCLOS* (n 9) art. 266(2).
[403] Morgera and Ntona (n 399) 299.
[404] Ibid.
[405] Ibid.
[406] Ibid 304.

scientific research.[407] In the context of knowledge transfer, this provision obliges states to promote 'the autonomous marine scientific capabilities of developing States'.[408] This obligation is to be met, inter alia, through education and training programmes for personnel from developing states.[409]

(b) Part XIV Transfer of Marine Technology

Article 266 of *UNCLOS* links marine science and technology by obliging states 'to promote actively the development and transfer of marine science and marine technology on fair and reasonable terms and conditions'.[410] Implicit differentiation qualifies this obligation, as states are to transfer marine science and technology 'in accordance with their capabilities'.[411] Article 266 then sets out explicit, differentiation by obliging states to 'promote the development of the marine scientific and technological capacity of States which may need and request technical assistance in this field, particularly developing States'.[412] This form of differentiation is framed by the overriding objective of 'accelerating the social and economic development' of developing states.[413] Article 266 does not, however, delineate what forms such a transfer of knowledge and technology to developing states should take. This ambiguity is deepened by the obligation to ensure transfers of marine science and technology take place 'for the benefit of all parties concerned on an equitable basis'.[414] While article 266 refers strongly to fisheries-related differentiation, significant uncertainty surrounds how these provisions apply to state practice.

UNCLOS provides several conduits for international cooperation on the transfer of marine science and technology, including new and existing international organisations,[415] and 'bilateral, regional, or multilateral programmes'[416]. Three forms of cooperation are also provided, two of which expressly set out differentiation. The first includes, inter alia, establishment of technical programmes; conclusion of transfer agreements; convening

[407] Ibid art 244(1).
[408] Ibid art 244(2).
[409] Ibid.
[410] Ibid art 266(1).
[411] Ibid art 266(2).
[412] Ibid.
[413] Ibid.
[414] Ibid art 266(3).
[415] Ibid arts 269, 270.
[416] Ibid art 268.

scientific and technical events, such as 'conferences, seminars and symposia'; and promoting projects and joint ventures.[417] Technical programmes are to work with developing states who 'have not been able either to establish or develop their own technological capacity in marine science and in the exploration and exploitation of marine resources or to develop the infrastructure of such technology'.[418]

The second modality for cooperation in *UNCLOS* is described in the establishment of national and regional research centres.[419] The promotion of national centres is 'to stimulate and advance the conduct of marine scientific research by developing States and to enhance their national capabilities to utilize and preserve their marine resources for their economic benefit'.[420]

Third, *UNCLOS* obliges fishing states to obey coastal state laws and regulations, including potential 'requirements for the training of personnel and the transfer of fisheries technology, including enhancement of the coastal State's capability of undertaking fisheries research'.[421] While not explicit differentiation, this third modality for cooperation would almost certainly apply to a DCS with lower marine scientific and technical capabilities.

(c) Annex VI: Resolution on Development of National Marine Science, Technology and Ocean Service Infrastructures

The non-binding, final Annex of *UNCLOS* applies explicit, differential treatment to the development of marine scientific and technological capabilities of developing states. Described as 'an often overlooked aspect of *UNCLOS*', the non-binding, 'Resolution on Development of Marine Science, Technology and Ocean Service Infrastructure' contextualises Parts XIII and XIV of *UNCLOS*.[422] The Resolution reinforces the transfer of marine science and technology provisions and calls upon developing states to establish programmes for the promotion of technical cooperation among themselves.[423] Para 3 'Urges the industrialized countries to assist the developing countries in the preparation and

[417] Ibid
[418] Ibid art 269(a).
[419] Ibid arts 275, 276.
[420] Ibid art 275(1).
[421] Ibid art 62(4)(j).
[422] *UNCLOS* (n 9) ann VI; Salpin et al (n 400) 369.
[423] *UNCLOS* (n 9) ann VI.

implementation of their...development programmes'.[424] To this end, it recommends several finance mechanisms through international organisations such as the World Bank and United Nations Development Programme (UNDP).[425] While Annex VI does not grant formal legal obligations onto *UNCLOS* parties, it provides a concrete direction for the more legally inchoate provisions of Parts XIII and XIV.

D *Differentiation in UNFSA*

UNFSA sets out a legal framework to support states' implementation of transboundary fisheries provisions in *UNCLOS*, providing a pathway for states to implement their duty to cooperate.[426] *UNFSA* contains differentiation provisions that span central obligations, implementation and assistance. *UNFSA* enhances *UNCLOS*'s approach to differentiation by developing the principle of the special requirements of developing states, to which it devotes the whole of Part VII.[427] *UNFSA* conceptualises this principle as having its own legal force, in contrast to its role contextualising central obligations within *UNCLOS*. According to Magraw's typology, 'special requirements' is transformed from a contextual norm in *UNCLOS* to a differential treatment norm in *UNFSA*.

While *UNFSA* advances *UNCLOS*'s differentiation provisions, its approach remains rooted within the *UNCLOS* legal framework. Therefore, differentiation provisions mostly contextualise central obligations in *UNFSA* as they do in *UNCLOS*. Moreover, like *UNCLOS*, the greater part of explicit, binding differentiation provisions in *UNFSA* concern assistance for developing states (albeit with a more express objective to improve their capacity to participate in transboundary fisheries and their management processes).

UNFSA's most striking contribution to differentiation is its emphasis on the 'participation' of developing states as fisheries users and managers. This emphasis on participation, reflected in language in both the preamble and substantive articles of *UNFSA*, speak to elements of procedural equity that are not contained within *UNCLOS*. As will be shown in Chapter 6,

[424] Ibid para 3 (emphasis in original).
[425] Ibid para 4.
[426] See ibid art 118.
[427] *UNFSA* (n 10) pt VII.

differentiation provisions concerning *both* procedural and distributive equity dimensions are often core to contestation within the WCPFC and IOTC.

1 *Contextual Differentiation of Central Obligations in UNFSA*

UNFSA applies weak—contextual and implicit— forms of differentiation to states' central obligations. These obligations concern general principles,[428] application of the precautionary approach,[429] compatibility of conservation and management measures,[430] institutional arrangements,[431] and determination of the participatory rights of new members or participants in shared fisheries[432]. Only provisions on general principles and participatory rights contain differentiation explicitly referring to developing states. In 'General principles', *UNSFA* mirrors language in *UNCLOS* on the conservation and management of shared fish stocks. States are obliged to:

> ensure that [conservation and management] measures are...designed to maintain or restore stocks at levels capable of producing maximum sustainable yield, as qualified by relevant environmental and economic factors, including the special requirements of developing States.[433]

States are further obliged to 'take into account the interests of artisanal and subsistence fishers'.[434]

(a) Part VII: Requirements of Developing States

Part VII of *UNFSA* formulates the special requirements of developing states to provide: (i) a legal framework for explicit differentiation advantaging DCSs based on a *duty to cooperate*;

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[428] Ibid art 5(b), (i).
[429] *UNFSA* obliges states to consider (with other geographical and biological indicators), 'existing and predicted ... socio-economic conditions' when implementing the precautionary approach: ibid art 6(3)(c).
[430] To adopt compatible conservation and management measures across EEZs and high seas areas, states must consider 'the respective dependence of the coastal States': ibid art 7(2)(e).
[431] According to *UNFSA*, states must agree on an 'area of application' that is cognizant of relevant 'socio-economic, geographical and environmental factors': at art 9(1)(b).
[432] In considering the participatory rights of newcomers to shared fisheries, states are required to take into account 'the needs of coastal fishing communities which are dependent mainly on fishing for the stocks'; 'the needs of coastal States whose economies are overwhelmingly dependent on the exploitation of living marine resources'; and '*the interests of developing States* from the subregion or region in whose areas of national jurisdiction the stocks also occur': ibid art 11(d), (e), (f) (emphasis added).
[433] Ibid art 5(b).
[434] Ibid art 5(i).

(ii) *forms of cooperation* for implementing this framework; and (iii) types of *assistance* and *funding* to DCSs.

Article 24 contains binding recognition of the special requirements of developing states,[435] requires that sources of financial assistance be made available for this purpose,[436] and defines special requirements in light of states' duty to cooperate for the conservation and management measures of transboundary fish stocks[437]. States are obliged to consider three factors in applying the special requirements of developing states to conservation and management decisions. Para 2 lists these factors as: (i) the particular vulnerability of a DCSs, based on their dependence on the relevant fish stocks, particularly for the purposes of food security;[438] (ii) 'the need to avoid adverse impacts' on dependent populations within DCSs and ensure fisheries access to specific groups, such as subsistence, small-scale, and artisanal fishers, women fishworkers and indigenous peoples, particularly within SIDS;[439] and (iii) the obligation of not, 'transferring, directly or indirectly, a disproportionate burden of conservation action' onto DCSs[440].

Para 2 of article 24 operationalises references to contextual differentiation in *UNCLOS*.[441] *UNFSA* sets out an eclectic mix of factors for states to consider using largely negative legal language. Sub-paras (a) and (b) can be collapsed together to form an obligation not to impact the food security of vulnerable and dependent populations within DCSs. Sub-para (c) requires a more complex application to (T)RFMO decision-making. The obligation to avoid 'disproportionate burden' potentially applies to (T)RFMO decisions that require members to broker an equitable balance between the interests of DCSs and DWFSs.[442]

Article 24 does not address distributive equity for DCSs. Instead, it provides cautionary legal language on preventing the worsening of vulnerabilities, impacts, and burdens on DCSs.[443]

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[435] Ibid art 24(1).
[436] Ibid.
[437] Ibid art 24(2).
[438] Ibid art 24(2)(a).
[439] Ibid art 24(2)(b).
[440] Ibid art 24(2)(c).
[441] *UNCLOS* (n 9) arts 61(3), 62(3), 119(1)(a).
[442] See Hanich and Ota (n 90); Kamal Azmi et al, 'Defining a Disproportionate Burden in Transboundary Fisheries: Lessons from International Law' (2016) 70 *Marine Policy* 164.
[443] Two paragraphs in Part VII refer to the distributive equity issue of increasing the participation of DCSs in transboundary fisheries: *UNFSA* (n 10) art 24(1), 25(a), (b).

Therefore, while providing a direct, explicit, and binding obligation to address differentiation, 'special requirements' only constitutes an obligation for states to *refrain* from actions on the basis of possible impacts on DCSs. In reality, the rather ambiguous references to food security and proportionality in these provisions have led to a lack of consensus among states, particularly members within the WCPFC and IOTC, on how to implement these obligations.

Article 25 sets out specific obligations on 'forms of cooperation' with DCSs.[444] Part VII links 'special requirements' to the duty to cooperate in *UNCLOS*. Article 25 builds on this link, requiring states to focus cooperation on three objectives: (i) to 'enhance' developing states' ability to conserve and manage transboundary fish stocks and develop their own fisheries; (ii) to 'assist' them in participating in high seas fisheries; and (iii) to 'facilitate' their participation in (T)RFMO processes.[445]

Despite strong support for differentiation in para 1, there is a disconnect with article 25's remaining paragraphs, which narrowly focus the duty to cooperate on implementation and assistance. For example, para 2 obliges states to provide financial and technical assistance for the purposes of fisheries management *and* development.[446] However, para 3 specifies that this assistance be prioritised ('directed specifically towards') for fisheries *management* activities such as data collection, scientific research, and monitoring, control and surveillance (MCS).[447] In this way, differentiated cooperation in Part VII is winnowed down from increasing DCSs' participation in transboundary fisheries and their management, to technical assistance for DCSs to implement their coastal state obligations.

The conflicted relationship between the paragraphs of article 25 has important implications for (T)RFMOs. Para 1 refers to obligations to increase developing states' participation in the management of transboundary fisheries *and* enhance their ability to participate in (harvest) such fisheries. Article 25's lack of clarity casts uncertainty in many fully exploited tuna

[444] Ibid art 25.
[445] Ibid art 25(1) sub-paras (a)–(c). These paragraphs emphasise cooperation with LDCs and SIDS.
[446] Specifically, 'financial assistance, assistance relating to human resources development, technical assistance, transfer of technology, including through joint venture arrangements, and advisory and consultative services': ibid art 25(2).
[447] Ibid art 25(3), sub-paras (a)–(c). Annex I of *UNFSA* on 'Standard Requirements for the Collection and Sharing of Data' also requires assistance to be provided to developing states 'in order to build capacity in the field of conservation and management of living marine resources': at ann I art 1(2).

fisheries as to whether historical DWFSs are obliged to cede portions of high seas fisheries to allow for increased participation by developing states.[448]

Article 26 requires the establishment of special funds to aid developing states' implementation of *UNFSA*, including the costs of its compulsory dispute settlement scheme.[449] Para 2 calls on states and international organisations to assist in helping developing states to establish or strengthen existing (T)RFMOs.[450]

Article 26 establishes the 'Part VII Fund', which is currently administered under a joint arrangement between the United Nations Division for Ocean Affairs and the Law of the Sea (UNDOALOS) and FAO.[451] The Fund is allocated through an FAO trust fund account and governed primarily by para 14 of its Terms of Reference (TOR).[452] Nowhere in the TOR is funding made available for the distributive equity elements granted by *UNFSA* to DCSs for creating domestic fisheries for transboundary fish stocks or increasing their participation in high seas fisheries.[453] At the time of writing, the fund was depleted and not accepting applications.[454]

E *Objectives for Differentiation Advantaging DCSs in IFL*

Provisions governing differentiation in *UNCLOS* and *UNFSA* reveal eight central principles emanating from these instruments. These principles fall into two categories: (i) the

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[448] See above (n 78).
[449] *UNFSA* (n 10) 26(1). Article 3(3) obliges states to consider DCSs' 'respective capacities' and 'need for assistance' in applying their obligations within EEZs: ibid art 3(3). *UNFSA*'s link between financial assistance and implementation blurs Rajamani's distinction between the two.
[450] Ibid art 26(2). This is the only paragraph in Part VII not phrased in legally binding language. The 'bindingness' of this obligation is important to consider in light of the current depleted status of the Part VII Fund.
[451] In 2002, the UNGA called for the establishment of a voluntary fund to fulfil the promise of assistance under Part VII: *[UNFSA]*, GA Res 57/143, UN Doc A/RES/57/143 (adopted 12 December 2002). After developing a TOR in 2003, the UNGA established the 'Assistance Fund under Part VII of the Agreement': *Sustainable Fisheries, Including Through [UNFSA] and Related Instruments*, GA Res 58/14, UN Doc A/RES/58/14 (adopted 24 November 2003). The Part VII Fund TOR was revised in 2019. See: UNDOALOS, *Fourteenth Round of Informal Consultations of States Parties to [UNFSA]*, ICSP14/UNFSA/INF.3, 2–3 May 2019, [80]–[86]; ann II ('*Part VII TOR*'). See also UNDOALOS, *Assistance Fund Under Part VII of [UNFSA]* (Web Page, 2020) <https://www.un.org/depts/los/convention_agreements/fishstocktrustfund/fishstocktrustfund.htm>.
[452] *Part VII TOR* (n 451) [14].
[453] *UNFSA* (n 10) art 25(1) sub-paras (a), (b).
[454] UNDOALOS (n 451). The Fund's depleted status questions whether article 26(1) of *UNFSA* is binding on states, given that the Fund relies on states' voluntary contributions. While *UNFSA* requires states to establish these funds, it does not appear to require states to *provision* them, often leading to funding gaps as Chapter 6 Section I will show.

conservation and management of shared fish stocks; and (ii) special assistance for developing states.

Under the first category, four principles provide implicit and explicit forms of differentiation that contextualise states' obligations to conserve and manage transboundary fish stocks. They are: (i) consideration of relevant socio-economic factors; (ii) prevention of adverse impacts on vulnerable coastal populations in DCSs; (iii) avoidance of transferring a disproportionate burden of conservation action onto DCSs; and (iv) promotion of DCSs' access to high seas fisheries.

In the second category, four principles set out explicit, direct forms of differentiation concerning the provision of special assistance to developing states. These principles are: (v) effective participation of DCSs in fisheries management; (vi) provision of financial assistance to DCSs for this purpose; (vii) human capacity development in DCSs in the areas of marine scientific research, data collection, and compliance-related activities; and (viii) transfer of marine technology to enable DCSs to develop their own fisheries.

The eight principles from this section are undergirded by the broader principle of the special requirements of developing states, introduced in *UNCLOS* and elaborated in *UNFSA*. *UNCLOS* and *UNFSA* define special requirements as the particular aspirations, interests, and needs of DCSs with respect to transboundary fisheries, which may range from dependence upon fisheries for food security and livelihoods, to capacity building needs for implementing fisheries management actions.

This section combines its analysis of *UNCLOS* and *UNFSA* to derive three central objectives for differentiation in IFL. These objectives guide the thesis' examination of how TRFMOs apply differentiation to their law and practice and are drawn across the eight principles set out above. Table 1 sets out each of the three objectives for differentiation in IFL and corresponding principles.

Table 1: Objectives for Differentiation in UNCLOS and UNFSA

Objectives	Principles
Objective I: *The effective participation of DCSs in transboundary fisheries management*	(v) Effective participation of DCSs in fisheries management
	(vi) Provision of financial assistance to DCSs
	(vii) Human capacity development in DCSs in marine scientific research, data collection and compliance-related activities
Objective II: *The protection of vulnerable and fisheries dependent populations within DCSs*	(i) Consideration of relevant socio-economic factors
	(ii) Prevention of adverse impacts on vulnerable coastal populations in DCSs
	(iii) Avoidance of transferring a disproportionate burden of conservation action onto DCSs
Objective III: *The promotion of DCSs' access to high seas fisheries*	(iv) Promotion of DCSs' access to high seas fisheries
	(viii) Transfer of marine technology to enable DCSs to develop their own fisheries

III TRFMO Treaty Law: Differentiation Frameworks of the WCPFC and IOTC

Drawing from an examination of the WCPFC and IOTC founding agreements, institutional law, and conservation and management measures, the following section sets out the principles and processes that guide differentiation in the treaty law of both TRFMOs.[455] The section describes this as each TRFMO's 'differentiation framework', which applies differentiation to management decisions, decision-making, and internal processes.

[455] This section only analyses WCPFC and IOTC conservation and management measures that focus expressly on differentiation. While other measures may *apply* differentiation to particular management topics (e.g. fishing regulations for particular tuna stocks) they do not elucidate either TRFMO's overall *approach* to differentiation.

A *WCPFC Differentiation Framework*

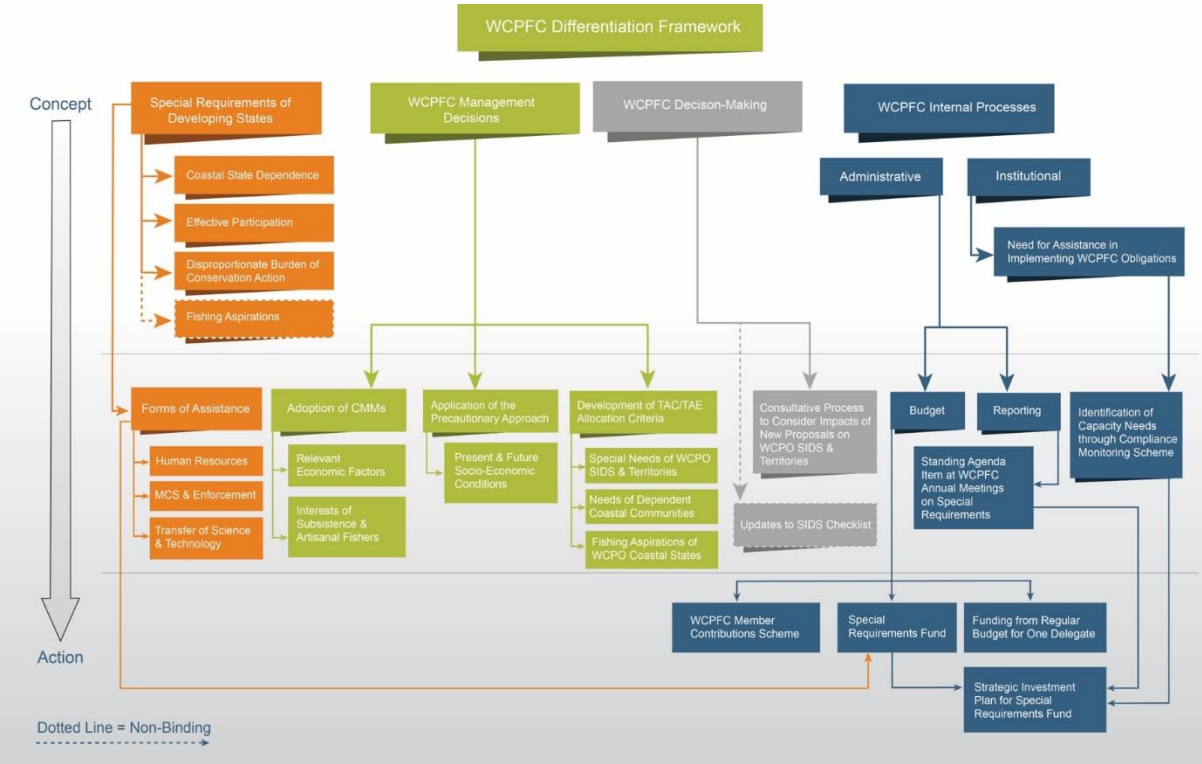
1 *Overview*

The WCPFC differentiation framework is set out in the *WCPF Convention*,[456] *WCPFC Rules of Procedure (WCPFC ROP)*,[457] *WCPFC Financial Regulations (WCPFC FR)*,[458] one Resolution,[459] three Conservation and Management Measures (CMMs)[460] and an annually updated 'Checklist'[461]. The WCPFC differentiation framework applies to four broad areas of treaty law: the special requirements of developing states (particularly WCPO SIDS, territories, and possessions); WCPFC management decisions; WCPFC decision-making; and WCPFC internal processes.

[456] *WCPF Convention* (n 46).
[457] *WCPFC ROP* (n 226).
[458] WCPFC, *Financial Regulations*, 2nd reg sess, updated 20 January 2014 ('*WCPFC FR*').
[459] WCPFC, *Resolution on Aspirations of SIDS and Territories*, Resolution 2008-01, 8–12 December 2008 ('*Resolution 2008-01*').
[460] WCPFC, *Conservation and Management Measure on the Criteria for the Consideration of Conservation and Management Proposals*, CMM 2013-06, 10th reg sess, 2–6 December 2013 ('*CMM 2013-06*'); WCPFC, *Conservation and Management Measure on the Special Requirements of SIDS and Territories*, *CMM 2013-07*, 10th reg sess, 2–6 December 2013 ('*CMM 2013-07*'). See also WCPFC, *Conservation and Management Measure for Compliance Monitoring Scheme*, CMM 2018-07, 15th reg sess, 10–14 December 2018 ('*CMM 2018-07*'). The WCPFC recently replaced *CMM 2018-07*: WCPFC, *Conservation and Management Measure for Compliance Monitoring Scheme*, CMM 2019-06, 16th reg sess, 5–11 December 2019 ('*CMM 2019-06*').
[461] WCPFC, *Checklist of SIDS Special Requirements to WCPFC12*, WCPFC12-2015-DP01, 12th reg sess, 3–8 December 2015 ('*WCPFC12 SIDS Checklist*').

For a visual representation of the WCPFC differentiation framework, see Figure 4 below.

Figure 4: Mapping the WCPFC Differentiation Framework[462]



2 *Special Requirements of WCPO Developing States (Central Obligations)*

(a) WCPF Convention Part VIII and Article 30

Most of the WCPFC differentiation framework emanates from the special requirements of WCPO developing states, reflecting the close relationship between the *WCPF Convention* and *UNFSA*.[463] The *WCPF Convention* devotes the entirety of Part VIII and its constituent article 30 to defining the Commission's binding legal obligations with respect to the special requirements of developing states.[464] Article 30 requires that the Commission give full recognition to the special requirements of developing states and take into account specific elements of these requirements when establishing CMMs.[465] Article 30 further obliges the Commission to establish a fund for effective participation and defines three types of activities towards which targeted assistance may be provided to Pacific Island countries and

[462] Dr. Indiah Hodgson-Johnston helped format this figure.
[463] *UNFSA* (n 10) pt VII. See also above (n 46).
[464] *WCPF Convention* (n 46) pt VIII.
[465] Ibid art 30(1), (2).

territories (PICTs).[466] The activities nominated by article 30 relate to assistance with the fisheries management cycle: including data collection and verification; stock assessments and scientific research; and MCS, compliance, and enforcement.[467]

Article 30 sets out five elements of the special requirements of developing states in the WCPFC differentiation framework. Three elements concern distributive equity and two procedural equity for PICTs. The first three are the WCPFC's obligation to consider the following elements of special requirements in adopting CMMs: (i) the vulnerability and dependency of PICTs on fish stocks, in particular for food security; (ii) the need to avoid impacts and ensure fisheries access for specific populations within PICTs; and (iii) the need to ensure decisions do not result in the direct or indirect transfer of a disproportionate burden of conservation action onto PICTs.[468] The remaining two elements require the WCPFC to provide institutional and financial support to PICTs.[469] They are: (iv) the effective participation of PICTs in the Commission's work; and (v) targeted financial and capacity building assistance for PICTs.

The elements of the special requirements of developing states contained in article 30 of the *WCPF Convention* can be condensed into three central objectives. The first of these objectives is that, in adopting management decisions, the Commission must recognise the dependence of PICTs on WCPO tuna stocks—which specifically includes particular coastal populations' dependence on fish stocks for food security. The notion of coastal state dependence has been a central, though contested, principle of IFL since the adoption of *UNCLOS*.[470]

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[466] Ibid art 30(3), (4). The remainder of this section refers to PICTs to highlight the WCPFC differentiation framework's focus on WCPO SIDS and territories. Only two WCPO DCSs are not PICTs—Indonesia and Philippines.
[467] Ibid art 30(4).
[468] Ibid art 30(2).
[469] Ibid art 30(3), (4).
[470] The principle of 'coastal state dependence' on fish stocks was first raised at UNCLOS I in 1958, which adopted a Resolution on 'Special situations relating to coastal fisheries': *Final Act of the Conference*, Res VI, United Nations Conference on the Law of the Sea Volume II: Plenary Meetings, 3rd Comm, 16th plen mtg, A/CONF.13/L.58 (26 April 1958). This resolution discussed populations 'overwhelmingly dependent upon coastal fisheries for their livelihood or economic development' and recommended that measures to limit fish stocks 'recognize any preferential requirements of the coastal State resulting from its dependence': at Preamble para 2, [1]. Preferential coastal state rights to fish stocks remains a source of debate in negotiations on catch and effort allocations among states in (T)RFMOs today.

The second objective is that the Commission must ensure that its management decisions do not result in the direct or indirect transfer of a disproportionate burden of conservation action onto PICTs. To date, the question of what constitutes a disproportionate burden has been the most discussed element of the WCPFC differentiation framework and is frequently referenced by PICTs in Commission negotiations. In recent negotiations, PICTs have argued that a disproportionate burden of conservation action can include both the administrative burden of participating in Commission processes and the economic burden of conservation actions that lead to loss of government revenue from tuna catches.[471]

The third objective is that the Commission is obliged to provide financial and technical support to PICTs for the purpose of their effective participation. The concept of effective participation encompasses both PICTs' attendance to Commission-related meetings and their capacity (in terms of technical knowledge, human resources, and technology) to implement Commission management decisions.[472] As will be discussed in Chapter 6, the conceptual framing of 'special requirements' and its three constituent objectives—coastal state dependence, disproportionate burden, and effective participation—provide a basis for how WCPFC members approach and discuss differentiation.

(b) CMM 2013-07

In 2013, the WCPFC adopted two CMMs to operationalise its obligations with respect to PICTs' special requirements.[473] *CMM 2013-07* sets out specific obligations for WCPFC members to cooperate with PICTs in the areas of: capacity development of personnel; technology transfers; fisheries conservation and management; MCS; and support for the domestic fisheries sector and tuna fisheries-related businesses and market access.[474]

CMM 2013-07 is almost entirely devoted to ensuring PICTs' effective participation in tuna management. The measure obliges WCPFC members to: provide technical assistance and financial support for the capacity development of nationals in fisheries science and

[471] WCPFC, *Working Papers for WCPFC Workshop on Disproportionate Burden*, WCPFC11-2014-DBW-05, Implementation of CMM 2013-06 and Disproportionate Burden Workshop, 3 November 2014, 3.
[472] *WCPF Convention* (n 46) Preamble para 7, art 30(3).
[473] See above (n 460).
[474] *CMM 2013-07* (n 460).

management;[475] promote the development and transfer of fisheries science and technology;[476] and enhance participation in WCPO monitoring, control, surveillance and enforcement activities.[477] It also requires members to assist PICTs with implementing their obligations under the Commission, including through the provision of fisheries data.[478]

One of the final sections of *CMM 2013-07* has a second objective, which is to assist PICTs in maximising economic benefits from the development of their tuna resources.[479] At WCPFC10 in 2013, this section was revised to express a softer legal obligation for WCPFC members.[480] WCPFC members are obliged to provide technical and economic support to the development of PICTs' domestic fishing sectors and to ensure that their actions do not undermine onshore investments in PICTs.[481] Beyond these broad obligations, WCPFC members 'shall endeavour' to take the following actions: ensure that domestic fishing accounts for at least half of total WCPO tuna catch;[482] encourage local employment and onshore economic activities;[483] eliminate trade barriers in fish and fisheries products;[484] and identify and promote other development activities[485].

Unsurprisingly, the WCPFC has made little progress reaching agreement on how to operationalise these obligations, such as determining the dependence of DCSs and their communities on fish stocks and defining a disproportionate burden of conservation action. The Commission has initiated and failed to conclude a number of policy processes, such as a disproportionate burden workshop, to address these obligations.[486]

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[475] Ibid [4], [5].
[476] Ibid [6], [7].
[477] Ibid [10], [11].
[478] Ibid [8], [9].
[479] Ibid [12]–[18].
[480] 'The concerns of some CMMs about the creation of obligations were addressed by including language stating that developed CCMs *will endeavour to cooperate*': WCPFC, *Summary Report*, 10th reg sess, 2–6 December 2013 [368] (emphasis added).
[481] *CMM 2013-07* (n 460) [12], [14].
[482] Ibid [13].
[483] Ibid [15]
[484] Ibid [17].
[485] Ibid [18].
[486] WCPFC, *Summary Report of the Implementation of CMM 2013-06 and Disproportionate Burden Workshop*, WCPFC11-2014-11_rev1, 3 March 2015.

3 *WCPFC Management Decisions (Central Obligations)*

(a) WCPF Convention, Articles 5, 6, and 10

The second component of the WCPFC differentiation framework applies differentiation to the Commission's management decisions. Articles 5, 6, and 10 of the *WCPF Convention* incorporate differentiation into the design of CMMs, the application of the precautionary approach, and the development of criteria for allocating TAC/TAE.[487] Article 5 requires WCPFC members to consider the special requirements of developing states and interests of subsistence and artisanal fishers in adopting CMMs.[488] Article 6 ensures that in applying the precautionary approach, WCPFC members take into account present and future uncertainties related to socio-economic conditions (among others).[489] Article 10 governs the development of criteria for allocating TAC/TAE of WCPO tuna stocks.[490] Article 10 sets out factors that the WCPFC must consider in determining allocation criteria for TAC/TAE, including: the needs of PICTs;[491] the fishing interests and aspirations of coastal states;[492] and the needs of coastal communities dependent on the stocks to be allocated[493]. Differentiation in articles 5, 6, and 10 is largely *implicit* and functions mostly to *contextualise* WCPFC members' obligations.[494]

(b) Resolution 2008-01

Article 10 contains the only reference in the *WCPF Convention* to the fishing aspirations of WCPO coastal states.[495] In fact, article 30 of the *WCPF Convention* differs from Part VII of *UNFSA* in that it does not refer to assisting developing states to develop domestic and high

[487] Article 8 provides that in establishing compatible measures on the high seas, the WCPFC is to 'take into account the *respective dependence* of the coastal States and the States fishing on the high seas on the stocks concerned': *WCPF Convention* (n 46) 8(2)(d) (emphasis added). Given that the article refers to an unspecified balance between coastal with fishing state dependence on the high seas, it is not included in this analysis.
[488] Ibid art 5(b), (h).
[489] Ibid art 6(1)(b).
[490] Ibid art 10(1)(g), (3), (4).
[491] Ibid art 10(3)(d).
[492] Ibid art 10(3)(j).
[493] Ibid art 10(3)(g).
[494] Article 10 lists another factor to be considered in determining TAC/TAE that could be construed as a form of weak differentiation. This is consideration of 'the respective interests, past and present fishing patterns and fishing practices of participants in the fishery and the extent of the catch being utilized for domestic consumption': ibid 10(3)(b). It is unclear whether this paragraph would advantage PICTs, given that DWFSs dominate the WCPO tuna fishery and markets for commercial tuna catch. However, PICs' local tuna consumption is projected to increase in the near future: see (n 27). Given the lack of clarity concerning differentiation in this paragraph, it is not included in this analysis.
[495] Ibid art 10(3)(j).

seas fisheries.[496] *CMM 2013-07* appears to address this gap in its final (non-binding) section by providing for the development of the domestic tuna sector within PICTs.[497]

The Commission nevertheless addressed the fishing aspirations of PICTs in 2008 through the adoption of a non-binding Resolution.[498] *Resolution 2008-01* sets forth concrete commitments for industrialised members, such as encouraging them 'to reduce and or restructure their fleet[s]' to allow for the development of domestic fisheries and to invest in fishing vessels and related onshore facilities.[499] The measure commits WCPFC members to ensuring that WCPO developing members receive a greater share of the total catch and value of WCPO fish stocks by 2018.[500] It is clear from the non-binding character of provisions that address WCPO DCSs' fishing aspirations that this remains a contested feature of the WCPFC differentiation framework.

4 *WCPFC Decision-Making (Implementation)*

The third part of the WCPFC differentiation framework incorporates legal differentiation into the decision-making processes of the Commission.

(a) CMM 2013-06

CMM 2013-06 devises a formal process by which the Commission is required to consider the potential impacts of new proposals on PICTs.[501] The measure is structured in two parts: the first provides a series of questions which the Commission is to apply when considering new proposals and their impact on PICTs;[502] the second nominates a list of actions the Commission may take in cases where a PICT demonstrates that the impact of a proposal constitutes the transfer of a disproportionate burden of conservation action.[503] The Commission has had mixed success implementing this measure. WCPFC meeting records convey that some industrialised members do not regard the procedure set out by the measure

[496] *UNFSA* (n 10) arts 24(1), 25(1) sub-paras (a), (b).
[497] *CMM 2013-07* (n 460) [12]–[18].
[498] *Resolution 2008-01* (n 459).
[499] Ibid [2].
[500] Ibid [4]. This goal is reiterated in *CMM 2013-07* (n 460) [13].
[501] *CMM 2013-06* (n 460).
[502] Ibid [3]. These questions centre on: how the proposal is to be implemented; what assistance is available to PICTs to implement the proposal; how the proposal might affect PICTs, in terms of development opportunities, aspirations and access to resources; and what options are available to mitigate or avoid a disproportionate burden of conservation action on PICTs.
[503] Ibid [4]. These actions include differentiated obligations, implementation, and assistance for PICTs.

as a binding obligation.[504] Therefore, only some members have carried out consultative processes with PICTs in the development of new proposals to address the considerations set out in *CMM 2013-06*.

(b) WCPFC SIDS Checklist

Since 2012, the Commission has also adopted a non-binding 'living document' in the form of an annually updated 'SIDS Checklist' which links specific issues at Commission negotiations to PICs' special requirements.[505] Proposed by FFA members in 2014 and adopted the following year, the SIDS Checklist was intended to guide the Commission in identifying and targeting specific areas of assistance for PICs. The WCPFC has continued to update the SIDS Checklist in subsequent annual sessions.

5 *WCPFC Internal Processes (Implementation and Assistance)*

The fourth element of the WCPFC differentiation framework integrates differentiation into WCPFC internal processes which are governed by the *WCPFC ROP*, *WCPFC FR*, and two CMMs (and, to a limited extent, the *WCPF Convention*). They can be roughly divided into 'administrative' and 'institutional' activities.

(a) WCPFC Administrative Activities: Budget, Special Requirements Fund, and Part 2 Reporting Requirements

The *WCPF Convention* and *WCPFC FR* set out a budgetary contribution scheme based partially on members' development status.[506] The scheme incorporates a cap on a national wealth fee for SIDS[507] and a discount on a variable catch-based fee for developing states and

[504] See WCPFC, *Summary Report*, 14th reg sess, 3–7 December 2017, 91-2, 94-5 ('*WCPFC14 Summary Report*').
[505] See WCPFC, *Special Requirements of Small Island Developing States*, WCPFC9-2012-DP32, 9th reg sess, 2–6 December 2012 ('*WCPFC9 SIDS Checklist*'); WCPFC, *FFA Members: Letter on Special Requirements of Small Island Developing States*, WCPFC10-2013-DP02, 10th reg sess, 2–6 December 2013 ('*WCPFC10 SIDS Checklist*'); WCPFC, *FFA Members Paper on Areas of Assistance for SIDS*, WCPFC11-2014-DP20 Rev2, 11th reg sess, 1–5 December 2014 ('*WCPFC11 SIDS Checklist*'); WCPFC, *Checklist of SIDS Special Requirements to WCPFC12*, WCPFC12-2015-DP01, 12th reg sess, 3–8 December 2015 ('*WCPFC12 SIDS Checklist*'); WCPFC, *Views on SIDS Checklist*, WCPFC13-2016-DP16, 13th reg sess, 5–9 December 2016 ('*WCPFC13 SIDS Checklist*').
[506] *WCPF Convention* (n 9) art 18(2); *WCPFC FR* (n 458) reg 5.2. In addition to these fees, the budgetary scheme also sets out an equal basic fee for all members.
[507] *WCPFC FR* (n 458) reg 5.2(b)(ii).

territories.[508] The *FR* requires funding for one PICT representative to all Commission-related meetings.[509] Both the *Convention*[510] and *FR*[511] also provide for the establishment and governance of the Special Requirements Fund (SRF).[512] The SRF's objective is to facilitate the effective participation of developing members through: attendance to Commission-related meetings;[513] financial assistance for human resources development, technical assistance, and transfer of technology; and capacity building in the areas of MCS, data collection, and scientific research.[514] In accordance with a provision in *CMM 2013-07*, the WCPFC also incorporates differentiation into its reporting requirements by ensuring industrialised members describe how they have implemented their obligations with respect to the special requirements of PICTs in annual reports submitted to the WCPFC Secretariat.[515]

(b) WCPFC Institutional Activities: Standing Agenda Item and Public Website on Special Requirements, SRF Strategic Investment Plan, and CMS Capacity Development Plans

Institutional activities denote several ongoing practices and policies used by the Commission to implement its obligations with respect to the special requirements of developing states. One practice is the inclusion of a standing agenda item on special requirements at every annual session of the Commission. This practice has been elaborated since 2013 to include reviews of the implementation of *CMM 2013-07* and annual updates to the SIDS Checklist.[516] The Commission also recently developed a public website maintained by the Secretariat to publish information on how the Commission and its members implement their obligations under article 30 of the *WCPF Convention*.[517]

The WCPFC has also developed processes to address the capacity needs of developing members. Article 7 of the *WCPF Convention* requires that coastal states apply the core principles for conservation and management set out by the *Convention* within areas under

[508] Ibid reg 5.2(c).
[509] Ibid reg 3.5.
[510] *WCPF Convention* (n 9) art 30(3).
[511] *WCPFC FR* (n 458) reg 7.
[512] See also WCPFC, *Principles, Guidelines and Operational Procedures for the Commission's Special Requirements Fund*, 3rd reg sess, 11–15 December 2006 ('*SRF Operational Guidelines'*).
[513] *WCPF Convention* (n 9) art 30(3).
[514] *WCPFC FR* (n 458) reg 7.1.
[515] *CMM 2013-07* (n 460) [19].
[516] *WCPFC ROP* (n 226) r 2(2)(h).
[517] WCPFC, *Implementation of Article 30 of the Convention* (Web Page, 18 November 2019) <https://www.wcpfc.int/implementation-article-30-convention>.

national jurisdiction.[518] With respect to this obligation, the Convention obliges the Commission to consider the respective capacities of DCS members and their need for assistance.[519] *CMM 2013-07* reinforces this obligation by requiring WCPFC members to assist PICTs with implementing Commission obligations.[520]

Two interrelated processes have emerged within the WCPFC addressing the capacity needs of developing members. The first process concerns the Commission's administration of the SRF. In 2018, the Commission adopted a three-year 'Strategic Investment Plan' (SIP) for the SRF to target financial assistance for the capacity needs of developing members.[521] That year, the Commission incorporated a second distinct, but related, process to identify the capacity needs of developing members into its Compliance Monitoring Scheme (CMS).[522] *CMM 2018-07* sets out a procedure for when, in the process of being assessed by the CMS, developing members may report that they cannot meet a particular obligation due to a lack of capacity.[523] Section V requires the member to submit a 'Capacity Development Plan' (CDP) to the Secretariat containing an anticipated time-frame for addressing their capacity needs.[524] The CMS will then assess the obligation as 'Capacity Assistance Needed' for that member until the Commission is notified that their capacity needs have been met.[525] The SRF SIP identifies funding sources to assist developing members in carrying out their CDPs.[526]

[518] *WCPF Convention* (n 9) art 7(1).
[519] Ibid art 7(2).
[520] *CMM 2013-07* (n 460) [8].
[521] WCPFC, *Report from the Chair of the Special Requirements Fund Intersessional Working Group (SRF IWG*, WCPFC15-2018-FAC_SRF IWG, 9 November 2018, att 1 ('*SRF SIP*'). See also Chapter 6 Section IIA.
[522] See WCPFC, *Compliance Monitoring Scheme* (Web Page, 2 May 2019) <https://www.wcpfc.int/compliance-monitoring>.
[523] *CMM 2018-07* (n 460) s 5. This represents the adoption of a softer approach to non-compliance for DCSs; number (iv) of Rajamani's categories for differentiated implementation: see Chapter 1 Section II B1.
[524] Ibid.
[525] Ibid.
[526] *SRF SIP* (n 521) att 1 [5].

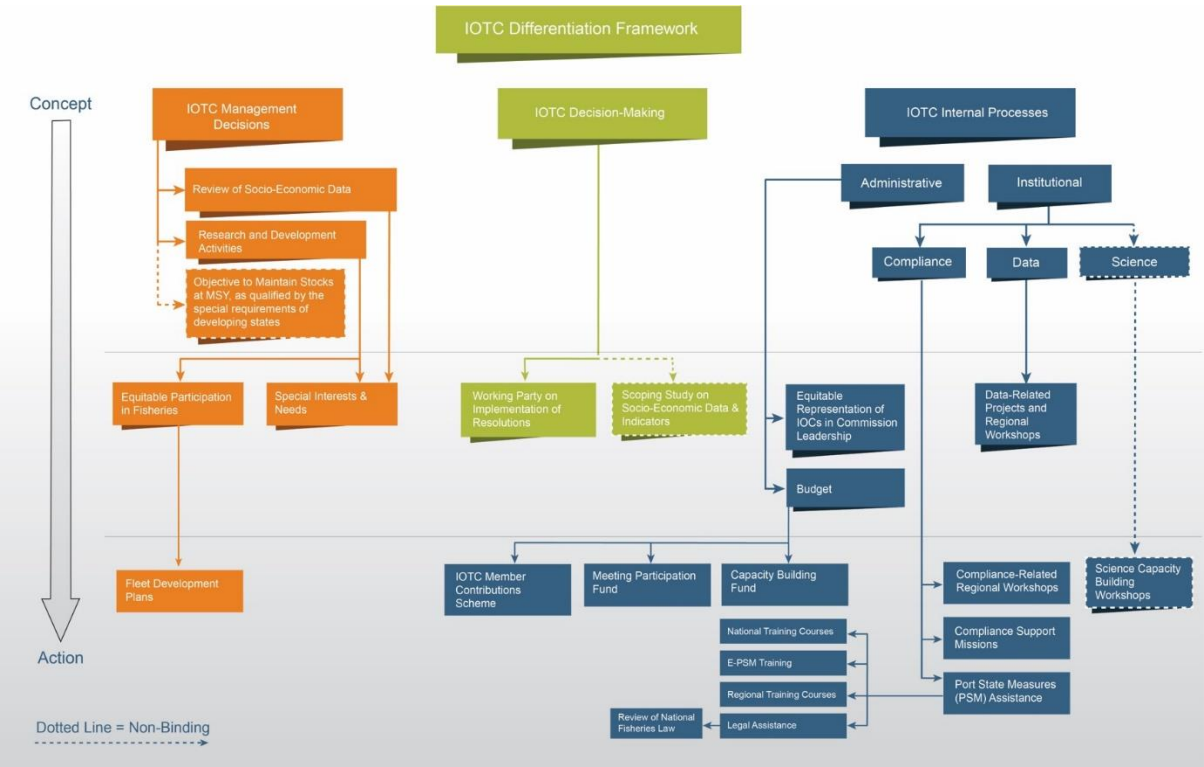
B *IOTC Differentiation Framework*

1 *Overview*

The IOTC's differentiation framework is set out in the *IOTC Agreement*,[527] *IOTC ROP*,[528] *IOTC FR*,[529] one Recommendation[530] and five Resolutions[531]. The design of the IOTC differentiation framework differs substantially from that of the WCPFC, providing a less systematic approach to differentiation. One indication of this is the scarcity of differentiation provisions in the *IOTC Agreement*; most differentiation provisions are set out in IOTC Resolutions. See Figure 5 for a visual representation of the IOTC differentiation framework below.

[527] *IOTC Agreement* (n 47).
[528] IOTC, *Rules of Procedure*, 18th reg sess, updated June 2014 ('*IOTC ROP*').
[529] IOTC, *Financial Regulations*, 23rd reg sess, amended June 2019 ('*IOTC FR*'). See also IOTC, *Report for the 23rd Session of the IOTC*, IOTC-2019-S23-R_rev1[E], 17–21 June 2019, app 5 ('*IOTC23 Summary Report*').
[530] IOTC, *On the Best Available Science*, Recommendation 12/15, 12th reg sess, 7–11 June 2012 ('*Recommendation 12/15*').
[531] IOTC, *On the Recording of Catch and Effort Data by Fishing Vessels in the IOTC Area of Competence*, Resolution 15/01, 19th reg sess, 27 April–1 May 2015 ('*Resolution 15/01*'); IOTC, *To Promote Implementation of IOTC Conservation and Management Measures*, Resolution 16/10, 20th reg sess, 23–27 May 2016 ('*Resolution 16/10*'); IOTC, *On Port State Measures to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing*, Resolution 16/11, 20th reg sess, 23–27 May 2016 ('*Resolution 16/11*'); *Resolution 17/02* (n 246); IOTC, *On a Scoping Study of Socio-Economic Data and Indicators of IOTC Fisheries*, Resolution 18/09, 22nd reg sess, 21–25 May 2018 ('*Resolution 18/09*').

Figure 5: Mapping the IOTC Differentiation Framework[532]



Whereas the WCPFC has adopted binding measures to develop its differentiation framework, the IOTC relies mostly on non-binding internal processes to address differentiation. IOTC's focus on these processes has led to an almost exclusive emphasis on implementation and assistance to developing members in its differentiation framework. However, recent IOTC Resolutions contain increasing references to differentiation in non-binding preambular language. The IOTC differentiation framework shares some similarities to the WCPFC, however, such as an emphasis on differentiation advantaging SIDS. Likewise, the IOTC applies differentiation to provisions across its management decisions, decision-making, and internal processes.

2 *IOTC Management Decisions (Core Obligations)*

(a) IOTC Agreement Article V

The first component of the IOTC differentiation framework incorporates differentiation into IOTC management decisions. The *IOTC Agreement* sets out the Commission's functions and

[532] Dr. Indiah Hodgson-Johnston helped format this figure.

responsibilities, two of which address differentiation.[533] One responsibility is that the Commission must 'encourage, recommend and coordinate research and development activities' for IO DCSs.[534] These activities include 'transfer of technology' and 'training and enhancement' for IOCs. The Commission is to carry out this responsibility while 'having due regard to the need to ensure the equitable participation of Members of the Commission in the fisheries and the special interests and needs of members in the region that are developing countries'.[535] The second responsibility of the Commission is 'to keep under review the economic and social aspects' of fisheries under the *IOTC Agreement*. The Commission is to execute this responsibility, 'bearing in mind, in particular, the interests of developing coastal states'.[536] These two obligations provide explicit differentiation in the form of stand-alone, binding obligations for the IOTC to address the special needs and interests of IOCs through capacity building activities and the review of socio-economic data on relevant fisheries.

3 *IOTC Decision-Making (Implementation)*

The second element of the IOTC differentiation framework applies differentiation to IOTC decision-making. This element is relatively recent and reflects the IOTC's establishment of working groups to advise the Commission on the two core obligations discussed previously.

(a) IOTC Working Parties

In 2017, the IOTC established a subsidiary body dedicated to addressing implementation issues associated with IOTC measures—the WPICMM. The WPICMM was established to advise the Commission on implementation and compliance matters.[537] One of the WPICMM's objectives is to 'enhance the technical capacity' of members and cooperating non-members of the Commission 'to understand and implement' IOTC measures.[538] The WPICMM is also required to develop capacity building mechanisms and activities to assist the implementation of IOTC measures.[539]

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[533] *IOTC Agreement* (n 47) art V(2).
[534] Ibid art V(2)(b). The remainder of this section refers to 'Indian Ocean countries' (IOCs) to describe IO DCSs.
[535] Ibid.
[536] Ibid art V(2)(d).
[537] *Resolution 17/02* (n 246) [1]. To date, the WPICMM has held three meetings
[538] Ibid ann I, [2] sub-para (b).
[539] Ibid [16], [17].

In 2017, the IOTC took first steps to keep under review the economic and social aspects of fisheries under its mandate. At IOTC21 Seychelles proposed establishing a 'Working Party on the Socio-Economic Aspects of the Fisheries in the IOTC Areas of Competence'.[540] The proposal provided that the Working Party would advise the Commission on socio-economic impacts resulting from the implementation of IOTC measures, as well as recommendations by the SC.[541] While choosing not to adopt the proposal, members agreed to engage an expert to conduct a scoping study on socio-economic data and indicators of IOTC fisheries in 2018.[542] *Resolution 18/09* sets out a TOR for this consultancy and requires the IOTC to determine whether a Working Party should be established at its next annual session.[543] While the scoping study was completed in 2019, the IOTC has yet to adopt a methodology the IOTC to collect and incorporate socio-economic data into its decision-making processes.[544]

4 *IOTC Internal Processes (Implementation and Assistance)*

The application of differentiation to IOTC internal processes is the most developed part of its differentiation framework. The *IOTC Agreement*, *IOTC FR*, *IOTC ROP*, five Resolutions, and one Recommendation set out administrative and institutional activities providing differentiation.

(a) IOTC Administrative Activities: Budget, Meeting Participation Fund, Capacity Building Fund (CBF), and Equitable Representation in Commission Leadership

Relevant administrative activities include the IOTC's differentiated budget and Commission leadership. Like the WCPFC, the *IOTC Agreement*[545] and *IOTC FR*[546] set out a budgetary contribution scheme and special fund that reflect the development status of IOCs and provide financial assistance for their effective participation. The IOTC budgetary scheme derives member contributions from four categories.[547] Each category accounts for a different percentage of the total budget. Two categories incorporate the development status of IOTC

[540] IOTC, *Working Party on Socio-Economic Aspect of the Fisheries in the IOTC Area of Competence*, IOTC-2017-S21-PropG[E], 21st reg sess, 21 April 2017.
[541] Ibid [1], [3] sub-para (c).
[542] IOTC, *Report of the 21st Session of the IOTC*, IOTC-2017-S21-R[E], 22–26 May 2017, [119] ('*IOTC21 Summary Report*').
[543] *Resolution 18/09* (n 531) ann I.
[544] See *IOTC23 Summary Report* (n 529) [103]–[110].
[545] *IOTC Agreement* (n 47) art XIII(3)(b).
[546] *IOTC FR* (n 529) annex [3], [4].
[547] Ibid.

members.[548] One is based on how members are classified under the World Bank classification of high-, middle-, and low- income states and the other discounts an assessment based on catch for members that are not part of the Organisation for Economic Co-operation and Development (OECD).[549]

The *IOTC ROP* establishes and governs the use of the 'Meeting Participation Fund' (MPF) which supports the participation of IOC delegates to Commission-related meetings.[550] The *IOTC ROP* prioritises funding for attendance to science-related meetings.[551] Another financial resource is the Capacity Building Fund (CBF).[552] *Resolution 16/10* provides that the CBF is to focus on improving data collection and implementation of IOTC Resolutions.[553] Last, the *IOTC Agreement* requires the Commission to observe 'equitable representation from among the Indian Ocean States' in electing Commission leadership, such as Chairpersons and Vice-Chairpersons.[554]

(b) IOTC Institutional Activities: IOTC Secretariat Capacity Building for DCSs in Science, Data and Compliance

Most of IOTC's differentiated internal processes are institutional activities undertaken by the Secretariat to build IOCs' capacities in the areas of science, data, and compliance. As a result, the IOTC differentiation framework emphasises implementation.

To address obligations contained in the *IOTC Agreement*, the Secretariat carries out science-related capacity building workshops; data-related projects and regional workshops; and a significant amount of compliance-related programming, including compliance support missions, reviews of members' fisheries legislation and compliance-related regional workshops.[555] An important element of the Secretariat's compliance work concerns the

[548] Ibid [1]–[2].
[549] Ibid [3]–[4].
[550] *IOTC ROP* (n 528) r XVI, app VII.
[551] Ibid rule XVI [5].
[552] *Resolution 16/10* (n 531) [1]–[3].
[553] Ibid [2].
[554] *IOTC Agreement* (n 47) art VI (6).
[555] *IOTC Agreement* (n 47) art V(2)(b). See IOTC, *Capacity Building: Science* (Web Page, 2020) <https://www.iotc.org/science/capacity-building-science>; IOTC, *Capacity Building Activities Implemented in Support of Developing Coastal States in the IOTC Area of Competence* (Web Page, 2020) <https://www.iotc.org/science/capacity-building-science>; IOTC, *Capacity Building: Compliance* (Web Page, 2020) <https://www.iotc.org/compliance/capacity-building-compliance>.

implementation of *Resolution 16/11*, particularly in light of members' obligations under the FAO-led, binding *Agreement on Port State Measures*.[556] *Resolution 16/11* is the only measure adopted by the IOTC which refers to the special requirements of developing states within its binding (non-preambular) text.[557] The IOTC Secretariat carries out PSM-related legal assistance, national and regional training courses and electronic PSM training.[558]

CONCLUSIONS

This chapter has mapped the general territory of law that this thesis will be concerned with in relation to transboundary tuna management. It tracks the development of modern differentiation in international law and its key characteristics. In IFL, the chapter shows that *UNCLOS* and *UNFSA* set out separate, though consistent, approaches to differentiation, largely based on the principle of the special requirements of developing states. In *UNCLOS*, differentiation contextualises states' obligations, whereas in *UNFSA*, it represents a stand-alone obligation with its own legal valence.

A comparison of WCPFC and IOTC differentiation frameworks demonstrates substantial differences between the two TRFMOs. Many of these differences are traced back to the reality that the WCPFC legal framework is based on *UNFSA*, while the IOTC's is based on *UNCLOS*. The analysis shows that the WCPFC sets out a more modern and elaborate differentiation framework than the IOTC. Ultimately, the chapter provides robust evidence for procedural and distributive equity-related principles in its analysis of differentiation in *UNCLOS*, *UNFSA*, and the treaty law—including institutional law—of the WCPFC and IOTC.

[556] *Resolution 16/11* (n 531) Preamble para 8; *Agreement on Port State Measures to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing*, opened for signature 22 November 2009, UNTS I-54133 (entered into force 5 June 2016).
[557] *Resolution 16/11* (n 531) pt 6.
[558] See IOTC, *Capacity Building: Compliance* (Web Page, 2020) <https://www.iotc.org/compliance/capacity-building-compliance>.

PART II: THE POLITICAL ECONOMY OF GLOBAL AND REGIONAL TUNA INDUSTRIES

CHAPTER 3: POLITICAL ECONOMY OF THE GLOBAL TUNA INDUSTRY

This chapter situates TRFMOs within the broader political economy of the global tuna industry. It addresses a significant gap in TRFMO research by modelling how members and their positions on points of law are informed by interactions with the tuna industry. The chapter links differentiation within TRFMOs to members' engagements with the tuna industry through 'distributional struggles' that occur between states acting as economic players within tuna production chains. The chapter then identifies two areas of distributional struggle in particular—regional allocations and funding for DCS members' effective participation—that affect distributive and procedural equity for DCSs. The chapter argues that these distributional struggles centre points of conflict between DCS and DWFS members in TRFMO negotiations concerning differentiation.

The tuna industry reflects trends in food production systems observed by political economy scholars. A handful of globally significant, vertically integrated lead firms play a central role coordinating global tuna fishing, processing, and retail. Their economies of scale and scope allow these firms to profit from high-volume, low-cost tuna products while driving down prices—and thus margins—for more numerous suppliers. The result of this economic logic is that, as tuna goes from fish to can to consumer, most of the surplus value is retained in industrialised economies where lead firms are based.[559] Conversely, DCSs tend to engage in tuna production as sources of raw material and low-wage labour. In this context, DCSs have had limited success exercising resource sovereignty to 'upgrade' their roles in tuna production chains.

Transboundary tuna management is an important element of the tuna industry's 'environmental conditions of production'.[560] Negotiations between TRFMO members determine critical components of the tuna business (such as catch limits, resource rents, and

[559] In this thesis, the term 'surplus value' refers to its traditional meaning Marx's theory of capitalist exploitation: Karl Marx, *A History of Economic Theories* (Langland Press, 1st ed, 1952) ('*Capital: Volume IV*'). Coe and Yeung provide a succinct definition: 'Surplus value [that] is created through a production process converting labour power into products and services to be exchanged for more than the labour value embedded in those commodities': Coe and Yeung (n 198) 16.
[560] See above (n 203).

fisheries access agreements), and thus indirectly influence the distribution of value capture among firms and states in the tuna industry. From the perspective of economic development, DCSs have had success using subregional cooperation to improve their negotiating positions in TRFMOs. This reveals the extent to which transboundary tuna management (and the laws forming the basis of its operation) can be an intervening factor in the ability of DCSs to use tuna resources to drive economic development.

Section I of this chapter introduces the GPN framework, a mode of political-economic analysis which will be used to describe the tuna industry. This section describes the four 'nodes' of tuna GPNs: fishing, processing, trading, and retailing. Section II outlines a typology for TRFMO members based on their engagement with tuna GPNs. Building on preceding sections, Section III argues that TRFMOs can be understood as sites of political-economic contestation, or 'distributional struggles' over value capture in tuna GPNs. It then describes how DCSs are using subregional strategies and institutions to increase their collective negotiating power.

I GLOBAL PRODUCTION NETWORK THEORY AND THE TUNA INDUSTRY

A *Political Economy Theory, GPNs, and Development of the Tuna Industry*

GPN theory emerges from political economy research examining the interface of globalisation and economic development. Since the 1970s, political economists have sought to understand how the increasingly complex and fragmented global economic system has altered development pathways in the global South.[561] A brief history of this research is necessary to understand the research program from which GPN theory emerges.[562]

[561] See, e.g., Gary Gereffi, 'Global Production Systems and Third World Development' in Barbara Stallings (ed), *Global Change, Regional Response: The New International Context of Development* (Cambridge University Press, 1995) 100.

[562] Several histories have been written of the development of economic geography research. See, e.g., Jennifer Bair, 'Global Capitalism and Commodity Chains: Looking Back, Going Forward' (2005) 9(2) *Competition and Change* 153. See also generally Terence Hopkins and Immanuel Wallerstein, 'Commodity Chains in the World-Economy Prior to 1800' (1986) 10(1) *Review (Fernand Braudel Center)* 157; Gary Gereffi, 'The Organization of Buyer-Driven Global Commodity Chains: How US Retailers Shape Overseas Production Networks' in Gary Gereffi and Miguel Korzeniewicz (eds) *Commodity Chains and Global Capitalism* (Praeger Publishers, 1994) 93.

Inquiry into ‘economic geography’,[563] began under the ‘world-system framework’ proposed by Immanuel Wallerstein.[564] Wallerstein organised national economies into an international division of labour based on economic relations established during the colonial period and divided states into the ‘core’, ‘semi-periphery’, and ‘periphery’. As globalisation unfurled in the latter decades of the 20th century, economic geographers recognised that the world system was changing in ways that challenged the conceptual category of the state and the neat divisions in Wallerstein’s framework.

In the 1990s, Gereffi and Korzeniewicz proposed a new analytical mode for understanding the international division of labour through ‘global commodity chains’ (GCCs).[565] GCC research focuses on ‘sets of interorganization networks clustered around one commodity or product’.[566] Focusing on commodities revealed impressive variance in how the world economy linked networks of ‘households, enterprises, and states’ across geographies.[567] In the early 2000s, Gereffi and his colleagues advanced their theory by shifting analytical focus again, this time to ‘global value chains’ (GVCs).[568] GVC research examined the *creation of value* rather than commodities.[569] The new research program underscored how multinational firms captured value through the increasingly complex governance of fragmented supply chains across borders.[570]

GPN theory emerged from this lineage of research and is summarised in Coe and Yeung's seminal text, *Global Production Networks: Theorizing Economic Development in an Interconnected World*.[571] Coe and Yeung propose another analytical shift to the ‘global production network’, defined as ‘an organizational arrangement, comprising interconnected

[563] This thesis refers interchangeably to the fields of ‘economic geography’ and ‘political economy’.
[564] Immanuel Wallerstein, *The Modern World-System I: Capitalist Agriculture and the Origins of the European World-Economy in the Sixteenth Century* (University of California Press, 1974).
[565] Gary Gereffi and Miguel Korzeniewicz, ‘Introduction: Global Commodity Chains’ in Gary Gereffi and Miguel Korzeniewicz and Roberto Korzeniewicz (eds), *Commodity Chains and Global Capitalism* (Praeger Publishers, 1994) 95.
[566] Ibid 2.
[567] Ibid.
[568] Gary Gereffi, John Humphrey and Timothy Sturgeon, ‘The Governance of Global Value Chains’ (2005) 12(1) *Review of International Political Economy* 78.
[569] Ibid 86–7.
[570] Ibid 90–6.
[571] Coe and Yeung (n 198).

economic and non-economic actors, coordinated by a global lead firm, and producing goods or services across multiple geographical locations for worldwide markets'.[572]

GPN research focuses primarily on *interactions* between firms, local economic actors, and the places they inhabit (framed as subnational 'regions').[573] GPN theory is distinguished from GVC research in that its outlook is broader than the details of how firms coordinate supply chains (termed 'inter-firm governance').[574] Rather, the GPN framework examines firms and their actions through the core concepts of value,[575] power,[576] and embeddedness[577]—all of which require researchers to consider 'extra-firm' actors and relations.[578] The progressive development and broadening of GCC, GVC, and GPN research and their associated units of analysis exhibit how researchers of economic geography have sought to refashion their theories in accordance with an increasingly dynamic and globalised economic system.

Research from GPN theory and its predecessors offer valuable insights for examining the development of the tuna industry and its interaction with states. The first is how this area of theory building has tracked and articulated trends in the global economy and its changing spatial organisation. Coe and Yeung provide an excellent overview of these changes over the 20th century.[579] They draw attention to transformations which occurred in the 1970s, as a focus on 'Fordism' (or the concentration of manufacturing in the global North) shifted towards increasingly flexible and dispersed modes of economic organisation coordinated by major firms.[580] The emergence of major firms responsible for orchestrating these changes occurred concomitantly with the rise of East Asian economies.[581] Motivated by the three

[572] Ibid 1–2.
[573] Ibid 20–1, 167-9.
[574] Ibid 11.
[575] For a discussion of the concept of value in GPN theory, see ibid 35–7.
[576] '*Power* in a production network context can be thought of as the ability of one actor to affect the behaviour of another actor in a manner contrary to the second actor's interests. It can also reflect the ability of one actor to resist an unwanted imposition by another actor': ibid 17 (emphasis in original).
[577] '[T]he *embeddedness* of [GPNs are] how they are constituted and are reconstituted by the ongoing economic, social and political arrangements in the places they inhabit': ibid 16 (emphasis in original). Please note the similarities between GPN theory's notion of embeddedness and Havice and Campling's discussion of the 'environmental conditions of production': see above (n 203).
[578] For an overview of these concepts, see Coe and Yeung (n 198) 16–8.
[579] Ibid 2–8.
[580] Ibid 4.
[581] Ibid.

drivers of cost, flexibility, and speed, major firms employed strategies to lower production costs (such as outsourcing) and capture increasing value at later stages of supply chains.[582]

The rise of industrial tuna fishing in tropical regions reflects these trends in the global economy. When industrial tuna fishing began in the 1950s, it was conducted by fishermen from the global North—primarily Japan and the US—in the Pacific, where they could reliably land and process fish.[583] The boats, fishing gear, and processing equipment of these fishermen were heavily subsidised by their home governments, partly due to strategic geopolitical and food security considerations.[584] Tuna fishing related activities did not typically involve the local economies or nationals from island states that served as bases for fishing and processing operations during this period.[585]

In the 1970s, technological innovations in fish tracking and storage enabled industrial tuna fishing to expand to other tropical regions and a new generation of tuna fishermen from distant waters emerged.[586] This introduced vessels flagged to European countries—France and Spain in particular—which established tuna fisheries off West Africa in the Atlantic and, eventually East Africa in the Indian Ocean.[587] It also included new participants in Pacific and Indian Ocean tuna fisheries from newly industrialised East Asian states, such as China, South Korea, and Taiwan.[588]

In the 1980s, as tuna fishing activities became increasingly global, firm coordinated governance of supply chains for tuna products also became more fragmented.[589] Industrial tuna fishing, trading, processing, and retail now involved highly concentrated, vertically integrated lead firms seeking to capture surplus value from tuna. During this period, firms

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[582] Ibid.
[583] Robert Gillett, *A Short History of Industrial Fishing in the Pacific Islands* (FAO Regional Office for Asia and the Pacific No 22, 2007); Kate Barclay, 'History of Industrial Tuna Fishing in the Pacific Islands' in Joseph Christensen and Malcolm Tull (eds), *Historical Perspectives of Fisheries Exploitation in the Indo-Pacific* (Springer, 2014) 153 ('*History of Industrial Tuna Fishing*').
[584] Norio Fujinami, 'Development of Japan's Tuna Fisheries' in David J. Doulman (ed), *Tuna Issues and Perspectives in the Pacific Islands Region* (East-West Center, 1987) 57.
[585] Gillett (n 583) 4.
[586] Peter Miyake, 'A Brief History of the Tuna Fisheries of the World' in William H. Bayliff, Juan Ignacio de Leiva Moreno and Jacek Majkowski (eds), *Management of Tuna Fishing Capacity: Conservation and Socio-Economics* (FAO Fisheries Proceedings No 2, 2005) 23, 31.
[587] Ibid.
[588] Ibid.
[589] Makoto Peter Miyake et al, *Recent Developments in the Tuna Industry: Stocks, Fisheries, Management, Processing, Trade and Markets* (FAO Fisheries Technical Paper No 543, 2010).

from the retail sector—specifically supermarkets—became central players in the increasingly competitive, high-volume, low-margin dynamics of the (canned) tuna industry.[590]

While the trajectory of the tuna industry followed broader trends in food production in the latter half of the 20th century, one key change distinguished the industry and its relationship to economic development outcomes. This was the shift in the political-economic context for tuna that occurred when *UNCLOS* codified the EEZ-concept and extended coastal state resource rights to 200 nm offshore.[591] The timing of this development in oceans law meant that lead firms were becoming central actors in tuna supply chains just as the role of states in tuna production was asserted. Campling and Havice describe this transition:

> The development of property relations through the EEZ—an "alien force" that disrupts the movement of capital in the sea—marked the possibility of states capturing ground-rent, primarily in the form of an access payment, which firms pay to fish in a state's EEZ. Following UNCLOS, the struggle over surplus profits was no longer exclusively between capitalists.[592]

In tropical regions, DCSs were now believed to have resource rights over the majority of global tuna stocks. This transformation established the contemporary elements of the political economy of the tuna industry and what this thesis argues are the conditions for contestation over legal differentiation in TRFMOs today.

B *Tuna Industry GPNs, Tuna GPN Nodes, and Value Capture*

GPNs for tuna products connect distant locales in the long journey through tuna fishing, processing, distribution, and retail. As tuna moves through these channels, it is transformed into a commodity and accrues economic value. As noted in the Introduction, tuna catches are responsible for adding over 40 billion USD to the global economy annually.[593] Lead firms that specialise in coordinating stages of this journey are influential actors in tuna GPNs. Commercial struggles among these and other firms structure how value is distributed as tuna

[590] Amanda Hamilton et al, *Markets and Industry Dynamics in the Global Tuna Supply Chain* (Pacific Islands Forum Fisheries Agency (FFA) Report, June 2011) <www.ffa.int/node/567>.
[591] *UNCLOS* (n 9) pt V, art 56.
[592] Campling and Havice, *Problem of Property* (n 203) 716.
[593] Macfadyen (n 1).

products move along supply chains. The outcomes of TRFMO negotiations play a part in shaping these competitive inter-firm dynamics.

This section draws upon political economy research conducted by Havice and Campling (a body of research which spans over a decade and draws from over 500 interviews[594]) to describe how networks of firms and states interact in the production and consumption of tuna products.[595] It is important to note that this section is not an exhaustive description of tuna GPNs; rather, it illustrates interactions between firms and the competitive strategies they employ to capture value within tuna product supply chains.

1 *Tuna Products: Canned Tuna and Raw Tuna GPNs*

The major tuna products are canned tuna, katsuobushi,[596] 'value-added' tuna products,[597] and sashimi[598]. These tuna products range in sale price from inexpensive protein to auctioned delicacy.[599] Markets differentiate tuna products according to tuna species, fishing, and processing techniques.[600] The two major tuna GPNs are primarily dedicated to canned and sashimi tuna markets. Responsible for over 60% of global tuna catch averaging 2.5 million

[594] See Havice and Campling, *Articulating Upgrading* (n 203); Havice and Campling, *Interfirm Strategies in the Canned Tuna GVC* (n 202). See also Elizabeth Havice and Liam Campling, 'Shifting Tides in the Western and Central Pacific Ocean Tuna Fishery: The Political Economy of Regulation and Industry Responses' (2010) 10(1) *Global Environmental Politics* 89 ('*Shifting Tides*'); Liam Campling and Elizabeth Havice, 'The Global Environmental Politics and Political Economy of Seafood Systems' (2018) 18(2) *Global Environmental Politics* 72 ('*Political Economy of Seafood Systems*').
[595] Unless otherwise noted, Section II B draws principally from Havice and Campling, *Interfirm Strategies in the Canned Tuna GVC* (n 202).
[596] Katsuobushi is a condiment in Japanese cuisine. It is made using cheaper tuna meat (skipjack) that has been filleted, dried, fermented, and smoked: Hamilton et al (n 590) 43.
[597] Value added tuna products refer to a range of shelf-stable and frozen items. Shelf-stable, value added tuna products include pre-packaged tuna salad, pouches, and burgers—these are included in the canned tuna GPN. Frozen, value added tuna products describe cuts of 'sashimi-grade' tuna, such as loins, fillets, 'saku blocks', and tuna steaks—these are included in the raw tuna GPN. Frozen value-added tuna products typically come from tuna carcasses that are not considered acceptable for sashimi. The markets for these products have expanded in recent years: ibid 320-7.
[598] Sashimi is prepared from high value cuts of tuna that come either fresh or frozen at temperatures below minus 40 degrees Celsius. Tuna carcasses that are not considered acceptable for sashimi are sold in the tuna steak market: Camillo Catarci, 'The World Tuna Industry—An Analysis of Imports and Prices, and of Their Combined Impact on Catches and Tuna Fishing Capacity' in William H. Bayliff, Juan Ignacio de Leiva Moreno and Jacek Majkowski (eds), *Management of Tuna Fishing Capacity: Conservation and Socio-Economics* (FAO Fisheries Proceedings No 2, 2005) 235, 243.
[599] To a lesser extent, byproducts from tuna processing may be smoked and dried for jerky or used for oil and animal feed: ibid 243.
[600] Ibid 243.

metric tonnes (mt) annually, the global canned tuna market is the largest.[601] In contrast, the sashimi market demands a lower volume of catch, averaging 500,000 mt annually.[602]

2 *Tuna GPN Nodes*

Havice and Campling describe three core nodes in the canned tuna GPN:[603] retail, processing, and fishing.[604] Intense, competitive dynamics across *and* within nodes characterise the canned tuna GPN. An overriding logic drives inter-firm relations, which Havice and Campling stress is the 'imperative to maintain high volumes of raw material throughput'.[605] The need for a high volume of tuna supply to extract increasingly thin margins shapes the behaviour of firms and the strategies they employ to capture value within the canned tuna GPN.

The following description of tuna GPN nodes illustrates the competitive dynamics that structure and drive tuna production and consumption practices. This description also elaborates on Havice and Campling's work by inserting an additional node—the 'trading node'—to describe the critical role played by tuna trading firms. As a result of competitive dynamics among firms, patterns of integration, centralisation, and concentration are observed in most nodes of the canned tuna GPN.[606]

(a) Retail Node: Supermarkets and Restaurants

The retail node is where most consumers interact with the tuna industry. In the canned tuna GPN, firms at the retail node are supermarkets, whereas in the raw tuna GPN, firms are in the

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[601] Hamilton et al (n 590) 18.
[602] Ibid 263.
[603] This section focuses on the canned tuna GPN. This GPN has received the most attention in the literature due to its dominance in catch and market share and is the focus of Havice and Campling's recent work using GPN theory. Where possible, illustrations of the raw tuna GPN have been included.
[604] Havice and Campling, *Interfirm Strategies in the Canned Tuna GVC* (n 202) 304. The use of the term 'node' is from the original characterisation of a global commodity chain, set out by Gereffi, Korzeniewicz and Korzeniewicz:

> Specific processes or segments within a commodity chain can be represented as *boxes or nodes*, linked together in networks. *Each successive node within a commodity chain involves the acquisition and/or organization of inputs (e.g., raw materials or semifinished products), labor power (and its provisions), transportation, distribution (via markets or transfers), and consumption*: Gereffi, Korzeniewicz and Korzeniewicz (n 565) 2 (emphasis added).

[605] Havice and Campling, *Interfirm Strategies in the Canned Tuna GVC* (n 202) 302.
[606] Miyake et al note an increasing concentration of capital in the hands of a smaller number of actors involved in vessel ownership, tuna trading, processing, and buying, as well as the relocation of tuna processing to developing states to cut labour and transportation costs: Miyake et al (n 589) xix.

restaurant sector, and comprise concentrated retailers such as sushi bar chains. Firms in the retail node wield substantial power over firms in upstream[607] nodes of tuna GPNs. Lead firms in this node shape consumer behaviour and influence competitive dynamics among other firms.

Supermarkets, in particular, cultivate the competitive logic that operates in the canned tuna GPN. Aware that customers who buy canned tuna spend more on average than other customers during a shopping trip, supermarkets utilise canned tuna as a 'loss leader' to increase customer expenditures in their stores. Traditionally, supermarkets put canned tuna on promotion at prices low enough to produce thin or even negative margins to attract 'high volume' customers. They then pass the costs of these promotions on to their suppliers. Supermarkets are able to employ this strategy due to the power they wield over suppliers. Using strategies such as 'slotting',[608] 'delisting',[609] and the creation of their own private labels,[610] supermarkets place downward price pressure and encourage competition among suppliers.[611] Supermarkets thus 'squeeze' canned tuna suppliers into lowering their prices and reducing their margins to remain competitive.[612] Havice and Campling argue that these tactics reveal how supermarkets 'nurture high volume, low price production practices' in the retail node of the canned tuna GPN.[613]

(b) Trading Node: Trading Firms and Vertical Integration

The trading node involves complex interactions among firms in the middle segments of tuna production chains. Firms in this node are trading firms and—similar to supermarkets at the retail node—are highly integrated and centralised.

[607] The network perspective of supply chains adopted by GPN scholars describes 'upstream' and 'downstream' flows across supply chain nodes. While definitions vary, Havice and Campling refer to networks of tuna suppliers in upstream nodes and networks of tuna distributors and retailers in downstream nodes: Havice and Campling, *Interfirm Strategies in the Canned Tuna GVC* (n 202) 294, 302–3, 305, 308–9.
[608] Slotting refers to the practice of supermarkets renting out premium shelf space to suppliers in which additional payment is sometimes required to maintain 'shelf real estate': ibid 297.
[609] Supermarkets may threat to delist (i.e. discontinue) a brand from a supplier, if its products do not generate sufficient revenue: ibid 297–8.
[610] Supermarkets sell their own 'private labels' more cheaply than their suppliers. They can utilise shelf space to take away market share from their suppliers through the sale of private label canned tuna: ibid 298-9.
[611] Ibid 299.
[612] Ibid.
[613] Ibid.

Trading firms—also described as 'supply management firms'—oversee the middle segments of tuna production chains.[614] This includes transactions where fishing firms supply tuna catch to processing firms. It also includes transactions where processing firms supply loined and canned tuna to retailers. These firms govern upstream flows of tuna product and essentially act as the 'middle men' of the tuna trade. In the process of sourcing and distributing tuna product, trading firms leverage economies of scale to manage risk associated with fluctuations in tuna supply for both fishers and processors.[615] Trading firms have sought to vertically integrate some of these transactions and some are engaged in the entire tuna supply chain, which encompasses fishing, processing, and retailing tuna product.

In the first category of transactions, trading firms depend upon relationships they build with other firms at the fishing and processing nodes to provide their services. Trading firms purchase catch from vessel operators and coordinate reefer carriers to tranship the catch for sale and delivery to processing firms.[616] Trading firms build longstanding relationships with vessel owners and operators, and, in some cases, are involved in voyage or vessel financing and support to secure catch for processing.[617] Trading firms then rely on relationships with processors to provide them with raw material, often through advance purchase contracts.[618] The coordinating role trading firms play in tuna production chains allows them 'to sell raw material for higher than the purchase price' by providing functional advantages to both fishing and processing firms.[619] In the second category of transactions, trading firms supply loined and canned tuna to brands and retailers.[620] A key element of these transactions is again, the relationships trading firms develop with canned tuna brands and buyers.

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[614] See generally Hamilton et al (n 590) 137–9; Liam Campling, Antony Lewis and Mike McCoy, *The Tuna Longline Industry in the Western and Central Pacific Ocean and its Market Dynamics* (FFA Report, 2017) <www.ffa.int/node/2025> 87–97; Liam Campling, Elizabeth Havice, and Vina Ram-Bidesi, *Pacific Island Countries, The Global Tuna Industry and the International Trade Regime—A Guidebook* (FFA Report, April 2007) 226–34.
[615] Campling, Havice, and Ram-Bidesi (n 614) 231.
[616] Hamilton et al (n 590) 137–8.
[617] Ibid; Havice and Campling, *Interfirm Strategies in the Canned Tuna GVC* (n 202) 303.
[618] See above (n 616).
[619] Hamilton et al describe how trading firms simplify interactions between fishing and processing firms. For fishing firms, 'Engaging a trader enables vessel operators to channel their energies into fishing, rather than having to deal with the financial, administrative and logistical hassle and risk associated with marketing catch': ibid 137. For processing firms, 'purchasing raw material from tuna traders removes the complexities of dealing with a large number of vessel owners selling small volumes of catch. Working with trading companies ensures that processors have continued access to large volumes of raw material': at ibid.
[620] See, e.g., Hamilton et al (n 590) 139.

The sourcing and integration strategies of trading firms have generated opportunities for vertical integration across the nodes of tuna production chains. These opportunities are created through the commercial relationships trading firms establish between fishers, processors, brands, and retailers. At the fishing node, a trading firm may directly purchase boats or provide alternative financial support to fishing firms through supply contracts and vessel financing (thus avoiding the financial risk of boat ownership).[621] At the processing node, a trading firm may enter into a joint venture with a coastal state government. In this case, a trading firm assumes direct partial ownership of a processing plant as part of the terms of a fisheries access agreement (FAA).[622] This agreement may enable either the trading firm's boats or associated fishing firm to enjoy exclusive and longer-term access to turn resources within the coastal state's EEZ. This arrangement also has the effect of providing an uninterrupted supply of raw material to the processing plant. Finally, at the retail node, complete integration may be achieved if a lead firm also owns a trading firm with processing plants and fishing boats. This level of vertical integration exists in the canned tuna GPN through the Bolton Group's ownership of Tri Marine and in the raw tuna GPN through Mitsubishi's ownership of Toyo Reizo.

It is debatable whether trading firms can be considered lead firms within tuna GPNs. Trading firms operate within what political economists refer to as a 'bottle neck', or point of corporate concentration, within tuna production chains—eight top trading firms operate within canned and raw tuna GPNs.[623] This level of concentration allows trading firms to wield substantial power over the upstream sale of raw and processed tuna. Some evidence exists in canned and raw tuna GPNs that trading firms engage in price manipulation.[624] For example, Havice and Campling have documented a 'common concern' among processing firms that trading firms

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[621] Havice and Campling, *Interfirm Strategies in the Canned Tuna GVC* (n 202) 303.

[622] Havice describes this arrangement in her discussion of 'second-generation' FAAs in the WCPO: Elizabeth Havice, 'The Structure of Tuna Access Agreements in the Western and Central Pacific Ocean: Lessons for Vessel Day Scheme Planning' (2010) 34 *Marine Policy* 979, 981–3. First-generation or 'cash for access' FAAs are where a foreign firm or state pays an agreed price for the right to fish in a coastal state EEZ: at 981. Second-generation FAAs are where a foreign firm secures access to a coastal state EEZ by registering their vessels to the coastal state or locally investing in onshore facilities such as processing plants: at 982. For examples of this practice in Fiji, PNG, the Solomon Islands, and Seychelles see Havice and Campling, *Articulating Upgrading* (n 203) 2619–23.

[623] Steven Adolf, Simon Bush, and Sietze Vellema, 'Reinserting State Agency in Global Value Chains: The Case of MSC Certified Skipjack Tuna' (2016) 182 *Fisheries Research* 79, 81. See below Section II D.

[624] For an example in the raw tuna GPN, see the following report on accusations of Mitsubishi stockpiling bluefin tuna: Marina Walker Guevara and Martin Foster, 'Part III: Bluefin, Inc.' (7 November 2010) *The Centre for Public Integrity* <https://publicintegrity.org/environment/part-iii-bluefin-inc/>.

manipulate the selling price of frozen tuna for canning.[625] In this scenario, trading firms stockpile frozen tuna in an attempt to 'narrow or widen supply so as to achieve a better price'.[626] Havice and Campling are dubious as to whether higher prices for processors are indicative of price manipulation and instead point to higher fuel costs and dwindling tuna stocks as alternative explanations.[627] As discussed previously however, increasing vertical integration has blurred this distinction where lead firms like Bolton Group and Mitsubishi own top trading firms.

(c) Processing Node: Branded and Nonbranded Manufacturers and Processing Plants

Firms in the processing node include branded and nonbranded manufacturers. The top canned tuna brands are owned by a small number of branded manufacturers. Havice and Campling note that branded manufacturers are increasingly centralised as a result of mergers and acquisitions under food multinationals such as Heinz and Mitsubishi.[628] Pointing to corporate concentration, Havice and Campling observe that all major canned tuna brands in North American and EU markets (the primary markets for canned tuna) are controlled by just six firms.[629] To address high labour costs, branded manufacturers either locate their processing plants in developing states or import frozen cooked 'loins' (a common intermediary form of tuna products) to market states for canning.[630] Food multinationals use centralisation to increase their economies of scope and scale, enabling them to source tuna supply from multiple oceans and increase their buying power.[631] The degree of centralisation among branded manufacturers accounts for their significant buying and lobbying power.[632]

Upstream from these highly concentrated *branded* manufacturers are what Havice and Campling refer to as '*nonbranded* manufacturers'.[633] These firms engage with the increasingly centralised brands and supermarket private labels to supply finished product

[625] Campling, Havice, and Ram-Bidesi (n 614) 232.
[626] Ibid 233.
[627] Ibid.
[628] Havice and Campling, *Interfirm Strategies in the Canned Tuna GVC* (n 202) 300.
[629] Ibid. Corporate concentration in this context refers to the number of lead firms with a share in the grocery market.
[630] Loining requires hand processing techniques that entail skinning, boning, cutting, and packing cuts of tuna caracasses: Kate Barclay, 'Impacts of Tuna Industries on Coastal Communities in Pacific Island Countries' (2010) 34(3) *Marine Policy* 406, 407.
[631] Ibid.
[632] For example, US canned tuna brands have historically lobbied their government for favourable trade conditions. See, e.g., Campling, Havice, and Ram-Bidesi (n 614) 358–9.
[633] Havice and Campling, *Interfirm Strategies in the Canned Tuna GVC* (n 202) 299.

(canned tuna). Nonbranded manufacturers are by nature 'less concentrated', 'geographically dispersed', and 'export-oriented'.[634] These shared characteristics enable lead firms to maintain supply despite fluctuations that often result from environmental and political-economic factors in different regions.[635]

This portion of the processing node represents a juncture in how the canned tuna GPN is spatially organised: nonbranded manufacturers are located largely in the developing world, in locales (such as Thailand, Philippines, Ecuador, and Indonesia) that offer cheap and efficient labour and/or geographic proximity to tuna stocks.[636] Nonbranded manufacturing firms own the majority of tuna processing plants worldwide, which numbered upwards of 240 plants in 2012.[637]

Tuna processing plants may function as either canning or loining plants. The labour-intensive nature of loining drives firms to locate loining plants in locales with a skilled, low-cost workforce.[638] Branded firms in the canned tuna GPN often outsource loining to nonbranded manufacturers and then import frozen cooked loins to their home state (typically a developed state) for canning in order to capture surplus value from (mechanical) processing.[639] Alternatively, fresh and frozen *uncooked* loins are imported for retailers in the raw tuna GPN, which sell tuna products requiring limited processing.[640]

Nonbranded manufacturers experience sustained downward price pressure from their buyers (supermarkets and branded firms). Buyers play nonbranded manufacturing firms against one another in negotiations through such strategies as 'cost plus' formulas, in which buyers cover

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[634] Ibid.
[635] Ibid 302; Hamilton et al (n 590) 157–8.
[636] Hamilton et al (n 590) 154–234.
[637] Ibid 301.
[638] Hamilton et al (n 590) 157. See also Campling on the 'logic of loining'. Campling argues:

> It should be noted that this aspect of the new international division of labour—the "logic of loining"—is not solely about the search for cheap labour as popularly depicted, but also for ready access to tuna fisheries, more lax labour standards and environmental regulations, reduced transportation costs and access to existing ocean-going networks, and, importantly…access to EU and US trade preferences': Liam Campling, 'Trade Politics and the Global Production of Canned Tuna' (2016) 69 *Marine Policy* 220, 224 (citation omitted) ('*Trade Politics*').

[639] Hamilton et al (n 590) 157.
[640] Ibid 82; Campling, Lewis, and McCoy (n 614) 57–9.

the costs to establish a processing plant in exchange for a 'predetermined profit margin', which they then use as leverage in subsequent negotiations.[641]

Despite synergies between centralised lead firms and nonbranded manufacturers, this node of the canned tuna GPN exhibits perverse competitive dynamics which culminate in overcapacity. Havice and Campling point to a 30% gap between processing capacity and consumption in the canned tuna GPN in the 1990s, which, they claim, has worsened in subsequent years.[642] Nonbranded manufacturers tend to reflect the overriding logic initiated at the retail node and reinforced by buyers because they also rely on high volumes of tuna supply to maintain profits. The processing node exhibits a power differential between buyers and suppliers. This differential motivates competitive dynamics that have created overcapacity at this node and enhanced demand for increasingly high volumes and uninterrupted tuna supply.

(d) Fishing Node: Fishing Firms and Competitive Pressures

Firms in the fishing node are subject to multiple regulatory and commercial pressures. These pressures include the competitive dynamics of downstream nodes, as well as regulations implemented by coastal states and TRFMOs. At the nexus of these pressures, firms in the fishing node face continuing tensions between the imperatives of tuna GPNs and the conservation objectives of tuna management.

The fishing node is the least concentrated node of tuna GPNs. It is populated by fishing firms with highly mobile fleets and increasing numbers of vessels.[643] At this node, fishing firms with diffuse and often opaque ownership control the global tuna fishing fleet.[644] Industrial

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[641] Havice and Campling, *Interfirm Strategies in the Canned Tuna GVC* (n 202) 301.
[642] Ibid 299.
[643] There is a substantial literature on overcapacity issues in global tuna fisheries. See, e.g., James Joseph, *Managing Fishing Capacity of the World Tuna Fleet* (FAO Fisheries Circular No 982, 2003) <www.fao.org/3/a-y4499e.pdf>; Aranda, Murua and de Bruyn (n 72).
[644] The issue of identifying 'beneficial owners' of industrial-scale fishing vessels is discussed in the literature on IUU fishing and its possible linkages with transnational crime. There is currently no formal definition of a 'beneficial owner', but the term is used to clarify the individual or company that enjoys the benefits of ownership of the fishing vessel. For a discussion of beneficial ownership issues in the context of tuna fisheries, see Yann-huei Song, 'The Efforts of ICCAT to Combat IUU Fishing: The Roles of Japan and Taiwan in Conserving and Managing Tuna Resources' (2009) 24 *The International Journal of Marine and Coastal Law* 101, 125–28. The *Implementation Guidelines for the FAO International Plan of Action to Prevent, Deter and Eliminate IUU Fishing* state that:

> The vessels that conduct IUU fishing are, by nature, highly mobile platforms that often operate in marine areas far from land and in places where effective [MCS] are lacking. The beneficial owners of the vessels

tuna fishing vessels are infamously large (both in terms of vessel size and capacity) and opportunistic, with the ability to follow migrating tuna stocks for months at sea.[645] Multiple factors inform the directives of fishing firms and the behaviours of vessel operators in tuna GPNs. Havice and Campling argue that, 'Lead firms put intense—though, most frequently, indirect—commercial pressure on boat owners to fish harder, faster, and further. Competition among fishing firms is sharp because ownership is not concentrated'.[646] In this dynamic, the retail node generates an imperative for high levels of catch at the lowest possible cost through downward price pressure on processing firms.

Conditions at the processing node enhance this pressure due to worldwide processing overcapacity and the related need to source increasing numbers of processing plants with raw material. Responding to these forces and managing additional issues concerning 'fuel and fish price volatility, labour, and insurance costs', tuna fishing operations have intensified their fishing practices.[647] Over time, these vessels have modified their gear, increased their size and holding capacity, and expanded their geographic range to cope with these pressures. Consequently, conditions within the fishing node are highly influenced and constrained by firms and economic logics operating at other nodes within tuna GPNs.

C *Distribution of Value in Tuna GPNs, the Role for TRFMOs, and the State*

Tuna GPN nodes form a complex supply chain that links the extraction of tuna from fishing grounds in the developing world to the sale of tuna products in the developed world. Within this chain, value flows predominantly from the developing world to lead firms based in

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often succeed in preventing fisheries managers and law enforcement officials from ascertaining their identities: FAO, *Implementation of the International Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing* (FAO Technical Guidelines for Responsible Fisheries No 9, 2002) 4.

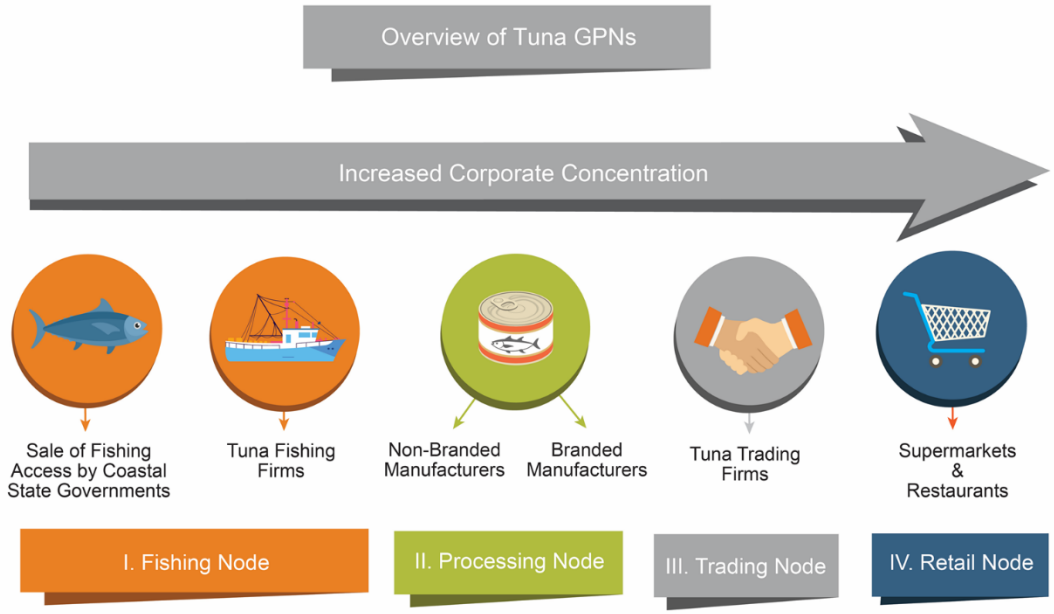
[645] Industrial-scale vessels are not the only vessels that supply tuna GPNs. Small- and medium-sized vessels, categorised as 'semi-industrial' vessels also supply tuna GPNs. For a discussion of semi-industrial tuna fishing vessels see Chapter 5 Section II E. These vessels carry out single to multiple day or week fishing trips. Some are small (5-15 GRT), artisanal vessels from Indonesia and Philippines. Others are medium-sized (under 24 GRT), modern longliners with chilling capacity from Taiwan and China which deliver fresh catch to sashimi markets. See Edison D. Macusi and Widhya Nugroho Satrioajie, 'Characterising Small-Scale Tuna Fisheries from Indonesia and the Philippines: A Review' (Conference Paper, MARE Conference People and the Sea VII, 27 June 2013); Richard Banks, Katherine Short and Seremaia Tuqiri, WWF, *South West Pacific Longline Caught Albacore: Going, Going, Gone?* (Policy Brief, 25–29 March 2012) 14–5.

[646] Havice and Campling, *Interfirm Strategies in the Canned Tuna GVC* (n 202) 304.

[647] Ibid 302.

industrialised states.[648] Figure 6 provides an overview of nodes and actors within tuna GPNs below.

Figure 6: Overview of Tuna GPN Nodes and Actors[649]



The unique political economy of tuna complicates the power wielded by lead firms within tuna GPNs. Lead firms are forced to act within the context of what Havice and Campling refer to as the 'environmental conditions of production'.[650] These background conditions are 'the ever-shifting combination of regulatory, commercial and ecological conditions that shape and are shaped by dynamic resource extraction processes'.[651] Key 'extra-firm' actors such as coastal and market states, TRFMOs, and NGOs contribute to the environmental conditions of production for the tuna industry.[652] Havice and Campling highlight that the relationship of

[648] Österblom et al have documented the 'keystone' role played by lead firms in the seafood industry: Österblom et al, 'Transnational Corporations as "Keystone Actors" in Marine Ecosystems' (2015) 10(5) *PLoS One* 0127533: 1–15.
[649] Dr. Indiah Hodgson-Johnston helped format this figure.
[650] See above (n 203).
[651] Ibid.
[652] See Coe and Yeung (n 198) 47–50, who explain that:

> [L]ead firms must [also] engage with extra-firm actors such as the state, international organizations, labour groups, consumers, and civil society organizations in the diverse localities that are articulated into these

states and TRFMOs to tuna GPNs is mutually constitutive (they 'shape and are shaped by' one another).[653] Therefore, the competitive logics that drive the canned tuna GPN tend to condition the motivations of states and by extension, TRFMO management decisions.

Havice and Campling conclude that TRFMOs are not simply a form of state-led transboundary tuna management; rather, they are 'indirectly engaging in the management of interests across tuna value chains'.[654] The authors ascertain that 'the well-documented failures of tuna fisheries management organizations can be explained in part by the failure to recognize that they are regulating not only boats or even fishing nations but the competitive effects of downstream interfirm relations'.[655]

Havice and Campling demonstrate that TRFMOs are engaged in competitive dynamics between lead firms and other firms within tuna GPNs. The authors establish this in direct examples of the tuna industry interacting with TRFMO management processes. This includes the positions advocated by observing industry associations at TRFMO meetings.[656] This thesis argues for additional evidence of this connection in *indirect* examples of states interacting with the tuna industry. Referenced, but not discussed, by Havice and Campling, these interactions come to bear on members' positions within TRFMO negotiations.[657] While these interactions are complex and at times opaque, they demonstrate that states are implicated in *both* the flow of value within tuna GPNs and TRFMO management decisions.

II Typology of State Interactions with Tuna GPNs

The political economy of tuna locates states in a complex web of interactions within tuna GPNs. This section describes how state participation in tuna GPNs informs the positions they take as TRFMO members. By isolating the most typical and frequent interactions between states and firms at different nodes, this section illustrates how both developing and

networks. These state and non-state institutions can be highly significant *extra-firm* actors shaping value activity in different global production networks: at 47 (emphasis in original).

[653] Havice and Campling, *Interfirm Strategies in the Canned Tuna GVC* (n 202) 294.

[654] Ibid 302.

[655] Ibid (citations ommitted).

[656] Ibid.

[657] 'These examples of interfirm strategies are not exhaustive; for example, financialized mechanisms are missing from the analysis here, and we focus on interfirm relations *to the exclusion of thorough analysis of firm relations with states (eg through political lobbying) and other institutional actors (such as tuna RFMOs)*': ibid 309 (emphasis added).

industrialised states are implicated in tuna GPNs. In order to focus the following discussion, a typology has been devised for state-GPN interaction. This typology includes coastal, fishing, processing, trading, and market states. It is important to note that this typology is not fully representative of the complex interactions between states and tuna GPNs. Rather, it provides a heuristic for considering the multifaceted interface between states and the tuna industry, particularly with a view to their differing levels of economic development. Moreover, not all possible overlaps across these 'types' have been included in the discussion below. The overlapping identities that might apply to a single state are complicated and therefore too intricate to cover here, though they produce interesting tensions for the positions states take in TRFMO negotiations.

A *Coastal States*

Coastal states interact with tuna GPNs as independent economic actors, which positions them in direct conflict with both firms and other states over surplus value from tuna products. As a result of rights granted to them under the EEZ regime, coastal states receive government revenue from the direct sale of access to tuna stocks that migrate through their EEZs. Coastal states sell fisheries access through negotiated licensing[658] and chartering[659] agreements with various economic actors in tuna GPNs.[660] These actors are domestic and foreign fishing firms, as well as fishing states.

Coastal states contribute to the environmental conditions of production for tuna GPNs by implementing fisheries regulations to manage tuna stocks in their EEZs. These regulations are typically contained in the terms of FAAs. Coastal states also function as 'port states' in regional and global efforts to end illegal, unreported, and unregulated (IUU) fishing. In this

[658] Access to EEZ tuna fisheries are granted through fishing licenses distributed and administered by a coastal state. A licensing agreement typically requires vessel operators to pay a fee for fisheries access.
[659] There is currently no common definition of a chartering agreement in the TRFMO literature. Crigler states that 'In the global tuna industry … the term [chartered vessel] is generally applied to describe a commercial fishing vessel operating under the control of a party in a nation other than the nation to which it is flagged': Crigler (n 80) 10–1. Foreign vessel operators enter into charter agreements with coastal states and adopt the flag of the coastal state to gain access to their EEZ. In some cases, such as in PNG, coastal states *require* a charter agreement for foreign fishing vessels to gain access to their EEZ. Coastal states benefit from these agreements because it expands their control over foreign vessels operating in their EEZs and increases their domestic fishing capacity: at 1; Valentin J. Schatz, 'The Contribution of Fisheries Access Agreements to Flag State Responsibility' (2017) 84 *Marine Policy* 313. For a discussion of various types of charters and flagging practices in industrial scale fisheries, see also: Crigler (n 80) 14–6.
[660] Licensing and chartering agreements are types of FAAs.

capacity, coastal states exercise their rights under international law to prohibit fishing vessels suspected of IUU fishing from entering their ports.[661]

In the various roles of economic actor and regulating authority, coastal states are positioned within tuna GPNs to represent their commercial and political interests in tuna fisheries. In multiple studies, Campling and Havice explore the complex orientation of coastal states towards tuna GPNs from a Marxist perspective of capitalist processes of resource extraction from the oceans.[662] They contend that: 'As state-landed property, coastal states sit at the nexus of rent appropriation and other distributional struggles around surplus value, (perceived) "national interest", geopolitics, resource management and industry regulation in EEZs'.[663] Indeed, coastal states are often motivated by a conflicting combination of commercial and public interests with respect to tuna fisheries.

Coastal states engage in interminable struggles for surplus value with fishing firms and, by extension, nearly every other actor involved in tuna GPNs. This is because coastal states receive government revenue insofar as they manage to capture surplus value from tuna production—a motivation that drives all other economic actors competing within tuna GPNs. For coastal states, this value typically takes the form of resource rents.[664] Coastal states receive access payments based on the rent they derive from tuna stocks.[665] Havice and Campling stress that the concept of rent is constructed, and therefore historically and institutionally contingent.[666] The authors maintain that this conception of rent is particularly

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[661] See *UNFSA* (n 10) 23, 21(8).
[662] See, e.g., Campling and Havice, *Problem of Property* (n 203); Campling and Havice, *Political Economy of Seafood Systems* (n 594).
[663] Campling and Havice, *Problem of Property* (n 203) 715.
[664] According to the World Bank, 'The resource rent is a measure of the net economic benefits from the harvest of wild fish stocks': Ragnar Arnason, Kieran Kelleher, and Rolf Willmann, *The Sunken Billions: The Economic Justification for Fisheries Reform* (World Bank No 2596, September 2009) 30 <https://siteresources.worldbank.org/EXTARD/Resources/336681-1224775570533/SunkenBillionsFinal.pdf>. Campling and Havice carefully articulate why the World Bank's definition is flawed: Campling and Havice, *Problem of Property* (n 203) 709–11.
[665] Stephen Mbithi Mwikya, *Fisheries Access Agreements: Trade and Development Issues* (International Centre for Trade and Sustainable Development Issue Paper No 2, April 2006) 15–6 <https://www.ictsd.org/downloads/2008/04/mbithi_2006.pdf>.
[666] Campling and Havice describe how a theory of rent was originally developed by economists in relation to property ownership: Campling and Havice, *Problem of Property* (n 203) 709–13. Neoclassical economic policy revised this conceptualisation of rent to be the economic benefits derived from exclusive access to natural resources: ibid. Campling and Havice argue that, by decoupling the relationship between rent and property, the neoclassical definition makes rent 'a given ... determined by the market ... a "normal" or "natural" payment for the differential productivity of land and other resources': at 710. Following other Marxist scholars, Campling and Havice argue that rent is neither 'ahistorical' nor 'normal', but, rather, dependent 'upon historically and socially specific relations between capitalists and landlords': at 720.

important to understanding the political economy of coastal states' juridical rights over EEZs.[667]

A grounded understanding of rent articulates the relationship between coastal states and firms within tuna GPNs. Because ground-rent is contingent, it is the site of intense contestation. Campling and Havice define ground-rent as 'the portion of surplus value taken by modern landed property [coastal states]'.[668] In the context of tuna fisheries, the authors classify coastal states as landlords (or, in Marxist terms, 'landed property') due to the resource rights granted to them in EEZs under international law. Through the concept of ground-rent, Campling and Havice re-establish the connection between property and resource rights articulated in early economic theories of rent. From this outlook, 'The capitalist fishing enterprise pays the coastal state ground-rent for the right to access a parcel of the ocean and extract the resource'.[669] Campling and Havice argue that neoliberal studies of resource rent in tuna fisheries are naïve to conflicts between coastal states and fishing firms over ground-rent.

Consequently, coastal states are in a continuous struggle with firms and fishing states because they are driven to increase the ground-rent that forms the basis of fisheries access negotiations. While access fee payments are still not widely published and numbers in the literature vary, some estimates are available. On average, coastal states currently receive access fee payments for tuna that approximate 3% of the total value of the catch.[670] Mwikya argues that, in comparison to resource rents for comparable resource extraction activities, 'it is difficult to justify resource rent levels below 30% of the value of the catch'.[671] The significant disparities reflected in how little access fee payments often correspond to the actual value of tuna resources reinforces Campling and Havice's contention that ground-rent is not predetermined by the market but a negotiated construct in tuna fisheries.

Many coastal states depend upon access payments for government funding of fisheries administrations within the most economically challenged economies in the world. For

[667] Ibid 713.
[668] Ibid.
[669] Ibid 722.
[670] Mwikya (n 665) 16. Unless otherwise specified, this and other descriptions of the value of tuna catch in this thesis refer to the *landed value*, that is, the value of the catch at the first point of sale when it leaves the vessel (the ex-vessel value).
[671] Ibid.

developing states, 'fish for aid' agreements can complicate their ability to demand adequate ground-rent in fisheries access negotiations.[672] In TRFMO negotiations, commentators have suggested that government delegations from developing states are often silent or unwilling to take strong positions to regulate DWFS fleets as a result of their reliance on aid and revenue from FAAs.[673] Campling and Havice nevertheless demonstrate that DCSs have improved their relative position in fisheries access negotiations:

> Over time, coastal states have deepened their individual and collective bargaining power as landed property to strengthen the terms and conditions of FAAs and their capture of surplus value...Coastal states' (in)ability to capture or increase their portion of surplus value over time indicates that resource access relations are a site of political and social struggle among states and firms, not a technical category determined by the market.[674]

Despite the significant challenges posed to DCSs from conflicts over ground-rent, Havice and Campling claim they have gained increasing traction in fisheries access negotiations with other economic actors in tuna GPNs.[675]

B *Fishing States*

Fishing states traditionally provide support for lead firms to counter the economic interests of coastal states in conflicts over surplus value in tuna GPNs. These states exhibit close coupling with fishing firms in the form of both political and economic sponsorship. Fishing states can sponsor firms through: (i) representation in fisheries access negotiations; and (ii) direct and indirect subsidies. Through this type of sponsorship, governments of DWFSs have historically forged close bonds with major fishing firms in the tuna industry.[676] Fishing states therefore tend to conflict with coastal states in access negotiations. In this context, coastal and fishing states are both 'active players in struggles over the creation and distribution of surplus value from the production of fisheries commodities, and are involved in meditating domestic and foreign interests and the relations among them'.[677]

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[672] Elizabeth Petersen, 'The Catch in Trading Fishing Access for Foreign Aid' (2003) 27 *Marine Policy* 219, 221–5.
[673] See, e.g., Mialy Andriamahefazafy, Christian A. Kull and Liam Campling, 'Connected by Sea, Disconnected by Tuna? Challenges to Regionalism in the Southwest Indian Ocean' (2019) 15(1) *Journal of the Indian Ocean Region* 58, 67–8.
[674] Campling and Havice, *Problem of Property* (n 203) 719.
[675] See Section III C below.
[676] Havice and Campling, *Shifting Tides* (n 594) 99–102, 108.
[677] Campling and Havice, *Problem of Property* (n 203) 715.

Fishing states also act as 'flag states' under international law and are responsible for the actions of fishing vessels flying their flag, both within coastal state EEZs and on the high seas.[678] Fishing vessel operators sometimes evade the domestic regulations of their fishing states by chartering or reflagging to a developing state with limited capacity to carry out MCS and other enforcement activities.[679] Traditional DWFSs claim that developing states who allow this practice—commonly known as the use of 'flags of convenience'—[680] are 'exclusively interested in economic revenue and not in their responsibilities'.[681] Molenaar points out that, 'The irony is, of course, that the responsibility for the abuse of flags of convenience lies to a considerable extent with these "traditional fishing" states' own nationals and companies'.[682] Irrespective of their ability to effectively perform their duties as flag states, the major fishing states in tuna GPNs represent a mix of industrialised and developing states.

The geographic distribution of major fishing states in tuna GPNs reflects relatively recent changes in the spatial organisation of the industry. In the 1950s, tuna fishing states were composed entirely of developed states, namely Japan and the US.[683] Changes in the global economy altered the composition of tuna fishing states as newly industrialised states from

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[678] See *UNCLOS* (n 9) arts 94, 217; *UNFSA* (n 10) pt V, arts 19, 20.

[679] A substantial literature discusses the relationship between IUU fishing and the use of flags of convenience. In her concise description of these issues, DeSombre states:

> When faced with either domestic or international fishery regulations, some fishing vessels choose to flag in states that do not belong to the relevant international agreements or are unlikely to uphold them. They can thereby legally harvest as much of the resource in question as they are able. In doing so, they make conservation more difficult, and perhaps even impossible, for other states and undermine the conservation gains of those who have agreed to limit resource extraction: Elizabeth R. DeSombre, 'Fishing Under Flags of Convenience: Using Market Power to Increase Participation in International Regulations' (2005) 5(4) *Global Environmental Politics* 73, 73.

For a discussion of this topic specific to tuna fisheries, see the following study on how Taiwan's lack of political recognition has required Taiwanese tuna fishing firms to adopt flags of convenience: Kuo-Huan Ting, Ching-Hsiewn Ou, and Wen-Hong Liu, 'The Management of the Distant Water Tuna Fishery in Taiwan' (2012) 36 *Marine Policy* 1234.

[680] The term 'flag of convenience' refers broadly to what Rayfuse describes as 'any flag which is adopted for the purposes of political and/or practical expediency': Rosemary Rayfuse, *Non-Flag State Enforcement in High Seas Fisheries* (Martinus Nijhoff Publishers, 2004) 25. In fact, flags of convenience are generally adopted through technically legal, open registries. To distinguish the flags of states with an open registry and states whose flags are commonly used to violate international fisheries regulations, RFMOs have shifted their language from targeting 'flags of convenience' to 'flags of non compliance': Darren S. Calley, *Market Denial and International Fisheries Regulation: The Targeted and Effective Use of Trade Measures Against the Flag of Convenience Fishing Industry* (Martinus Nijhoff Publishers, 2012) 17.

[681] Erik Jaap Molenaar, 'Participation, Allocation and Unregulated Fishing: The Practice of Regional Fisheries Management Organisations' (2003) 18(4) *International Journal of Marine and Coastal Law* 457, 461.

[682] Ibid.

[683] See generally Peter Miyake, 'A Brief History of the Tuna Fisheries of the World' in William H. Bayliff, Juan Ignacio de Leiva Moreno and Jacek Majkowski (eds), *Management of Tuna Fishing Capacity: Conservation and Socio-Economics* (FAO Fisheries Proceedings No 2, 2005) 23, 31–3.

East Asia (including China, South Korea, and Taiwan) expanded their fishing fleets. More recent changes in tuna GPNs have introduced new players from DCSs with large (and, in the case of PNG, foreign owned) regional fleets.

Currently, the top ten tuna fishing states are Indonesia, Japan, Taiwan, the US, South Korea, Philippines, Spain, Ecuador, PNG, and France.[684] Over half of these states represent industrial fishing fleets that harvest tuna in distant waters, moving across all major ocean basins and landing tuna at ports around the world (Japan, Taiwan, US, South Korea, Spain, and France). By contrast, DCSs in this list—Indonesia, Philippines, Ecuador, and PNG—represent extensive local or regional fleets that fish waters within and adjacent to their EEZs.[685]

There are sharp differences among fleets flagged to the top ten tuna fishing states. The top fishing state, Indonesia, flags a fleet with vastly different characteristics from a DWFS fleet like that flagged by the US. Indonesia's tuna catches are contained largely within its own EEZ and its fleet is comprised almost entirely of coastal fishermen in traditional, small- and medium-sized wooden boats.[686] Conversely, the US represents a fleet that harvests tuna almost entirely in other states' EEZs, or distant waters, and is comprised of highly efficient, steel, industrial-scale fishing vessels with substantial holding capacity.[687] In contrast to these two examples, the PNG fleet is almost entirely foreign-owned fishing vessels that have been reflagged to PNG under the terms of FAAs.[688] While it is important to consider the wide variation among fishing states and the fleets they represent, this typology focuses on DWFSs

[684] Grantly Galland, Anthony Rogers and Amanda Nickson, 'Netting Billions: A Global Valuation of Tuna' (PEW Charitable Trusts Report, May 2016) 4 <https://www.pewtrusts.org/en/research-and-analysis/reports/2016/05/netting-billions-a-global-valuation-of-tuna>.
[685] Ibid 3.
[686] Rahmadi Sunoko and Hsiang-Wen Huang, 'Indonesia Tuna Fisheries Development and Future Strategy' (2014) 43 *Marine Policy* 174.
[687] Robert Gillett, Mike A McCoy, and David G Itano, *Status of the United States Western Pacific Tuna Purse Seine Fleet and Factors Affecting Its Future* (University of Hawaii Joint Institute for Marine and Atmospheric Research Contribution No 02-344, 2002) <http://imina.soest.hawaii.edu/PFRP/soest_jimar_rpts/gpa_amer_samoa.pdf>.
[688] Elizabeth Havice and Kristin Reed, 'Fishing for Development? Tuna Resource Access and Industrial Change in Papua New Guinea (2012) 12(2–3) *Journal of Agrarian Change* 413.

to discuss the particularly intimate relationship these states have formed with major fishing firms in tuna GPNs.[689]

Additional background on FAAs is required to demonstrate the extent to which DWFSs support fishing firms. In tuna FAAs, access is generally defined as 'permission to use a defined fishing effort in an EEZ for a particular period'.[690] Most tuna FAAs are between the government of a DCS—a 'host state' with limited capacity to fish tuna stocks in its own EEZ—and either a DWFS government or fishing firm (or association) headquartered in a DWFS. The terms of FAAs often include licensing fees as well as sustainability and compliance requirements for the fishing fleet being granted access.[691] The negotiating process for FAAs can vary and may involve both government and industry actors. FAAs are often bilateral, though one exception is a multilateral agreement between the US and 17 PICs.[692] FAA negotiations are often closed to observers and their terms may not be available to the public.[693] As was mentioned in Section II A, 'fish for aid' FAAs tie bilateral aid payments and programs for DCSs to fisheries access for DWFS fleets. This arrangement is understood as a form of 'subsidisation' of a DWFS's tuna fishing industry.[694]

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[689] At the national level, DWFSs provide fuel, shipbuilding, and financing subsidies to support their DWF industries. A substantial literature examines WTO negotiations to discipline these fisheries subsidies. See, e.g., Margaret Young, *The 'Law of the Sea' Obligations Underpinning Fisheries Subsidies Disciplines* (International Centre for Trade and Sustainable Development Reference Paper, 14 November 2017).

[690] Mwikya (n 665) ix.

[691] '[FAAs] outline fishing provisions for distant water vessels and define vessel operators' responsibilities, including *inter alia*: vessel and/or effort limits, licensing procedures, reporting requirements and vessel identification requirements': Havice (n 622) 981.

[692] Known as the 'US Multilateral Treaty' or 'South Pacific Tuna Treaty', the US multilateral FAA with PICs was first signed in 1987: *Treaty on Fisheries Between the Governments of Certain Pacific Island States and the Government of the United States of America*, opened for signature 2 April 1987, [1987] PITS 2 (entered into force 15 June 1988) as at 3 December 2016 ('*South Pacific Tuna Treaty*'). It has been renewed four times and the current renewal period extends to 2022: see *Agreed Record on Amendments to the Treaty on Fisheries Between the Governments of Certain Pacific Island States and the Government of the United States of America* (Senate Treaty Document 115-3) <https://www.congress.gov/treaty-document/115th-congress/3/document-text>. The combination of fisheries access fees and development assistance provided to PICs in the treaty has risen from 12 million to 98 million USD per year: Ministry of Commerce, Industry, Labour and Immigration, Solomon Islands, *Re-Negotiated US Tuna Treaty Provides More Benefits for Pacific* (Ministry Updates, 7 December 2016) <https://www.commerce.gov.sb/activities-updates/news/ministry-updates/53-re-negotiated-us-tuna-treaty-provides-more-benefits-for-pacific.html>. See generally Jope Tarai, 'The New Pacific Diplomacy and the South Pacific Tuna Treaty' in Greg Fry and Sandra Tarte (eds), *The New Pacific Diplomacy* (Australian National University Press, 2015) 237.

[693] Mwikya distinguishes between 'open' and 'closed' FAA negotiations: 'A negotiation for fishing access is termed "closed" when the public is not informed of the negotiation process, there is no real consultation prior to the negotiation, and the details of the ensuing agreement are not published': Mwikya (n 665) 9.

[694] Mwikya distinguishes between 'access fee subsidies' and other subsidies associated with access:

> Access fees, shipbuilding subsidies and financial subsidies are the main subsidies associated with fisheries access agreements in most countries. There are myriad of other subsidies associated with fishing access,

The diversity of FAAs reflects different negotiating strategies among the major DWFSs and fishing firms. For instance, the EU only enters into bilateral FAAs.[695] EU FAAs—(re)branded 'Sustainable Fisheries Partnership Agreements'—consist of financial compensation for fishing a defined quantity of tuna.[696] As was noted earlier, the US, by comparison, has entered into the only multilateral FAA, which involves the payment of a lump sum for a fishing period, with no limitation on catch during this period.[697] Both the EU and US FAAs for tuna are between governments and the terms are published;[698] 70-80% of access fees contained in the EU and US FAAs are paid by governments.[699] In contrast, private sector associations and fishing firms from Japan and other East Asian states negotiate bilateral FAAs with coastal state governments and pay access fees directly.[700] The governments of these states attend negotiations as observers.[701] Commentators argue that government observers in these negotiations 'formally and informally couple aid to access negotiation outcomes'.[702] In this negotiating modality, access fee payments are based on catch reported at agreed landing ports in the region and the terms for the agreements are not published.[703] Perhaps as a consequence of these different negotiating strategies, the resource rents reflected in tuna FAAs with DWFSs are believed to vary between 2% and 8% of the

including vessel transfer subsidies, subsidies for joint ventures [second-generation FAAs], transhipment and landing subsidies and subsidies associated with the processing of catch obtained from access agreements: ibid 21.

Mwikya notes that in the WTO context, it is debatable whether *access fee subsidies* can be considered a straightforward subsidy (as compared to other subsidies associated with access) because many coastal state fleets operate in their EEZs without paying fees. According to Mwikya, 'Assigning subsidy status to access fees needs to take into account a broad analysis of the taxation context within which both the domestic and DWF fleets operate': at 22.

[695] Ibid 10–1; Havice (n 622) 983–4.

[696] Mwikya (n 665) 5.

[697] See above (n 692). Over time, the treaty has incorporated limits on fishing effort in the form of 'vessel days': see Havice (n 622).

[698] Mwikya (n 665) 9.

[699] Ibid 21.

[700] China, Japan, and Taiwan's FAAs are typically either with industry associations (multiple firms) or individual firms and considered private agreements with the coastal state: ibid 8. (Although the Chinese government appears to have entered into some bilateral FAAs with DCSs in the 1980s: cf Tabitha Mallory, 'China's Distant Water Fishing Industry: Evolving Policies and Implications' (2013) 38 *Marine Policy* 99, 101.) Major industry associations in these states are: the Chinese Overseas Fisheries Association, the Japan Tuna Fisheries Co-operative Association, and the Taiwanese Deep-Sea Tuna Longline Boat Owners and Exporters Association. While the governments of China, Japan, and Taiwan only observe FAA negotiations, they actively maintain close relationships with their DWF firms. See, e.g., Marcus Haward and Anthony Bergin, 'Taiwan's Distant Water Tuna Fisheries' (2000) 24 *Marine Policy* 33, 39–40; Marcus Haward and Anthony Bergin, 'The Political Economy of Japanese Distant Water Tuna Fisheries' (2001) 25 *Marine Policy* 91, 96.

[701] Mwikya (n 665) 8.

[702] Havice and Campling, *Articulating Upgrading* (n 202) 719.

[703] Mwikya (n 665) 7–8.

value of the tuna resource.[704] The form and content of FAAs thus show wide variation, though DWFS governments provide direct and indirect support to fishing firms in all cases.

A problematic aspect of the support provided by DWFS governments to fishing firms is the continuing practice of embedding foreign aid in FAAs. These 'access fee subsidies' are one of many fisheries subsidies paid by DWFS governments to support fishing firms.[705] Sumaila et al estimate that worldwide fisheries subsidies totalled approximately 35 billion USD in 2016.[706] Fisheries subsidies contribute to overcapacity in DWFS fleets by artificially enabling these fleets to extend their range to distant waters around the globe without market feedback.[707] Petersen contends that access fee subsidies are particularly disadvantageous to DCSs seeking higher resource rents because of the 'large financial risks associated with the possibility of aid withdrawal'.[708] Petersen surmises that fish for aid FAAs constrain DCSs' ability to capture greater surplus value and utilise tuna fisheries as a source of economic development.[709] In this vein, Mwikya concludes that, 'In their current form, the agreements tend to be exploitative and are not in line with international agreements on poverty eradication and sustainable development'.[710] FAA negotiations thus reveal how DWFSs engage with tuna GPNs to counter the interests of coastal states. These states mediate the economic relations between coastal states and fishing firms in a way that mingles geopolitical dynamics (like the provision of foreign aid) with commercial struggles over surplus value.

C *Processing States*

Major processing states in tuna GPNs are closely associated with lead firms, much like fishing states. Two areas in which processing states interact with tuna GPNs are international trade policy and government ownership of processing plants. In the first instance, major

[704] Published figures on resource rents in FAAs are generally not specific to tuna. Resource rent figures for the US are not adjusted for the most recent iteration of its multilateral treaty with PICs. Mwikya estimates that resource rents in Japan FAAs are 5% and FAAs with Taiwan and China are 6%: ibid 8. Adjusting for unreported catch, Belhabib et al estimate resource rents in FAAs with EU and China are 4% and 8% respectively: Dyhia Belhabib et al, 'Euros vs. Yuan: Comparing European and Chinese Fishing Access in West Africa' (2015) 10(3) *PLoS One* 0118351: 1–22.
[705] Mwikya estimates that 'DWF fleets rarely pay more than 30 percent of the total access fee': Mwikya (n 665) 21.
[706] Ussif Rashid Sumaila et al, 'Global Fisheries Subsidies: An Updated Estimate' (2016) 69 *Marine Policy* 189.
[707] Ussif Rashid Sumaila et al, 'The World Trade Organization and Global Fisheries Sustainability' (2007) 88 *Fisheries Research* 1.
[708] Petersen (n 672) 227.
[709] Ibid.
[710] Mwikya (n 665) 16.

processing states attempt to negotiate a favourable international tuna trade regime with market states.[711] In the second, minor processing states enter into joint ventures to establish onshore processing in their coastal communities, typically as part of a second-generation FAA. In this scenario, minor processing states interact with various branded or nonbranded manufacturers and trading firms. In general, processing states are interested in the capture of surplus value from the middle portion of tuna GPNs, whether it be through direct government revenue or indirect economic benefits (for example, employment in coastal communities) from processing plants.

It is currently estimated that over forty states around the world host tuna processing plants.[712] Thailand and Philippines are major processing states in tuna GPNs. Thailand alone processes up to one-quarter of the world's canned tuna.[713] Originally, the dominant players in tuna processing were the EU, US and Japan.[714] After the early 1980s, however, canned tuna production in these states was overtaken by highly efficient, strategically-situated archipelagic states with low-cost labour (such as Indonesia, Thailand and Philippines), as well as emerging East Asian states (such as South Korea and Taiwan).[715] As has been discussed, SIDS, such as Seychelles in the IO and PNG in the WCPO, have also leveraged preferential trade agreements granting them duty-free access to end markets and proximity to tuna resources to entice onshore investment in processing plants through second-generation FAAs.[716]

Processing states seek to protect their processing operations through the positions they take in international trade negotiations. In these states, processing plants not only generate revenue for national economies, but also provide a source of employment and further spin-off work (such as in transport and secondary markets) to coastal populations.[717] International trade agreements undergird the economic viability of processing plants in developing states. The international tuna trade regime offers preferential access to markets in developed states such

[711] Campling, *Trade Politics* (n 638).
[712] Campling, Havice, and Ram-Bidesi (n 614).
[713] Hamilton et al (n 590) 155.
[714] Ibid153.
[715] Ibid 156.
[716] Campling, *Trade Politics* (n 638) 226.
[717] Barclay, *History of Industrial Tuna Fishing* (n 583) 409–10.

as in the EU and US for different classes of DCSs.[718] For instance, there are currently separate tuna trading regimes between the EU and major processing states in Southeast Asia, on the one hand (under the EU Generalised System of Preferences (GSP) regime), and minor processing states in Africa, the Caribbean, and the Pacific (referred to as ACP states under Economic Partnership Agreements), on the other.[719] These differences have formed the basis of controversial negotiations at the WTO, including subsequent arbitrations with the EU instigated by Thailand and Philippines.[720] Processing states actively endeavour to shape the environmental conditions of production for tuna GPNs through attempts to influence the structure of the international tuna trade regime.

Processing states that enter into joint ventures with lead firms are directly implicated in the processing node of tuna GPNs. Joint ventures are most common in SIDS, where states attempt to capture additional surplus value by tying onshore investment in processing plants to long-term access to tuna stocks in their waters through second-generation FAAs.[721] SIDS typically face major challenges achieving economies of scale to host processing plants. They utilise fisheries access to incentivise firms to invest in onshore processing plants that are less efficient than processing operations in the archipelagic 'hubs' (Thailand or Philippines).[722] Examples of the challenges SIDS face include less-skilled and efficient labour,[723] limited infrastructure, constrained water resources, and high costs for transport and freight fees (including for importing processing materials, such as cans, and exporting finished products to end markets).[724] Havice and Campling have investigated examples of joint ventures in several case studies.[725] Their work demonstrates that the economic and social outcomes of

[718] 'The EU and US tariff regimes play a major role in shaping the structure of global tuna production. Tuna canneries in Africa, Latin America and the Pacific islands tend to focus on the EU market, largely as a direct result of tariff preferences, while those in Southeast Asia supply the US, Japan *and* the EU': Campling, *Trade Politics* (n 638) 224 (emphasis in original).
[719] Ibid 222.
[720] See Elizabeth Bennett, Helene Rey-Valette, and Zhen Kun Wang, 'Analysis of the Impact of Opening Up the EU Import Market for Canned Tuna on ACP Countries' in Roman Grynberg (ed), *WTO at the Margins: Small States and the Multilateral Trading System* (Cambridge University Press, 2006) 562.
[721] See above (n 622).
[722] 'For most investors, fishing, not onshore activities, is the investment incentive; those firms that invest in processing plants will require more licenses than are necessary to supply the plant. The longevity of the investment depends on the operational costs, available labor force, product quality and market access considerations': ibid 982.
[723] Hamilton et al (n 590) 156; Campling, Havice, and Ram-Bidesi (n 614) 21.
[724] Kate Barclay and Ian Cartwright, *Capturing Wealth From Tuna: Case Studies from the Pacific* (Australia National University Press, 2007) 12–3.
[725] See Havice and Campling, *Articulating Upgrading* (n 203); Campling, *Upgrading in Seychelles* (n 203); Havice and Reed (n 688). Campling and Havice explore another case study of 'upgrading' in American Samoa

these joint ventures are often mixed for SIDS, especially in cases where they are dealing with lead firms in tuna GPNs.[726]

In summary, major processing states focus on the terms of the international tuna trade regime and its implications for firms within tuna GPNs. These states express the interests of firms—typically nonbranded manufacturers—in international trade negotiations with market states. Conversely, minor processing states, particularly SIDS, leverage their role as coastal states to 'upgrade' in tuna production chains in the hope of capturing additional surplus value from tuna production.[727] In these cases, SIDS typically enter into a joint venture with lead firms in tuna processing and/or trading. Ideally, joint ventures provide SIDS with an opportunity to leverage the commercial expertise and trading infrastructure of lead firms.[728] Empirical studies have revealed that these attempts have yielded mixed results in terms of both value capture and socio-economic outcomes for SIDS. In both cases, processing states interface with, and in the case of major players such as Thailand, represent the interests of lead firms in tuna GPNs.

D *Trading States*

The top trading firms in canned and raw tuna GPNs are headquartered in Taiwan, the US, and Japan. This analysis uses the category of a 'trading state' to assist in describing the geographic distribution of tuna GPNs. However, it acknowledges that the interactions between trading firms and the governments of states in which they are headquartered is not well studied. Furthermore, while trading firms regularly observe TRFMO negotiations and even participate in FAA negotiations, the nature of their relationships with state actors is unclear.

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in: Liam Campling and Elizabeth Havice, 'Industrial Development in an Island Economy: US Trade Policy and Canned Tuna Production in American Samoa' (2007) 2(2) *Island Studies Journal* 209.

[726] For a discussion of the social and environmental impacts of joint ventures on coastal communities in SIDS, see also Barclay, *History of Industrial Tuna Fishing* (n 583).

[727] Havice and Campling define the concept of 'upgrading' in political economy research as the following: 'In its ideal-typical, linear formulation, upgrading, and capturing associated "development" gains, involves linking with lead firms in a particular chain and moving "up" the chain to more rewarding functional positions or to making products that have more value added and provide better returns to producers': Havice and Campling, *Articulating Upgrading* (n 203) 2614. The authors adopt a critical view of the concept of 'upgrading' by arguing against a linear view of economic development: at 2614–6.

[728] See H.F. Campbell and A.J. Hand, 'Joint Ventures and Technology Transfer: The Solomon Islands Pole-and-Line Fishery' (1998) 57 *Journal of Development Economics* 421, 422–3.

The three major trading firms in the canned tuna GPN are FCF Fishery Co. Ltd. (originally Fong Cherng Fishery Company Ltd.), Tri Marine (owned by the Bolton Group), and Itochu.[729] These firms concentrate their operations in the WCPO, however the larger two—FCF and Tri Marine—also have operations in the IO.[730] All three are multinational corporations and exhibit complex organisational structures. Trading states are identified according to the location of each trading firm's global headquarters: FCF is headquartered in Taiwan; Tri Marine in the US (while Bolton Group headquarters are in Amsterdam); and Itochu in Japan.

Whereas trading firms in the canned tuna GPN include multinational ownership, lead trading firms in the raw tuna GPN are exclusively headquartered in Japan. This is because tuna destined for sashimi markets does not require as much processing and therefore trading in sashimi-grade tuna occurs largely within Japan, where the largest sashimi market is located. Campling, Lewis, and McCoy estimate that, in 2006, four trading companies supplied approximately 65% of sashimi-grade tuna to the Japanese market.[731] The authors identify the 'big four' sashimi trading firms as Toyo Reizo (a subsidiary of Mitsubishi), Try Sangyou, Fukuichi, and Yamafuku.[732]

E *Market States*

Market states are motivated by two (often conflicting) forces which link them with tuna GPNs. The first motivation is the connection between market states and lead firms in the retail node of tuna GPNs. These firms wield enormous downward pressure on other nodes. Market states represent the interests of these firms through the negotiating positions they take on the international tuna trade regime concerning terms and standards for tuna product imports, often countering the efforts of processing states described in the previous section. Second, market states are home to the majority of consumers for tuna products, who are increasingly sensitive to the environmental impacts of industrial tuna fishing activities. The

[729] These trading firms are listed in order of the magnitude of the tuna catch they trade: Hamilton et al (n 590) 137–152.
[730] Ibid 146, 140, 149. See also Cliff White, 'Tri Marine Sold to Bolton Group' *Seafood Source* (Web Page, 8 July 2019) <https://www.seafoodsource.com/news/business-finance/tri-marine-sold-to-bolton-group>. See also FCF Co., Ltd., *Learn Who We Are* (Web Page, 2020) <http://www.fcf.com.tw/program/who-we-are/>; Tri Marine, *About Us* (Web Page, 2020) <http://www.trimarinegroup.com/about-us-2-2/>.
[731] Campling, Lewis, and McCoy (n 614) 88.
[732] Ibid.

governments of market states are, therefore, responsible for conveying the normative concerns of consumers in domestic and international fisheries policy.

The major end markets for tuna products are located in the EU, US, and Japan. Known as the global 'Triad', these three markets in the developed world consume the bulk of internationally traded fish.[733] Campling notes that the Triad has continued to dominate the international fish trade, even while new markets have emerged among the expanding middle classes of Asia.[734] These three market states are also among the original fishing states for tuna species, having initiated government-sponsored industrial tuna fishing activities in the 1950s. After the 1980s, however, their dominance in industrial tuna fishing has waned even as they have maintained market power.[735]

The three core market states interact with different tuna GPNs as a result of their consumption of different tuna products. For example, the major end markets for canned tuna continue to be the EU and US, where demand developed in the 1950s after diminished sardine stocks and rising canned salmon prices created consumer markets for canned tuna.[736]

Of these two markets, the EU is the largest. The EU imports both canned tuna and pre-cooked frozen loins, which processors use for domestic canning. Within the EU, the top three markets are Spain, Italy, and France.[737] The major suppliers of canned and processed tuna to the EU market (outside of the EU) are Ecuador, the Philippines, Mauritius, Seychelles, PNG, and China.[738] Hamilton et al estimate that the average level of corporate concentration with respect to firms selling canned tuna in the grocery market of EU member countries is 67.3%.[739] The firms that make up this corporate concentration are well-known national brands (such as John West, Princes, and Calvo), as well as the private brands of major supermarkets like Tesco and Carrefour.[740]

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[733] Campling, *Trade Politics* (n 638) 221.
[734] Ibid.
[735] Ibid.
[736] Hamilton et al (n 590) 241.
[737] FAO, Maria Catalano et al, *Globefish Highlights: A Quarterly Update on World Seafood Markets October 2018 Issues with Jan-Jun 2018 Statistics* (Globefish Highlights Series No 4, October 2018) 23 <http://www.fao.org/3/ca2830en/CA2830EN.pdf> '*Globefish Highlights*'.
[738] Ibid.
[739] Hamilton et al (n 590) 250. On corporate concentration, see also above (n 629).
[740] Ibid.

The US is the second largest market for canned tuna. Like the EU, the US imports canned tuna and pre-cooked frozen loins for domestic canning. The US also dominates global consumption of canned albacore (approximately 55% to 60%).[741] Major suppliers of canned and processed tuna to the US market are Thailand, China, Ecuador, and Vietnam.[742] Corporate concentration is also high in the US market. While there are competitive dynamics between national brands and supermarket private labels, 80% of canned tuna sales in US retail markets still flows to the so-called 'big three' brands: Bumble Bee, StarKist, and Chicken of the Sea.[743] Demand for canned tuna in these markets has stabilised, though future growth is expected in emerging developing regions—including in Latin America, the Middles East, and Eastern Europe—where the largest tuna fishing grounds are not located.[744]

The sashimi market is concentrated in Japan, which comprises 80% of the global market.[745] Campling, Lewis, and McCoy estimate that Japan annually imports approximately 160,000 mt of sashimi-grade tuna.[746] Japan's sashimi market is supplied by a combination of domestic landings by Japanese-flagged vessels and imports. As this traditional Japanese delicacy has grown in popularity since the 1990s, smaller markets have also proliferated across the US, EU, and other parts of Asia.[747] In recent years, the US has constituted an additional 8-10% of the market.[748]

Campling, Lewis, and McCoy break down the Japanese sashimi market into two types of 'channels' through which sashimi-grade tuna is distributed in Japan.[749] The first are 'traditional channels', through which mostly fresh sashimi-grade tuna is traded in government-regulated wholesale markets.[750] In these wholesale markets, either whole, or gilled and gutted individual fish are traded via auction sales.[751] Buyers at these auctions include: intermediate wholesalers (who are licensed to resell in a shop or stall in the market area); third party unlicensed buyers (who are from smaller supermarkets or convenience

[741] Ibid 170.
[742] *Globefish Highlights* (n 737) 23.
[743] Hamilton et al (n 590) 176.
[744] Ibid.
[745] Ibid 303.
[746] Campling, Lews and McCoy (n 614) 14.
[747] Hamilton et al (n 590) 303.
[748] Ibid.
[749] Campling, Lewis and McCoy (n 614) 83–4.
[750] Ibid 83.
[751] Ibid.

stores); and authorised buyers (who include major firms, such as sashimi trading companies, supermarkets, processing firms, and restaurant chains).[752]

The second are 'unofficial channels' through which frozen sashimi-grade tuna bypasses (or only partly flows) through the government-regulated wholesale markets.[753] Campling, Lewis, and McCoy have documented the increasing dominance of the 'big four' tuna trading companies in the Japanese sashimi market. The authors estimate that these large trading companies use unofficial channels for up to 80% of their sales.[754] These researchers contend that commercial relationships between the 'big four' trading firms and large retailers and supermarkets (which control approximately 70% of the retail food market in Japan) have shifted the sale and distribution of sashimi-grade tuna in Japan away from the traditional—and more transparent—government-regulated wholesale markets.[755]

Market states like the EU, US, and Japan leverage their buying power to forge links between their DWF fleets, national processors, and domestic markets (i.e. lead firms). Havice and Campling use the term 'production system' to describe these links, which are 'often cemented commercially through financial or contractual relationships, and by government policy through protective tariffs on imported competition and strict rules of origin for preference receiving competitors [e.g. ACP states]'.[756] Part of the way market states create production systems is through the imposition of quality standards on tuna imports. This is particularly true for the EU and US markets in the canned tuna GPN. One example is the EU's 'rules of origin' (RoO) in tuna trade agreements with ACP states.[757] Another is the EU's 'IUU Regulation' which is directed at preventing the import of IUU fish into the EU market.[758] The EU argues that these rules are intended to promote the development of ACP countries and deter IUU fishing, but scholars like Campling and Tsamenyi et al have demonstrated that they often have the consequence of advantaging the EU DWF fleet.[759]

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[752] Ibid.
[753] Ibid.
[754] Ibid 87.
[755] Ibid 95. 'With the growing dominance of trading companies and large retailers in the trade of frozen sashimi-grade tuna, distribution systems have become increasingly complex and opaque': at 89.
[756] Campling, Havice, and Ram-Bidesi (n 614) 225.
[757] For a description of EU RoO, see Campling, *Upgrading in Seychelles* (n 203) 225–36.
[758] See generally Martin Tsamenyi et al, *Fairer Fishing? Trade and Fishing Policy Implications for Developing Countries of the European Community Regulation in Illegal Fishing* (Commonwealth Secretariat, 2009).
[759] Campling argues the following:

At the same time as they support the dominant positions of lead firms (and the perverse economic logics they perpetuate), market states also advocate for normative concerns on behalf of consumers. These concerns are reflected in increasing consumer awareness regarding the sustainability of tuna GPNs as well as their environmental (for example, bycatch and related species) and social (for example, IUU fishing, human trafficking and forced labour) impacts.[760]

Fishery certification programs and their associated eco-labels, like that of the Marine Stewardship Council (MSC), have leveraged consumer awareness to place pressure on actors in the tuna industry to improve their production practices and thereby gain access to premium markets.[761] The rising profile of these issues and their interface with tuna GPNs has resulted in attempts at normative leadership from market states like the EU across different policy arenas. Miller et al describe how the EU has attempted, through both trade regulations and normative leadership, to integrate new regulations concerning IUU fishing in the canned tuna production network of the WCPO.[762]

To conclude, market states located in the developed world interface with both lead firms and consumers in tuna GPNs. This often produces fundamental tensions between their representation of lead firm interests and rising concerns among consumers over the various adverse impacts of tuna fisheries on the marine environment and the wellbeing of vulnerable coastal populations. The major market states also have overlapping identities as major fishing states, which often place pressure on them to advance lead firm interests (and the high-volume/low-cost economic logics these firms perpetuate), while striving to be perceived as

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> Rules of origin determine the extent to which a trade preference can be commercially utilised or not, and EU RoO for fish (especially in relation to tuna) were a source of contention in ACP-EU trade relations since the 1970s. The evidence firmly suggests that EU RoO for fish were designed and enforced as a commercial support for the EU DWF: Campling, *Upgrading in Seychelles* (n 203) 248.

Campling concludes this because EU RoO 'make ACP-based processors captive buyers of the [EU] fleet's raw material sales': at 313. See also Tsamenyi et al (n 758) 65–6.

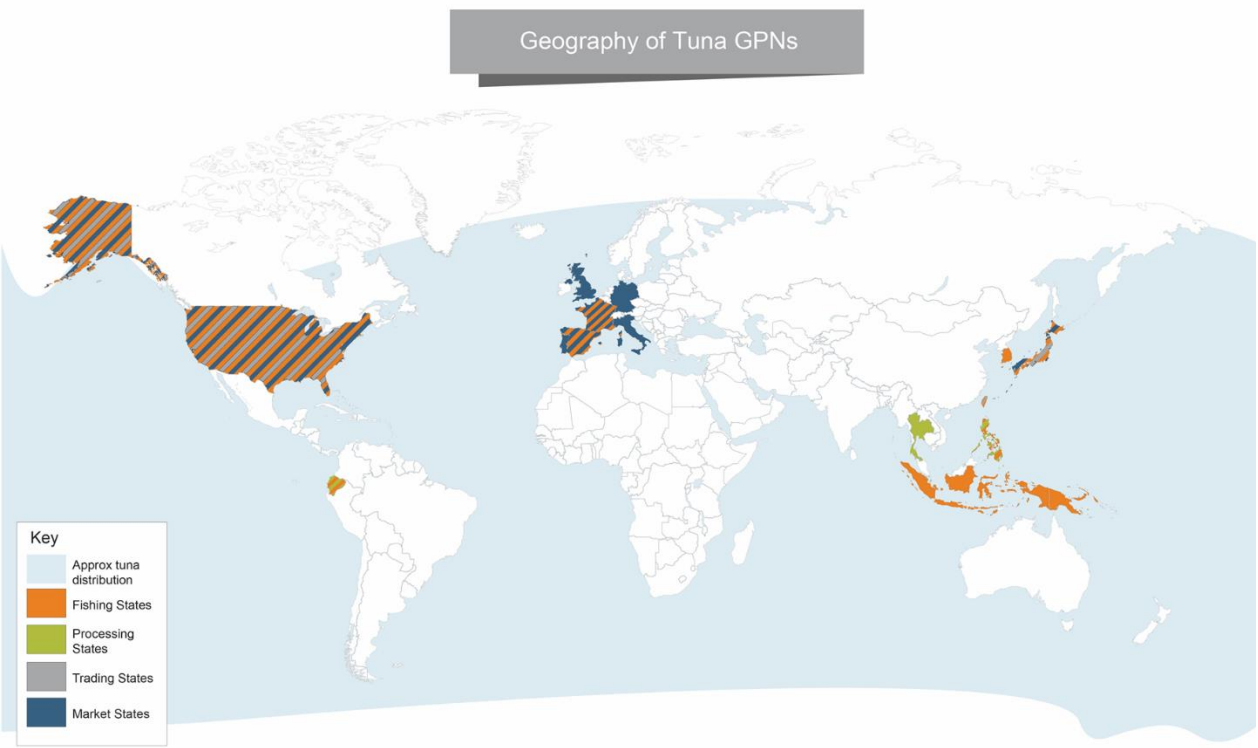
[760] WWF, Greenpeace and PEW have carried out consumer awareness campaigns to achieve sustainable and socially responsible tuna fisheries. See, e.g., '2017 Tuna Shopping Guide', *Tuna Shopping Guide* (Web Page, 2017) <http://www.greenpeace.org/US/oceans/tuna-guide/>. These NGOs regularly attend TRFMO meetings as observers. One classic example of the impact of consumer awareness on tuna management actions is the influence of the 'dolphin-safe' eco-label on US policy in the 1990s: see Elizabeth DeSombre, *Domestic Sources of International Environmental Policy: Industry, Environmentalists, and U.S. Power* (MIT Press, 2000).

[761] See Alice Miller and Simon Bush, 'Authority Without Credibility? Competition and Conflict Between Ecolabels in Tuna Fisheries' (2015) 107 *Journal of Cleaner Production* 137.

[762] Alice Miller, Simon Bush, and Arthur Mol, 'Power Europe: EU and the Illegal, Unreported and Unreported Tuna Fisheries Regulation in the West and Central Pacific Ocean' (2014) 45 *Marine Policy* 138.

environmentally responsible. Finally, a visualisation of the distribution of global tuna stocks and major fishing, processing, and market states in tuna GPNs is provided in Figure 7 below.

Figure 7: Map of Major States in Tuna GPNs[763]



III TRFMOs, Environmental Conditions of Production for Tuna GPNs and Distributional Struggles Among States

Because TRFMO members negotiate and implement regulatory regimes for tuna fishing activities in multiple oceanic regions, TRFMO members are in the critical position of contributing to the environmental conditions of production for tuna GPNs. Consequently, TRFMO members bring their engagement with tuna GPNs to bear on the positions they take in TRFMO negotiations. This section investigates instances where these positions produce areas of contestation within the purview of work undertaken by TRFMOs. These areas reflect conflicts, primarily between DCSs and DWFSs attempting to capture surplus value from tuna GPNs.

[763] Dr. Indiah Hodgson-Johnston helped format this figure.

A *Overview of TRFMOs and the Fishing Node within Tuna GPNs*

TRFMOs have developed increasingly sophisticated and responsive regulatory approaches to the management of transboundary tuna fisheries. These approaches cover a range of functions, from contentious negotiations regarding levels and distributions of catch and effort limits to the practical and often technical tasks of data collection and MCS activities. While it is difficult to capture the full range of TRFMO functions and regulatory techniques, this section provides a brief overview. It shows that TRFMOs directly impact the fishing node of tuna GPNs through the application and enforcement of fishing regulations, as well as the collection of critical data from tuna fishing vessels.

TRFMOs engage in the full cycle of fisheries management, which includes devising, monitoring, and enforcing tuna fisheries regulations in the oceanic regions under their jurisdiction.[764] TRFMOs establish regulatory frameworks to limit levels of tuna catch (number of fish taken from the fishery) and/or effort (number of different types of fishing vessels operating in the fishery).[765] As part of setting these limits, TRFMOs are involved in deciding how limits will impact on different states in their memberships. To enforce these regulatory frameworks, TRFMOs develop compliance procedures to assess how well states conform to their regulatory commitments.[766] TRFMOs and their Secretariats, in particular, derive compliance data through a triangulation of self-reporting from members, tuna trading data, and sophisticated MCS tools.[767] As part of this task, TRFMOs also participate in enforcement, enacting remedial procedures against violators, including through prohibitions on specific vessels confirmed to have participated in IUU fishing.[768]

These regulatory processes directly shape the fishing node in tuna GPNs. Fishing regulations adopted by TRFMOs limit the number of tuna fishing vessels and the size of their catch. If they do not obey TRFMO regulations, tuna fishing vessel operators risk exclusion from the

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[764] See Allen (n 26) 8.
[765] See Quentin Grafton et al, 'The Economics of Allocation in Tuna Regional Fisheries Management Organizations' in Robin Allen, James Joseph, and Dale Squires (eds), *Conservation and Management of Transnational Tuna Fisheries* (Blackwell Publishing, 2010) 155, 156-7; Lodge et al (n 66) ch 4. For an updated review of the approaches to allocation adopted by the five TRFMOs, see also Katherine Seto et al, 'A Global Analysis of Allocation in Transboundary Tuna Fisheries Management' (forthcoming).
[766] See Lodge et al (n 66) ch 5.
[767] Ibid.
[768] The practice of 'blacklisting' non-member (and, in some instances, member) vessels that have been engaged in IUU fishing ('IUU vessel lists') is common practice in the TRFMOs: see ibid 61.

fishery. Vessel operators must also collaborate with fishing firms and states to provide data to TRFMO Secretariats for both scientific and compliance purposes. On an ultimate level, TRFMO fishing regulations limit the total volume of raw material supply within tuna GPNs. On a proximate level, the precise distribution of catch and/or effort limits between EEZs (areas under national jurisdiction) and high seas (areas beyond national jurisdiction) in TRFMOs has enormous implications for relations between actors in tuna GPNs, most obviously between coastal and fishing states negotiating fisheries access. These examples show only a minimum of the different ways in which TRFMOs are integral to the flow of value within tuna GPNs.

B *TRFMOs: A Site of Distributional Struggle Over Value Capture*

As this chapter has discussed, Havice and Campling demonstrate that TRFMOs indirectly manage interests in tuna GPNs through their contribution to the environmental conditions of production. As a consequence of this role, TRFMOs tend to be sites where actors engage in 'distributional struggles' to directly and indirectly influence tuna production. Havice and Campling refer to the concept of *distributional struggle* to describe conflicts among actors seeking to increase the surplus value they capture from tuna production.[769]

Consequently, TRFMOs are implicated in distributional struggles among economic actors within tuna GPNs. Both states and firms affect, and are affected by, TRFMO negotiations that shape the flow of value within tuna GPNs. As TRFMO members, states are in complex positions as regulators *and* economic actors in tuna GPNs. By contrast, firms attempt to indirectly influence TRFMO negotiations through inclusion on government delegations and by leveraging their collaborations with the state in tuna GPNs.[770] Firms directly (and more transparently) engage in TRFMO decision-making through industry associations, which are often included as observers in TRFMO meetings. These dynamics establish the field for distributional struggle within TRFMOs.

According to Havice and Campling, states, firms, and industry associations engage in distributional struggles within tuna GPNs. While distributional struggles occur among a

[769] See above (n 203).
[770] Matilda Tove Petersson et al, 'Patterns and Trends in Non-State Actor Participation in Regional Fisheries Management Organizations' (2019) 104 *Marine Policy* 146.

diversity of economic actors, this section focuses on distributional struggles between *DWFSs and DCSs at the fishing node* of tuna GPNs. This focus reflects the primary occupation of this thesis, which is to examine *state behaviour* regarding differentiation within TRFMOs. Consequently, the concept of distributional struggle in this thesis critically frames TRFMO negotiations with the political economic drivers that condition members' negotiating positions and the policy outcomes that follow.

1 *Areas of Distributional Struggle within TRFMO Work that Impact on DCSs*

This thesis is primarily concerned with how the outcomes of legal debates concerning differentiation impact on intragenerational equity for DCSs within TRFMOs. Intragenerational equity for DCSs is closely related, in GPN parlance, to *the ability of these states to capture surplus value from tuna GPNs*. While TRFMO negotiations influence many aspects of tuna GPNs, this section therefore focuses on TRFMO debates concerning the ability of DCSs to capture surplus value at the fishing node of tuna GPNs.

States seeking to capture value at the fishing node are impacted by two central factors related to TRFMO work: (i) regional tuna allocations; and (ii) control over both knowledge of tuna stocks and information on tuna fishing activity in the region. These factors reflect fundamental parts of TRFMO work; namely, how TRFMOs allocate tuna catch and/or effort to their members and provide financial assistance for technical capacity building activities to developing members.

The link between these areas of TRFMO work and value capture can generate protracted debate among members in TRFMO negotiations. These debates reflect the distributional struggles that can potentially underwrite TRFMO decision-making between DCSs and DWFSs. In order to strengthen their negotiating position in these debates in the TRFMOs, DCSs have devised subregional strategies and institutions to independently address these factors. In doing so, DCSs have increased the value they capture from tuna stocks in their waters. The following section sets out the two main areas for distributional struggle between DCSs and DWFSs in TRFMO decision-making and reviews how DCSs have responded to these issues over time.

2 *Area of Distributional Struggle I: Tuna Catch and/or Effort Allocations*

Regional allocations are a contested area of TRFMO work that directly shapes distributive struggles among actors in tuna GPNs.[771] TRFMOs set overall limits on levels of catch and/or effort within tuna fisheries.[772] These limits translate directly to the total supply of raw material to tuna GPNs. In turn, allocations of these limits among TRFMO members influence the amount of value states and firms are able to capture from tuna stocks. The distribution of allocations inside or outside areas under coastal state jurisdiction determines the amount of value captured by coastal states and fishing firms. When allocations are *inside areas under the jurisdiction of coastal states*, FAAs are required, and coastal states capture a portion of value through ground-rents. Conversely, when allocations are *outside areas under the jurisdiction of coastal states*, no FAAs are required. Fishing firms enjoy the entire value captured from these allocations and the degree to which coastal states capture value is limited to their highly constrained (less numerous and efficient) domestic fleets.[773] TRFMOs therefore face significant challenges in determining members' allocations due to contestation over their distributive implications for coastal and fishing states.

TRFMOs employ two possible approaches to regional allocation. The first approach involves the adoption of catch and/or effort limits in specific conservation and management measures. This approach is usually based on the historical catches and/or effort levels of TRFMO members and is necessarily fragmented, ad hoc, and short term. The second approach entails the establishment of a general system for allocation based on specific, predetermined criteria.[774] This approach is systematic, long term, and uses a previously agreed basis for present and future allocation decisions. Most TRFMOs operate on the basis of the former approach. The only TRFMO that determines allocation using a systematic approach is

[771] For a condensed review of the early development of allocation frameworks in RFMOs and their distributive impacts on states, see Palma (n 81) 73–6.
[772] TRFMOs have several options for setting and allocating limits for tuna fisheries. For instance, a TRFMO may choose to set output (i.e. catch) or input (i.e. effort) controls or provide explicit (i.e. assigning limits to individual members) or implicit (i.e. de facto limits for a particular reference period) allocations to members. For an overview, see ibid 114–5.
[773] Douglas McCauley et al, 'Wealthy Countries Dominate Industrial Fishing' (2018) 4(8) *Science Advances* eaau2161: 1–9.
[774] This practice generally constitutes 'rights-based management' in tuna fisheries. For a discussion of the types of rights and allocations that can form the basis of this system in tuna fisheries, see Robin Allen et al, 'Rights-Based Management in Transnational Tuna Fisheries' in Robin Allen, James Joseph, and Dale Squires (eds), *Conservation and Management of Transnational Tuna Fisheries* (Blackwell Publishing, 2010) 65.

CCSBT, which due to the nature of the SBT stock, does not exhibit the same pattern of contestation between coastal and fishing states as other TRFMOs.[775]

This area of distributional struggle is linked to distributive equity for DCSs. The two approaches to regional allocation forecast radically different distributive outcomes for DCSs. This is because regional allocations based on historical catch and/or effort tend to favour established DWF fleets.[776] As Chapter 2 discussed, most examples of differentiation in IFL avoid directly addressing distributive equity for DCSs.[777] However, in the context of high seas allocations, *UNFSA* provides a notable exception by obliging states to 'facilitate' DCSs' access to high seas fisheries.[778] This provision may provide a basis for preferential high seas catch and/or effort allocations for DCSs.[779] However, it should be noted that neither the WCPFC nor IOTC differentiation frameworks incorporate this obligation. Chapter 6 explores Policy Examples concerning the WCPFC and IOTC's efforts to implement longer-term approaches to regional allocations.[780] In this context, distributional struggles focus on a classic case of clashing interests between DCSs and DWFSs.

3 *Area of Distributional Struggle II: Increased Funding for the Effective Participation of Developing States*

The ability of states to translate their interests into outcomes at TRFMO negotiations partly depends on the nature and extent of their involvement in tuna fisheries management processes. This includes the deliberative, scientific, and compliance-related procedures undertaken by TRFMOs. The procedural power states gain through their participation in these processes shapes how well they represent their interests at TRFMO meetings and indirectly impacts upon their ability to capture value from tuna GPNs.

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[775] Seto et al (n 765). Allocations are determined, to varying degrees, by periodic, direct negotiations among members in all five TRFMOs and are heavily influenced by historical catch levels. CCSBT is unique among the TRFMOs because it has a small membership and is responsible for a single tuna stock. CCSBT allocations are based on a management procedure—the Cape Town Procedure (formerly known as the Bali Procedure)—which sets a global TAC every three years and assigns relative catch limit allocations to members and non-members in the SBT fishery. See CCSBT, *Resolution on the Adoption of a Management Procedure*, 26th reg sess, 14–17 October 2019; CCSBT, *Resolution on the Allocation of the Global Total Allowable Catch*, 24th reg sess, 9–12 October 2017.
[776] See also Chapter 1 Section I C.
[777] Chapter 2 Section II.
[778] *UNFSA* (n 10) art 25(1)(b).
[779] See Chapter 2 Section I B2(e).
[780] See Chapter 6 Section I.

TRFMOs and their Secretariats oversee funding and training programs for developing members to increase their competencies in different areas of tuna fisheries management.[781] The majority of this work in TRFMOs remains uncontroversial and is categorised as capacity building or development activities. Debates among members occur, however, with respect to funding for more effective and increased participation of DCSs in TRFMO deliberative processes. From the perspective of value capture in tuna GPNs, these debates reflect the possibility that DWFSs are circumspect about enhancing the ability of DCSs to effectively represent their interests at TRFMO meetings.

It is clear to most observers of TRFMO meetings that there are glaring asymmetries in the size and capacities of government delegations.[782] DWFS delegations often include a large number of well-briefed government officials from various fisheries and foreign affairs departments, as well as industry representatives. Conversely, DCS delegations are appreciably smaller and often face challenges in sending more than one delegate to the various meetings convened by TRFMOs and their subsidiary bodies throughout the year. These delegations do not typically include representatives from different government departments or industry.

DCSs can struggle to effectively represent their interests in TRFMO meetings which require institutional knowledge of the relevant TRFMO, scientific expertise, and technical know-how in fisheries management.[783] The limited size of DCS delegations also poses a challenge when TRFMOs convene simultaneous working groups and other informal negotiations that require delegations to spread delegates across simultaneous meetings. The financial resources available to assist DCSs to increase the size of their delegations is often constrained within

[781] There is currently no review of the capacity building activities and programs undertaken by all five TRFMOs.

[782] See, e.g., the lists of participants in the meeting reports of recent regular sessions of the WCPFC and IOTC: WCPFC, *Summary Report*, 15th reg sess, 10-14 December 2018, 81-131 ('*WCPFC15 Summary Report*'); IOTC, *Report for the 23rd Session of the IOTC*, IOTC-2019-S23-R_rev1[E], 17-21 June 2019, 24-9 ('*IOTC23 Summary Report*').

[783] Havice and Campling highlight this issue:

> On a more day-to-day level, [PICs] struggle with the Commission policy making process, including: the costs associated with attending meetings, engaging in multiple negotiating issues, and diplomatic coordination to develop regional positions among a range of island states. The effect is that [PICs] are unable to fully participate in Commission negotiations: Havice and Campling, *Shifting Tides* (n 594) 104.

TRFMOs, despite the unique challenges DCSs (and, in particular, SIDS) face in their ability to perform as enfranchised negotiators at TRFMO meetings.

Finally, access to digestible scientific knowledge and compliance information concerning tuna stocks and fishing activities also determines the ability of states to represent their interests at TRFMO negotiations. A disparity in this area also arises in TRFMO memberships between well-briefed DWFSs, with delegates who specialise in science and compliance, and DCSs with smaller, less-specialised delegations who might attend meetings without formal briefings.

TRFMOs do not directly address this disparity. Rather, TRFMO Secretariats convene training workshops for scientists and fisheries managers from DCSs. They also support and fund tuna-related data collection activities in DCSs. In addition, data input services for TRFMO Secretariats often employ DCS nationals in TRFMO MCS activities. While the institutional disadvantages of DCSs in TRFMOs do not directly concern value capture at the fishing node, they are an important procedural element of distributional struggle because the ability of members to advocate for their interests in TRFMO negotiations corresponds with their ability to shape the environmental conditions of production.

This area of distributional struggle is associated with procedural equity for DCSs. It strikes at DCSs' perceptions of whether TRFMO decision-making is fair and legitimate, which, as Chapter 2 showed, was a concern for DCSs when the 'regional approach' was originally espoused during *UNFSA* negotiations.[784] An element of effective participation, DCS participation in TRFMO meetings is referred to in both *UNFSA* and the differentiation frameworks of the WCPFC and IOTC.[785] Chapter 6 explores Policy Examples related to the financing of special funds that address negotiating asymmetries among DCSs and DWFSs.[786] Like regional allocations, the full and effective participation of DCSs in TRFMO meetings is also part of classic distributional struggles between DCSs and DWFSs.

[784] See Chapter 2 Section I B2(d).
[785] Chapter 3 Section III.
[786] See Chapter 6 Sections II, III.

C *Subregionalism: A Response to Distributional Struggles in TRFMOs*

Distributional struggles within TRFMOs produce mixed results, both for transboundary tuna management and for brokering divergent interests among actors attempting to capture value in tuna GPNs. DCSs have responded by strengthening subregional strategies and institutions to address the contestation arising from distributional struggles with DWFSs, and have consequently improved their ability to capture value. Subregionalism accomplishes this primarily through strengthening the collective bargaining power of DCSs and expanding their institutional capacity to: (i) effectively participate in TRFMO deliberative processes; (ii) contribute to the depth of scientific data and knowledge on regional tuna stocks; and (iii) take part in the collection of compliance data on regional tuna fishing activity.

Studies that investigate how DCSs leverage subregionalism to push against power asymmetries with DWFSs document these subregional processes and focus on the ways these dynamics impact FAAs and TRFMO allocations.[787] The next section previews this literature's assessment of subregionalism among DCSs and expands the scope of these studies to include the institutional aspects of subregional strategies, which indirectly empower coastal states to better represent their interests by making them more informed and coordinated negotiators in TRFMOs.

Subregional strategies enable coastal states to wield their collective bargaining power in tuna fisheries. These strategies can empower them to increase the value of ground-rent in fisheries access negotiations, constrain fishing activity in areas outside of national jurisdiction, and strengthen their negotiating positions concerning the compatibility of region-wide allocations at TRFMOs. In the WCPO, a subregional grouping of DCSs called the Parties to the Nauru Agreement (PNA) has accomplished these three outcomes through collective action. By combining fisheries access to their waters and charging for access through their 'Vessel Day Scheme' (VDS), PNA members have increased the ground-rent for their tuna resources from

[787] See, e.g., Havice (n 622); Miller, Bush, and van Zweiten (n 213); Transform Aqorau, 'How Tuna is Shaping Regional Diplomacy' in Greg Fry and Sandra Tarte (eds), *The New Pacific Diplomacy* (Australian National University Press, 2015) 223; Quentin Hanich, Hannah Parris and Martin Tsamneyi, 'Sovereignty and Cooperation in Regional Pacific Tuna Fisheries Management: Politics, Economics, Conservation and the Vessel Day Scheme' (2010) 2(1) *Australian Journal of Maritime and Ocean Affairs* 2; Andriamahefazafy, Kull, and Campling (n 673).

3% to 13%.[788] In addition, they have linked access to their combined waters with a ban on fishing in the high seas 'pockets' between their EEZs, effectively constraining fishing outside areas under their jurisdiction.[789] Finally, PNA members have also used this access arrangement to make arguments for compatible measures on the high seas at their relevant TRFMO, the WCPFC.[790] Notably, the PNA has emerged from a complex and multi-decadal legacy of tuna-related subregionalism and institution-building among DCSs in the WCPO.[791]

Subregional institutions empower coastal states to participate in TRFMOs as enfranchised negotiators. Subregionalism has taken on increasingly permanent institutional forms in recent years to include Secretariats. These Secretariats and their staff engage with coastal states to ensure their effective participation in TRFMO negotiations. Subregional institutions may provide separate funding streams to sponsor the attendance of DCS delegates to TRFMO meetings. In addition, these institutions may also lead in-depth briefings on points of common interest among DCSs prior to TRFMO meetings. Subregional institutions may further specialise in particular aspects of transboundary tuna management, such as scientific research or MCS activities. The work of these institutions both feeds information to DCSs and engages in capacity development activities which further enhance their ability to represent their interests at TRFMO negotiations.

CONCLUSIONS

This chapter describes the structure of the global tuna industry and the role TRFMOs play in determining how key actors capture value from tuna production. The chapter finds that the outcomes of TRFMO negotiations influence the ability of states and firms to capture value from the tuna industry. It demonstrates that states interact with the nodes of tuna GPNs, both as independent economic actors and representatives of firm interests. The roles states play in tuna GPNs converge on TRFMO negotiations and inform core distributional struggles between DCSs and DWFSs. It also points to the ways in which some DCSs have leveraged

[788] World Bank, John Virdin, *Pacific Possible: Tuna Fisheries* (World Bank Pacific Possible Working Paper No 1, 25 August 2017) <http://documents.worldbank.org/curated/en/966441503678446432/Tuna-fisheries> 63 ('*Pacific Possible*'). But see FFA, *Tuna Fishery Report Card 2019* (Tuna Fishery Report Card No 5, August 2019) <https://www.ffa.int/system/files/tuna%20fishery%20report%20card%202019%20WEB.pdf> 3. The World Bank's estimate of resource rents in the WCPO purse seine fishery is derived from 2014 figures. In 2019, the FFA reported that overall resource rents for WCPO tuna fisheries are likely to increase to 25% by 2020.
[789] See Miller, Bush and van Zweiten (n 213) 11–4.
[790] Ibid 10–1.
[791] See Chapter 4 Section III C2.

subregionalism to increase their bargaining power and negotiating competency at TRFMO meetings. With the strategies of DCSs in mind, the next chapter investigates how distributional dynamics in tuna GPNs likely inform contestation among members of the WCPFC and IOTC.

CHAPTER 4: POLITICAL ECONOMY OF THE WESTERN AND CENTRAL PACIFIC OCEAN TUNA INDUSTRY

This chapter introduces the first regional case study for comparing how TRFMOs design and apply legal differentiation. The WCPO region presents an exceptional context for studying the political-economic dynamics of transboundary tuna management because it contains the world's largest and most valuable tuna fishery and greatest concentration of SIDS. With the political economy of WCPO tuna production in the foreground, this chapter establishes the link, discussed in Chapter 3, between distributional struggles between DCSs and DWFSs and differentiation within TRFMOs. The chapter provides a record of PICs and DWFSs implicating the WCPFC in distributional struggles between them and demonstrates that differentiation within the WCPFC may relate to these states' economic interests in WCPO tuna production.

PICs command access to the majority of WCPO tuna resources through a vast network of EEZs. Representing the majority of DCSs in the WCPO, PICs play an active role in bilateral and multilateral levels of transboundary tuna management. Over time, PICs have looked to exercise their sovereign rights to tuna resources in pursuit of economic development and tuna conservation objectives. With the aspiration of driving tuna-led economic development, PICs have employed multiple strategies to increase their value capture from WCPO tuna production. They have pursued these strategies, with varying degrees of success, in the context of shifting commercial and regulatory environments.

PICs have engaged in distributional struggles with DWFSs and foreign firms to increase their value capture and expand their participation across all tuna GPN nodes. This chapter discusses literature examining the viability of tuna-led economic development in PICs, shedding light on how the political power exercised by DWFS governments on behalf of their fishing fleets and the shifting economic organisation of the tuna industry have insinuated barriers to their ability to derive economic gains from tuna resource rights. In particular, work by Havice and Campling reveals that WCPFC negotiations have been underwritten by distributional struggles between PICs and DWFSs in tuna GPNs.

This chapter examines the current state of knowledge concerning political economic dynamics in the WCPO tuna industry. Section I summarises the WCPO tuna fishery and its contemporary fleet dynamics. Section II sets out a brief, state-focused overview of the WCPO tuna industry (using the typology devised in Chapter 3), providing a profile of how WCPFC members interact with the WCPO tuna industry.[792] Section III investigates how WCPFC members' economic interests in the WCPO tuna industry generate distributional struggles between PICs and DWFSs over value capture. The chapter demonstrates that, by endeavouring to advantage their economic interests *through* the WCPFC, PICs and DWFSs implicate WCPFC policy outcomes in distributional struggles within tuna GPNs. This case study reveals that distributional struggles among states within the WCPO tuna industry are likely to inform how the WCPFC applies differentiation advantaging PICs.

I Overview of WCPO Tuna Fishery

In terms of both volume and value, the WCPO tuna fishery is the largest and most significant in the world for global tuna production. The multi-species, multi-gear nature of the fishery enables it to dominate tuna production for both canned and raw tuna GPNs. In 2018, tuna catch in the WCPO accounted for 55% of worldwide commercial tuna catch.[793] Since 1994, the WCPO has consistently produced approximately 50% of global tuna supply.[794] For the top four commercial tuna species, the WCPO has contributed, on average, over 60% to global skipjack catches, over 50% to albacore catches, 35% to yellowfin catches, and 25% to bigeye catches.[795] The WCPO's regular contribution to the bulk of global tuna supply, as well as its significant contribution to high-value sashimi markets, distinguishes the region's tuna fishery as the most productive and valuable in the world.

Despite year-to-year fluctuations, the volume and value of total tuna catch in the WCPO has followed a fairly consistent upward trajectory since the 1980s. In 2017, the total volume of tuna catch in the WCPO was estimated to be over 2.5 million mt[796] (compared with the

[792] See Chapter 3 Section II.
[793] WCPFC, Peter Williams and Chris Reid, *Overview of Tuna Fisheries in the WCPO Including Economic Conditions—2018*, WCPFC-TCC15-2019-IP05, 15th reg sess, 25 July 2019, 2 <https://www.wcpfc.int/node/43832> ('*Overview of WCPO Tuna Fisheries 2018*').
[794] The percentages in the report by Campling, Havice, and Ram-Bidesi are based on worldwide tuna catches up to 2007: Campling, Havice, and Ram-Bidesi (n 614) 15.
[795] Ibid.
[796] *Overview of WCPO Tuna Fisheries 2017* (n 51) 2.

highest catch on record—over 2.8 million mt in 2014[797]). The value of WCPO tuna catch has risen precipitously, from 375 million USD in 1982[798] to a recent valuation of 5.84 billion USD in 2017[799]. The industrial tuna fishery looms large over other fisheries in the region, in terms of both economic importance and magnitude. A study by the Asian Development Bank estimates that the WCPO tuna fishery is valued at seven times more than, and produces 10 times the catch of, all other fisheries in the region combined.[800]

Contemporary fleet dynamics and trends in tuna-related commercial activity in the WCPO began in the 1980s with additional entrants to the fishery and increasingly aggressive fishing practices. Whereas gradual rises in catch characterised the fishery for the majority of the 20th century, expansions in the purse seine and longline fisheries in the 1980s resulted in exponential catch increases that have been maintained to the present day, exhibiting only a slight dip in the late 2000s.[801] New entrants, such as China, Philippines, Indonesia, and recently, a number of PICTs, have further expanded and diversified the fishery.[802] In both purse seine and longline fisheries, intense competition drives fishing practices. This includes the use of fish aggregating devices (FADs) in the purse seine fishery,[803] and a pattern of increasing effort on new species, novel locations, and deeper areas of the water column in the longline fishery.[804]

II STATE-FOCUSED OVERVIEW OF WCPO TUNA INDUSTRY

Reflecting its importance in tuna GPNs, WCPO tuna production chains have been summarised in multiple studies on the political geography of tuna production—many of

[797] Ibid.
[798] Asian Development Bank (ADB), Robert Gillett et al, *Tuna: A Key Economic Resource in the Pacific Islands* (Pacific Studies Series No 121000, March 2001) 7 ('*Tuna: A Key Economic Resource*').
[799] *Overview of WCPO Tuna Fisheries 2017* (n 51) 3.
[800] Ibid 12.
[801] Barclay, *History of Industrial Tuna Fishing* (n 583) 154; *Overview of WCPO Tuna Fisheries 2017* (n 51) 2.
[802] *Overview of WCPO Tuna Fisheries 2017* (n 51).
[803] The use of targeted 'fish aggregating devices' (FADs), or man-made floating objects in tuna fisheries, started in the Atlantic Ocean in the early 1990s, and then expanded to the Indian and Pacific Oceans: Makoto Peter Miyake, Naozumi Miyabe, and Hideki Nakano, 'Historical Trends of Tuna Catches in the World' (FAO Fisheries Technical Paper No 467, 2004) 3. During this period, vessel operators and fishing companies observed that they could increase tuna catch by using floating objects for schools of tuna to associate with: Tim Davies, Chris Mees, and EJ Milner-Gulland, 'The Past, Present and Future Use of Drifting Fish Aggregating Devices (FADs) in the Indian Ocean' (2014) 45 *Marine Policy* 163, 165–6. Today, most FADs are fitted with a buoy and location-tracking technology (e.g. radio beacon or GPS) and can either be anchored or drifting. Since the 1990s, increasingly sophisticated FAD technology has increased the efficiency of purse seine vessels in the Pacific and Indian Oceans: Miyake et al (n 589) 29–30.
[804] Barclay, *History of Industrial Tuna Fishing* (n 583) 161.

which include Havice and Campling as contributors. The following section draws on these studies to convey the complex political-economic drivers that underlie negotiations among WCPFC members.[805] Recalling the GPN framework from Chapter 3, a state-focused overview of WCPO tuna production is provided. This overview is modelled on the state-based typology provided in Chapter 3 to map WCPO tuna production chains, including major coastal, fishing, processing and trading, and market states.[806] By investigating where WCPFC members fall in this typology of interactions with tuna GPNs, this section establishes a foundation for discussing how economic interests inform WCPFC policy, including how the WCPFC applies differentiation advantaging PICs to its management decisions.

A *WCPO Coastal States*

According to the UN, the WCPO region includes 13 SIDS, four archipelagic states, four LDCs, six territories and dependencies, and three industrialised states, listed in Table 2 below.[807]

[805] Aside from updating catch and effort data to reflect recent numbers, the following section does not present new data, analysis, or findings on the WCPO tuna industry, but merely reflects the current state of knowledge on the political economy of WCPO tuna production. WCPO catch and effort data, largely from 2016, was collated from recent versions of three primary sources. Unless otherwise noted, Section II is based on these sources: *Overview of WCPO Tuna Fisheries 2017* (n 51); SPC, *WCPFC Tuna Fishery Yearbook 2017* (Tuna Fishery Yearbook Series, 3 November 2018); FFA, *Value of WCPO Tuna Fisheries 2017* (Value of WCPO Tuna Fisheries Series, 5 July 2017). This overview excludes the WCPO pole and line and trolling fisheries because catches in these fisheries are either stagnating or declining, and comprise only a small portion of overall WCPO tuna fishery catch: *Overview of WCPO Tuna Fisheries 2017* (n 51) 22–3, 34. Since the time of writing, updates to these publications and WCPO catch and effort data have been made available for 2018. See *Overview of WCPO Tuna Fisheries 2018* (n 793); SPC, *WCPFC Tuna Fishery Yearbook 2018* (Tuna Fishery Yearbook Series, 5 November 2019) <https://www.wcpfc.int/doc/wcpfc-tuna-fisheries-yearbook-2017>; FFA, *Value of WCPO Tuna Fisheries 2017* (Value of WCPO Tuna Fisheries Series, 5 July 2017) <https://www.ffa.int/node/425>.

[806] The following analysis of state engagement with tuna GPNs is intended as a heuristic for considering how states interact with GPNs in the context of WCPO tuna production. It provides a general overview, of states that contribute *significantly* to WCPO tuna production and consumption and are major players within tuna GPNs. It is not an exhaustive description of all links between states and tuna GPNs, nor does it provide a complete analysis of how state and non-state actors relate with respect to WCPO tuna production. Rather, this typology simply draws together some of the current knowledge in political economy on the competing interests and commercial dynamics that may inform states' interests within WCPFC negotiations.

[807] For the purposes of this thesis, the 'WCPO region' refers to the boundaries of the WCPFC's area of application: *WCPF Convention* (n 46) art 3. Therefore, the following discussion excludes the South China Sea and its coastal states.

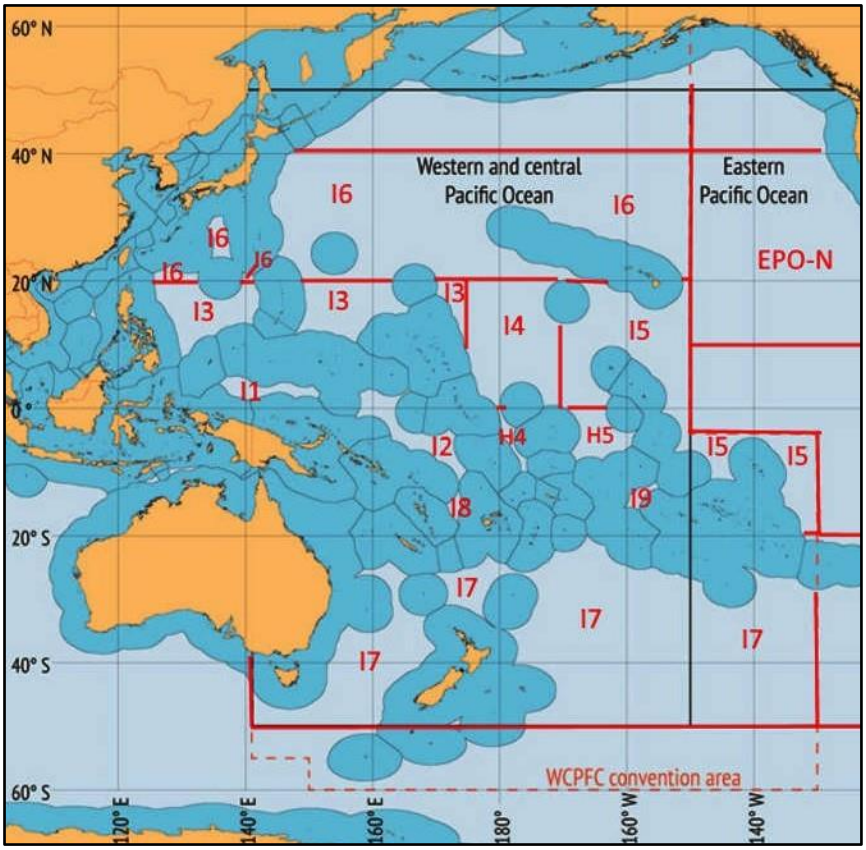
Table 2: List of WCPO Coastal States[808]

WCPO SIDS (PICs)	Other WCPO DCSs	WCPO Territories & Dependencies	Industrialised WCPO Coastal States
Cook Islands	Indonesia*	American Samoa	Australia
FSM	Philippines*	Northern Mariana Islands	New Zealand
Fiji*		French Polynesia	Japan
Kiribati		Guam	
RMI		New Caledonia	
Nauru		Tokelau	
Niue			
Palau			
PNG*			
Samoa			
Solomon Islands			
Tonga			
Tuvalu			
Vanuatu			

There are 11 recognised high seas areas within the WCPFC's area of application. Figure 8 provides an illustration of WCPO EEZs, indicated in dark blue shading, and high seas areas. As the map indicates, the WCPFC has assigned each high seas area a code. The four 'high seas pockets' (high seas areas that are completely enclosed by PIC EEZs) in the WCPO are: I1, I2, I8 and I9.

[808] States in bold are LDCs. States with an asterisk (*) were approved as archipelagic states at UNCLOS III.

Figure 8: EEZs and High Seas Areas in the WCPFC Area of Application[809]



In 2016, approximately 56% of overall WCPO tuna catch was taken from PIC EEZs. The largest catches were taken in Kiribati, PNG, FSM, Solomon Islands, Nauru, and Tuvalu. In non-PIC EEZs, substantial catches were also taken in Indonesia, Philippines, and Japan. By comparison, only 11% of the total catch was taken in high seas areas.

In identifying major coastal states in the WCPO region, it is important to distinguish between the purse seine and longline fisheries. The WCPO purse seine fishery is concentrated largely in PIC EEZs, where fleets track the migrations of tropical tuna species such as bigeye, skipjack, and yellowfin. In 2016, approximately 75% of total purse seine catch was taken from PIC EEZs and 9% from high seas areas. By contrast, the WCPO longline fishery is geographically dispersed—it has a tropical and southern component—and more evenly distributed between EEZs and high seas areas. In 2016, approximately 42% of total longline catch was taken from PIC EEZs and 20% from high seas areas. The tropical portion of the

[809] Senina et al (n 28) 11.

WCPO longline fishery targets bigeye and yellowfin, largely in the EEZs of FSM, Kiribati, Palau, Solomon Islands, and high seas areas. The southern portion targets albacore, principally in the EEZs of Cook Islands, Fiji, Solomon Islands, Vanuatu, and subtropical high seas areas. PICs currently exercise jurisdiction over a majority of the region's tuna resources, ranging from 42% to 75% of total catch of the WCPO longline and purse seine fisheries in 2016. Through the creative exercise of their tuna resource rights over time, PICs have actively leveraged these resources to provide both direct and indirect contributions to their national economies.[810]

Access fees play a particularly important role in the national economies of PICs. However, wealth from (and dependence on) access fee payments is unevenly distributed, both across the region and between the purse seine and longline fisheries. Mapping the distribution of access fees in 2014, Gillett estimates that PICs which received the largest payments were: Kiribati, PNG, FSM, Solomon Islands, RMI, and Tuvalu.[811] In certain PICs, such as Kiribati, Tuvalu, and Tokelau, access fee payments regularly account for over 50% of government revenue.[812] The value PICs capture from access fees in the purse seine fishery is dramatically higher than from the longline fishery. In 2015, the World Bank estimated that PICs earned approximately 13% of the value of purse seine caught tuna in their EEZs through access fees.[813] By comparison, the World Bank has estimated that PICs annually earn between 3% and 5% of the value of longline caught tuna in their EEZs—or approximately 10 to 15 million USD.[814] As major coastal states in the WCPO region, PICs face traditional struggles to capture surplus value from the tuna resources caught in their waters. This theme—the degree

[810] The Asian Development Bank study identified several ways industrial tuna fishing contributes to PIC economies: Gillett et al, *Tuna: A Key Economic Resource* (n 798) 11–34. These economic benefits include: access fee payments; foreign exchange earnings, taxes, and fines from tuna exports; direct employment in the tuna fishing and processing sectors; indirect employment in industries that support these sectors (e.g. transport and vessel servicing); port-based economic activities stimulated by locally based vessels and at-port transshipments; and commercial sport fishing: at 34. See also Robert Gillett, *Fisheries in the Economies of Pacific Island Countries and Territories* (SPC, 2nd ed, 2016) <https://coastfish.spc.int/component/content/article/462?lang=en> ('*Fisheries in PICT Economies*'); Robert Gillett and Mele Ikatonga Tauati, *Fisheries of the Pacific Islands: Regional and National Information* (FAO Fisheries and Aquaculture Technical Paper No 625, 2018).
[811] Gillett and Tauati (n 810) 37.
[812] According to Gillett, access fees comprise 75%, 58.3%, and 52.6% of government revenue for Kiribati, Tuvalu, and Tokelau, respectively: Gillett, *Fisheries in PICT Economies* (n 810) 488.
[813] Virdin, *Pacific Possible* (n 788) 38.
[814] Ibid.

to which PICs are successful in capturing surplus value from WCPO tuna production—is discussed at length in Section III.

B *WCPO Fishing States*

Industrial tuna fishing in the WCPO is carried out by a wide variety of fishing vessels. Multiple characteristics distinguish these vessels from one another, including their gear type and mode of fishing, target species, location of origin, operating base, and flag state. An important feature of vessels in the region is whether they fall into one of three categories based on their beneficiary vessel ownership and flagging arrangements:[815] (i) domestic PIC-flagged vessels; (ii) foreign PIC-flagged vessels (either locally based or chartered);[816] and (iii) DWFS-flagged vessels. These categories influence fleet dynamics in the WCPO by affecting the ability of different fleets to access the tuna rich EEZs of PICs. In 2017, domestic PIC-flagged vessels caught approximately 25% of total catch, while DWFS-flagged vessels caught 43%. In the same year, the most productive fishing fleets in the region were flagged to Indonesia, Japan, South Korea, Philippines, Taiwan, the US (and its territories), PNG, Kiribati, and China.[817]

C *WCPO Processing and Trading States: Thailand, Taiwan, the US, and Japan*

The lead processing and trading states in the WCPO are defined by their interconnectedness with other nodes in tuna GPNs. Thailand dominates processing in the WCPO and sources approximately 90% of its catch from the region.[818] In 2010, Thailand processed 700,000 mt

[815] Crigler (n 80) 14, 45–6.
[816] According to Crigler's analysis, Cook Islands, FSM, Fiji, Kiribati, RMI, Palau, PNG, Samoa, and Solomon Islands chartered a total of 120 foreign flagged (purse seine and longline) vessels in 2017: ibid 45–6.
[817] It is estimated that a total of 2,689 purse seine and longline vessels operated in the WCPO region in 2017: *WCPFC Tuna Fishery Yearbook 2017* (n 805) 115. While Indonesia and Philippines represent major fishing fleets in the WCPO due to their large domestic tuna fisheries, there is limited information available on the number of vessels flagged to these two states: at 108–113.
[818] Ibid 159.

of tuna from the WCPO.[819] The majority of tuna processed in Thailand is destined for markets in the US, EU, and Middle East.[820]

As Chapter 3 discussed, trading firms play an integral role in both the canned and raw tuna GPNs.[821] The three major trading firms in the canned tuna GPN—FCF, Tri Marine, and Itochu—reportedly source 70% of the catch they handle from the WCPO.[822] In contrast, major trading firms in the raw tuna GPN source more widely from multiple oceans and there is limited data available on the degree to which they source from the WCPO.

D *WCPO Market States: the EU, US, and Japan*

The majority of WCPO-sourced tuna products are destined for either canned tuna or sashimi markets. As Chapter 3 discussed, these markets represent the two major tuna GPNs, though there are minor markets in other 'value-added' tuna products.[823] The task of parsing out the total amount of WCPO-sourced tuna that flow into individual markets is difficult due to the complexity of tuna production chains. However, reflecting recent efforts to track commercial tuna catch from harvest to final point of sale, Drakou, Virdin, and Pendelton have attempted to map the destination of WCPO canned tuna production.[824] Their study estimates that the final markets for WCPO canned and processed tuna are distributed roughly as follows: the EU (30%), the US (19%), Asia (15%), Latin America (13%), the Middle East (6%), Australia and New Zealand (3%), Africa (2.7%), Eastern Europe (1.6%), and all other countries (7.5%).[825]

[819] Evangelia Drakou, John Virdin, and Linwood Pendleton, 'Mapping the Global Distribution of Locally-Generated Marine Ecosystem Services: The Case of the West and Central Pacific Ocean Tuna Fisheries' (2018) 31 *Ecosystem Services* 278, 283. The majority of purse seine caught tuna in the WCPO is thus sold to Thailand for processing. The remainder is processed in Japan, South Korea, PNG, and the Philippines. To a lesser extent, Ecuador, Vietnam, and Indonesia also process WCPO-caught tuna: at ibid.
[820] Hamilton et al (n 590) 164.
[821] Chapter 3 Section II D.
[822] Hamilton et al (n 590) 138.
[823] Chapter 3 Section II D.
[824] Drakou, Virdin, and Pendelton (n 819).
[825] Ibid 283.

E *Interests of Member States of the Western and Central Pacific Fisheries Commission (WCPFC)*

The state-focused description of WCPO tuna production in this thesis establishes a starting point for examining the political-economic drivers that underwrite WCPFC negotiations. Table 3 lists the major coastal, fishing, processing and trading, and market states involved in WCPO tuna production.[826]

Table 3: WCPFC Member States' Interactions with Tuna GPNs

Tuna GPN	WCPFC SIDS (PICs)	Other Developing WCPFC Members	Industrialised WCPFC Members
WCPO Coastal States			
Canned Tuna GPN	Kiribati, PNG, FSM, Solomon Islands, Nauru, Tuvalu, RMI	Indonesia, Philippines	Japan
Raw Tuna GPN	Kiribati, Solomon Islands, Fiji, Cook Islands, Vanuatu, Tuvalu		
WCPO Fishing States			
Canned Tuna GPN	PNG, FSM, RMI Solomon Islands	Indonesia	South Korea, US, Taiwan, Japan
Raw Tuna GPN	Fiji, Samoa, Vanuatu, Cook Islands, Palau, New Zealand, RMI, FSM		Japan, China, US, South Korea
WCPO Trading States			
Canned Tuna GPN			Taiwan, US, Japan
Raw Tuna GPN			Japan
WCPO Processing States			
Canned Tuna GPN		Thailand	
Raw Tuna GPN			Japan
WCPO Market States			
Canned Tuna GPN			EU, US
Raw Tuna GPN			Japan

Figure 9 provides a map of PICs' engagement with tuna GPNs as coastal and fishing states below.

[826] This table does not include PICs that are *minor* coastal and processing states in tuna GPNs. See above (n 806).

Figure 9: Map of PICs' Engagement with Tuna GPNs[827]

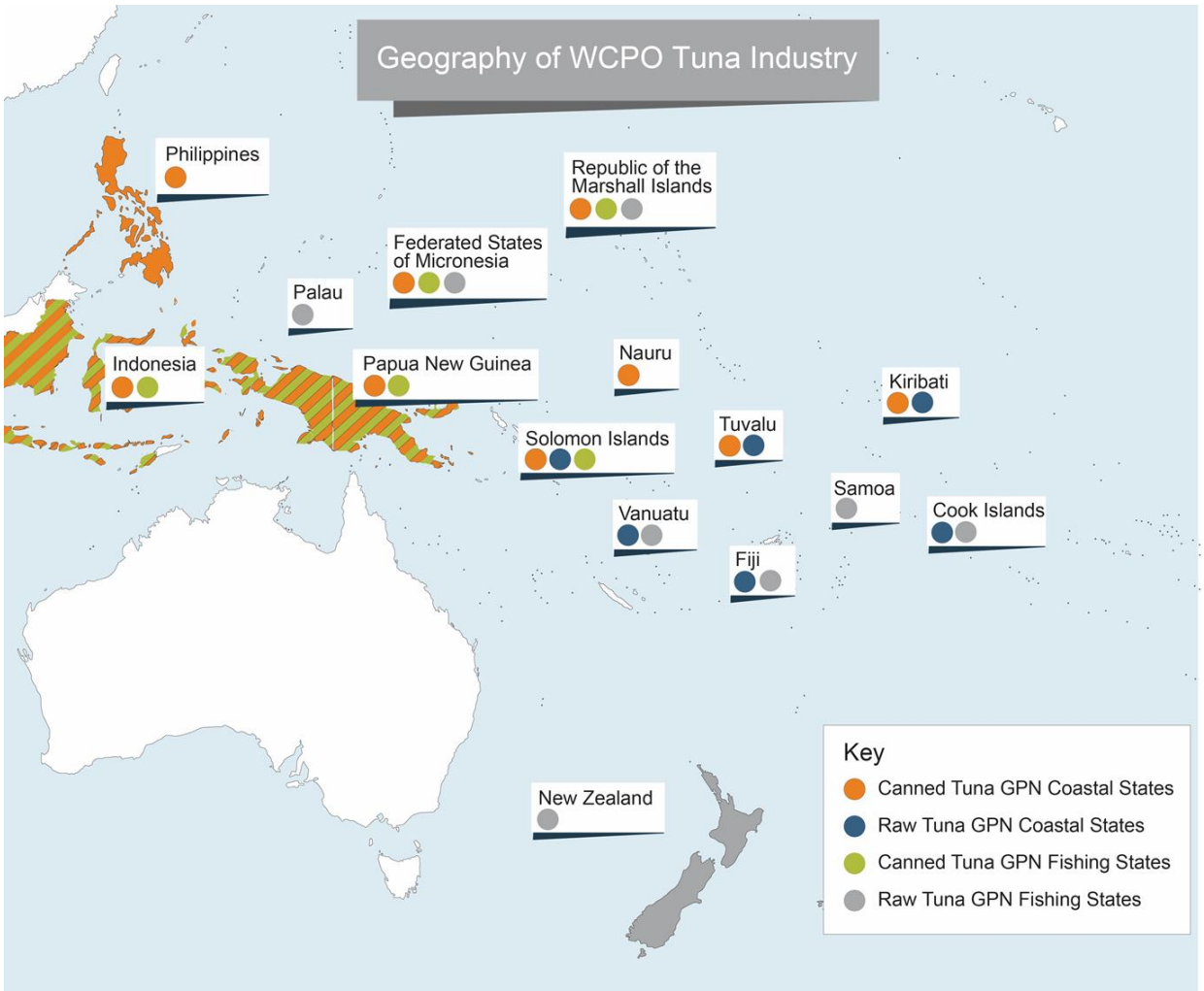


Table 3 and Figure 9 illustrate that the majority of WCPO tuna catches are harvested from the EEZs of island states, processed in nearby archipelagic states with economies of scale to support large-scale processing, traded by industrialised states with entrenched knowledge and longstanding relationships across tuna GPN nodes, and delivered to markets in developed states.

The description of the global tuna industry in Chapter 3 matches the patterns of engagement between states and the WCPO tuna industry shown in Table 3 and Figure 9. PICs and other DCSs are engaged with WCPO tuna production primarily at the fishing and processing nodes

[827] This figure displays the regional scope of the WCPO tuna industry. Therefore, WCPFC members from outside of the region are not included. Minor regional players within canned and raw tuna GPNs are also not included in this figure. See above (n 806). Dr. Indiah Hodgson-Johnston helped format this figure.

of tuna GPNs. As coastal, fishing, and/or processing states, WCPO DCSs interact with the lower-value end of the tuna production chain, where firms are under some of the most competitive pressures observed in tuna GPNs. Conversely, WCPO DWFSs operate across all tuna GPN nodes. This includes the trading and retail nodes of tuna GPNs, which are the higher-value end of the tuna production chain, and to which a major portion of surplus value from tuna production flows.

Lead trading and retail firms with significant coordinating power in the WCPO are headquartered in DWFSs. WCPO tuna production is therefore spatially organised to move tuna from the EEZs of the region's most economically challenged DCSs—PICs—to the markets of developed states in Europe, the US, and Japan. The spatial organisation of WCPO tuna production informs patterns of distributional struggle between WCPFC members. As established in Chapter 3, distributional struggles within TRFMOs reflect states' direct and indirect economic interests in tuna GPNs.[828] In the WCPO, the economic interests of PICs and DWFSs forecast these distributional struggles.

In a seminal study on transboundary tuna management in the WCPO, Hanich rigorously argues that members' economic interests influence WCPFC policy.[829] In the only detailed assessment of the commercial interests of members within a TRFMO, Hanich demonstrates that economic drivers constrain the political potentialities for tuna management within the WCPFC. He reviews the economic interests of states in the WCPO tropical tuna fisheries for bigeye, skipjack, and yellowfin, and assesses whether the constellation of interests represented by the WCPFC membership is likely to lead to much-needed regulatory steps towards bigeye conservation.[830] Hanich finds that conflicting interests between 'purse-seine/skipjack' and 'multiple gear' states render conservation action difficult, requiring a more transparent discussion of how WCPFC members distribute the economic burden of conserving bigeye.[831] Hanich essentially maps the vested interests of WCPFC members in the

[828] Chapter 3 Section III B.
[829] Quentin Hanich, 'Interest and Influence—Conservation and Management in the Western and Central Pacific Fisheries Commission' (PhD Thesis, University of Wollongong, 2011). See also the following report summarising Hanich's findings: Quentin Hanich, *Interest and Influence—A Snapshot of the Western and Central Pacific Tropical Tuna Fisheries* (Australian National Centre for Ocean Resources and Security Report, 2011) ('*Interest and Influence in WCPO Snapshot*').
[830] Hanich, *Interest and Influence in WCPO Snapshot* (n 829) ii.
[831] Ibid iv, 25–7.

fishing node, though he notes other processing and market interests.[832] Since Hanich's 2011 study, the WCPFC has taken steps to constrain bigeye catches in major revisions to its tropical tunas measure, which occurred most recently in 2017.[833] That year, reflecting Hanich's findings, WCPFC members agreed to adopt a tropical tunas measure that exceeded precautionary, scientifically recommended limits.[834] As political economy research on the WCPO tuna fishery has developed since the 1980s, studies like Hanich's and others have elucidated the inter-connections between WCPO tuna production and regulation.

III Distributional Struggle within the WCPFC

For over four decades, distributional struggles between PICs and DWFSs have shaped the political economy of WCPO tuna production. These distributional struggles predate the WCPFC, when they originally coalesced around contentious access relations in the early 1980s. Since then, they have escalated to encompass not just the fishing node, but all tuna GPN nodes. The current pattern of distributional struggle in the WCPO reflects how PICs have expanded their engagement with the tuna industry as a result of government policies to pursue tuna-led economic development. To advance these policies, PICs have sought to strike a balance between countering DWFSs in asymmetrical negotiations and partnering with lead firms in tuna GPNs. An understanding of PICs' commercial efforts and their precarious positioning within tuna GPNs is important to this thesis because the WCPFC differentiation framework explicitly focuses on increasing the economic benefits PICs receive from the WCPO tuna fishery.

Over time, PICs and DWFSs have developed different strategies to advantage their economic interests in the WCPO tuna industry. Several of these strategies implicate the WCPFC in distributional struggles between PICs and DWFSs. The second half of this chapter explores the distributional struggles that pervade WCPO tuna production to illuminate how members'

[832] Ibid v-vi. Hanich does not name processing and market states among the 14 with significant interests in the WCPO tropical tuna fisheries. He does, however, explore the canning and loining market interests of Thailand, the US, Japan, China, Philippines, South Korea, American Samoa, PNG, and Indonesia, as well as the interests of states with large consumer markets such as the EU, Japan, and the US: at 19–21.
[833] For an overview of the WCPFC tropical tunas measure, see Chapter 1 Section IV A. In 2018, the tropical tunas measure was revised to remove exemptions for some WCPFC members, though catch limits remained largely the same: WCPFC, *Conservation and Management Measure for Bigeye, Yellowfin and Skipjack Tuna in the Western and Central Pacific Ocean*, CMM 2018-01, 15th reg sess, 10–14 December 2018.
[834] Some WCPFC members argued for increasing these limits because of a cautiously optimistic stock assessment of bigeye in 2017: WCPFC, *Summary Report*, 14th reg sess, 3–7 December 2017, [236] ('*WCPFC14 Summary Report*').

interactions with the tuna industry inform WCPFC negotiations and are likely to influence how the WCPFC applies legal differentiation to tuna management.

This section begins by reviewing how PICs have operated in tuna GPNs to increase the value they capture from tuna production. It describes the distributional struggles with DWFSs that have followed, and explores scholarly literature assessing their efforts in the context of the unique political economy of WCPO tuna production. The section then discusses how DWFSs and PICs have employed 'interference' and 'cooperative' strategies, respectively, to advantage their economic interests *through* WCPFC policy.

A *PICs within Tuna GPNs*

PICs have explored opportunities to capture value across all three nodes of tuna GPNs via access fees, onshore processing, and the direct marketing and sale of tuna products. At the fishing node, PICs have negotiated increasing access fee payments in bilateral and multilateral FAAs,[835] and rapidly expanded PIC-flagged fishing fleets in recent years[836]. At the processing node, PICs have encouraged foreign investment in onshore processing.[837] These efforts began in the 1980s, when PIC governments began investing directly in joint ventures with foreign firms to establish locally based fishing fleets and processing facilities.[838] After many of these joint ventures failed, PIC governments renewed their efforts in the early 2000s by linking FAAs to onshore investment.[839] Under these FAAs, lead firms secured ongoing fishing access to some PIC EEZs in exchange for investments in local

[835] Adjusting for inflation, Gillett estimates that access fees payments to PICs have increased by over 800% from 15 million USD in 1982 to almost 350 million USD in 2014: Gillett, *Fisheries in PICT Economies* (n 810) 8, 495. More recent estimates place access fee revenues for PICs at well over 450 million USD: FFA, Peter Terawasi and Chris Reid, *Economic and Development Indicators and Statistics: Tuna Fisheries of the Western and Central Pacific Ocean* (Economic Indicators Report, 2017) 15 ('*FFA Economic Indicators Report*').
[836] No estimates are available for the economic benefits PICs receive from the tuna harvested by vessels they flag (both domestic and foreign). This is due to the fact that FFA reporting combines estimates of the economic contributions of PIC-flagged fishing fleets and PIC domestic processing operations to PIC GDPs: *FFA Economic Indicators Report* (n 835) 18. Even so, the FFA recently estimated that, in 2017, PIC-flagged fleets received 45% of the total share of WCPO tuna catch: FFA, *Tuna Fishery Report Card 2018* (Tuna Fishery Report Card No 4, 2018) 2.
[837] Currently, 17 canneries and loining factories operate in PNG, Fiji, Solomon Islands, RMI, and Kiribati: Gillett, *Fisheries in PICT Economies* (n 810). It is estimated that less than 10% of WCPO purse seine catch is processed by PICs and that approximately 11,000 PIC citizens are employed in processing operations in the region: ibid.
[838] Rachel Schurman, 'Tuna Dreams: Resource Nationalism and the Pacific Islands' Tuna Industry' (1998) 29 *Development and Change* 107.
[839] Havice (n 622).

processing facilities and requirements for their vessel operators to tranship in PIC ports.[840] At the retail node, one group of PICs—the PNA—directly sells and markets tuna to processing facilities and premium end markets.[841] Though PICs continue to be primarily engaged at the fishing node of tuna GPNs like other DCSs, their expansion into other nodes represents a remarkable, multi-decadal feat of island states overcoming adverse odds in the highly competitive global tuna industry.

B *Studies on Tuna-Led Economic Development in PICs*

Despite increasing their value capture and expanding their engagement with WCPO tuna production nodes, PICs have struggled historically to establish their position in tuna GPNs. Amidst the competitive pressures of tuna production chains, PICs have experienced successes and failures in 'upgrading' their interactions with tuna GPNs. With a view to this, political economists have examined the outcomes of PIC government policies to derive economic development from tuna resources. Perhaps singularly among these scholars, Havice and Campling situate PICs and their efforts to drive tuna-led economic development in the context of distributional struggles with DWFS governments and foreign firms.

PICs' experiences at the fishing and processing nodes of tuna GPNs illustrate some of these challenges. PICs have had mixed success in capturing value at these nodes, epitomised by a string of commercial failures that occurred after several multinational firms pulled out of joint ventures established through large public investments in the region in the 1990s.[842] These events attracted considerable scholarly interest in the mid-2000s and inspired multiple

[840] Ibid.
[841] See PACIFICAL, *About Pacifical* (Web Page, 2020) <https://www.pacifical.com/about-pacifical/>. MSC certification plays an integral role in the ability of PICs to sell and market their tuna directly to high-value, premium markets: Agnes Yeeting et al, 'Implications of New Economic Policy Instruments for Tuna Management in the Western and Central Pacific' (2016) 63 *Marine Policy* 45. In addition to the PNA's sale of MSC-certified 'free school' (caught by purse seiners without the use of FADs) skipjack and yellowfin, fishing firms in the Fiji Tuna Boat Owners Association (FTBOA) sell MSC-certified yellowfin, albacore, and bigeye caught in their longline fishery: MSC, 'Fiji Albacore, Yellowfin and Bigeye Tuna Longline' *Marine Stewardship Council: Track a Fishery* (Web Page, 2020) <https://fisheries.msc.org/en/fisheries/fiji-albacore-yellowfin-and-bigeye-tuna-longline/@@view>.
[842] Schurman (n 838).

studies debating the design of PIC government policies for achieving tuna-led economic development.[843]

Much of this research followed Schurman's original study of PICs' attempts to 'domesticate' their tuna industries through public investments.[844] Schurman locates PICs' efforts within the highly dynamic and competitive commercial environment of the tuna industry, concluding that, in the 1990s, PICs were poorly positioned to enter into tuna production chains.[845] Schurman argues that the choices made by PIC government officials at this time were not informed by knowledge of the industry but by 'resource nationalism', and that this policy orientation doomed their commercial efforts.[846] Nearly a decade later, several studies authored by development economists argued that PICs' weak domestic institutions, high operating costs, and lack of infrastructure diminished their comparative advantage to tuna resources to such an extent that PICs should abandon attempts to enter tuna production chains.[847] Writing in the early 2000s, these scholars recommended that PICs focus instead on cooperating with DWFSs to maximise access fee payments for their tuna resources and develop the governance capacity of domestic and regional institutions to manage tuna fisheries.[848]

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[843] See, e.g., Elizabeth Petersen, 'Economic Policy, Institutions and Fisheries Development in the Pacific' (2002) 26 *Marine Policy* 315; Ron Duncan, 'Troubled Fishing in Pacific Waters' (2006) 21(3) *Pacific Economic Bulletin* 98; Hannah Parris and R Quentin Grafton, 'Can Tuna Promote Sustainable Development in the Pacific?' (2006) 15(3) *Journal of Environment and Development* 269; Kate Barclay and Ian Cartwright, 'Governance of Tuna Industries: The Key to Economic Viability and Sustainability in the Western and Central Pacific Ocean' (2007) 31 *Marine Policy* 348; Rögnvaldur Hannesson, 'The Exclusive Economic Zone and Economic Development in the Pacific Island Countries' (2008) 32 *Marine Policy* 886; Tim Stephens, 'Fisheries-Led Development in the South Pacific: Charting a "Pacific Way" to a Sustainable Future' (2008) 39 *Ocean Development and International Law* 257; Havice and Reed (n 688).

[844] Schurman (n 838). Schurman states that in the 1990s, PIC government investments in the tuna industry included fishing vessels, aeroplanes, port infrastructure, and processing facilities: at 115.

[845] Schurman argues that as PICs made investments to enter the tuna industry in the 1990s, a spatial reorganisation of global tuna production was underway: ibid 120–3. Schurman shows that lead firms were moving away from a model of vertical integration and towards coordinating more dispersed modes of tuna production: at 122. In this new context, highly competitive players operating at low margins dominated tuna harvesting (e.g. firms based in South Korea, Taiwan, and later China) and tuna processing (e.g. firms in Thailand, Philippines, and Indonesia): at 122–3. During this time, the most profitable nodes of tuna production chains were trading and retail, both of which required extensive industry experience and professional networks to enter—which PIC local operations did not possess: at 123.

[846] Ibid 127–8.

[847] See Petersen (n 843); Parris and Grafton (n 843); Satish Chand, R Quentin Grafton, and Elizabeth Petersen, 'Multilateral Governance of Fisheries: Management and Cooperation in the Western and Central Pacific Tuna Fisheries' (2003) 18 *Marine Resource Economics* 329; Rögnvaldur Hannesson and John Kennedy, 'Rent-Maximization Versus Competition in the Western and Central Pacific Tuna Fishery' (2008) 1(1) *Journal of Natural Resources Policy Research* 49.

[848] See, e.g., Petersen (n 843) 320, 322–3; Parris and Grafton (n 843) 281–4.

In a study that updates Schurman's work by examining specific case studies of PIC government investments in tuna processing, Havice and Campling propose a broader perspective.[849] The authors contextualise the difficulties PICs faced during their early experiences in the tuna industry with a description of wider, 'mediating dynamics' that condition tuna-related economic development.[850] From Havice and Campling's perspective, PICs' mixed experiences reflect the non-linear development pathways of island states, which generally come at great political and financial cost to their governments.[851] Havice and Campling contend that, like other developing states, PICs are subject to industry dynamics in the broader global economic system that generate moments of investment and divestment, inclusion and exclusion, and upgrading and downgrading in tuna production chains.[852]

Havice and Campling also respond critically to the studies by development economists that suggest PICs shift their efforts away from entering tuna production chains.[853] Their critique of these studies draws out another theme relevant to investigating equity issues in TRFMOs—the prevailing neoliberal logic operating in fisheries management and scholarship. According to Havice and Campling, these studies 'assign blame' to PIC governments for their past commercial failures without acknowledging the political-economic forces that condition their engagement with tuna production chains.[854] By suggesting weak domestic institutions are solely responsible for frustrating PICs' efforts to achieve tuna-led economic development, these neoliberal studies fail to adequately account for the distributional struggles that characterise relations between PICs and other actors in tuna GPNs.[855] Havice and Campling detail how neoliberal framings of institutional failure produce 'methodologically and analytically weak' analyses:

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[849] Havice and Campling, *Articulating Upgrading* (n 203).

[850] Havice and Campling identify four 'mediating dynamics' that condition processes of inclusion and exclusion for developing states in commodity chains. They are world-market conditions; regulatory mechanisms; contingent state-firm relations; and environmental conditions of production: ibid 2617–8.

[851] Havice and Campling argue:

> The combination of mediating dynamics—in particular, small island states' control over the environmental conditions of production (a factor frequently absent from commodity chain studies)—explains the puzzle of why small island economies have survived in this highly competitive chain over a forty-year period. The mediating dynamics [also] provide a lens for revealing several nuances associated with "upgrading": that it is an historically highly changeable process, it is multiscalar and includes competition between production sites, and that its material outcomes are highly contingent: ibid 2624.

[852] Ibid 2616.

[853] Havice and Campling, *Shifting Tides* (n 594) 91–5.

[854] Ibid 91.

[855] Havice and Campling assert that: '[T]heir analysis lacks the framing of power relations required to explicate the underlying causes of this form of institutional failure. Further, to identify weak institutions as the primary

> Methodologically, neoliberals blame domestic governments, but ignore the contexts within which they operate. This creates a false dichotomy between internal and external relations and processes in an undeniably global industry. Analytically, neoliberals fail to acknowledge how relational political and economic dynamics among states and firms in a global industry influence not only the formulation and behavior of institutions, but also the exercise of political power and the manipulation of economic advantage when analyzing institutions and institution building.[856]

This compartmentalised, ahistorical view of WCPO tuna production and regulation is perhaps most apparent in these studies' recommendations to PIC governments, which recommend that PICs devote their efforts to developing rights-based management in the WCPFC through cooperation with DWFSs.[857] They maintain that, if the WCPO tuna fishery were rationalised at the WCPFC-level, PICs would achieve objectives such as rent maximisation, risk-sharing, and domestic, institutional capacity development.[858] As Chapter 1 discussed, neoliberal approaches to fisheries management favour rights-based management because it presents a solution that achieves economic efficiency while eliding distributional issues among fishers.[859] Havice and Campling articulate that, by recommending such a solution to PICs, these studies ignore the distributional struggles between PICs and DWFSs that have come to shape the political economy of WCPO tuna production.[860]

Tellingly, PIC governments have not taken up the recommendations of development economists. Informed by their early experiences, PICs today are involved in all three nodes of tuna production chains. In 2011, the PNA entered the retail node in an initiative to exercise greater control over the distribution and sale of MSC-certified, purse-seine caught skipjack in the WCPO.[861] PACIFICAL is a public-private partnership between the PNA and the Dutch trading company, 'Sustunable'.[862] The firm sells various products to processors and end markets in both the canned tuna and raw tuna GPNs.[863] Adolf, Bush, and Vellema explain that PACIFICAL is the linchpin of a wider PNA strategy to exercise greater agency in tuna

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inhibitor of tuna-based socio-economic performance is too narrow to encapsulate the regulatory challenges presented by a global industry': ibid 92.

[856] Ibid 92–3.

[857] See, e.g., Chand, Grafton, and Petersen (n 847).

[858] Parris and Grafton (n 843) 284–5.

[859] Mansfield, *Neoliberalism in the Oceans* (n 100). See Chapter 1 Section I C.

[860] For a description of these distributional struggles, see below Chapter 4 Section III C.

[861] Adolf, Bush, and Vellema (n 623).

[862] Ibid 82.

[863] PACIFICAL sells frozen skipjack and yellowfin in various forms to processors, as well as sashimi-grade and canned tuna direct to end markets: PACIFICAL (n 841).

GPNs and to challenge the coordinating power and considerable influence of lead firms.[864] The authors conclude that, 'By re-positioning itself, the PNA seeks to shift economic control over their resources from buyers to the member states which own and supply tuna'.[865] PACIFICAL is the latest iteration of PICs' efforts to address distributional struggles with DWFSs and foreign firms and thereby increase the value they capture from tuna GPNs.

C *The WCPFC and Distributional Struggles in Tuna GPNs*

Refocusing on distributive dynamics within the WCPFC, the next section looks to state behaviour within the WCPFC. This section demonstrates that specific strategies employed by DWFSs and PICs have implicated the WCPFC in broader distributional struggles within tuna GPNs. It argues that, over time, DWFSs have used 'interference strategies' and PICs have leveraged 'cooperative strategies' at the WCPFC-level to advance their interests in tuna GPNs.

1 *Interference Strategies: DWFSs*

To describe the behaviour of DWFSs in distributional struggles with PICs, this thesis uses the concept of 'interference strategies' as it relates to fisheries. Hanna first introduced the concept of 'interference strategies' in connection with competition among fishers.[866] Borrowing from Hirshleifer's work translating insights from biology to economics—what he describes as the field of 'natural economy'—[867] Hanna describes the difference between scramble and interference competition.[868] In the absence of property rights, Hanna postulates, scramble competition prevails, under which fishers are in a direct race against other fishers for resources. Conversely, Hanna argues that interference competition occurs when fishers employ strategies to *indirectly interfere with the ability* of *other fishers to compete for fishery resources*.[869] Hanna thus makes a distinction between forms of direct versus indirect

[864] Adolf, Bush, and Vellema (n 623) 82.
[865] Ibid 83.
[866] Susan Hanna, 'Strengthening Governance of Ocean Fishery Resources' (1999) 31 *Ecological Economics* 275, 282.
[867] Jack Hirshleifer, 'Competition, Cooperation, and Conflict in Economics and Biology' (1978) 68(2) *Economics and Biology* 238.
[868] Hanna (n 866) 282.
[869] Ibid. More specifically, Hirshleifer characterises the distinction between scramble and interference competition as follows:

> *Scramble* competitors ignore one another, interacting only through depletion of resources. The winning organisms are those most efficient at extracting energy and other inputs from the external environment.

competition among fishers. Using these forms of competition to frame transboundary fisheries management, Hanna contends:

> The expansion of national jurisdiction and the development of layered national and international arrangements have limited the scope for scramble competition but have given rise to more interference competition, as groups attempt to garner political support for favourable management outcomes.[870]

Hanna's description of different forms of competition among fishers corresponds with Havice and Campling's observation that distributional struggles among actors in tuna GPNs inform WCPFC policy.

Havice and Campling demonstrate that DWFSs have deployed interference strategies at the WCPFC level—both in negotiations leading up to the establishment of the WCPFC and more recently—to advantage the interests of their fleets.[871] The researchers argue that DWFSs have repeatedly sought to advantage their fishing interests in the WCPO, 'even though these interests conflict with the environmental and economic objectives of [PICs]'.[872] Havice and Campling focus on how DWFSs like Japan and Taiwan (and their respective tuna industries) have strategised at bilateral and multilateral levels to secure favourable fishing access in the WCPO tuna fishery.[873] They point to specific instances in WCPFC negotiations where DWFSs have: advocated to weaken PICs' ability to allocate tuna catches within their EEZs in favour of WCPFC-led allocations;[874] argued to increase SC-recommended limits in WCPFC measures;[875] and attempted to use aid payments to control PIC participation in pre-WCPFC negotiating processes[876]. Havice and Campling reveal that

> [D]istant water fishing nations exert pressure on management structures at both the national ([PIC]) and international (Commission) levels, influencing fisheries management, but not necessarily in favour of conservation or economic development in the island states. Instead, distant water fishing nations insert their own diplomatic interests, and those of their fleets, into policy frameworks.[877]

Interference strategists, in contrast, gain and maintain control over resources by fighting off or reducing the efficiency of rivals (emphasis in original): Hirshleifer (n 867) 239.

[870] Hanna (n 866) 282.
[871] Havice and Campling, *Shifting Tides* (n 594).
[872] Ibid 94.
[873] Ibid 98–102, 106–9.
[874] Ibid 108.
[875] Ibid 107.
[876] Ibid.
[877] Ibid 110.

Similarly, Havice and Campling indicate that fishing firms from DWFSs employ their own interference strategies, which include lobbying both their flag state governments and PICs for more favourable regulatory conditions.[878] Finally, the interference strategies exhibited by DWFSs may indicate that they do not view important elements of the WCPFC differentiation framework as binding obligations. This includes increasing PICs' share of the WCPO tuna fishery and promoting increased economic benefits for PICs from WCPO tuna production.[879]

In this context, Havice and Campling argue that the establishment of the WCPFC itself permanently shifted the calculus of distributional struggles among states and firms in the WCPO. They show how the WCPFC expanded the ability of DWFSs to shape tuna management in the region, at the same time as it constrained the ability of PICs to regulate tuna fishing activity within their EEZs and provided DWFS fishing firms with broader scope to lobby for regulatory conditions that advanced their interests. Havice and Campling conclude that:

> The changes shifted decision-making power from [PICs] to international cooperative bodies, and ignited further political and economic maneuvering by states and firms with interests in the WCPO tuna fishery. [PICs] struggled to maintain regulatory control as distant water fishing nations advanced national agendas at the international level, arguably at the expense of [PICs'] environment and development priorities. Likewise, distant water fleets sought to adjust their operational strategies to be compatible with the changing terms of regulation; they negotiated with their home states and [PICs] to secure their strategic positions in the WCPO.[880]

Havice and Campling's characterisation of the behaviour of DWFSs within the WCPFC tracks Hanna's application of the concept of interference strategies to transboundary fisheries management. Through the WCPFC, DWFSs have devised strategies to undermine the ability of PICs to capture value from WCPO tuna production and have advantaged the interests of lead fishing firms in tuna GPNs. In doing so, DWFSs have implicated WCPFC policy outcomes in their distributional struggles with PICs.

2 *Cooperative Strategies: PICs*

[878] Ibid.
[879] See Chapter 2 Section III A 2(b), 3(b).
[880] Ibid 109.

In contrast to the interference strategies pursued by DWFSs, PICs have employed cooperative strategies (among themselves) to advance their interests within the WCPFC. These cooperative strategies have evolved primarily around fisheries access relations between PICs and DWFSs at the subregional level.

PICs' earliest cooperative strategies predate the WCPFC. In the 1980s and 1990s, the FFA mobilised PICs to formulate a series of legal frameworks and related enforcement tools to apply to DWFS vessels licensed to fish in their EEZs.[881] These efforts included the adoption of region-wide, harmonised minimum terms and conditions (MTCs) for DWFS fishing access in 1982,[882] and granting preferential fishing access to domestic and locally based fishing vessels through the *FSM Arrangement* in 1995.[883] During this period, the FFA also developed a Regional Register of Foreign Fishing Vessels and completed negotiations for the *Niue Treaty*, which enables PICs to cooperate on MCS and enforcement activities through technology and information sharing.[884] Guided by the FFA and premised on extensive cooperation among PICs, these initiatives sought to strike a balance between optimising the economic benefits PICs received from their sovereign rights to tuna resources and effective tuna management.

Alongside FFA-led efforts in this period, PICs used cooperative strategies to improve their negotiating positions in fishing access relations with DWFSs. This resulted in the adoption of landmark multilateral FAAs in the WCPO, including the *Nauru Agreement*[885] and its three

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[881] See Quentin Hanich, Hannah Parris, and Martin Tsamenyi, 'Sovereignty and Cooperation in Regional Pacific Tuna Fisheries Management: Politics, Economics, Conservation and the Vessel Day Scheme' (2010) 2(1) *Australian Journal of Maritime and Ocean Affairs* 2.

[882] FFA, *The Harmonised Minimum Terms and Conditions for Access by Fishing Vessels*, FFC99, 4 July 2016 <https://www.ffa.int/mtcs> ('*MTC*s'). See Michael Lodge, 'Minimum Terms and Conditions of Access: Responsible Fisheries Management Measures in the South Pacific Region' (1992) 16(4) *Marine Policy* 277 ('*MTCs in the South Pacific Region*'). The FFA has periodically revised its MTCs (in 2003, 2005, and 2016) to reflect developments in regional access arrangements.

[883] *Federated States of Micronesia Arrangement for Regional Fisheries Access*, opened for signature 30 November 1994, [1994] PITS 19 (entered into force 23 September 1995) ('*FSM Arrangement*'). See Transform Aqorau and Anthony Bergin, 'The Federated States of Micronesia Arrangement for Regional Fisheries Access' (1997) 12(1) *International Journal of Marine and Coastal Law* 27.

[884] Hanich, Parris, and Tsamenyi (n 881) 6–7. Since 2008, the FFA has operated its own VMS to track and monitor vessels in the Regional Register. The FFA VMS uses satellite technology to determine the position, speed and direction of registered vessels: FFA, *FFA Vessel Monitoring System* (Web Page, 20 August 2008) <https://www.ffa.int/vessel_registration>. After entering into an agreement with the WCPFC in 2009, information from both the FFA VMS and WCPFC VMS systems were combined as the 'Pacific VMS', which reports fishing activities within EEZs and on the high seas of the WCPO: WCPFC, *Vessel Monitoring System* (Web Page, 2020) <https://www.wcpfc.int/vessel-monitoring-system>.

[885] *Nauru Agreement Concerning Cooperation in the Management of Fisheries of Common Interest*, opened for signature 11 February 1982, [1982] PITS 5 (entered into force 4 December 1982 ('*Nauru Agreement*').

implementing agreements,[886] and the South Pacific Tuna Treaty[887].[888] In this era, tuna-related subregionalism emerged among PICs as a collective action response to efforts by DWFSs to play PICs against one another in fisheries access relations.[889] In the post-WCPFC era, PICs continue to mobilise cooperative strategies to strengthen their engagement in WCPO tuna management and improve their collective negotiating positions in access relations with DWFSs.

PICs leverage cooperative strategies in the WCPFC to combat DWFSs' interference strategies. In doing so, PICs participate in implicating WCPFC policy outcomes in distributional struggles within tuna GPNs. As Chapter 3 discussed, one of the most successful examples of PICs' efforts to shape WCPFC policy through cooperative strategies is the interdependence PNA PICs have forged between their management scheme—the VDS—and WCPFC measures.[890] PNA PICs employ cooperation—combining fishing access to the most productive EEZs in the region—to counter bilateral negotiating pressures in FAAs with DWFSs, protect their control over WCPO tuna resources, and advance their interests at the WCPFC level.

Miller, Bush, and van Zweiten demonstrate that the PNA and WCPFC exhibit a 'creative tension', whereby they mutually support the improvement of tuna management in the

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[886] PNA, *An Arrangement Implementing the Nauru Agreement Setting Forth Minimum Terms and Conditions of Access to Fisheries Zones of the Parties*, 1983 <https://www.pnatuna.com/content/1st-pna-implementing-arrangement>; PNA, *A Second Arrangement Implementing the Nauru Agreement Setting Forth Additional Terms and Conditions of Access to the Fisheries Zones of the Parties*, 1991 <https://www.pnatuna.com/content/2nd-pna-implementing-arrangement>; PNA, *Palau Arrangement for the Management of the Western Pacific Fishery As Amended—Management Scheme (Purse Seine Vessel Day Scheme*, 1995 (amended 2016) <https://www.pnatuna.com/sites/default/files/PS_VDS%20Txt_Amended_Oct2016_0.pdf> ('*Palau Arrangement Amended for LL VDS*'); PNA, *A Third Arrangement Implementing the Nauru Agreement Setting Forth Additional Terms and Conditions of Access to the Fisheries Zones of the Parties*, 2008 (amended 2019) <https://www.pnatuna.com/sites/default/files/3IA%20%28as%20of%20May%202019%29.pdf>.

[887] See above (n 692).

[888] For background on the historical development of the *Nauru Agreement*, its implementing agreements, and the VDS, see Transform Aqorau and Anthony Bergin, 'Ocean Governance in the Western Pacific Purse Seine Fishery—the Palau Arrangement (1997) 21(2) *Marine Policy* 173; Michael Lodge, 'The Development of the Palau Arrangement for the Management of the Western Pacific Purse Seine Fishery' (1998) 22(1) *Marine Policy* 1; Steve Dunn, Len Rodwell, and Glen Joseph, 'The Palau Arrangement for the Management of the Western Pacific Purse Seine Fishery—Management Scheme (Vessel Day Scheme)' (Conference Paper, FAO Sharing the Fish '06: Allocation Issues in Fisheries Management Conference, 27 February–2 March 2006) <http://www.fishallocation.com/papers/pdf/papers/GlenJoseph.pdf>; Elizabeth Havice, 'Rights-Based Management in the Western and Central Pacific Ocean Tuna Fishery: Economic and Environmental Change Under the Vessel Day Scheme' (2013) 42 *Marine Policy* 259.

[889] Lodge, *MTCs in the South Pacific Region* (n 882) 280.

[890] Chapter 3 Section III C.

WCPO.[891] However, like the development economists discussed in the previous section, these researchers focus on institutional rather than political responses to distributional issues in the WCPO tuna fishery. In reality, while PNA and WCPFC management measures may be mutually constitutive, Miller, Bush, and van Zweiten go one step further by claiming that their interplay is responsible for progressive innovations in WCPO tuna management. By emphasising institution-level rather than state-level interactions, Miller, Bush, and van Zweiten downplay the distributional struggles at the core of the 'creative tension' between the PNA and WCPFC.

Recently, PICs have deployed cooperative strategies to focus on the WCPFC's management of other fisheries in the region with mixed results. When the WCPFC delayed management action to limit fishing pressure on the South Pacific albacore (SPA) stock, six concerned PICs with significant portions of the SPA stock in their EEZs established Te Vaka Moana (TVM).[892] TVM is a subregional organisation dedicated to the effective management of shared fisheries in the South Pacific. Collectively, TVM PICs presented their formal position on SPA management to the WCPFC in 2012.[893] However, their efforts had little effect on WCPFC policy, and it appears TVM has ceased its activities.[894] The FFA has since made efforts to organise a SPA management scheme with catch limits within PIC EEZs. While FFA members adopted the *Tokelau Arrangement* in 2014 for this purpose, SPA catch limits continue to be non-binding.[895]

More recently, in 2016, the PNA amended the *Palau Arrangement* (a successor of the *Nauru Agreement*) to include a Longline Vessel Day Scheme (LLVDS), which encompasses the SPA fishery.[896] While the LLVDS is referenced in the preamble of the WCPFC's most recent

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[891] Miller, Bush, and van Zweiten (n 213) 14.
[892] *Cooperation Arrangement Between the Ministry of Marine Resources of the Cook Islands, the Ministry of Fisheries of New Zealand, the Department of Agriculture, Forestry and Fisheries of Niue, The Ministry of Agriculture and Fisheries of Samoa, The Ministry of Agriculture and Food, Forestry and Fisheries of Tonga, and Department of Economic Development Natural Resources and Environment of Tokelau*, IEA Database Project No 4964 (signed and entered into force 1 January 2010) <https://iea.uoregon.edu/treaty-text/2010-tevakamoanaarrangemententxt> [5.1] ('Te Vaka Moana Arrangement').
[893] WCPFC, *Summary Report*, 9th reg sess, 2–6 December 2012, 13–4, att O ('*WCPFC9 Summary Report*').
[894] While Te Vaka Moana represented initial efforts to marshal collective action among South Pacific PICs, the organisation did little to progress SPA management. At the time of this writing, the domain for the Te Vaka Moana website had expired: <http://www.tevakamoana.org>.
[895] *Tokelau Arrangement for the Management of the South Pacific Albacore Fishery* opened for signature 22 October 2014 (entered into force 1 December 2014) <https://www.ffa.int/tka_public> ('*TKA*').
[896] *Palau Arrangement Amended for LL VDS* (n 886).

tropical tunas measure, it appears to have little relationship to current WCPFC policy.[897] The slow and mixed progress of PICs' cooperative strategies in the longline fishery indicate that the PNA's success may be a function of their effective control over WCPO purse seine fishing grounds. This poses a difficulty for PICs in the longline fishery, which is distributed more widely over high seas areas in the WCPO.

3 *Implicating the WCPFC in Distributional Struggles within Tuna GPNs*

This section has shown that PICs are precariously positioned within tuna GPNs—a reality which situates their tenuous ability to capture value within tuna production chains. PICs have, nevertheless, managed to derive direct and indirect economic benefits across all nodes of tuna GPNs. As this section has also shown, PICs have achieved this feat over time at great financial and political cost.

Extending Havice and Campling's discussion of distributional struggle, this section has shown how interference strategies by DWFS and cooperative strategies by PICs implicate the WCPFC. Within the setting of distributional struggles within tuna GPNs, this thesis foregrounds these dynamics as likely to inform negotiations concerning differentiation provisions advantaging PICs within the WCPFC.

CONCLUSIONS

This chapter has described the political economy of the WCPO tuna industry to contextualise the economic interests that underwrite WCPFC negotiations. Section II provides a state-focused overview of WCPO tuna production chains. Mapping how states interact with the WCPO tuna industry, it reveals that the economic interests of PICs and DWFSs are differently distributed over the nodes of WCPO tuna production chains—while PICs represent major coastal states, DWFSs represent major fishing, trading, and market states.

In Section III, this chapter demonstrates how the spatial organisation of the WCPO tuna industry informs distributional struggles between PICs and DWFSs. Drawing from work by Havice and Campling, the chapter argues that PICs are engaged in distributional struggles with DWFSs and foreign firms as a result of government policies to pursue tuna-led

[897] *CMM 2018-01* (n 232) Preamble para 12, att 1.

economic development. PICs' positions within tuna production chains are conditioned by the challenging dynamics of economic development trajectories for island states in tuna GPNs. DWFSs and PICs have reflected these distributional struggles in negotiating positions for WCPFC policy, devising interference and cooperative strategies respectively to shape WCPFC policy outcomes in ways that advantage their economic interests.

The distributional issues discussed in this chapter are consistent with the description of the role TRFMOs play in distributional struggles between DCSs and DWFSs from Chapter 3. By demonstrating that WCPFC policy is implicated in distributional struggles between PICs and DWFSs, this chapter strengthens the thesis' overall proposition that political-economic drivers that underwrite WCPFC negotiations are likely to impact on the WCPFC's application of legal differentiation advantaging PICs. The next chapter provides a similar discussion that bridges a description of political economic dynamics in the IO tuna industry with IOTC policy.

CHAPTER 5: POLITICAL ECONOMY OF THE INDIAN OCEAN TUNA INDUSTRY

This chapter introduces the second regional case study, establishing a basis for this thesis' comparison of differentiation within the IOTC and WCPFC. While there are marked differences between IO and WCPO tuna fisheries, DCSs in both regions have faced similar struggles to capture value from tuna production. The most significant difference lies in IO DCSs' distinct geographies, cultures, and economic contexts which shape the operation of tuna production chains in the region. Paralleling Chapter 4, this chapter foregrounds the political economy of IO tuna production to establish a connection between distributional struggles between IOCs and DWFSs and differentiation within the IOTC. The chapter maps IOTC members' economic interests in IO tuna production to set out a basis for discussing how these interests may affect IOTC negotiations concerning differentiation.

The second largest tuna fishing grounds in the world, the IO tuna fishery exhibits multiple characteristics that distinguish it from the WCPO. The fishery possesses a greater variety of tuna stocks, which include not only the major commercial tuna species, but also four neritic tuna species (smaller, nearshore tuna species) that play a key role in food security for coastal communities. The fishery also displays a greater variety of fishers and gear types. Encompassing industrial, semi-industrial, and artisanal tuna fishing operations, IO fishing vessels employ an array of gear types and supply both international and local markets. Finally, a higher proportion of catches in the IO tuna fishery are harvested from high seas areas than in the WCPO.

This chapter shows that IOCs interact in diverse ways with the IO tuna industry. This diversity enables IOCs to receive a broader range of economic benefits from tuna GPNs than PICs in the WCPO. However, only a minority of IOCs are significantly engaged in IO tuna production and IOCs have struggled to produce similar cooperative strategies as PICs in the WCPO.

This chapter demonstrates that IOCs are siloed by the different production chains in which they participate. The chapter draws from recent studies to argue that IOCs' particular interactions with tuna production chains generate competitive dynamics that create a barrier

to cooperation. As a consequence, IOCs have not had the same success in increasing the ground-rent of their tuna resources in fisheries access relations with DWFSs as PICs.

More recently, IOCs have sought to improve their cooperative efforts through regional and subregional institution-building and by exhibiting solidarity in IOTC negotiations. These efforts have produced dynamics similar to those observed at the WCPFC and indicate that IOCs and DWFSs also implicate IOTC policy in distributional struggles among themselves.

The structure of this chapter mirrors Chapter 4. Section I describes the IO tuna fishery and recent fleet dynamics. Section II provides a short, state-focused overview of the IO tuna industry, creating a profile of how IOTC members interact with IO tuna production and consumption. Section III discusses IOCs' interactions with tuna GPNs, which for some IOCs involve critical fisheries access and aid relations with DWFSs. Recognising the dearth of literature on distributional struggle in the IO tuna industry, Section III draws from commentaries on recent IOTC negotiations to show that IOCs are increasingly leveraging cooperative strategies to confront DWFSs and advance their economic interests *through* the IOTC. The case study concludes that, similar to the WCPFC, these negotiating dynamics are likely to impact how the IOTC applies legal differentiation advantaging IOCs.

I Overview of Indian Ocean Tuna Fishery

The IO tuna fishery is arguably the most diverse tuna fishery in the world by virtue of several characteristics unique to the region. These characteristics concern the breadth of the fishery's tuna species, vessel operators, and gear types. The fishery can roughly be divided into an offshore, industrial-scale component and a nearshore, smaller-scale (in IOTC nomenclature, 'artisanal') component.

The industrial-scale component targets the four major commercial tuna species (albacore, bigeye, skipjack, and yellowfin).[898] Most vessel operators in this component are similar to those in other tuna fisheries: they operate large-scale purse seine and longline vessels and follow tuna migrations across vast distances for months at a time, stopping briefly to offload

[898] This chapter uses the term 'commercial' tuna species to distinguish these four species from neritic tuna stocks in the IO.

catch through transhipment, either at sea or in ports. These vessel operators harvest tuna primarily in the western and southern IO, where concentrations of tropical tuna species and SBT[899] are found.[900]

Other vessel operators in this component—sometimes referred to as 'semi-industrial'—[901] are unique to the IO and come from traditional tuna fisheries. Due to technological improvements in motorised boats and freezing capacity, these operators have developed the ability to harvest large quantities of tuna, specifically skipjack, for export.[902] These vessels operate predominately in the central, northern, and eastern IO.[903]

The artisanal component does not primarily target commercial tuna species, which are caught in concert with other pelagic species using less targeted gear deployed from smaller vessels.[904] This component of the fishery is almost exclusively responsible for catches of neritic tuna species (bullet, frigate, kawakawa, and longtail) in the IO.[905] Vessel operators in this component harvest tuna species in coastal areas for local markets, and employ a variety of fishing techniques, such as small-scale purse seining and longlining, handlining, and trolling.[906] Most artisanal tuna fishing activity in the region is conducted in the eastern IO.[907]

The IO is the second largest tuna fishing grounds in the world. In 2017, approximately 20% of global tuna catch was harvested from the IO.[908] This catch amounted to 1.5 million mt of tuna and tuna-like species, 1.1 million mt of which comprised the four commercial tuna

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[899] The SBT stock occurs in the southern portion of the IO. SBT is not included in this overview because it is primarily managed by CCSBT.
[900] *IOTC Review of Data and Trends for Tropical Tunas* (n 52).
[901] Currently, the IOTC only reports catch of industrial and artisanal vessels in the IO. Recently, there has been debate over whether the IOTC should introduce a semi-industrial category to its reporting of IO catch data. See Martín Aranda, 'Description of Tuna Gillnet Capacity and Bycatch in the IOTC Convention Area' (IOTC Report No IOTC-2017-WPEB13-18, 29 August 2017) 2; Guillermo Moreno and Miguel Herrera, 'Estimation of Fishing Capacity by Tuna Fishing Fleets in the Indian Ocean' (IOTC Report No IOTC-2014-SC16-INF03, 17 November 2013) 14–5.
[902] *IOTC Review of Data and Trends for Tropical Tunas* (n 52) 17.
[903] Ibid.
[904] Moreno and Herrera (n 901) 18.
[905] IOTC, *Review of the Statistical Data Available for Neritic Tuna Species*, IOTC-2018-WPNT08-07, 8th sess of WPNT, 17 August 2018, 2 ('*IOTC Review of Data and Trends for Neritic Tunas*'). Neritic tuna species dwell closer to shore and are generally smaller in size than commercial tuna species.
[906] Moreno and Herrera (n 901) 18.
[907] *IOTC Review of Data and Trends for Tropical Tunas* (n 52); *IOTC Review of Data and Trends for Neritic Tunas* (n 905).
[908] ISSF, *Status of the World Fisheries for Tuna* (ISSF Technical Report No 2018-21, October 2018) 74.

species.[909] Catch levels of commercial tuna species have recently recovered from a dip after record setting catches in 2005.[910] The total value of IO tuna catch is not well-documented or understood.[911] A major source of uncertainty stems from lack of data on the artisanal component of the tuna fishery.[912] The most recent estimate, however, values IO tuna resources at 4.76 billion USD in 2017.[913]

Contemporary fleet dynamics in the industrial component of the IO tuna fishery have trended alongside tuna fishing grounds in other parts of the world.[914] In the 1980s, IO tuna catches rose sharply after new entrants to the fishery and improvements in vessel technology intensified fishing activities.[915] The fishery continued expanding in the 1990s and early 2000s.[916] A confluence of technological and environmental factors produced record catches in 2005.[917] These factors included escalations in the use of FADs by industrial purse seiners, the increasing range of IOCs' semi-industrial fleets, and variations in oceanographic conditions that improved the availability of tuna species, particularly yellowfin.[918] Rising catch levels were arrested in the mid-2000s, however, when the threat of piracy off the coast of Somalia began to impact on the industrial component of the fishery.[919]

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[909] IOTC, *IOTC Nominal Catches Database* (IOTC Nominal Catch by Species, Gear and Vessel Flag Reporting Country Series, December 2018) <https://www.iotc.org/data/datasets> ('*IOTC Nominal Catch Database*').
[910] *IOTC Review of Data and Trends for Tropical Tunas* (n 52).
[911] Colin Barnes and Kwame Mfodwo, *A Market Price Valuation of Tuna Resources in the Western Indian Ocean—An Indicative Regional and Country/EEZ Perspective* (WWF Report, February 2012) 75.
[912] IOTC, *Estimation of EEZ Catches in the IOTC Database: Report on the Availability and Quality of Catch Estimates*, IOTC-2017-SC20-INF05, 20th sess of SC, 20th November 2017 ('*EEZ Catch Estimates in the IOTC Database*').
[913] Poseidon Aquatic Resource Management, Graeme Macfadyen and Vincent Defaux, *Scoping Study of Socio-Economic Data and Indicators of IOTC Fisheries* (IOTC/FAO Report No 1489-REG/R/02/B, May 2019) 9. It should be noted that this valuation includes SBT.
[914] Miyake, Miyabe, and Nakano (n 803) 33–46.
[915] Prior to 1980, the major fisheries in the IO were a combination of artisanal fisheries in IOCs and a diminutive industrial longline fishery operated by vessels from Japan, Taiwan, and South Korea: ibid. In the 1980s, the IO purse seine fishery was established as an alternative for European DWFSs, France and Spain, to transfer effort from the declining tuna fishery in the East Atlantic: ibid. See also Liam Campling, 'The Tuna "Commodity Frontier": Business Strategies and Environment in the Industrial Tuna Fisheries of the Western Indian Ocean' (2012) 12(2–3) *Journal of Agrarian Change* 252 ('*The Tuna Commodity Frontier in the WIO*'). In the 1990s and 2000s, tuna catches accelerated, following the intensive use of FADs and the construction of 'super-seiners' (over 2000 GRT) and 'super super-seiners' (over 3500 GRT) by European fishing companies: Davies, Mees, and Milner-Gulland (n 803) 166.
[916] *IOTC Nominal Catch Database* (n 909).
[917] Ibid.
[918] Campling, *The Tuna Commodity Frontier in the WIO* (n 915) 272–3; Aranda (n 901) 3.
[919] See Emmanuel Chassot et al, 'Analysis of the Effects of Somali Piracy on the European Tuna Purse Seine Fisheries of the Indian Ocean' (IOTC Report No IOTC-2010-SC-09, September 2010) 3.

II State-Focused Overview of IO Tuna Industry

IO tuna production plays a keystone role in tuna GPNs. Tuna sourced from the IO supplements global tuna production, supplies premium canned tuna markets in Europe, and supports artisanal fisheries throughout the region. The vital global and local contribution of IO tuna production has invited a surge of new research in recent years, although it remains the case that much less is known about regional tuna production in the IO than in the WCPO.

The following section draws from recent research on the IO tuna industry to provide a rough picture of the political-economic forces that converge on IOTC negotiations.[920] It is based on conveying a state-focused description of IO tuna production.[921] To make this overview comparable to that of the WCPO tuna industry, it pertains only to the four commercial tuna species which are integrated into tuna GPNs. Neritic tuna species have been excluded, as little information is available on the local markets they supply, no comparable markets exist in the WCPO, and the IOTC has yet to adopt measures to manage these stocks. However, this focus does not entirely exclude IO artisanal fleets and gear types, which export some of their catches of commercial tuna species to markets in tuna GPNs. This distinction reveals a major difference between IO and WCPO tuna production: whereas commercial tuna stocks are almost exclusively harvested by industrial-scale vessels in the WCPO, a combination of industrial, semi-industrial, and artisanal scale vessels harvest these tuna species and supply tuna GPNs in the IO.

[920] This section does not present new data, analysis, or findings on the IO tuna industry, but updates catch and effort data and conveys the state of research on the political economy of IO tuna production. IO catch and effort data, primarily from 2017, was taken from the IOTC dataset of nominal catches and IOTC Record of Authorised Vessels in 2018: *IOTC Nominal Catch Database* (n 909); IOTC, *IOTC Record of Authorised Fishing Vessels* (Web Page, 2018) <https://www.iotc.org/vessels>. Estimates of EEZ catches were derived from a report submitted by the IOTC Secretariat: *EEZ Catch Estimates in the IOTC Database* (n 912). Additionally, most data on IO tuna production chains was taken from: IDDRI, Marie Lecomte et al, *Indian Ocean Tuna Fisheries: Between Development Opportunities and Sustainability Issues* (Diagnosis of the Tuna Industry in the Indian Ocean Report, November 2018 <https://www.iddri.org/en/publications-and-events/report/indian-ocean-tuna-fisheries-between-development-opportunities-and>. Unless otherwise noted, Section II is based on these sources.

[921] The following analysis of state engagement with tuna GPNs is intended as a heuristic for considering how states interact with GPNs in the context of IO tuna production. It provides a general overview, of states that contribute *significantly* to IO tuna production and consumption and are major players within tuna GPNs. It is not an exhaustive description of all links between states and tuna GPNs, nor does it provide a complete analysis of how state and non-state actors relate with respect to IO tuna production. Rather, this typology simply draws together some of the current knowledge in political economy on the competing interests and commercial dynamics that may inform states' interests within IOTC negotiations.

A *IO Coastal States*

Coastal states in the IO are more geographically and culturally diverse than in the WCPO. The IO region encompasses 32 coastal states and 17 island territories with a variety of political statuses.[922] Three subregions can be broadly identified to group IOCs: the southwestern IO, where East African littoral and island states are located; the northwest-central IO, where Middle Eastern states are located; and the southeastern IO, where mostly South East Asian states are located. Among these states, there are five SIDS, eight LDCs, two territories, and one industrialised state. Table 4 provides an overview of these subregions, and groups IOTC members accordingly.

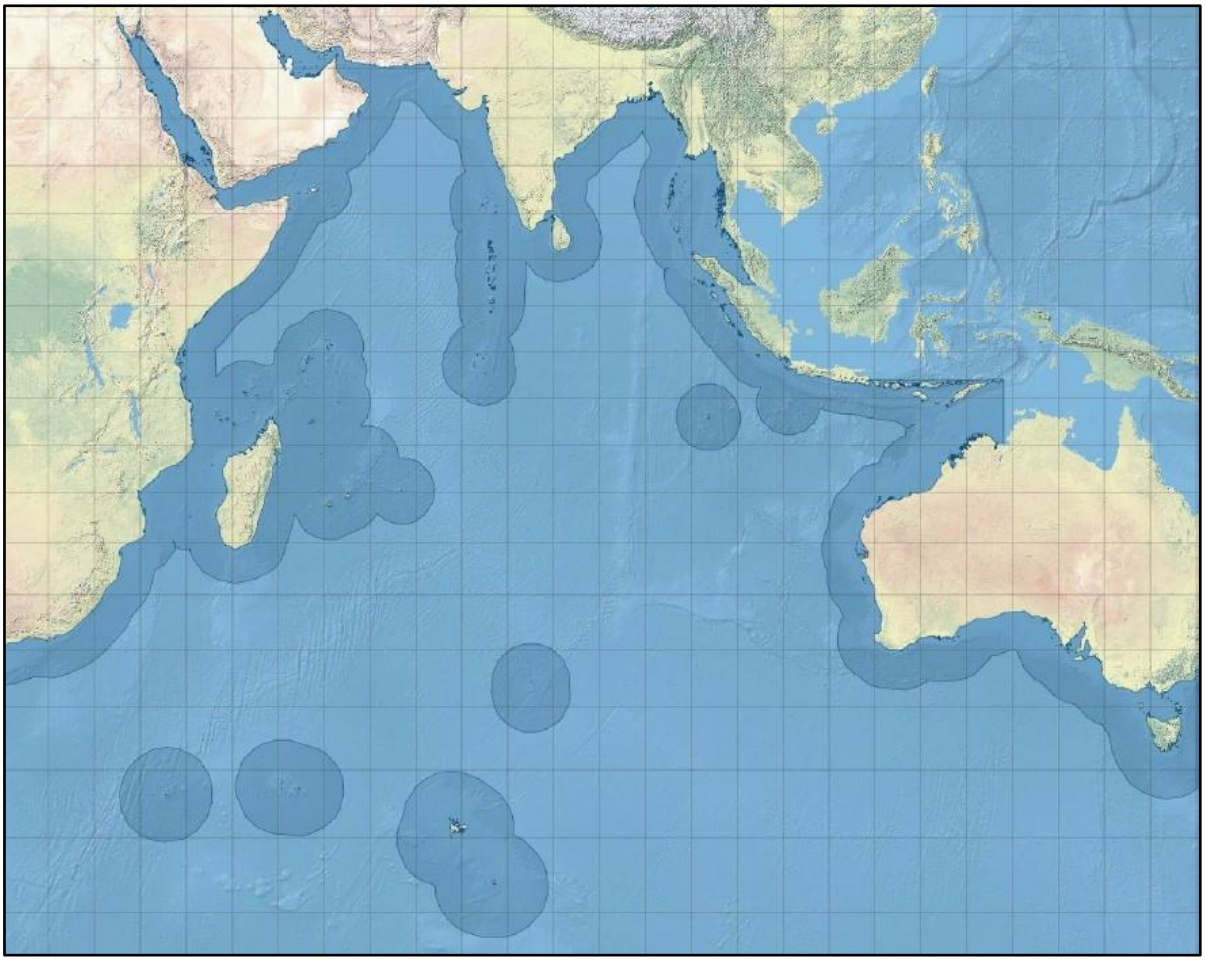
Table 4: List of IO Coastal States[923]

IO DCSs	IO Territories	Industrialised IO Coastal States
Southwest Subregion		
Comoros*	French Overseas Territories (OT)	
Kenya	British Indian Ocean Territories (BIOT)	
Madagascar*		
Mauritius*		
Mozambique		
Seychelles *		
Somalia		
South Africa		
Tanzania		
Northwest-Central Subregion		
Bangladesh		
Eritrea		
India		
Iran		
Maldives*		
Oman		
Pakistan		
Sri Lanka		
Sudan		
Yemen		
Southeast Subregion		
Indonesia		Australia
Malaysia		
Philippines		
Thailand		

[922] For the purposes of this thesis, the 'IO region' refers to the boundaries of the IOTC's Area of Competence: *IOTC Agreement* (n 47) art II.
[923] States in bold are LDCs. States with an asterisk (*) are SIDS.

Unlike in the WCPO, high seas areas cover a significant portion of ocean space in the IO, located in the heart of the region. Figure 10 illustrates this point by indicating Indian Ocean EEZs in dark blue shading:

Figure 10: EEZs and High Seas Areas in the IOTC Area of Competence[924]



Publicly available data on the catch of commercial tuna species in the IO is not divided into EEZs and high seas areas, nor is there regularly published catch data available for the individual EEZs of IOCs.[925] Rather, regional-level catch data divides the fishery into two areas: the Western and Eastern IO.[926] Though a comprehensive catch database for

[924] *EEZ Catch Estimates in the IOTC Database* (n 912) 3. Note that this map is indicative of EEZs in the Indian Ocean and does not refer to contested, joint or unsettled EEZs in the region.
[925] The IOTC Secretariat has discussed assigning catch data to EEZs and released (highly tentative) estimates of average catches from 2013 to 2017: ibid.
[926] This section relies on this convention to describe IO tuna fishery. The two subregions correspond with 'FAO Major Fishing Areas' 57 and 50, respectively, referred to in the IOTC Agreement's definition of the IOTC Area of Competence: *IOTC Agreement* (n 47) art II.

commercial tuna species is unavailable for IOC EEZs, it is possible to highlight five coastal states with EEZs estimated to produce significant catches—over 60,000 mt on average—[927] of albacore, bigeye, skipjack, and yellowfin (as well as swordfish). In order of descending magnitude, these IOCs are Indonesia, Maldives, Sri Lanka, Seychelles, and India.

IO coastal states receive a range of direct and indirect economic benefits from their tuna resources. Direct benefits include government revenue from access fees and GDP created from tuna exports.[928] Indirect benefits encompass tuna fishing sector-related employment in associated industries, such as vessel and port servicing.[929] For coastal states like Indonesia, Maldives, Sri Lanka, and India, which have limited (or no) foreign fishing activities in their EEZs, direct economic benefits from FAAs with DWFSs are limited.[930] Seychelles is the only major coastal state in the IO that receives significant economic benefits from FAAs.[931] Notably, no studies provide estimates of the total access fees paid to IOCs; numerous studies have commented on the difficulty of obtaining information on IO FAAs.[932]

B *IO Fishing States*

Fishing operations in the IO comprise industrial, semi-industrial, and artisanal vessels. Along with diversity in the scale and gear types of vessels, IO fishing fleets represent a broader spectrum of couplings with tuna GPNs. Publicly available data shows that the profile of these fishing fleets differs between the WIO and EIO. In the WIO, industrial-scale vessels dominate tuna catches. In 2017, the majority of the WIO catch of commercial tuna species (66% of the total) was attributed to industrial fleets. The gear type which contributed the most to this catch (46%) was industrial purse seiners. In 2017, the top five fleets reporting the

[927] In this chapter, the term 'significant catches' refers to catches over 60,000 mt.
[928] Macfadyen and Defaux (n 913) 8.
[929] Ibid 14.
[930] These states receive government revenue from licensing local vessels.
[931] Seychelles Fishing Authority, *Fisheries Statistic Report* (Semester 1 Report No SFA/FSR/05, 2016).
[932] The most comprehensive review was conducted by Mbendo in 2012: Jane Mbendo, *Developing Regional Minimum Terms and Conditions for Granting Tuna Fishing Access in the Western Indian Ocean* (WWF Report No CN63, September 2012) <https://wwf.panda.org/?208719/DEVELOPING-REGIONAL-MINIMUM-TERMS-AND-CONDITIONS-FOR-GRANTING-TUNA-FISHING-ACCESS-IN-THE-WESTERN-INDIAN-OCEAN>. See also Poseidon Aquatic Resource Management, Graeme Macfadyen and Alejandro Anganuzzi, *Review of Tuna Fisheries in the Western Indian Ocean* (EU Commission Report No WIOR01D, 24 January 2014) 69.

highest catches of commercial tuna species in the WIO were Iran (22%), Spain (12%), Maldives (10%), Seychelles (10%), and India (10%).

In the EIO, semi-industrial and artisanal vessels catch the largest volumes of tuna. In 2017, the majority of EIO catch of commercial tuna species (86% of the total) was attributed to artisanal fleets. By contrast, only 14% of this total was attributed to industrial-scale fleets. Due to the considerable numbers of artisanal fishing vessels in the EIO, catches of commercial tuna species are distributed across a broader range of gear types than in the WIO. In 2017, the gear types that contributed most to EIO catch of commercial tuna species were small purse seine vessels (22%); coastal longline vessels (19%); and gillnet vessels (18%). That year, the top three fleets reporting the highest catches of commercial tuna species in the EIO were Indonesia (55%), Sri Lanka (20%), and India (13%).

C *IO Processing and Trading States*

The IO tuna industry is comprised of six tuna production chains.[933] Most of these production chains are integrated into canned tuna and raw tuna GPNs. Three are coupled with the canned tuna GPN: (i) industrial purse seine caught tuna destined for WIO canneries; (ii) semi-industrial gillnet caught tuna destined for canneries in Iran; and (iii) semi-industrial pole and line caught tuna supplying canneries in Maldives and Thailand. Two are coupled with the raw tuna GPN: (i) industrial longline caught tuna transhipped and destined for sashimi markets; and (ii) tuna caught by artisanal gears landed fresh and destined for sashimi *and* tuna steak markets. Finally, tuna caught by artisanal gears and destined for local markets form the last tuna production chain, which is not incorporated into tuna GPNs.

The processing node is critical for IO tuna production chains coupled with the canned tuna GPN. Some IOCs are chief tuna processors in the canned tuna GPN and host thriving domestic processing industries. These IOCs include SIDS in the WIO (Seychelles, Mauritius, Madagascar, and Maldives) and processing powerhouses in the EIO (Thailand and Indonesia).[934] In the raw tuna GPN, IOCs in the WIO, such as Mauritius and Seychelles,

[933] Lecomte et al (n 920) 30.
[934] Iran has a minor domestic canning industry, which contributes to one of the six tuna production chains in the IO. Lecomte et al estimate that up to 30 Iranian canneries, supplied by semi-industrial gillnet fleets flagged to Iran and Pakistan, process a small portion—up to 200,000 mt—of tuna annually: Ibid 44–5.

provide ports for DWFS-flagged vessels to tranship their catches to sashimi markets. IOCs in the EIO, such as Indonesia, Sri Lanka, Maldives, (and India) source fresh tuna from semi-industrial and artisanal fleets for minor onshore processing and export to sashimi markets.

In contrast to WCPO-caught tuna, most IO-caught tuna is processed by IOCs *within* the region. Consequently, the proximity of landing ports to tuna processing hubs limits the need for trading firms in the IO. While trading firms are involved in the transhipment of catch and negotiations between fishing and processing firms, it is common for fishing firms in the IO to land catch and sell directly to processing firms that own local canneries.[935] In comparison to the WCPO then, major trading firms play a less central role in IO tuna production.[936] In the EIO, Lecomte et al observe that tuna traders play a role in the collection and distribution of catch from semi-industrial and artisanal vessels. [937]The authors describe some vertical integration in which traders own and/or finance fishing vessels and voyages, however private individuals as opposed to trading firms are involved in this type of trading.[938]

D *IO Market States*

Major markets in the EU, US, and Japan import IO tuna products. These markets consume canned tuna and sashimi tuna, as well as fresh and frozen tuna and tuna steaks. Thailand may also be considered a major market state in the region, especially for MSC-certified Maldivian pole and line caught tuna. This allows Thai lead firms to enter premium markets for eco-certified tuna products.[939]

In addition to global markets in tuna GPNs, significant local markets are located in Indonesia, Comoros, Maldives, and Sri Lanka. Taken together, local markets in these states comprise 56% of locally consumed tuna worldwide.[940] The majority of tuna consumed in IO local markets are neritic tuna species. Lecomte et al estimate that approximately 282,250 mt of

[935] Macfadyen and Anganuzzi (n 932) 69.
[936] However, FCF and Tri Marine do report some operations in the IO, see above (n 730).
[937] Lecomte et al (n 920) 48–9.
[938] Ibid.
[939] The pole and line gear used by Maldivian fishing fleets has been marketed to consumers as a sustainable alternative to other forms of tuna fishing. This enables tuna caught in the Maldives to be sold in premium end markets for higher prices. The Thai market represents tuna that is not processed in Maldives, but frozen and exported for canning. The Maldivian skipjack fishery contributes one of the major sources of MSC-certified tuna for lead processing firms in Thailand such as Thai Union Group.
[940] Ibid 41.

tuna catch are consumed annually in these states.[941] Estimates of the final value of these markets are up to 814 million USD.[942]

E *Interests of Member States of the Indian Ocean Tuna Commission (IOTC)*

This description of IO tuna production conveys the complications inherent in examining the political-economic drivers that underlie IOTC negotiations. The scale and diversity of IO tuna production contrasts significantly with the simpler picture of WCPO tuna production from Chapter 4. Table 5 offers a visualisation of this information, listing the IO region's major coastal, fishing, processing and trading, and market states.[943]

Table 5: IOTC Member States' Interactions with Tuna GPNs

Tuna GPN	IOTC SIDS	Other Developing IOTC Members	Industrialised IOTC Members
IO Coastal States			
Canned Tuna GPN	Maldives, Seychelles	India	
Raw Tuna GPN		Indonesia, Sri Lanka	
IO Fishing States			
Canned Tuna GPN	Seychelles, Mauritius, Maldives	Iran, India	Spain, France, South Korea
Raw Tuna GPN		Indonesia, Sri Lanka	(Taiwan)
IO Trading States			
Canned Tuna GPN			Taiwan, US
Raw Tuna GPN			Japan
IO Processing States			
Canned Tuna GPN	Mauritius, Madagascar, Seychelles	Thailand, Indonesia	
Raw Tuna GPN	Maldives	Indonesia, Sri Lanka	
IO Market States			
Canned Tuna GPN		Thailand	France, UK, Spain, Italy, US
Raw Tuna GPN			Japan

Figure 11 provides a map of IOCs' engagement with tuna GPNs as coastal and fishing states.

[941] Ibid.
[942] Ibid.
[943] This table does not include IOCs that are *minor* coastal and processing states in tuna GPNs. See above (n 921).

Figure 11: Map of IOCs' Engagement with Tuna GPNs[944]

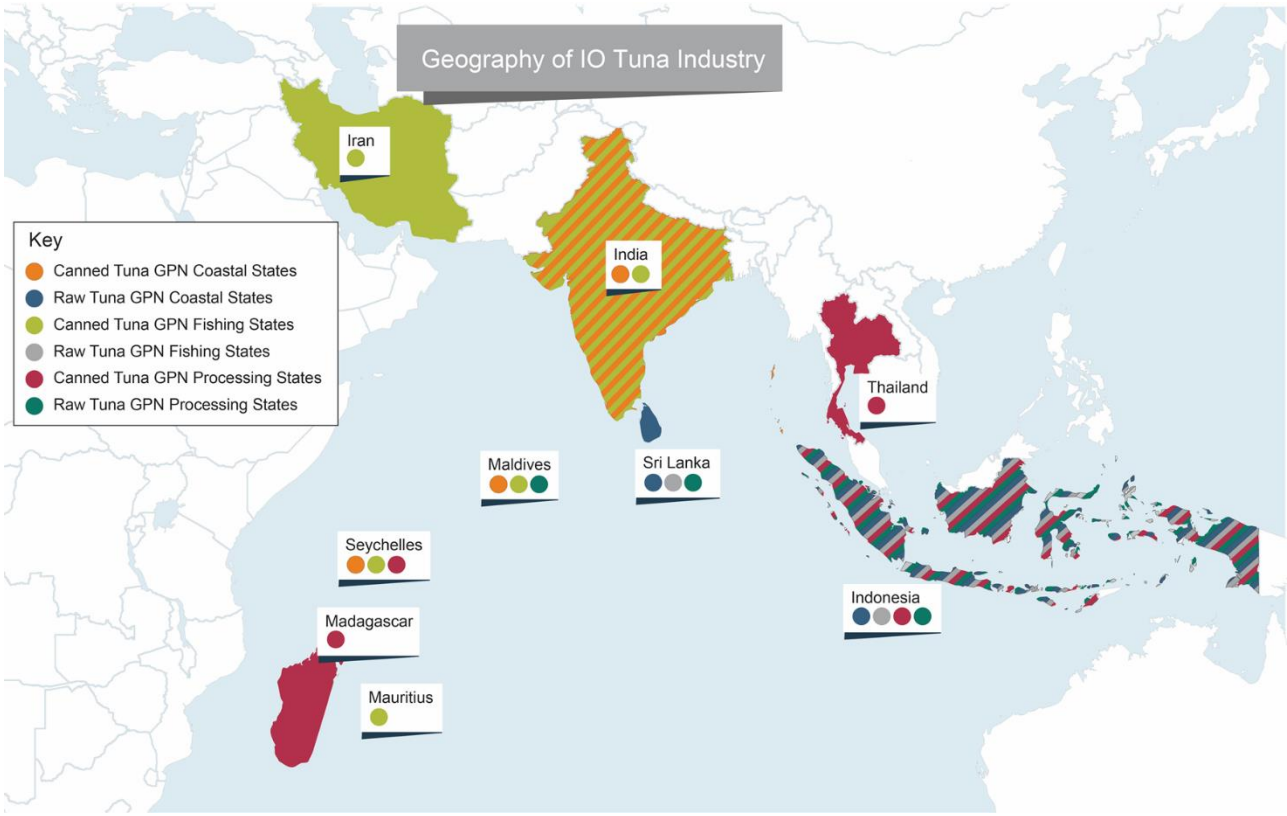


Table 5 and Figure 11 depict rough similarities between IOTC and WCPFC member state interactions with tuna GPNs, though with key differences. They convey that, as in the WCPO, some IOCs have substantial endowments of EEZ tuna resources. Commercial tuna species in IOC EEZs, are, to a large extent, harvested by industrial-scale vessels originating from DWFSs. As with the WCPO, the majority of IO commercial tuna products are exported to markets in DWFSs. In contrast to the WCPO, however, IOCs are significant players across all nodes of tuna GPNs, while DWFSs only participate in fishing and retail nodes.[945] The broader representation of IOCs in tuna GPNs would appear to point to a more even distribution of economic benefits from regional tuna production to IOCs. However, the IOCs represented in Figure 11 only comprise a minority of coastal states in the region. As

[944] This figure depicts the regional scope of the IO tuna industry. Therefore, IOTC members from outside of the region are not included. Minor regional players within canned and raw tuna GPNs are also not included in this figure. See above (n 921). It should be highlighted that Indonesia is a coastal state in both IOTC and WCPFC Convention Areas. Dr. Indiah Hodgson-Johnston helped format this figure.

[945] Another important observation is that EU members like Spain, France, Italy, and the UK are more deeply engaged in IO tuna production chains than in the WCPO, while the converse is true for the US.

compared to the number of PICs involved in WCPO tuna production, this grouping represents only a small proportion of IOCs.

According to Figure 11, the number of IOCs with domestic tuna industries that are coupled with tuna GPNs, and therefore significantly engaged in IO tuna production, is limited to *nine* states: India, Indonesia, Iran, Madagascar, Maldives, Mauritius, Seychelles, Sri Lanka, and Thailand. These states are engaged in different IO tuna production chains, set out in Table 6:

Table 6: IOCs in IO Tuna Production Chains[946]

Tuna GPN	IO Tuna Production Chain	IOCs
Canned Tuna GPN	Industrial purse seine tuna, destined for WIO canneries	Madagascar, Maldives, Mauritius, Seychelles
	Semi-industrial gillnet tuna, destined for Iranian canneries	Iran
	Semi-industrial pole and line tuna, supplying Thai canneries	Maldives, Thailand
Raw Tuna GPN	Industrial longline tuna, transhipped in WIO, and destined for sashimi markets	Mauritius, Seychelles
	Tuna caught by artisanal gears, landed fresh, and destined for sashimi and tuna steak markets	Maldives, Sri Lanka, Indonesia, India

The development statuses of the IOCs in Table 6 are almost evenly divided between SIDS (Madagascar, Maldives, Mauritius, and Seychelles) and middle-income states (India, Indonesia, Iran, Sri Lanka, and Thailand).

[946] This table excludes the sixth IO tuna production chain, comprised of tuna caught by artisanal gears destined for local markets, which, again, is not coupled with tuna GPNs.

As in the WCPFC, IOTC negotiations are informed by members' interactions with the tuna industry. However, the limited engagement of most IOCs in tuna GPNs and the complexity of IO tuna production confounds a simple explanation of these dynamics. One major source of difficulty in explaining the political economy of the IO tuna industry is the uncertainty associated with IO catch data. IOTC definitions exacerbate this issue by representing IO fishing fleets as a binary split between industrial and artisanal fleets. In reality, a much wider range of vessel types harvest IO tuna. This creates confusion, not only in terms of how IO catch data is presented, but also in the way analysts use this data to support arguments concerning management of the fishery.

The IOTC's definition of vessels is based on length and range. Industrial vessels, or those that are included on the IOTC Record of Authorised Vessels, must either be over 24 metres or conduct fishing activities outside of their flag state EEZ. Artisanal vessels, which are exempt from multiple IOTC Resolutions, are under 24 metres. Significantly, this dichotomy of vessels does not sufficiently describe the diversity of IOC-flagged vessels operating in the IO. According to Aranda, the IOTC definition 'includes under the same category vessels with very different technical and economic characteristics, market niches, and fishing power'.[947] Moreno and Herrera point out that, under the IOTC definition of an artisanal vessel, subsistence and offshore vessels flagged to IOCs are grouped into a single category, with no reference to differences in motor, communications, and fish holding capabilities.[948] They recommend that the IOTC define a third category of 'semi-industrial vessels', which would encompass vessels between 15 and 24 metres in length that fish exclusively inside their flag state EEZ.[949]

Improving the precision of IO catch data is a critical issue because this data is often used by analysts to justify claims concerning the nature of the fishery and its implications for IOTC management. For example, most analysts claim that the IO tuna fishery is roughly divided between industrial and artisanal fishing fleets.[950] This claim is true for overall IO tuna catches which combine catches of commercial and neritic tuna species. Analysts like Lecomte et al argue that industrial fishing fleets flagged to DWFSs do not harvest the majority of IO tuna

[947] Aranda (n 901) 2.
[948] Moreno and Herrera (n 901) 14.
[949] Ibid. According to Moreno and Herrera, artisanal vessels would be vessels below 15 metres: ibid.
[950] See, e.g., Lecomte et al (n 920) 22, 31.

catches and therefore should not be the exclusive focus of IOTC regulatory actions.[951] This emphasis on the industrial component of the IO tuna fishery, they contend, produces unnecessary 'polarisation' among IOTC members.[952] They argue that IOC-flagged fishing fleets have a significant impact on IO tuna stocks of both commercial and neritic species, and require greater regulation, monitoring and enforcement by the IOTC.[953]

These arguments fail to acknowledge the realities of IOTC management. Over its history, the IOTC has focused on regulating the region's four commercial tuna stocks. This is because, in repeated negotiations for proposals to adopt a measure on neritic tuna stocks, IOCs have taken the position that the IOTC is not empowered to manage nearshore, neritic tuna species. They argue that these species are exclusively targeted by artisanal vessels *within* IOC EEZs and therefore fall under the remit of either national or subregional management organisations.

If one acknowledges this reality and focuses on catch data for the four commercial tuna stocks, it becomes clear why the industrial component of the IO tuna fishery remains central to IOTC negotiations. In 2017, 81% of catches of the four commercial tuna stocks in the IO were harvested by industrial vessels using gillnets, purse seines, and longlines.[954] The majority of this catch (76%) was attributed to industrial purse seine and longline vessels, which, in the IO, are generally either flagged to or financed by actors in DWFSs.[955]

Multiple publications rely on the fallacy of 'overall' catch data to argue that the IOTC ought to focus its efforts on IOC-flagged fishing fleets and artisanal fisheries. These analysts are correct to suggest that IOC-flagged fishing fleets require greater oversight. However, they downplay the reality that the IOTC may not be the appropriate forum to adopt, implement, and enforce regulatory actions for neritic tuna species—which will depend on the specific and sometimes highly localised characteristics of artisanal fleets.

Currently, four IOC-flagged fishing fleets harvest significant catches of commercial tuna species and defy the IOTC's artisanal-industrial dichotomy. These fleets are the Maldivian

[951] Ibid 73–5.
[952] Ibid 74.
[953] Ibid.
[954] *IOTC Nominal Catch Database* (n 909).
[955] Ibid; Lecomte et al (n 920) 26.

pole and line fleet, Iranian offshore gillnet fleet, Indonesian longline fleet, and Sri Lankan longline fleet.[956] In different ways, these fleets frustrate categorisation due to their extensive range, substantial catches, and—in the case of the latter two—orientation to export markets. A semi-industrial category could encompass these four fleets, but would need to extend beyond Moreno and Herrera's suggestion that such a category should only correspond to the size of the fishing vessel. A semi-industrial category could refer to IOC-flagged vessels that are between 15 and 24 metres *and* either export over 50% of their catch, *or* fish outside their flag state EEZ. By focusing on this slice of IOC-flagged fleets, the IOTC might isolate and improve the management of specific fleets with a measurable impact on commercial tuna stocks in the IO.

Much confusion remains regarding tuna fishing activities in the IO and it cannot be denied that this opacity informs the negotiating environment within the IOTC. While difficult, the following section nevertheless attempts to elucidate some of the distributional dynamics that influence IOTC negotiations.

III Distributional Struggle within the IOTC

This chapter has demonstrated the diversity of ways in which IOCs and DWFSs are engaged in IO tuna production chains. As a result of this diversity, which includes different tuna resources and interactions with tuna production chains, some IOCs receive substantially higher economic benefits from IO tuna resources than others. This section focuses on the commercial efforts of IOCs to situate their interactions with tuna GPNs.

This section takes a closer look at IOCs within tuna GPNs because the IOTC differentiation framework explicitly refers to the socio-economic role of tuna fisheries in IOC national economies. However, there is limited region-wide information on the contribution of tuna resources to IOCs' national economies. It is therefore difficult to determine the extent to which IOCs currently capture value from IO tuna production.

[956] *IOTC Nominal Catch Database* (n 909).

In the scant literature on the subject, it is generally understood that *most* IOCs have been unable to maximise economic benefits from their EEZ tuna resources.[957] Several studies suggest possible reasons for this. Some suggest factors related to the domestic institutional capacity of IOCs, including a lack of capacity in fisheries administrations; lack of adequate MCS systems; and insufficient domestic legal frameworks.[958] Others emphasise broader issues in the region, such as the inequitable and non-transparent terms of FAAs, IUU fishing activities, and the lack of onshore and port infrastructure.[959]

Most studies nonetheless highlight the potential for IOCs to use cooperative strategies at regional and subregional levels to increase their value capture from IO tuna production.[960] These studies highlight how cooperative strategies can allow IOCs to develop institutional capacity, pool resources, and leverage collective action in negotiations with DWFSs, as has been done among PICs in the WCPO.[961] Recent work looks more closely at the fact that despite the potential benefits, IOCs continue to face significant barriers to forms of subregional and regional cooperation.[962]

Despite these barriers, IOCs are taking an active interest in cooperative strategies as an avenue to maximise the economic benefits they receive from IO tuna resources. This is apparent in recent institution-building efforts that focus on tuna resources at the regional and subregional levels. The rise of tuna-related regionalism among IOCs has come to bear on recent IOTC negotiations. As in the WCPFC, there is evidence that both IOCs and DWFSs have consequently implicated IOTC policy in distributional struggles among themselves.

A *IOCs within Tuna GPNs*

A small group of IOCs plays a central role in IO tuna production and management. As the previous section discussed, nine IOCs have employed a range of strategies to develop into significant players across all tuna GPN nodes. Therefore, the situation in the IO contrasts

[957] See, e.g., Edward Kimani, Gladys Okemwa, and Johnson Kazungu, 'Fisheries in the Southwest Indian Ocean: Trends and Governance Challenges' in Ellen Laipson and Amit Pandya (eds), *The Indian Ocean: Resource and Governance Challenges* (The Henry L Stimson Center, 2009) 4.
[958] Ibid 9–13.
[959] Mbendo (n 932) 82–3.
[960] Mbendo (n 932); Andriamahefazafy, Kull, and Campling (n 673).
[961] Mbendo (n 932) 74–5.
[962] Andriamahefazafy, Kull, and Campling (n 673).

with the WCPO, where PICs have struggled with limited success to 'upgrade' to other nodes in tuna GPNs. It nonetheless remains the case that both regions exhibit wide disparities in the distribution of benefits from tuna production *among* coastal states.

The nine IOCs with a major stake in IO tuna production have developed individualised strategies to capture value within tuna GPNs. Indonesia and Thailand, two IOCs which capture the greatest surplus value, have leveraged their economies of scale and proximity to IO and WCPO fishing grounds to dominate regional fishing and processing nodes. A number of IO SIDS, particularly Maldives and Seychelles, have developed domestic tuna and related industries based on substantial EEZ tuna resources. Other middle-income IOCs, such as Iran, Indonesia, and Sri Lanka, have developed semi-industrial fishing fleets and established export-oriented processing sectors for fresh and frozen tuna.

Despite these apparent successes, very few published studies have elucidated the role of IO tuna production in IOC economies. This is especially the case for IOCs that fall outside the core nine and have current and future legitimate interests in the IO tuna fishery. Importantly, the lack of socio-economic information (including both data and indicators) has been identified as an area of recent work for the IOTC, which engaged experts to publish a preliminary report in 2019.[963] The recent work by the IOTC indicates that further research into the IO tuna industry and its interactions with IOC economies is needed.

The available studies show that IOCs capture value across all three nodes of tuna GPNs in similar and different ways to PICs in the WCPO. While the overview provided in Section II focuses on the nine core IOCs involved in IO tuna production, in reality many more are engaged in the IO tuna industry. At the fishing node, some IOCs receive access fee payments through FAAs with DWFSs, while other IOCs directly export tuna caught by domestic fishing fleets. Outside the major coastal states, this includes Comoros, Kenya, Mozambique, Oman, South Africa, and Tanzania.[964] At the processing node, other IOCs have invested in minor processing operations; for example, in Kenya and Oman.[965] Finally, as has already been discussed, Maldives processes and exports a small portion of its MSC-certified pole and

[963] Macfadyen and Defaux (n 913).
[964] Macfadyen and Anganuzzi (n 932) 27–8.
[965] Ibid 70–2.

line skipjack tuna directly to premium retail markets.[966] Sharing some similarities with the direct sale of MSC-certified tuna by the PNA through PACIFICAL, Maldives has relied on a combination of government involvement through MIFCO and eco-certification to enter premium markets at the retail node of the canned tuna GPN.[967]

B *Studies on IOCs' Efforts to Maximise Economic Benefits from Tuna Resources*

A small collection of studies, published largely by inter-[968] and non-governmental[969] organisations, discusses the economic benefits IOCs derive from tuna resources. The majority focus on WIO IOCs, largely because tropical tuna stocks pass through the EEZs of these states on seasonal migrations (referred to colloquially as the 'yellowfin tuna belt').[970] The relevant literature describes a number of challenges WIO IOCs face in maximising the economic benefits they receive from tuna resources. Kimani, Okemwa, and Johnson point to domestic institutional constraints, including: a lack of technical expertise and human capacity in fisheries administrations;[971] inadequate MCS systems;[972] and inappropriate domestic fisheries legislation[973].

Many of these studies discuss the nature of WIO FAAs. An extensive literature has developed criticising these FAAs—particularly EU FAAs—for not delivering adequate economic and broader social benefits to WIO IOCs.[974] In a proposal for WIO IOCs to adopt

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[966] Ibid 71; Lecomte et al (n 920) 54–8.
[967] See Barclay and Parris (n 109) 25–6.
[968] See Arthur Neiland, *Characterisation of the Fisheries Sector in the Indian Ocean: With Particular Reference to Tuna Fisheries in the Bay of Bengal: Environmental and Economic Aspects* (OPP-BOBP Report No BOBP/WB/OPP/REP 07, 12 May 2016); Philip Townsley, *Characterisation of the Fisheries Sector in the Indian Ocean: With Particular Reference to Tuna Fisheries in the Bay of Bengal: Social and Institutional Aspects* (OPP-BOBP Report No BOBP/WB/OPP/REP 18, 26 October 2016).
[969] See Barnes and Mfodwo (n 911); Jane Mbendo, *Developing Regional Minimum Terms and Conditions for Granting Tuna Fishing Access in the Western Indian Ocean* (WWF Report No CN63, September 2012) <https://wwf.panda.org/?208719/DEVELOPING-REGIONAL-MINIMUM-TERMS-AND-CONDITIONS-FOR-GRANTING-TUNA-FISHING-ACCESS-IN-THE-WESTERN-INDIAN-OCEAN>.
[970] Kimani, Okemwa, and Johnson (n 957) 11.
[971] Ibid 13.
[972] Ibid.
[973] Ibid 9.
[974] See Frédéric Le Manach et al, 'European Union's Public FAAs in Developing Countries' (2013) 8(11) *PLOS ONE* e79899; Frédéric Le Manach et al, 'Who Gets What? Developing a More Equitable Framework for EU Fishing Agreements' (2013) 38 *Marine Policy* 257; Antonius Gagern and Jeroen van den Bergh, 'A Critical Review of Fishing Agreements with Tropical Developing Countries' (2013) 38 *Marine Policy* 375; Cecilia Hammarlund and Anna Andersson, 'What's in it for Africa? European Union FAAs and Fishery Exports from Developing Countries' (2019) 113 *World Development* 172.

harmonised MTCs, Mbendo provides a detailed review of WIO FAAs.[975] In the context of these agreements, Mbendo articulates a set of limitations that interfere with the ability of WIO IOCs to capture value from EEZ tuna resources, including: IUU fishing activities; a lack of port infrastructure and processing plants; transhipment and exporting practices by East Asian DWFS fleets; and low resource rents.[976]

This literature argues that IOCs in the WIO could significantly increase economic benefits from FAAs through subregional cooperation. Pointing to models in other subregions, these studies suggest that IOCs in the WIO could collectively increase the economic benefits they receive by harmonising the terms of their FAAs with DWFSs.[977] Additionally, the literature suggests that cooperative tuna management could improve the capacity of WIO IOCs in a range of other relevant areas, such as negotiating leverage and expertise, and MCS capabilities.[978] Mbendo goes so far as to suggest that, once in place in the WIO, *region-wide* MTCs could be developed to extend across the totality of IOCs' FAAs with DWFSs.[979]

From this literature it can be concluded that IOCs face two primary categories of challenges to increasing their value capture from tuna production. The first is domestic capacity development in the areas of fisheries administration, law, and enforcement; the second is the development of cooperative strategies focused on tuna fisheries access relations with DWFSs.

C *IOC (Sub)Regionalism: Current Barriers and Institution-Building*

Since the 1980s, IOCs have increased their engagement in tuna GPNs, developing a keen awareness of the potential for tuna resources to contribute to their economic development. Some of the starkest examples of this phenomenon are illustrated in IOCs which have managed to capture enough value from tuna GPNs to contribute significantly to their national economies, such as in Indonesia, Maldives, and Seychelles. In other IOCs, stock depletions of inshore and coastal fisheries have encouraged governments to turn towards the development

[975] Mbendo (n 932). In her study, Mbendo examines FAAs in Comoros, Kenya, Madagascar, Mauritius, Mozambique, Seychelles, South Africa, and Tanzania. See also Mialy Andriamahefazafy and Christian Kull, 'Materializing the Blue Economy: Tuna Fisheries and the Theory of Access in the Western Indian Ocean' (2019) 26(1) *Journal of Political Ecology* 403.
[976] Ibid 9.
[977] Mbendo draws lessons from the PNA, TVM and Sub-Regional Fisheries Commission: ibid 11, 74–5.
[978] Ibid 70–3.
[979] Ibid 82–3.

of offshore tuna fisheries, as Kimani, Okemwa, and Johnson suggest is the case in East African IOCs like Kenya, Tanzania, and Mozambique.[980] A number of these IOCs, particularly in the WIO, have initiated reforms in domestic fisheries administration and law to accommodate this shift in focus to tuna fisheries.[981]

At both subregional and regional levels, IOCs have started mobilising political will and resources towards multiple forms of tuna-related cooperation at regional and subregional levels. Cooperative efforts are currently underway through the Indian Ocean Commission (IOC),[982] Indian Ocean Rim Association (IORA),[983] and Southwest Indian Ocean Fisheries Commission (SWIOFC)[984]. SWIOFC, in particular, has marshalled efforts to develop harmonised MTCs in the southwestern subregion of the IO. In 2014, these efforts led to the Maputo Declaration, a set of non-binding MTCs adopted by Kenya, Mozambique, and Tanzania.[985] In 2012, the SWIOFC established a working party to adopt subregion-wide MTCs and to draft an agreement to institutionalise cooperative management of shared fish stocks (similar to the FFA).[986] While these efforts signal that IOCs are prepared to cooperate to increase their value capture from EEZ tuna resources and improve IO tuna management

[980] Kimani, Okemwa and Johnson (n 968) 4.
[981] Ibid 15-6. See also Judith Swan, *Harmonization of Fisheries Legislation and Assessment of the Implementation of Fisheries Management Plans and Rights Based Management in the South West Indian Ocean* (SWIOFP Report, 21 October 2012).
[982] See Andriamahefazafy, Kull, and Campling (n 673) 59, 64–5, 68. The IOC represents a coalition of island states and territories in the southwest subregion of the IO. Their work is based on four pillars of cooperation related to diplomacy, security, environment, and identity building: at 58. The IOC's members are Comoros, Madagascar, Mauritius, Reunion, and Seychelles: IOC, *Presentation of the IOC* (Web Page, 2020) <https://www.commissionoceanindien.org/presentation-coi/>.
[983] Under the guidance of Nelson Mandela, IORA was established in 1997 as a strategic platform for IOCs to discuss their common political aims: IORA, *About IORA* (Web Page, 2020) <https://www.iora.int/en/about/about-iora>. IORA currently has 21 members, the majority of which are IOTC members. IORA recently established a Fisheries Support Unit in Oman: IORA, *Fisheries Management* (Web Page, 2020) <https://www.iora.int/en/priorities-focus-areas/fisheries-management>.
[984] Like the IOTC, SWIOFC was established under FAO auspices in 2004. See Aubrey Harris and Domingos Gove, *Ten Years Promoting and Strengthening Regional Cooperation for Securing Sustainable Fisheries in South West Indian Ocean (SWIO) Region* (WWF Information Booklet, 10 November 2015).
[985] See WWF, *Tanzania Makes Strides in Implementing 2014 Maputo Declaration on Fisheries* (Blog Post, 28 September 2015) <https://wwf.panda.org/?253570/Tanzania-makes-strides-implementing-2014-Maputo-declaration-on-fisheries>.
[986] See SWIOFC, *Policy Brief on a Possible Southwest Indian Ocean Fisheries Framework Agreement*, SWIOFC/WPCCTF/19/4 E, 9th sess, 29 September 2019. In 2019, the SWIOFC also adopted a document setting out non-binding guidelines on MTCs for members: SWIOFC, *Final Approval of the Guidelines on Minimum Terms and Conditions (MTC) for Foreign Fisheries Access in the SWIOFC Region*, SWIOFC/WPCCTF/19/Inf 5 E, 9th sess, 29 September 2019.

more broadly, some commentators have outlined significant barriers to the ability of IOCs to leverage regionalism to increase their economic benefits from access relations with DWFSs.

Andriamahefazafy, Kull, and Campling explore these challenges from the perspective of the IOC, which brings together island states in the southwest IO.[987] The authors focus specifically on tuna-based regionalism among a sub-set of IOC members: Madagascar, Mauritius, and Seychelles. They argue that a combination of factors inhibits these IOCs from fully engaging in strong, tuna-related subregional cooperation.[988] The factors they identify are: fraught relations among the three states, which reflect their different socio-economic contexts; dependence on IO tuna production; and relationships with DWFSs.

Andriamahefazafy, Kull, and Campling examine different cases of multilateral and bilateral negotiations where the IOCs in their study exhibited a lack of cooperation. One theme from their analysis is how, across negotiating contexts, the three IOCs continue to be influenced by their relations with DWFSs—what the authors refer to as, '[historical] geopolitical and economic entanglements'.[989] Andriamahefazafy, Kull, and Campling highlight three ways in which these relations limit the development of tuna-related subregional cooperation among IOCs. The first concerns the dependence of several IOCs on aid payments tied to FAAs.[990] The authors argue that the dependence of IOCs on aid payments (which other studies have found comprise nearly the entire budget for some national fisheries administrations)[991] explains why some IOCs are either silent or unable to support region-wide positions within the IOTC.[992] The uneven dependence of IOCs on this form of aid creates barriers for countries like Madagascar to serious participation in subregional cooperation, which has the potential to jeopardise relationships with development partners.

The second concerns how, in the absence of a region-wide approach to FAAs (such as the harmonised MTCs suggested by Mbendo), IOCs are positioned in competition with one

[987] Andriamahefazafy, Kull, and Campling (n 673) 58. See also Mialy Andriamahefazafy et al, 'The Paradox of Sustainable Tuna Fisheries in the Western Indian Ocean: Between Visions of Blue Economy and Realities of Accumulation' (2020) 15 *Sustainability Science* 75.
[988] Andriamahefazafy, Kull, and Campling (n 673) 64.
[989] Ibid 67.
[990] See Chapter 3 Section II A for a broader discussion of 'fish for aid' agreements.
[991] Mills Elyse et al, 'EU FAAs: Cheap Fish for a High Price' (Policy Brief, Transnational Insitute, Afrika Kontakt, Masifundise for Hands on the Land, November 2017).
[992] Andriamahefazafy, Kull, and Campling (n 673) 66–7.

another in the same tuna production chains. Competition among IOCs in the study is heightened by the fact that all three island states capture value through FAAs and port activities.[993] This drives individual relations with DWFSs so that IOCs compete to obtain FAAs and encourage catch landings in their ports.[994] The authors add that the uneven distribution of tuna resources in different IOCs' waters during seasonal migrations exacerbates this competition. The variability in productivity implies that countries have different levels of leverage in their FAA negotiations, again undermining a common approach to access.[995]

The third and most oblique way is through the financial assistance DWFSs provide to IOCs to improve tuna management through MCS activities and scientific data collection. By funding successful cooperative efforts among IOCs, DWFSs also ensure that these efforts indirectly benefit their industry interests—as the authors contend is the case for EU funding of the Regional Fisheries Monitoring Program (PRSP).[996] In discussing subregional cooperation among IOCs, authors in this literature draw attention to the complex dynamics among IOCs and the wider 'geopolitical economy' of IO tuna production (of which IOTC is a part).

It remains an open question as to whether greater formal cooperation will lead to increased economic benefits for IOCs. As has been discussed, approximately half of the IO tuna fishery occurs within high seas areas, which undermines the level of control IOCs are able to exert over regional tuna resources. This presents a similar case to the challenges PICs in the WCPO longline fishery face to maximising economic benefits from their tuna resources.[997] It is likelier that WIO IOCs, which share significant skipjack and yellowfin tuna resources in their EEZs, could stand to benefit greatly from increased cooperation. Subregional cooperation among these IOCs could enable these IOCs to address at least two of the core issues Mbendo describes as affecting their ability to capture value: IUU fishing practices and low resource

[993] Ibid 67.
[994] Ibid 70.
[995] Ibid.
[996] The authors comment that 'The contribution of the EU serves its own interests in that the French and Spanish boats dominate the regional purse seine fishery. With its flagged vessels operating in the waters of IOC members, funding the PRSP largely benefits EU fishing operators, whose catches are protected from other non-EU entities fishing illegally in the region.': ibid 68.
[997] See Chapter 4 Section III C2.

rents.[998] While some regional MCS efforts, such as the PRSP led by the IOC, are underway, formal cooperation through an FFA-style MCS system could allow WIO IOCs to more effectively address IUU fishing in their subregion.[999] Moreover, collective negotiations for FAAs, meaning *binding* MTCs that WIO IOCs commit to enforcing in negotiations, could potentially increase the resource rents these states currently receive from EEZ tuna resources.

D *The IOTC and Distributional Struggles in Tuna GPNs*

IOCs have a broad range of interactions with tuna production chains. As the previous section shows, this diversity impacts on their ability to use cooperative strategies to increase their value capture from tuna production and, in some cases, positions IOCs in competition with each other. Consequently, diversity among IOCs shapes the distributional struggles they experience—with each other and with DWFSs in tuna GPNs.

The dearth of studies on distributional struggles among IOCs, DWFSs, and foreign firms makes it difficult to provide a precise description of distributional struggle in the IO. Currently, most studies focus on distributional dynamics in bilateral FAAs with DWFSs, particularly with the EU. Emphasising broader security considerations, other studies suggest that geopolitical drivers which lie outside the scope of competitive dynamics within the tuna industry may motivate fisheries relations between IOCs and DWFSs.[1000] Consequently, it is difficult to describe any specific interference and cooperative strategies that DWFSs and IOCs have used to advantage their positions in tuna GPNs.

It is, however, possible to introduce recent negotiations on prospective catch and effort allocations in the IOTC in light of a broad conception of distributional struggle. One challenge IOCs face in maximising their value capture from tuna production, individually and collectively, is their dependence on the IOTC to effectively manage tuna resources on the high seas. Andriamahefazafy, Kull, and Campling explain that the physical distribution of commercial tuna stocks in the IO, which are at least evenly weighted across EEZs and high

[998] See above (n 976).
[999] Andriamahefazafy, Kull, and Campling (n 673) 68; see also above (n 884).
[1000] Thean Potgeiter, *Institute for Security Studies* (Paper No 236, August 2012); Michelle Voyer et al, 'Maritime Security and the Blue Economy: Intersections and Interdependencies in the Indian Ocean' (2018) 14(1) *Journal of the Indian Ocean Region* 28, 37–41. See also Liam Campling and Alejandro Colás, 'Capitalism and the Sea: Sovereignty, Territory and Appropriation in the Global Ocean' (2018) 36(4) *Environment and Planning D: Society and Space* 776, 787–9.

seas areas, means that IOCs are ultimately dependent on equitable and effective tuna management by the IOTC—more so, for example, than PICs who control the majority of regional tuna resources within their EEZs.[1001]

IOCs have recognised this common issue and are seeking to cooperate through collective negotiating positions at the IOTC, particularly in the context of long-term catch and effort allocations.[1002] Much of this cooperation has been embodied in IOCs' efforts to present joint negotiating positions to the IOTC as the G16 Group of Like-Minded Coastal States in the IOTC.[1003] Similar to the WCPFC, this would indicate that the IOTC is implicated in wider distributional struggles concerning tuna production in the IO.

Recent commentaries on IOTC deliberations apply differing perspectives to G16 negotiating positions, which primarily focus on the need for the IOTC to regulate the industrial portion of the IO tuna fishery more effectively and to address IOCs' legitimate fishing aspirations. For example, Lecomte et al identify four 'leaders' among IOCs, who, they suggest, 'constitute the main coastal States bloc that provides the main proposals for management measures'.[1004] These regional leaders are South Africa, Maldives, Mauritius, and Seychelles.[1005] The authors propose that these IOCs' negotiating positions have had the effect of 'polarising' IOTC deliberations on short-term regulatory measures and longer-term negotiations for a quota allocation system. The authors claim that IOCs have 'demonised' industrial purse seiners flagged to DWFSs and their use of FAD technology.[1006] They conclude that, 'The black-and-white view of the two blocs can be summarized as: a distant industrial fleet motivated solely by profit versus a mainly artisanal coastal fleet that guarantees food security and livelihoods in coastal areas'.[1007] Lecomte et al argue that IOCs' negotiating positions do not reflect the realities of the IO tuna fishery, where artisanal fishing activities have a significant impact on

[1001] Andriamahefazafy, Kull, and Campling (n 673) 71.
[1002] See, e.g., Andriamahefazafy et al (n 987).
[1003] The G16 are Australia, Bangladesh, Indonesia, Iran, Kenya, Malaysia, Maldives, Mauritius, Madagascar, Mozambique, Oman, Pakistan, Seychelles, South Africa, Sri Lanka, and Tanzania. Since 2010, the Australian government has funded and supported the G16 and its activities, which include caucusing prior to IOTC annual sessions and skills development workshops. See Australian High Commission, *Australia Supports Sustainable Fisheries Management in Indian Ocean Countries* (Web Page, 3 April 2019) <https://mauritius.embassy.gov.au/plut/OZsupportssustainablefisheriesmgmtinIOcountries2019.html>.
[1004] Lecomte et al (n 921) 73.
[1005] Ibid 74.
[1006] Ibid.
[1007] Ibid 75.

tuna resources; they also place too much emphasis on the impacts of the industrial fleet.[1008] As shown in Section II E, these claims by Lecomte et al might be premised on the misleading way in which the IOTC categorises fishing fleets.

Conversely, Hussain argues that DWFSs have attempted to systematically undermine the legitimate development aspirations of IOCs at the IOTC.[1009] Hussain characterises DWFSs' negotiating positions on determining the role of historical catch in a quota allocation system as colonialist and imperialist. Hussain's observation reflects demands by DWFSs that historical catch by their vessels *within* the EEZs of IOCs be attributed to them as part of determining future catch allocations. Similar to Lecomte et al, Hussain identifies a group of states that has helped marshal IOCs' collective negotiating positions, including South Africa, Maldives, and Seychelles, as well as Indonesia and Australia. Alluding to the fraught relationship explored by Andriamahefazafy, Kull, and Campling concerning some IOCs' dependence on aid from DWFSs, Hussain notes that 'many coastal developing countries depend on the developed nations for assistance … This muddies the waters among coastal states, whereby differing levels of dependence on the developed countries lead to differing strategies and priorities'.[1010]

While it is difficult to ascertain the precise implications for IOTC negotiations of distributional struggles in the IO, it is reasonable to conclude that the prospective nature of these negotiations has a direct, potential impact on future competitive dynamics among states and firms in the IO tuna industry. As the commentaries by Lecomte et al and Hussain show, this has invited significant debate among IOTC members. Consequently, this thesis considers the application of differentiation by the IOTC in light of distributional struggles among states and firms in IO tuna production.

[1008] Ibid.
[1009] Sinan Hussain, 'Colonialism and Imperialism Still Strong in One of World's Largest Tuna Fisheries Regions', *Indian Ocean Observatory* (Web Page, 10 June 2018) <https://www.theioo.com/index.php/en/diplomacy/item/527-colonialism-and imperialism-still-strong-in-one-of-world-s-largest-tuna-fisheries-regions>.
[1010] Ibid.

CONCLUSIONS

This chapter has examined the political economy of the IO tuna industry to elucidate the economic interests that inform IOTC negotiations. Section II reviews IOTC members' engagement with tuna GPNs and provides insights for comparing and contrasting the political economies of the IO and WCPO tuna industries. The chapter finds that the IO tuna industry encompasses a total of six production chains, the majority of which feed canned and raw tuna GPNs.

The chapter demonstrates that IOCs are major players across all nodes of IO tuna production chains, while DWFSs participate primarily in fishing and retail nodes. Consequently, DCSs receive a wider range of economic benefits and DWFSs exhibit a narrower set of economic interests in the IO tuna industry than in the WCPO. The chapter also shows that, in comparison to PICs in the WCPO, only a minority of IOCs—nine in total—receive significant economic benefits from IO tuna production.

In reviewing IOTC catch and effort data, the chapter further argues that there is a clear and pressing need to improve how the IOTC and commentators characterise semi-industrial fishing fleets in the IO. It also demonstrates that confusion regarding vessel categories in the data has allowed commentators to present claims that distort presentations of the tuna fishery, such as the claim that artisanal fleets flagged to IOCs have a similar impact on commercial tuna stocks as industrial fleets either flagged to or financed by capital from DWFSs.

Section III discusses recent research on challenges IOCs face in maximising the economic benefits they receive from EEZ tuna resources. The chapter finds that, in comparison to the WCPO, there is currently a scarcity of studies on the contribution of IO tuna production to IOC national economies. Concomitantly, there is also little research on distributional struggles between IOCs and DWFSs in tuna GPNs. Nevertheless, the chapter focuses on research that argues IOCs could benefit greatly from cooperative strategies (as PICs in the WCPO have) in fisheries access relations with DWFSs. This research also describes the substantial challenges IOCs face to engaging in such strategies.

Scholars note several barriers to tuna-related cooperation among IOCs, including limitations to domestic institutional capacity in fisheries administration, law, and enforcement and competitive dynamics arising from some IOCs' fraught relations with DWFSs, who are viewed as development partners. In the face of these challenges, the chapter highlights recent legal and institution-building efforts among IOCs at regional and subregional levels, particularly in the area of fisheries access relations. The chapter demonstrates that distributional struggles between IOCs and DWFSs are playing an increasing role in IOTC negotiations, as evidenced by the IOTC's recent discussions on a quota allocation system.

This chapter shows that, while there are differences between WCPO and IO tuna fisheries and industries, the regions share striking similarities in their patterns of distributional struggle. Perhaps the most critical similarity is that distributional struggles between DCSs and DWFSs implicate TRFMO policies in both regions. As both case studies show, this is because DWFSs and DCSs attempt to advantage their economic interests in tuna GPNs via interference and cooperative strategies *through* TRMFO negotiations. Along with Chapter 4, this chapter confirms that political-economic dynamics between DWFSs and DCSs underwrite TRFMO negotiations. With an understanding of distributional struggle in both regions to background its analysis, the next chapter examines how the WCPFC and IOTC apply differentiation to policy outcomes.

PART III: APPLYING DIFFERENTIATION WITHIN THE WCPFC AND IOTC

CHAPTER 6: DIFFERENTIATION IN PRACTICE WITHIN THE WCPFC AND IOTC

This chapter examines the application of differentiation within the law and policy of the WCPFC and IOTC. Using the three objectives for differentiation in IFL to structure this examination, the chapter evaluates Policy Examples in both TRFMOs. The Policy Examples have been chosen to compare three issue areas relevant to differentiation: (i) special funds that support the participation of DCSs in TRFMO-related meetings and other capacity building-related funding; (ii) management decisions based on consideration for socio-economic impacts on coastal communities in DCSs; and (iii) allocation negotiations relevant to DCSs' high seas fishing aspirations. Each issue area captures elements of procedural and distributive equity for DCSs.

This chapter compares differentiation provisions in WCPFC and IOTC treaty law with actual policy outcomes. For each Policy Example, the chapter provides a description of the case (in light of the relevant objective in IFL), examines relevant TRFMO treaty law, and discusses the policy outcome.

I OBJECTIVE 1: EFFECTIVE PARTICIPATION AND MEETING FUNDS FOR DCSS

The first objective of differentiation in IFL is DCSs' effective participation in transboundary fisheries management. This principle is supported by *UNCLOS*, *UNFSA*, and WCPFC and IOTC treaty law. An element of effective participation is the ability of DCSs to fund the attendance of delegates to TRFMO-related meetings.

This section examines evidence for the application of the principle of effective participation by the WCPFC and IOTC. It describes the application of this principle through an analysis of special funds for DCS delegates to attend Commission-related meetings of both TRFMOs. The section explores how both funds have experienced difficulties maintaining funding levels. Issues with resourcing both funds have required the WCPFC and IOTC to discuss the nature and availability of financial assistance to developing members.

A *Policy Example A: WCPFC Special Requirements Fund (SRF)*

1 *Effective Participation of PICTs within the WCPFC*

Chapter 2 showed that the effective participation of PICTs is a cornerstone of the WCPFC differentiation framework.[1011] According to the *WCPF Convention*, effective participation is part of the special requirements of developing states.[1012] Under article 30, effective participation includes attendance to meetings of the Commission and its subsidiary bodies, with a particular focus on supporting PICTs.[1013] In addition, effective participation refers to financial assistance for capacity building activities that enhance the ability of PICTs to engage in the scientific and technical work of the Commission.[1014] According to WCPFC treaty law, effective participation can be interpreted as encompassing both the narrow objective of supporting the attendance of PICTs to Commission-related meetings, as well as the broad objective of supporting their capacity to implement the Commission's management decisions.

2 *History of the SRF*

The WCPFC Special Requirements Fund (SRF) was created to address article 30(3) of the *WCPF Convention*, which describes its purpose as facilitating the effective participation of PICTs in the work of the Commission.[1015] The Commission officially established the SRF through the adoption of the *WCPFC FR* in 2004.[1016] Before 2010, the balance of the SRF steadily increased through voluntary contributions largely from the US.[1017]

The Commission originally gave minimal guidance regarding how the SRF should be used, though it assisted developing members and territories in implementing the *FAO Guidelines to Reduce Sea Turtle Mortality in Fishing Operations*.[1018] To address this lack of guidance and

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[1011] See Chapter 2 Section III A.
[1012] *WCPF Convention* (n 46) art 30.
[1013] Ibid art 30(3).
[1014] Ibid art 30(4).
[1015] Ibid art 30(3).
[1016] *WCPFC FR* (n 458) 5 [7.1]. The starting balance of the SRF—16,892.30 USD—was from a fund that sponsored the attendance of DCS delegates to negotiations to establish the WCPFC: WCPFC, *Final Report of the Preparatory Conference Organizational Fund*, WCPFC/Comm.1/9, 1st reg sess, 15 March 2005, 1 [3].
[1017] See, e.g., WCPFC, *Summary Report*, 2nd reg sess, 12–16 December 2005, 10 [68].
[1018] WCPFC, *Resolution to Mitigate the Impact of Fishing for Highly Migratory Species on Sea Turtles*, Resolution 2005-04, 2nd reg sess, 16 December 2005, 54 [9].

clarify the relationship between the SRF and capacity building activities, the WCPFC adopted operational guidelines for the SRF in 2006.[1019]

3 *Use of the SRF and Other Funding Sources*

Over time, the Commission has devoted the majority of SRF funds to covering the costs of meeting attendance for PICT delegates to sessions of the WCPFC plenary, SC, and TCC, as well as various WCPFC and SPC-led workshops, trainings, and working group meetings. The WCPFC budget already provides funding for one delegate from developing members to attend meetings of the WCPFC and its subsidiary bodies. The primary use of SRF funds has supported the attendance of *additional* delegates from these members. To a lesser degree, the SRF has also funded various capacity building projects and consultancies by fisheries development professionals.[1020]

A description of the SRF balance, contributions, and expenditures from 2004 to 2019 is provided in Table 7. Table 7 shows that the greatest contributors to the SRF have been the US and Canada. The first time the SRF was used to fund the participation of PICT delegates to a tuna management-related meeting was in 2010, when it enabled four delegates to attend an SPC Preparatory Tuna Stock Assessment Workshop.[1021] FAC documents indicate a growing trend in the use of SRF funds for meeting attendance, starting in 2013 and peaking in 2019.[1022]

[1019] *SRF Operational Guidelines* (n 512).
[1020] In addition to the SRF, voluntary funding streams supported by industrialised members have been added to the Commission's financial resources over the years. This includes the establishment of the Japanese Trust Fund in 2005 and the Chinese Taipei Trust Fund in 2016. Both Trust Funds have each secured funding of approximately 2 million USD over five-year periods to conduct capacity building projects. See, e.g., WCPFC, *Japan Trust Fund Summary of Projects 2012 to Date*, 11 April 2019; WCPFC, *Establishment of the Chinese Taipei Trust Fund*, Circular No. 2016/23, 20 May 2016.
[1021] WCPFC, *Report on the Status of Other Funds for 2010*, WCPFC7-2010-FAC4/06, 4th sess, 7 November 2010.
[1022] Cf ibid; WCPFC, *Report on the Status of Other Funds for 2013*, WCPFC10-2013-FAC7-06, 7th sess, 1 November 2013; WCPFC, *Report on the Status of Other Funds for 2019*, WCPFC16-2019-FAC13-06 Rev 1, 13th sess, 3 December 2019.

Table 7: SRF Balance, Expenditures and Contributions 2004-2019[1023]

Year	SRF Balance (USD)	SRF Expenditures	SRF Contributions
2004	$16,892	$0	$0
2005	$34,999	$20	$10,000 (FSM) $25,000 (US)
2006	$56,500	$34,000	$55,000 (US)
2007	$53,650	$4,042	$0
2008	$146,547	$0	$50,000 (US)
2009	$153,564	$3,069	$15,000 (US)
2010	$212,465	$48,483	$46,960 (Australia) $30,000 (US)
2011	$236,161	$32,951	$0
2012	$179,445	$57,133	$0
2013	$94,838	$51,781	$0
2014	$83,982	$0	$0
2015	$2,554	$75,342	$0
2016	$32,456	$0	$20,000 (US)
2017	$179,273	$54,579	$50,000 (Canada) $35,000 (US)
2018	$99,267	$144,183	$70,000 (Canada) $30,000 (US)
2019	$279,549	$157,773	$67,892 (Australia) $50,000 (Canada) $30,000 (South Korea) $50,000 (US)

4 *Historical Discussions on the SRF*

The WCPFC regularly discusses the SRF under a standing agenda item on the special requirements of developing states.[1024] Over the Commission's history, members have raised two central issues associated with the SRF. The first was put forward by FFA members in 2012 in relation to SRF funding for 'core' Commission work. PICs argued that the SRF should not be used to fund delegates to undertake meetings and capacity building activities associated with the Commission's SC and NC.[1025] The WCPFC resolved this issue by adopting a FAC recommendation that the NC develop budgetary funding to regularly provision the costs of attendance for developing members, including five SIDS, to NC meetings.[1026]

[1023] Derived from annual reporting by the WCPFC Secretariat to the FAC. See, e.g., above n 1022.
[1024] The WCPFC ROP obliges the Commission to consider the special requirements of developing members during its regular sessions: *WCPFC ROP* (n 226) 5 [2(2)(h)].
[1025] WCPFC, *Summary Report*, 8th reg sess, 26–30 March 2012, 20 [161].
[1026] *WCPFC9 Summary Report* (n 893) [94]–[104]. The FAC agreed core funding would be provided by NC members who were non-developing states, giving priority to RMI, FSM, and Palau: WCPFC, *Summary Report and Recommendations of the Sixth Session of the FAC (FAC6)*, WCPFC9-2012-22, 6 December 2012, [25]–[26]. For a more detailed account of the FAC's discussion, see also: at [21]–[27].

The second, far more deliberated issue for the WCPFC has been ensuring the sustainability of SRF funding. Secondary to this issue has been whether the SRF should be resourced from mandatory contributions by developed members. FFA members first raised this issue in 2014, proposing that a mandatory 'SIDS assistance fee' of 10,000 USD be added to the budgetary contributions of developed members to maintain funding for the SRF.[1027]

While the Commission did not adopt the FFA's proposal, the resourcing issue gained salience when SRF funds became depleted in 2015. In 2016, the FAC deliberated on possible options for increasing SRF funding and creating a sustainable funding stream.[1028] Some options included drawing from a proportion of the overall Commission budget, using participation fees levied on observers, and imposing a mandatory assessed contribution on developed members.

In 2016, the FFA (re)submitted a proposal to maintain the SRF balance at 300,000 USD through mandatory assessed contributions from developed members and focus on funding for a second PICT delegate to WCPFC, SC, and TCC meetings.[1029] The FFA argued that the Commission had already established a precedent for using mandatory contributions to support meeting participation after agreeing to use NC core budget funding for SIDS' participation in 2012.[1030] Furthermore, the FFA claimed that the breadth and complexity of issues now covered by the Commission, and the associated expansion of obligations on members, now required at least two PICT delegates to participate in meetings.[1031]

[1027] WCPFC, *Summary Report and Recommendations of the Eight Session of the FAC (FAC8)*, WCPFC11-2014-23, 5 December 2014, [52]–[55].

[1028] WCPFC, *Summary Report and Recommendations of the Tenth Session of the FAC (FAC10)*, WCPFC13-2016-FAC10, 9 December 2016, [87]–[109] 'FAC10 Summary Report'.

[1029] Ibid [87]. The FFA derived this figure from WCPFC Secretariat estimates that the cost to support PICs' participation to one meeting was approximately 90,000 to 100,000 USD and that this should be tripled to include participation in the WCPFC, SC, and TCC annual sessions: at [94].

[1030] WCPFC, *FFA Proposal to Ensure the Sustainability of the Special Requirements Fund*, WCPFC13-2016-DP17, 13th reg sess, 4 November 2016, [17]–[20].

[1031] Ibid [14]. In their proposal, the FFA argued that:

> it must be recognised that the Commission has ever-increasing obligations placed on all CCMs [members], in particular SIDS. The environment today is quite different from what it was in 2004 when the Commission first started. The complexity and diversity of issues have expanded and evolved, so it must also be recognised that it is impossible for one representative to cover all the issues at these meetings: at 13.

The FFA proposal negotiations produced both short- and long-term actions. In the short term, the Commission replenished the SRF through a voluntary contribution from Taiwan,[1032] and by transferring funds from another stand-alone fund.[1033] In the long term, the Commission agreed that members required clarification around core elements of the SRF, including 'its scope of use, prioritization, allocation authority, securing of funding at an appropriate level, and transparency of operation'.[1034] Therefore, the Commission established a virtual intersessional working group to review the SRF.[1035]

In 2017, the WCPFC reviewed the work of the SRF working group and approved a proposal to develop a 'Strategic Investment Plan' (SIP).[1036] The SIP's objectives were defined as follows: to support the 'full input and participation' of developing members in meetings of the Commission; to support the development of the fisheries management and technical 'capability and capacity' of these members to implement CMMs (as identified through the Commission's internal processes, such as the CMS process, SIDS checklist and other capacity needs identified by the Commission and Secretariat); and to explore funding models to provide adequate and sustainable funding for the SRF.[1037] The SRF working group proposed that a gap and needs analysis first be conducted to guide the development of the SIP.[1038] Once developed, the SIP would be submitted to the Commission for approval on a trial basis over three years.[1039]

During the course of WCPFC14 discussions on the SRF, the Commission returned to the theme of supporting the effective participation of developing members through funding for a second delegate.[1040] In this vein, the FFA had submitted a proposal to amend the *WCPFC FR* to provide funding for two delegates to WCPFC-related meetings.[1041] FFA members argued that mandatory contributions to the SRF would not be required (as had been repeatedly

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[1032] It should be noted that a trend, contemporaneous with the depletion of the SRF, was observed in the rise of extra-budgetary contributions by DWFSs. This trend indicates that, rather than voluntarily contribute to the SRF at a time when funds were depleted, DWFSs opted to earmark individual contributions to the Commission.
[1033] *FAC10 Summary Report* (n 1028) [105]–[108].
[1034] Ibid [109].
[1035] Ibid.
[1036] See *SRF SIP* (n 521).
[1037] WCPFC, *Summary Report and Recommendations of the Eleventh Regular Session of the FAC (FAC11)*, WCPFC14-2017-FAC11, 7 December 2017, [45] ('FAC11 Summary Report').
[1038] Ibid [47].
[1039] Ibid [46].
[1040] *WCPFC14 Summary Report* (n 834) [132]–[135].
[1041] WCPFC, *Special Requirements Fund*, WCPFC14-2017-DP07, 14th reg sess, 3 November 2017.

proposed in previous years) if second delegates were supported by the WCPFC budget.[1042] The proposal did not succeed however, due to resistance by industrialised members.[1043]

5 *Policy Outcome*

At WCPFC15 in 2018, the Commission followed up on commitments to adopt the SIP, resolve the need for a sustainable funding model, and systematise its approach to the governance and use of SRF funds.[1044] In the process of addressing these action items, the Commission established a stronger and more direct relationship between the SIP, SRF, and implementation of article 30. The Commission remained divided, however, on the issue of amending the *WCPFC FR* to include a second delegate as a means of addressing effective participation—which was proposed for the second year by the FFA.[1045]

The actions of the Commission were informed by recommendations of the SRF working group. The working group reported on an analysis undertaken to identify the capacity needs of PICTs and to seek funding options available both within and outside the WCPFC administrative framework to address these needs. The SRF working group reported that the analysis 'demonstrated that most capacity development needs had associated support mechanisms already', though some members continued to assert that 'effective participation was inadequately supported by the Commission'.[1046] On the basis of this analysis, the SRF working group had developed the SIP, noting the need for flexibility, funds for second delegates, 'in-country' capacity building activities, and greater transparency in the SRF's administration.[1047]

At WCPFC15, the Commission adopted the SIP and secured annual funding for its implementation in the WCPFC budget at a 'target base level' of 150,000 USD.[1048] The Commission also directed the Secretariat to annually update the SIP and report on its

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[1042] Ibid [3].
[1043] *FAC11 Summary Report* (n 1037) [48]–[52].
[1044] WCPFC, *Summary Report*, 15th reg sess, 10-14 December 2018, 23-7 [128]–[157] ('*WCPFC15 Summary Report'*).
[1045] WCPFC, *Proposal to Amend the Financial Regulations for the Effective Participation of SIDS*, WCPFC15-2018-DP25, 15th reg sess, 10–14 December 2018.
[1046] *WCPFC15 Summary Report* (n 1044) 23–4 [134].
[1047] Ibid.
[1048] Ibid 27 [154]; WCPFC, *Summary Report and Recommendations of the Twelfth Regular Session of the FAC (FAC12)*, WCPFC15-2018-FAC12-14, 14 December 2017, [120].

implementation to the Commission.[1049] Finally, the Commission made information from internal processes relevant to identifying the developing members' capacity needs public domain data, which has been uploaded to a public webpage on 'Implementation of Article 30 of the Convention'.[1050]

After considerable debate since 2015, the WCPFC adopted a plan for securing sustainable funding and ensuring that their fund addresses the specific needs articulated by PICs in the context of the Commission's work. It remains to be seen whether this new approach will address concerns expressed by PICs on the need to secure funding for an additional delegate to attend Commission meetings.

6 *Comparison with WCPFC Differentiation Framework*

The SRF was established to address article 30(3) of the *WCPF Convention*, which obliges the WCPFC to establish a fund to facilitate the effective participation of developing members. Article 30(3) provides that effective participation encompasses Commission 'meetings and those of its subsidiary bodies'.[1051] Obligations concerning the governance and administration of the SRF are elaborated in the *WCPFC FR* and the *SRF Operational Guidelines*.

Central negotiating issues have been sustainable resourcing and the use of SRF funding to support a second PIC delegate to WCPFC-related meetings. Both issues are not explicitly connected to binding obligations under the WCPFC differentiation framework. The only binding obligation is for the Commission to *establish* a fund for the purpose of facilitating effective participation.[1052] Therefore, although the Commission allowed the SRF to become depleted in 2015, it was not in violation of relevant provisions in WCPFC treaty law.

This reality highlights the curious legal status of the SRF (and as Chapter 2 noted, provisions on special assistance to developing states more generally in IFL).[1053] While WCPFC treaty law obliges states to establish the SRF, it does not oblige them to maintain adequate resourcing for it. PICs underscored the resourcing issue in their SIDS Checklist, which

[1049] *WCPFC15 Summary Report* (n 1044) 27 [154].
[1050] Ibid [157].
[1051] *WCPF Convention* (n 46).
[1052] Ibid.
[1053] Chapter 2 Section III D1.

included their proposal to add a 'SIDS assistance fee' of 10,000 USD to the budgetary contributions of developed members.[1054] Ultimately, the Commission addressed this resourcing issue in the policy outcome by funding the ongoing SIP through a line item in the budget.

The Commission's actions have failed to address PICs' arguments that additional resourcing is required, through the SRF or otherwise, to fund their effective participation. These arguments emanate from a sense of the broader objective contained in article 30 and the preamble of the *WCPF Convention* that PICs require specific financial assistance.[1055] As Chapter 3 discussed, significant asymmetries in size and negotiating capacity between PIC and DWFS national delegations continue to be observed at WCPFC meetings.[1056] As PICs have demonstrated, this pattern continues at the same time as the complexity and number of conservation and management issues handled by the WCPFC have risen. This has resulted in an increasing number of working groups convening simultaneously on the margins of meetings and a greater need for multiple, expert negotiators on PIC delegations to represent their interests. Therefore, while the WCPFC has secured a long-term strategy for funding the SRF and followed black letter law in this respect, it does not appear to provide adequate financial support for PICs' effective participation.

B *Policy Example B: IOTC Meeting Participation Fund (MPF)*

1 *History of the MPF*

The IOTC Meeting Participation Fund (MPF) was established to respond to low levels of participation of developing members in scientific meetings. Prior to the MPF, the IOTC relied on training activities through bilateral capacity building programs with the EU and Japan to address the persistent trend of developing members' low participation.[1057] This issue was first identified in 1999 at IOTC4[1058] and gained salience a decade later, when the IOTC's first Performance Review recommended that it consider 'establishing a special fund to

[1054] *WCPFC12 SIDS Checklist* (n 505) [xiii].
[1055] *WCPF Convention* (n 46) art 30(1), Preamble paras 7–8.
[1056] See Chapter 3 Section IIIB 1(b).
[1057] See, e.g., ibid.
[1058] IOTC, *Report of the Fourth Session of the IOTC*, IOTC/S/04/99/R[E], 13–16 December 1999, [49].

facilitate participation [of developing states] in the Commission's work'.[1059] Subsequently, the Commission established the MPF in 2010.[1060] *Resolution 10/05* defines the MPF's purpose as follows: '[to] support scientists and representatives from IOTC Contracting Parties and Cooperating Non-Contracting Parties (CPCs) who are developing States to attend and/or contribute to the work of the Commission, the IOTC Scientific Committee and its Working Parties'.[1061] In 2012, the IOTC adopted a *MPF ROP*[1062] and made it a standing SCAF agenda item[1063].

2 *Use of the MPF*

When it established the MPF, the IOTC transferred 200,000 USD of accumulated funds to 'seed' the Fund and agreed it would be sustained by accumulated funds, voluntary contributions, and other sources of funding identified by the Commission.[1064] The IOTC also committed to agree to a long-term plan to maintain the MPF by 2011 at IOTC15.[1065] Between 2011 and 2013, the Commission maintained the MPF at 200,000 USD through transfers of accumulated funds, including extra-budgetary contributions from Australia, China, and other intergovernmental projects.[1066] During this time, the Commission observed a significant rise in the participation of developing members in meetings of the SC and its working parties.[1067]

[1059] IOTC, *Report of the Thirteenth Session of the IOTC*, IOTC-2009-S13-R[E], 30 March–3 April 2009, app V (II).
[1060] IOTC, *On the Establishment of a Meeting Participation Fund for Developing IOTC Members and Non-Contracting Cooperating Parties (CPCs)*, Resolution 10/05, 14th reg sess, 1–5 March 2010 ('*Resolution 10/05'*). This Resolution is no longer active. In 2014, a Compendium Working Group recommended that *Resolution 10/05* (along with other 'administrative' measures) be incorporated into the Commission's revision of its *ROP*: IOTC, *On the Removal of Obsolete Conservation and Management Measures*, Resolution 14/01, 18th reg sess, 1–5 June 2014, [2(d)]. The *MPF ROP* is in the IOTC's revised *ROP*: *IOTC ROP* (n 528) r XVI, app VIII.
[1061] *Resolution 10/05* (n 1060) [1]. The same language is in Rule XVI: *IOTC ROP* (n 528) r XVI [1].
[1062] IOTC, *Report of the Sixteenth Session of the IOTC*, IOTC-2012-S16-R[E], 22–26 April 2012, 54–56 app XI.
[1063] See, e.g., IOTC, *Report of the Ninth Session of the SCAF*, IOTC-2012-SCAF09-R[E], 24-26 April 2012, 6 [15]–[18]. Before 2012, MPF discussions were limited to Secretariat reports to the SCAF which addressed a reporting requirement in the *MPF ROP*: *IOTC ROP* (n 528) r XVI [4].
[1064] *Resolution 10/05* (n 1060) [2]. Data on MPF expenditures is difficult to obtain. In 2016, the SCAF recommended that the Secretariat annually prepare a document on the MPF's financial status, including historical expenditures: IOTC, *Report of the 13th Session of the SCAF*, IOTC-2016-SCAF13-R[E], 19–20 May 2015, 9 [40] ('*SCAF13 Report*').
[1065] *Resolution 10/05* (n 1060) [2].
[1066] See IOTC, *IOTC Meeting Participation Fund Status*, IOTC-2019-SCAF16-06[E], 16th sess, 12–13 June 2019 ('*MPF Status*').
[1067] See, e.g., IOTC, *Report of the Eighteenth Session of the IOTC*, IOTC-2014-S18-R[E], 1–5 June 2014, 18 [86].

An overview of the MPF balance, contributions, expenditures, and number of funded meeting participants from 2010 to 2018 is included in Table 8.

Table 8: MPF Balance, Expenditures and Funded Participants 2010-2018[1068]

Year	MPF Balance (USD)	MPF Expenditures	No. of MPF Funded Participants*	% of Scientific Meetings Funded	% of Non-Scientific Meetings Funded
2010	$57,429	$57,429	–	–	–
2011	$157,186	$157,186	–	–	–
2012	$126,010	$195,502	–	–	–
2013	$240,547	$315,952	–	–	–
2014	$118,517	$242,517	89	63%	37%
2015	$118,656	$207,073	87	66%	34%
2016	$211,022	$285,088	121	57%	43%
2017	$182,945	$202,945	118	67%	33%
2018	$200,000	$250,903	122	48%	52%

In 2014 and 2015, the Commission reduced MPF funds to over half of previous levels. Part of the reason for this decision was the shortfall created in 2013, when the MPF was overspent.[1069] The IOTC was also experiencing broader budgetary issues that required it to seek cost-saving measures in the budget.[1070] In 2014, the Commission reduced MPF funds to 60,000 USD and requested that the Secretariat 'strictly adhere' to Rule XVI, para 5 of the *IOTC ROP* that only 25% of MPF funds be used for 'non-scientific meetings'.[1071] The Commission also agreed to exclude MPF funding for the participation of cooperating non-members.[1072] Noting a reduction in developing members' delegates, the SC recommended the MPF be raised to the previous level of 200,000 USD.[1073]

In 2016, the IOTC underwent a second Performance Review, which recommended the Commission incorporate the MPF into the budget indefinitely for its 'continuation and

[1068] Derived from annual reporting by the IOTC Secretariat to the SCAF. See *MPF Status* (n 1066) 2. It is difficult to determine the number of MPF-funded participants to scientific and non-scientific meetings between 2010 and 2013 due to inconsistent reporting by the IOTC Secretariat. Cf IOTC, *Progress Report of the Secretariat*, IOTC-2013-SCAF10-03[E], 10th sess, 6 April 2013; IOTC, *Progress Report of the IOTC Secretariat*, IOTC-2014-SCAF11-04[E], 11th sess, 15 April 2014.
[1069] IOTC, *Report of the Eleventh Session of the SCAF*, IOTC-2014-SCAF11-R[E], 29–31 May 2014, 7 [19].
[1070] Ibid [15].
[1071] *Report of the Eighteenth Session of the IOTC* (n 1067) 18 [90].
[1072] Ibid [91].
[1073] IOTC, *Report of the Seventh Session of the IOTC SC*, IOTC-2014-SC17-R[E], 8–12 December 2014, 35–6 [118]–[119]. See generally ibid 35-36 [112]–[123].

optimisation' and 'to create a more balanced attendance to both science and non-science meetings of the Commission'.[1074] Subsequently, the IOTC agreed to fund the MPF through its budget and raised funding to 150,000 USD for 2016 and 200,000 USD for 2017.[1075] This decision was five years overdue; the Commission repeatedly elapsed the deadline set in *Resolution 10/05* to agree on long-term MPF funding by 2011.

3 *Historical Discussions on the MPF*

IOTC members have discussed two central issues associated with the MPF. Since the establishment of the MPF, the Commission has specified that 75% of its expenditures are to be used for participation in 'scientific meetings',[1076] while the remaining 25% are to be used for 'non-scientific meetings'.[1077] This 75:25 ratio for MPF allocations was intended to reflect the IOTC's priority that MPF funds support participation in the scientific work of the Commission. Table 8 provides indicative numbers for MPF funding of participants to scientific versus non-scientific meetings. It appears the MPF has not always been allocated according to this ratio. The most recent audit by the FAO Office of the Inspector General in 2019 nevertheless concluded that the Secretariat is administrating the MPF in accordance with the *IOTC ROP*.[1078]

In 2019, the IOTC Secretariat noted a rise in the number of subsidiary bodies served by the MPF. The Secretariat advised that the increasing number of IOTC non-scientific subsidiary bodies 'may require the current 25% allocation of the MPF to non-scientific meetings […] to be reassessed in the future'.[1079] While members have not discussed revising the MPF allocation ratio, MPF discussions over the years have highlighted the ratio as a critical aspect of the MPF.

[1074] IOTC, *Report of the 2nd IOTC Performance Review*, IOTC-2016-PRIOTC02-R[E], 2–6 February, 14–18 December 2015, 43 [211].
[1075] IOTC, *Report of the 20th Session of the IOTC*, IOTC-2016-S20-R[E], 23–27 May 2016, 22 [105], app XV 101 [31].
[1076] According to Commission practice, 'scientific meetings' have included the SC and its associated working parties.
[1077] *IOTC ROP* (n 528) rXVI 8 [5]. According to the MPF ROP '[n]on-scientific meetings are regular and special Sessions of the Commission, including Sessions of the Compliance Committee and the Standing Committee on Administration and Finance, and other non-scientific subsidiary bodies of the Commission': at app VIII 22 [1].
[1078] IOTC, *Report on the Audit of the IOTC Secretariat by FAO*, IOTC-2019-SCAF16-10[E], 16th reg sess, 12–13 June 2019, 3 [23].
[1079] Ibid.

The second issue concerned the use of extra-budgetary contributions to cover shortfalls in the MPF budget. Table 9 provides an overview from 2010 to 2018 of the MPF budget, actual balance, expenditures, and extra-budgetary contributions.

Table 9: MPF Budgetary Shortfalls and Extra-Budgetary Funding Sources[1080]

Year	MPF Budget	MPF Balance	MPF Expenditures	MPF Shortfall Covered by Extra-Budgetary Funding	Extra-Budgetary Funding Sources
2010	$200,000	$57,429	$57,429	$0	–
2011	$200,000	$157,186	$157,186	$0	–
2012	$200,000	$126,010	$195,502	$69,492	Australia (FAO)*
2013	$200,000	$240,547	$315,952	$75,405	Australia
2014	$60,000	$118,517	$242,517	$124,000	Australia, Bay of Bengal Large Marine Ecosystem Project, FAO-GEF ABNJ Tuna Project
2015	$60,000	$118,656	$207,073	$88,417	Australia, China, FAO-GEF ABNJ Tuna Project
2016	$150,000	$211,022	$285,088	$74,066	Australia, China, FAO-GEF ABNJ Tuna Project
2017	$200,000	$182,945	$202,945	$20,000	China
2018	$250,842	$200,000	$250,903	$50,903	Australia, China
Average MPF Budgetary Shortfall = $55,809					

Table 9 shows that, on average, MPF expenditures have exceeded the IOTC's planned budget by over 50,000 USD. To cover these shortfalls, the Commission has relied on extra-budgetary funding. Since 2016, the SCAF has encouraged the Secretariat to seek extra-budgetary MPF funding.[1081] In the past two years, the SCAF also noted the important role played by extra-budgetary contributions in meeting demand for MPF funding.[1082] In 2019 the Commission adopted a SCAF recommendation to increase the MPF budget to 250,000 USD.[1083]

[1080] The information contained in this table was compiled from IOTC budgets in SCAF annual reports, as well as IOTC Secretariat reporting to the SCAF. See, e.g., IOTC, *Report of the 16th Session of the SCAF*, IOTC-2019-SCAF16-R[E], 12–13 June 2019, 16 ('*SCAF16 Report*').
[1081] See, e.g., *SCAF13 Report* (n 1064) 9 [38].
[1082] IOTC, *Report of the 15th Session of the SCAF*, IOTC-2018-SCAF15-R[E], 16–17 May 2018, 7 [22]; *SCAF16 Report* (n 1080) 8 [31].
[1083] *SCAF16 Report* (n 1080) 8 [32].

4 *Policy Outcome*

After calls from two Performance Reviews and repeated delays in determining a long-term funding scheme between 2011 and 2015, the IOTC now resources its fund through a line item in its budget. Several ongoing sources of debate associated with the MPF remain, however, such as the proviso that no more than 25% of funding be used for non-scientific meetings.

5 *Comparison with IOTC Differentiation Framework*

The *IOTC ROP* provides that the objective of the MPF is to support the attendance of delegates from IOCs to IOTC-related meetings.[1084] The *IOTC ROP* further emphasises support for the attendance of *scientists* from IOCs.[1085] In both these respects, the MPF differs from the SRF, which has a wider remit (as was shown, the IOTC budget has a separate line for capacity building activities) and does not explicitly focus on scientist participants or science-related meetings of the WCPFC.

The IOTC differentiation framework does not oblige the Commission to maintain resourcing for the MPF. As was the case for the WCPFC, therefore, the IOTC was not in violation of its treaty law when MPF funds fell below half of previous levels in 2014 and 2015, resulting in a fall in IOC delegates' participation in science-related meetings.

The IOTC was also not in violation of treaty law when the Commission took an additional four years to agree to long-term resourcing for the MPF. This was because the relevant paragraph was non-binding in *Resolution 10/05*: 'The Commission *will* identify, at its 15th Session, a procedure for supplying funds to the MPF in the future'.[1086] Since this time, the Commission has responded to funding needs, indicated in the most recent increase to the MPF budget.

Ultimately, the IOTC addressed its differentiation framework and the needs of IOCs through its policy outcome by securing long-term funding for the MPF. It remains to be seen how the

[1084] *IOTC ROP* (n 528).
[1085] Ibid.
[1086] *Resolution 10/05* (n 1060) (emphasis added).

IOTC will respond to potential issues associated with the MPF in the future, such as possible revisions to the ratio of expenditures for scientific versus non-scientific meetings.

II Objective 2: Protection of Vulnerable and Fisheries Dependent Coastal Populations and Impacts of Management Actions on Industries Within DCSs

The second objective of differentiation in IFL is the protection of dependent and vulnerable coastal populations. This principle refers to the special interests of certain coastal populations (small-scale, artisanal, and indigenous fishers and fishworkers) in transboundary fish stocks to support their food security and livelihoods. *UNFSA* further obliges states to consider the interests of, and impacts on, these coastal populations in adopting conservation and management measures.[1087] Recently, SIDS in both TRFMOs have argued that specific management decisions have adversely impacted coastal populations dependent on tuna stocks for their livelihoods. In these Policy Examples, SIDS have called for the TRFMOs to take immediate, short-term action, as well as make long-term commitments to alleviate these impacts.

A *Policy Example C: WCPFC Management of the South Pacific Albacore Stock and PICTs' Domestic Tuna Industry*

1 *Overview of South Pacific Albacore Fishery and WCPFC CMMs*

The South Pacific albacore (SPA) stock supports domestic fishing activities and associated canneries across WCPO coastal communities. These communities are located south of the equator where SPA are concentrated, in the EEZs of the Cook Islands, Samoa, Fiji, New Caledonia, and American Samoa. The SPA stock fulfils at least three important socio-economic functions. First, SPA catches have supported the only sustained, domestic tuna fishing industry in the WCPO since the 1990s.[1088] Second, the stock sources culturally significant artisanal tuna fisheries throughout the Polynesian PICs.[1089] Third, the SPA stock feeds major canneries in the region that provide employment to local populations, particularly in American Samoa.[1090]

[1087] *UNFSA* (n 10) art 24(a), (b). See also Chapter 2 II D.
[1088] Gillett, *A Short History of Industrial Fishing in the Pacific Islands* (n 583) 9.
[1089] See Gillett, *Fisheries of the Pacific Islands: Regional and National Information* (n 810).
[1090] See Gillett, *Fisheries in PICT Economies* (n 810).

The WCPFC has adopted three CMMs on SPA (each CMM replacing the other); *CMM 2005-02*, *CMM 2010-05*, and *CMM 2015-02*.[1091] These CMMs have responded to SC recommendations to limit fishing pressure on SPA. Despite three iterations, each CMM has retained the same effort limit—WCPFC members are obliged to keep the number of fishing vessels actively targeting SPA to 2005 levels, or an average of levels between 2000 and 2004.[1092] PICTs are exempted insofar as they 'wish to pursue a responsible level of development of their fisheries' for SPA.[1093] Each CMM has instituted increasingly robust reporting requirements for members that harvest SPA.[1094] Despite these CMMs, the SC, the Pacific Islands tuna fishing industry, and the World Wide Fund for Nature (WWF) have expressed increasing concern for the economic viability of the SPA stock and its ability to continue to support coastal communities.[1095]

SPA catches have risen dramatically since the establishment of the WCPFC. Pre-WCPFC, SPA catches remained between 25,000 and 50,000 mt.[1096] In the late 2000s, SPA catch rocketed to over 80,000 mt and has continued to increase.[1097] In 2017, the longline catch for SPA (89,388 mt) was the highest on record.[1098] Rising catch levels are attributable to two trends. The first is the increased efficiency of longline fishing vessels from DWFSs, which render the existing effort limit ineffective for constraining SPA catch.[1099] The second is an increase in chartering arrangements between PICs and foreign fishing firms based in Taiwan

[1091] WCPFC, *Conservation and Management Measure for South Pacific Albacore*, CMM 2005-02, 2nd reg sess, 12–16 December 2005 ('*CMM 2005-02*'); WCPFC, *Conservation and Management Measure for South Pacific Albacore*, CMM 2010-05, 7th reg sess, 6–10 December 2010 ('*CMM 2010-05*'); WCPFC, *Conservation and Management Measure for South Pacific Albacore*, CMM 2015-02, 12th reg sess, 3–8 December 2015 ('*CMM 2015-02*').
[1092] *CMM 2005-02* (n 1091) [1]; *CMM 2010-05* (n 1091) [1]; *CMM 2015-02* (n 1091) [1]. This effort limit applies only to SPA caught in the area above 20 degrees South.
[1093] See, e.g., *CMM 2015-02* (n 1091) [2].
[1094] *CMM 2005-02* did not require members to report SPA catch data, while *CMM 2010-05* merely required members to report the number of vessels actively targeting SPA, and SPA bycatch data: *CMM 2010-05* (n 1091) [4]. CMM 2015-02 now requires members to report catch data for SPA: *CMM 2015-02* (n 1091) [4].
[1095] See, e.g., WCPFC, *Fourteenth Regular Session of the SC*, WCPFC15-2018-SC14-00, 8–16 August 2018, 53 [246]; Pacific Islands Tuna Industry Association, 'Longlining for South Pacific Albacore: The Ship has Sailed and the Domestic Industry is Left to Sink' (Press Release, Fisheries Newsletter No 142, Pacific Community, 29 January 2014); Banks, Short, and Tuqiri (n 645). The SC has cautioned members on the impacts of increasing SPA catches since its second session: WCPFC, *Second Regular Session of the SC*, 7–18 August 2006 [20].
[1096] *Overview of WCPO Tuna Fisheries* (n 51) 45.
[1097] Ibid.
[1098] Ibid.
[1099] Banks, Short, and Tuqiri (n 645) 14–5.

and China.[1100] Catch data reveals rising levels of SPA catch by PIC-flagged longline vessels, many of which operate through charters and are owned by these firms.[1101]

Two factors have frustrated the WCPFC's ability to manage the SPA stock adequately. The first is the Commission's overall approach to management which, reflecting both WCPFC treaty law and broader TRFMO practises, focuses primarily on maintaining or restoring tuna stocks to levels that produce MSY. The way the SPA stock is impacted by fishing pressure render MSY an inappropriate measure for managing the SPA fishery.[1102] SPA are primarily caught by industrial-scale longline fishing vessels, which focus fishing pressure on larger, mature-aged individuals. Over time, increased fishing pressure has significantly reduced the biomass of mature SPA, resulting in 'localised depletions' in PICT EEZs and severe impacts on catch rates.[1103] Economic conditions for vessels that harvest SPA have subsequently deteriorated. While the SC has repeatedly recommended that the WCPFC take management action to reduce fishing pressure on SPA, Commission negotiations reflect difficulties in adopting adequate CMMs based on concern for economic, rather than biological, indicators in the fishery.

The second, related factor concerns the behaviour of industrial fishing fleets that harvest SPA. As Chapter 1 discussed, external factors, such as the economic pressure of reduced catch rates, rather than TRFMO management actions, are often responsible for reductions in fishing pressure on tuna stocks.[1104] It has become clear however that limiting economic factors have not affected the behaviour of DWFS fleets that target SPA.[1105] Commentators have argued that government subsidisation has allowed these fleets to remain operational, despite significant declines in their profitability.[1106] Consequently, many PIC-flagged fleets

[1100] Ibid 7–8.
[1101] Ibid.
[1102] See Skirtun et al (n 73); Graham Pilling, 'A Scientific Perspective on Current Challenges for PICT Domestic Tuna Longline Fleets that are Dependent on South Pacific Albacore' (September–December 2013) *SPC Fisheries Newsletter*.
[1103] See Adam D. Langley, SPC-OFP, *The SPA Fishery Management Issues of Relevance to PICTs* (Technical Report No 37, 17 July 2006) 21–4.
[1104] Pons, Melnychuk and Hilborn (n 66).
[1105] Banks, Short, and Tuqiri (n 645).
[1106] Jemima Garrett, 'Huge Chinese Subsidies Shock Pacific Tuna Industry', *Australian Broadcasting Corporation News* (online, 12 August 2013) <https://www.abc.net.au/news/2013-08-12/pacific-tuna/4881870>.

have shut down their operations due to declining catch rates, while fishing fleets owned by operators from DWFSs, have increased their share of the fishery.[1107]

2 *WCPFC Negotiations on SPA*

To address the problematic economic conditions in the SPA fishery, WCPFC members have focused negotiations on the development of a TRP for SPA.[1108] A TRP would incorporate economic considerations into future catch and/or effort limits for the SPA stock. The WCPFC began negotiating a TRP after FFA proposals to revise the existing effort limits failed repeatedly. From 2012 to 2014, the FFA submitted three proposals to revise the SPA measure by strengthening effort limits for SPA and imposing a catch limit for SPA on the high seas.[1109] These proposals faced significant resistance and failed to garner support. In lieu of agreement, the WCPFC committed to the next best option: adopting a SPA TRP in a separate measure on harvest strategies.[1110]

3 *Policy Outcome*

In 2018, the WCPFC took first steps to act on deteriorating economic conditions in the SPA fishery. The Commission adopted an interim SPA TRP (acknowledging the need to rebuild the stock in order to improve catch rates) and agreed to continue developing a 'roadmap' outlining subsequent commitments to improve SPA management.[1111] This policy outcome resolved a long and frustrating negotiation process that lasted three years, during which the Commission repeatedly failed to meet an agreed deadline to adopt an interim SPA TRP.[1112]

[1107] Lagi Toribau, 'Ready to Hear the Truth About South Pacific Albacore', *Pacific Scoop* (online, 18 August 2015) <http://pacific.scoop.co.nz/2015/08/tuna-fisheries-ready-to-hear-the-truth-about-south-pacific-albacore/>; Pita Ligaiula, 'Dire Warning for Pacific's Domestic Albacore Fishery', *WWF South Pacific* (Web Page, 5 December 2017) <http://www.wwfpacific.org/?uNewsID=318055>.
[1108] Skirtun et al (n 73). For a review of historical discussions on SPA at the SC, TCC, and Commission plenary, see WCPFC, *South Pacific Albacore Roadmap Previous SC, TCC, and Commission Discussions Regarding CMMs 2010-05 and 2015-02*, WCPFC15-2018-SPalbroadmap_suppl, 15th reg sess, 26 November 2018.
[1109] WCPFC, *FFA Members Draft Amendments to the CMM for South Pacific Albacore*, WCPFC8-2011-DP/03, 8th reg sess, 26–30 March 2012; WCPFC, *Proposal on a Revised CMM for South Pacific Albacore by a Number of FFA Member Countries*, WCPFC10-2013-DP34_rev3, 10th reg sess, 2–6 December 2013; WCPFC, *FFA Members' Proposed Replacement for the CMM for South Pacific Albacore*, WCPFC11-2014-DP05, 11th reg sess, 1–5 December 2014.
[1110] *CMM 2014-06* (n 238).
[1111] *WCPFC15 Summary Report* (n 1044) 36 [207]; ibid 32 [182]. See also WCPFC, *Intersessional Activity Report from South Pacific Albacore Roadmap Virtual Working Group*, WCPFC15-2018-SPalbroadmap, 15th reg sess, 26 November 2018.
[1112] This deadline was first set out in the Harvest Strategy Workplan adopted by the Commission in 2015: WCPFC, *Agreed Workplan for the Adoption of Harvest Strategies under CMM 2014-06*, suppl_CMM 2014-06, 12th reg sess, 3–8 December 2015, 4. Unable to reach agreement, the WCPFC repeatedly revised the deadline to

In truth, negotiations on the Commission's effective and equitable management of the SPA stock dated back to 2012, when FFA members first flagged the need to address economic conditions in the SPA fishery.

4 *Comparison with WCPFC Differentiation Framework*

The special circumstances surrounding management of the SPA stock implicate several elements of the WCPFC differentiation framework, including core obligations. The *WCPF Convention* obliges members to design CMMs on the basis of MSY.[1113] This obligation is qualified by the need to consider relevant environmental and economic factors, including the special requirements of PICTs[1114]—and the special vulnerability and needs of coastal communities[1115].

WCPFC members are obliged to consider the dependency of coastal communities on the SPA stock for domestic fishing activities and associated industries in designing relevant CMMs. Moreover, because artisanal fisheries have also been established for SPA, this is reinforced by members' further obligation to take into account the interests of artisanal and subsistence fishers.[1116] Additionally, the *WCPF Convention* requires members to consider uncertainties associated with existing and predicted socio-economic conditions, which would plausibly apply to the present and future impacts on the domestic tuna industry in PICTs.[1117]

Furthermore, PICTs raised the need for adequate management action under the Commission's standing agenda item on special requirements from its 2012 session onwards,[1118] and

agree to a SPA TRP from 2016 to 2017, and again to 2018: WCPFC, *Summary Report*, 13th reg sess, 5–9 December 2016, 45 [314]; *WCPFC14 Summary Report* (n 834) 37 [188]. In 2017, some FFA members were prepared to call a vote rather than delay the adoption of a SPA TRP again: *WCPFC14 Summary Report* (n 834) 36–7 [180]–[187].

[1113] *WCPF Convention* (n 46) art 5(b).

[1114] Ibid.

[1115] Ibid art 30(2)(a)–(c).

[1116] Ibid art 5(h).

[1117] Ibid art 5(c), art 6(1)(b).

[1118] See, e.g., *WCPFC9 Summary Report* (n 893) 11 [83]; WCPFC, *Summary Report*, 10th reg sess, 2–6 December 2013 15 [97].

regularly incorporated associated management actions, such as the establishment of a TRP for the stock, as an item on the SIDS Checklist[1119].

While the WCPFC has taken early management decisions in response to PICTs' concerns, there are gaps between these actions and the WCPFC differentiation framework. For example, the current interim TRP merely *anticipates* a future catch limit. While the Commission is developing a SPA 'roadmap', it has yet to set a deadline for agreement on an improved SPA catch limit (derived from the TRP). Therefore, while the interim SPA TRP represents progress in *negotiations*, actual conditions in the SPA fishery remain the same and will continue to have impacts on PICTs until catch limits for members are set out in a revised CMM.

In the case of SPA, the WCPFC has failed to address core obligations contained in its differentiation framework. In a broad sense, economic conditions in the fishery will continue to impact coastal communities in PICTs, including artisanal fishers and cannery workers, until the WCPFC adopts and implements a new catch limit. Furthermore, the longer the Commission takes to set a revised catch limit, the greater the likelihood that impacts will worsen and require increasingly drastic management action to recover the SPA fishery.

The current CMM operating in the fishery—*CMM 2015-02*—contains the same catch limit the Commission has used since 2005. The Commission continues to implement this catch limit, despite being made aware by the SC of its impacts (local depletions and lower catch rates) as early as 2006.[1120] Some DWFSs, specifically China and Taiwan, have repeatedly dismissed arguments on this effort limit's impacts on PICTs' domestic fishing and processing operations and have actively blocked consensus to revise it in negotiations.[1121] The repeated failure of the Commission to revise the SPA catch limit, despite increasingly dire appeals from PICTs, representatives of the domestic tuna industry, and NGOs represents a lack of

[1119] See *WCPFC9 SIDS Checklist* (n 505) (ii); *WCPFC10 SIDS Checklist* (n 505) 1; *WCPFC11 SIDS Checklist* (n 505) (iv); *WCPFC12 SIDS Checklist* (n 505) (iii).
[1120] Langley (n 1103).
[1121] Author's fieldnotes, WCPFC14 plenary, 7 December 2017. See also *WCPFC14 Summary Report* (n 834) [178]–[180].

consideration for the special requirements of PICTs as they are articulated in the WCPFC differentiation framework.

This Policy Example draws attention to the link established in both *UNFSA* and the *WCPF Convention* between the obligation to take into account special requirements and the duty to cooperate.[1122] Vicuña argues that 'Because [special requirements] is expressly linked to the duty to cooperate it can be argued that such a duty will not be properly discharged unless this requirement is satisfactorily met'.[1123] It would appear that DWFS members have not satisfactorily taken into account the special requirements of PICTs, or properly discharged their duty to cooperate within the WCPFC, given their repeated refusal to respond to calls to revise the effort limit on SPA, which remains the same after 15 years.

Nevertheless, while the WCPFC's management actions (or lack thereof) indicate a broader violation of treaty law, the Commission's repeated failure to honour its own timeline to agree on a SPA TRP does not. This is because the commitments set out by the Commission, first in the Harvest Strategy Workplan from 2015 and later at WCPFC13 in 2016, were non-binding.[1124] In the instance where the Commission *did* use binding language at WCPFC14 in 2017, members succeeded in adopting an interim SPA TRP at WCPFC15 in 2018.[1125]

The Commission's management actions should be considered in light of broader policy developments among PICs that are coastal states in the SPA fishery. As Chapter 4 discussed, South Pacific coastal states began to organise subregionally to manage the SPA fishery in 2010.[1126] Supported by the New Zealand Government, six PICs negotiated and signed the *Te Vaka Moana Arrangement*, which established Te Vaka Moana (TVM), a subregional organisation focused on shared fisheries such as SPA.[1127] TVM members submitted a formal statement on SPA to the Commission in 2012 at WCPFC9.[1128]

[1122] *UNFSA* (n 10) art 24(2); *WCPF Convention* (n 46) art 30(2).
[1123] Vicuña, *Changing Law of High Seas Fisheries* (n 370) 225.
[1124] See, e.g., use of the phrase 'possible adoption of an interim [TRP] for the [SPA] stock' in the WCPFC13 summary report: WCPFC, *Summary Report*, 13th reg sess, 5–9 December 2016 ('*WCPFC13 Summary Report*').
[1125] Contrast this language with use of the phrase 'shall adopt a [TRP] for [SPA]' in the WCPFC14 summary report: *WCPFC14 Summary Report* (n 834).
[1126] Chapter 4 Section III C.
[1127] *Te Vaka Moana Arrangement* (n 892) [5.1].
[1128] *WCPFC9 Summary Report* (n 893) att O.

After proposals to revise the SPA CMM failed at the WCPFC, the FFA also began to focus its efforts on subregional collective action.[1129] In 2014, the FFA facilitated the signature of the *Tokelau Arrangement*,[1130] which foresees the development of a SPA management scheme[1131] and sets out initial, *non-binding*[1132] catch limits in EEZs of 12 members[1133]. Signatories of the *Tokelau Arrangement* have convened several meetings under FFA auspices since 2014, though members have struggled to reach agreement on *binding* catch limits.[1134]

Subregional SPA management actions invoke other provisions in WCPFC treaty law that articulate the need to avoid a disproportionate burden of conservation action onto PICs.[1135] Since the beginning of their efforts to manage SPA, PICs have shown a willingness to take action on deteriorating conditions in the SPA fishery, including through the adoption of EEZ catch limits while WPCFC negotiations on adjacent high seas areas have stalled. If members of the *Tokelau Arrangement* succeed in adopting binding EEZ catch limits before a new catch limit is adopted by the WCPFC, conditions in the SPA fishery will clearly place a disproportionate burden on PICs.

The Commission's management actions reveal that the WCPFC has failed to address concerns about the impacts of conditions in the fishery on local industries and communities that rely on SPA. The Commission has only committed to interim actions that have yet to result in concrete catch limits to constrain fishing pressure on SPA and alleviate impacts on PICTs. As more time elapses before adequate management action is taken, these impacts are

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[1129] For insight into the rationale of FFA leadership at the time the Tokelau Arrangement was adopted, see James Movick, 'South Pacific Albacore Tuna Crisis: Collective Action of the Pacific Islands is the Way Forward' (Press Release, FFA, April 2014) <http://www.pimrisportal.org/news/205-south-pacific-albacore-tuna-crisis-collective-action-of-the-pacific-islands-is-the-way-forward>.
[1130] *TKA* (n 895).
[1131] Ibid 4.3(b).
[1132] Ibid 3.1.
[1133] Ibid Note.
[1134] See Emmanuel Samoglou, 'A Pacific Dilemma—How to Fish the World's Biggest Ocean When Tuna are Scarce', *Matangi Tonga Online* (online, 6 December 2017) <https://matangitonga.to/2017/12/06/pacific-dilemma-how-fish-world-s-biggest-ocean-when-tuna-are-scarce>. The Solomon Islands exited the *TKA* in 2017: Ronald Toito'ona, 'We Are Out', *Solomon Star* (online, 4 December 2017) <https://www.solomonstarnews.com/index.php/news/national/item/19724-we-are-out>.
[1135] See *WCPF Convention* (n 46) art 30(2)(c); *CMM 2013-06* (n 460) paras (1)–(2); *CMM 2013-07* (n 460) paras (1)–(2). The example of the SPA stock implicates a number of other obligations for WCPFC members that are not related to differentiation. These obligations include provisions in WCPFC treaty law on applying the precautionary approach by developing reference points and ensuring that CMMs are compatible with fishing regulations within areas under national jurisdiction: *WCPF Convention* (n 46) art 5(c), art 6(1)(a), (2), art 8.

ongoing; and it remains to be seen whether a revised WCPFC SPA catch limit will provide an appropriate response.

B *Policy Example D: IOTC Management of the Southwest Indian Ocean (SWIO) Yellowfin Stock and Impacts on SWIO Cannery Workers*

1 *Overview of Yellowfin Fishery and IOTC Resolutions*

The YFT stock is critical to the socio-economic benefits IOCs receive from tuna production in the region. YFT is responsible for supporting IO coastal communities in two ways. First, it directly sources multiple artisanal fisheries in the region.[1136] Second, YFT has long been harvested by the industrial purse seine fleet in the WIO, which, in turn, supplies canneries in the region that provide local employment—primarily in Seychelles, Mauritius, and Madagascar.[1137]

Since 2015, the IOTC has been aware that the IO YFT stock is overfished. SC reporting from three stock assessments conducted in 2015, 2016, and 2018 have confirmed this.[1138] The most recent stock assessment determined that the MSY for the YFT stock is 403,000 mt.[1139] According to the IOTC's catch history, YFT catches have reached and exceeded this MSY at various points: first in 1993, then in 2004, and, more recently, from 2016 up to the present.[1140] Prior to 2016, the IOTC had no Resolutions in place to restrict YFT catch, aside from *Resolution 15/08* which applied FAD limitations to purse seiners targeting YFT.[1141]

[1136] See Chapter 5 Section II B.
[1137] See Chapter 5 Section II C.
[1138] The SC first determined with 94% certainty that YFT was overfished in 2015: IOTC, *Report of the 18th Session of the IOTC SC*, IOTC-2015-SC18-R[E], 23–27 November 2015, 84 app XI ('*SC18 Summary Report*'). In 2016, the SC confirmed that YFT was overfished after conducting a new stock assessment, though it reduced the level of certainty to 67.6%: IOTC, *Report of the 19th Session of the IOTC SC*, IOTC-2016-SC19-R[E], 1–5 December 2016, 114–6 app XI. Another stock assessment in 2018 reported that YFT continues to be overfished: IOTC, *Report of the 21st Session of the IOTC SC*, IOTC-2018-SC21-R[E], 3–7 December 2018, 131–3 app 11 ('*SC21 Summary Report*').
[1139] *SC21 Summary Report* (n 1138) 132.
[1140] Prior to 1980, YFT was almost exclusively caught by longline vessels in the IO, with catches remaining below 80,000 mt: *IOTC Nominal Catches Database* (n 909). YFT catches increased in the 1980s and peaked in 1993 at 400,000 mt (nearly MSY for the stock): ibid. This rise in catches was due to innovations in fishing gear technology and the development of other fisheries (in particular, industrial purse seining) in the IO. YFT catch decreased slightly and then increased sharply in 2004 to a record catch of over 520,000 mt: ibid. YFT catch decreased again from 2004 to 2007 and fell sharply from 2007 to 2011 as a result of piracy issues in the region: ibid. In 2016, YFT catches rose again to above 400,00 mt and have remained around this level up to 2018: ibid.
[1141] IOTC, Procedures on a Fish Aggregating Devices Management Plan, Including a Limitation on the Number of FADs, More Detailed Specifications of Catch Reporting from FAD Sets, and the Development of Improved

The IOTC has adopted four measures to address the overfished state of the YFT stock, which, taken together, comprise the Commission's interim plan to rebuild the stock. These measures include *Resolutions 16/01, 17/01, 18/01*, and *19/01* (with each subsequent measure replacing the other).[1142] Importantly, all measures contain largely the same catch limits[1143] which amount to a 7% reduction in YFT catch from 2014 catch levels.[1144] These catch limits conflict with SC advice from 2015 that a 20% reduction of YFT catch from 2014 catch levels was required for the stock to have a 50% chance of recovery by 2024.[1145]

The core of the four measures set out catch limits[1146] for different gears, including purse seine,[1147] gillnet,[1148] longline,[1149] and 'other gears'[1150]. For purse seiners, the measures

FAD Designs to Reduce the Incidence of Entanglement of Non-Target Species, Resolution 15/08, 19th reg sess, 27 April–1 May 2015, [14].

[1142] IOTC, *Resolution 16/01 On an Interim Plan for Rebuilding the Indian Ocean Yellowfin Tuna Stock in the IOTC Area of Competence*, Resolution 16/01, 20th reg sess, 23–27 May 2016 ('*Resolution 16/01')*; IOTC, *On an Interim Plan for Rebuilding the Indian Ocean Yellowfin Tuna Stock in the IOTC Area of Competence*, Resolution 17/01, 21st reg sess, 22–26 May 2017 ('*Resolution 17/01*'); IOTC, *On an Interim Plan for Rebuilding the Indian Ocean Yellowfin Tuna Stock in the IOTC Area of Competence*, Resolution 18/01, 22nd reg sess, 21–25 May 2018 ('*Resolution 18/01*'); IOTC, *On an Interim Plan for Rebuilding the Indian Ocean Yellowfin Tuna Stock in the IOTC Area of Competence*, Resolution 19/01, 23rd reg sess, 17–21 June 2019 ('*Resolution 19/01*').

[1143] Two modifications have altered catch limits in the YFT rebuilding plan. The first is a change to the baseline year for catch reductions for members that are SIDS, LDCs, and SVEs. In 2017, these members were allowed to choose between the baseline years of 2014 and 2015 in order to increase their catch limits: *Resolution 17/01* [13]. (The adoption of a later baseline year for DCSs shows that this is an example of number (ii) of Rajamani's categories for differentiated implementation: see Chapter 1 Section II B1.) The second is an additional purse seine catch limit for SIDS for 2019 and 2020. SIDS that caught less than 4% of total YFT catch in 2017 are required to reduce their purse seine catch by 7.5% of 2018 catch: *Resolution 19/01* [10].

[1144] Jessica Rattle, *A Case Study on the Management of Yellowfin Tuna by the IOTC* (Blue Marine Foundation Information Paper, No IOTC-2019-S23-INF14) 18 June 2019.

[1145] *SC18 Summary Report* (n 1138).

[1146] The catch limits imposed across all four measures only apply to vessels that the IOTC does not classify as 'artisanal': See *Resolution 16/01* (n 1142) 2 [1]; *Resolution 17/01* (n 1142) 2 [1]; *Resolution 18/01* (n 1142) 3 [1]; *Resolution 19/01* (n 1142) [1]. The catch limits also apply only to vessels that caught *over* a certain amount of YFT in 2014. *Resolution 18/01* does not provide substantive revisions, but simply clarifies the definition of a 'supply vessel' to include a 'support vessel': *Resolution 18/01* (n 1142) 4.

[1147] Members reporting purse seine catches over 5000 mt for 2014 are obliged to reduce their catches by 15% of 2014 catch levels: See *Resolution 16/01* (n 1142) 2 [3]; *Resolution 17/01* (n 1142) 2 [3]; *Resolution 18/01* (n 1142) 3 [3]; *Resolution 19/01* (n 1142) [5].

[1148] Members reporting gillnet catches over 2000 mt for 2014 are obliged to reduce their catches by 10% of 2014 catch levels: See *Resolution 16/01* (n 1142) 2 [4]; *Resolution 17/01* (n 1142) 3 [4]; *Resolution 18/01* (n 1142) 4 [4]; *Resolution 19/01* (n 1142) [6].

[1149] Members reporting longline catches over 5000 mt for 2014 are obliged to reduce their catches by 10% of 2014 catch levels: See *Resolution 16/01* (n 1142) 2 [5]; *Resolution 17/01* (n 1142) 3 [5]; *Resolution 18/01* (n 1142) 4 [5]; *Resolution 19/01* (n 1142) [7].

[1150] Members reporting catches for 'other gears' over 5000 mt for 2014 are obliged to reduce their catches by 5% of 2014 catch levels: See *Resolution 16/01* (n 1142) 2 [6]; *Resolution 17/01* (n 1142) 3 [6]; *Resolution 18/01* (n 1142) 4 [6]; *Resolution 19/01* (n 1142) [8]. While no definition is provided, it may be assumed that 'other gears' are all gears excluding purse seine, gillnet, and longline.

contain increasingly restrictive limits on the use of FADs and supply vessels.[1151] The measures also create reporting requirements for members, institute penalties for lack of compliance with catch limits,[1152] and set deadlines for subsequent actions by the Commission. These deadlines are for conducting additional stock assessments,[1153] taking measures to manage artisanal YFT catch,[1154] evaluating the effectiveness of each measure,[1155] and reviewing the interim plan in 2020[1156].

2 *IOTC Negotiations on YFT*

Negotiations on the Commission's interim plan for rebuilding the YFT stock have centred on its impact on coastal communities in IOCs. Although all three measures exempt artisanal vessels from YFT catch limits, the Commission faced unforeseen impacts on coastal communities in the WIO in 2017.

In 2017, multiple IOCs submitted proposals to amend *Resolution 16/01*.[1157] Seychelles and Mauritius argued that catch limits for purse seiners (which had come into effect in January)

[1151] The first measure, *Resolution 16/01*, listed the existing limit for FADs in *Resolution 15/08*, which was a total of 1275 FADs: *Resolution 16/01* (n 1142) 2 [3]. It also limited the number of supply vessels to half of the number of active purse seine vessels: at ibid. *Resolution 17/01* further restricted the number of FADs to 1050: *Resolution 17/01* (n 1142) 3 [3], and introduced a stepped plan to reduce the overall number of supply vessels operating in the IO from 2018 to 2022, requiring that no more than one supply vessel could support a purse seiner: at ibid. *Resolution 18/01* set out the same limits to FAD and supply vessels: *Resolution 18/01* (n 1142) 3–4 [3]. *Resolution 19/01* does not include FAD limits, but sets out the same limits on supply vessels as *Resolution 17/01*: *Resolution 19/01* (n 1142) [16]–[17]. *Resolution 19/01* also provides that supply vessel limits do not apply to members with only one supply vessel: ibid [18]. The likely reason that FAD limits are not included in *Resolution 19/01* is because of the limits already adopted in *Resolution 19/02*: IOTC, *Procedures on a FADs Management Plan*, Resolution 19/02, 17–21 June 2019 [4].

[1152] Penalties are only included in *Resolution 19/01*: see *Resolution 19/01* (n 1142) [13]–[15].

[1153] *Resolution 16/01* (n 1142) 3 [9]; *Resolution 17/01* (n 1142) 4 [9]; *Resolution 18/01* (n 1142) 4–5 [9].

[1154] *Resolution 16/01* (n 1142) 3 [11]; *Resolution 17/01* (n 1142) 4 [11]; *Resolution 18/01* (n 1142) 5 [11]. Since 2016, the Commission has had a deadline to 'take appropriate measures' to manage the artisanal YFT fishery by 2018. It is unclear whether the IOTC has taken management actions in view of this obligation: see *Resolution 19/01* (n 1142).

[1155] The SC was required to evaluate the effectiveness of the measures set out in the rebuilding plan in 2018 and 2019: *Resolution 16/01* (n 1142) 3 [10]; *Resolution 17/01* (n 1142) 4 [10]; *Resolution 18/01* (n 1142) 5 [10]; *Resolution 19/01* (n 1142) [30].

[1156] Originally, the Commission was obliged to review the interim plan for rebuilding the YFT stock in 2019: *Resolution 16/01* (n 1142) 3 [12]; *Resolution 17/01* (n 1142) 4 [12]; *Resolution 18/01* (n 1142) 5 [12]. In 2019, the Commission adopted *Resolution 19/01* as an interim measure and set a deadline for another review in 2020: *Resolution 19/01* (n 1142) [2].

[1157] The separate proposals were originally submitted by Mauritius, Seychelles and (jointly) South Africa, and Maldives: IOTC, *Amendments to Resolution 16/01: On an Interim Plan for Rebuilding the IO YFT*, IOTC-2017-S21-PropD[E], 21st reg sess, 21 April 2017; IOTC, *On an Interim Plan for Rebuilding the IO YFT Stock in the IOTC Area of Competence*, IOTC-2017-S21-PropE[E], 21st reg sess, 12 April 2017; IOTC, *Proposal to Amend 16/01: On an Interim Plan for Rebuilding the IO YFT Stock in the IOTC Area of Competence*, IOTC-2017-S21-PropI[E], 21st reg sess, 21 April 2017. These proposals were combined later in the meeting and sponsored by several additional IOCs.

were resulting in fleet dynamics that were likely to cause an early closure of the fishing season.[1158] This change in supply to local canneries would require large numbers of workers to lose work for several months.[1159] IOCs proposed to take measures to decrease the efficiency of purse seiners harvesting YFT.[1160] They argued that this could be accomplished through further restrictions on the use of FADs and supply vessels, so that purse seiners would take longer to reach YFT catch limits.[1161] Additional restrictions would extend the season and thereby keep cannery workers in the region employed for longer.[1162] Seychelles also argued that the baseline year for reducing YFT catch in the measure—2014—imposed a disproportionate burden of conservation action on IOCs that were SIDS, LDCs, and SVEs.[1163] Seychelles proposed that these IOCs be allowed the option of choosing 2014 or 2015 as their baseline year for reducing YFT catch.[1164] Despite vocal resistance from DWFSs, these concerns were reflected in the adoption of *Resolution 17/01*.[1165]

As the IOTC has progressed its interim plan, it has focused devising appropriate limits to reduce fishing pressure. In 2019, a paper submitted to the WPTT suggested that effort, rather than catch limits may be better suited to the fishery due to the intermeshed manner in which YFT is caught with other tropical tuna species.[1166] While this may provide a path forward, IOTC management actions on YFT continue to be adopted in the uncertain context of stalled negotiations on allocation criteria.[1167] Some commentators have argued that the inability of the IOTC to progress allocation negotiations has resulted in higher overall catches in recent years, including for YFT, because members are incentivised to pad out their historical catch numbers to increase their future share of the fishery.[1168]

[1158] Author's fieldnotes, IOTC21 plenary, 25 May 2017. See also Angela Abolhassani, 'Tuna Fisheries and Geopolitical Change: Coastal and Fishing Country Tensions Resurface at the IOTC' (2017) 10(1) *Australian Journal of Maritime and Ocean Affairs* 35, 37–8.
[1159] Ibid.
[1160] Ibid.
[1161] Ibid.
[1162] Ibid.
[1163] Ibid.
[1164] Ibid.
[1165] See *IOTC21 Summary Report* (n 542) 93 app 8.
[1166] Gorka Merino et al, *Prospects for an Effort-Based management of IO YFT*, IOTC-2018-WPTT20-43, 20th reg sess of WPTT, 16 October 2018.
[1167] More detailed information on these negotiations is provided in Policy Example F below.
[1168] See, e.g., Jeremy Noye and Kwame Mfodwo, 'First Steps Towards a Quota Allocation System in the Indian Ocean' (2011) 30 *Marine Policy* 882, 885–6. For a detailed discussion of the phenomenon of the perverse, short-term effects of negotiating a quota allocation system based on historical catches—sometimes referred to as the 'announcement effect'—see also: Palma (n 81) 146–7; Lodge et al (n 66) 41.

3 *Policy Outcome*

Reflecting calls from IOCs that the Commission redesign the purse seine limits on YFT catch to protect the livelihoods of cannery workers in the WIO, the IOTC adopted changes to its interim plan to rebuild the YFT stock in 2017. *Resolution 17/01* retained the same limit on purse seine catches, but required a further reduction in the number of FADs and supply vessels used by purse seiners, and set out a plan to oversee a gradual reduction in the use of supply vessels by 2022. The provisions on supply vessels provided that the IOTC would not allow for the inclusion of new or additional supply vessels on its vessel registry after 2017 and obliged flag states to submit a 'supply vessel reduction plan' to the SC by the end of 2017.[1169]

In addition, *Resolution 17/01* granted SIDS, LDCs and/or SVEs the option of choosing between 2014 and 2015 as baseline years for their catch reductions.[1170] Only Seychelles selected the alternative baseline year of 2015 reducing its purse seine catches.[1171] Finally, *Resolution 17/01* provided language in its preamble referring to the IOTC differentiation framework, including article V(2), sub-paras (b) and (d) of the *IOTC Agreement*. The preamble further recognises that the IOTC is obliged to ensure that Resolutions do not transfer a disproportionate burden of conservation action onto developing states, especially SIDS, under article V(2)(d).[1172]

In accordance with its interim plan, the IOTC reviewed the effectiveness of its actions to rebuild the YFT stock in 2018. Upon reviewing YFT catch levels, the SC found that overall catches had increased by 3%.[1173] Further analysis of the fleets subject to catch limits revealed that four members—the EU, Seychelles, Iran, and Maldives—had violated their catch limits. Of these members, the EU had not made large enough reductions in their catch; the remaining three IOCs had increased their catch.[1174] Further analysis revealed that a larger number of fleets was exempted from catch limits in *Resolution 17/01* and that these fleets had greatly

[1169] *Resolution 17/01* (n 1142) [3] sub-paras (c), (iii).
[1170] Ibid 4 [13].
[1171] *SC21 Summary Report* (n 1138) 39 Table 3.
[1172] *Resolution 17/01* (n 1142) Preamble paras 16, 17.
[1173] *SC21 Summary Report* (n 1138) 39 [124].
[1174] The EU reduced purse seine catches by 5% rather than the requisite 15%. Seychelles increased its purse seine catches by 7%, Iran increased its gillnet catches by 33%, and the Maldives increased its hand-line catches by 1%: ibid 39–40 Table 3.

increased their YFT catches, some by over 1000%.[1175] Therefore, a large part of the increase in YFT catches was attributed to exempted fleets.[1176] Despite the proven ineffectiveness of catch limits in the interim plan, the Commission made few changes in 2018.

In 2019, the IOTC revisited its interim plan.[1177] At IOTC23, the Commission adopted another interim measure containing the same catch limits as those set out in previous measures.[1178] *Resolution 19/01* closes loopholes that distorted catch limits in previous measures,[1179] imposes penalties for over-catch of YFT,[1180] and sets out additional requirements on the use of gillnets with a view to phasing out their use in the IO[1181]. The revised measure also provides that the Secretariat circulate a table of catch limits to members every December[1182] and that the SC will evaluate the effectiveness of the measure in 2019[1183].

It remains to be seen how *Resolution 19/01* will resolve issues with the IOTC's management of the YFT stock. In a rare occurrence, India has submitted an objection to the measure and is therefore not subject to YFT catch limits.[1184] The preamble of *Resolution 19/01* refers to new scientific advice that the YFT stock requires a 20% catch reduction from 2017 levels to have a 50% probability of recovery by 2027.[1185] This scientific advice is not reflected in the catch limits in the current measure, which are based on 2015 (for Seychelles, 2014) catch levels. As was the case in Policy Example C, the IOTC's decision to retain the same catch limits in the

[1175] 10 fleets were exempt from purse seine catch reductions, 20 fleets from longline catch reductions, 16 fleets from gillnet catch reductions and 22 fleets from reductions for 'other gears': ibid. Fleets flagged to Comoros, Iran, Mauritius, and Mozambique increased their YFT catch by over 1000%: ibid.
[1176] While total YFT catches increased by 3% in 2017, total YFT catches among members subject to the catch limits contained in the measure decreased by 1%: ibid.
[1177] *IOTC23 Summary Report* (n 768) 47–8. The deadline to review the interim plan was originally agreed in 2016: *Resolution 16/01* (n 1142) 3 [12].
[1178] *Resolution 19/01* (n 1142).
[1179] From 2017 onwards, any exempted member which exceeds its YFT catch limits is obliged to reduce its catches: *Resolution 19/01* (n 1142) [11].
[1180] If a member's YFT catches from 2017 to 2019 exceed their total YFT catch limit for those three years, the over-catch will be deducted from their 2021 YFT catch limit. This penalty is adjusted for SIDS and LDCs. After 2020, if a member exceeds its YFT catch limit, the over-catch will be deducted from its YFT catch limit over the next two years. If over-catch occurs over two or more consecutive years, an additional 25% will be deducted from its YFT catch limit over the next two years: ibid [13]–[15].
[1181] *Resolution 19/01* obliges all members to set gillnets at a 2m depth from the surface by 2023. The measure also includes *non-binding* language on phasing out or converting gillnet fleets and increasing observer coverage of gillnet vessels by 10%: ibid [21]–[24].
[1182] Ibid [25].
[1183] Ibid [30].
[1184] IOTC, *Objection from India to IOTC Resolution 19/01 On an Interim Plan for Rebuilding the IO YFT Stock in the IOTC Area of Competence*, IOTC Circular 2019-35, 4 September 2–19.
[1185] *Resolution 19/01* (n 1142) Preamble para 10.

YFT fishery is problematic. These catch limits do not reflect scientific advice and are likely to result in ongoing impacts on local employment and artisanal fisheries in IOCs.

4 *Comparison with IOTC Differentiation Framework*

The IOTC differentiation framework provides little guidance to the Commission for addressing the case of the YFT stock. The preambles of YFT measures after 2017 nevertheless point to article V(2) of the *IOTC Agreement*[1186] and *Resolution 12/01*.

The preambles of *Resolution 17/01, 18/01*, and *19/01* elaborate on differentiation provisions in the *IOTC Agreement*. One preambular paragraph repeated in all three measures notes that article V(2)(b), which sets out a soft obligation for the IOTC to engage in research and development activities on IOTC fisheries, also contains 'full recognition [of] the special interests and needs of Members in the region that are developing countries'.[1187] Another preambular paragraph notes that article V(2)(d), which obliges the IOTC to review socio-economic data on IOTC fisheries, further obliges the Commission to ensure that 'conservation and management measures do not result in transferring, directly or indirectly, a disproportionate burden of conservation action onto developing States, especially [SIDS]'.[1188] These paragraphs extend *IOTC Agreement* obligations to include formal recognition of the special interests and needs of IOCs and avoiding placing a disproportionate burden of conservation action onto IOCs.

Preambular paragraphs in all four YFT measures also reference language on states' application of the precautionary approach from article 6 of *UNFSA*.[1189] The relevant paragraph in *Resolution 19/01* also references *Resolution 12/01*, which emphasises the precautionary approach in the context of the IOTC's development of reference points and harvest control rules.[1190] This reference establishes a link between the IOTC's application of

[1186] *IOTC Agreement* (n 47) art V(2) sub-paras b and d.
[1187] *Resolution 17/01* (n 1142) Preamble para 16; *Resolution 18/01* (n 1142) Preamble para 15; *Resolution 19/01* (n 1142) Preamble para 15.
[1188] *Resolution 17/01* (n 1142) Preamble para 17; *Resolution 18/01* (n 1142) Preamble para 16; *Resolution 19/01* (n 1142) Preamble para 16.
[1189] *Resolution 16/01* (n 1142) Preamble para 6; *Resolution 17/01* (n 1142) Preamble para 6; *Resolution 18/01* (n 1142) Preamble para 6; *Resolution 19/01* (n 1142) 6.
[1190] IOTC, *On the Implementation of the Precautionary Approach*, Resolution 12/01, 16th reg sess, 22–26 April 2012. *Resolution 12/01* obliges the Commission to consider uncertainty about 'socio-economic events' among other uncertainties in determining reference points and harvest control rules: at [3].

the precautionary approach and its management of the YFT stock. Given this link, the IOTC should consider the current and future status of the YFT stock in light of socio-economic conditions in IOCs. While preambular language in treaty law can be used as an interpretive aid, it is crucial to acknowledge that this language is not binding on members.

The IOTC differentiation framework contains broad recognition of the special interests and needs of developing members. This recognition has a bearing on YFT management due to the relationship of the YFT stock to artisanal fisheries and local canneries in several developing IOCs, including SIDS. Furthermore, the IOTC's binding obligations under article V(2)(d) highlights the need for improved data on the precise role of the YFT stock in IOC coastal communities.

Despite this lack of information, IOCs such as Seychelles and Mauritius argued in 2017 at IOTC21 that the purse seine catch limits in *Resolution 16/01* were likely to have a significant impact on local employment in canneries. The Commission responded to these potential impacts by revising the purse seine catch limits to include further restrictions on the use of FADs and supply vessels. These revisions had the effect of reducing the efficiency of purse seiners targeting YFT, extending the fishing season, and alleviating potential impacts on employment in local canneries. The actions taken by the IOTC in 2017 show that the Commission responded quickly to needs articulated by IOCs. Furthermore, when the SC conducted a review of the effectiveness of the interim rebuilding plan in 2018 showing that YFT catches had actually increased, the Commission modified new provisions on catch limits and penalties for over-catch for SIDS and LDCs in *Resolution 19/01*. While the broader effectiveness of the IOTC's management of the YFT stock remains in question, the Commission's actions indicate a record of responding to the special interests and needs of developing members articulated in the IOTC differentiation framework.

III Objective 3: Promotion of Access to High Seas Fisheries for DCSs and TRFMO Allocation Systems

The third, final objective of IFL is the promotion of high seas fisheries access for DCSs, though recent developments provide only limited support for this objective.[1191] *UNFSA* is the

[1191] See Chapter 2 Section II.

only binding legal instrument in this analysis to set out a direct obligation that states assist in enabling the participation of developing states in high seas fisheries, which includes 'facilitating access to such fisheries'.[1192] Due to its limited inclusion in IFL instruments—and substantial debate among both practitioners and scholars as to its content—this objective is the most contested principle in this analysis.[1193] Other than ICCAT, there is little precedent among TRFMOs for incorporating DCSs' access to high seas fisheries into quota allocation systems. Lodge et al note the complexities involved in such a task, especially in fully exploited tuna fisheries.[1194] The authors conclude that

> Generally, there is limited evidence that RFMOs have yet taken positive steps to increase the access of developing States to high seas stocks…In most cases, the criterion of the special needs of developing countries is relegated to a subsidiary category of allocation criteria, well below elements such as historical catch and record of compliance…The aspirations of developing countries are always diluted in this scenario.[1195]

DCSs' access to high seas fisheries is an important element of TRFMOs' quota allocation systems. Over time, the WCPFC and IOTC have adopted measures through short-term, ad-hoc allocations determined largely through members' historical fishing activities. More recently, both TRFMOs have made concrete commitments to devising long-term quota allocation systems. An inherent element of these commitments is the need to address DCSs' legitimate fishing aspirations and prospective fishing rights. Recent trends indicate that the WCPFC and IOTC are struggling to deliver on these commitments due to the contested and sensitive nature of long-term allocations and its association with value capture within tuna GPNs.

A *Policy Example E: Allocation Frameworks within the WCPFC*

1 *Overview of WCPFC Negotiations on Allocation Frameworks for High Seas Purse Seine and Bigeye Fisheries*

In 2017, the WCPFC agreed to adopt long-term limits for two core components of the WCPO tuna fishery. As part of this commitment, the Commission also agreed to devise allocation

[1192] *UNFSA* (n 10) art 25(1)(b).
[1193] See Palma (n 81) 98–100; Lodge et al (n 66) 94–8.
[1194] Lodge et al (n 66) 95.
[1195] Ibid.

frameworks for distributing these limits among WCPFC members.[1196] *CMM 2018-01* provides that the first of these limits are to be catch or effort limits on the high seas for the purse seine fishery;[1197] and the second are to be hard limits on the bigeye stock[1198]. Originally, the WCPFC agreed to adopt the first set of limits by 2019 and the second by 2020.[1199]

In 2018, the WCPFC discussed convening a two-day workshop to begin advancing negotiations.[1200] Initial talks were to cover the first set of limits for the high seas purse seine fishery. At WCPFC15, members were presented a draft TOR for the workshop[1201] and decided could not agree on a primary objective.[1202] Deciding against holding the workshop, the Commission delayed the deadline for adopting an allocation framework for the high seas purse seine fishery to 2020.[1203]

WCPFC negotiations to establish hard limits and long-term allocations in the WCPO tuna fishery have been much-anticipated by members. The initial commitment in 2017 was perceived as a momentous decision by FFA leadership, who viewed long-term allocations on the high seas as a vital step towards securing an equitable distribution of WCPO tuna resources.[1204] Publications dating back to negotiations for the *WCPF Convention* convey that PICs expected the WCPFC to address the allocation issue far earlier in its negotiating history. For example, Tarte describes the question of whether WCPFC allocations would cover both

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[1196] WCPFC, *Conservation and Management Measure for Bigeye, Yellowfin and Skipjack Tuna in the WCPO*, CMM 2017-01, 14th reg sess, 3–7 December 2017, [28], [44] ('*CMM 2017-01*').
[1197] The WCPFC updated its tropical tuna measure in 2018—the current measure is *CMM 2018-01*: *CMM 2018-01* (n 232) [28].
[1198] Ibid [44].
[1199] Ibid; *CMM 2017-01* (n 1196) [44].
[1200] *WCPFC15 Summary Report* (n 1044) 40-1 [237]–[243].
[1201] Ibid [239].
[1202] Ibid [242]. The EU argued that negotiations for an allocation framework should not only encompass limits on the high seas for the purse seine fishery, but also limits for PIC EEZs: at [240]. It is significant that this negotiating stance conflicts with the clearly worded commitment to an allocation framework for the high seas purse seine fishery contained in *CMM 2017-01*: (n 1196) [28].
[1203] *WCPFC15 Summary Report* (n 1044) 41 [243].
[1204] See Fatu Tauafiafi, Jemima Garrett, and Lisa Williams-Lahari, 'UNPLUGGED: Impacts of 2018 Tuna Commission Measures on Pacific Island Fisheries' (Media Release, Pacific Islands Oceanic Fisheries Management Project, 3 February 2018) <http://www.tunapacific.org/2018/02/03/unplugged-impacts-of-2018-tuna-commission-measures-on-pacific-island-fisheries/>. After the adoption of *CMM 2017-01*, then-Deputy Director General of the FFA, Wez Norris stated that:

> The agreement to High Seas allocation is a really large step forward in terms of other Commission members recognising the needs of SIDS…This is a real, tangible way that the Commission can implement [article 30 of the *WCPF Convention*]. It is not about development funding or assistance for meeting participation—it is about actually structuring management measures that will benefit SIDS in the region: ibid.

EEZs and high seas areas as a contentious issue in negotiations for the *WCPF Convention*.[1205] According to Tarte, negotiators resolved conflicting views by leaving the relevant provision ambiguous.[1206] Article 10 of the *WCPF Convention* therefore only sets out criteria and principles to *guide* allocations and does not explicitly require the Commission to take allocation decisions.[1207] Negotiators also quarantined allocation decisions through an article obliging the Commission to decide on allocation matters through consensus only.[1208] Expectations that the Commission would address allocation faded as members repeatedly deferred negotiations in favour of short-term measures with de facto allocations determined by historical fishing activities. Consequently, WCPFC members' commitment to hard limits and allocation frameworks in 2017 represented the Commission's first step towards addressing the issue of long-term catch/effort allocations in over 15 years.

2 *Policy Outcome*

At the time of writing, it is unclear how the WCPFC will progress negotiations for long-term allocations into the future.

3 *Comparison with WCPFC Differentiation Framework*

The WCPFC differentiation framework anticipates establishing a long-term system for distributing allocations of TAC and/or TAE. According to the *WCPF Convention*, a function of the Commission is to develop criteria for determining allocations among members.[1209] The *WCPF Convention* sets out ten factors the Commission is required to consider in developing allocation criteria, some of which reflect differentiation.[1210] Two factors provide explicit and direct differentiation advantaging PICTs: the first is the special needs of PICTs resulting from

[1205] Tarte (n 48) 204.
[1206] Ibid 213.
[1207] *WCPF Convention* (n 46) art 10(3), (4).
[1208] Ibid art 10(4).
[1209] *WCPF Convention* (n 46) art 10(1)(g). Lodge et al discuss how the *WCPF Convention* uniquely sets out this obligation:

> The exception is the WCPFC, which is unique in including in its constituent treaty the requirement that the Commission will develop criteria for the allocation of catch or effort and in setting out some of the factors that the Commission must take into account in doing so. These factors include a *very specific recognition of the circumstances of developing States in the region*: Lodge et al (n 66) 96 (emphasis added) (citations omitted).

[1210] Ibid art 10(3).

their dependency on the relevant fish stock;[1211] the second is the fishing interests and aspirations of PICTs which have EEZs where the relevant fish stock occurs.[1212]

Two additional factors provide indirect, implicit differentiation that appear to favour allocations for DCSs: the needs of dependent coastal communities that fish for the relevant fish stock;[1213] and the respective interests of existing participants in the fishery (including the extent to which catch is being utilised for domestic consumption). This second factor may apply to subsistence fisheries and coastal communities that rely on fresh and canned tuna for food security within PICTs.[1214] Accordingly, the WCPFC would be required to take these factors (among the others contained in article 10) into account in allocating hard limits for the high seas purse seine fishery and bigeye stock.

During deliberations in 2018, Japan argued that negotiations for allocation frameworks governing the high seas purse seine fishery and bigeye stock were distinct from negotiations for the allocation criteria provided for under article 10 of the *WCPF Convention*.[1215] While it remains to be seen how members will conduct negotiations at this early stage, Japan's intervention conflicted with the inclusion of references to article 10(3) in *CMM 2017-01*.[1216] If members do not regard the factors contained in article 10(3) as relevant to their negotiations for allocation frameworks, it is possible differentiation will only play a marginal role in the determination of final allocations.

Another relevant part of the WCPFC differentiation framework focuses on the Commission's role in promoting the fishing interests and aspirations of PICTs. In this respect, the WCPFC

[1211] Ibid art 10(3)(d).
[1212] Ibid art 10(3)(j).
[1213] Ibid art 10(3)(g).
[1214] Ibid art 10(3)(b). Recently, Bell et al have argued that under conditions of climate change, PICTs may need to diversify traditional food sources to increase food security for coastal communities as reef fisheries decline; this may require increasing domestic consumption of tuna: Bell et al (n 27).
[1215] *WCPFC15 Summary Report* (n 1044) 41 [240].
[1216] 'By 2019 the Commission shall agree on hard effort or catch limits in the high seas of the Convention Area and a framework for the allocation of those limits in the high seas … that adequately take into account Articles 8, *10(3) and 30 of the Convention*': *CMM 2017-01* (n 1196) (emphasis added). 'By 2020 the Commission shall agree on hard limits for bigeye and a framework to allocate those limits … that adequately take into account Articles 8, *10(3) and 30 of the Convention*': at 44 (emphasis added).

has set out soft legal obligations to support the development of the domestic tuna sector within PICTs in *Resolution 2008-01* and *CMM 2013-07*.[1217]

Given the nascency of allocation negotiations at the WCPFC, it is difficult to determine whether the agreed allocation frameworks will produce allocations that address high seas fisheries access for PICTs. It is nevertheless clear that the Commission has failed to address its obligation to develop allocation criteria for over 15 years and that this status quo will remain until allocation negotiations begin in earnest.

B *Policy Example F: Allocation Criteria within the IOTC*

1 *Overview of IOTC Allocation Negotiations*

IOTC members have been negotiating a quota allocation system for IO tuna stocks for nearly a decade. Allocation negotiations at the IOTC are therefore more advanced than those currently underway at the WCPFC. More recently, negotiations have been guided by revisions to two proposals representing the majority views of members.[1218] These views are those of IOCs, formally negotiating as the G16, and those of the region's DWFSs, formally led by the EU.[1219] Both allocation proposals incorporate elements of differentiation advantaging DCSs. Despite longstanding points of difference that continue to stall negotiations, both sides support operationalising differentiation within the IOTC's quota allocation scheme. However, recent allocation proposals differ substantially on whether differentiation will play a central role in determining final allocations.

The current G16 allocation proposal weaves provisions accommodating the special requirements of IOCs throughout its scheme, including, in its first principles; how allocations

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[1217] *Resolution 2008-01* (n 459); *CMM 2013-07* (n 460) [12]–[18].

[1218] The IOTC began working from two majority view proposals in 2016 at the third meeting of the Technical Committee on Allocation Criteria (TCAC): IOTC, *Report of the 3rd TCAC*, IOTC-2016-TCAC03-R[E], 21–23 February 2016, 9 [30]–[32], 10 [51] ('*TCAC3 Summary Report*').

[1219] IOTC negotiations on a quota allocation system have formally excluded Taiwan, as is not a member of the Commission, though they delegates do attend TCAC negotiations as 'invited experts' with observer status. The TCAC first flagged this issue at TCAC3 in 2016: at 9 [32]. At TCAC4 in 2018, one area of consensus among negotiators obliquely referred to Taiwan's membership status in the IOTC: 'Any final and adopted allocation scheme should provide language that is inclusive of a long-term participating fishing fleet': IOTC, *Report of the 4th TCAC*, IOTC-2018-TCAC04-R[E], 5–7 February 2018, 8 [17] sub-para ii ('*TCAC4 Summary Report*'). Recent allocation proposals have nevertheless allocated Taiwan's catch limit to China: see, e.g., IOTC, *On the Allocation of Fishing Opportunities for IOTC Species*, IOTC-2019-S23-PropA[E], 23rd reg sess, 17–21 June 2019, 1 Explanatory Memorandum ('*G16 Allocation Proposal*').

are to be calculated and weighted; and how the burden of future downward adjustments to TAC will impact individual allocations. The EU allocation proposal does not incorporate provisions advantaging IOCs into its calculation of core allocations, but rather allows for marginal, additional allocations through a 'complementary allocation' and 'correction factor'.

In 2019, the results of simulations were presented to illustrate the allocation outcomes of both allocation proposals—this did little to advance negotiations. It remains to be seen whether the IOTC will conclude discussions and adopt a quota allocation system in the near term. While it appears IOTC members agree to incorporating the special requirements of IOCs into the Commission's quota allocation system (including taking into account their dependence on fish stocks and fishing aspirations), the G16 and DWFSs remain divided on how to operationalise this principle. In addition, the seemingly intractable issue of the attribution of historical catch taken within IOC EEZs continues to loom large over negotiations.

2 *History of IOTC Allocation Negotiations: 2011 to Present*

The IOTC first discussed a quota allocation system in 2009, when the initial performance review of the Commission recommended that members 'explore the advantages and disadvantages' of devising a system for allocating fishing quota.[1220] That year, the EU submitted the first proposal to the Commission, setting out catch limits for the region's yellowfin, bigeye, and swordfish stocks.[1221] Allocations were largely based on the historical catch of members and, after being deemed unacceptable by IOCs, the proposal was not adopted.[1222]

The following year, the IOTC adopted *Resolution 10/01*, calling for the Commission to convene a technical meeting to discuss allocation criteria and recommend a quota allocation system.[1223] *Resolution 10/01* was also adopted to respond to increasing concerns for the status of the region's yellowfin and bigeye stocks.[1224] In this context, the Commission was obliged

[1220] IOTC, *Report of the 13th Session of the IOTC*, IOTC-2009-S13-R[E], 30 March-3 April 2009, app I 57 [46].
[1221] Ibid 12 [49]–[50].
[1222] Ibid.
[1223] *Resolution 10/01* (n 256) [12].
[1224] IOTC, *Report of the 14th Session of the IOTC*, IOTC-2010-S14-R[E], 1–5 March 2010, 8 [18], 12 [42]–[44].

to determine a quota allocation system or 'other relevant measure' for these stocks by 2012.[1225]

The Technical Committee on Allocation Criteria (TCAC) held its first meeting in 2011, and has subsequently convened four more meetings (in 2013, 2016, 2018, and 2019). Over time, *Resolution 10/01* was replaced by *Resolution 12/13*[1226] and *Resolution 14/02*,[1227] which eliminated provisions on an area closure for yellowfin and bigeye catches, and removed the 2012 deadline for agreement on a quota allocation system.[1228] Since 2011, the IOTC has failed to adopt a quota allocation system for any of the species under its mandate.

3 *Primary Issues in IOTC Allocation Negotiations*

Several issues have thwarted the IOTC's efforts to establish a quota allocation system. While difficult to provide a full survey, it is possible to isolate a few central issues that have vexed negotiators. The first is the need to assess, reconcile, and finalise the IOTC's historical catch records. In TRFMOs that have instituted quota allocation schemes, a reliable record of historical catches has been necessary to establish baseline allocations for fishery users. The Commission requested the Secretariat to provide information on the quality of historical catch data for all fleets,[1229] consult with members to reconcile this data,[1230] and finalise historical catch data from 1950 to 2016 for all members[1231]. The IOTC Secretariat has reported to the Commission that catch estimates in the IOTC database are generally considered heavily approximated and incomplete.[1232] In particular, the IOTC database does not currently provide

[1225] Resolution 10/01 (n 256) [13].
[1226] IOTC, For the Conservation and Management of Tropical Tuna Stocks in the IOTC Area of Competence, Resolution 12/13, 16th reg sess, 22–26 April 2012.
[1227] IOTC, IOTC, For the Conservation and Management of Tropical Tuna Stocks in the IOTC Area of Competence, Resolution 14/02, 18th reg sess, 1–5 June 2014.
[1228] The Commission has since acknowledged that the 'implementation of a quota system may take several years': IOTC, Report of the 15th Session of the IOTC, IOTC-2011-S15-R[E], 18–22 March 2011, 17 [102] ('*IOTC15 Summary Report*').
[1229] IOTC, *Report of the TCAC*, IOTC-2011-SS4-R[E], 1st sess, 16–18 February 2011, 8 [34] ('*TCAC1 Summary Report*'); *IOTC15 Summary Report* (n 1124) 16 [95]. See also at 17 [99]–[100].
[1230] *TCAC3 Summary Report* (n 1218) 54.
[1231] *TCAC4 Summary Report* (n 1219) 20. In 2019, the Secretariat presented an administrative process for reconciling historical catch data and consulting with members on associated over-catch penalties: IOTC, *Report of the 5th TCAC*, IOTC-2019-TCAC05-R[E], 11–13 March 2019, 7–8 [20]–[21] ('*TCAC5 Summary Report*'); Secretariat, IOTC, *Administrative Processes*, IOTC-2019-TCAC05-INF06, TCAC5, 11–13 March 2019.
[1232] The Secretariat has reported that 'Both nominal catches and catch-and-effort in the IOTC database are considered to be incomplete to varying degrees—dependent on the fishery and species in question—due to non-reporting of data by IOTC CPCs [members]': Secretariat, IOTC, *Estimation of EEZ Catches in the IOTC Database: Report on the Availability and Quality of Catch Estimates*, IOTC-2017-SC20-INF05, 20th reg sess, 20 November 2017, 2. In addition to non-reporting, the Secretariat has stated there is a lack of reliability of

information on catches in IOCs' EEZs. The issues associated with the IOTC's database of historical catches create significant uncertainty in allocation negotiations.

The second issue is how historical catches in EEZs will be attributed to members to establish baseline allocations. One of the topics discussed at length during in 2016 at TCAC3, this point of difference has continued to divide members, largely as a result of conflicting interpretations of relevant provisions in IFL.[1233] IOCs argue that 100% of historical catches taken in a coastal state's EEZ should be attributed to the coastal state, regardless of whether that historical catch was taken by a different flag state under an FAA or licensing/chartering agreement.[1234] DWFSs argue that all historical catches should be attributed to the flag state, regardless of whether the historical catch was taken in an EEZ or on the high seas.[1235] Differing views on this point have emerged as a key stumbling block in negotiations—a recent analysis undertaken by the TCAC Chair underscored the high degree of difficulty of reconciling members' positions.[1236]

The third issue is procedural and includes the need for strong leadership and legal guidance to progress negotiations. This issue was partially resolved in 2016, when the TCAC contracted an independent Chairman.[1237] In 2013 at TCAC2, members identified the need for an external legal expert to advise and inform negotiations and requested funding for this purpose.[1238] While the Commission endorsed this request, no funding was provided.[1239] The FAO has not sent a representative from its Legal Office to any TCAC meetings to address this need. As the issue of attributing historical catch taken in EEZs demonstrates, IOTC allocation negotiations continue to require the clarity of informed legal advice.

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artisanal catch estimates and difficulties with precise estimates for industrial catch due to raised or aggregated catch-and-effort data from EU purse seiners and Japanese longliners: at 8 [1]; 9 [4].

[1233] *TCAC3 Summary Report* (n 1112) 8 [25] sub-paras (b), (g), (h).

[1234] Ibid 8 [27]. IOCs argue that attributing historical catches from their EEZs to another flag states prejudices their sovereign rights to living marine resources.

[1235] In its most recent proposal, the EU modified its position, allowing for the reallocation of 10% of total EEZ catches from a flag state to the coastal state. This reallocation would be made over a 'transitional period' of a decade: IOTC, *On a Quota Allocation System in the IOTC Area of Competence*, IOTC-2019-S23-PropM[E], 23rd reg sess, 17–21 June 2019, 4 [8] ('*EU Allocation Proposal*').

[1236] Don MacKay, 'Chair's Table', *Allocation Estimations* (Information Paper, 8 April 2019) 6–7 <https://www.iotc.org/allocation-estimations>.

[1237] *TCAC3 Summary Report* (n 1218) 7 [13].

[1238] IOTC, *Report of the 2nd TCAC*, IOTC-2013-TCAC02-R[E], 18-20 February 2013, 10 [35]; IOTC, *Report of the 17th Session of the IOTC*, IOTC-2013-S17-R[E], 6–10 May 2013, 12 [42].

[1239] *TCAC3 Summary Report* (n 1219) 7 [12].

4 *Negotiating Positions of IOCs and DWFSs: Recent Allocation Proposals*

Despite issues confronting IOTC negotiations, members have continued to galvanise discussions through periodic proposals outlining their differing visions for a future quota allocation system. While complex, allocation proposals have been organised around six key elements first agreed during TCAC1 in 2011.[1240] These elements include: guiding principles; allocation criteria; indicators to quantify allocation criteria; an allocation formula weighting criteria against one another; correction factors to adjust baseline allocations; and rules of implementation to govern how allocations are implemented, monitored, and enforced. To varying degrees, the two most recent proposals from 2019 contain these elements.

The two proposals convey substantially different applications of differentiation to quota allocations, both in respect to the procedure for determining quota allocations and the substantive outcome of quota allocations.

(a) G16 Allocation Proposal (2019)

The G16 proposal is framed by preambular language[1241] and allocation principles[1242] that refer to the special requirements, fishing aspirations, and social and economic dependency of IOCs, especially SIDS. The proposal provides explicit differentiation for developing IOCs in two (out of three) components of their allocation formula.[1243] The first is the 'Baseline

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[1240] *TCAC1 Summary Report* (n 1229) 7–8 [26]–[29].

[1241] The preamble of the G16 proposal refers to the objective of the IOTC as, 'maintaining stocks … at levels not less than those capable of producing their maximum sustainable yield, as qualified by relevant environmental, *social and economic factors including the special requirements of developing States in the IOTC Area of Competence*': *G16 Allocation Proposal* (n 1219) Preamble para 3 (emphasis added). The preamble also contains references to article V of the *IOTC Agreement* which recognises the special interests and needs of DCSs in the IO in para 2, sub-paras b and d: at Preamble para 5. Borrowing from previously adopted Resolutions, the preamble further refers to recommendations adopted by Kobe on the need to consider freezing fishing capacity in a way that does not constrain the fishing aspirations of developing states and that may include a transfer of capacity from developed to developing members: at Preamble paras 9–10. The proposal also takes pains to refer to specific provisions in *UNCLOS*, *UNFSA* and the *FAO Code of Conduct* that require the recognition of the special requirements of developing states and, in particular, SIDS: at Preamble paras 11–4.

[1242] Two of the nine allocation principles set out in the G16 proposal provide differentiation for DCSs. These are the special requirements and development aspirations of DCSs in the region and their social and economic dependency on IOTC fisheries. The proposal provides that dependency is to be measured by the contribution of IOTC fisheries to social and economic needs: ibid 5 [14] sub-para d; 6 [14] sub-para h.

[1243] According to the G16 proposal, quota allocations for IOTC members will be derived from three calculations, the weighting of which must accommodate the special requirements and development aspirations of developing IOCs: ibid 10 [25]. These three calculations are the Baseline Coastal State Allocation, Baseline Historical Catch Allocation, and Supplementary High Seas Allocation: ibid. Informally, the G16 has proposed that these could be weighted respectively according to a rough ration of 30%, 65%, and 5%: ibid.

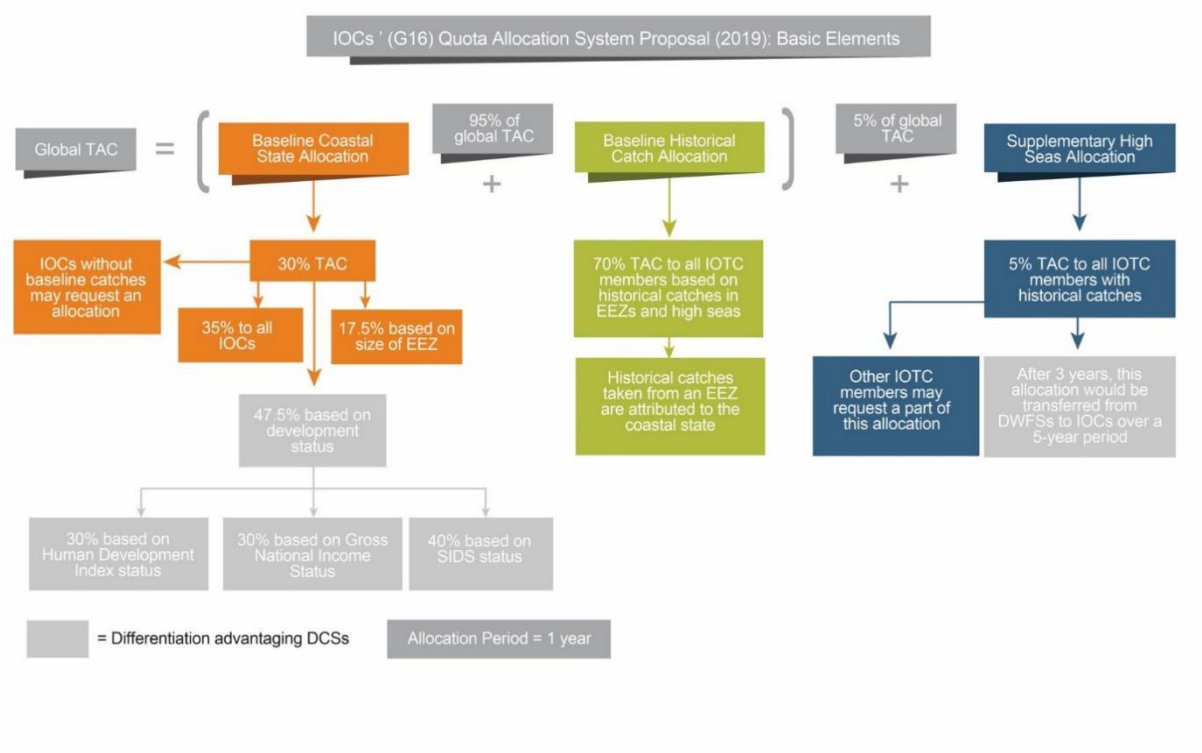
Coastal State Allocation', nearly half of which is to be allocated to developing IOCs according to their development status with reference to various indicators: the Human Development Index, level of Gross National Income, and whether they are classified as a SIDS.[1244]

The second component is the 'Supplementary High Seas Allocation'.[1245] This allocation is open to both members and non-members of the IOTC. After the quota allocation system has operated for three years, however, the portion held by DWFS members would be gradually transferred, at a rate of 20% per year, to developing IOCs (both members and non-members) over five years.[1246]

Finally, the G16 proposal also sets out differentiation in a provision on the procedural matter of reductions to the overall TAC. If overall TAC is reduced, DCSs will receive a smaller allocation reduction of between one-fourth and one-third less than other IOTC members.[1247] A visual overview of the basic allocation formula of the G16 proposal is provided in Figure 12 below.

[1244] Ibid 7 [19] sub-para (a)(ii).
[1245] Ibid 9 [21].
[1246] Ibid 9 [21] sub-para d.
[1247] Ibid 11 [27].

Figure 12: G16 Allocation Proposal Formula[1248]



The G16 allocation proposal sets out to frame the IOTC's quota allocation system in recognition of the special requirements and development aspirations of developing IOCs. Consequently, the proposal provides for the systematic incorporation of this principle into the determination of current and future quota allocations among IOTC members (and non-members).

(b) EU Allocation Proposal (2019)

In its proposal, the EU sets out a more contained role for differentiation. In comparison to the G16 proposal, the preamble is relatively light on references to the special requirements of developing IOCs, including their economic and social dependence on IOTC fisheries, and does not provide a reference to the fishing aspirations of these states.[1249] In its main

[1248] Dr. Indiah Hodgson-Johnston helped format this figure

[1249] The preamble of the EU proposal refers to the special requirements of developing states in the IO in characterising the IOTC's objectives: *EU Allocation Proposal* (n 1235) Preamble para 2. The preamble also refers to a paragraph in *UNFSA* on the special requirements developing states, but fails to reference the fishing aspirations of developing states: at Preamble para 5. The EU also highlights 'important investments in harvesting, processing and trade industries' which it states 'are essential to keep IOTC fisheries economic and socially viable' and which 'maintain jobs created in the region': Preamble para 15. While this paragraph

principles, the proposal does not include references to the special requirements, fishing aspirations, or economic and social dependence of developing IOCs.[1250] Rather than systematically incorporate differentiation for developing IOCs, the EU proposal sets out a welfare payment style approach, wherein minor additional allocations are given to these states.[1251]

The greatest share of the TAC in the EU proposal is entirely based on IOTC members' historical catches, assigned as an 'Initial Baseline Allocation'.[1252] The proposal then provides the first element of differentiation, which is a 'Complementary Allocation' to developing IOCs, intended to address their special requirements.[1253] Developing IOCs are to receive different portions of the Complementary Allocation, according to the proportional size of their EEZs and whether they are classified as LDCs (½), SIDS (¼), or developing (¼).[1254] Procedurally, developing IOCs must also meet certain requirements to be assigned a Complementary Allocation. A developing IOC is not eligible if it already has an initial allocation which accounts for 5% to 10% of the TAC.[1255] In addition, developing IOCs must ensure that this additional allocation is consistent with the terms and implementation of their FDP.[1256]

The second element of differentiation in the EU proposal is a 'Correction Factor' allocation, which comprises two groups of factors: 'Development and Social Factors' and 'Fishery-

identifies the economic and social dependence of IOCs on IOTC fisheries, it appears to also highlight foreign investments which are part of this dependency.

[1250] Ibid 3–4 [1]–[7]. The proposal sets out a 'stability principle', which provides differentiation advantaging DWFSs to prevent 'sudden economic dislocation/disruption' with existing fishing activities and investments: at [7].

[1251] According to the EU proposal, quota allocations for IOTC members would be primarily based on an 'Initial Baseline Allocation' largely determined by historical catches: ibid 4 [8]. This first allocation would then be adjusted to include a 'Complementary Allocation' and 'Correction Factors': at 4 [9]–[11]; 4–5 [12]–[13]. The proposal provides that Commission members will make a 'good faith effort' to determine a weighting scheme two years after the adoption of the quota allocation system: at 6 [19]. Importantly, the ratio proposed by the EU for the simulation of allocation outcomes in 2019 was 85%, 8% and 6%: Joel Rice, *Report on the Simulations of Catch Allocation Based on Criteria from the EU Proposal and the Coastal States Proposal* (Consultancy for IOTC No IOTC-2019-TCAC-5-02_Rev5, 18 May 2019) 26 app 3.

[1252] *EU Allocation Proposal* (n 1235) 4 [8].

[1253] 'In addition to the baseline allocation provided for in paras 9 and 10 and to accommodate the special requirements of the developing States in Article 24 UNFSA and special interests of developing countries in the Indian Ocean Region to benefit equitably from the fishery resources as recognised in the *IOTC Agreement* the following complementary allocations shall be added to the baseline allocation to be distributed': ibid 4 [9].

[1254] Ibid.

[1255] Ibid 4 [10].

[1256] Ibid 4 [11].

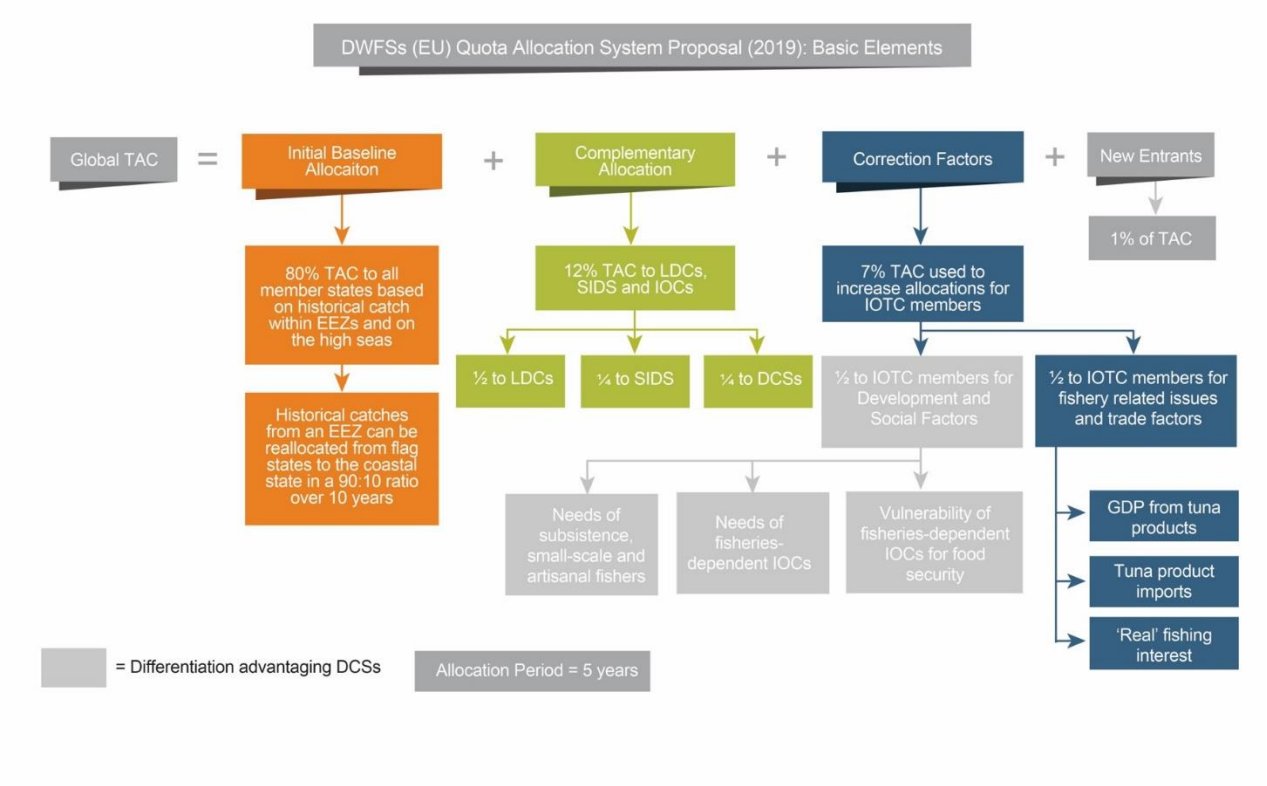
Related Issues and Trade Factors'.[1257] The list of indicators for these factors shows that this allocation sets out implicit differentiation for developing IOCs.[1258] Many indicators depend upon existing interactions with IO tuna production and therefore reinforce an overall bias towards historical fishing interests. Furthermore, the second set of trade-related factors establishes additional allocations for *both* developing IOCs and DWFSs. While the EU proposal sets out a quota allocation scheme that would provide explicit and implicit differentiation for developing IOCs, it is important to underscore that these elements constitute a relatively small portion of the overall TAC and are strictly governed by procedures which constrain their application to IOCs.

[1257] Ibid 4–5 [12].

[1258] 'Development and Social Factors' include: the needs of subsistence, small-scale and artisanal fishers; the special dependency of coastal states as determined by the percentage of jobs and exports linked to the exploitation of living marine resources; and the vulnerability of developing IOCs, particularly LDCs: ibid 5 [12] sub-paras (i)–(iii). 'Fishery-Related Issues and Trade Factors' are less strongly linked to the needs of developing states. Indicators for these factors include: the existence of a domestic fleet and FDP; imports of raw tuna products; and exports linked to marine living resources: at 5 [12] sub-paras (i)–(iv).

A visual overview of the basic allocation formula and elements of the EU proposal is provided in Figure 13 below.

Figure 13: EU Allocation Proposal Formula[1259]



5 *Policy Outcome*

The future of IOTC negotiations for a quota allocation system remains uncertain. At the most recent TCAC meeting, members noted that there was not enough time to discuss all the elements of a potential quota allocation system[1260], such as whether a single quota allocation scheme would be used for all IOTC stocks, how compliance matters would be incorporated into an allocation procedure, and the fundamental issue of how historical catch in EEZs would be attributed to coastal states and/or fishing states.[1261] While efforts were made to carry forward negotiations from the TCAC to the Commission's most recent meeting in 2019,

[1259] Dr. Indiah Hodgson-Johnston helped format this figure
[1260] *TCAC5 Summary Report* (n 1231) 10 [47].
[1261] Ibid 9 [28]; 21–2 app 5; 8 [26]–[27].

no allocation proposals were adopted and the process for advancing negotiations remains unclear.

6 *Comparison with IOTC Differentiation Framework*

The IOTC differentiation framework provides minimal guidance to members in negotiating a quota allocation system. As observed in Chapter 2, this is partly because the *IOTC Agreement* lags behind modern developments in IFL and does not include provisions for the establishment of a system for determining and allocating TAC and/or TAE. However, preambular language in recent Resolutions state that the Commission has 'clarified its objectives' over time to include:

> the aim of maintaining stocks in perpetuity and with high probability, at levels not less than those capable of producing their maximum sustainable yield, as qualified by relevant environmental, social and economic factors including *the special requirements of developing States in the IOTC Area of Competence*.[1262]

One difference between the objective in the *IOTC Agreement* and this revised objective is its reference to the special requirements of developing IOCs. Both the G16 and EU include this language in the preamble of their allocation proposals, acknowledging that the revised objective is critical to contextualising negotiations for the Commission's quota allocation system. It appears that tacit agreement on this objective also informs the inclusion of (albeit different) differentiation for developing IOCs in both recent proposals.

The *IOTC Agreement* contains one provision that indirectly refers to the fishing aspirations of developing IOCs. As discussed in Policy Example D, article V(2)(b) obliges the Commission 'to encourage, recommend, and coordinate research and development activities' for IOTC fisheries.[1263] The *IOTC Agreement* states that these activities include capacity building for members,[1264] and are to be carried out with 'due regard to the need to ensure the equitable participation of the Members of the Commission in the fisheries and the special interests and needs of Members in the region that are developing countries'.[1265] While not directly

[1262] This contrasts with the objective contained in the *IOTC Agreement* that the Commission merely '*promote cooperation* among its Members with a view to ensuring, through appropriate management, the conservation and optimum utilization of stocks covered by this Agreement and encouraging sustainable development of fisheries based on such stocks': *IOTC Agreement* (n 47) art V(1) (emphasis added).
[1263] *IOTC Agreement* (n 47) art V(2)(b).
[1264] '[I]ncluding activities connected with transfer of technology, training and enhancement': ibid.
[1265] Ibid.

addressing the fishing aspirations of developing IOCs, this provision affirms the need to prioritise their special requirements in the process of researching and developing IOTC fisheries. According to this provision, it would be reasonable to expect that the IOTC would be responsible for responding to the future fishing aspirations and interests of developing IOCs in the context of a quota allocation system.[1266]

It is difficult to state with certainty that the outcome of IOTC allocation negotiations will produce allocations addressing high seas access for developing IOCs. As this section has shown, the IOTC differentiation framework provides little guidance to the Commission on how to address this issue. In contrast to WCPFC negotiations for allocation frameworks however, recent TCAC negotiations show that both IOCs and DWFSs agree that differentiation, including consideration for the high seas fishing aspirations of developing IOCs, should play *some* role in the IOTC quota allocation system.[1267] Nonetheless, TCAC negotiations are unlikely to conclude in the near future, with the result that the IOTC will continue to rely on short-term catch limits until a quota allocation system is agreed.

IV Conclusions

This chapter has analysed six Policy Examples within the WCPFC and IOTC. These examples of TRFMO practice were selected to reflect the three objectives for differentiation in IFL. The outcomes of these Policy Examples—and the extent to which they reflected TRFMO treaty law—are mixed. Only the outcomes of Policy Examples B (IOTC MPF) and D (IOTC YFT) reflected the application of differentiation provisions in TRFMO treaty law.

Surprisingly, the IOTC outperforms the WCPFC across Policy Examples. WCPFC policy outcomes appeared not to conform to the high standards set out in its differentiation framework. This finding seems to disrupt the premise that an elaborate differentiation framework is necessary to address equity issues for DCSs in TRFMOs. However, it could be argued that the difference in performance between the WCPFC and IOTC reflects the difference in standards set out in their respective differentiation frameworks. This argument

[1266] This expectation is also in line with the Commission's work on FDPs. See Chapter 1 Section IV B3.
[1267] See the TCAC Chair's comments: 'Agreement that there should be special treatment of developing States including SIDS is common to both Proposals, and the principle itself is reasonably straightforward and uncontroversial. Operationalising it is more difficult however (Difficult/Medium degree of difficulty), due to the different approaches taken by both Proposals': MacKay (n 1236) 8.

is refuted by a comparison of Policy Examples C (WCPFC SPA) and D (IOTC YFT), however, which reveals substantial differences in the responsiveness of the two TRFMOs to impacts on coastal communities in DCSs.

Findings from this chapter have generated other insights about the WCPFC and IOTC's applications of differentiation, or lack thereof. Many policy outcomes reflected interim management decisions with a view to future negotiations. This introduces a temporal dimension to the analysis of whether the TRFMOs conformed to relevant treaty law and reveals a new aspect of equity issues for DCSs in TRFMO decision-making. In addition, both TRFMOs have failed to execute policies that promote DCSs' access to high seas fisheries. Though treaty law on this objective is limited, and negotiations for an allocation system which would address this issue are ongoing in both TRFMOs, neither TRFMO has carried out programming to promote DCSs' access to high seas fisheries to date.

As previous chapters have posited, findings from this chapter reflect the influence of distributional struggles on TRFMO policy outcomes. The TRFMOs perform the worst in Policy Examples E (WCPFC AFs) and F (IOTC ACs), which have the greatest (long-term) distributional implications for the fishing node of regional tuna industries. External factors affecting the application of differentiation by the WCPFC and IOTC are discussed at length in the next chapter, which undertakes a deeper, *comparative* analysis of the Policy Examples.

CHAPTER 7: COMPARATIVE ANALYSIS OF THE APPLICATION OF LEGAL DIFFERENTIATION WITHIN THE WCPFC AND IOTC

This chapter demonstrates that differentiation is not sufficient to produce equitable TRFMO policy outcomes for DCSs. The chapter provides evidence that the WCPFC and IOTC have not fully addressed the range of procedural and distributive equity issues for DCSs raised in the six Policy Examples. It goes on to show that despite this, both TRFMOs *have* addressed two out of the three objectives for differentiation in IFL.

This chapter's comparative analysis of Policy Examples within the WCPFC and IOTC finds that differentiation does not significantly shape the outcomes of TRFMO management decisions. Rather, it appears that distributional struggles between DCSs and DWFSs exert a more powerful influence over the equitability of TRFMO management decisions. Both TRFMOs perform poorly in Policy Examples that implicate significant distributional struggles between DCSs and DWFSs. This is especially the case in Policy Examples E and F, which describe negotiations for quota allocation systems underway in both TRFMOs.

The chapter subsequently argues that TRFMOs should develop management models that transparently incorporate equity considerations into both law *and* practice. The chapter recommends that TRFMOs design quota allocation systems to explicitly deliver concrete economic benefits to DCSs. Through a system analogous to Community Development Quotas (CDQs), TRFMOs could begin to adequately address equity issues for DCSs.

II COMPARATIVE ANALYSIS OF WCPFC AND IOTC

Structured according to the three objectives for differentiation in IFL, this section examines comparable Policy Examples within the two TRFMOs to determine the extent to which their respective management decisions have addressed equity issues for DCSs. It also discusses the role distributional struggles—and the interference and cooperative strategies employed by TRFMO members—may have played within the Policy Examples.

A *Objective I: Effective Participation*

The first set of Policy Examples in Chapter 6 investigated WCPFC and IOTC special funding to support the effective participation of DCSs. This funding encompassed special funds to sponsor the attendance of delegates to TRFMO meetings, as well as capacity building funding to enhance their capabilities to engage in scientific and technical TRFMO work.

Given the extensive capacity building work undertaken by the TRFMO Secretariats (and other organisations) in both regions, Policy Examples A and B focused on special funds established by the TRFMOs to support the effective participation of developing members: the SRF and MPF. Both funds became depleted in the 2000s, requiring TRFMO members to discuss the primary objectives and sustainable resourcing of the funds. To maintain this funding, extra-budgetary funds, often sourced from contributions by industrialised members, increased in both TRFMOs. DCSs argued that the funds were necessary to support their effective participation in TRFMO work. DWFSs maintained that financial contributions to the funds should either be voluntary (SRF) or shared by all members (MPF).

In both Policy Examples, TRFMO members agreed to resource the funds in the long term at levels between 150,000 and 250,000 USD. The WCPFC adopted the SRF SIP and agreed to annually allocate 150,000 USD from its budget. Similarly, the IOTC agreed to fund the MPF through its budget and recently raised its allocation by 50,000 USD to meet demand among IOCs. While both TRFMOs have secured long-term funding for these funds, Policy Examples A and B raised several procedural and distributive equity issues for DCSs which have yet to be resolved in the TRFMOs.

The need to maintain the special funds highlights the relationship between the effective participation of DCSs and their ability to engage in TRFMO decision-making. Long-term funding for DCS members to attend TRFMO meetings addresses procedural equity in two ways. First, it relieves the financial burden of sponsoring delegates to attend TRFMO meetings from DCSs' domestic fisheries departments. Second, it enfranchises DCSs by increasing their negotiating capacity through expanded delegations (as Policy Example A showed) and providing learning opportunities to less-experienced staff. Consequently, both TRFMOs have responded to these equity issues by committing to long-term resourcing for both funds.

Policy Examples A and B provided evidence of a distributive equity issue related to funding for both special funds. In each Policy Example, long-term funding was sourced from TRFMO budgets. Both examples therefore produced policy outcomes whereby all members, regardless of development status, were responsible for the long-term resourcing of the special funds.

Insofar as industrialised members are obliged to support the DCS members' effective participation, the current funding schemes for the SRF and MPF raise a distributive equity issue. By incorporating the SRF and MPF into their annual budgets, both TRFMOs have essentially made contributions to these funds mandatory for all members. In doing so, they have addressed the issue of mandatory contributions, which has long vexed the implementation of similar funds, such as the UNFSA Part VII fund.[1268] However, there is a question as to whether *all* TRFMO members or *only* industrialised members should be obliged to finance these special funds. According to IFL, provisions in *UNCLOS* and *UNFSA* oblige *all* states to support the effective participation of DCSs. Given that both special funds are now sourced from budgetary contributions, it would appear that the TRFMOs have followed relevant provisions in IFL. However, this legal requirement fails to address the distributive equity issue of obliging DCSs to bear the cost of supporting the participation of other members.

Lastly, these Policy Examples may indicate that negotiations on the effective participation of DCSs in TRFMO decision-making reveal the deployment of interference strategies by DWFSs. DWFS members repeatedly advocated against mandatory contributions to support the multilateral funds administered by the TRFMOs.[1269] In this light, the actions of DWFS members could be viewed as interference strategies to undermine DCS members' negotiating capacity at TRFMO meetings. As Chapter 4 described, this tactic has been used previously in TRFMO settings, such as in negotiations leading to the establishment of the WCPFC.[1270] Instead, DWFS members exhibited a greater willingness to fund bilateral, aid-related projects, which as Chapter 5 showed can function to advantage DWFSs' interests and disempower aid-dependent DCSs.[1271] Notably, not all DWFS members participated in this

[1268] See Chapter 2 Section D 1(a).
[1269] See e.g., above (n 1043).
[1270] See above (n 876).
[1271] See above (n 992).

interference strategy, one example being the consistent financial support provided by the US and Canada to the SRF.[1272] This could indicate that rather than use interference strategies to undermine the ability of PICs to represent their interests at WCPFC negotiations, these DWFS members were more interested in being viewed as supportive development partners. In any case, these Policy Examples show that even procedural equity issues, such as the effective participation of DCSs in TRFMO meetings, can be implicated in distributional struggles between DCSs and DWFSs.

B *Objective II: Protection of Vulnerable and Fisheries-Dependent Coastal Populations*

Policy Examples C and D examined management decisions that incorporate considerations for vulnerable and fisheries-dependent coastal populations. Each management decision concerns a particular stock: SPA in the WCPO and YFT in the IO. In Policy Examples C and D, management action was required to limit catches while maintaining the delivery of economic benefits to coastal communities. The process of designing, negotiating, and adopting appropriate management actions to respond to these two objectives has proved contentious within both TRFMOs. Consequently, both policy outcomes have been interim management actions adopted in the context of broader commitments by members to undertake further actions in coming years.

Each Policy Example highlights how TRFMO management decisions often operate at the interface of sustainability and equity concerns. In both examples, local employment in coastal communities relies heavily on onshore processing operations that source raw materials from the stock—these processing operations depend on foreign fishing vessels to deliver them a consistent supply. Under these circumstances, both DWFSs and DCSs with onshore processing operations are concerned with maintaining recent catch levels of the stocks. However, advice from both TRFMOs' SCs revealed the detrimental impact of recent rises in catch levels on SPA and YFT, and resulted in recommendations for management actions to either strengthen existing (SPA) or adopt new (YFT) catch limits. Both Policy Examples also indicate that increases in catch levels have affected the viability of local fishing operations in nearby DCSs.

[1272] Chapter 6 Section I A3.

In Policy Examples C and D, several measures have been adopted over multiple years to address the concerns of the TRFMO SCs. These measures contain negotiated catch limits that grossly exceed those recommended by the SCs. The same measures provide exemptions (SPA) or modifications (YFT) to catch limits for DCSs. DCSs have argued that existing catch limits are insufficient to address the concerns expressed by their SCs. As a first step, the WCPFC committed to concrete actions towards improving its approach to managing SPA and adopted an interim TRP for the stock. The IOTC similarly committed to revising its approach to managing YFT by 2020. It agreed to an interim measure that closed loopholes on catch limits for previously exempted members, imposed stronger limits on (environmentally harmful) gillnet fisheries, and sanctioned members found to be in violation of their limits. While both TRFMOs have taken steps to contain the impacts of their management actions (or lack thereof) on coastal communities in DCSs, the Policy Examples bring to light complex procedural and distributive equity issues, some of which both TRFMOs have been unable to resolve.

The SPA and YFT Policy Examples underscore tensions between the design of TRFMO management actions intended to constrain fishing pressure and their effect on coastal communities. In each example, a distributive equity issue is raised by the need to limit catches (with a specific emphasis on fishing pressure generated by foreign fishing fleets) and the objective of maintaining economic benefits for coastal communities. Both TRFMOs initially responded to this tension by modifying the application of the relevant measure to DCSs. In this respect, the TRFMOs have attempted to limit the impact of relevant measures on fishing fleets based in DCSs. These actions are in accordance with common practice across TRFMOs, as well as relevant provisions in *UNFSA* requiring all states to take into account the special requirements of DCSs, including the particular dependency and vulnerability of their coastal populations with respect to tuna stocks.[1273] In both Policy Examples, however, this response produced conditions that continued to encourage increased exploitation of both stocks.

Consequently, each TRFMO has found itself in a similar position, whereby its attempts to address distributive equity issues for DCSs have negatively impacted on the effectiveness of its management actions. Critically, the WCPFC and IOTC have addressed concerns for the

[1273] See above (n 79).

SPA and YFT stocks through heavily negotiated, short-term measures. In both Policy Examples, these measures have been periodically renegotiated without providing significant changes to the core issue of inadequate catch limits. Eventually, both TRFMOs responded to the problematic design of their measures by committing to change their overall management approaches to SPA and YFT through the adoption of long-term management strategies that will enable the stocks to recover from overharvesting.

Despite these commitments, the TRFMOs have not acknowledged a crucial procedural equity issue associated with these Policy Examples. This procedural equity issue concerns the temporal dimension of TRFMO management actions. While the WCPFC and IOTC have committed to a plan for improved management of SPA and YFT stocks, the time taken for these negotiations to produce this outcome continues to jeopardise the recovery of both stocks and the local fishing operations that depend upon them.

For example, scientific advice first cautioned the WCPFC against increased catches in 2005 and DCSs in the region have called for management action to limit impacts on local fishing fleets since 2012. In the intervening years, news agencies in the region have reported the closure of local longline fishing operations. The IOTC, on the other hand, was first advised in 2015 that the YFT stock was overfished (though scientific advice cautioning the Commission on the state of the stock goes back to as early as 2009). While the Commission adopted a measure the following year (2016), it continued to adopt catch limits that did not follow scientific advice for stricter catch limits which would allow the stock a 50% chance of recovery. These catch limits have been retained in the present measure and their effect on the recovery of the YFT stock remains to be seen.

Consequently, the lack of timely and effective TRFMO management action in both Policy Examples reveals a procedural equity issue that adversely impacts on coastal communities in DCSs. Nevertheless, both TRFMOs are attempting to address the objective set out in *UNFSA*—of providing protections for dependent and vulnerable coastal communities—through longer-term approaches to managing SPA and YFT. However, this legal requirement does not address the procedural equity issue outlined above regarding ongoing adverse impacts on coastal communities as TRFMOs shift their approaches to managing the two stocks.

These Policy Examples captured the implementation of both interference and cooperative strategies in distributional struggles among TRFMO members. In both cases, DWFS members sought to support the interests of their DWF fleets, while DCSs advocated for the interests of their locally based fleets. Ultimately, these interests resulted in both TRFMOs adopting effort (SPA) and catch (YFT) limits that did not reflect scientific advice or sufficiently respond to concerns about the status of both stocks. However, DCSs sought to maintain local employment in onshore processing operations and therefore also advocated for improvements to stock management in order to secure the future of both stocks and the economic benefits they provide. This resulted in commitments to improve the future management of both stocks.

The most visible example of distributional struggle was observed in Policy Example 4. DWFSs such as Taiwan and China exhibited interference strategies by blocking consensus at the WCPFC to improve economic conditions in the SPA fishery.[1274] These actions resulted in economic conditions within the fishery that led to the closure of PIC domestic fishing firms.[1275] However, these actions were not supported by all DWFSs, reflecting their different fishing and processing interests. For example, US processing interests in American Samoa led them to support stronger WCPFC management actions on SPA.[1276] DCSs responded through cooperative strategies, which enabled the adoption of the Tokelau Agreement. However, unable to reach consensus on binding catch limits within their EEZs, PICs were disempowered from effectively leveraging these cooperative strategies to secure stronger management action on SPA at the WCPFC. These distributional struggles produced interim policy outcomes that fail to offer a positive outlook for both stocks and the coastal communities that depend on them for their livelihoods. In this respect, distributional struggles in these Policy Examples were shown to impact on both procedural and distributive equity issues for DCSs.

C *Objective III: High Seas Fisheries Access*

Policy Examples E and F reviewed ongoing negotiations for the development of quota allocation systems in the WCPFC and IOTC. Both Policy Examples assessed the extent to

[1274] Chapter 6 Section II A4.
[1275] See above (n 1095).
[1276] See above (n 1090).

which current negotiations within the TRFMOs address facilitating DCSs' future access to high seas fisheries. The majority of high seas fisheries globally are harvested by fishing vessels from industrialised DWFSs.[1277] Furthermore, in both the WCPO and IO regions, industrial fishing vessels that catch the largest volume of tuna on the high seas are either flagged to, or owned by, firms headquartered in DWFSs.[1278]

While controversial, *UNFSA* provisions oblige states to cooperate through (T)RFMOs to increase the participation of developing states in high seas fisheries for highly migratory stocks like tuna.[1279] *UNFSA* further provides that cooperation can include different forms of assistance, including transfer of technology.[1280] In addition to the direct forms of assistance set out in *UNFSA*, TRFMOs are empowered to support the participation of DCSs in high seas fisheries through participatory rights in quota allocation systems. As a form of rights-based management, the implementation of quota allocation systems within TRFMOs has significant implications for distributive equity for DCSs. Policy Examples E and F both show that the negotiation and design of quota allocation systems within TRFMOs also have notable procedural equity implications for DCSs.

Both examples demonstrate the potentially critical role of quota allocation schemes in increasing the value DCSs capture from tuna production. Both TRFMOs currently operate through annual negotiations on ad-hoc, short-term measures, but in recent years have agreed to improve their approach to fisheries management through the development and implementation of various best practices.[1281] As Chapter 1 discussed, best practices recommended by experts include the implementation of rights-based management. In Policy Examples E and F, concrete commitments to the implementation of rights-based management signalled a major juncture in the practice of both TRFMOs. In fact, compared with other TRFMOs, both the WCPFC and IOTC are latecomers in implementing quota allocation systems.[1282]

[1277] McCauley et al (n 773).
[1278] See Chapter 4 Section II V; Chapter 5 Section II V.
[1279] *UNFSA* (n 10) arts 24(1), 25(1) sub-paras (a), (b).
[1280] Ibid art 25(2), (3)(c).
[1281] See above (n 24).
[1282] Seto et al (n 765).

As Chapters 4 and 5 demonstrated, DCSs have benefitted from increasing the value they capture from tuna production through forms of quasi rights-based management within their collective EEZs. Observers of negotiations for the establishment of the WCPFC originally expected that a quota allocation system would be developed early in the Commission's history.[1283] When it became clear this would not be the case, PNA PICs leveraged their control of skipjack resources to design the VDS, which implements effort controls (a form of rights-based management among PICs) in the WCPO tuna fishery and has significantly increased the value they collectively capture from regional tuna production.[1284] Thirteen years after its establishment, the WCPFC finally agreed to initiate negotiations for a Commission-wide quota allocation scheme.

WIO IOCs have recently begun to explore formalising MTCs, a potential precursor to the same quasi rights-based management system developed by PICs in the WCPO.[1285] Like the WCPFC, the IOTC delayed negotiations until more than 15 years after its establishment. IOTC negotiations on rights-based management have included deliberations on effort controls, which culminated in the Commission's measures on limiting fishing capacity in the IO tuna fishery in 2003.[1286] This management decision explicitly highlighted DCSs' concerns for their participation in high seas fisheries by requiring members to submit FDPs.[1287] Because IOCs have a lesser portion of IO tuna resources under their jurisdiction and have less developed rights-based management within their EEZs than PICs in the WCPO, an IOTC quota allocation system has greater potential to substantially increase their capacity to capture value from IO tuna production.

In both regions, DCSs stand to significantly increase the value they capture from regional tuna production through rights-based management in high seas areas. After their access to these stocks is secured, DCSs will be better able to determine the value of their tuna resources and make vital decisions about how to increase the value they capture from their rights to these resources. Once both tuna fisheries are rationalised through a quota allocation system, DCSs will possess quota within closed, rather than open, access tuna fisheries in the

[1283] See, e.g., Vina Ram-Bidesi and Martin Tsamenyi, 'Implications of the Tuna Management Regime for Domestic Industry Development in the Pacific Island States' (2004) 28 *Marine Policy* 383.
[1284] See Chapter 4 Section III C.
[1285] See Chapter 5 Section III B.
[1286] *Resolution 03/01* (n 257).
[1287] Chapter 1 Section IV B.

IO and WCPO regions. This is expected to increase the value of their tuna resources in the form of concrete quotas within a limited system.

This has the potential to increase the value they capture from tuna resources in two key ways. The first is their ability to attract foreign investment in domestic tuna fisheries. With a more clearly defined idea of their tuna resources, DCSs will be better informed on the potential to develop their domestic tuna fisheries and how this compares with other fisheries in the region. The second is their ability to negotiate FAAs. Through a closed access system, DCSs will be better able to calculate, leverage, and potentially increase the value of their quota in FAA negotiations. Agreement on a quota allocation system within both TRFMOs therefore captures some of the most significant distributive equity issues for tuna fisheries in both regions.

Perhaps due to the potential of quota allocation systems to disrupt value flows from tuna production in both regions, TRFMO members in Policy Examples E and F have repeatedly delayed negotiations due to a lack of agreement. These policy outcomes are not particularly surprising, given the length of time required for other TRFMOs to negotiate quota allocation systems.[1288] While WCPFC negotiations are still in their infancy, the inability of members to agree on key first principles to convene an initial workshop signals that negotiations may even surpass the updated deadline of 2020. Similarly, the IOTC has repeatedly exceeded deadlines for finding agreement since 2012. Key sticking points in current negotiations, such as historical catch attribution within IOC EEZs, further call into question whether members will agree on a quota allocation system in the near term. These policy outcomes evidence that the WCPFC and IOTC have found negotiations for a quota allocation system highly contentious and repeatedly failed to meet their own negotiated deadlines for agreement.

The indeterminate outcomes of Policy Examples E and F have a direct impact on the specific issue of improving high seas fisheries access for DCSs. The lack of momentum around negotiations within both TRFMOs has obscured whether either quota allocation system will set aside a specific allocation of high seas quota for DCSs. Nevertheless, negotiations on this issue within the IOTC are more advanced, and recent allocation proposals by both the G16

[1288] See Seto et al (n 765).

and EU have explicitly provided special high seas allocations for coastal states on the basis of their development status.

In parallel with the previous set of Policy Examples, negotiations on quota allocation systems within the WCPFC and IOTC have a temporal dimension that raises an important procedural equity issue for DCSs. As has been shown, DCSs within both TRFMOs will continue to forego potentially significant changes in the value they capture from regional tuna production so long as agreement is repeatedly delayed. In connection with this issue, both TRFMOs have observed substantial increases in catches in recent years, which some commentators attribute to vessel operators anticipating a quota allocation system and peremptorily increasing historical catch levels.[1289] Given the risks associated with high catches in both regions, where most tuna stocks are either at or exceeding full exploitation, these developments have the potential to negatively impact DCSs and the tuna stocks they depend upon. As these circumstances persist in the absence of agreement on quota allocation systems, both TRFMOs risk placing additional burdens on DCSs in their regions over time. It remains the case that, insofar as quota allocation systems have yet to be adopted in either TRFMO, the WCPFC and IOTC have not addressed the relevant provisions on high seas fisheries access for DCSs in *UNFSA*.

Policy Examples 5 and 6 have significant long-term implications for distributional struggles between DCSs and DWFSs at the fishing node of tuna GPNs. However, given that negotiations in both Policy Examples are still nascent, it was difficult to observe whether distributional struggles have begun to impact on policy outcomes yet. These Policy Examples nevertheless speak to both procedural and distributive equity issues for DCSs that pivot on the role long-term allocation systems could play in distributional struggles between DCSs and DWFSs.

D *Conclusions of Comparative Analysis of Application of Legal Differentiation by the WCPFC and IOTC*

This review of Policy Examples within the WCPFC and IOTC has examined: first, relevant procedural and distributive equity issues associated with DCSs; second, whether policy

[1289] See above (n 1168) on the 'announcement effect'.

outcomes addressed these equity issues; and third, whether the TRFMOs fully addressed corresponding objectives in IFL. Across these three dimensions of analysis, the two TRFMOs exhibited similar results. In Policy Examples A, C, and D, the WCPFC and IOTC were found to have addressed objectives 1 and 2. In Policy Examples E and F, the WCPFC and IOTC were found *not* to have addressed objective 3. On first glance, it appears that the WCPFC and IOTC have successfully applied differentiation in the majority of cases and therefore addressed equity issues for DCSs within their memberships. Table 10 sets out these findings below (and includes findings from Chapter 6 on whether policy outcomes reflected relevant TRMFO treaty law).

However, a deeper examination of these results, which looks beyond black letter law to the equity issues arising for DCSs, demonstrates a different finding. Across Policy Examples, one repeated observation emerged: many equity issues are not fully captured by the three objectives in IFL. Therefore, although the Policy Examples show that the WCPFC and IOTC have addressed two out of three of the objectives in IFL, the TRFMOs were also found to have repeatedly failed to respond to the full range of equity issues which arose for DCSs. On this point, none of the policy outcomes in the six examples fully addresses *all* equity issues associated with DCSs. From the perspective of substantive procedural and distributive equity issues, then, both TRFMOs have failed to deliver equitable policy outcomes for DCSs within their memberships. These results support the conclusion that the application of differentiation by TRFMOs is not sufficient to adequately address equity issues for DCSs.

A fine-grained comparison of the WCPFC and IOTC Policy Examples further supports the finding that differentiation plays a less significant role in determining the equitability of policy outcomes than may be assumed. Across Policy Examples, the IOTC was found to have demonstrated greater qualitative progress on equity issues for DCSs in its membership than the WCPFC—including agreement on the incorporation of differentiation into a future quota allocation system.

Table 10: Findings from Comparative Analysis of WCPFC and IOTC Policy Examples

Policy Example Outcome	Were Relevant	Was the Relevant	Were Procedural	Were Distributive

	Differentiation Provisions in TRFMO Treaty Law Addressed?	Objective for Differentiation in IFL Addressed?	Equity Issues for DCSs Addressed?	Equity Issues for DCSs Addressed?
Objective I: Effective Participation				
A. WCPFC SRF	✗	✓	✓	✗
B. IOTC MPF	✓	✓	✓	✗
Objective II: Protection of Vulnerable and Fisheries-Dependent Coastal Populations				
C. WCPFC SPA	✗	✓	✗	✓(✗)
D. IOTC YFT	✓	✓	✗	✓(✗)
Objective III: High Seas Fisheries Access				
E. WCPFC AFs	✗	✗	✗	✗
F. IOTC AC	✗	✗	✗	✗

This difference between the WCPFC and IOTC Policy Examples challenges the premise that differentiation is sufficient for addressing equity issues, because the IOTC has a markedly less developed differentiation framework than the WCPFC. It must be noted that, while surprising, this comparative finding remains tentative. This is because the comparison has been made at a time when the WCPFC is progressing a number of interim negotiating processes that could improve its ability to address the equity issues for developing members in a number of the Policy Examples. While provisional, this finding nonetheless affirms the overall conclusion that there is no strong connection between differentiation and the equitability of policy outcomes within the two TRFMOs.

III Legal Differentiation Advantaging DCSs and The Equitability of TRFMO Policy Outcomes

The comparison of the WCPFC and IOTC supports the conclusion that differentiation alone (in TRFMO treaty law *and* broader IFL) does not produce equitable TRFMO policy outcomes for DCSs. Instead, the comparative analysis provides evidence of other factors shaping the equitability of TRFMO policy outcomes. This section explores three alternative explanations, drawing from concepts introduced in Chapter 1, to describe dynamics (other than the presence of differentiation) that potentially underwrite the equitability of TRFMO policy outcomes.

A *Legal Differentiation and Equity as a 'Balanced Settlement of Conflicting Claims'*

In order to explain why differentiation does not significantly alter the equitability of TRFMO policy outcomes, it is necessary to look more closely at how differentiation was applied in the Policy Examples. As suggested in Section II D, the manner in which IFL sets out differentiation did not capture the range of equity issues that arose for DCSs in the Policy Examples. However, this is only a partial explanation for why the application of differentiation did not yield equitable policy outcomes for DCSs.

As Chapter 6 demonstrated, analysis of the relationship between differentiation provisions in TRFMO treaty law and the TRFMO policy outcomes shows that the WCPFC and IOTC have repeatedly struggled to apply their own law advantaging DCSs in practice. For example, in Policy Examples A and B, both TRFMOs convened extensive negotiations over several years on the resourcing and governance of special funds to support the attendance of DCS delegates to TRFMO-related meetings. Funding depletions instigated TRFMO negotiations revisiting the primary objectives of both funds and revealed differing interpretations among members on treaty law governing the funds. In both cases, DCSs advocated for mandatory, sustainable resourcing of the funds to reflect commitments to effective participation in TRFMO treaty law. Differences among members prolonged the negotiations (over multiple years) and effectively hindered the implementation of both special funds.

The 'effective participation' Policy Examples reveal that *how* to apply TRFMO treaty law to practice remains a significant source of contention among members in negotiations. These

examples reveal that WCPFC and IOTC members have required years of negotiations to determine how to reflect treaty law provisions on effective participation in the resourcing and governance of special funds. Their negotiations indicate that the application of differentiation within both TRFMOs often reflects compromises among members—and that this can take multiple years to achieve. It is reasonable to conclude, then, that while black letter treaty law guides the application of differentiation within the two TRFMOs, actual policy outcomes are ultimately determined by the results of protracted negotiations among members.

This observation is supported by the literature on the role of justice and fairness in international negotiations.[1290] It may be that, while the formulation of differentiation is important, the negotiating conditions under which it is applied are just as important. In this sense, equity for DCSs, as it is reflected in the policy outcomes of TRFMOs, reflects Albin's definition of justice: a 'balanced settlement of conflicting claims'.[1291]

B *Legal Differentiation and Distributional Struggles within Tuna GPNs*

Distributional struggles among members also influence the equitability of TRFMO outcomes in the Policy Examples. One recurring procedural equity issue was the timeliness of TRFMO management decisions. In repeated instances, DCSs were negatively affected by delays in TRFMO negotiations (Policy Examples B, C, E, and F). In every case, negotiations were delayed as a result of the negotiating positions of DWFS members. Often, these positions reflected distributional struggles occurring within TRFMO memberships, thus linking this broader procedural equity issue with distributive equity issues. These delays reflected a core weakness in the mode of decision-making within TRFMOs, which is consensus based.[1292]

This was illustrated in the second set of Policy Examples C and D, in which distributional struggles among members delayed timely TRFMO management decisions. In the example of the SPA fishery, the WCPFC repeatedly failed to achieve consensus to take timely management action due to resistance by DWFSs such as China and Taiwan. While the domestic tuna industry in many PICs languished over multiple years, these members blocked WCPFC management action and maintained economic conditions in the fishery that

[1290] Franck (n 42).
[1291] See above (n 154). See also Chapter 1 Section II C.
[1292] See Introduction Section II C2.

deteriorated to such an extent that only their government-subsidised fleets could operate. In the example of the YFT fishery, the IOTC struggled to implement effective and equitable management actions despite several iterations of regulatory actions over multiple years. In negotiations DWFS members, such as the EU and South Korea, resisted management decisions, and in particular, the inclusion of adjusted catch limits for developing IOCs. Moreover, the EU, which harvests some of the largest YFT catch in the region, failed to comply with binding catch reductions.

In both examples, after surpassing multiple deadlines, the TRFMOs adopted interim measures in light of broader commitments to revising their management approach to SPA and YFT stocks. While signifying a step forward, these interim measures underscore the procedural equity issue of the need for effective and timely TRFMO management actions that do not adversely impact DCSs. These Policy Examples depict a negotiating reality within both TRFMOs—legal commitments to differentiation have less of an impact than distributional struggles among members on the equitability of management decisions.

This finding extends work by Havice and Campling on the relationship between TRFMOs and the tuna industry. It shows that distributional struggles among TRFMO members are relevant to the application of differentiation by TRFMOs. Havice and Campling have shown that commercial and geopolitical drivers often motivate the negotiating positions of members within TRFMOs. In Havice and Campling's parlance, TRFMOs currently operate under a 'corporate-environmental seafood governance regime' that has been heavily moulded by the imbrication of state-led fisheries management with historical, competitive dynamics within tuna GPNs.[1293]

C *Legal Differentiation and Neoliberal Fisheries Management*

The TRFMO policy outcomes examined in this thesis are heavily shaped by the broader context of neoliberal fisheries management. In part, this finding is evidenced by the relevance of distributional struggles among members to TRFMO management decisions. It was also evidenced by the limited possibilities available to both TRFMOs for applying differentiation,

[1293] Liam Campling and Elizabeth Havice, 'The Global Environmental Politics and Political Economy of Seafood Systems' (2018) 18(2) *Global Environmental Politics* 72.

which has constrained their ability to address the full range of equity issues raised by DCSs, particularly distributive equity issues. In most negotiations, the Policy Examples show that both TRFMOs either did not discuss, or were unable to reach agreement on, distributive equity issues for DCSs. This finding corresponds with Okereke's description of neoliberalism's role in the development of the oceans governance regime, and its careful excision of distributive justice themes for developing states.[1294] As was noted in Chapter 2, IFL on the whole avoids the use of binding language with respect to distributive equity for DCSs (save some exceptional provisions in *UNSFA*). Consequently, both the law and practice of TRFMOs in this analysis reflects a lack of attention to distributive equity issues for DCSs.

The third set of Policy Examples (E and F) illustrates a neoliberal logic operating in both TRFMOs. The WCPFC and IOTC have both elected to rationalise their tuna fisheries through a rights-based management model. As Chapter 1 discussed, Mansfield has demonstrated that rights-based management exemplifies a fisheries-specific form of neoliberalism.[1295] This form of neoliberal fisheries management often fails to account for equity concerns, and typically results in the concentration of quota in the hands of historically powerful fishing interests (often the same interests that have driven the fishery into crisis). Importantly, DCSs in both regions (though to a much lesser extent in the IO) have anticipated TRFMO-wide rights-based management, and its omission of equity issues, by leveraging fisheries access in their waters to develop subregional, quasi rights-based management. Despite these precautions, it remains unclear how quota allocation systems in both TRFMOs will address distributive equity issues for DCSs in both regions. While negotiations in these cases are ongoing, the IOTC appears more inclined to integrate differentiation into its quota allocation system.

D *Conclusion: Limitations of TRFMOs Applying Legal Differentiation within a Neoliberal Context for Tuna Fisheries Management*

This section has shown that both TRFMOs did not address all procedural and distributive equity issues for DCSs in the Policy Examples. This leads to the conclusion that

[1294] Okereke (n 100).
[1295] Mansfield, *Neoliberalism in the Oceans* (n 100).

differentiation does not have a sufficient, or significant influence, on the equitability of TRFMO policy outcomes. This thesis proposes three explanations for this finding:

(i) Members within TRFMOs do not seek to apply their obligations under differentiation provisions, but, rather, seek to strike a balanced settlement of conflicting claims.

(ii) Members are motivated within TRFMOs by distributional struggles, which have a significant impact on the equity issues that TRFMOs are willing to address through differentiation.

(iii) TRFMOs operate within the broader context of neoliberal fisheries management, which also constrains the type of equity issues they are willing to address within their technical-scientific framework for management (thereby avoiding distributive equity issues for DCSs).

IV A WAY FORWARD: COMMUNITY DEVELOPMENT QUOTAS (CDQS) AND DISTRIBUTIVE EQUITY FOR DCSS

This thesis has shown that TRFMOs are not adept at addressing the range of equity issues that arise from regional tuna management for DCSs, and, in particular, distributive equity issues. Given that rights-based management strikes at the core of long-term (procedural and) distributive equity issues in both regions, there is a high risk that DCSs will be disadvantaged by the outcome of these negotiations. These negotiating outcomes are likely, despite the potential for these systems to significantly increase the value they capture from regional tuna production and deliver on the objective of differentiation provisions in wider IFL.[1296]

To address this situation, this thesis recommends focusing on integrating elements into TRFMOs' rights-based management systems that disrupt neoliberal fisheries management and explicitly target generating equitable outcomes for DCSs. One example of a way to accomplish this is through the inclusion of a Community Development Quota (CDQ)-style system for DCSs. Currently, CDQs have only been implemented in a domestic context among indigenous communities in the Bering Sea region of western Alaska in the US, so an

[1296] See above Chapter 7 Section II C.

analogous system among states would have to be developed within the WCPFC and IOTC.[1297]

A CDQ is a portion of quota set aside and assigned to coastal communities for the purposes of developing fisheries-based economic activity.[1298] The objective of the US CDQ program is to combat equity issues for poorer coastal communities associated with the privatisation, or implementation of rights-based management, in offshore fisheries.[1299] The CDQ program in the US provides allocations for multiple species in Bering Sea fisheries to coastal, mostly indigenous rural communities in Alaska.[1300] Quota is allocated to 'CDQ organisations' that lease their quota to fishing firms.[1301] The income from leasing quota is then used in fisheries-related and other community development projects.[1302]

A limited amount of research has been conducted on CDQs, which have only been implemented in the US context in comparison to the much wider implementation of individual transferable quota (ITQ) systems. Carothers' study examines how the US CDQ program addresses equity for poorer populations negatively affected by fisheries privatisation.[1303] In a similar vein, Mansfield argues that CDQs protect coastal communities from the market under neoliberal conditions of fisheries privatization.[1304] Carother's claims that CDQs centralise and institutionalise equity concepts in fisheries management.[1305] She argues that by responding to inequities, CDQs address a 'politics of difference'.[1306] CDQs are

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[1297] The implementation of a CDQ-style system would be premised on the development of rights-based management and the conclusion of WCPFC and IOTC allocation negotiations. It would also require that national quotas be transferable. Notwithstanding her comments on non-discrimination in high seas fisheries, a CDQ-style system may address the criticisms levelled by Palma on the subject of quota trading in (T)RFMOs: Palma (n 81) 282–7.
[1298] National Research Council, *Sharing the Fish: Toward a National Policy on Individual Fishing Quotas* (Committee to Review Individual Fishing Quotas, 9 June 1999) 125.
[1299] Jay J. C. Ginter, 'The Alaska Community Development Quota Fisheries Management Program' (1995) 28(1–3) *Ocean and Coastal Management* 147; Courtney Lyons, Courtney Carothers, and Jesse Coleman, 'Alaska's Community Development Quota Program: A Complex Institution Affecting Rural Communities in Disparate Ways' (2019) 108 *Marine Policy* 103560, 1.
[1300] Becky Mansfield, 'Property, Markets, and Dispossession: The Western Alaska Community Development Quota as Neoliberalism, Social Justice, Both, and Neither' (2007) 39(3) *Antipode* 479, 479 ('*The Western Alaska CDQ*').
[1301] Lyons, Carothers, and Coleman (n 1299) 1–2.
[1302] Ibid.
[1303] Courtney Carothers, 'Equity and Access to Fishing Rights: Exploring the Community Quota Program in the Gulf of Alaska' (2011) 70(3) *Human Organization* 213.
[1304] Mansfield, *The Western Alaska CDQ* (n 1300) 481–2.
[1305] Carothers (n 1303) 221.
[1306] Ibid.

therefore clearly associated with notions of intragenerational equity in fisheries and differentiation for poorer, vulnerable, and dependent populations.

Recent scholarship by Carothers and others on the CDQ program nevertheless raise a few issues. The first is that while CDQs provide economic benefits to coastal communities, they do not improve fisheries access.[1307] This is because CDQs provide allocations, rather than fisheries access to coastal communities. Similar issues have been raised in relation to the operation of ITQ systems.[1308] Secondly, and related to fisheries access is the fact that while CDQs have mostly delivered economic benefits to coastal communities, some have not delivered on other development metrics, like improved well-being.[1309] These issues associated with CDQs will have to be addressed if they are to be implemented at the TRFMO level. If they are to receive an analogous quota for similar purposes, DCS fisheries departments may be forced to choose, depending on their specific circumstances whether they will prioritise economic benefits or fisheries access for coastal communities.

Within a TRFMO quota allocation system, a 'CSDQ' (Coastal State Development Quota) could be assigned to DCSs. CSDQs could either be used by DCSs themselves or transferred to other TRFMO members for revenue. DCSs would then be obliged to either use CSDQs or revenue from CSDQs to develop domestic fishing and associated industries. Development activities could include the establishment of tuna fisheries and associated industries that have proven positive socio-economic impacts on coastal communities, such as pole and line fishing operations.[1310] Eventually, as has been the case in the domestic context, the use of revenue from CSDQs could be expanded to non-fisheries-related coastal development activities.[1311]

It would also be necessary to determine the scale of the collective to which CSDQs would be assigned. One option would be to administer CSDQs to individual DCSs. Another option would be to assign CSDQs to subregional groupings of DCSs with respect to specific fisheries/stocks. If CSDQs were assigned to subregions, TRFMOs might find a better fit

[1307] Ibid.
[1308] See Tracy Yandle and Christopher M. Dewees, 'Consolidation in an Individual Transferable Quota Regime: Lessons from New Zealand, 1986–1999' (2008) 41 *Environmental Management* 915, 916–7.
[1309] Lyons, Carothers, and Coleman (n 1299) 11–2.
[1310] Barclay and Parris (n 967).
[1311] Lyons, Carothers, and Coleman (n 1299) 4–5.

between the tuna resources themselves (which generally occur in subregions) and the scale of quota allocations for the purposes of generating economic activity in DCSs. In addition, DCSs, especially SIDS, might increase their chances of establishing viable domestic tuna industries through economic cooperation that would increase their collective economies of scale.[1312]

Finally, it would also be necessary to create an administrative infrastructure within the TRFMOs to govern the CSDQ system. It is important to highlight that this is the most problematic aspect of the analogy between domestic CDQs and a regional CSDQ system. In domestic contexts, CDQs have been administered by central governments in relation to community-based indigenous corporations established for the purposes of implementing CDQs. It is therefore important to acknowledge that a CSDQ system would have to operate in relation to (mostly) sovereign members within TRFMOs.

Nevertheless, the most likely candidate for administering CSDQs would be TRFMO Secretariats under the direction of their respective Commissions. A CSDQ system, administered by the TRFMOs and their Secretariats would represent a tuna-specific, multilateral approach to addressing capacity development provisions in *UNCLOS* and *UNFSA*. This would be in juxtaposition with the largely bilateral system under which these provisions are currently addressed through 'fish for aid' FAAs with DWFSs. It would be critical to underscore the importance of responding to procedural equity issues for DCSs and ensuring their full enfranchisement in the administration of CSDQ systems. Ultimately, CSDQs could become the basis for the development of domestic fishing and associated industries in DCSs seeking to increase the value they capture from regional tuna production. This would, in turn, ensure that rights-based management in both regions translated into the delivery of concrete socio-economic benefits to DCSs, thereby addressing the distributive equity issues at the core of tuna management and production in both regions.

CSDQs would also provide an avenue for explicitly addressing the distributional struggles within tuna GPNs that often underwrite TRFMO negotiations. In quota allocation system

[1312] Hanich, Teo, and Tsamenyi set out a potential model for subregional scales of cooperation among smaller PICs through in-country capacity building and 'sub-regional collective management authorities': Quentin Hanich, Feleti Teo, and Martin Tsamenyi, 'A Collective Approach to Pacific Islands Fisheries Management: Moving Beyond Regional Agreements' (2010) 34 *Marine Policy* 85, 89–90.

negotiations, CSDQs would bring to the surface the policy incoherence of DWFSs that has traditionally been observed, both in this thesis and elsewhere, in TRFMO decision-making.[1313] If a CSDQ system were resisted by these members, it would become necessary for them to explicitly oppose fishery-based development of DCSs in these regions. As Chapter 2 showed, this would be in contradiction to the commitments they have made in provisions on fisheries development for DCSs within both *UNCLOS* and *UNFSA*.[1314]

'Scaling up' the concept of CDQs to TRFMO quota allocation systems accomplishes two objectives that increase the likelihood of TRFMOs addressing the full range of equity issues for DCSs and potentially improve the equitability of TRFMO policy outcomes. First, a CSDQ system would transparently and explicitly integrate distributive equity considerations into the TRFMO management model. If successfully implemented, CSDQs would result in greater direct participation of DCSs in tuna fisheries, which could, in turn, result in their sustained and deeper engagement with TRFMO decision-making. It is possible to argue that this connection between the expansion of DCSs' involvement in value capture from tuna fisheries and their management has already been established in the historical engagement of PICs with tuna management in the WCPO region.

Second, a CSDQ system would provide an important countervailing force to the rising influence of neoliberal fisheries management within TRFMOs. In her assessment of CDQs in the Bering Sea, Mansfield describes how CDQs can generate a productive tension within the scope of neoliberal fisheries management.[1315] In the context of TRFMOs, the productive tension created through CSDQs could provide a pathway for TRFMOs to arrive at more equitable policy outcomes for DCSs. In this way, CSDQs could enable an increasing number of DCSs to become deeply engaged and enfranchised stewards of regional tuna resources.

CONCLUSIONS

This chapter provides evidence that the WCPFC and IOTC have been unable to address the range of procedural and distributive equity issues for DCSs across the six Policy Examples.

[1313] See Les Clark, *Perspectives on Fisheries Access Agreements: Developing Country Views* (Chapter 5, OECD Fishing for Coherence: Proceedings on Policy Coherence for Development in Fisheries, 2006).
[1314] See, e.g., Chapter 2 Section II D1.
[1315] Mansfield, *The Western Alaska CDQ* (n 1300).

This incapacity has resulted in policy outcomes that partially reflect differentiation but do not respond to equity concerns expressed by DCSs. The IOTC is shown to have produced more equitable policy outcomes than the WCPFC, in spite of the WCPFC's sophisticated differentiation framework.

Drawing from relevant literatures presented in Chapter 1, this chapter argues that a 'negotiated' form of equity has often been applied by the TRFMOs through differentiation which reflects a 'balanced settlement of conflicting claims' among members. It also argues that the application of differentiation by the WCPFC and IOTC operates in tension with broader forces that have been shown to underwrite the imbrication between TRFMOs and the tuna industry. These include the presence of distributional struggles among members and the influence of neoliberal fisheries management.

Showing that these themes run through current negotiations for quota allocation systems within the WCPFC and IOTC, the chapter charts a preliminary path forward for TRFMOs to explore in the form of a CDQ-style system explicitly and transparently addressing equity issues for DCSs.

CONCLUSION: DIFFERENTIATION ALONE WILL NOT PRODUCE INTRAGENERATIONAL EQUITY IN TRFMOS

This thesis began with the premise that differentiation plays a critical role in how TRFMOs address equity issues for DCSs. From this premise, the thesis analyses six Policy Examples to investigate how the WCPFC and IOTC have applied differentiation. The thesis finds that the two TRFMOs have addressed the majority of objectives for differentiation set out in IFL. However, the TRFMOs have failed multiple times to apply differentiation as provided for in their own treaty law. In addition, in every Policy Example, the WCPFC and IOTC have failed to deliver wholly equitable outcomes for DCSs. These results indicate that, at present, the WCPFC and IOTC do not adequately address equity issues for DCSs.

This thesis originated as an interrogation of intragenerational equity in transboundary tuna management, conceived as procedural and distributive equity for DCSs in TRFMOs. Intragenerational equity issues are underplayed in the scholarly literature on TRFMO performance, despite research findings that point to socio-economic disparities among members as a key factor in determining TRFMO effectiveness.

Legal scholarship in IFL shows a lack of consensus concerning the normative content of intragenerational equity and its implications for TRFMO decision-making. In literature that does broach the equitability of transboundary tuna management, surprisingly little work has been done, either on conceptualising these issues within the scope of TRFMO work or describing how TRFMOs currently respond to equity issues that arise in their work. This underdeveloped area of study has presented a research opportunity to describe and examine equity issues for DCSs in TRFMOs.

Importantly, this thesis examines intragenerational equity for DCSs pragmatically. Rather than using theoretical or normative conceptualisations of equity to evaluate how TRFMOs respond to equity issues, it uses a comparative analysis of the design and application of WCPFC and IOTC differentiation frameworks to examine how state practice compares with treaty law. In this way, the thesis is able to compare legal provisions on equity that states had committed to *on paper* with TRFMO policy outcomes that states produced *in practice*.

I KEY FINDINGS

A *On Describing Differentiation in IFL and TRFMO Treaty Law*

A central objective of this thesis has been to conceptualise and describe how TRFMOs respond to equity issues for DCSs. In order to identify provisions in IFL and TRFMO treaty law that address equity for DCSs, the thesis draws from a robust literature on differentiation and its changing role in the arena of international law and politics. Analytically, this thesis argues that differentiation provides an expanded conceptualisation of equity that, in comparison to related concepts like CBDR, encompasses both rights *and* responsibilities, and is better suited to analysing TRFMOs.

Initially, this descriptive task required an analysis of *UNCLOS* and *UNFSA* to map key IFL principles relevant to differentiation within TRFMOs. This mapping exercise discovered eight principles in two main areas of TRFMO work: conservation and management of shared fish stocks and special assistance to developing states. Three objectives were extrapolated from these principles and used to guide the selection of comparative Policy Examples.

Another dimension of the descriptive work conducted in this thesis is mapping WCPFC and IOTC differentiation frameworks. Differentiation frameworks in both TRFMOs are broken down into relevant provisions concerning management decisions, decision-making, and internal governance processes. The WCPFC exhibited a comparatively more highly developed differentiation framework in its treaty law than the IOTC. The analysis found that differentiation in both IFL and TRFMO treaty law speak to both procedural *and* distributive notions of equity for DCSs.

B *On Comparing Differentiation Provisions to TRFMO Policy Outcomes*

Comparing differentiation in IFL and TRFMO treaty law with WCPFC and IOTC policy outcomes reveals that both TRFMOs have only partially applied differentiation in practice. In other words, differentiation provisions do not appear to have a significant impact on TRFMO policy outcomes.

This thesis proposes an explanation for this finding: that differentiation within the TRFMOs is used for a purpose other than the stated objective of responding to equity issues for DCSs. Instead, it is suggested, differentiation within the Policy Examples has been used by TRFMO members to achieve a 'balanced settlement of conflicting claims'. Drawing from Albin's work on international negotiations, this explanation clarifies why most policy outcomes have been interim measures adopted on the basis of continuing negotiations. Ultimately, the thesis finds that differentiation is used instrumentally, as a way to broker compromises among TRFMO members in negotiations, rather than to achieve equitable policy outcomes for DCSs.

C *On Assessing the Equitability of TRFMO Outcomes*

This thesis pursues the related question of whether the application of differentiation actually results in equitable TRFMO policy outcomes for DCSs. As indicated above, the scope of this question is limited to Policy Examples (or parts thereof) in which the TRFMOs were found to have applied relevant differentiation provisions. In these Policy Examples, it has been shown that, even where differentiation was applied, the policy outcome often failed to capture additional procedural and distributive equity issues for DCSs. This finding demonstrates that the application of differentiation alone has not generated equitable TRFMO policy outcomes. It reinforces the conclusion that differentiation is not sufficient to address equity issues for DCSs in TRFMOs.

D *On the Influence of Distributional Struggles on TRFMO Policy Outcomes*

This thesis draws from insights in political economy research on the relationship between the tuna industry and transboundary tuna management. Researchers like Havice and Campling argue that TRFMOs are imbricated in distributional struggles within tuna GPNs, among and between firms and states. Positioning TRFMOs in this broader context, this thesis widens its inquiry to incorporate non-legal factors that might also influence the equitability of TRFMO policy outcomes. To describe these other factors, the thesis provides the necessary background to contextualise transboundary tuna management by the WCPFC and IOTC with descriptions of the tuna industries and historical relations between DCSs and DWFSs in both regions. This groundwork on the political economy associated with transboundary tuna

management in each region deepens understandings of each TRFMO's differentiation framework and application of differentiation in the Policy Examples.

The thesis demonstrates that, in both regions, TRFMO members have participated in implicating the WCPFC and IOTC in distributional struggles among themselves. In this specific form of distributional struggle among *states*, the thesis identifies 'interference strategies' employed by DWFSs and 'cooperative strategies' used by DCSs over time to advance their interests *through* the TRFMOs. In the Policy Examples, the thesis finds that these strategies are still operating among members in the context of applying differentiation.

The thesis finds that distributional struggles among DCSs and DWFSs are a chief driver of the policy outcomes observed in the majority of Policy Examples. Perhaps surprisingly, the procedural issue of the duration of TRFMO negotiations was found to be most influenced by distributional struggles. Across multiple Policy Examples, interference strategies employed by DWFSs repeatedly prolonged negotiations, while cooperative strategies by DCSs countered these extensions, forcing negotiations to a decision. In this context, interim measures were adopted in multiple cases as a compromise. While these policy outcomes often reflect general objectives in IFL, they do not adequately address specific differentiation provisions in TRFMO treaty law.

The policy outcomes of the case studies reflect a wider resistance to responding to distributive equity issues within the TRFMOs. In the literature on equity among states, Franck argues that procedural and distributive equity are mutually constitutive.[1316] This thesis confirms this link, demonstrating that the procedural equity issue of the duration of negotiations is manifested in negative distributive outcomes for DCSs. Moreover, a dimension of this procedural equity issue is that TRFMO members were often unable to openly negotiate distributive equity issues, despite clear guidelines set out in TRFMO treaty law. The thesis argues that this inability to directly confront distributive equity issues in the Policy Examples may point to a wider neoliberal logic operating in the TRFMO management model.

[1316] Franck (n 1290).

III CONCLUSIONS FOR TRFMO POLICYMAKERS AND RESEARCHERS

A *The WCPFC and IOTC Do Not Currently Produce Equitable Policy Outcomes For DCSs*

This thesis embarked on an investigation of equity within TRFMOs, arguing that little research has been conducted on the equitability of TRFMO policy outcomes. This thesis demonstrates that, in the selected Policy Examples, the WCPFC and IOTC have not produced equitable outcomes for DCSs.

The thesis conceptualises equity within TRFMOs in two ways: (i) legal differentiation advantaging DCSs; and (ii) procedural and distributive equity for DCSs. The WCPFC and IOTC failed to meet the standards set in assessments of each of these legal and non-legal understandings of equity. This finding is not surprising in light of the current structure of the tuna industry (as described in Chapter 3).

This finding may point to one of several reasons why equity issues are under-discussed in the literature on TRFMOs and their performance. It may be that commentators do not believe that TRFMOs are capable of delivering equitable policy outcomes for DCSs, given the inequitable nature of current industrial tuna production and consumption practices. As highlighted in Chapter 4, Havice and Campling argue that TRFMOs mediate competitive dynamics among actors within the tuna industry which they are neither designed, nor equipped, to handle.[1317]

Regardless of why equity for DCSs appears to be a particularly problematic aspect of TRFMO research, it remains the case that equity issues are becoming an increasingly critical part of transboundary tuna management. As indicated in Chapter 1, this is due to reasons that are both internal (moves towards longer-term management models) and external (biomass reductions and migratory shifts in tuna distributions resulting from climate change) to TRFMOs. Therefore, while the initial findings from these studies are intuitive to many commentators, other (perhaps less intuitive) findings may still be of interest to TRFMO policymakers and researchers into the future.

[1317] *Interfirm Strategies in the Canned Tuna GVC* (n 202) 309.

B *Differentiation Plays A Functional Role in Brokering Agreement Among TRFMO Members*

Perhaps most strikingly, this thesis finds that differentiation exerts little direct influence on the equitability of WCPFC and IOTC policy outcomes. Differentiation was found to be only partially applied by the TRFMOs, and in cases where it was applied, it did not result in equitable policy outcomes for DCSs. Rather, similar to other broad principles in IFL, like the precautionary approach and ecosystem-based management, differentiation is subject to ongoing disputes among states as to its meaning and implementation.[1318]

These findings lead to two conclusions that are significant for considering the relationship between law and equity issues in the context of TRFMO decision-making. The first is that law may matter little in realising procedural and distributive equity for DCSs. This is because differentiation may play an alternative role in TRFMO negotiations (apart from realising equity for DCSs.) Instead, differentiation may provide a way for TRFMO members to reach compromises, particularly in cases where interests appear diametrically opposed.

In the Policy Examples, differentiation provisions provide a sort of 'black box' of legal obligation, in which members utilise ambiguity surrounding their obligations to apply differentiation provisions to support their arguments and reach interim compromises. This function may explain why differentiation frameworks and equitable principles in TRFMO treaty law feature heavily in TRFMO negotiations in the Policy Examples, but are not ultimately reflected in policy outcomes. For TRFMO policymakers, this conclusion supports the notion that differentiation *does* play an important role in TRFMO negotiations—though this role *may not be for the purpose of* delivering equitable TRFMO policy outcomes for DCSs.

C *Differentiation in IFL Does Not Capture the Full Scope of Procedural and Distributive Equity Issues that Arise for DCSs in Transboundary Tuna Management*

Differentiation, as it is currently formulated in IFL and TRFMO treaty law, does not capture the full scope of procedural and distributive equity issues for DCSs. This thesis identifies

[1318] De Bruyn, Murua, and Aranda (n 23) 405; Ruth Davis and Quentin Hanich, 'Developing an Equitable and Ecosystem-Based Approach to Fisheries Management' in Harry N. Scheiber, James Fraska, and Moon-Sang (eds), *Science, Technology, and New Challenges to Ocean Law* (Koninklijke Brill NV, 2013) 124.

several procedural and distributive equity issues for DCSs that are not addressed by TRFMO policy outcomes, even in cases where differentiation has been applied. On the one hand, this conclusion further confirms that differentiation does not function to actualise equitable TRFMO policy outcomes for DCSs. On the other, it identifies new spaces in which TRFMO policymakers could further develop differentiation to better address equity issues for DCSs.

A closer reading of the types of equity issues both TRFMOs have repeatedly failed to address leads to two additional conclusions that point to new ways of thinking about the equitability of TRFMO policy outcomes. The first concerns a procedural equity issue (with implications for distributive equity) that has been repeatedly observed across the Policy Examples. This procedural equity issue refers to the duration of negotiations, which was often extended at key junctures in the Policy Examples, until the absence of a TRFMO decision produced negative distributive outcomes for DCSs. The extension of TRFMO negotiations over multiple years provides a clear example of an equity issue that links procedural *and* distributive themes in the Policy Examples.

This thesis concludes that both TRFMOs have failed to take into account this procedural equity issue in their differentiation frameworks and policy outcomes. For TRFMO policymakers, this finding may highlight the need to address temporality in future provisions setting out differentiation in TRFMO treaty law. For TRFMO researchers, this finding could prove to be a fertile area for exploring the (shorter-term) temporal dimensions of (*intra*-generational) equity issues within transboundary tuna management.

The second, additional conclusion concerns the overall lack of engagement of TRFMO policy outcomes with distributive equity issues for DCSs. Chapter 3 discussed, distributive equity for DCSs is a contentious area in IFL today. (It is only provided for in legally binding language on DCSs' access to high seas fisheries in *UNFSA*.) Therefore, it is not surprising that this analysis concludes that distributive equity issues for DCSs are largely not reflected in TRFMO differentiation frameworks and policy outcomes.

D *Distributional Struggles Play a Limiting Role in the Equitability of TRFMO Policy Outcomes*

Distributional struggles breach the surface in multiple Policy Examples, where negotiations raise distributive equity issues for DCSs. In these examples, the presence of underlying distributional struggles appears to constrain the scope of distributive equity issues addressed by TRFMO policy outcomes. The limiting role distributional struggles play in the application of differentiation by the TRFMOs points to the imbrication of states, TRFMOs, and the tuna industry. In the second and third sets of Policy Examples (C–F), where distributive equity issues were explicitly raised, negotiations revealed that the TRFMOs are ill-equipped to confront diverging interests among members. This analysis suggests that TRFMO members' negotiating positions often reflect differing interests within tuna GPNs and that negotiating dynamics are informed by longstanding distributional struggles between DCSs and DWFSs.

In these examples, TRFMO policy outcomes elided distributive equity issues to arrive at interim compromises which included commitments to address points of contention among members in the future. This raises the procedural equity issue (discussed above) of the timeliness of TRFMO negotiations and the distributive outcomes of extended negotiations for DCSs. Consequently, the Policy Examples demonstrate that distributional struggles inform the negotiating positions of TRFMO members (DWFSs in particular) and constrain the level of ambition within TRFMOs for addressing distributive equity issues for DCSs.

IV A Path Forward for Achieving Equitable TRFMO Policy Outcomes

The conclusions of this thesis provide a foundation for considering equity within TRFMOs in a different light than has previously been conceived in the small literature on the subject. This new research has unearthed findings that demonstrate complex legal and non-legal dynamics at work in determining the equitability of TRFMO policy outcomes.

Overall, this thesis has demonstrated TRFMOs are particularly constrained in their ability to address distributive equity issues for DCSs. The thesis attributes this finding to both the limited formulations of differentiation in IFL and TRFMO treaty law, and the influence of distributional struggles on TRFMO negotiations. This thesis proposes that both factors reflect the broader, panoptic presence of neoliberal fisheries management.

As Palma and Burgt have observed, the word ‘equity’ has faced erasure in international fisheries instruments at the same time as differentiation has developed in TRFMO practice.[1319] The wider literature on differentiation observes a similar trend in other IEL regimes, and commentators have connected this trend to the broader rise of neoliberalism in international environmental policymaking.[1320]

This thesis shows that, while legal provisions setting out differentiation reflect equitable principles in IFL and TRFMO treaty law, the actual application of differentiation by the TRFMOs largely functions to reach compromises between asymmetrical negotiators. In this context, DWFSs (guided by their interests in the distributional struggles that underwrite these negotiations) have often argued for compromised solutions that delay policy outcomes and result in poorer distributive outcomes for DCSs. It is this ‘negotiated’ form of ‘functional’ equity that appears to dominate the outcomes of most Policy Examples examined in this thesis. Consequently, it is argued that, while the WCPFC and IOTC have made long-term commitments to address distributive equity issues for DCSs, other actions may be required to ensure that these issues are resolved in a way that delivers concrete socio-economic benefits to DCSs in both regions.

A *For TRFMO Policymakers: A CDQ-Style System*

This thesis proposes that TRFMO policymakers in the WCPFC and IOTC consider implementing a CDQ-style system to explicitly and directly address distributive equity for DCSs. It argues that, to achieve equitable TRFMO policy outcomes, an alternative pathway to the application of differentiation to short-term management decisions is needed. Looking to the future, this thesis proposes introducing elements into the TRFMO management model that are in tension with neoliberal fisheries management and which acknowledge the imbrication of regional tuna management and tuna GPNs.

With negotiations for regional quota allocation systems underway in both TRFMOs, the WCPFC and IOTC are poised to assign quotas for the purpose of fisheries-based economic development to DCSs. This thesis has shown that, within a neoliberal decision-making

[1319] See Chapter 1 Section II B.
[1320] Chukwumerije Okereke, ‘Equity Norms in Global Environmental Governance’ (2008) 8(3) *Global Environmental Politics* 25.

context, rights-based management is unlikely to result in distributive outcomes that meaningfully benefit DCSs. A CDQ-style system might ensure that DCSs become enfranchised stewards and beneficiaries of the tuna resources in their regions.

B *For TRFMO Researchers: The Temporal Dimension of Equity in TRFMOs, Empirical Research on the Firm-State Nexus in Tuna GPNs, and Models of Fisheries Management that Successfully and Explicitly Prioritise Socio-Economic Objectives*

This thesis suggests new territory for scholars to explore in TRFMO research. Overall, this analysis underscores the necessity of inquiry into the equity-related dimensions of TRFMO work. In general, more empirical evidence is needed on the ways TRFMOs address equity issues. It remains a reality that TRFMO management decisions produce distributive outcomes among states in tuna fisheries and that negotiations often revolve around the equitability of these decisions. Despite this reality, many scholars continue to examine TRFMOs as if this were not the case—and, instead, assess them on the basis of a solely technical-scientific framework for fisheries management.[1321] Further research in this area could help better conceptualise equity issues and their function within TRFMOs—a similar analysis of differentiation in ICCAT could provide a starting point for drawing more generalisable conclusions than those suggested by this thesis. In addition, greater understanding is required of the implications for differentiation *among* DCSs.[1322] Moreover, inquiry could be broadened to include other transboundary fisheries managed by (non-tuna) regional fishery bodies more generally.

Future work could extend inquiry on equity issues in regional fishery bodies by exploring four areas of research that branch naturally from the findings of this thesis. Firstly, future research could seek counterfactuals to the cases in this thesis—this would require surveying management decisions for cases where distributive equity issues *have* been adequately addressed by regional fisheries bodies. It may also further pursue examples where the WCPFC and IOTC have adequately addressed distributive equity issues for DCS members. Breaking down the anatomy of these management decisions could shed light on enabling (rather than limiting) factors that shape the equitability of policy on transboundary fisheries.

[1321] Davis and Hanich (n 1318) 128.
[1322] Certain findings in this thesis point to these differences among DCSs. See, e.g., Chapter 5 Section III C.

Secondly, future studies might further examine whether differentiation plays the same 'functional' role in reaching compromises among members in *other* bodies, particularly those with *majorities of developed states*, such as CCSBT. Thirdly, future work could investigate further interdependencies between procedural and distributive equity within TRFMOs. As a starting point, this research could focus on equity issues like those associated with the temporal dimension of TRFMO policy outcomes identified in this thesis.[1323] Fourth, a review of successful fisheries management models that prioritise socio-economic objectives could provide a template for thinking about how to improve the equitability of transboundary fisheries management.

Future research could also concentrate on theoretical development around the strategies actors employ in distributional struggles within seafood GPNs. Greater examination of the calculus that motivates these strategies is needed. This thesis has offered the concepts of 'interference' and 'cooperative' strategies to describe the strategies used by DWFSs and DCSs within TRFMOs.[1324] However more research is needed to drill down into these strategies and how they specifically inform states' negotiating positions, not only within regional fishery bodies, but in other intergovernmental fora relevant to seafood GPNs (such as in bilateral FAA negotiations). More research is also needed into the strategies employed by other actors within seafood GPNs, such as firms and NGOs.[1325]

A dimension of this research could examine heterogeneities in economic interests *among* DCSs and DWFSs, which this thesis indicates can either reinforce or challenge these strategies, with interesting implications for negotiating outcomes. For example, this thesis showed that states can exhibit varied and potentially multiple engagements with tuna GPNs. This was the case with traditional DWFSs, such as the EU, US, and Japan, which are also core market states, as well as a number of DCSs that have leveraged their role as coastal states to become processing states through second generation FAAs.[1326] Some Policy Examples used in this thesis point to tensions created by these heterogeneities, which

[1323] See Chapter 7 Section III C.
[1324] See Chapter 4 Section III C.
[1325] Havice and Campling have gone some way in addressing this through their description of 'interfirm strategies': see above (n 205).
[1326] See, e.g., Chapter 4 Section II E.

challenge the classical division of interests between DCSs and DWFSs and may give rise to less common distributional struggle *among* states within these groupings.[1327]

This area of research is connected to possible new directions for studying the relationship between state-led fisheries management and the seafood industry. In particular, empirical research is needed on the explicit and implicit connections between corporations involved in the seafood industry and national fisheries administrations, and how this translates to the negotiating positions observed within regional fishery bodies.[1328]

[1327] See Chapter 7 Section II A, B.
[1328] In order to examine the opaque nexus of the state and industry, it may be necessary to engage in new research methods. One possibility would be a corporate ethnography of lead firms in tuna GPNs. See: June Nash, 'Anthropology of the Multinational Corporation' in Madeline Barbara Léons and Frances Rothstein (eds) *New Directions in Political Economy: An Approach from Anthropology* (Greenwood Press, 1979) 173.

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