Chapter 4

Effectively Influencing Value Chain Governance and Implementing SDG 14: 'Life Below Water'

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4.1 Introduction

There have been significant structural changes in recent decades in the way trade, production and marketing are organised. There is now wide recognition that global trade increasingly involves spreading the production of a final good over firms in several countries, with each one undertaking what is better described as a 'task' in the overall process rather than the production of a discrete good or service (WTO–IDE, 2011). These changes, which result from the internationalisation of global production and the fragmentation of trade across countries, have occurred as capital has become increasingly mobile under the accelerated pace of financial globalisation. Their implications have been increasingly analysed through the lens of global value chain (GVC) analysis. This literature, which became fashionable during the 1990s, and its use of a heuristic approach to analysis were motivated by the need to understand better how firms and workers located in developing countries were engaging with more recent processes of globalisation.

Often neglected within the GVC literature are sectors and regions such as the processed fisheries sector, as is consideration of both the Pacific and the Caribbean as distinct regions. For example, in both regions the fisheries value chain has received far less attention to date than other sectors in the GVC literature, such as textiles and clothing and high-value agriculture, even though the promotion of these value chains has been spurred by the creation of tariff rents conveyed by the international trading system. As a result, across the African, Caribbean and Pacific (ACP) countries, these sectors are important drivers of the expansion of labour-intensive formal employment opportunities. For all of the ACP, the 'oceans economy' and fisheries-based value chains assume particular importance, in terms of their social, economic and environmental contributions.

This chapter focuses on the fisheries sector in the Caribbean and the Pacific, and considers the trade-related implementation agenda of Sustainable Development Goal (SDG) 4 through the GVC perspective. It is structured as follows. Section 4.2 gives an overview of the evolution of GVCs within natural resource sectors. Section 4.3 introduces the SDG 14 trade-related implementation agenda. Section 4.4 reviews current patterns of value addition within the fisheries sector with reference to the Caribbean and Pacific, and introduces the GVC perspective. Section 4.5 analyses least developed country (LDC) trade-related issues in the fisheries sector, focusing on

the Pacific, in view of their implications for the advancement of SDG 14. Section 4.6 briefly reviews the available evidence on how international support measures such as Aid for Trade (AfT) are responding to these dynamics. The chapter concludes with reference to the potential future dynamics unleashed by forthcoming multilateral trade negotiations for the implementation agenda of SDG 14 and for influence on GVC governance.

4.2 Non-equity modes of global value chain participation: Contract farming and fishing

While the literature has paid much attention to agricultural GVCs, including in Africa, there has been rather less focus on the fisheries sector across the ACP, with a few exceptions, such as Campling (2016). Nevertheless, it is fair to say similar dynamics may be at play. Contract farming as well as fishing is a form of vertical integration between producers and buyers. The major difference between contract farming and fishing and contract manufacturing is that the former is resource-seeking and the latter efficiency-seeking (UNCTAD, 2011). The contracting arrangements which exist between producers and buyers means that these GVCs are forms of non-equity modes of production (UNCTAD, 2011). The dynamics at play within the fisheries sector compared with other extractive industries are also unique in some respects.[2]

Despite some of these differences in terms of the structure of the value chain and its drivers, the dramatic transformation of the global trading system experienced in recent years means that a few dominant players tend to drive trade within the fisheries value chain at a global level. These are typically the drivers of integrated supply chains, comprising traders and retailers as well as multinational and transnational enterprises.

While there are undoubtedly new trade opportunities arising for all countries and regions in view of technological advances that can spur trade linkages and transactions, at the same time not all of these developments are viewed positively. As patterns of global trade have changed, these have subsequently been linked to qualitative changes in the governance structures associated with GVCs. With reference to Sub-Saharan Africa, Gibbon and Ponte (2005) argue that these shifts have resulted in the region 'trading down' rather than up in GVCs. This is through increasing producer specialisation within the lower value-added nodes of a given value chain, rather than facilitating movement up towards higher value-added nodes such as processing, retailing and marketing. This is because the quest by transnational corporations or globally operating retailers for economies of scale at the marketing and retailing nodes of GVCs has resulted in increasingly hierarchical relations between firms across borders. Although at the initial stages of integration these structures are expected to result in rapid producer and product upgrading, sustaining these gains over time may become challenging.

In terms of governance, the initial distinction made in the GVC literature was between industry-specific and internal governance structures.[3] Since that time, there has been limited empirical scrutiny of these types of governance, in spite of the literature taking the framework forward extensively. More recently, there has been

greater consideration of the institutional context within which GVCs operate. This is because of the conceptual challenges regarding the interplay between internal GVC governance as defined by Gereffi et al. (2005) and external governance structures, including relating to public policy. The adoption of the SDGs clearly demonstrated major public policy concerns regarding the social as well as environmental outcomes of global trade (averting a race to the bottom) and the need for the international community to more effectively address these.

The focus and reflection on the regulatory measures associated with global trade the universal adoption of the SDGs prompted necessarily entail a more critical review of trade governance and interactions with institutional structures. In parallel, the GVC literature has begun to reflect on the institutional variables that influence the nature of GVC integration and upgrading outcomes (Dollar et al., 2016; Pathikonda and Farole, 2016), as described in the following sub-sections.

4.2.1 Value chain governance and public policy

Although the approach considers trade to be embedded in and determined by specific (but changing) institutional structures (see The IGLP Law and Global Production Working Group, 2016) and organisational aspects of international trade, more careful consideration of these structures and their influence, particularly on upgrading trajectories, has so far remained outside of the modelling sphere of 'which GVC takes what shape and why' (Keane, 2012). For example, the governance structures posited by Gereffi et al. (2005) do not include reference to external structures, including the institutional framework negotiated by governments for private actors, but rather focus on the internal structures between firms and private actors.

This omission is becoming increasingly recognised in view of the advancement of the SDGs and the 2030 Agenda. For example, Ponte and Sturgeon (2014) acknowledge that domestic regulation and public sector support need to be incorporated in a comprehensive framework that links GVC governance, institutional frameworks and upgrading processes. This is because, so far, GVC analysis has focused mainly on governance mechanisms internal to the value chain, treating the institutional framework (including state regulation) as 'background' (ibid.). Research questions remain regarding how overall GVC governance is shaped by broader institutional, regulatory and societal processes. These institutional aspects in view of public policy objectives clearly feature within the 2030 Agenda and the SDGs adopted by the international community in 2015.

However, it is the operationalisation of the trade-related targets, across fragmented regulatory spheres, that is now subject to increasing scrutiny. This more careful consideration of the institutional and regulatory context of trade is assuming increased importance in view of the need for more effective trade governance to advance the 2030 Agenda. The international community's acceptance of the GVC approach towards the analysis of global trade has led to the creation of new databases that distinguish between the imports of intermediates used in final production and exports. This means that analysis of global trade flows between partners has become more accurate and reliable.

4.2.2 Accounting for the value in global value chains

No single research method can provide a complete picture of GVC participation; rather, a combination of different approaches and research measures becomes necessary in order to effectively measure this. The recent empirical trade literature has begun to improve and refine some of the data sources and research methods used to map and measure GVCs. Some of these include (see Amador and Cabral, 2016):

- International trade statistics on parts and components (intermediate goods trade);
- Customs statistics on processing trade; and
- The integration of international trade data combined with input-output tables.

The last of the aforementioned approaches helps us begin to more clearly distinguish between sources of domestic value-added (DVA) as compared with foreign value-added (FVA). However, approaches at the current time focus on the sectoral level. This is in contrast with the more case study-based literature of the 1990s, which more clearly distinguished between value addition processes at the firm level and then subsequently, between the shares of value-added that accrue to different actors within the GVC.

Understanding how value is created and then, subsequently, who captures most of it, assumes particular importance in view of the SDG 14-related agenda. For example, SDG 14.7 calls on the international community to increase economic benefits to small island developing states (SIDS) and LDCs by 2030. Invariably, action on some of the other trade-related targets included within SDG 14 will assist in meeting this target. However, the adoption of the GVC perspective also entails consideration of the quantitative targets included in SDG 14 in tandem with the identification of the legal and institutional structures that must be influenced in order to realise these ambitions.[4]

4.3 SDG 14's trade-related implementation agenda[5]

The oceans governance policy landscape is highly fragmented, hindering effective management in view of sustainable development objectives. While the UN framework of rules covers some aspects, the World Trade Organization's (WTO's) remit seeks to address others. The recent adoption of the SDGs as part of the 2030 Agenda is an unprecedented attempt to overcome these differences. These goals, established for the next 15 years, are rightly ambitious, with full support of the Commonwealth. However, this should not obscure the scale of the challenges ahead. Urgent actions are required to advance this development agenda.

SDG 14 urges the international community to 'conserve and sustainably use the oceans, seas, and marine resources'. This points to a pressing need to address the issue of the conservation and rebuilding of global fish stocks that have been depleted not only as a result of the industrialisation of the fisheries sector to date but also because of the expansion of artisanal fisheries. Effective and sustainable fisheries management has become a greater imperative in recent years for all groups of countries.

For Caribbean and Pacific Commonwealth Member Countries the oceans economy is of critical importance, although there are major differences in terms of how and why this is the case. For example, The Bahamas has an Exclusive Economic Zone (EEZ) of an estimated 629,292 km^2 compared with a land area of 13,942 km^2. Kiribati comprises 33 islands with a total land area of just 810 km^2 but has about 3.5 million km^2 of marine waters. Coastal tourism fisheries remain important in The Bahamas, despite reduced catches. In Kiribati, the nature of offshore fisheries tends to be dominated by distant water fleets. The oceans economy assumes importance for SIDS in remarkably different ways, depending on their geographic (especially access to markets), socio-historical and environmental contexts. Despite these differences in context, however, the facts render the oceans economy, including sustainable fisheries management, of upmost importance.

SDG 14 interacts with many of the other targets in the 2030 Agenda, including, for example, SDG 2 to end hunger and achieve food security and improved nutrition. For some of the LDCs, SDG 14 interacts with other trade-related targets, notably doubling the share of LDC world exports. Other trade-related targets included in SDG 14 include:

- SDG 14.4: 'By 2020, effectively regulate harvesting and end overfishing, illegal, unreported and unregulated (IUU) fishing and destructive fishing practices and implement science-based management plans, in order to restore fish stocks in the shortest time feasible, at least to levels that can produce maximum sustainable yield as determined by their biological characteristics.'
- SDG 14.6: 'By 2020, prohibit certain forms of fisheries subsidies which contribute to overcapacity and overfishing, eliminate subsidies that contribute to illegal, unreported and unregulated (IUU) fishing and refrain from introducing new such subsidies, recognizing that appropriate and effective special and differential treatment for developing and least developed countries should be an integral part of the World Trade Organization fisheries subsidies negotiation.'
- SDG 14.7: 'By 2030, increase the economic benefits to small island developing States and least developed countries from the sustainable use of marine resources, including through sustainable management of fisheries, aquaculture and tourism.'
- SDG 14.7b: 'Provide access for small-scale artisanal fishers to marine resources and markets.'

From a GVC perspective, these last two goals are closely interrelated. Damaging anti-competitiveness effects may arise in view of the inability to effectively regulate IUU fishing. Similarly, harmful fishing subsidies create a deeply unfair and un-level playing field. This can undermine and constrain market access for types of producers with less recourse to the financial resources needed to bolster their position within particular markets.

4.3.1 Reflecting on regulatory frameworks

The institutional architecture and regulatory context of the trade-related SDG 14 implementation agenda will need to be operationalised at different levels and within

different spheres. For example, efforts to achieve SDG 14.4 will require international adoption of the UN Convention on the Law of the Sea (UNCLOS) and the UN Fish Stocks Agreement.[6] The UN Food and Agriculture Organization's (FAO's) Port State Measures Agreement could be ratified and adopted to promote implementation and practical application on IUU measures. There is a need to promote coherence among the myriad of international laws and frameworks regulating the fisheries sector and their effective implementation in a mutually supportive manner by regional fisheries management organisations and national fisheries authorities.

The interaction between SDG 14 and the other SDGs will be a determinant of its successful implementation. For example, in view of major capacity constraints in countries with EEZs that far exceed their land area and ability to effectively police vast sea areas, the target included on AfT (SDG 8), which calls on the international community to increase shares destined for developing countries, particularly the LDCs, becomes paramount to the advancement of SDG 14.4.

While there are fresh proposals on the table calling for the prohibition of subsidies to fishing on overfished stocks and IUU fishing, major data issues abound. This is because of the complexity of first defining and then identifying harmful fishing subsidies. An estimated US$20 billion of harmful fishing subsidies are deemed as contributing directly to overfishing, though in practice the level is likely to be far higher (UNCTAD, 2016a). There is a need for far more up-to-date and detailed studies across countries—a major research endeavour.

Prior to this, full transparency and the disclosure of information regarding subsidies to the fisheries sector are required. Transparency, along with consensus and common action, are core Commonwealth principles. The reaffirmation of these core principles by a number of Commonwealth member states featured strongly in the launch of a Commonwealth Blue Charter at the UN Oceans Conference, New York, 5–9 June 2017.

4.3.2 Proposals on the Table

Recent developments at the WTO in view of the achievement of SDG 14.6—addressing harmful fishing subsidies—may be viewed as either a 'glass half full' or a 'glass half empty' scenario. This is because, while some members have committed themselves to a multilateral deal (e.g. the EU), definitional issues remain regarding 'artisanal fisheries'. Other major players (e.g. the USA), disillusioned by WTO processes, are pursuing a plurilateral trade deal on addressing harmful fishing subsidies.

In relation to market access and SDG 14.7b, further liberalisation at the multilateral level and at the forthcoming WTO Ministerial Conference in 2017 looks unlikely. Within this context, the regional value chain mechanism and its promotion assume particular importance, particularly given the linkages between the fisheries, transportation and tourism sectors. Overcoming barriers to trade at the intra-regional level will also assist in meeting other trade-related targets included in the SDGs, notably those related to the LDCs and, more specifically, SDG 17 (to significantly increase the exports of developing countries, in particular with a view to doubling the LDC share of global exports by 2020).

Given stalled multilateralism and a realisation that the Doha Development Agenda is unlikely to be as fully implemented as originally envisaged, progress on the timely implementation of duty-free and quota-free market access on a lasting basis for all LDCs remains somewhat elusive. Nonetheless, since the last Ministerial, held in Nairobi 2015, efforts continue to ensure that preferential rules of origin applicable to imports from LDCs are transparent and simple, and contribute to the facilitation of market access and, therefore, SDG 17.[7]

Finally, it must be recognised that not all aspects where changes are required may be directly under the influence of trade policy-makers (Keane and Melamed, 2015). This is precisely because of the nature of GVCs: around one third of global trade is intra-firm trade. This means an extremely large proportion of global trade takes place within the parameters of one globally operating firm. Within this context, the creation of effective institutional frameworks and the incentive structures required to induce shifts in the nature of GVC participation and potential gains, including economic benefits and shares of value-added, obviously become heightened. The following section explores these aspects, based on available data.

4.4 Value addition in the fisheries sector

There are longstanding concerns related to growth in developing countries' shares in world manufactured exports, which have not been matched with commensurate increases in the income earned from such activities (UNCTAD, 2002). Within the GVC literature and with particular reference to the light manufacturing sector, the shares of value-added available at particular GVC nodes are simply less than in the past (Baldwin, 2012). Within the light manufacturing sector, however, processed fisheries rarely get mentioned. We therefore review recent findings in the sub-sections below.

4.4.1 What the available data suggests

As discussed by Lanz and Werner (2015), agri-food products are among the main export products of small economies and are part of a value chain that has experienced significant changes over the past decades.[8] Within their analysis, which focuses on small economies, the authors draw particular attention to the role of the processed fisheries sector. They estimate that, while exports from the category of 'fish' accounted for 3.4 per cent of total exports from small economies in 2013, they made up 90.5 per cent of processed product exports.

This very large difference between reported unprocessed and processed fish exports may reflect the fact that in some cases fish are not landed. This is because the quantity caught may be in such a large volume there is not the capacity to land and process; instead they are landed in another location and jurisdiction. In many cases, landed fish are simply consumed within the domestic market, rather than exported. Because so little processing actually takes place on SIDS, this accounts for the large proportion of processed fish products exported. This points to the need to exercise extreme caution in the interpretation of aggregate trade data.

Despite the clear data discrepancies, across small economies the sector is an important driver of value addition activities and the expansion of formal employment opportunities. On the whole, it is fair to say the evidence Lanz and Werner (2015) presents is suggestive of rather more upgrading and therefore a degree of 'trading-up' by small economies within the fisheries GVC (as opposed to trading-down and being locked into unprocessed commodity exports). This is because, while small economies exported below US$0.5 billion of primary fish products in both 2003 and 2013, exports of processed fish almost tripled, from below $1.5 billion in 2003 to $4.2 billion in 2013.

This increase in volume is mirrored by an improvement in the relative position of small economies within the global fisheries value chain: their share in the world trade of processed fish increased from 5.2 per cent in 2003 to 6.5 per cent in 2013. An increase in both value addition and market share is a strong indicator of upgrading within GVCs (Kaplinsky and Reardon, 2005; Bernhardt and Milberg, 2011).

4.4.2 Data discrepancies

It is fair to say that while on paper these aggregate numbers look good, there is much less information on the types of firms involved in processing activities and in the accrual of shares of value addition. The aggregation of small economies can mask underlying dynamics, for example the effect of increases attributable to a few major players within the sector. More fundamentally, and a major challenge to the current narrative on GVCs is that fact that currently the distribution of trade in value-added is based on geographical location compared with the ownership of productive factors. Hence, aggregate analysis of value-added data can mask the fact that this accrues to foreign-owned firms and may well end up as income outside the country of production.

This issue is particularly pertinent for the fisheries sector, as aggregate trade data do not reflect the geographical extraction and movement of primary fish products, which are from the waters and ports of many SIDS in the Caribbean and Pacific but are not registered as exports as they are caught by vessels under foreign flags. Issues regarding at-sea transhipment are also largely unaccounted for.

Obviously, this information can be known only through detailed case study analysis. However, the available evidence suggests some reasons for concern. For example, according to Bjorndal et al. (2015) on value chain dynamics in small-scale fisheries, small-scale fishers and fish farmers receive relatively less value than processors and retailers. Campling (2016) echoes these concerns. The following sub-section introduces some of the sectoral measures of trade in DVA and FVA, with a particular focus on the fisheries sector in the Caribbean and Pacific regions.

4.4.3 Shifts in domestic and foreign value-added: Fisheries sector[9]

We present disaggregated analysis at the country and regional level on changes over time in the share of DVA and FVA in the fisheries sector for the Commonwealth Caribbean and Pacific.[10] The objective of this analysis, which is not driven by any hypothesis and is simply descriptive at this stage, is intended to spur reflection on

related policy measures, instruments and data sources, which in the future could deepen this analysis. The next step in the analysis, for example, could include a closer examination of the interaction between shifts in value-added and regulatory frameworks.

Sectoral analysis of trade in value-added

The Eora Multi-Regional Input-Output (MRIO) database is a good effort to compile and harmonise input-output tables from several countries using different sectoral classifications. It is one of the major available data sources used to calculate trade in value-added (TiVA). Although invariably, in the process of preparing this dataset some assumptions as well as adjustments to the data have been made, which has invariably raised some concerns (Kowalski et al., 2015), it has the best country coverage in terms of availability across Commonwealth members.

It is important to understand some of the caveats of this database. These include the fact that, although in aggregate terms the Eora-MRIO can help calculate the value-added content of exports and other production variables, when the analysis is performed at disaggregated levels some inconsistences may appear. The distinction between intermediates and final products blurs in the summation of overall TiVA, but it is logical to assume an increase in FVA equates to a greater use of imported intermediates and, hence, GVC engagement (IMF, 2015).

The reported figures for TiVA may differ substantially from those associated with gross merchandise trade. This is because not only is the value of imported intermediate goods used in production omitted, but also, as TiVA is decomposed, the services sector gains in weight once its overall contribution is acknowledged. Overall, 26 'sectors' are included in the database (including categories such as 're-export and re-import' as well as 'others').

This means that the value-added generated in local or foreign transport or financial services, for example, are embedded in both exported services and goods. Consequently, the structure of TiVA tends to be more similar to the structure of domestic production than it is to the value of goods trade. This is precisely one of the main objectives of the exercise undertaken to calculate TiVA: to address the imbalance between the measurement of gross trade compared with the value-added data used to measure gross domestic product (GDP).

Exploring shifts in value-added

One of the databases with the most developing country coverage was that developed by the UN Conference on Trade and Development (UNCTAD)–Eora. Within this database, the following two data sources are included:

- **DVA in exports:** This indicator measures how much value produced in the respective country is actually embodied in exports.
- **FVA in exports:** This indicator measures the share of imported intermediate inputs embodied within a country's exports and as such is a relatively good proxy for backward integration.

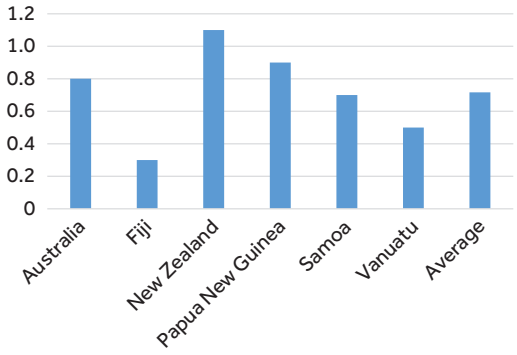
Both indicators can be expressed as a share of gross exports. For example, a decline in DVA embodied in exports as a share of gross exports (and thus an increase in FVA embodied within exports) implies the use of more foreign inputs embodied within exports; this could indicate the export of more technologically sophisticated exports, which demand higher skills and pay higher wages.

Essentially, TiVA is calculated by the summation of DVA in total exports (net exports) plus FVA. The following sub-sections analyse the contribution of DVA and FVA for the fisheries sector in the Caribbean and Pacific.

Comparison of Caribbean and Pacific: Shifts in value-added in the fisheries sector

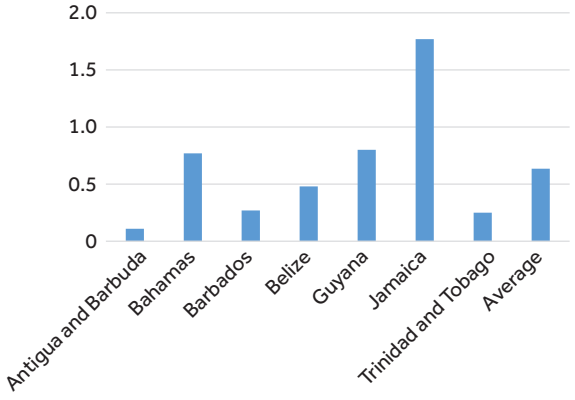
Figures 4.1 and 4.2 present the ratio of value-added exported compared with gross exports for those countries in the Commonwealth Pacific and Caribbean for which data are available, in 2012. It is clear from these results that the ratio of TiVA exported

Figure 4.1 Ratio of TiVA to gross exports in 2012 (Pacific)



Source: Authors elaboration based on Eora-MRIO

Figure 4.2 Ratio of TiVA to gross exports in 2012 (Caribbean)

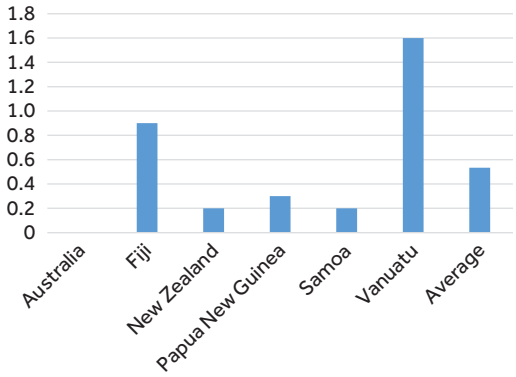


Source: Authors elaboration based on Eora-MRIO

compared with gross exports is slightly higher, on average, in the Pacific fisheries sector than in the Caribbean. There is also greater variation in the Caribbean, with Jamaica posting a ratio around three times higher than the average for the region.

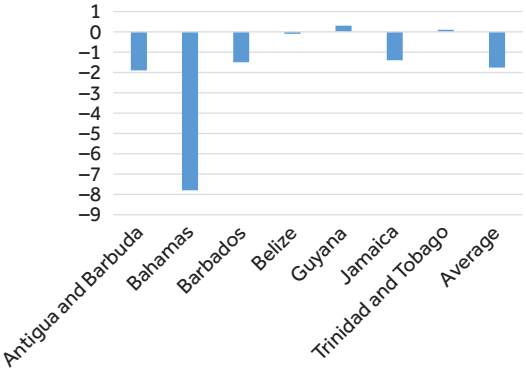
Figures 4.3 and 4.4 present shifts in FVA in the fisheries sector between 2000 and 2012. The largest decline in FVA is the largest shift apparent between 2000 and 2012 for The Bahamas—one of the largest apparent for the Caribbean as a whole. Whereas the share of FVA has generally increased in the Pacific, it has actually declined both on average and across several countries in the Caribbean. These declines are indicative of a greater contribution of DVA within the sector. However, they may also be reflective of a decline in engagement with the processed modern fisheries export sector.[11] Without much more detailed analysis, we are unable to make any normative judgement regarding this change at this stage.

Figures 4.3 Shifts in total FVA (% point change) between 2000 and 2012 (Pacific)



Source: Authors elaboration based on Eora-MRIO

Figure 4.4 Shifts in total FVA (% point change) between 2000 and 2012 (Caribbean)



Source: Authors elaboration based on Eora-MRIO

In comparison, all countries in the Pacific experienced increases in FVA in the fisheries sector between 2000 and 2012. The largest increases in FVA are apparent for Vanuatu and Fiji. These results are indicative of deeper GVC engagement in the fisheries sector by the region as a whole, and particularly for the aforementioned countries. However, again, without more detailed scrutiny (at the micro level), we are unable to infer any judgements regarding the distribution of value-added across actors within the value chain. Much more detailed case study and firm-level analysis, including regarding investment policy, is required to complement this analysis.

This is precisely because of the need to ensure momentum regarding the implementation of SDG 14. Obtaining data on shares of value-added across actors is extremely challenging because the information is highly commercially sensitive. Nevertheless, for policy-makers with a clear remit to '(14.7) By 2030, increase the economic benefits to small island developing States and least developed countries from the sustainable use of marine resources, including through sustainable management of fisheries, aquaculture and tourism', it is important to understand how and why shares of value addition within the fisheries sector changed so dramatically between 2000 and 2012 in both regions.[12]

Reflection on trends to date may lead to greater consideration of policy measures that could increase potential gains, both within as well as between sectors through effective linkage development.[13]

4.5 LDC-specific trade issues in the fisheries sector[14]

This section focuses on the role of the fisheries sector within the graduation criteria. This is because the sector plays a cross-cutting role and features heavily within each of the categories used to identify LDCs in the Pacific. For example, not only does the sector provide direct employment, but also it serves as a key source of nutrition. The specific targets included in SDG 14 therefore will invariably exert a major influence on progress towards sustainable graduation. The identification of LDCs is currently based on three criteria: per capita gross national income (GNI); human assets; and economic vulnerability to external shocks. The latter two are measured by two indices of structural impediments—namely, the Human Assets Index (HAI) and the Economic Vulnerability Index (EVI):

i. **Income criterion**, based on a three-year average estimate of GNI per capita for the period 2011–2013, based on the World Bank Atlas method (under US$1,035 for inclusion, above $1,242 for graduation as applied in the 2015 triennial review);

ii. **HAI** based on indicators of (a) nutrition: percentage of population undernourished; (b) health: mortality rate for children aged five years or under; (c) education: the gross secondary school enrolment ratio; and (d) adult literacy rate;

iii. **EVI** based on indicators of (a) population size; (b) remoteness; (c) merchandise export concentration; (d) share of agriculture, forestry

and fisheries; (e) share of population in low elevated coastal zones; (f) instability of exports of goods and services; (g) victims of natural disasters; and (h) instability of agricultural production.

4.5.1 Graduation indicators and progress

According to the most recent report from the United Nations (2015) Committee for Development Policy, Kiribati had met both the income and the HAI criteria (for the second consecutive time). The Committee did not recommend, however, that Kiribati be graduated from the LDC category, given its extreme high economic vulnerability (the highest in the world). Consideration on the country's graduation was deferred to its 2018 session. Meanwhile, the Committee recommended Tuvalu for graduation at its 2012 triennial review but, in view of its high score on the EVI (see Table 4.1) and in anticipation of major challenges resulting from the effects of climate change, this country also saw consideration on its graduation deferred to 2018.

The situation faced by Tuvalu is similar to that of Vanuatu, which was found to be eligible for graduation in 2006, 2009 and 2012 and was recommended for graduation in the 2012 triennial review. However, the United Nations General Assembly decided to grant an additional preparatory period of one year before the start of the three-year preparatory process and invited the country to prepare its national smooth transition strategy. Three other LDCs met the eligibility criteria for graduation for the first time in 2015: Bhutan, São Tomé and Príncipe and Nepal. According to present rules, if these countries meet the criteria for graduation during the 2018 triennial review, the Committee may subsequently recommend them for graduation. In comparison, Solomon Islands met only the income and HAI criteria, whereas Timor-Leste only met the income criteria.

One objective of the Istanbul Programme of Action is to enable half of all LDCs to reach graduation by 2020. This is a formidable challenge, particularly given that, since the international community created the category, the number of countries defined as LDCs has doubled, from 24 to 48. There have been only four LDC graduates since 1971 (Botswana, Cape Verde, Maldives and Samoa). Nevertheless, according to recent estimates by Drabo and Guillaumont (2016), around 10 LDCs are likely to reach graduation status by 2020. These include Kiribati, Solomon Islands, Tuvalu and Vanuatu. The following sub-section explores the potential trade-related effects of LDC graduation and potential mitigation measures within the fisheries sector. Again, we take a GVC perspective and explore the potential for trade shifts as a result of movement from LDC status. Finally, we interpret these results in terms of their interaction with the implementation agenda of SDG 14.

4.5.2 Potential cost of graduation from LDC status

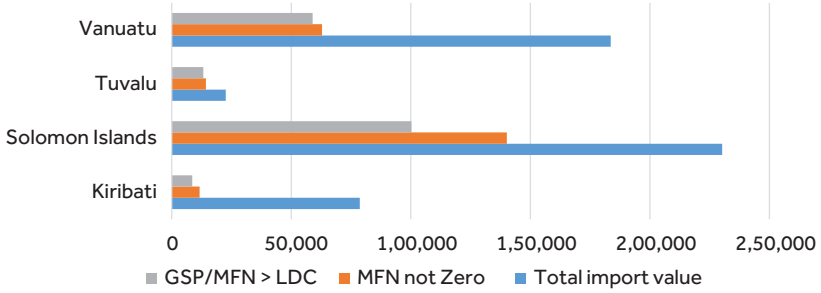
The approach taken in this analysis is as follows. First, data were collected on imports from LDC Commonwealth Pacific Island Countries (PICs). Subsequently, the duties levied on imported fisheries products from PICs were calculated (Figure 4.5). Specifying a value threshold of US$1,000, the major imported fisheries products from LDC PICs were identified. This approach identified the main products likely affected

Table 4.1 Selected LDC graduation indicators

	Income	Economic Vulnerability Index (EVI)				Human Assets Index (HAI)	
Country	**GNI per capita (US$)**	**EVI**	**Share of population in low elevated coastal zones (%)**	**Export concentration index**	**Shares of agriculture, forestry and fisheries (%)**	**HAI**	**Prevalence of undernourishment in total population (%)**
Kiribati	2 489	71.5	95.22	0.83	26.2	86.3	5.0
Solomon Islands	1 402	50.8	12.88	0.58	28.2	71.7	12.5
Tuvalu	5 788	54.0	94.73	0.69	25.5	88.8	10.0
Vanuatu	2 997	47.7	1.18	0.70	25.1	81.3	7.2

Note: The indicators here are illustrative of those included within the EVI and HAI
Source: UNDESA

Figure 4.5 Value of imports receiving preference (US$'000s)[16]



Source: UN Comtrade; see Keane and Kennan (2016).

by a tariff increase within particular markets.[15] Finally, the three main competitors of each product were identified and their respective trade regimes identified. The following sub-sections present the main results of this analysis.

Almost 60 per cent of imports from Tuvalu face a GSP/MFN rate that is less favourable than the rate applicable to LDCs. In value terms, however, Solomon Islands is likely to face the greatest cost as a result of loss of trade preferences arising from graduation and movement out of the LDC classification (almost 44 per cent of its exports face a GSP/MFN rate that is less favourable than the rate applicable to LDCs). However, within the fisheries sector, Vanuatu has the highest number of 'key' products (26)[17] that may be affected by a loss of preference if LDC status ceases (Table 4.2).

In comparison, Solomon Islands has around 20 products potentially facing an increase in tariffs. Most of these will likely face an increase in tariffs in the EU market, followed by the Japanese market. All Pacific LDCs have a number of key fisheries products that will likely face an increase in tariffs in the Japanese market. It is challenging to clearly identify affected products in the US market because specific duties are applied to volumes (as opposed to values) and these are difficult to quantify.

Table 4.2 Number of key fisheries products facing tariff increase

Country	Kiribati	Solomon Islands	Tuvalu	Vanuatu	Total
Canada	0	1		0	1
EU	3	11	0	3	17
Japan	12	7	7	12	38
USA		1		0	1
China				3	3
Korea Republic	2	0	3	6	11
Thailand	0	0	0	2	2
Total	17	20	10	26	73

Notes: 'Key' products are those on which there would be a loss of preference if LDC status ceased. Fisheries products are those falling within Harmonised System chapter 03 and sub-heads 1604 and 1605. Vanuatu appears to be the only PIC LDC eligible for China's LDC preferences

Source: Keane and Kennan (2016)

Table 4.3 Hypothetical duties on key fisheries products (US$'000s)

Country	Kiribati	Solomon Islands	Tuvalu	Vanuatu
Canada	–	0.1	–	–
EU	1.4	18,092	–	1.4
Japan	294.1	105.6	107.2	1,663.50
USA	–	?	–	–
China	n/a	n/a	n/a	704.6
Korea Republic	9.3	–	2.8	352.4
Thailand	–	–	–	0.3

Notes: The duty that would hypothetically have been applied had the PIC not been an LDC, derived simply by applying the percentage point increase in applicable tariff to the value of imports from the country concerned (although it should be noted that duties collected do not always reflect this simple calculation). Where a range of tariffs may be applicable to different sub-items falling within a single trade code, the calculation uses the highest

Source: Keane and Kennan (2016)

In terms of the potential cost of graduation, the results of the analysis suggest this is highest for the Solomon Islands (Table 4.3), by a considerable margin. Most of these potential costs will be borne in the EU market. In comparison, Vanuatu has a larger range of products across a greater number of markets that may potentially face an increase in tariffs.

We then identified the major fisheries product, at the lowest level of disaggregation, within each market affected by a potential tariff increase because of graduation out of LDC status (Table 4.4). In each case, for each market the key fisheries product affected is tuna. Whereas the increase in tariffs within the Japanese market as a result of graduation from LDC status may put the affected PICs at an equal footing with their main competitors in terms of the costs of market access, it is Solomon Islands that may be put in a potentially more disadvantageous position relative to some of its major competitors in the EU market, such as Ecuador[18] and Papua New Guinea,[19] which enter the EU market tariff-free. However, a note of caution is urged for all other LDC PICs, in view of the fact that some of these countries (China, Korea and Japan) are currently in negotiations for a free trade agreement, which may in the future remove tariffs on these products.

This type of analysis clearly draws the readers' attention to the issue of flags of convenience, whereby the flag that flies is the one which relates to where the ship is registered as opposed to the flag of which its owners originate. What it also serves to highlight are issues relating to the potential effect of graduation from LDC status on the organisation of the fisheries GVC and the nature of integration of Pacific SIDS.

In brief, graduation from LDC status has the potential to shake up existing participation in GVCs in the region. Adopting a more disaggregated approach to analysis of the potential for trade shifts, in view of the new understandings arising from GVC analysis, and embedding this approach within an impact assessment framework, could result in more targeted AfT to assist with trade-related adjustment, as well as to address

Table 4.4 Products affected by tariff removal

Country	Market	HS code	Product	Preference loss (% point)	Hypothetical duty (US$'000s)	Imports (av. 2013–2015 US$'000s)	Competitors	Imports (av. 2013–2015 US$'000s)	Tariff
Kiribati	Japan	030342000	Tunas, yellowfin, frozen excluding Heading 03.04, livers and roes	3.5	155.9	4,454	Taiwan	69,350	3.5
							China	21,635	3.5
							Korea Republic	17,935	3.5
Solomon Islands	EU	16041416	Fillets known as 'loins' of tunas or skipjack, prepared or preserved	20.5	8,058	39,306	Ecuador	198,461	0
							Thailand	73,713	24
							Papua New Guinea	57,114	0
Tuvalu	Japan	030344000	Frozen bigeye tunas: *Thunnus obesus*"	3.5	44.68	1,277	Taiwan	234,097	3.5
							China	95,261	3.5
							Korea Rep.	36,312	3.5
Vanuatu	Japan	030344000	Frozen bigeye tunas: *Thunnus obesus'*	3.5	767.63	21,932	Taiwan	234,097	3.5
							China	95,261	3.5
							Korea Republic	36,312	3.5

Source: Keane and Kennan (2016)

subsequent shortfalls in productive capacity. Such an approach is invariably more in tune with the intended focus of sustainability impact assessments, which are often used to determine the need for AfT resources but to date have unfortunately exhibited a heavy reliance on more macro-level analysis (e.g. use of Computable General Equilibrium).

4.6 Available evidence on international support measures[20]

The AfT initiative has gained substantial momentum since it was officially launched in 2005 at the 6th WTO Ministerial, further to the Doha round of negotiations. There have also been substantial improvements in disbursement mechanisms. In the case of the LDCs, the Enhanced Integrated Framework is a key pillar of the international support architecture that is beginning to adapt in view of the forthcoming wave of LDC graduates. Although casual relations should not be interpreted in terms of causations, it is clear from a review of Table 4.5 that the next wave of LDCs expected by 2020 (Tuvalu, Angola, Kiribati, Bhutan, Nepal, São Tomé and Príncipe, Solomon Islands, Timor-Leste, Equatorial Guinea and Vanuatu) have received a much larger share of AfT compared with the non-graduates.

It is also clear that particular sectors in the next wave of LDC graduates have also received greater shares of AfT compared with the non-graduates (Table 4.6). These sectors include fishing, energy and transportation. Again, although caution is urged in the interpretation of these figures, at face value it would appear they deserve further attention. This is because they are suggestive of greater attention paid by available support measures (and donors) to the next wave of LDC graduates, which are predominantly island states. Moreover, the increased resources destined for the fisheries sector may be suggestive of better targeting in anticipation of the competitiveness effects likely to arise once the tariff rent is removed as a consequence of graduation from LDC status.

4.7 Conclusion

Momentum is growing to secure some of the trade-related aspects of SDG 14's implementation agenda. This includes the progress currently being made in view of

Table 4.5 AfT disbursements (2006–2010) to future LDC graduates

Indicator	LDCs likely to graduate in 2020	LDCs unlikely to graduate in 2020
Total AfT disbursement as share of GDP	4.32%	2.43%
Total AfT disbursement per capita (US$)	83.37	11.80

Note: Number of future likely graduates by 2020 is 10, against 38 non-graduates
Source: OECD DAC

Table 4.6 Categories of AfT disbursement (2006–2010)

Sector	Graduates	Non-graduates
Transport and storage	**44.00**	**4.37**
Communications	3.28	0.20
Energy	**22.64**	**1.94**
Banking and financial services	3.92	0.58
Business and other services	1.08	0.69
Agriculture	3.85	2.94
Forestry	0.57	0.21
Fishing	**10.56**	**0.27**
Industry	0.84	0.39
Mineral resources and mining	1.48	0.21
Trade policies and regulation	0.72	0.22
Tourism	0.75	0.03

Source: OECD DAC

the WTO Ministerial that will take place later this year. Evident shifts are being made, albeit across different negotiation tracks. Issues of relevance to the Small States Work Programme at the WTO to consider include how to discipline harmful fisheries subsidies while preserving special and differential treatment (S&DT).

In order to avoid a similar fate to other negotiations, which have become stuck on issues related to S&DT, attention has begun to focus on issue-specific discussion on subsidy prohibition. Current areas under discussion include (see WTO, 2017):

- What sorts of fisheries subsidies should be *ipso facto* prohibited;
- What role, if any, Regional Fisheries Management Organisations and/or fisheries management systems should have in any package of disciplines;
- How to define subsistence, small-scale and artisanal fishing and what subsidy disciplines should apply to these activities; and
- How an agreement on fisheries subsidies could address future development needs of developing and least developed members.

A failure to achieve an outcome at the forthcoming WTO Ministerial that serves to support, rather than undermine, the SDGs runs an extremely high risk of jeopardising not only SDG 14 but also SDG 17 and reliance on the multilateral trading system as a means of implementing all other SDGs. Invariably, ensuring the effectiveness of trade governance structures operating at the multilateral level will be crucial to the overall success of the SDG implementation agenda.

For Caribbean and Pacific Commonwealth Member Countries, the oceans economy is of critical importance. Both regions are adapting to the significant changes in the way global trade, production and marketing are now organised. While the relative position of small economies within the global fisheries value chain has increased, with their world share of processed fisheries increasing from 5.2 per cent in 2003 to 6.5 per cent in 2013, these aggregate numbers mask underlying dynamics at the

regional level. As the data presented in this chapter have shown, the most recent available evidence on GVC participation is suggestive of rather divergent patterns of value addition within the fisheries sector for both regions: the Pacific region increased its share of foreign (imported) value-added within the fisheries sector between 2000 and 2012, which indicates deepening GVC integration; the converse is true for the Caribbean, where shares of foreign (imported) value-added declined substantially.

This shift in the Caribbean may have been driven by a commensurate increase in domestic value-added and deserves much further scrutiny within the context of the SDG 14 implementation agenda. This is because the ratio of (trade) in value-added exported compared with gross exports is slightly higher, on average, in the Pacific fisheries sector than it is in the Caribbean. Therefore, the results are suggestive of reduced engagement with the fisheries GVC, which may have implications for the achievement of SDG 14.7, as well as 14.7b, by 2030.

Notes

1 This chapter was drafted by Dr Jodie Keane, Economic Adviser, Commonwealth Secretariat, London. It is based on a number of existing as well as forthcoming Commonwealth Secretariat publications. The author is extremely grateful to the external peer reviewer (Dr Vinaye Ancharaz) in addition to Dr Liam Campling, Queen Mary University of London, and Jeff Ardronm, Economic Adviser, Oceans and Natural Resources, Commonwealth Secretariat.

2 Marine fish are extracted by capital-intensive foreign firms, employing mainly foreigners, and sometimes rarely even touch down terrestrially.

3 For example, whether or not structures are buyer- or producer-driven, with the ability to exert control over forward or backward linkages (Gereffi and Korzeniewicz, 1994). This concept was subsequently developed into a hierarchy of internal governance structures by Gereffi et al. (2005), with each structure distinguished by the degree of coordination between actors at stages of production, or value chain nodes, and a function of the complexity of a transaction, the ability to codify aspects of it and the capabilities of producers. The governance typology of Gereffi et al. (2005) was developed on the basis of a set of country case studies.

4 Bolwig et al. (2010) present a conceptual framework integrating poverty and environmental concerns into GVC analysis.

5 This sub-section is adapted from the Commonwealth Secretariat's contribution to the Trade and Environment Review (see Maharaj, 2016).

6 It is fair to say that UNCLOS is already, at least as regards fisheries, entering into the realm of customary international law. In comparison, while the fish stock agreement is not as universal, it has spawned an increase in Regional Fisheries Management Organisations.

7 Consideration of the services waiver and linkage development between the fisheries, transportation and tourism sector could be an interesting avenue of research.

8 They recognise how modern agri-food value chains are buyer-driven chains where large retailers or food manufacturers constitute the lead firms. Moreover, suppliers in agri-food value chains are required to comply with a myriad of public and private food standards that are particularly important in the case of upgrading into packaging and processing.

9 This analysis is based on ongoing analysis on GVCs in the Caribbean and the Pacific and background papers prepared by Mendez-Parra and data obtained from the Eora Multi-Regional Input-Output (MRIO) database. A forthcoming GVC Handbook for the Caribbean and Pacific will present more disaggregated trade in value-added data across sectors.

10 DVA means the proportion of exports that a given country physically produces. FVA refers to the share of exports that includes components sourced from other countries.

11 This is because the decline in FVA within the sector may be indicative of less GVC engagement (IMF, 2015).
12 For the Pacific region, anecdotal information suggests this question can be answered in terms of (i) 2000 being a low year for Solomon Islands; (ii) Papua New Guinea developing onshore investment; (iii) Fiji actually upgrading; and (iv) Vanuatu licensing more boats. However, more specific country case studies analysis is required to confirm this.
13 A GVC Handbook specific to the Caribbean is a forthcoming Commonwealth Secretariat Publication.
14 This section is adapted from Keane and Kennan (2016).
15 These markets include Australia, Canada, Chile, China, the EU, Japan, Republic of Korea, India, New Zealand, Russian Federation, Switzerland, Taiwan, Thailand, Turkey and the USA.
16 Many of the most-favoured nation (MFN) rates (which for some of these reporting countries are set at a more disaggregated level than that at which the trade statistics are available) include a range of rates, including a zero tariff for one or more sub-items. Any value in a trade code for which MFN is not unequivocally zero is included in the group 'MFN not zero' and, similarly, the value of imports for which the Generalised System of Preferences (GSP) (if available, MFN otherwise) rate is less favourable than that for the LDCs. In the case of Australia and New Zealand, these amounts take into consideration South Pacific Regional Trade and Economic Cooperation Agreement preferences, which are more favourable than GSP and are unaffected by LDC status. It appears that only Vanuatu is eligible for China's preferences for LDCs (being included in the beneficiary list for the 'preferential tariff for 24 African LDCs').
17 These key products have been identified if they fall within the Harmonised System chapter 03 and sub-heads 1604 and 1605.
18 Ecuador under the EU–Ecuador Free Trade Agreement.
19 Papua New Guinea under the interim Economic Partnership Agreement.
20 This analysis is based on Goel and Keane (2016).

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