Evidence-based and policy coherent Oceans Economy and Trade Strategies in Costa Rica[1]

Sectorial factsheet
for Crustaceans Fishing and Aquaculture[2]

1. INTRODUCTION

The project "Evidence-based and policy coherent Oceans Economy and Trade Strategies" aims to support developing countries such as Barbados, Belize and 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). This data factsheet presents detailed sectorial information of one (of the four) ocean sectors selected in Costa Rica to facilitate the identification and informed selection of key sectors to be considered for the next phase of the project:

Sector 1	Sector 2	➡ **Sector 3**	Sector 4
Sustainable marine fisheries (all fish but tuna)	Sustainable wild tuna harvesting/fishing sector (only tuna species)	**Sustainable crustacean aquaculture**	The seafood manufacturing sector

Crustaceans are defined as that vast sub organization of arthropods, among which are lobster, crabs, shrimps prawns and others. Within the dynamics of this fisheries sector in Costa Rica, some key aspects are presented in this introductory summary, and are expanded upon in the relevant sections of the factsheet. Firstly, the crustacean fishing industry has been rather significant; almost 8,000 tons have been landed in Costa Rican ports in the last 4 years. During 2011, landings reached a total of US$6,389,000, while in 2015, they reached a total of US$3,926,000. This considerable reduction not only affected this product in specific but the fishing industry in general. Second, the export values during 2015 and 2016, reached 15,7000,000 and 11,300,000 million dollars, respectively. Although there was a reduction, it remained above the export values of tuna, which for the same years reached 8,900,000 and 8,100,000 million dollars. Third, within the classification of crustaceans, derived products "Other shrimps and prawns" (30617 and 30627), are those that account for the highest values exported and imported into Costa Rica. Fourth, the Revealed Comparative Advantage coefficient in relation to the product is less than 1, with values for 2015 of 0.986, and it is reduced for the year 2016 to 0.253, which represents a negative situation in the market in relation to the comparative advantage of similar products. These results show a downward trend in recent years. Fifth, in relation to employment within the crustacean and aquaculture sectors, the workforce is mostly male. It also suffers from a downward trend, reaching 1,085

[1] This project is funded by the United Nations Development Account and implemented by the United Nations Conference on Trade and Development (UNCTAD), in cooperation with the Division for Ocean Affairs and the Law of the Sea of the Office of Legal Affairs of the United Nations (DOALOS). This fact sheet was used as an input for a oceans-based sector selection workshop in Costa Rica, November 2018. See: https://unctad.org/en/pages/MeetingDetails.aspx?meetingid=1930

Acknowledgements: This publication was produced by José Vinicio Sandi Meza, UNCTAD and DOALOS consultant and Professor – Researcher at Universidad Nacional de Costa Rica. It has benefited from comments by David Vivas Eugui, Legal Officer; Marco Fugazza, Economic Affairs Officer; Samuel Rosenow, Associate Economic Officer all at UNCTAD Secretariat and Francois Bailet, Senior Legal Officer, at DOALOS.

for 2016, below the value reached in 2012 of 1,551, and in 2014 of 1,768 (the most positive value in the last 6 years). According to the data, women have little participation in the activity, and although there was a rebound in the percentage of employability of 0,349 in 2014, the number was reduced to 0,213 in 2016. They are unskilled workers with low minimum wages, located in poor, rural areas with many social problems, particularly in regions with high rates of poverty due to the lack of employment opportunities.

The following data sheet contains a first section (1 to 2.6) which presents general data on the activity and the specific sectors (in relation to the existing data). A second part, (section 3 to 6) presents specific data on the sector.

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 possibility they represent for developing countries to acquire foreign currency through exports. The crustacean breading industry however has encountered significant technical difficulties with intensive breeding species, due to the complex biological cycles of these organisms. The efforts have continued throughout the world, encouraged by governments and also significantly by private groups, and in consideration of positive developments including those of Japanese mariculturists (Source: (http://www.fao.org/docrep/005/ac867s / AC867S06.htm, revised August 15, 2018).

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 artisan fishers or are cultivated at industrial scale throughout the year. The main landing ports are in Puntarenas and in the Gulf of Nicoya (Manual of Commercial Species of Costa Rica, INCOPESCA, PROCOMER AND CANEPP*)

**. It has no year of publication, but it was revised online on August 14, 2018.*

KEY POINT:

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.

.

Source: http://www.fao.org/docrep/003/x6941e/x6941e04.htm

1.2. COSTA RICA: FISHERY CONTEXT

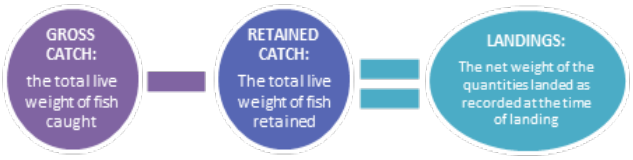
Land: 51,100 km²
Coasts length: 1,290 km²
Pacific maritime space: 538,273 km² (*)
Caribbean maritime space*: 26,000 km² (*)
Main Pacific landing points: Cuajiniquil, Playas del Coco, Puntarenas, Quepos y Golfito
Main Caribbean landing points: Barra del Colorado, Puerto Limón

*(*Source:http://files.snitcr.go.cr/Visor/limites/MAPA%20OFICIAL%20CONTINENTAL%20INSULAR%20Y%20MARITIMO.pdf)*

2. PRODUCTION

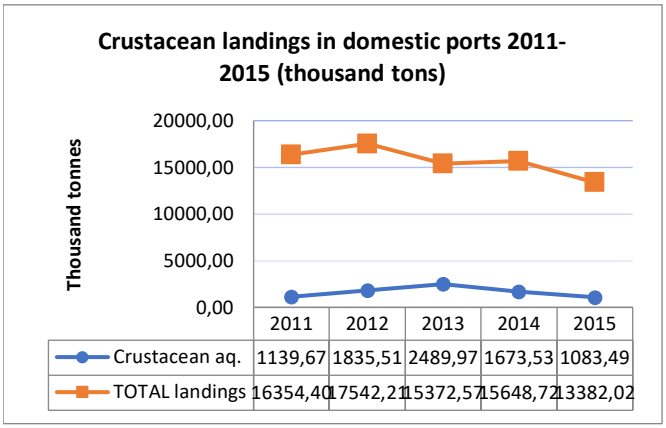
2.1. LANDINGS

Total national landings in Costa Rica production has been slightly declining since 2011, from 16,081 tons to 13,382 tons in 2015. Around 8% of the disembarked tons during 2015 correspond to crustaceans. Sales values for the same year correspond to about 8% ($ 3,926,300).



Source: Catch Concepts: Diagrammatic Presentation (http://www.fao.org/3/bt981t/bt981t.pdf)

Similarly, the situation has been quite irregular in relation to the tons of crustaceans caught. For example, the variation and/or trend has been downward in recent years. While in 2011 the total weight of crustaceans caught was 1,139.67 tons, by 2015 it had decreased to 1,083.49 tons.



Source: Statistic Department, Research Department, INCOPESCA, 2017

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 crustaceans nei. *(http://www.fao.org/docrep/011/i0327e/I0327E04.htm)*

A similar negative trend can be observed with respect to generated (US$ terms) from this sector, dropping from $6,389,900 in 2011 to $3,926,300 in 2015. Comparing the relationship between volume harvested and total produced (US$ terms), the decrease in volume has been lower, compared to the received in domestic ports.

Products	Variable	2011	2012	2013	2014	2015
Whiteleg shrimp	Tonnes	3028	3043	2890	2973	2682
	Mil US$	$24 933 949,8	$26 361 081,8	$25 954 203,3	$30 117 575,6	$28 493 607,1

Source: Statistic Department, Research Department, INCOPESCA, 2017

The whiteleg shrimp has been produced since 2011, and in 2015 2,682 tons were produced with a total value of 28,493,000 million dollars. The year with the highest production was 2012, with 3,043 tons and a total value of 26,361,000 million dollars. In 2014, 2,973 tons for a value of 30,117,000 million dollars were produced. A smaller amount of tons, compared to 2011 and 2012, but a higher market value *(source: Department of Aquaculture, INCOPESCA, 2017).*

2.2. OFFICIAL FEES

For the 2016-2017 period, some of the fees (by 2018) set by INCOPESCA (in colones)[3] are:

- ₡ Small scale commercial fishing license: **23,700**
- ₡ Medium scale commercial fishing license: **71,000**
- ₡ Advanced scale commercial fishing license: **260,800**
- ₡ Fishing inputs tax exemption authorization: **3,400 per year**
- ₡ Authorization to place fishery products in primary rural markets: **23,600**
- ₡ Authorization to transport fishery products: **40,600–93,600**
- ₡ Authorization to export fishery products: **22,400**
- ₡ Authorization to import fishery products: **28,400**
- ₡ Purchase order of fuel (individual or consolidated): **2,600 (per order)**
- ₡ Authorized fuel: **5,00** (per liter)*
- ₡ Captain and crew ID card (all types of vessels, national or resident): **5,000 per year**

**. 5 CRC must be paid per every authorized litter. Represents a specific data.*

Source: Directive Council Agreement No. AJDIP/328-2016 (Session No. 034-2016, Sept. 08, 2016), INCOPESCA

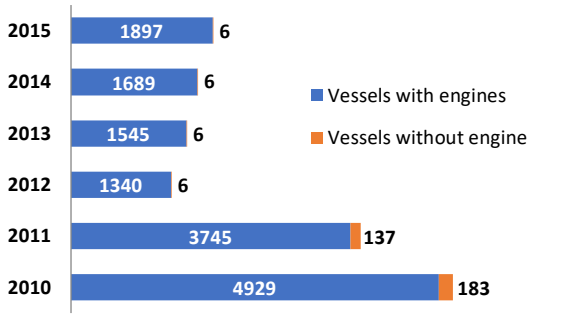
2.3. FISHING FLEET

The Costa Rican fishing fleet is classified into Small, Medium and largescale fleet:

Small and Medium-scale fleet: Vessels with engines LOA 0 - 11.09 (mts) *(Artisan shrimp, squid, sharks, scales fishes)*

Advanced-sclae fleet: Vessels with engines LOA 12 - 23.9 (mts) *(Large pelagic and demersal species)*

Fishing fleet 2010-2015 (in vessel numbers)



Source: Statistic Department, Research Department, INCOPESCA, 2017

According INCOPESCA, Costa Rican fishing fleet has decreased significantly since 2010.

In 2010 the fishing fleet was two and a half times larger (5,112 vessels) than in 2015 (1,903 vessels).

[3] The price in the charts is in Costa Rican Colones, as provided by the source. However, at this point an exchange rate of US $ 1 = 585 (September 19, 2018, Central Bank of Costa Rica, exchange rate of sale) was considered.

2.4. NUMBER OF FISHERY PRODUCTS, DESTINATIONS AND COMPANIES

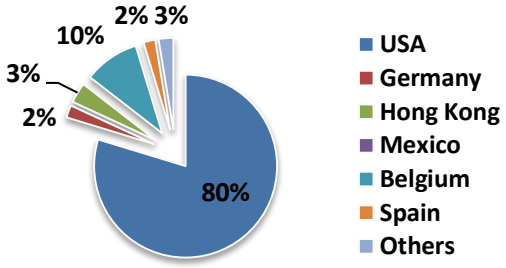
The number of fishing products, destinations and exporting companies have decreased in the last five years. The number of fishing products exported decreased from 69 in 2013 to 51 in 2017, as well as the number of destinations and companies that export those products, from 29 and 31 in 2013 to 22 and 26 in 2017 respectively.

Number of fishing products, destinations and companies 2013-2017*

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

**Includes all fishing products exports*
Source: Statistical Yearbook, 2017, PROCOMER

Fishery products main destinations, 2017

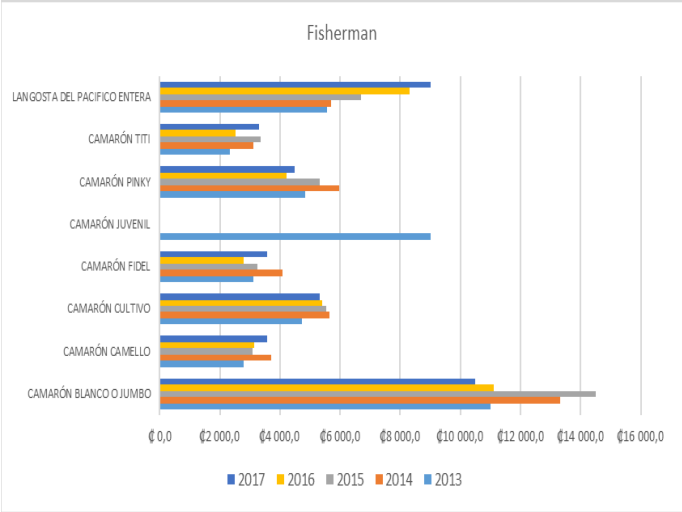


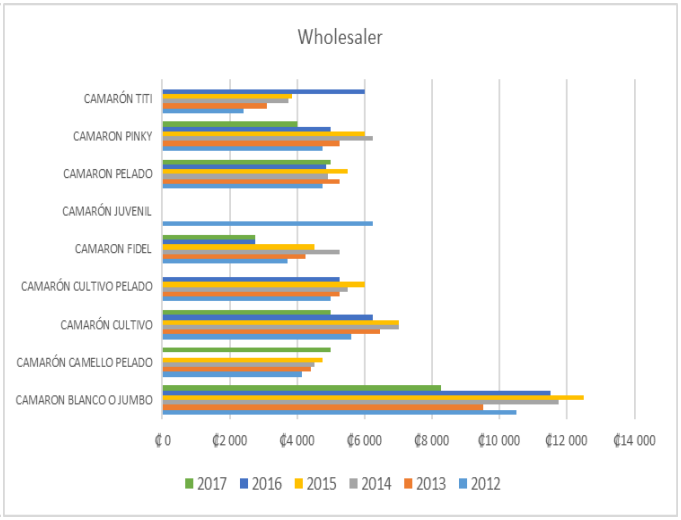
Source: Statistical Yearbook, 2017, PROCOMER

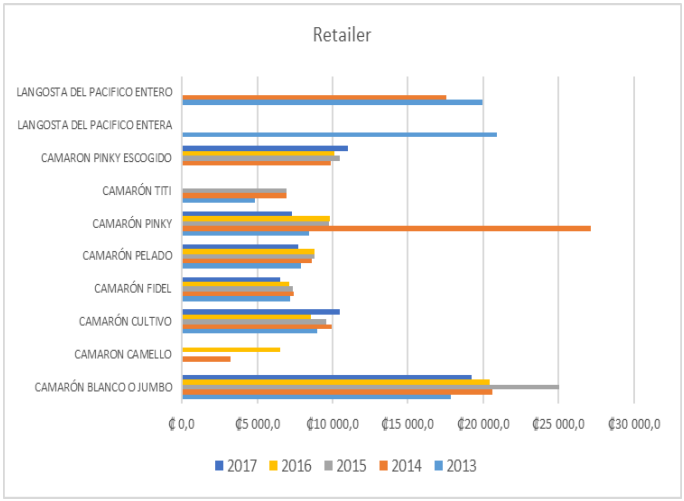
3. CRUSTACEAN PRODUCT PRICES[4]

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 in the three markets for both purchase and sale. White shrimp or jumbo shrimp, achieved their highest price in 2015 in the 3 markets, reaching prices between 12,000 and 25,0000 colones (see below).[5]

Product prices in Crustacean sector, by value chain segment in 2013-2017







Source: Marketing Department, INCOPESCA

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

**Wholesaler: Average between minimum and maximum price. Product placed on the National Supply Central (CENADA)

***Retailer: Average between Market price, Super 1 and Super 2

**** Varieties of analysis. Varieties most sold in relation to kilos and prices. The last quinquennium is included as representative of the data

[4] AVERAGE PRICES PAID 2013-2017- THOUSANDS COLONES

[5] The price in the charts is in Costa Rican Colones, as provided by the source. However, at this point an exchange rate of US $ 1 = 585 (September 19, 2018, Central Bank of Costa Rica, exchange rate of sale) was considered.

4. Trade Metrics

4.1. Sector Overview:

Table 2: Export metrics of sectors in 2016, weighted by HS6 export value

Dimension / Sector	HS6 Products	Exports in Mil USD (in Mil Tones)	Diversification # of distinct export destinations / # of distinct HS6 exports	Revealed Comparative Advantage	Demand in global market Annualized average growth rate in import values	Employment Men vs. women	Perception of competitiveness Survey-based evaluation [0 1]
Crustacean 0.12% of total exports	•Shrimps and prawns •Cold-water shrimps and prawns •Other shrimps and prawns	11.9 (1.1)	5/3	0.8	7.5	1100 200	0.18
Fish 0.65% of total exports	•Tilapia •Hake •Swordfish •Salmon •Trout •Other	64.4 (9.4)	16/31	169.5	4.9	5900 800	0.46
Tuna 0.08% of total exports	•Yellowfin tuna •Bigeye tuna •Tunas, skipjack or stripe-bellied bonito	7.8 (1)	2/3	28.2	1.2	5900 800	0.48
Seafood manufacturing 0.33% of total exports	•Tunas, skipjack and bonito •Sardines, sardinella and brisling or sprats •Other prepared or preserved fish •Salmon	32.4 (8.7)	27/6	5.8	-3.3	3700 200	0.51

	Low Values
	Medium Values
	High Values

Source: UN-COMTRADE, survey-based evaluation

4.2. CRUSTACEANS TRADE METRICS, 2012-2016

Table 3: Export metrics of Crustacean sector, 2012-2016

	2012	2013	2014	2015	2016
Export Value (in Mil USD)	**7,0**	**12,6**	**15,6**	**15,6**	**11,9**
Exports QTY (in Mil Tonnes)	**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 Mil USD)	**11250,8**	**11472,1**	**11242,5**	**9578,2**	**9907,8**
Sector share (in %)	**0,06**	**0,11**	**0,14**	**0,16**	**0,12**

Source: UN-COMTRADE **Note** : Relevant HS codes for Crustacean products as defined in the Appendix 1.

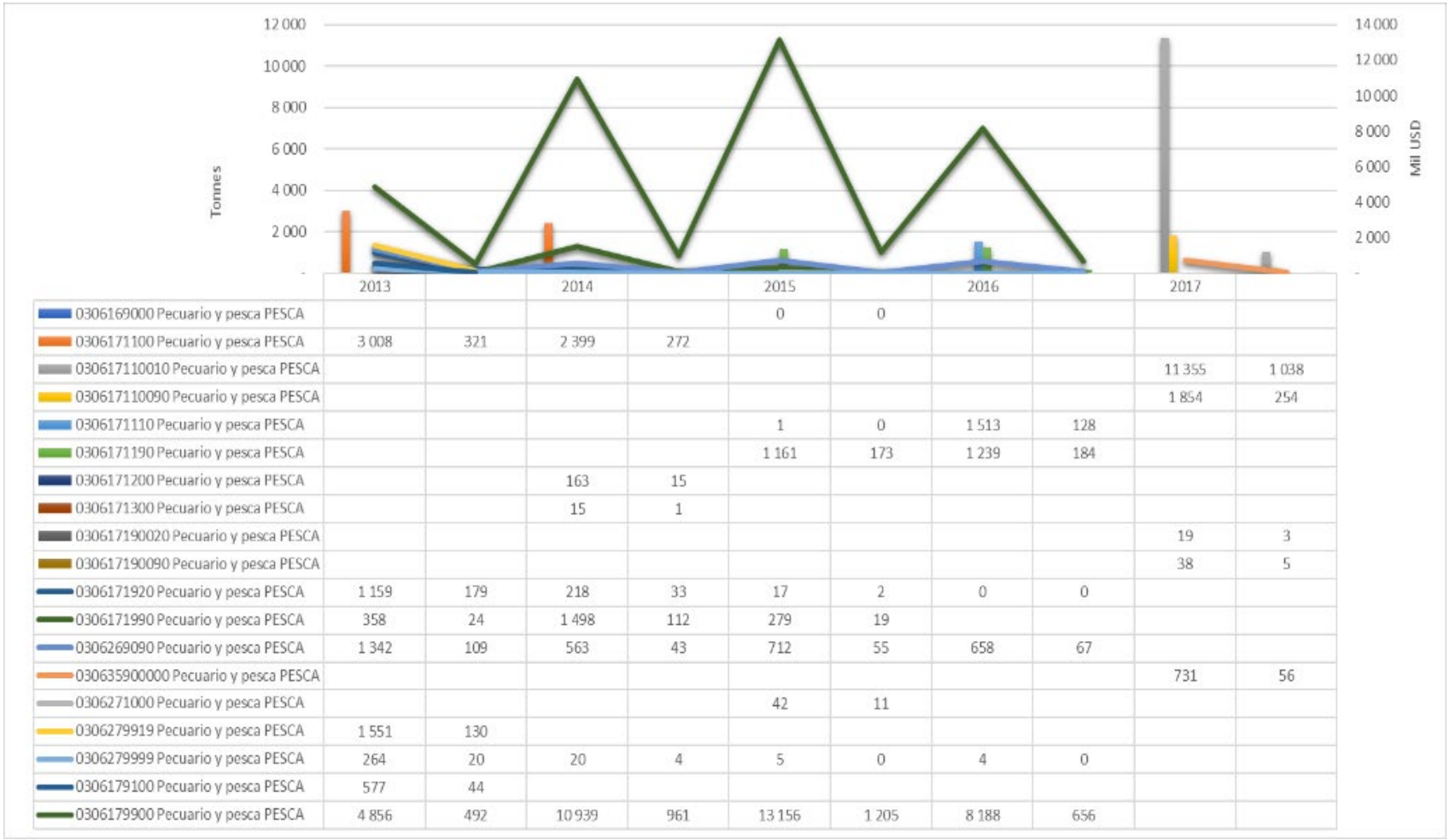
Exports increased slightly in value, volume and proportion of Costa Rica's total exports from 2012 to 2016, the latest year of available data. Export diversification remained stable, both in terms of distinct destinations and exported HS6 product lines.

4.3. EXPORTS OF CRUSTACEAN PRODUCTS: VALUE AND WEIGHT

The following graph shows the value and weight of exports of Crustaceans products for 2013-2017 (thousands US$ tons).

In 2017, frozen white and torpedo squids, and edible crustaceans, prawns and others, were the most exported crustacean products to foreign destinations according to PROCOMER. In the case of the tariff item 0306179900, belonging to prawns and other decapods, these represent the largest volume in thousands of dollars and metric tons exported between the years 2013 and 2017.

(see appendix 1 for reference on these products)



	2013		2014		2015		2016		2017	
0306169000 Pecuario y pesca PESCA					0	0				
0306171100 Pecuario y pesca PESCA	3 008	321	2 399	272						
030617110010 Pecuario y pesca PESCA									11 355	1 038
030617110090 Pecuario y pesca PESCA									1 854	254
0306171110 Pecuario y pesca PESCA					1	0	1 513	128		
0306171190 Pecuario y pesca PESCA					1 161	173	1 239	184		
0306171200 Pecuario y pesca PESCA			163	15						
0306171300 Pecuario y pesca PESCA			15	1						
030617190020 Pecuario y pesca PESCA									19	3
030617190090 Pecuario y pesca PESCA									38	5
0306171920 Pecuario y pesca PESCA	1 159	179	218	33	17	2	0	0		
0306171990 Pecuario y pesca PESCA	358	24	1 498	112	279	19				
0306269090 Pecuario y pesca PESCA	1 342	109	563	43	712	55	658	67		
030635900000 Pecuario y pesca PESCA									731	56
0306271000 Pecuario y pesca PESCA					42	11				
0306279919 Pecuario y pesca PESCA	1 551	130								
0306279999 Pecuario y pesca PESCA	264	20	20	4	5	0	4	0		
0306179100 Pecuario y pesca PESCA	577	44								
0306179900 Pecuario y pesca PESCA	4 856	492	10 939	961	13 156	1 205	8 188	656		

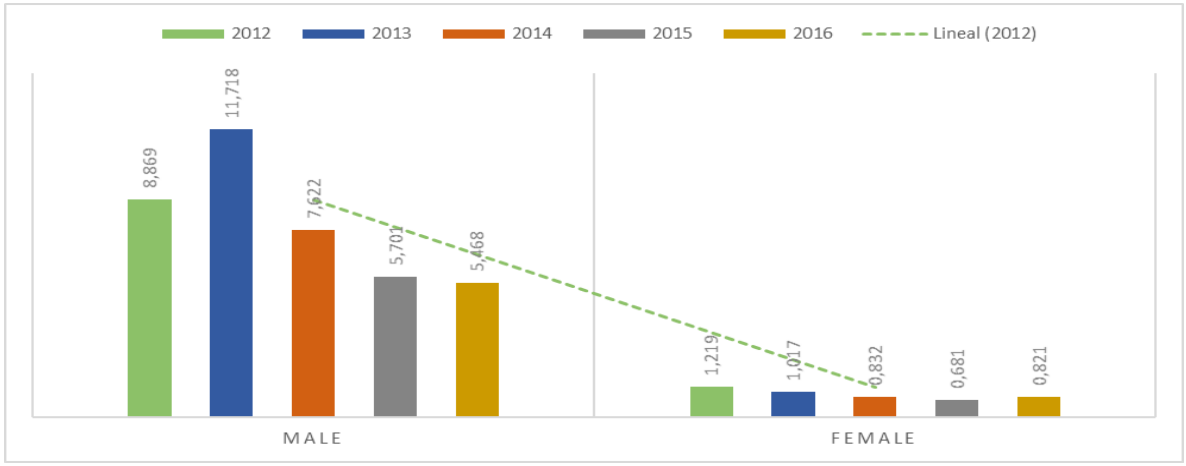
Source: Adapted by author from Export Statistics, PROCOMER, based on Central Bank statistics

5. EMPLOYMENT: CRUSTACEANS

In relation to employment, the graph on the right shows the total employment rates, that includes fishing activity in general but also aquaculture and manufacturing. There is a greater employability of men, where in 2013, it reached the highest value with a total of 11,718. Meanwhile, in 2012, it was the most women employed, with a total of 1,219.

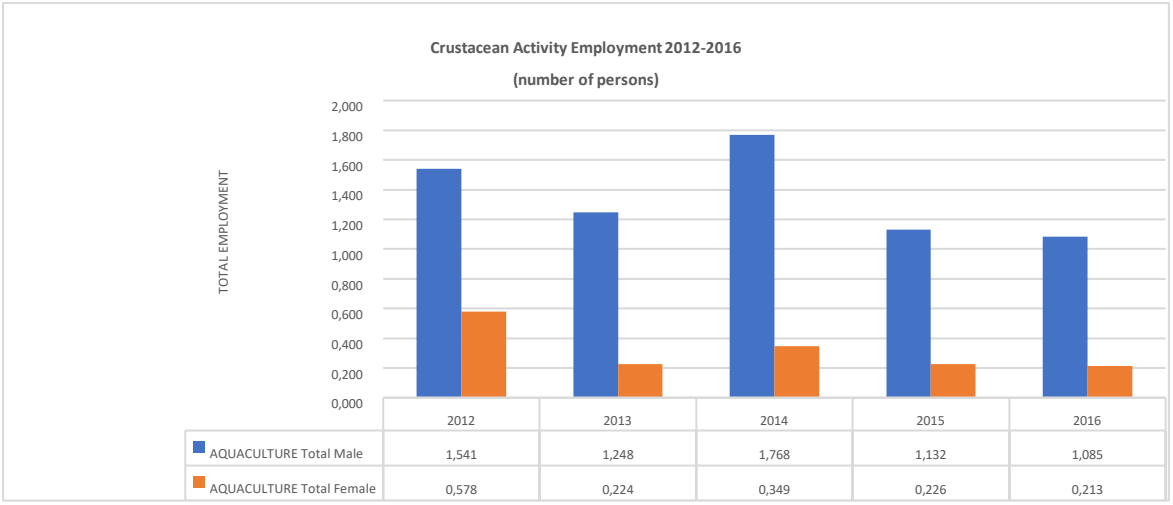
In the specific case of crustacean activity, the total for 2016 includes 1,085 men and 213 women (see below).

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



In the specific case of the crustacean and aquaculture activities the workforce is mostly male, however, it has been trending downwards, and employed 1,085 men in 2016, below the number in 2012 with 1,541 and 2014 with 1,768 (the highest value of the last 6 years). According to the data, women have little participation in the activity, and although there was a rebound in the total employability of 349 women for 2014, it was reduced to 213 women employees for 2016. They are unskilled workers with low minimum wages, located, in poor rural areas with a large number of social problems.

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



6. Relevant National and International Regulatory framework[6]

In the specific case of crustaceans, the following national regulations are established and are considered of high importance:

- Law No. 8495, General Law of the National Animal Health Service. (may, 2016)
- Law N ° 7554, Organic Law of the Environment. (October, 1995)
- Regulation on Procedures of SETENA, No. 25705-MINAE (March, 1998)
- Law No. 4240, Urban Planning Law. (November 1968)
- Law No. 5395, General Health Law.(May, 1998)
- Law N ° 7317, Wildlife Conservation Law.(October, 1992)
- Regulation of Reuse and Discharge of Wastewater. No. 33601-S-MINAE.(June, 2004)
- Executive Decree No. 34859-MAG, General Regulation for the Granting of the Veterinary Operation Certificates.(October, 2008)
- 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)
- Executive Decree Nº. 18696 MAG-S. Regulation of Veterinary Inspection on Fishery Products. (September, 2000)
- 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)

In relation to the regulatory tools of which Costa Rica is a party to, specifically agreements, we can cite some such as (source COMEX and Costa Rica Ministry of Foreign Affairs):

1. International Trade Treaties:
    a. World Trade Organisation (WTO) and goods and services related Uruguay Round Agreements (1994)
    b. Free Trade Agreement among Central America – United States and Dominican Republic (2012)
    c. Association Agreement between Central America and the European Union (2012)
    d. Member of the Central American Integration System (SICA)
    e. Various Free Trade Agreements with EFTA, CARICOM, Canada, Chile, China, Colombia, México, Peru, Dominican Republican and Singapore
2. Law of the Sea (for further analysis of the law of the sea and multilateral environmental agreements, see study on the law of the sea, regulatory and governance framework in selected ocean-based sectors by UNCTAD-DOALOS (2018).
    a. Convention on the Law of the Sea (1982)
    b. The United Nations Fish Stocks Agreement (1995)
3. Aquaculture:
    a. FAO Technical guidelines on Aquaculture certification

[6] NOTE: 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”, prepared by Mariamalia Rodriguez Chaves as a consultancy under the OETS Project.

4. Environment:
    a. Convention on Biological Diversity (1992)
    b. Convention on International Trade in Endangered Species of Wild Fauna and Flora (1975)
    c. Convention on the Conservation of Migratory Species of Wild Animals (1979)

ABBREVIATIONS

CENADA	National Supply Central
CIF	Cost, Insurance and Freight
COMEX	Costa Rican Ministry of Foreign Trade
DOALOS	Division for Ocean Affairs and the Law of the Sea of the Office of Legal Affairs
FAO	Food and Agricultural Organisation
INCOPESCA	Costa Rican Fishing and Aquiculture Institute
LDC´s	Least Developed Countries
OECD	Organization for Economic Co-operation and Development
OETS	Oceans Economy and Trade Strategies
PROCOMER	Costa Rican Export Promotion Agency
PCI	Product Complexity Index
RCA	Revealed Comparative Advantage
SIDS	Small Island Development States
UNCLOS	United Nations Convention on the Law of the Sea
UNCTAD	United Nations Conference on Trade and Development
UNDP	United Nations Development Programme
UNFSA	United Nations Fish Stock Agreement
WTO	World Trade Organisation

Appendix 1: HS6 Trade Metric

H6S	Sector	Product
30611	Crustaceans	Crustaceans-- Rock lobster and other sea crawfish
30612	Crustaceans	Crustaceans-- Lobsters
30614	Crustaceans	Crustaceans-- Crabs
30616	Crustaceans	Crustaceans-- Cold-water shrimps and prawns
30617	Crustaceans	Crustaceans-- Other shrimps and prawns
30619	Crustaceans	Crustaceans-- Other, including flours, meals and pellets of crustaceans
30624	Crustaceans	Crustaceans-- Crabs
30626	Crustaceans	Crustaceans-- Cold-water shrimps and prawns
30627	Crustaceans	Crustaceans-- Other shrimps and prawns
30629	Crustaceans	Crustaceans-- Other, including flours, meals and pellets of crustaceans

PRODUCT	TARIFF CODE	2014		2015		2016		2017	
		Miles USD	Tonnes	Miles USD	Tonnes	Miles USD	Tonnes	Miles USD	Tonnes
CALAMARES BLANCOS Y TORPEDOS CONGELADOS	0306169000	ND	ND	0	0	ND	ND	ND	ND
	0306171100	2 399	272	ND	ND	ND	ND	ND	ND
	030617110010	ND	ND	ND	ND	ND	ND	11 355	1 038
	030617110090	ND	ND	ND	ND	ND	ND	1 854	254
	0306171110	ND	ND	1	0	1 513	128	ND	ND
	0306171190	ND	ND	1 161	173	1 239	184	ND	ND
	0306171200	163	15	ND	ND	ND	ND	ND	ND
	0306171300	15	1	ND	ND	ND	ND	ND	ND
	030617190020	ND	ND	ND	ND	ND	ND	19	3
	030617190090	ND	ND		ND	ND	ND	38	5
	0306171920	218	33	17	2	0	0	ND	ND
	0306171990	1 498	112	279	19	ND	ND	ND	ND
	0306269090	563	43	712	55	658	67	ND	ND
	030635900000	ND	ND	ND	ND	ND	ND	731	56
CRUSTÁCEOS COMESTIBLES	0306271000	ND	ND	42	11	ND	ND	ND	ND
	0306279919	ND	ND	ND	ND	ND	ND	ND	ND
	0306279999	20	4	5	0	4	0	ND	ND
DECÁPODOS Y OTROS LANGOSTINOS	0306179100	ND	ND	ND		ND	ND	ND	ND
	0306179900	10 939	961	13 156	1 205	8 188	656	ND	ND

In the case of crustaceans, it is evident according to the data above, that the products Other shrimps and prawns (30617 and 30627), are those with the highest export values for the country. Similarly, however, it has very high import values; therefore, as the data demonstrates, the revealed comparative advantage coefficient is not relevant for Costa Rica. Other data also confirms this downward trend; for example, the value opportunity as well as the profit opportunity show a downward trend over the last two years. However, the annual growth in demand from the global markets is positive. Although not high enough, there is growth in demand for the product to enable expansion in capture (if within national management plans and MSY) and aquaculture production.

BIBLIOGRAPHY.

- Anuario. Estadísticas de Comercio Exterior (2013). Promotora de Comercio Exterior de Costa Rica. ISSN: 2215-2342. Mayo, 2014
- Anuario. Estadísticas de Comercio Exterior (2014). Promotora de Comercio Exterior de Costa Rica. ISSN: 2215-2342. Mayo, 2015.
- Anuario. Estadísticas de Comercio Exterior (2015). Promotora de Comercio Exterior de Costa Rica. ISSN: 2215-2342. Mayo, 2016
- Anuario. Estadísticas de Comercio Exterior (2016). Promotora de Comercio Exterior de Costa Rica. ISSN: 2215-2342. Mayo, 2017.
- Anuario. Estadísticas de Comercio Exterior (2017). Promotora de Comercio Exterior de Costa Rica. ISSN: 2215-2342. Mayo, 2018.
- Banco Central de Costa Rica. Online https://www.bccr.fi.cr/SitePages/default.aspx Revised, 10 setember, 2018.
- Estado de Costa Rica (2000). La Gaceta número 85. Sistema de seguimiento y verificación del Atún capturado con y sin mortalidad de Delfines. 4 de Mayo del 2000.
- INCOPESCA (2015). Modelo de Gestión para la Certificación de Origen y Artes de Pesca Amigables con el Ambiente. Departamento de Mercadeo. Recopilador Rolando Ramírez Villalobos PhD.
- INCOPESCA-PRECIOS DE CENADA (2010-2017). Bases de datos estadísticos proporcionadas por las Instituciones para los sectores bajo consulta.
- Instituto Nacional de Estadísticas y Censos, INEC (2018). Datos estadísticos sobre empleo y actividad económica sobre los sectores bajo consulta.
- Jimenez, J.A; E. Ross Salazar (2017). Las pesquerías de atún en Costa Rica. Una oportunidad para el Desarrollo. Fundación Marviva, San José, Costa Rica. 58pp.
- La Gaceta. Diario Oficial (2016). AJDIP/328-2016. Establecimiento de tarifas para el año 2017 y se mantenían al año 2017. Lunes, 7 de noviembre del 2016. Imprenta Nacional La Uruca, San José, C. R.
- Ministerio de Trabajo y Seguridad Social, MTSS (2018). Datos sobre salarios. Salarios mínimos del sector privado. Departamento de salarios.
- Online. Catch Concepts: Diagrammatic Presentation. Revised in: (http://www.fao.org/3/bt981t/bt981t.pdf). Revised 22 may, 2018.
- Online: http://files.snitcr.go.cr/Visor/limites/MAPA%20OFICIAL%20CONTINENTAL%20INSULAR%20Y%20MARITIMO.pdf Revised 30 August, 2018.
- Online: http://www.fao.org/docrep/011/i0327e/I0327E04.htm Revised 30 August, 2018.
- Salarios Mínimos Sector Privado año 2018, Decreto Nº40743-MTSS, publicado en La Gaceta 228, Alcance N°291 del 01 de diciembre del 2017. Rige 1º de enero del 2018.
- SENASA (s.f). Buenas Prácticas para establecimientos de Producción Primaria de Acuicultura en Camarón. Programa Nacional de Sanidad Acuícola.
- UNCTAD (2016). Sustainable Fisheries: International Trade. Trade Policy and Regulatory Issues. UNCTAD/WEB/DITC/TED/2015/5 UNITED NATIONS PUBLICATION Copyright © United Nations, 2016 All rights reserved.
- UNCTAD (2017). Bases de Datos COMTRADE. Proporcionada por UNCTAD.