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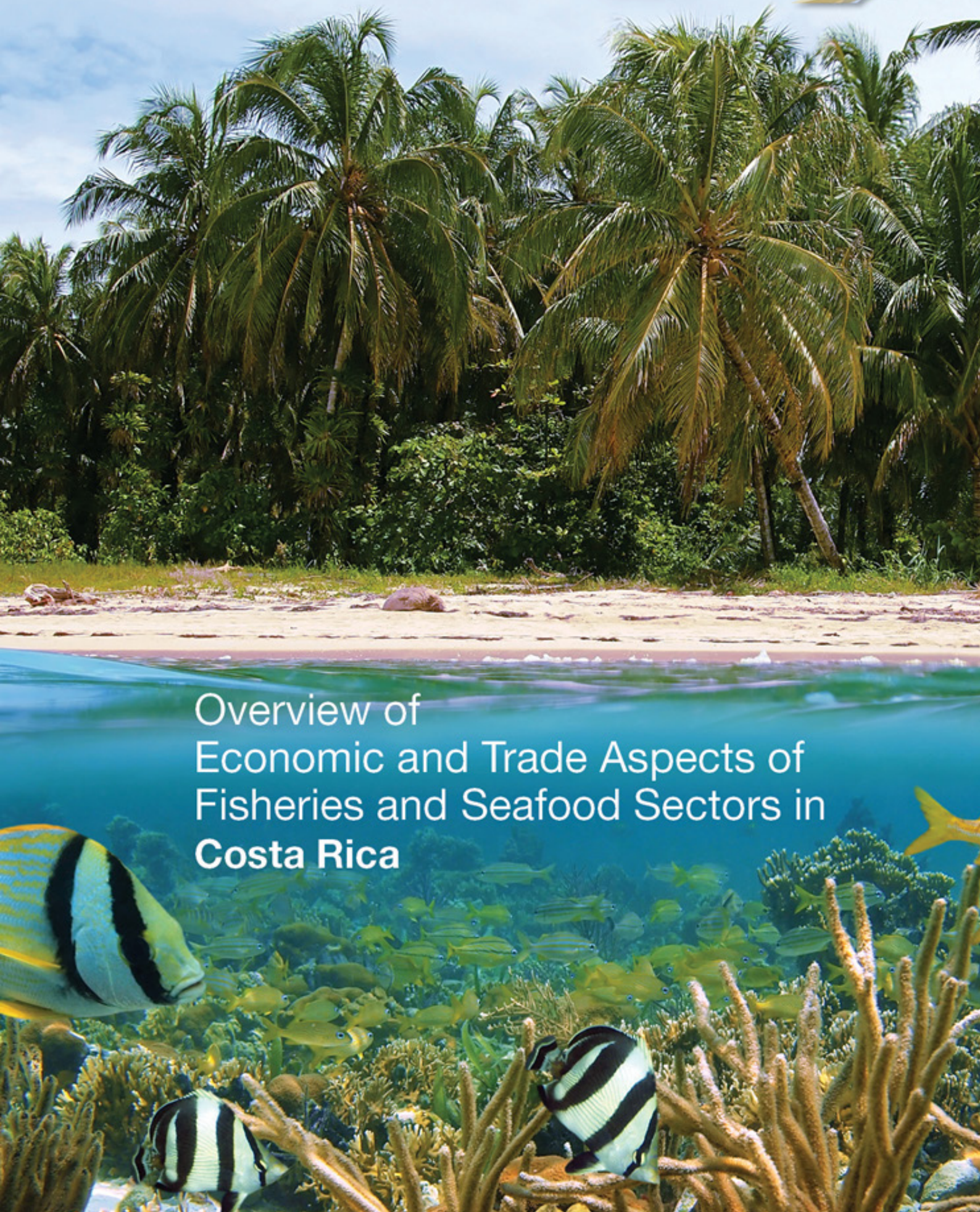

Overview of Economic and Trade Aspects of Fisheries and Seafood Sectors in **Costa Rica**

UNCTAD/DITC/TED/INF/2019/13

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Abbreviations

AIDCP	Agreement on the International Dolphin Conservation Program
CARICOM	Caribbean Community
CENADA	National Center for Food Supply and Distribution
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
COMEX	Ministry of Foreign Trade
EEZ	Exclusive economic zone
EFTA	European Free Trade Association
FAO	Food and Agricultural Organization of the United Nations
IACTT	Inter-American Tropical Tuna Commission
INCOPESCA	Fishing and Aquaculture Institute
IPP-MAN	Manufacture producer price index
LDCs	Least Developed Countries
MAG	Ministry of Agriculture and Livestock
MINAE	Ministry of Environment and Energy
MSC	Marine Stewardship Council
OECD	Organisation for Economic Co-operation and Development
OETS	Oceans Economy and Trade Strategies
PROCOMER	Export Promotion Agency of Costa Rica
PCI	Product Complexity Index
RSA	Tuna Tracking Record
SIDS	Small Island Developing States
SINAC	National System of Conservation Areas
UNCLOS	United Nations Convention on the Law of the Sea
UNCTAD	United Nations Conference on Trade and Development
UNDOALOS	United Nations Office of Legal Affairs Division for Ocean Affairs and the Law of the Sea
UNDP	United Nations Development Programme
UNFSA	United Nations Fish Stock Agreement
WTO	World Trade Organization

Note

Reference to "dollar" and "$" indicate United States dollars, unless otherwise stated. Reference to "tons" indicates metric tons, unless otherwise stated. Reference to product codes relate to the Harmonized System Nomenclature 2012 edition, unless otherwise stated. Reference to "fisheries" in this document only indicates the sum of all fishing activities whether annually or seasonally (on tuna, all marine fish [except tuna] and crustaceans) by industrial and/or commercial methods (FAO, 1999). Reference to "fishing" indicates capture of aquatic organisms in marine, coastal and inland areas (FAO, 1999).

Use of a dash (–) between dates representing years, e.g. 2015–2017, signifies the full period involved, including the initial and final years. Asterisks are placed after the elements to which they relate to provide additional information in the same way as endnote numbers. To reflect the closest estimate for data, decimals and percentages are rounded off. Number in money is rounded to the nearest dollar, unless otherwise stated. Decimals and percentages in this document do not necessarily add to totals, because of rounding.

Acknowledgements

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28 November 2019

A. INTRODUCTION

Nearly half of the world's population relies on marine and coastal biodiversity for livelihood and sustenance. The interconnected oceans, with their manifest capacity to provide free social and economic goods and services to mankind, also buffer the impacts of global warming by absorbing and storing 30 per cent of carbon dioxide that humans produce. The threat of overexploitation, habitat destruction, pollution and climate change are primary negative catalysts to changes in marine ecosystems – one of which is the reduction of fish stocks and other marine resources many developing countries, Small Island Developing States (SIDs) and coastal Least Developed Countries (LDCs) heavily depend on.

Costa Rica, a small Central American country that straddles both the Pacific Ocean and the Caribbean Sea benefits from high fishery productivity level particularly on its Pacific coast consisting of numerous bays, three large gulfs, a large continental shelf and an exclusive economic zone (EEZ) (FAO, 2004b) ten times the size of its land area (see 1.2). However, due to years of illegal, unreported and unregulated (IUU) fishing, lack of consistency in good fisheries management, governance and enforcement of regulations, Costa Rica is now facing an onerous task of balancing its sustainability and conservation needs against the crucial requirements of promoting the advancement of one of its key economic sectors.

To this end, the UNCTAD-DOALOS project "Evidence-based and policy coherent Oceans Economy and Trade Strategies" supports developing countries such as Costa Rica, in realizing trade and economic benefits from the sustainable use of marine resources within the framework of the 1982 United Nations Convention on the Law of the Sea (UNCLOS). It aims to improve and fortify Costa Rica's capacity to benefit economically from the sustainable use of the available marine resources in its vast EEZ. From this capacity, it is expected that Costa Rica is able to identify and harness trade opportunities arising from the selected ocean-based sector and minimize substantial reliance

Box 1. Official continental, insular and maritime map of Costa Rica

Land:
51,100 km²

Coastal length:
1,290 km²

Pacific maritime space:
538,273 km²

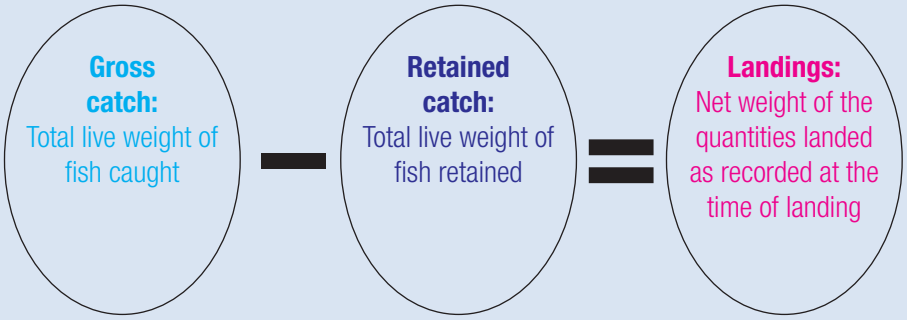
Caribbean maritime space:
26,000 km²

Main Pacific landing points:
Cuajiniquil
Playas del Coco
Puntarenas
Quepos
Golfito

Main Caribbean landing points:
Barra del Colorado
Puerto Limón

Source: National Geographic Institute - National Registry. Edition 1 IGNCR. 2018

Box 2. Quantifying national landings* in domestic ports (FAO, 2004a).



* There is still a considerable capture production that is not identified to the species level but is instead recorded as marine/freshwater fishes nei (nei = not elsewhere included), marine/freshwater molluscs nei and marine/freshwater (FAO, 2008).

on importation and vulnerability to significant trade barriers including high tariffs and tariff peaks, complex non-tariff measures, and private standards relevant to its export products.

This document presents detailed information on four ocean sectors identified as national priorities in Costa Rica i.e.: (1) Sustainable wild tuna harvesting/fishing, (2) Sustainable marine fisheries (3) Sustainable crustacean aquaculture and (4) Seafood manufacturing, with a view to facilitate the identification and informed selection of the key sectors to be considered for the next phase of the project.

1. Costa Rica fishery context: At a glance

1.1. Landings

Recorded total national landings (as calculated in Box 2) in Costa Rica have been slightly declining since 2011, from 16 thousand tons to 13 thousand tons in 2015 with a total value of $49 million in 2015 — $21 million less than in 2011. Tuna landings comprised 11 per cent (approximately 1.5 thousand tons) of the production in 2015 while 80 per cent of production (almost 11 thousand tons) included all fish species (except tuna) caught at the Pacific coast (see Figure 1).

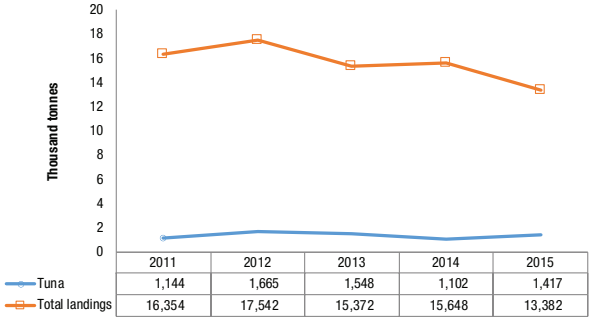
Tuna

In 2011, the recorded total national landings at domestic ports of tuna were 1,144 tons, which increased significantly in 2012 and 2013 (1,666 and 1,548 tons respectively). Though data relating to the recorded tons of tuna landings has been variable and at times intermittent, it is important to highlight that there has been no direct effect on the price of the product – in fact, tuna prices have trended downwards over the last five years in both the internal market and international markets (Audun Lem, FAO 2016).

Marine fisheries (all fish excluding tuna)

Due to their significant landing volumes, sharks, rays and skates (3,431 tons), and swordfish (1,366 tons) were some of the most important fish species landings in 2015 in the small-scale commercial sector. In 2015, around 77 per cent of the total value in dollars corresponded also to fish species such as sharks, rays, and skates among others ($15 million), swordfish ($5 million) and common Dolphinfish ($4.4 million). There appears to be a downward tendency in the aggregate information on the captured fish species in question (see Figure 2), which may potentially be

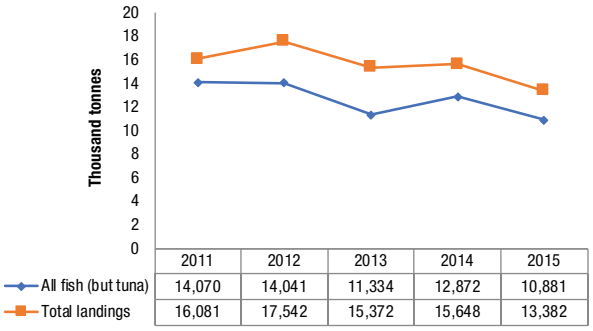
Figure 1. Overview of total national landings and tuna landings at domestic ports, 2011-2015



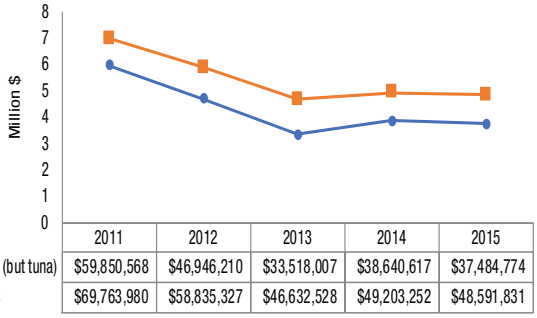
	2011	2012	2013	2014	2015
Tuna	1,144	1,665	1,548	1,102	1,417
Total landings	16,354	17,542	15,372	15,648	13,382

Source: INCOPESCA (Statistics and Research Departments), 2017.

Figure 2. Marine fisheries (all fish excluding tuna) national landings at domestic ports, 2011-2015 (in volume (tons) and value ($))



	2011	2012	2013	2014	2015
All fish (but tuna)	14,070	14,041	11,334	12,872	10,881
Total landings	16,081	17,542	15,372	15,648	13,382



	2011	2012	2013	2014	2015
All fish (but tuna)	$59,850,568	$46,946,210	$33,518,007	$38,640,617	$37,484,774
Total $	$69,763,980	$58,835,327	$46,632,528	$49,203,252	$48,591,831

Source: INCOPESCA (Statistics and Research Departments), 2017.

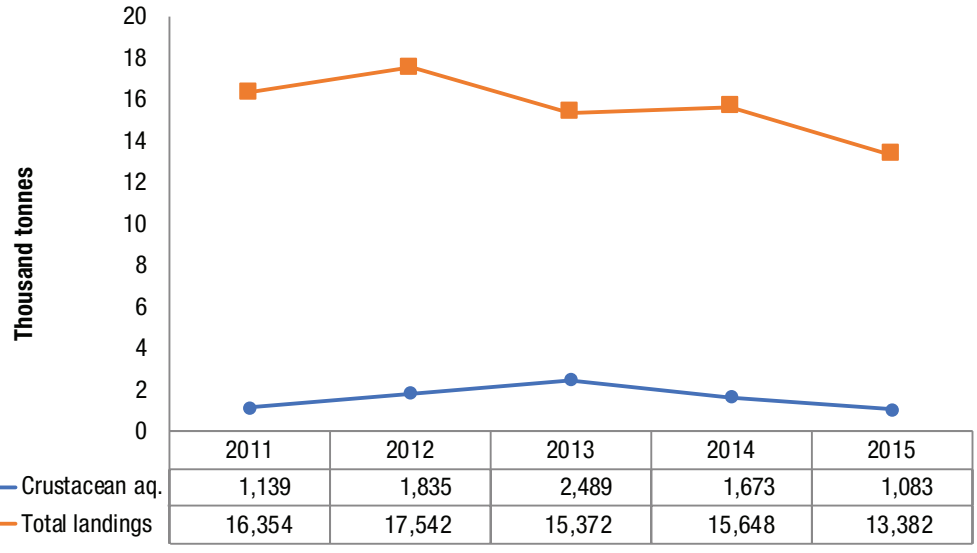
attributed to either underreporting and/or increasing species management, standardization and regulations on sharks, rays and other species capture.

Crustaceans

Around eight per cent of the disembarked tons in 2015 corresponds to crustaceans while sales values for the same year correspond to about eight per cent ($3.9 million). In recent years, there has been a downward trend in relation to the total weight of crustaceans caught i.e. from 1.14 thousand tons ($6.4 million in value) in 2011 to 1.08 thousand tons in 2015 ($4 million). Despite a short-term increase in 2012 to 2013, the considerable reduction of landings and prices through the years have had an effect on this product and the fishing industry in general (see Figure 3).

A similar downward trend can be observed with respect to income generated (in value) from this sector, dropping 40 per cent from $6.4 million in 2011 to $3.9 million in 2015. Comparing the relationship between volume harvested and total income produced (in dollars), the decrease in volume has been lower, compared to all the disembarked tons received in domestic ports.

Figure 3. Crustacean landings in domestic ports, 2011-2015

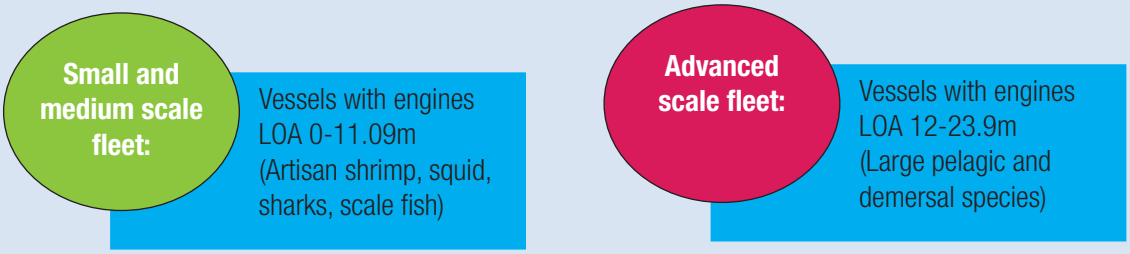


	2011	2012	2013	2014	2015
Crustacean aq.	1,139	1,835	2,489	1,673	1,083
Total landings	16,354	17,542	15,372	15,648	13,382

Source: INCOPESCA (Statistics and Research Departments), 2017.

Box 3. Costa Rica fleet classification

The Costa Rican fishing fleet is classified into:
(i) small and medium-scale fleet and
(ii) large-scale fleet. Most of the tuna captures are done by the large-scale fleet.



2. Official fees

For the 2016-2017 period, some of the fees set by INCOPESCA are shown in Table 1.

Table 1. Official fisheries fees* set by INCOPESCA (in Costa Rican colones and dollars), 2016-2017

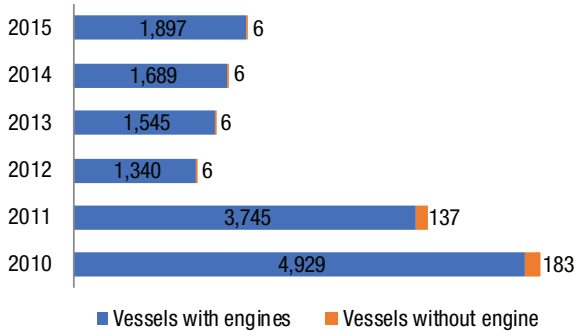
Fee type	Colones	$**
Small scale commercial fishing license	23,700	43
Medium scale commercial fishing license	71,000	129
Advanced scale commercial fishing license	260,800	475
Fishing inputs tax exemption authorization (per year)	3,400	6
Authorization to place fishery products in primary rural markets	23,600	43
Authorization to transport fishery products	40,600 –93,600	74 –170
Authorization to export fishery products	22,400	41
Authorization to import fishery products	28,400	52
Purchase order of fuel (individual or consolidated/per order)	2,600	5
Authorized fuel (per litre) ***	5	0.01
Captain and crew ID card (all types of vessels, national or resident/per year)	5,000	9
Issuance and extension, fishing license for tuna, foreign vessel (per year)	424,200	772

Source: Directive Council Agreement No. AJDIP/328-2016 (Session No. 034-2016, Sept. 08, 2016), INCOPESCA.
* Amount may be subject to changes annually.
** CRC/$: 0.00182/1 as at 8 September 2016 (https://www.xe.com).
*** 5 CRC must be paid per every authorized litre. Represents specific data.

3. Fishing fleet

Box 3 shows the Costa Rica fleet classification based on sizes. Figure 4 shows the evolution of the sizes of the Costa Rica Fleet during the period 2010-2015 showing a decreasing trend in numbers that could reflect harder competition in the sector and over utilisation of resources.

Figure 4. Comparison of Costa Rican fishing fleet*, 2010-2015



Source: INCOPESCA (Statistics and Research Departments), 2017
*Number of vessels.

4. Number of fishery products, destinations and companies

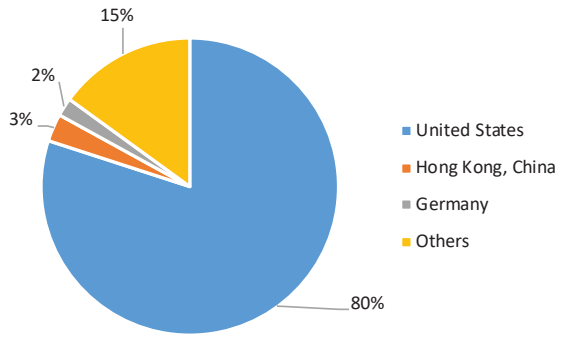
Table 2. Number of fishery products, destinations and companies, 2013-2017*

Year	Fishing products	Destination	Companies
2013	69	29	31
2014	63	38	34
2015	54	23	28
2016	45	18	22
2017	51	22	26

Source: PROCOMER Statistical Yearbook, 2017.
*Includes all fishery product exports

The number of fishery products, destinations and exporting companies has decreased during the last five years (see Table 2 and 5). As the number of exported fishery products decreased from 69 in 2013 to 51 in 2017, the number of destinations and companies simulated the drop in numbers, from 29 to 22, and from 31 to 26, respectively. This is not necessarily a negative indicator as it could mean changes in the export market or a consolidation of the sector in certain species, activities and markets. Whereas the decrease in the number of fishery products could be alarming, several factors may be considered for such decline e.g. the lack of demand and/or evolving challenges for exporting companies relating to costs, allocation of resources (e.g. marketing to new destination countries), potential barriers at export markets as well as financial risks associated with export markets (e.g. liquidity or currency risks) that are generally more complex than marketing the product domestically.

Figure 5. Fishery products' main destinations, 2017



Source: PROCOMER Statistical Yearbook, 2017

5. Exports and imports evolution by sector

Overall average share of fishing products in Costa Rica's total export market is around one per cent between 2013 and 2017 with the last couple of years registering the lowest at 0.8 per cent. The decrease in the share of fishing sector exports could be attributed to lower supply, downward trends in prices in some species such as tuna, and higher local demand due to tourism and changes in consumption patterns. On the contrary, imports of fish do not cease to grow. In 2017, fishing sector products represented 33 per cent ($90 million) of the total value of imported livestock and fishing sectors ($276 million). This growing trend could also be attributed to higher local demand due to tourism and changes in consumption patterns nationally (see Table 3).

Table 3. Livestock and fishing sector exports and imports, 2013-2017 (in million dollars)

	2013		2014		2015		2016		2017	
Sector	Export	Import	Export	Import	Export	Import	Export	Import	Export	Import
Dairy	116.1	35.3	144.9	40.8	119.1	43.5	134.9	47.1	135.6	50.5
Fishing	124.3	60.9	112.8	72.8	99.3	76.6	83.2	81.1	89.1	90
Meats	61.8	55.2	85.6	56.1	89.2	78.6	72.1	104.1	73.8	113.1
Other	21.6	22.4	22.1	26	26.6	24.8	27.8	31.9	27.7	22.4
TOTAL	323.8	173.8	365.3	195.8	334.2	223.5	318.1	264.2	326.4	276

Source: PROCOMER Statistical Yearbook, 2017.
* The data corresponds to the fishing sector, in relation to other Costa Rican exporting sectors.

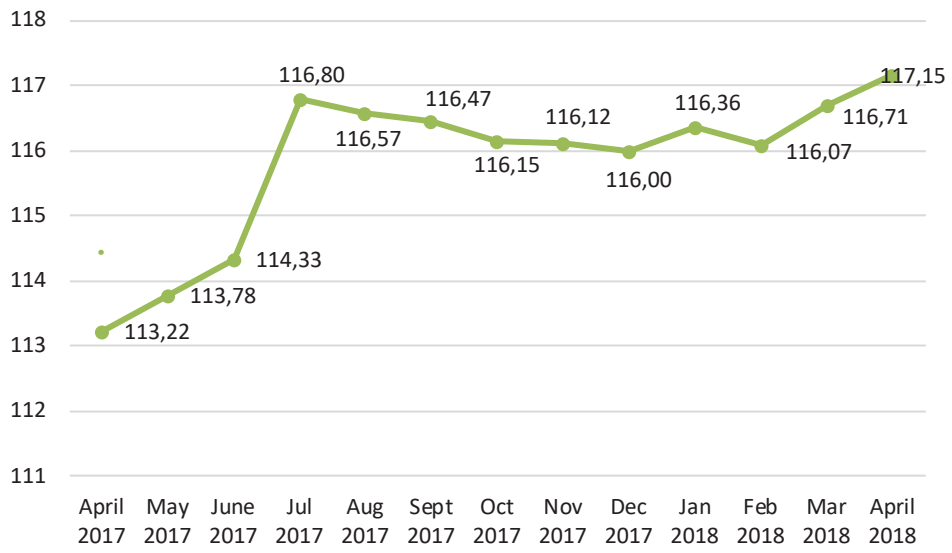
Table 4. Export metrics of sectors in 2016, weighted by HS6 export value

Dimension		HS6 products	Exports Million $/ Million tons	Diversification Number of distinct export destinations/ Number of distinct HS6 exports	Demand in global market Annualized average growth rate in import values	Employment Men/ women	Perception of competitiveness (by COMEX*) Survey-based evaluation [0-1]
Sector	**Tuna** 0.08% of total exports	Yellowfin tuna Bigeye tuna Tunas, skipjack or stripe-bellied bonito	8 1	2 3	1		0.5
	All fish (except tuna) 0.65% of total exports	Tilapia Hake Swordfish Salmon Trout Other	64 9	16 31	5	3,695 men 191 women	0.5
	Crustaceans 0.12% of total exports	Shrimps and prawns Cold-water shrimps and prawns Other shrimps and prawns	12 1	5 3	8	1,085 men 213 women	0.2
	Seafood manufacturing 0.33% of total exports	Tunas, skipjack and bonito Sardines, sardinella and brisling or sprats Other prepared or preserved fish Salmon	32 9	27 6	-3	688 men 417 women	0.5

Source: UNCTAD based on UN-COMTRADE(plus survey-based evaluation), 2018.

* Based on the data collected by COMEX at the 1st National Stakeholder Workshop in Costa Rica on 6-7 November 2018 (see: https://unctad.org/en/pages/MeetingDetails.aspx?meetingid=1930. Participants were invited to respond to questions relating to their perception of each sector's competitiveness from 0 ("least competitive") to 1 ("most competitive"). Information obtained from stakeholders may be subjective.

Figure 6. Evolution of Costa Rica's manufacture producer price index, April 2017 – April 2018



Source: Compiled by the author with data from Banco Central Costa Rica (2017).

6. Trade metrics

6.1. Sector overview

Table 4 shows that 'all fish (except tuna)' and 'seafood' are key products for the economic activity of the country, particularly as they promote the opening up of a great number of destinations for Costa Rican fisheries exports. The 'seafood manufacturing' sector has also fared well in 2016 by producing more competitive export products than the other sectors in the market – though all fish and tuna sectors are bigger and more important employers than the former. The growing demand for crustaceans could be a trigger for further development of the country's aquaculture sector. This observation is reflected on the information gathered from the survey-based evaluation on perception of competitiveness of each sector (see column 7, Table 4). Whilst tuna, all fish and seafood manufacturing sectors attained moderate (0.5) assessment from the stakeholders at the workshop, crustaceans sector was rated the least competitive among the sectors (0.2). This may be due to the perceived constricting factors for its growth which could be attributable to Costa Rica's experience with species diseases and a notably tougher competition and more stringent requirements in international markets

7. Manufacture producer price index[1]

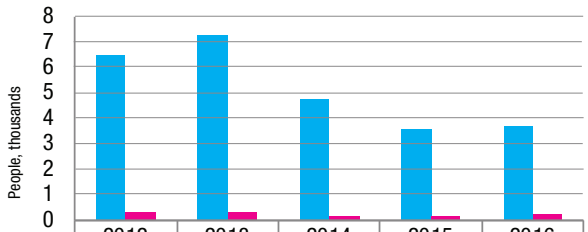
This section describes the evolution of Costa Rica's manufacture producer price index (IPP-MAN 2012), with a view to gauge the price competitiveness through percentages that respond to the monthly increase or decrease in prices of goods in a particular sector. To that end, both level and percentage variations are considered.

Figure 6 shows monthly price change data from April 2017 to April 2018. The variation in the IPP-MAN was drastic for the month of July 2017, at 3.30 per cent. In the following months, the variations ranged between the levels of 116 and 117. In the case of the percentage changes of the IPP-MAN, the greatest change occurred during the month of April in 2018 – reaching a change of 3.4 per cent.

8. Employment

Demographic statistics on the population employed in fisheries, aquaculture and seafood manufacturing sectors is limited due to the complexity of the inter-related activities and the level of operations (e.g. industrial or informal) in both sectors. Despite the lack of robust data that points to the substantial economic significance of the fisheries sector in Costa Rica– its strategic importance, social value and the role it plays in the livelihood of the rural and more often isolated population in both the Pacific and the Caribbean coastal areas are clear-cut. These sectors have generated both primary and alternative employment opportunities for both men and women for generations

Figure 7. Fisheries sector employment (number of persons), 2012-2016*



	2012	2013	2014	2015	2016
Male	6,457	7,283	4,713	3,541	3,695
Female	283	281	133	154	191

Source: Costa Rica Ministry of Labour and Social Security (MTSS), 2018.

* This graph is an overview of all fish (except tuna, crustaceans and seafood manufacturing) employment data between 2012 and 2016.

and will continue to do so for years to come.

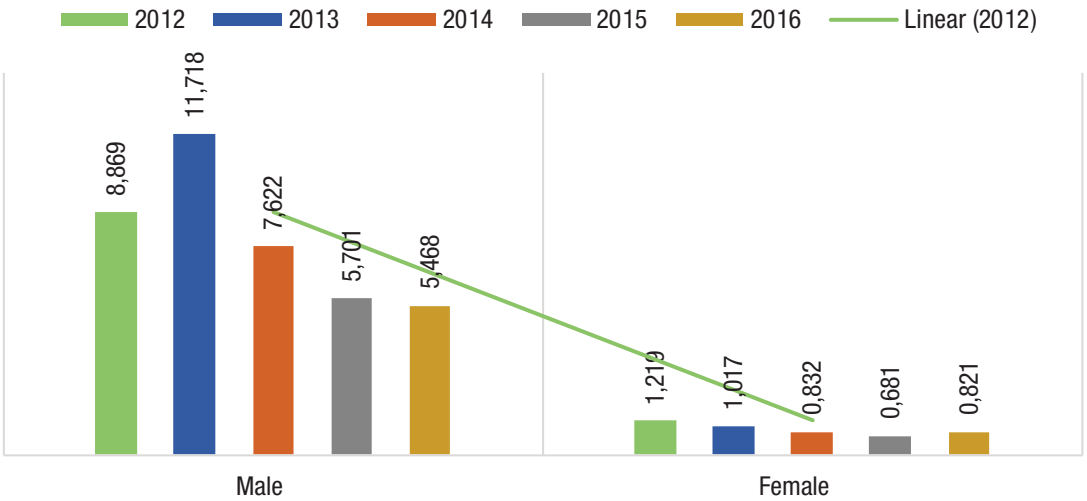
In 2012 and 2013, the fisheries sector (see Figure 7) employed a total of 6,740 and 7,564 individuals respectively, trending downwards during the following years, reaching a low of 3,886 workers in 2016. The fisheries sector in Costa Rica employs more men than women. The average daily wage[2] for the workers, classified as "non-qualified workers" ("TNC" by its Spanish language acronym), is ₡10,060,[3] which can be considered as the national minimum wage in the agricultural, livestock, wildlife and fisheries sector.

Figure 8 shows the total employment rates that include fishing in general, aquaculture and manufacturing. Historically, these sectors offer greater employability prospects for men due to perceived relative health, safety and occupational risks (especially in fishing) and their inherent gender connotations. At times, available data may not reflect women participation as they may not have been properly accounted for due to informal and/or unpaid work undertaken by them. More often, socio-cultural restraints (e.g. women preferring to stay at home to manage domestic affairs) also limit and/or inhibit female participation in these sectors' workforce. This is clearly demonstrated in the substantial difference between the total male and female numbers of labour force in Costa Rica's fisheries sector between 2012 and 2016. The highest number of male workers, recorded at 11,718 in 2013, is almost ten times more than the recorded largest number of women employed in 2012 at 1,219.

For employment in the manufacturing activity specifically (Figure 9), the employment rate reached the highest values in 2013, where it was 3,188 for men and 512 for women. The general average of employment, during the last 5 years, reached 1,383 for men and 387 for women. It is important to note that there is slight yet significant participation of more women in this sector as women tend to undertake shore-side unskilled processing functions rather than fish actively at sea. Exceptionally in 2016, female employees make up nearly 40 per cent of the total workforce –the biggest share recorded in all four sectors during the period between 2012 and 2016.

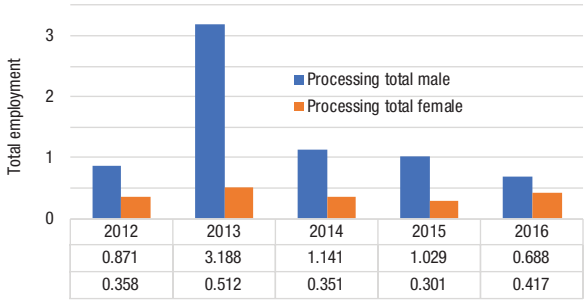
In the specific case of the crustacean and aquaculture activities (Figure 10), the workforce is also mostly

Figure 8. Total employment rates for fishing (general), aquaculture and manufacturing, 2012-2017



Source: Adapted by the author from data provided by INEC, 2017.

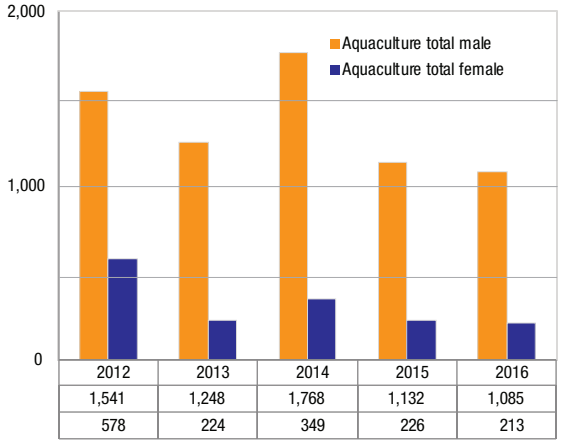
Figure 9. Manufacturing activity employment (number of persons), 2012-2016



2012	2013	2014	2015	2016
0.871	3.188	1.141	1.029	0.688
0.358	0.512	0.351	0.301	0.417

Source: Adapted by the author from data provided by INEC, 2017.

Figure 10. Crustacean and aquaculture activities employment (number of persons), 2012-2016



2012	2013	2014	2015	2016
1,541	1,248	1,768	1,132	1,085
578	224	349	226	213

Source: Adapted by the author from data provided by INEC, 2017.

male, though their number has been steadily declining despite a one-year peak in 2014. Significantly, the female workforce in these activities follows the downward trend exhibited in the male employment data. Again, this may only be a cursory glance at the female employment in general as women would have been directly or indirectly involved in activities related to the sector such as feeding, grading, harvesting, processing of cultured organisms and pond water level control among others (FAO, n.d.)

9. Environment

In order to obtain the Marine Stewardship Council (MSC) certification for local fishing companies and in relation to other ongoing projects to improve the domestic fishing industry led by the National Platform of Large Pelagic (MAG, MINAE, INCOPESCA and UNDP), the country is undergoing a pre-evaluation process for golden tuna, dolphinfish and swordfish exports.

With regard to the exports of specific species of shark, within the framework of CITES, the relevant policies are the Wildlife Law No. 7317 and its specific bylaw, as well as the Executive Order No. 40379-MINAE-MAG. Currently, INCOPESCA has been designated as the CITES administrative authority, which was previously administered by the National System of Conservation Areas (SINAC by its Spanish acronym). INCOPESCA has also worked with the academic sector in 2015 to elaborate a management model for a certification of origin and environmentally friendly fishing practices.

In the specific case of tuna sector, the following regulations have been established and are considered of high importance:

System for monitoring and verifying the tuna captured with and without mortality of dolphins

1. For the purposes of applying this regulation, the following definitions shall apply:
   - » Tuna: the species of the suborder Scombroidei (Klawe, 1980), except for the genus Scomber
   - » Dolphin safe tuna: tuna caught without apparent damage or mortality on dolphins
   - » Non-dolphin safe tuna: tuna caught with apparent damage or mortality on dolphins
   - » AIDCP: Agreement on the International Dolphin Conservation Program between the Republic of Costa Rica and the United States, approved by Law No 7938, of 4 November 1999
   - » Container: Container used to transport or store the tuna unloaded from the ship
   - » Dolphin: the species of the family Delphinidae associated with the fishery for yellowfin tuna in the Area of Agreement
   - » INCOPESCA: Institute of Fisheries and Aquaculture, Costa Rica
   - » RSA: Tuna Tracking Record
2. The “dolphin safe tuna” and the “non-dolphin safe tuna” shall be unloaded from the ship in different containers. The transport guide of each container shall clearly indicate the ship’s origin and the corresponding RSA number, either if it is “tuna dolphin safe” or “non-dolphin safe”.
3. The “dolphin safe tuna” shall be classified, weighed and stored separately from the “not dolphin safe tuna” in the company’s refrigerator, in duly identified hoppers and whose weights and codes shall be

recorded in the control system of inventories such as “dolphin safe tuna” or “non-dolphin safe” with the corresponding RSA.

4. If the processing plant requires to sell or transfer untreated whole tuna, it must notify in writing the change in ownership to the official designated by INCOPESCA, and will also follow-up with AIDCP, indicating the corresponding RSA number, the weight transferred and the species, so that the authority continues with the monitoring and control of that tuna.
5. The requirements for processing “dolphin safe tuna” and “non-dolphin safe tuna” shall be made separately in terms of inventory. It shall be recorded on the inventory exit guide if it is “dolphin safe tuna” or “non-dolphin safe”, as well as the numbers of the storage chutes that are sent to production and the RSA number to which they correspond.
6. “Dolphin safe tuna” and “non-dolphin safe tuna” will not be processed on the same production line at the same time.
7. Each production lot will be identified in the processing records as “dolphin safe” or “non-dolphin safe” indicating the date of production, manufacturing codes, volume, finished product and corresponding RSA.
8. Tuna processed from a purse-seine vessel, operating within the Area of Agreement and not covered by the AIDCP, will oblige the National Authority to consign it in a document; a copy of the same shall be delivered to the consignee of the tuna, who shall record in his system of refrigerated inventory records, processing records and export records, the notation that the specific tuna is not covered by the AIDCP.
9. Any export of tuna produced with “dolphin-safe tuna” classification must be accompanied by an official certification issued by INCOPESCA, in which the “dolphin-safe” origin of the processed tuna and the corresponding RSA numbers shall be recorded so that an audit can easily follow the tradability of the tuna in its different management stages.
10. These systems apply as of its publication.

B. TUNA SECTOR

1. Introduction

Tuna *(Thunnus and Katsuwonus species)* is a migratory, saltwater meaty fish belonging to the subgroup of mackerel family that has around forty species varying in color and size. As they migrate, these impressive warm-blooded wild ocean creatures swim incredible distances with some species travelling at a speed of around 43 miles per hour across the earth's oceans. For many years, tuna has been an integral part of millions of people's diets making it one of the most commercially valuable fish and an important global commodity. Despite its high productivity, most tuna stocks have now been fully or overexploited, threatening economic and food security of many SIDS and LDCs that highly depend on it. Recognizing the importance of tuna in improving economies, global food security, nutrition, and sustainable development, the United Nations General Assembly voted to officially observe World Tuna Day every 2 May from 2017.

Tuna is one of the key exports of Costa Rica. Particularly, the yellowfins figure most prominently in its EEZ (FAO, 2004b). However, the inadequacy of policies on extractive and sustainable fishing of tuna in addition to the prevalence of illegal tuna fishing (including modern-day pirate fishing and illicit licenses for tuna fishing) has affected the national fish sector, particularly small-scale artisanal coastal fisheries and low-income families along the coastal areas that are losing out on access and economic opportunities from this valuable resource. While there has been some trade, regulatory and policy improvements to facilitate management of tuna fishing so that it generates the greatest possible benefit for the highest possible number of Costa Ricans, there is a crucial gap to fill in terms of ensuring proper and full contribution to the sustainable development of the country's ocean-based economy.

2. Tuna fishing and harvesting

Tuna fishing in Costa Rica goes back over 500 years BC, when the indigenous pre-Columbian inhabitants would catch black skipjack tuna (*Euthynnus lineatus*), in several settlements such as El Conchal, Manzanillo, Nacascolo and Vividor. In the Concheros at Nacascolo, the black skipjack tuna represented 32 per cent of the identified population, being one of the main fisheries resources in Bahia Culebra. The indigenous populations of Costa Rica continued to harvest this fish until the seventeenth century, when the depopulating of the indigenous populations along the coastal area ended the practice (Sol, 2013; Vargas 2014).

Tuna fishing in Costa Rica

In Costa Rica, tuna fishing is rather significant, particularly the variety I and II of the yellow fin tuna. Exports of this species has been vital for the country in the last four years, however, in the last two years, imports have been higher due to certain competitive issues.

It was not until the beginning of the twenty-first century that the commercialization of tuna restarted. Canning technology, introduced in 1903 in the United States propelled the development of the tuna industry in California, which was looking to supply the demand of the United States East coast market, including from Costa Rica. Tuna is a key export of Costa Rica, especially to the United States. (Jiménez, J.A. and E. Ross Salazar. Editors 2017).

Between 2006-2015, the catches included five species of tuna. Among these species, the four most exploited species were yellowfin tuna (192,605 tons), which represented around 75 per cent of the total catches, skipjack tuna which accounted for 24 per cent of the catch, and the remaining one per cent was divided between bigeye and black skipjack tuna. The catch of yellowfin tuna consisted mainly of medium age groups (from 3.8 to five years old), followed by tuna over five years of age (Jiménez, JA and E. Ross Salazar. Editors 2017).

3. Tuna trade metrics, 2012-2016

Table 5 shows the export metrics of tuna sector between 2012 and 2016. As the table suggests, tuna exports have decreased in value and consequently, in proportion of Costa Rica's total exports from 2012 to 2016, the latest year of available data. On a positive note, volume decrease within this period was less exacerbated. Export diversification remained small, both in terms of distinct destinations and exported HS6 product lines.

Table 5. Export metrics of tuna sector, 2012-2016

	2012	2013	2014	2015	2016
Export value (in million $)	13.6	11.9	6.8	7.2	7.8
Exports quantity (in million tons)	1.3	1.3	0.8	0.9	1.0
Number of export destinations	11	7	2	3	2
Number of HS6 exports*	4	5	4	4	3
Total exports (in million $)	11,251	11,472	11,243	9,578	9,908
Sector share (in %)	0.12	0.10	0.06	0.08	0.08

Source: UNCTAD based on UN-COMTRADE, 2018.

* Relevant HS codes for tuna products are found in Appendix 1.

4. Tuna domestic product prices

While most tuna landings are intended for export to cater to substantial international demand, domestic sales are gaining momentum. Factors such as lower supply, changes in Costa Rica's domestic consumption patterns, and changes in national dietary trends generate significant variations in value (from fisherman to retailer) in its domestic markets. Table 6 shows that the price of higher quality tuna (Yellowfin I) is several times higher at the end of the supply chain (at retailer level - closer to the consumers). This substantial increase in prices reflects the fact that along a multi-level marketing channel system, a retailer may procure its tuna products from a wholesaler and may have incurred costs from dealing with intermediaries along the supply chain to improve its efficiency, as well as related operational costs to bring the tuna product to the consumers. Nevertheless, it is important to highlight that lower tuna prices at the extreme end of

Table 6. Average prices paid, 2013-2017 (per kilogram, in Costa Rican colones[9])

		Paid to the	Fisherman*	Wholesaler**	Retailer***
Yellowfin Tuna I	2013		n/d	4,047****	n/a
	2014		2,050	3,686****	10,335
	2015		1,300	3,307****	14,730
	2016		1,500	2,955****	11,465
	2017		n/d	3,720****	n/a
Yellowfin Tuna II	2013		1,183	1,450	n/d
	2014		1,093	1,400	5,000
	2015		1,002	1,750	n/d
	2016		1,015	2,500	n/d
	2017		876	n/d	n/d
Blackfin Tuna	2013		200	259	n/d
	2014		n/d	223	n/d
	2015		200	212	n/d
	2016		n/d	361	n/a
	2017		n/d	220	n/a

Source: INCOPESCA Marketing Department, 2018.

Note: n/a (not available)

* Average prices paid in stalls 1, 2, 3, 4

** Average price between minimum and maximum prices of the product placed at the National Supply Central (CENADA)

*** Average price between two sample market/retailer prices

**** Tuna I and II: Market Quality Classification (a process of the supermarkets to classify the quality of the product)

the supply chain (e.g. fisherman) does not automatically affect the price (to go down) at the retailer level. In fact, in 2015, when yellowfin tuna prices dropped to their lowest, retailer price was over ten times the price at the fisherman level and close to five times higher than the wholesaler price.

5. Exports of tuna products, value and weight by national tariff line

Table 7. Value and weight of exports of tuna products*, 2013-2017 (in thousand dollars and tons)

	2013		2014		2015		2016		2017		2013-2017 Total	
Tariff item	$	Tons	$	Tons	$	Tons	$	Tons	$	Tons	$	Tons
030231000000									1	0	**1**	**0**
0302320000	9,878	1,060	5,917	676	6,952	867	6,988	1,362			**29,735**	**3,966**
030232000000									6,864	873	**6,864**	**873**
0302330000	11	5									**11**	**5**
0302340000	257	25	84	8	164	18	84	9			**589**	**60**
030234000000									65	9	**65**	**9**
0303410000	208	62									**208**	**62**
0303420000	137	15	36	8	5	1					**178**	**23**
030342000000									3	1	**3**	**1**
0303430000					1	4					**1**	**4**
030343000000									190	98	**190**	**98**
0304870000	754	77	564	66	60	12	541	80			**1,919**	**236**
030487000000									228	24	**228**	**24**
0305590010	184	2									**184**	**2**
Total	**11,429**	**1,247**	**6,600**	**759**	**7,183**	**900**	**7,613**	**1,452**	**7,352**	**1,005**	**40,177**	**5,363**

Source: PROCOMER Export Statistics (based on Central Bank statistics), 2018.

* The tariff items presented in the table correspond to fresh, chilled or frozen fish. Tariff line 0305590010 corresponds to dried or salted fish. All tariff items include tuna.

** Tariff codes presented in this table are based on the 6-digit HS Code 2012 (international level) with the additional digits per Costa Rica's national tariff and statistical requirements. See: https://www.hacienda.go.cr/tica/web/hdbaranc.aspx for details.

C. MARINE FISHERIES (ALL FISH EXCLUDING TUNA) SECTOR

1. Introduction

The fisheries sector (along with its ancillary industries) plays a significant role in the livelihoods of Costa Ricans, particularly the rural and more often isolated coastal populations in the Pacific and Caribbean coasts who have limited possibilities for economic diversification. However, its susceptibility to environmental damage and pressure as well as the scarcity of reliable data threatens sustainable* and effective management and preservation of marine resources in the country, with knock-on effects on its economic development, food security and employment opportunities. Costa Rica has jurisdiction to fully exploit, develop, manage and conserve the resources within its EEZ, under UNCLOS.

This sector (together with tuna sector) is currently worth around $52 million in exports to Costa Rica each year and the global demand is growing at an annual three per cent rate. This represents significant prospects for medium and small-scale fishers involved in harvesting these target species. Further to this, value addition and diversification in the fisheries sector can expand livelihood opportunities, create jobs and expand internal downward and upward economic linkages in goods and services provision.

2. Marine fisheries

Marine fisheries are usually defined as the industry or occupation devoted to the catching, processing, or selling of fish, shellfish, and other aquatic species except tuna. Trade in marine fisheries is an important contributor to economic development, exports, hard currency, income, employment, and food security, especially of SIDS and LDCs.

*** There is no internationally agreed definition of "sustainable fisheries"**

One common understanding of this term refers to fishing activities that can be continued on a sustained or indefinite basis due the renewable nature of the resource. A more methodological approach refers to the application of the maximum sustainable yield (MSY) as reflected in the UNCLOS and the UNFSA, in some cases updated by economic and social considerations. On an institutional basis, 'sustainable fisheries' can be perceived to be fishing practices and actions that follow, and effectively apply, relevant international agreements, guidelines and best practices agreed. (UNCTAD, 2016).

Benefitting from two coastlines in the Pacific and the Caribbean, Costa Ricans have historically and traditionally depended on marine resources for subsistence. Previously dominated by small-scale artisanal, Costa Rica's marine fisheries sector has started to maximize modern processes in catching fish by establishing a national fishing fleet and opening up to more modern and bigger foreign vessels. This expansion vis-à-vis competing fishing activities on a relatively small coastline (mostly on the Pacific Ocean) has put pressure on coastal resources, affecting the artisanal fishermen who rely on subsistence fishing as well as overall coastal landings.

3. All fish trade metrics, 2012-2016

As seen in Table 8, exports have decreased in value and proportion of Costa Rica's total exports from 2012 to 2016, the latest year of available data. Volume decreases were less exacerbated than value exported. Despite this, export diversification remained considerable, both in terms of distinct destinations and exported HS6 product lines.

Table 8. Export metrics of fish sector, 2012-2016

	2012	2013	2014	2015	2016
Export value (in million $)	125.1	97.7	91.4	77.3	64.4
Export quantity (in million tons)	15.7	15.4	14.5	11.1	9.4
Number of export destinations	30	29	26	22	16
Number of HS6 exports	48	46	40	34	31
Total exports (in million $)	11,250.8	11,472.1	11,242.5	9,578.2	9,907.8
Sector share (in %)	1.11	0.85	0.81	0.81	0.5

Source: UNCTAD based on UN-COMTRADE, 2018.

Table 9. Average prices paid, 2013-2017 (per kilogram, in Costa Rican colones)[10]

	Paid to the:	Fisherman*	Wholesaler**	Retailer***
Bigeye thresher (Tiburón tresher)	2013	475	675	n/a
	2014	468	875	2,333
	2015	461	1,050	2,600
	2016	359	750	2,400
	2017	287	600	n/a
Croaker (small) (Corvina pequeña)	2013	1 695	1,900	7,406
	2014	1 834	2,350	3,701
	2015	1 883	3,250	3,931
	2016	2 089	2,850	4,056
	2017	1 766	2,750	3,800
Dolphinfish II (Dorado II)	2013	1 022	1,150	5,558
	2014	1 344	1,800	6,405
	2015	1 663	2,000	7,158
	2016	2 540	2,450	n/a
	2017	2 407	2,550	n/a

Source: INCOPESCA Marketing Department, 2018.

Note: n/a (not available).

Table 10. Value and weight of exports 2013-2017 (in thousand dollars and tons)

	2013	2014	2015	2016	2017	2013-2017
Eels						
$	-	1.9	-	-	-	**1.9**
T	-	1.1	-	-	-	**1.1**
Fish fillets and other fish meat (whether or not minced), fresh, chilled or frozen						
$	71,775.9	59,305.5	49,415.4	40,774.4	42,528.4	**263,799.6**
T	9,332.5	8,113.9	6,586.8	7,137.1	6,109.1	**37,279.4**
Cuttlefish						
$	5.6	88.2	62.5	12.7	75.9	**244.9**
T	5.8	51.2	38	11.4	32	**138.4**
All other tropical ornamental fish						
$	78.7	31.7	44.9	37.4	21.8	**214.5**
T	12.0	4.5	5.9	5.7	3.3	**31.5**
Live fish						
$	-	0.8	1.6	-	-	**2.4**
T	-	-	0.1	-	-	**0.1**
Other live fish						
$	32.4	21.2	31.4	25.8	8.9	**119.7**
T	0.8	0.6	0.6	0.7	0.1	**2.8**
Molluscs						
$	0.1	0.4	1.5	-	-	**2.0**
T	0.2	0.4	0.3	-	-	**0.9**
Fish: fresh, chilled or frozen						
$	25,306	27,160.1	21,899	19,986.4	22,150.3	**116,501.8**
T	6,344.3	6,179.1	4,370.1	4,871.5	3,871.1	**25,636.1**
Fish: dried, smoked, salted or in brine						
$	3,333.7	4,303.5	5,389.8	3,723.4	3,191.1	**19,941.5**
T	50.7	60.9	68.9	720.7	51.6	**952.8**
Octopus						
$	7.6	2.6	-	-	-	**10.2**
T	10.9	2.7	-	-	-	**13.6**

Source: PROCOMER Export Statistics (based on Central Bank statistics), 2018.

4. Sea-products domestic prices: some fish species

Table 4 shows average prices (in Costa Rica colones) of certain valuable species (excluding tuna) in the period 2013-2017. Price variations can be 2 to 5 times between the price at fisherman level and the price al retailer, always favouring the retailer.

5. Exports of fishery products: value and weight

There were two major exports that registered the highest numbers between 2013 and 2017: HS tariff lines 03.04 and 03.02. Between the two exports, the fish products of greater volume and amount of exports are those in the HS tariff line 03.04 (fish fillets and other fish meat) with a value of $263.8 million in the five-year period. In 2017 alone, exported products in this tariff line accounted for 6,109 tons (with a value of $42.6 million). On the other hand, HS tariff line 03.02 was exported for a value of $116.5 million within the period in question. In 2017, Costa Rica exported 3,871 tons of this fish product for a value of $22.2 million – about half the value of HS tariff line 03.04 (see Table 10).

6. Imports of fishery products: value and weight

Between 2013 and 2017, Costa Rica's total import value for HS tariff line 03.04 (fish fillets and other fish meat) was $159.7 million and $60.1 million for tariff line 03.02 (see Table 11). At face value, there is considerably lower value of import against the export of the same tariff lines denoting a positive trade balance of such goods for Costa Rica in the last five years.

Table 11. Value and weight of imports 2013-2017 (in thousand dollars and tons)

	2013	2014	2015	2016	2017	2013-2017
Clams						
$	112.38	134.73	77.48	90.80	110.99	**526.38**
T	36.23	54.07	29.81	42.54	50.93	**213.58**
White squid and torpedo fish						
$	-	-	-	-	41.62	**41.62**
T	-	-	-	-	25.20	**25.20**
Fish fillets and other fish meat (whether or not minced), fresh, chilled or frozen						
$	26,267.46	29,178.08	30,660.23	36,026.33	37,529.03	**159,661.13**
T	8,046.97	9,439.82	9,958.69	12,122.63	12,784.90	**52,353.01**
Cuttlefish						
$	1,776.32	2,264.74	2,060.50	2,008.79	2,929.62	**11,039.97**
T	1,092.30	1,486.28	1,497.17	1,039.44	1,435.62	**6,550.81**
All other ornamental fish						
$	244.59	279	705.08	303.16	275.59	**1,807.42**
T	34.43	39.24	234.55	47.55	40.07	**395.84**
Mussel						
$	563.26	455.15	365.82	415.33	285.01	**2,084.57**
T	121.78	72.32	66.93	77.24	54.68	**392.95**
Molluscs						
$	422.63	410.37	283.28	414.62	467.57	**1,998.47**
T	189.44	169.12	83.22	134.99	181.94	**758.71**
Oyster						
$	9.2	7.44	2.79	4.27	3.57	**27.27**
T	2.21	1.29	0.45	0.9	0.7	**5.55**
Fish: fresh, chilled or frozen						
$	14,640.08	13,775.40	15,406.44	8,526.09	8,398.07	**60,746.08**
T	18,042.35	8,766.03	8,523.43	5,443.19	5,711.36	**46,486.36**
Fish: dried, smoked, salted or in brine						
$	839.36	745.63	888.93	757.83	682.82	**3,914.57**
T	92.97	96.43	147.56	119.68	74.49	**531.13**
Octopus						
$	143.88	196.61	363.87	990.12	627.47	**2,321.95**
T	25.02	45.14	83.6	242.23	124.17	**520.16**
Scallops						
$	218.41	171.27	265.56	385.46	159.38	**1,200.08**
T	38.18	22.04	31.85	36.39	13.13	**141.59**

Source: PROCOMER Export Statistics (based on Central Bank statistics), 2018

D. CRUSTACEANS FISHING AND AQUACULTURE SECTOR

1. Introduction

Crustaceans (particularly decapod crustaceans: e.g. prawns, shrimps, lobsters and crabs, among others), just like all the other fish products, are important aquatic sources of protein caught or produced for consumption worldwide. As such, crustacean fishing contributes to global food security for both importing and exporting countries. Despite this sector being only marginal within national economies in Latin America and its exports being more affected by fluctuations in major international fish markets due to their close links with the United States market, the trade and production in this sector are very important economic activities for those who are directly and indirectly engaged in its value chain in many coastal developing countries such as Costa Rica. In recent years, there has been a continuous decline of wild crustaceans' landings at domestic ports in Costa Rica as a consequence of the bottom trawling ban imposed by Costa Rica's Constitutional Court in 2013[4] and the consequent termination of fishing license renewals. Currently, there are discussions in Costa Rica on how shrimp fishing could be allowed under sustainable fishing methods that protect marine habitats on the seafloor and prevent bycatch at the same time.

At this juncture, crustaceans farming (aquaculture) is rapidly becoming an alternative key food-producing sector globally and developing countries are taking the lead. The OECD/FAO Agricultural Outlook for 2017-2026 reports that farmed fish production is the fastest growing protein source among food commodities. The current level of stocks governed by policies to limit overfishing as well as aquaculture being much less seasonal and volatile compared with wild fishing could propel aquaculture to dominate growth in the fish sector in the next ten years (OECD/FAO, 2017).

Even so and over the years, several issues have been constricting factors for the expansion of these sectors in Costa Rica: biosecurity (relating to species diseases), impacts of climate change, loss of revenue due to tough and unequal competition, destruction of mangroves and wild fish habitats and unwanted and unreported bycatch and discards from trawling, among others. The UNCTAD-DOALOS OETS project in Costa Rica will address these challenges and explore opportunities to protect and manage its valuable marine assets through inter alia, sustainable large and small scale fisheries, good environmental sustainability practices and commercial viability for the sectors' produce.

Aquaculture or farming in water

is the aquatic equivalent of agriculture or farming on land […] covers the farming of both animals (including crustaceans, finfish and molluscs) and plants (including seaweeds and freshwater macrophytes). Aquaculture occurs in both inland (freshwater) and coastal (brackishwater, seawater) areas (FAO, 1998).

1.1. Crustacean fishing and harvesting

The production of crustacean-based products in the country is mainly driven by high prices in major markets around the world and the opportunities they represent for developing countries to acquire foreign currency through exports. The crustacean breeding industry however has encountered significant technical difficulties with intensive breeding species due to the complex biological cycles of these organisms. Efforts have continued throughout the world, encouraged by governments and, significantly, private groups, in consideration of positive developments including those of Japanese mariculturists (see Figure 11).

White shrimp, white prawns, camel shrimp, Fidel shrimp, pink shrimp and Pacific lobster (green lobster), which are found in the Eastern Pacific Ocean, are usually harvested by artisanal fishers or cultivated at an industrial scale throughout the year. The main landing ports are in Puntarenas and the Gulf of Nicoya (Manual of Commercial Species of Costa Rica, INCOPESCA, PROCOMER AND CANEPP[5]).

1.2. Shrimp farming

One particular crustacean product in Costa Rica is the whiteleg shrimp which has been produced through farming since 2011. Table 12 presents data on the production of this crustacean species between 2011 and 2015. In the latter, a total of 2,682 tons with a total value of $28.5 million have been produced while 2012 produced the highest yield at 3,043 tons and a total value of $26.4 million. Two years later in 2014, whiteleg shrimp was valued 14 per cent higher, generating the highest production value at

$30.1 million for 2,973 tons of production (Costa Rica Department of Aquaculture, INCOPESCA, 2017).

Table 12. Production of the whiteleg shrimp, 2011-2015 (in volume (tons) and value (million dollars)

Product	Variable	2011	2012	2013	2014	2015
Whiteleg shrimp	Tons	3,028	3,043	2,890	2,973	2,682
	Million $	25	26.4	26	30.1	28.5

Source: Statistics and Research Departments, INCOPESCA, 2017.

2. Crustaceans trade metrics, 2012-2016

Table 13 summarizes crustacean sector's export metrics for five years, between 2012 and 2016. Throughout this period, export diversification remained stable, both in terms of distinct destinations and exported HS6 product lines. Derived products "Other shrimps and prawns" (30617 and 30627), are those that account for the highest values exported by Costa Rica. Between 2012 and 2016 (the latest year of available data) exports have slightly increased in value, volume and proportion of the country's total exports. Although there was a reduction in total value of crustacean product exports, it performed better and remained above the total export values of tuna, which for the same years reached $7.2 million and $7.8 million respectively.

3. Crustacean domestic product prices[6]

The dock-side (fishermen) and wholesale prices are very similar for crustaceans, but of higher value at the retail (supermarkets) level. White shrimp or jumbo shrimp have the highest prices among the three markets for both purchase and sale. White shrimp or jumbo shrimp achieved their highest price in 2015 in the three markets, reaching prices between 12,000 and 25,0000 colones[7] (see Figure 11).

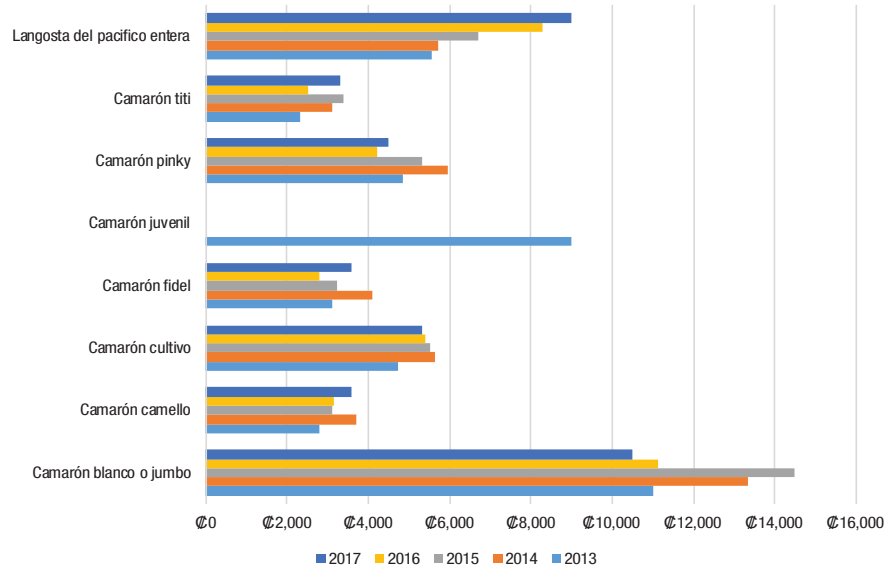
Table 13. Export metrics of crustacean sector, 2012-2016

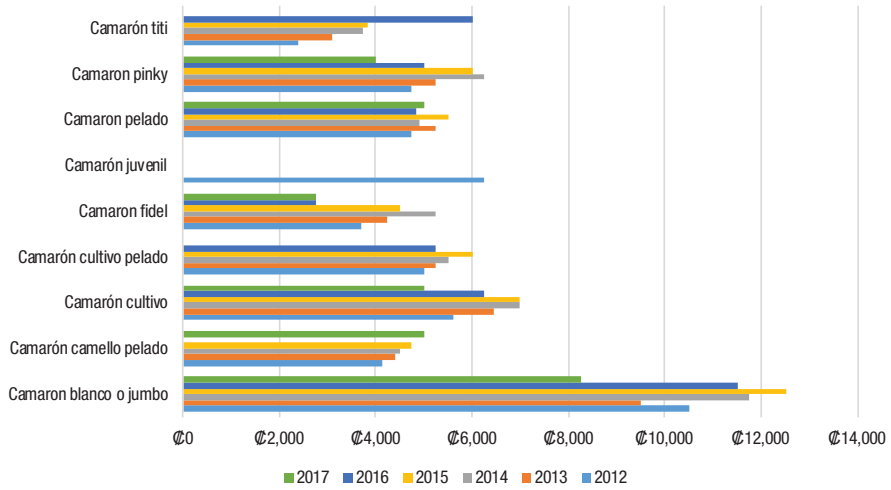
	2012	2013	2014	2015	2016
Export value (in millions of $)	7	12.6	15.6	15.6	11.9
Exports (in millions of tons)	0.8	1.3	1.4	1.5	1.1
Number of export destinations	7	8	8	8	5
Number of HS6 exports*	4	3	3	4	3
Total exports (in millions of $)	11,251	11,472	11,242	9,578	9,908
Sector share (in %)	0.06	0.11	0.14	0.16	0.12

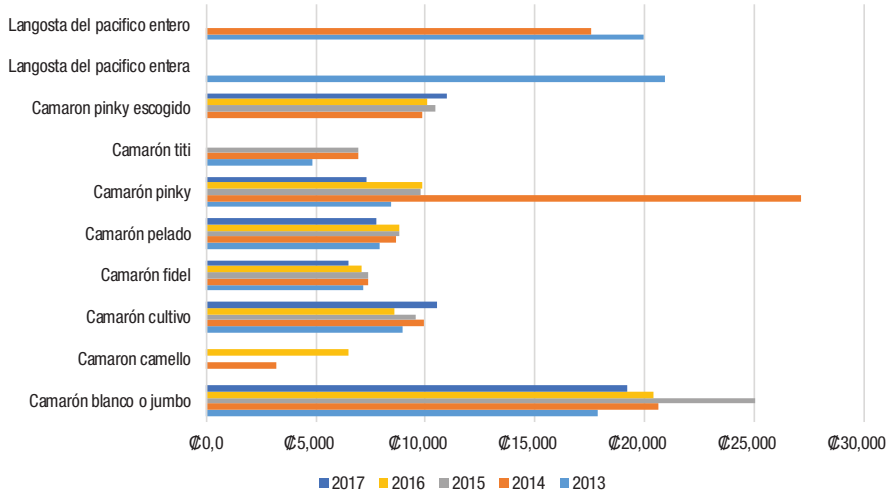
Source: UN-COMTRADE, 2018.

*Relevant HS codes for crustacean products as defined in Appendix 1.

Figure 11. Product prices in crustacean sector by value chain segment, 2013-2017* (in Costa Rica colones)







** Fisherman: Average prices paid in stalls 1, 2, 3, 4

*** Wholesaler: Average between minimum and maximum prices of the product placed at the National Supply Central (CENADA)

**** Retailer: Average price between two sample market/ retailer prices

Note
Information is based on the product names in the local market and represents data on crustacean species i.e. shrimp ("camarón") and lobster ("langosta").

Source: INCOPESCA. Marketing Department, 2018.

E. SEAFOOD MANUFACTURING SECTOR

1. Introduction

The seafood production system is becoming increasingly global and seafood is becoming one of the most highly traded commodities accounting for ten per cent of all food trade (by value) and exceeding the value of sugar, maize, coffee, rice, and cocoa trade combined (Gephart and Pace, 2015). With a view to keep up with the expanding population of seafood consumers worldwide vis-a-vis declining marine resources due to overfishing and environmental problems, aquaculture is becoming a key source of fish or aquatic species used in the seafood manufacturing sector.

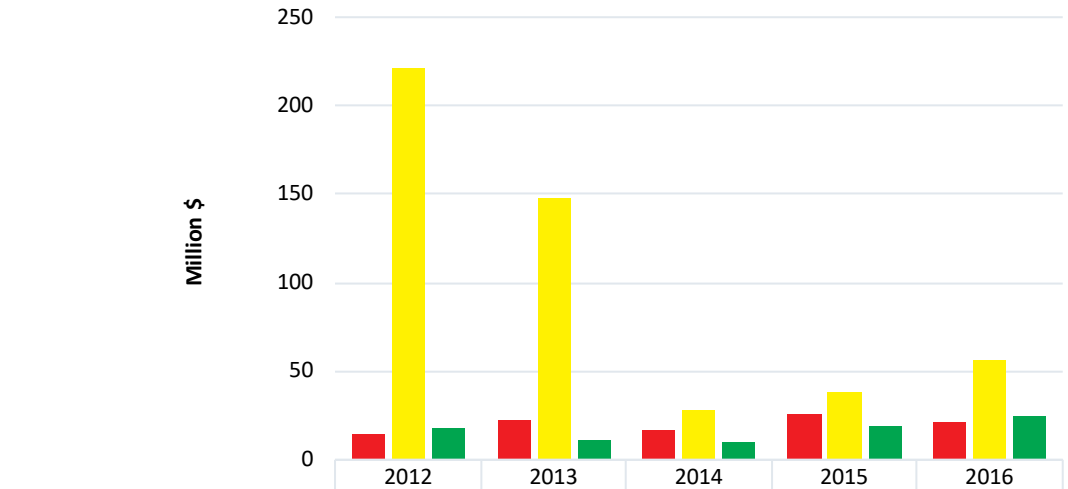
In Costa Rica, the landscape for seafood manufacturing has been changing over the years. As a country between the great Pacific Ocean and the Caribbean Sea, it is interesting to note that local consumption of fresh seafood has been quite low. This may be due to several possible reasons such as: most of the population's diets do not include fish traditionally, seafood preservation methods and quality have been poor, other animals' meats are cheaper than fresh fish, and inconsistent supplies and underdeveloped state of rural markets, influencing consumption patterns that are more partial to readily available products (imported or domestic) such as preserved tuna and sardines – particularly among lower income groups in Costa Rica.

In recent years, the country has imported processed seafood products in this sector more than it exported them. While this may be positive on the face of it as it allows the population to have greater product options as well as buffer it from internal supply shocks – importation has also negatively exposed Costa Rica to global trade at the risk of facing external supply shocks. For instance, the price of imported sardines and tuna products has considerably increased in the last decade due to the depreciation of Costa Rican colon against the dollar. As a matter of course, the lower income segment of the population particularly in the rural areas could not afford these "staple" products at once. Reliance on imported seafood products could also induce Costa Rica's reliance on certain foods from overseas and run the risk of being subjected to trade and policy changes imposed by the exporting source country.

2. The seafood manufacturing sector

Between 2012 and 2016 in Figure 12, the total value of exports within the manufacturing of seafood products

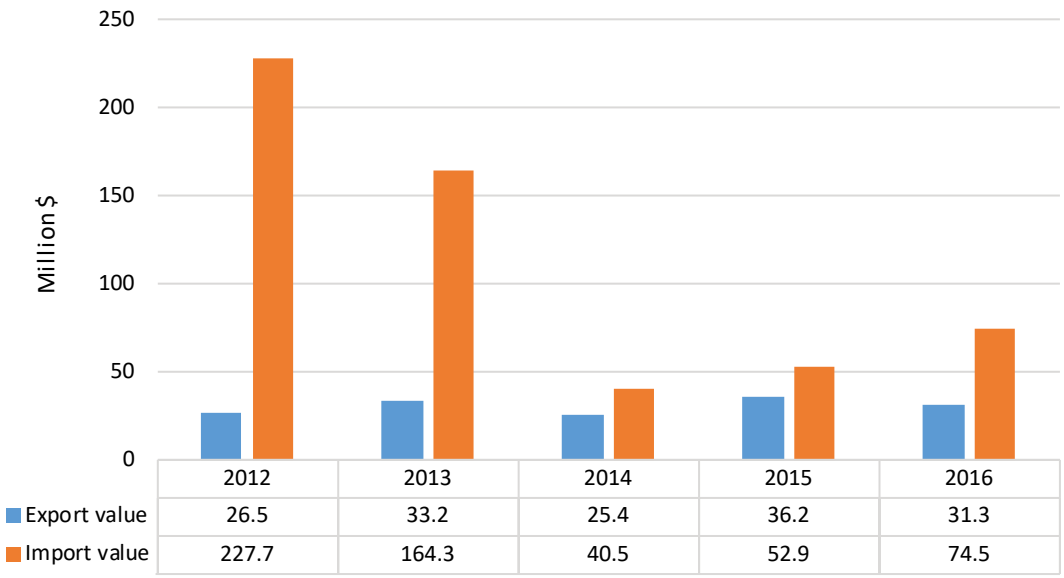
Figure 12. Total Export and import values for seafood manufacturing sector in Costa Rica, 2012-2016



	2012	2013	2014	2015	2016
Export value	14	21.8	16.5	25.2	20.8
Import value	221.5	147.4	27.7	38.2	56.1
Number of export destinations	18	11	10	19	24

Source: UNCTAD based on UN-COMTRADE, 2018.

Figure 13. Highest export and import values for prepared fish-tuna, skipjack and bonito



	2012	2013	2014	2015	2016
Export value	26.5	33.2	25.4	36.2	31.3
Import value	227.7	164.3	40.5	52.9	74.5

Source: UNCTAD based on UN-COMTRADE, 2018.

sector totaled $152.7 million. The value of imports totaled $559.9 million for the same period. There has been a recovery of the total value of imports after 2014, a different situation with the exported values, which went from $36.2 million in 2015 to $31.3 million in 2016. Trade balance in the seafood manufacturing has been clearly negative for Costa Rica but the gap has been significantly reduced over the last three years due to lower values for imports. This gap could be further bridged through efforts in export diversification and value addition through manufacturing.

Out of the total (Figure 13), the tariff item Prepared fish - Tunas, skipjack and bonito, shows the highest value of exports and imports. Although the total in the last two years (2015 and 2016) has decreased considerably, it still shows the highest export and import values for Costa Rica, compared to the rest of the world. Figure 13 presents the values of the last 5 years.

3. Seafood manufacturing trade metrics, 2012-2016

Exports remain relatively steady with slight movements in value. The proportion of Costa Rica's total exports from 2012 to 2016 was variable per the latest year of available data (2016). Volume decreases were less exacerbated while export diversification and distinct destinations show a steady increase in number.

Table 14. Export metrics of seafood manufacturing sector, 2012-2016

	2012	2013	2014	2015	2016
Export value (in million $)	26.5	33.2	25.4	36.2	31.3
Exports (in million tons)	9.6	9.9	8.9	10.1	8.7
Number of export destinations	18	13	17	20	27
Number of HS6 exports*	7	10	9	10	6
Total exports (in million $)	11,250.8	11,472.1	11,242.5	9,578.2	9,907.8
Sector share (in %)	0.26	0.9	0.8	0.39	0.33

Source: UN-COMTRADE, 2018.
*Details for relevant HS6 codes for seafood manufacturing products in Appendix 1.

APPENDIX 1:
PRODUCT CLASSIFICATION BY SECTOR (HARMONIZED SYSTEM NOMENCLATURE 2012 EDITION)

1. Tuna sector

Product	HS-6 Product code	Product description	
		Classification	Sub-classification
03.01 Live fish	0301.94	- Other live fish	-- Atlantic and Pacific bluefin tunas (Thunnus thynnus, Thunnus orientalis)
	0301.95		-- Southern bluefin tunas (Thunnus maccoyii)
03.02 Fish, fresh or chilled, excluding fish fillets and other fish meat of heading 03.04	0302.31	-Tunas (of the genus Thunnus), skipjack or stripe-bellied bonito (Euthynnus (Katsuwonus) pelamis), excluding livers and roes	-- Albacore or longfinned tunas (Thunnus alalunga)
	0302.32		-- Yellowfin tunas (Thunnus albacares)
	0302.34		-- Bigeye tunas (Thunnus obesus)
	0302.35		-- Atlantic and Pacific bluefin tunas (Thunnus thynnus, Thunnus orientalis)
	0302.36		-- Southern bluefin tunas (Thunnus maccoyii)
03.03 Fish, frozen, excluding fish fillets and other fish meat of heading 03.04	0303.41	-Tunas (of the genus Thunnus), skipjack or stripe-bellied bonito (Euthynnus (Katsuwonus) pelamis), excluding livers and roes	-- Albacore or longfinned tunas (Thunnus alalunga)
	0303.42		-- Yellowfin tunas (Thunnus albacares)
	0303.44		-- Bigeye tunas (Thunnus obesus)
	0303.45		-- Atlantic and Pacific bluefin tunas (Thunnus thynnus, Thunnus orientalis)
	0303.46		-- Southern bluefin tunas (Thunnus maccoyii)
03.04 Fish fillets and other fish meat (whether or not minced), fresh, chilled or frozen	0304.87	- Frozen fillets of other fish	-- Tunas (of the genus Thunnus), skipjack or stripe-bellied bonito (Euthynnus (Katsuwonus) pelamis)

2. Marine fisheries (all fish excluding tuna) sector

Product	HS-6 Product code	Product description	
		Classification	Sub-classification
03.01 Live fish	0301.11	- Ornamental fish	-- Freshwater
	0301.19		-- Other
	0301.91	- Other live fish	-- Trout (Salmo trutta, Oncorhynchus mykiss, Oncorhynchus clarki, Oncorhynchus aguabonita, Oncorhynchus gilae, Oncorhynchus apache and Oncorhynchus chrysogaster)
	0301.92		-- Eels (Anguilla spp.)
	0301.93		-- Carp (Cyprinus carpio, Carassius carassius, Ctenopharyngodon idellus, Hypophthalmichthys spp., Cirrhinus spp., Mylopharyngodon piceus)
	0301.99		-- Other
03.02 Fish, fresh or chilled, excluding fish fillets and other fish meat of heading 03.04	0302.11	- Salmonidae, excluding livers and roes	-- Trout (Salmo trutta, Oncorhynchus mykiss, Oncorhynchus clarki, Oncorhynchus aguabonita, Oncorhynchus gilae, Oncorhynchus apache and Oncorhynchus chrysogaster)
	0302.13		-- Pacific salmon (Oncorhynchus nerka, Oncorhynchus gorbuscha, Oncorhynchus keta, Oncorhynchus tschawytscha, Oncorhynchus kisutch, Oncorhynchus masou and Oncorhynchus rhodurus)
	0302.14		-- Atlantic salmon (Salmo salar) and Danube salmon (Hucho hucho)
	0302.19		-- Other
	0302.21	- Flat fish (Pleuronectidae, Bothidae, Cynoglossidae, Soleidae, Scophthalmidae and Citharidae), excluding livers and roes:	--Halibut (Reinhardtius hippoglossoides, Hippoglossus hippoglossus, Hippoglossus stenolepis)
	0302.22		-- Plaice (Pleuronectes platessa)
	0302.23		-- Sole (Solea spp.)
	0302.24		-- Turbots (Psetta maxima)
	0302.29		-- Other
	0302.33		-- Skipjack or stripe-bellied bonito
	0302.39		-- Other
	0302.41	- Herrings (Clupea harengus, Clupea pallasii), anchovies (Engraulis spp.), sardines (Sardina pilchardus, Sardinops spp.), sardinella (Sardinella spp.), brisling or sprats (Sprattus sprattus), mackerel (Scomber scombrus, Scomber australasicus, Scomber japonicus), jack and horse mackerel (Trachurus spp.), cobia (Rachycentron canadum) and swordfish (Xiphias gladius), excluding livers and roes	-- Herrings (Clupea harengus, Clupea pallasii)
	0302.42		-- Anchovies (Engraulis spp.)
	0302.43		-- Sardines (Sardina pilchardus, Sardinops spp.), sardinella (Sardinella spp.), brisling or sprats (Sprattus sprattus)
	0302.44		-- Mackerel (Scomber scombrus, Scomber australasicus, Scomber japonicus)
	0302.45		-- Jack and horse mackerel (Trachurus spp.)
	0302.46		-- Cobia (Rachycentron canadum)
	0302.47		-- Swordfish (Xiphias gladius)

	0302.51	- Fish of the families Bregmacerotidae, Euclichthyidae, Gadidae, Macrouridae, Melanonidae, Merlucciidae, Moridae and Muraenolepididae, excluding livers and roes	-- Cod (Gadus morhua, Gadus ogac, Gadus macrocephalus)
	0302.52		-- Haddock (Melanogrammus aeglefinus)
	0302.53		Coalfish (Pollachius virens)
	0302.54		-- Hake (Merluccius spp., Urophycis spp.)
	0302.55		-- Alaska Pollack (Theragra chalcogramma)
	0302.56		-- Blue whitings (Micromesistius poutassou, Micromesistius australis)
	0302.59		-- Other
	0302.71	- Tilapias (Oreochromis spp.), catfish (Pangasius spp., Silurus spp., Clarias spp., Ictalurus spp.), carp (Cyprinus carpio, Carassius carassius, Ctenopharyngodon idellus, Hypophthalmichthys spp., Cirrhinus spp., Mylopharyngodon piceus), eels (Anguilla spp.), Nile perch (Lates niloticus) and snakeheads (Channa spp.), excluding livers and roes	-- Tilapias (Oreochromis spp.)
	0302.72		-- Catfish (Pangasius spp., Silurus spp., Clarias spp., Ictalurus spp.)
	0302.73		-- Carp (Cyprinus carpio, Carassius carassius, Ctenopharyngodon idellus, Hypophthalmichthys spp., Cirrhinus Mylopharyngodon piceus)
	0302.74		-- Eels (Anguilla spp.)
	0302.79		-- Other
	0302.81	- Other fish, excluding livers and roes	-- Dogfish and other sharks
	0302.82		-- Rays and skates (Rajidae)
	0302.83		-- Toothfish (Dissostichus spp.)
	0302.84		-- Seabass (Dicentrarchus spp.)
	0302.85		-- Seabream (Sparidae)
	0302.89		-- Other
	0302.90	- Livers and roes	
03.03 Fish, frozen, excluding fish fillets and other fish meat of heading 03.04.	0303.11	- Salmonidae, excluding livers and roes	-- Sockeye salmon (red salmon) (Oncorhynchus nerka)
	0303.12		-- Other Pacific salmon (Oncorhynchus gorbuscha, Oncorhynchus keta, Oncorhynchus tschawytscha, Oncorhynchus kisutch, Oncorhynchus masou and Oncorhynchus rhodurus)
	0303.13		-- Atlantic salmon (Salmo salar) and Danube salmon (Hucho hucho)
	0303.14		-- Trout (Salmo trutta, Oncorhynchus mykiss, Oncorhynchus clarki, Oncorhynchus aguabonita, Oncorhynchus gilae, Oncorhynchus apache and Oncorhynchus chrysogaster)
	0303.19		-- Other

	0303.23	- Tilapias (Oreochromis spp.), catfish (Pangasius spp., Silurus spp., Clarias spp., Ictalurus spp.), carp (Cyprinus carpio, Carassius carassius, Ctenopharyngodon idellus, Hypophthalmichthys spp., Cirrhinus spp., Mylopharyngodon piceus), eels (Anguilla spp.), Nile perch (Lates niloticus) and snakeheads (Channa spp.), excluding livers and roes	-- Tilapias (Oreochromis spp.)
	0303.24		-- Catfish (Pangasius spp., Silurus spp., Clarias spp., Ictalurus spp.)
	0303.25		-- Carp (Cyprinus carpio, Carassius carassius, Ctenopharyngodon idellus, Hypophthalmichthys spp., Cirrhinus spp., Mylopharyngodon piceus)
	0303.26		-- Eels (Anguilla spp.)
	0303.29		-- Other
	0303.31	- Flat fish (Pleuronectidae, Bothidae, Cynoglossidae, Soleidae, Scophthalmidae and Citharidae), excluding livers and roes	-- Halibut (Reinhardtius hippoglossoides, Hippoglossus hippoglossus, Hippoglos
	0303.32		-- Plaice (Pleuronectes platessa)
	0303.33		-- Sole (Solea spp.)
	0303.34		-- Turbots (Psetta maxima)
	0303.39		-- Other
	0303.43	-Tunas (of the genus Thunnus), skipjack or stripe-bellied bonito (Euthynnus (Katsuwonus) pelamis), excluding livers and roes	-- Skipjack or strip-bellied bonito
	0303.49		-- Other
	0303.51	- Herrings (Clupea harengus, Clupea pallasii), sardines (Sardina pilchardus, Sardinops spp.), sardinella (Sardinella spp.), brisling or sprats (Sprattus sprattus), mackerel (Scomber scombrus, Scomber australasicus, Scomber japonicus), jack and horse mackerel (Trachurus spp.), cobia (Rachycentron canadum) and swordfish (Xiphias gladius), excluding livers and roes	-- Herrings (Clupea harengus, Clupea pallasii)
	0303.53		-- Sardines (Sardina pilchardus, Sardinops spp.), sardinella (Sardinella spp.), brisling or sprats (Sprattus sprattus)
	0303.54		-- Mackerel (Scomber scombrus, Scomber australasicus, Scomber japonicus)
	0303.55		-- Jack and horse mackerel (Trachurus spp.)
	0303.56		-- Cobia (Rachycentron canadum)
	0303.57		-- Swordfish (Xiphias gladius)
	0303.63	- Fish of the families Bregmacerotidae, Euclichthyidae, Gadidae, Macrouridae, Melanonidae, Merlucciidae, Moridae and Muraenolepididae, excluding livers and roes	-- Cod (Gadus morhua, Gadus ogac, Gadus macrocephalus)
	0303.64		-- Haddock (Melanogrammus aeglefinus)
	0303.65		-- Coalfish (Pollachius virens)
	0303.66		-- Hake (Merluccius spp., Urophycis spp.)
	0303.67		-- Alaska Pollack (Theragra chalcogramma)
	0303.68		-- Blue whitings (Micromesistius poutassou, Micromesistius australis)
	0303.69		-- Other
	0303.81	- Other fish, excluding livers and roes	-- Dogfish and other sharks
	0303.82		-- Rays and skates (Rajidae)
	0303.83		-- Toothfish (Dissostichus spp.)
	0303.84		-- Seabass (Dicentrarchus spp.)
	0303.89		-- Other
	0303.90	- Livers and roes	

03.04 Fish fillets and other fish meat (whether or not minced), fresh, chilled or frozen	0304.31	-Fresh or chilled fillets of tilapias (Oreochromis spp.), catfish (Pangasius spp., Silurus spp., Clarias spp., Ictalurus spp.), carp (Cyprinus carpio, Carassius carassius, Ctenopharyngodon idellus, Hypophthalmichthys spp., Cirrhinus spp., Mylopharyngodon piceus), eels (Anguilla spp.), Nile perch (Lates niloticus) and snakeheads (Channa spp.)	-- Tilapias (Oreochromis spp.)
	0304.32		-- Catfish (Pangasius spp., Silurus spp., Clarias spp., Ictalurus spp.)
	0304.33		-- Nile Perch (Lates niloticus)
	0304.39		-- Other
	0304.41	- Fresh or chilled fillets of other fish	-- Pacific salmon (Oncorhynchus nerka, Oncorhynchus gorbuscha, Oncorhynchus keta, Oncorhynchus tschawytscha, Oncorhynchus kisutch, Oncorhynchus masou and Oncorhynchus rhodurus), Atlantic salmon (Salmo salar) and Danube salmon (Huchohucho)
	0304.42		-- Trout (Salmo trutta, Oncorhynchus mykiss, Oncorhynchus clarki, Oncorhynchus aguabonita, Oncorhynchus gilae, Oncorhynchus apache and Oncorhynchus chrysogaster)
	0304.43		-- Flat fish (Pleuronectidae, Bothidae, Cynoglossidae, Soleidae, Scophthalmidae and Citharidae)
	0304.44		-- Fish of the families Bregmacerotidae, Euclichthyidae, Gadidae, Macrouridae, Melanonidae, Merlucciidae, Moridae and Muraenolepididae
	0304.45		-- Swordfish (Xiphias gladius)
	0304.46		-- Toothfish (Dissostichus spp.)
	0304.49		-- Other
	0304.51	- Other, fresh or chilled	-- Tilapias (Oreochromis spp.), catfish (Pangasius spp., Silurus spp., Clarias spp., Ictalurus spp.), carp (Cyprinus carpio, Carassius carassius, Ctenopharyngodon idellus, Hypophthalmichthys spp., Cirrhinus spp., Mylopharyngodon piceus), eels (Anguilla spp.), Nile perch (Lates niloticus) and snakeheads (Channa spp.)
	0304.52		-- Salmonidae
	0304.53		-- Fish of the families Bregmacerotidae, Euclichthyidae, Gadidae, Macrouridae, Melanonidae, Merlucciidae, Moridae and Muraenolepididae
	0304.54		-- Swordfish (Xiphias gladius)
	0304.55		-- Toothfish (Dissostichus spp.)
	0304.59		-- Other
	0304.61	- Frozen fillets of tilapias (Oreochromis spp.), catfish (Pangasius spp., Silurus spp., Clarias spp., Ictalurus spp.), carp (Cyprinus carpio, Carassius carassius, Ctenopharyngodon idellus, Hypophthalmichthys spp., Cirrhinus spp., Mylopharyngodon piceus), eels (Anguilla spp.), Nile perch (Lates niloticus) and snakeheads (Channa spp.)	-- Tilapias (Oreochromis spp.)
	0304.62		-- Catfish (Pangasius spp., Silurus spp., Clarias spp., Ictalurus spp.)
	0304.63		-- Nile Perch (Lates niloticus)
	0304.69		-- Other

	0304.71	- Frozen fillets of fish of the families Bregmacerotidae, Euclichthyidae, Gadidae, Macrouridae, Melanonidae, Merlucciidae, Moridae and Muraenolepididae	-- Cod (Gadus morhua, Gadus ogac, Gadus macrocephalus)
	0304.72		-- Haddock (Melanogrammus aeglefinus)
	0304.73		-- Coalfish (Pollachius virens)
	0304.74		-- Hake (Merluccius spp., Urophycis spp.)
	0304.75		-- Alaska Pollack (Theragra chalcogramma)
	0304.79		-- Other
	0304.81	- Frozen fillets of other fish	-- Pacific salmon (Oncorhynchus nerka, Oncorhynchus gorbuscha, Oncorhynchus keta, Oncorhynchus tschawytscha, Oncorhynchus kisutch, Oncorhynchus masou and Oncorhynchus rhodurus), Atlantic salmon (Salmo salar) and Danube salmon (Huchohucho)
	0304.82		-- Trout (Salmo trutta, Oncorhynchus mykiss, Oncorhynchus clarki, Oncorhynchus aguabonita, Oncorhynchus gilae, Oncorhynchus apache and Oncorhynchus chrysogaster)
	0304.83		-- Flat fish (Pleuronectidae, Bothidae, Cynoglossidae, Soleidae, Scophthalmidae and Citharidae)
	0304.84		-- Swordfish (Xiphias gladius)
	0304.85		-- Toothfish (Dissostichus spp.)
	0304.86		-- Herrings (Clupea harengus, Clupea pallasii)
	0304.89		-- Other
	0304.91	- Other, frozen	-- Swordfish (Xiphias gladius)
	0304.92		-- Toothfish (Dissostichus spp.)
	0304.93		-- Tilapias (Oreochromis spp.), catfish (Pangasius spp., Silurus spp., Clarias spp., Ictalurus spp.), carp (Cyprinus carpio, Carassius carassius, Ctenopharyngodon idellus, Hypophthalmichthys spp., Cirrhinus spp., Mylopharyngodon piceus), eels (Anguilla spp.), Nile perch (Lates niloticus) and snakeheads (Channa spp.)
	0304.94		-- Alaska Pollack (Theragra chalcogramma)
	0304.95		-- Fish of the families Bregmacerotidae, Euclichthyidae, Gadidae, Macrouridae, Melanonidae, Merlucciidae, Moridae and Muraenolepididae, other than Alaska Pollack (Theragra chalcogramma)
	0304.99		-- Other
03.05 Fish, dried, salted or in brine; smoked fish, whether or not cooked before or during the smoking process; flours, meals and pellets of fish, fit for human consumption	0305.10	- Flours, meals and pellets of fish, fit for human consumption	
	0305.20	- Livers and roes of fish, dried, smoked, salted or in brine	

	0305.31	- Fish fillets, dried, salted or in brine, but not smoked	-- Tilapias (Oreochromis spp.), catfish (Pangasius spp., Silurus spp., Clarias spp., Ictalurus spp.), carp (Cyprinus carpio, Carassius carassius, Ctenopharyngodon idellus, Hypophthalmichthys spp., Cirrhinus spp., Mylopharyngodon piceus), eels (Anguilla spp.), Nile perch (Lates niloticus) and snakeheads (Channa spp.)
	0305.32		-- Fish of the families Bregmacerotidae, Euclichthyidae, Gadidae, Macrouridae, Melanonidae, Merlucciidae, Moridae and Muraenolepididae
	0305.39		-- Other
	0305.41		-- Pacific salmon (Oncorhynchus nerka, Oncorhynchus gorbuscha, Oncorhynchus keta, Oncorhynchus tschawytscha, Oncorhynchus kisutch, Oncorhynchus masou and Oncorhynchus rhodurus), Atlantic salmon (Salmo salar) and Danube salmon (Hucho hucho)
	0305.42		-- Herrings (Clupea harengus, Clupea pallasii)
	0305.43		-- Trout (Salmo trutta, Oncorhynchus mykiss, Oncorhynchus clarki, Oncorhynchus aguabonita, Oncorhynchus gilae, Oncorhynchus apache and Oncorhynchus chrysogaster)
	0305.44		-- Tilapias (Oreochromis spp.), catfish (Pangasius spp., Silurus spp., Clarias spp., Ictalurus spp.), carp (Cyprinus carpio, Carassius carassius, Ctenopharyngodon idellus, Hypophthalmichthys spp., Cirrhinus spp., Mylopharyngodon piceus), eels (Anguilla spp.), Nile perch (Lates niloticus) and snakeheads (Channa spp.)
	0305.49		-- Other
	0305.51	- Dried fish, other than edible fish offal, whether or not salted but not smoked	-- Cod (Gadus morhua, Gadus ogac, Gadus macrocephalus)
	0305.59		-- Other
	0305.61		-- Herrings (Clupea harengus, Clupea pallasii)
	0305.62		-- Cod (Gadus morhua, Gadus ogac, Gadus macrocephalus)
	0305.63		-- Anchovies (Engraulis spp.)
	0305.64		-- Tilapias (Oreochromis spp.), catfish (Pangasius spp., Silurus spp., Clarias spp., Ictalurus spp.), carp (Cyprinus carpio, Carassius carassius, Ctenopharyngodon idellus, Hypophthalmichthys spp., Cirrhinus spp., Mylopharyngodon piceus), eels (Anguilla spp.), Nile perch (Lates niloticus) and snakeheads (Channa spp.
	0305.69		-- Other
	0305.71	- Fish fins, heads, tails, maws and other edible fish offal	-- Shark fins
	0305.72		-- Fish heads, tails and maws
	0305.79		-- Other

03.07 Molluscs, whether in shell or not, live, fresh, chilled, frozen, dried, salted or in brine; smoked molluscs, whether in shell or not, whether or not cooked before or during the smoking process; flours, meals and pellets of molluscs, fit for human consumption	0307.11	- Oysters	-- Live, fresh or chilled
	0307.19		-- Other
	0307.21	- Scallops, including queen scallops, of the genera Pecten, Chlamys or Placopecten	-- Live, fresh or chilled
	0307.29		-- Other
	0307.31	- Mussels (Mytilus spp., Perna spp.)	-- Live, fresh or chilled
	0307.39		-- Other
	0307.41	- Cuttle fish (Sepia officinalis, Rossia macrosoma, Sepiola spp.) and squid (Ommastrephes spp., Loligo spp., Nototodarus spp., Sepioteuthis spp.)	-- Live, fresh or chilled
	0307.49		-- Other
	0307.51	- Octopus (Octopus spp.)	-- Live, fresh or chilled
	0307.59		-- Other
	0307.60	- Snails, other than sea snails	
	0307.71	- Clams, cockles and ark shells (families Arcidae, Arcticidae, Cardiidae, Donacidae, Hiatellidae, Mactridae, Mesodesmatidae, Myidae, Semelidae, Solecurtidae, Solenidae, Tridacnidae and Veneridae)	-- Live, fresh or chilled
	0307.79		-- Other
	0307.81	- Abalone (Haliotis spp.)	-- Live, fresh or chilled
	0307.89		-- Other
	0307.91	- Other, including flours, meals and pellets, fit for human consumption	-- Live, fresh or chilled
	0307.99		-- Other

03.08 Aquatic invertebrates other than crustaceans and molluscs, live, fresh, chilled, frozen, dried, salted or in brine; smoked aquatic invertebrates other than crustaceans and molluscs, whether or not cooked before or during the smoking process; flours, meals and pellets of aquatic invertebrates other than crustaceans and molluscs, fit for human consumption	0308.11	- Sea cucumbers (Stichopus japonicus, Holothurioidea)	-- Live, fresh or chilled
	0308.19		-- Other
	0308.21	- Sea urchins (Strongylocentrotus spp., Paracentrotus Loxechinus albus, Echichinus esculentus)	-- Live, fresh or chilled
	0308.29		-- Other
	0308.30	- Jellyfish (Rhopilema spp.)	
	0308.90	- Other	

3. Crustaceans fishing and aquaculture sectors

Product	HS-6 Product code	Product description	
		Classification	Sub-classification
16.05 Crustaceans, molluscs and other aquatic invertebrates, prepared or preserved	1605.10	- Crab	
	1605.21	- Shrimps and prawns	-- Not in airtight container
	1605.29		-- Other
	1605.30	- Lobster	
	1605.40	- Other crustaceans	
	1605.51	- Molluscs	-- Oysters
	1605.52		-- Scallops, including queen scallops
	1605.53		-- Mussels
	1605.54		-- Cuttle fish and squid
	1605.55		-- Octopus
	1605.56		-- Clams, cockles and arkshells
	1605.57		-- Abalone
	1605.58		-- Snails, other than sea snails
	1605.59		-- Other
	1605.61	- Other aquatic invertebrates	-- Sea cucumbers
	1605.62		-- Sea urchins
	1605.63		-- Jellyfish
	1605.69		-- Other
23.01 Flours, meals and pellets, of meat or meat offal, of fish or of crustaceans, molluscs or other aquatic invertebrates, unfit for human consumption; greaves	2301.20	-Flours, meals and pellets, of fish or of crustaceans, molluscs or other aquatic invertebrates	

4. Seafood manufacturing sector

Product	HS-6 Product code	Product description	
		Classification	Sub-classification
16.03 Extracts and juices of meat, fish or crustaceans, molluscs or other aquatic invertebrates	1603.00		
16.04 Prepared or preserved fish; caviar and caviar substitutes prepared from fish eggs.	1604.11	- Fish, whole or in pieces, but not minced	-- Salmon
	1604.12		-- Herrings
	1604.13		-- Sardines, sardinella and brisling or sprats
	1604.14		-- Tunas, skipjack and bonito (Sarda spp.)
	1604.15		-- Mackerel
	1604.16		-- Anchovies
	1604.17		-- Eels
	1604.19		-- Other
	1604.20	- Other prepared or preserved fish	

APPENDIX 2. RELEVANT NATIONAL AND INTERNATIONAL REGULATORY FRAMEWORKS[8]

Multilateral and regional regulatory systems of which Costa Rica is party to:

1. International Trade Treaties:

1. World Trade Organisation (WTO) and goods and services related Uruguay Round Agreements (1994). The WTO Agreements on Technical barriers to Trade and on Sanitary and phytosanitary measures will be particularly relevant in the case of seafood manufacturing.
2. Free Trade Agreement among Central America – United States and Dominican Republic (2012)
3. Association Agreement between Central America and the European Union (2012)
4. Member of the Central American Integration System (SICA)
5. Various free trade agreements with EFTA, CARICOM, Canada, Chile, China, Colombia, México, Peru, Dominican Republic and Singapore.

2. Law of the Sea (for further analysis of the law of the sea and multilateral environmental agreements, see *Ocean Governance in Costa Rica: An Overview on the Legal and Institutional Framework in Ocean Affairs* ***by UNCTAD-UNDOALOS (2018)).***

1. The United Nations Convention on the Law of the Sea (1982)
2. The United Nations Fish Stocks Agreement (1995)

3. Fisheries:

1. FAO's Port State Measures Agreement (2009)
2. Latin American Organization for Fisheries Development (OLDEPESCA)
3. Soft law instruments applicable to aquaculture:
4. FAO Technical Guidelines on Aquaculture Certification (2011)
5. Soft law instruments applicable to post harvesting and trade
   a. The FAO Code of Conduct on Responsible Fisheries (1995)
   b. The FAO Guidelines for The Ecolabelling of Fish and Fishery Products from Marine Capture Fisheries (2009)

4. Environment:

1. The Convention on Biological Diversity (1992)
2. The Convention on International Trade in Endangered Species of Wild Fauna and Flora (1975)
3. The Convention on the Conservation of Migratory Species of Wild Animals (1979)

Tuna industry (national level):

1. Ferreto Law: Law No. 5775, promoted by Deputy Arnoldo Ferreto (period 1974-1978), was approved in 1975 and later reformed in 1978 by Law No. 6267. Between the two laws, they make the normative body known as "The Ferreto Law", which governed all tuna fishing activities until the entry into force of the Fisheries and Aquaculture Law No. 8436 in 2005. The so-called Ferreto Law established many of the regulations that since then have been regulating tuna fishing in the country and were incorporated into subsequent regulations and laws.

2. Decree No. 23943-MOPT-MAG of 5 January 1995: The January 1995 Decree No. 23943-MOPT-MAG, aside from keeping the calculation formula, the TNR (Moorsom ton, 100 cubic feet 2.83 cubic meters), it established in the 6th article that "every tuna fishing vessel with a foreign flag has to pay a single fee of $54 per net ton of registered product." This was the minimum rate charged since 1990, but it became a flat rate for all boats regardless of their size or capacity. This provision has remained unchanged since then, without having been updated for more than 20 years.

3. Fisheries and Aquaculture Law No. 8436, of 1 March 2005: The Law on Fisheries and Aquaculture No. 8436, of 1 March 2005, indicated in transitory I that: "During the period between the publication of this law and the publication of its bylaws, Decree No. 23943 MOPT-MAG will remain in force." The bylaw of the Fisheries Law to which this transitory refers, was published six years later (Executive Decree No. 36782 of September 2011). However, it did not make any modification to the collection of $54 for TNR, nor modified the methodology for calculating that capacity (tuna fishing).

4. Resolutions/Decrees:
   a. Resolution No. 027-2008-MAG decided to assign 6,885 t to Sardimar S.A. for the period between 1 August 2008 and 31 July 2009.
   b. Resolution No. 028-2009-MAG decided to assign 7,585 t to Sardimar S.A. for the period between 1 August 2009 and 31 July 2010.
   c. Resolution No. AJ-001-2010-MAG decided to assign a quota of 7,225 t to Sardimar S.A. for the period between 1 August 2010 and 31 July 2011.
   d. Resolution No. 001-2012 assigned Sardimar - Prosalud, 6,885 t for the period between 1 August 2011 to 31 July 2012.
   e. On 19 January 2012, through Executive Decree No. 36998-MAG, called "Regulation for the utilization of the purse-seine tuna (sic) fishing capacity recognized to Costa Rica within the CIAT", it was possible to change this practice damaging of public finances (see section 2.9.2. Regulations for the use of the haulage fee).
   f. Executive Decree No. 36998 MAG was repealed by Executive Decree No. 37386-MAG of 9 July 2012. This last decree established a procedure for the allocation and exploitation of the IACTT fishing quota, which assumes that the haulage capacity recognized to Costa Rica "constitutes a sovereign right of participation and the management of said right will respond to the sustainable development of local fisheries" (Article 1).

5. Zoning decree for tuna fishing with purse seines: There have been partial advances in zoning of the marine space destined for tuna fishing. Because of the work between longline and sport fishing organizations during 2013 and 2014, the Executive Branch issued Decree No. 38681 MAG-MINAE, which established a zone for the exploitation of tuna in the EEZ.

6. Decree No. 38681 MAG-MINAE, signed in October 2014: Established three exclusion polygons for tuna purse seine fishing activity, namely: 1) a coastal polygon in the first 45 nm, 2) a central polygon in the area with the greatest presence of yellowfin tuna close to Coco's Island and 3) a protection zone in the southern part of the EEZ. This zoning has had strong opposition from the tuna seiner sector.

7. Rulings: The Constitutional Chamber of the Supreme Court of Justice issued ruling 10.540-2013, accepting an action of unconstitutionality filed by various organizations against semi-industrial shrimp trawling. This ruling marked a before and after in the country's fishing law, establishing that the country's Law on Fishery is transversally articulated with its Environmental Law.

Industry (national level):

1. Law No. 7554, Organic Law of the Environment (October, 1995).
2. Law No. 8495, General Law of the National Animal Health Service (May, 2016).
3. Regulation on Procedures of SETENA, No. 25705-MINAE (March, 1998).
4. Law No. 4240, Urban Planning Law (November, 1968).
5. Law No. 5395, General Health Law (May, 1998).
6. Law No. 7317, Wildlife Conservation Law (October, 1992).
7. Regulation of Reuse and Discharge of Wastewater. No. 33601-S-MINAE (June, 2004).
8. Executive Decree No. 34859-MAG, General Regulation for the Granting of the Veterinary Operation Certificates (October, 2008).
9. Executive Decree No. 29342- MINAE, Requirements for the Renewal of the Use Permit in Mangrove Areas related to the Production of Salt and Shrimp (February, 2001).
10. Executive Decree No. 18696 MAG-S. Regulation of Veterinary Inspection on Fishery Products (September, 2000).
11. Executive Decree No. 34687, Regulation of Maximum Microbiological Limits and Waste Medicines and Contaminants for Products and by-products of Fisheries and Aquaculture for Human Consumption (July, 2008).

References

Audum Lem (2016). Global Overview of Tuna Supply, Trade, Price, Consumption and Outlook. FAO, Available at http://infofish.org/v2/images/tunaslide/Audun%20Lem%20-%20Tuna%20Presentation%20Bangkok%202016.pdf. Accessed on 18 April 2019.

Banco Central de Costa Rica. Available at https://www.bccr.fi.cr/SitePages/default.aspx. Accessed on 10 September 2018.

Costa Rica, INCOPESCA-PRECIOS DE CENADA (2010-2017). Bases de datos estadísticos proporcionadas por las Instituciones para los sectores bajo consulta.

FAO, (n.d.). National Aquaculture Sector Overview: Costa Rica. Available at http://www.fao.org/fishery/countrysector/naso_costarica/en. Accessed on 11 April 2019.

FAO, Regional Office for Asia and the Pacific (1998). Rural Aquaculture: Overview and Framework for Country Reviews. Available at http://www.fao.org/3/x6941e/x6941e00.htm#Contents. Accessed on 22 March 2019.

FAO (1999). Guidelines for the Routine Collection of Capture Fishery Data; FAO Fisheries Technical Paper 382; FAO/DANIDA Expert Consultation, Bangkok, Thailand, 18-30 May 1998. Available at http://www.fao.org/3/x2465e/x2465e00.htm#Contents. Accessed on 31 March 2019.

FAO (2004a). Coordinating Working Party on Fishery Statistics, (CWP). Handbook of Fishery Statistics, Catch Concepts: Diagrammatic Presentation. Available at http://www.fao.org/3/bt981t/bt981t.pdf. Accessed on 19 March 2019.

FAO (2004b). Republic of Costa Rica General Economic Data, April 2004. Available at http://www.fao.org/fi/oldsite/FCP/en/cri/profile.htm.. Accessed on 21 March 2019.

FAO Regional Office for Asia and the Pacific (2008). Overview: Status and Potential of Fisheries and Aquaculture in Asia and the Pacific; Report of the Thirtieth Session of the Asia-Pacific Fishery Commission, Manado, North Sulawesi, Indonesia,11-13 August 2008, RAP publication 2008/11.44 p.29. Bangkok. Available at http://www.fao.org/docrep/011/i0327e/I0327E04.htm. Accessed on 30 August 2018.

Gephart, J.A; Pace, M.L. (2015). Environ. Res. Lett. 10 125014. Available at https://iopscience.iop.org/article/10.1088/1748-9326/10/12/125014/pdf. Accessed on 12 April 2019.

Instituto Nacional de Estadísticas y Censos, INEC (2018). Datos estadísticos sobre empleo y actividad económica sobre los sectores bajo consulta.

IPP-MAN, (2012). XXXXXX

Jiménez, J.A; Ross Salazar E. (2017). Las pesquerías de atún en Costa Rica. Una oportunidad para el Desarrollo. Fundación Marviva, San José, Costa Rica. 58pp.

Klawe W.L. (1980) Longline catches of tunas within the 200-mile economic zones of the Indian and western Pacific Oceans. FAO Indian Ocean Fishery Commission; Indian Ocean Programme, Dev. Rep.

Ministerio de Trabajo y Seguridad Social, MTSS (2018). Salarios Mínimos Sector Privado año (2018) Departamento de salarios. Decreto Nº40743-MTSS, publicado en La Gaceta 228, Alcance N°291 del 01 de Diciembre del 2017. Rige 1º de Enero del (2018).

Organisation for Economic Co-operation and Development (OECD) and FAO, (2017). OECD-FAO Agricultural Outlook; OECD Agriculture statistics (database). Available at http://dx.doi.org/10.1787/agr-data-en. Accessed on 15 April 2019.

Promotora de Comercio Exterior de Costa Rica, PROCOMER (Mayo 2014). Anuario: Estadísticas de Comercio Exterior, 2013.

_____ (Mayo 2015). Anuario: Estadísticas de Comercio Exterior, 2014.

_____ (Mayo 2016). Anuario: Estadísticas de Comercio Exterior, 2015.

_____ (Mayo 2017). Anuario: Estadísticas de Comercio Exterior, 2016.

_____ (Mayo 2018). Anuario: Estadísticas de Comercio Exterior, 2017.

República de Costa Rica: Mapa Oficial, Continental, Insular Y Marítimo. Available at http://files.snitcr.go.cr/Visor/limites/MAPA%20OFICIAL%20CONTINENTAL%20INSULAR%20Y%20MARITIMO.pdf. Accessed on 30 August 2018.

Sol, F. (2013). Antecedentes precolombinos de la pesca de atún en la costa del Pacífico de Costa En: Aprovechamiento atunero y manejo pesquero en la Zona Económica Exclusiva del Pacífico de Costa Rica. Una Propuesta de Desarrollo Alternativo. FECOP. San José, Costa Rica.

UNCTAD (2016). Sustainable Fisheries: International Trade. Trade Policy and Regulatory Issues. UNCTAD/WEB/DITC/TED/2015/5. Available at https://unctad.org/en/PublicationsLibrary/webditcted2015d5_en.pdf. Accessed on 23 April 2018.

UNCTAD (2018). Bases de Datos UN COMTRADE.

UNCTAD; UNDOALOS (2018). Ocean Governance in Costa Rica: An Overview on the Legal and Institutional Framework in Ocean Affairs. UNCTAD/DITC/TED/INF/2018/4. Available at https://unctad.org/en/PublicationsLibrary/ditctedinf2018d4_en.pdf. Accessed on 23 April 2019.

Vargas, V. (2014). Reconstrucción Histórica con Base en la Pesca de Atún con Caña en Costa Rica (1944-1964) San José, Costa Rica.

World Customs Organization (n.d.), Harmonized System Nomenclature 2012 Edition. Available at http://www.wcoomd.org/en/topics/nomenclature/instrument-and-tools/hs_nomenclature_previous_editions/hs_nomenclature_table_2012.aspx. Accessed on 20 May 2019.

Notes

1 See Appendix 1 for further details. The manufacture producer price index includes 2,532 products and 449 informants; the version used was published for the first time in February 2015, with monthly data since January 2012. It should be noted that the three indicators cited measure the evolution of the prices paid by the domestic market to manufacturers, in this case: “1010-1020 Elaboration and conservation of meat, fish and crustaceans”.

2 The payment of daily wage is common in the global fisheries labour market, both in developed and developing economies. This is to ensure that unskilled workers are protected from exploitation and receive income for services given within the nationally mandated minimum. In Costa Rica, employees are typically paid the minimum legally mandated price floor for number of days at sea – which is 10,060 per day ($17 as at 19 September, 2018: see Note 3 below).

3 Amount in Costa Rican colones. Historical exchange rate of $ 1 = 585 (19 September 2018, Central Bank of Costa Rica, exchange rate of sale).

4 See: Decision 13 -010540 Constitutional Court, Costa Rica, Environmental Protection and ban of bottom trawling fishing. See: https://www.poder-judicial.go.cr/salaconstitucional/index.php/ambiente/852-13-010540-proteccion-ambiental-y-veda-de-la-pesca-de-arrastre.

5 It has no year of publication but was revised online on 14 August 2018.

6 Average prices paid 2013-2017- thousand colones.

7 See: Note 3 above.

8 For further information on the legal and institutional framework, see “Ocean governance in Costa Rica: An overview on the legal and institutional framework in ocean affairs” by Mariamalia Rodriguez Chaves under the OETS Project. Available at https://unctad.org/en/pages/PublicationWebflyer.aspx?publicationid=2349.

9 See: Note 3 above.

10 See: Note 3 above.