Evidence-based and policy coherent Oceans Economy and Trade Strategies[1]. Sector data factsheet[2]: Belize

Aquaculture

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 Belize 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
Marine fisheries	**Aquaculture**	Seafood manufacturing	Tourism

DEFINITION

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.

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

Aquaculture in Belize formally began in 1982 with the development of pilot programmes led by the private sector. The production is now largely dominated by Pacific White Shrimp (*Penaeus vannamei*) farming with both investment inside and markets outside of the country driven by strong continuous demand regardless of price variation. The Whiteleg Shrimp production accounted for 99.5 percent of aquaculture production in 2014 and about 97 percent in 2016 after the production collapsed dues to Early Mortality Syndrome (EMS) disease. In 2017, shrimp exports represented 98.8% of all aquaculture exports (UNCTAD, 2018). There are some investments in large scale tilapia (*Oreochromis niloticus*) and some family scale tilapia farming (FAO, 2016). In

[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).

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2013, a Tilapia hatchery centre was opened under a bilateral technical cooperation project, to support growth in this sector.

Belize aquaculture products have been exported within the region to the United States of America, Mexico, Guatemala, Trinidad and Tobago, Jamaica. Further away Great Britain, Germany and Spain have also been important destination markets over the last few years. Belizean products even reached some Asian markets with dynamic domestic demand, namely Thailand and Vietnam. Note that both countries are also dynamic exporters of similar aquaculture products.

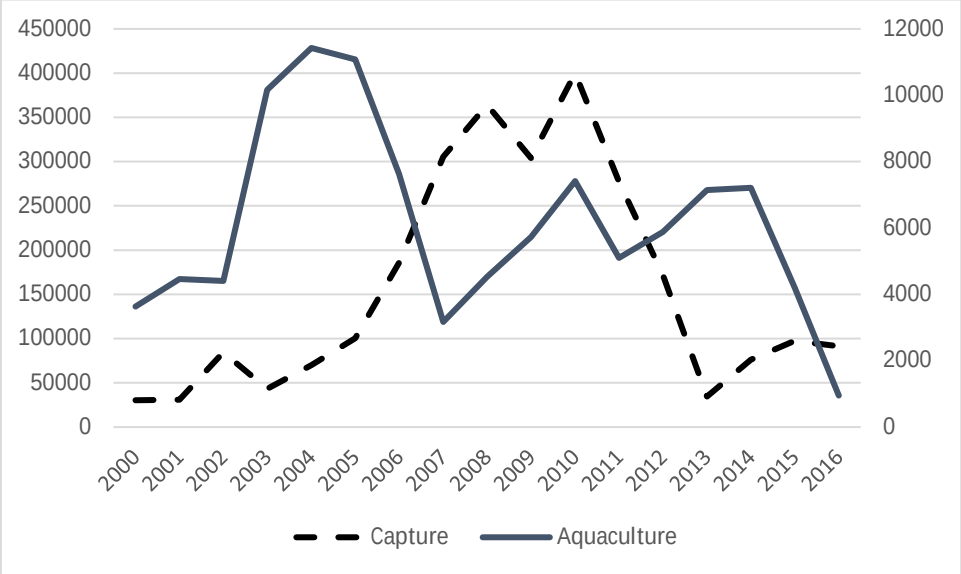
Aquaculture production still represents a small share of total fish production. Its share in total production has varied between the 19 percent recorded in 2003 and 1 percent recorded in 2016. The last years are not necessarily representative of longer terms tendency due to the outbreak of the EMS shrimp disease in 2015.

As to the external sector, aquaculture products represented more than tree fourth of fish exports in 2014. In 2017, they still represented 25 despite the extraordinary decrease in production. The reason is twofold. First prices of aquaculture products such as shrimps are relatively high compared to other more substitutable products. Second, species groups such as Tuna or Sardines or Mackerels directly landed in foreign countries are not counted as exports from Belize.

Because of the EMS episode, imports of shrimps surged between 2014 and 2017. About 25 tonnes overall were imported from the region during these three years. This indicates that some domestic consumption exists and may be expanded further in the future. It is however impossible to identify whether consumption is demanded by local people or by tourists.

In global perspective, Belize's farmed shrimps' exports are still relatively modest and even more since outbreak the EMS shrimp disease. Between 2010 and 2015 Belize exports share varied between 0.1 percent and 0.2 percent in value terms and between 0.1 and 0.7 in quantity terms. After 2015 Belize exports have not represented more than 0.03 percent of World exports in value terms, and 0.06 percent in quantity terms. Largest exporters of frozen or not frozen shrimps are India, Ecuador, Indonesia, Thailand, Argentina, Vietnam and China. They represent all together about 70 percent of world exports in both value and quantity terms.

FIGURE 1: AQUACULTURE AND CAPTURE PRODUCTION (TONNES)



SOURCE: FAO FISHSTAT

Apart from shrimp farming, Belize has also grown in tilapia and seaweed farming with opportunities that exist to produce and export snapper, grouper, red drum, octopus and sea cucumber among other fisheries commodities.

2. BELIZE: THE AQUACULTURE CONTEXT

Land: 22,966 km²
Coasts length: 386 km
Economic structure of the GDP (2016): agriculture and fisheries made 11.7 % of GDP, industry 14.4 % and services 59.9 %. Tourism alone represents almost one fourth of GDP.
Fisheries and aquaculture as a percentage of GDP: 3%
Main aquaculture sites: Most aquaculture farms in Belize can be found om the southern half of the country in areas such as Dangriga Town, Riversdale, Monkey River, Ladyville and South of Belize City.

The Fisheries and Aquaculture industry in Belize also benefits from ideal climatic conditions with mean monthly maxima air temperatures ranging from 33° C / 91° F in the summer to 28° C / 82° F in the winter and mean monthly minima temperatures ranging from 16° C / 61° F in the winter to 24° C / 75° F in the summer. Warm sea water temperatures off the coast also open the doors for many investment opportunities in the industry with Belize being sub-divided into two (2) climatic systems with sub-tropical conditions in the northern lowlands and central inland areas, and tropical conditions in the southern and coastal areas. This increases the prospect for product diversification. However, Belize's aquaculture industry is highly vulnerable to adverse weather and disease outbreaks, in an area with increasingly unseasonal weather patterns and high risk of strengthened hurricane and tropical storm activity. Droughts and flooding are increasingly affecting aquaculture farm outputs as underlined in the Belize National Biodiversity Strategy and Action Plan (NBSAP, 2016 – 2020).

The environmental impact of aquaculture is important as it is an industry intensive in water, land, diverse food inputs, labour and ecosystem services. Belize has prepared a National Strategy and Action Plan for the development of freshwater aquaculture in Belize, with emphasis on tilapia farming. In social terms, aquaculture can be a significant job creator in rural Belize.

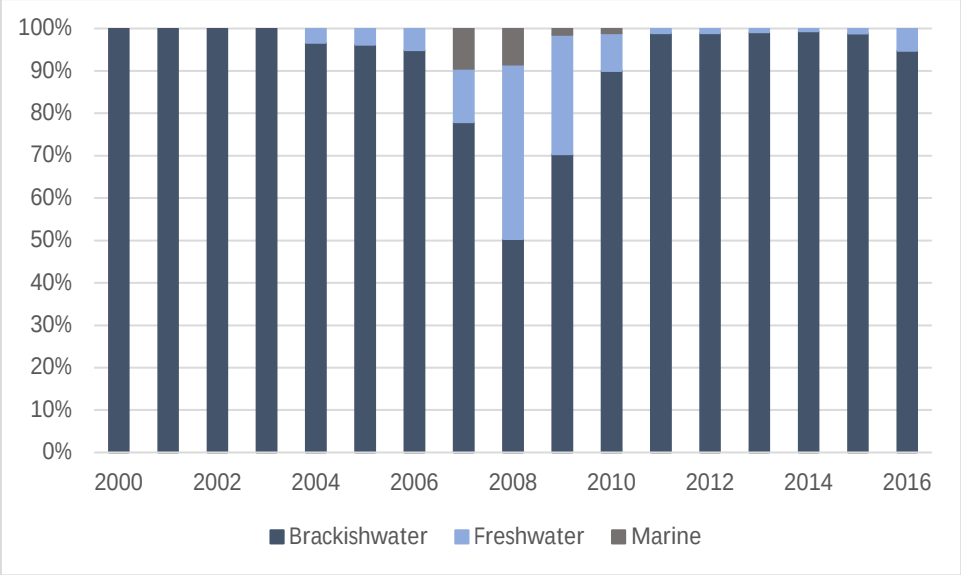
FAO is promoting the Caribbean Blue Revolution Initiative, which could be of potential benefit to Belize through country participation. The aim of the Initiative, which is to be funded by PetroCaribe, is to double fish production by Eastern Caribbean States over the next ten years through the intensification of aquaculture.[3]

3. PRODUCTION

The species currently farmed in Belize are the Pacific White Shrimp (*Litopenaeus vanammei*) and the Nile Tilapia (*Oreochromis niloticus*). Pacific White Shrimp remains by far the most lucrative aquaculture product (about 97 percent of value generated by aquaculture in 2016) despite the collapse in its production in 2015. As depicted in Figure 2 most of the production remains in brakishwater (briny water with more salinity that fresh water) environment due to the predominance of Pacific White shrimp production. However, freshwater is used for Tilapia farming and fresh water shrimp farming although both remain significantly modest with respect to shrimp production.

[3] See http://www.fao.org/jamaica-bahamas-and-belize/fao-in-jamaica-bahamas-and-belize/en/ for a full description of the project in progress.

FIGURE 2: AQUACULTURE PRODUCTION BY CULTURE ENVIRONMENT



SOURCE: FAO FISHSTAT (2018)

Shrimp production has been historically about 10 tonnes a year as shown in Figure 3. Because of the EMS, production has dropped dramatically in 2015 and 2016. Consequently, production value fell from 28.6 million USD in 2014 to 3.6 million USD in 2016. It is now known that EMS is caused by a bacterial agent, which is transmitted orally, colonizes the shrimp gastrointestinal tract and produces a toxin that causes tissue destruction and dysfunction of the shrimp digestive organ known as the hepatopancreas. Actions to recover former pre-EMS production level have been taken but trade trends presented below do not show any strong recovery yet. The major Shrimp farms are located along the coastal plain of Belize and stretches from the just north of Dangriga in its most northerly extent, to a little south of the Big Creek Port in its southerly extent. A remarkable achievement of the sector has been the certification, based on socially responsible and environmentally sustainable farming practices, by the Aquaculture Stewardship Council (ASC) of the members of Belize's Shrimp Growers Association production, which represents about 90% of the country's shrimp production.[4] Belize has thus become the first country in the world to be awarded a certification of this type for such a large portion of its national production.

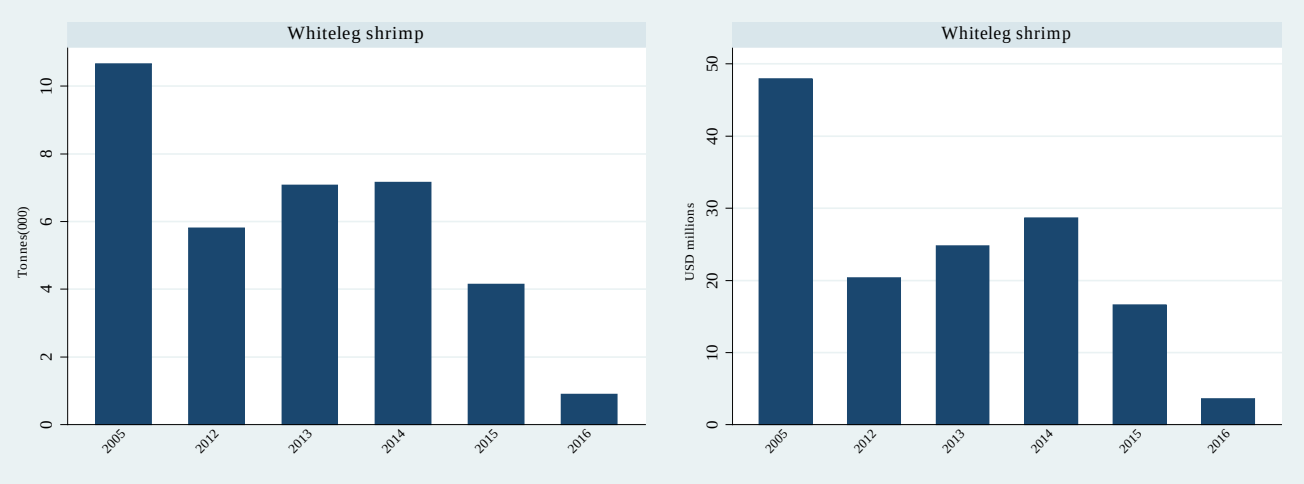
As shown in Figure 4 below, Tilapia production back in 2005 was above 400 tonnes but fell drastically around 2010. Production has remained somewhat constant since 2014 at about 50 tonnes and is worth about 125,000 USD.

Cobia (*Rachycentron canadum*) has also been in aquaculture from 2007 to 2010. Its production picked at 384 tonnes in 2008 for a value of about 2.3 million USD. Further back in time other species have been farmed in Belize such as ornamental African Rift Lake Cichlids (e.g. *Haplochromis and Pseudochromis*).

[4] See http://www.wwfca.org/en/belize_aquaculture.cfm for a full report.

FIGURE 3: WHITE SHRIMP AQUACULTURE PRODUCTION 2005, 2012-2016

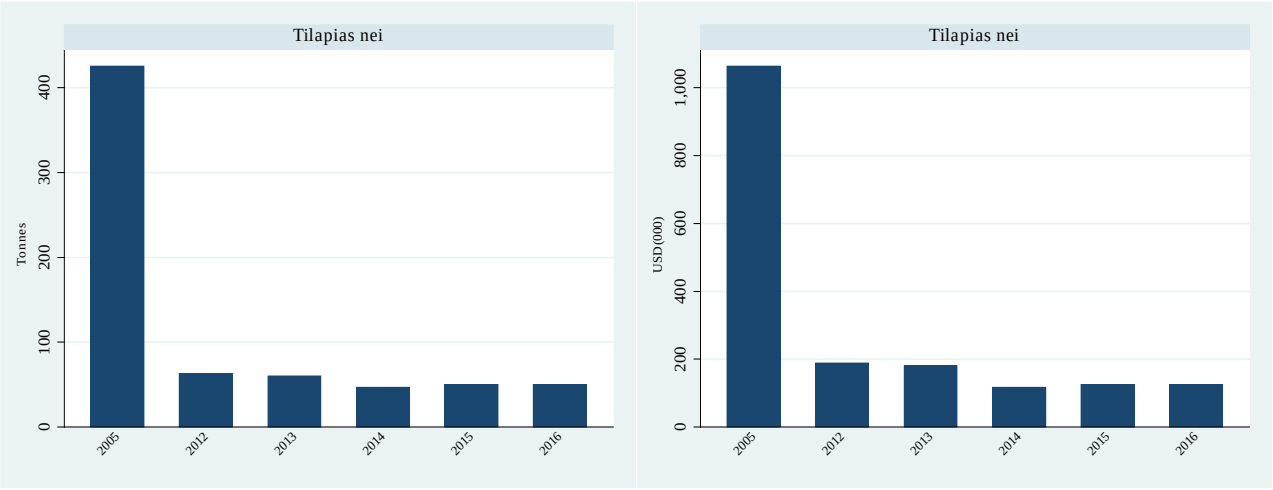
(Quantity) **(Value)**



SOURCE : FAO FISHSTAT (2018)

FIGURE 4: TILAPIAS AQUACULTURE PRODUCTION 2005, 2012-2016

(Quantity) **(Value)**



SOURCE: FAO FISHSTAT (2018)

Beside fish species some aquatic plants have been farmed recently. The production of red seaweeds started in 2012. Belize's coastal waters are a perfect ecosystem for such a farm: the water's depth and temperature provide enough nutrients to sustain repeated crops. Squid, lobster, octopus, and fish breed and feed there. Belize has the second-longest reef in the world, and with reefs under pressure from climate change and fishing, this is one way to promote biodiversity. As reported in Figure 5 production reached almost 10 tonnes in 2013 to stabilize at about three tonnes in the following years. Production value remains quite modest at about 6,000

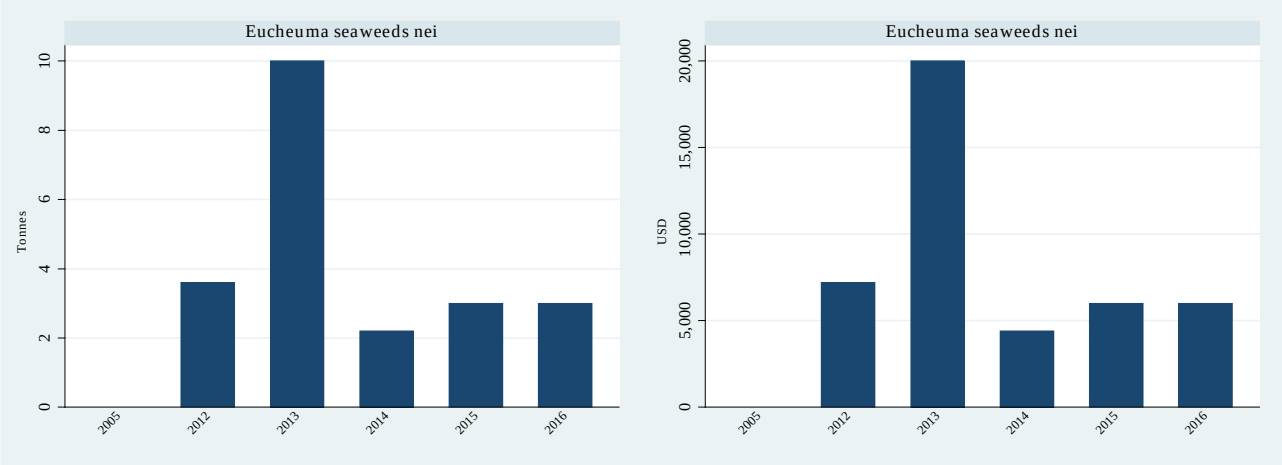
USD. Growth potential should not be underestimated especially in a context of increasing demographic pressure on traditional crops production around the word. Moreover, no fresh water is necessary in the farming of seaweeds.

Sea cucumber farming may start shortly. Harvesting took place for two decades or so in Belizean waters. The fishery included two main species, *Holothuria mexicana* and *Isostichopus badionotus*. In 2009, Belizean sea cucumber started being sold on international markets. However, due to overfishing the entire fishery was closed in 2017. But sea cucumber remains highly demanded worldwide with popularity in Asia stemming from the dried product's unique components that serve different applications in food and medicine and opportunities based on previous trade relationships do exist. Every year billions of larvae and millions of juveniles are successfully grown in aquaculture facilities most of them being located in Asia and new initiatives are booming also in other parts of the world. The core species that have so far been successfully cultivated are the *Apostichopus japonicus*, the *Holothuria scabra* and the *Isostichopus fuscus*.[5]

As argued by Beltraide, the Belize Trade and Investment Development Service, some additional species could be farmed in Belize. These include native stocks such as the "River Lobster" (*Macrobrachium spp*.), Blue-eye Catfish (*Ictalurus furcatus*), Common Snook (*Centropomus undecimalis*), Mutton Snapper (*Lutjanus analis*), Nassau Grouper (*Epinephelus striatus*), Blue Crab (*Callinectes sapidus*), or some exotic species such as the Australian Freshwater Lobster (*Cherax quadricarinatus*), channel Catfish (*Ictalurus punctatus*), Flounder (*Paralichthyidae spp*.), American Oyster (Crassostrea virginica), Malaysian Prawn *(Macrobrachium rosembergii*), Florida Pompano (*Trachinotus carolinus*). A closer look at their respective demand on international markets could be relevant in a more detailed analysis.

FIGURE 5: RED SEAWEEDS AQUACULTURE PRODUCTION 2005, 2012-2016

(Quantity) **(Value)**



SOURCE : FAO FISHSTAT (2018)

[5] See for a more detailed discussion "Sea cucumber aquaculture: Hatchery production, juvenile growth and industry challenges," available from: https://www.researchgate.net/publication/268746754_Sea_cucumber_aquaculture_Hatchery_production_juvenile_growth_and_industry_challenges.

4. TRADE

4.1. OVERVIEW

With shrimp production representing more than 97 percent of total aquaculture production tendencies reported in Table 1 are everything but surprising. Exports collapsed between 2014 and 2016 due to the EMS in shrimp production and its repercussion on certification. Optimistic projections pointed to 20 million USD of export earnings by the end of 2017. Less than a fifth of that amount was eventually cashed in by the external sector. As a consequence, aquaculture exports counted for slightly more than 2 percent of total exports in 2017 against almost 15 percent three years before. The number of products exported, and markets reached have also declined again as a consequence of the strong contraction of the shrimp sector and of the suspension of certification for some farms.

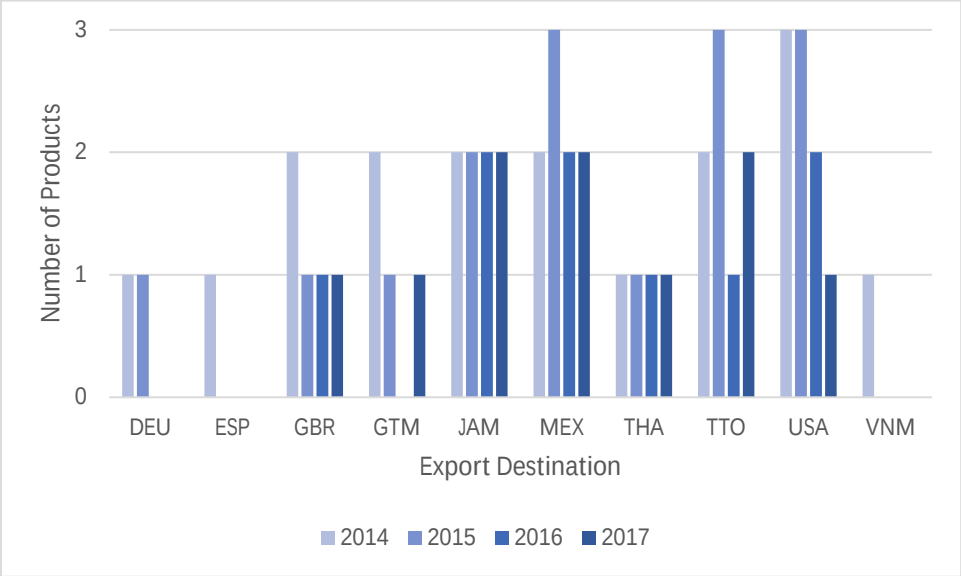
TABLE 1: EXPORTS, NUMBER OF PRODUCTS, NUMBER OF DESTINATIONS 2014-2017

	2014	2015	2016	2017
EXPORTS VALUE (USD MILLIONS)	44.1	30.2	6.4	4.6
EXPORTS QTY (TONNES)	14350.8	10188.3	1624.1	1286.8
NUMBER OF DESTINATIONS	10	8	6	7
NUMBER OF PRODUCTS	3	6	4	3
TOTAL EXPORTS (USD MILLIONS)	307	268	201	223
SHARE IN TOTAL	14.4%	11.3%	3.2%	2.1%

SOURCE: COMTRADE IN WITS (EXPORTS DATA) (2018)
NOTE: RELEVANT HS CODES FOR AQUACULTURE PRODUCTS ARE AROUND FRESH OR FROZEN SHRIMPS AND TILAPIA AS WELL AS FILLETS AS SHOWN IN TABLE A1 OF THE APPENDIX.

Figure 6 reports export destinations for aquaculture products between 2014 and 2017. We clearly observe some discontinuity in either 2015 or 2016. The same is true for the number of products reaching the different markets.

FIGURE 6: NUMBER OF PRODUCTS PER DESTINATION: 2014-2017

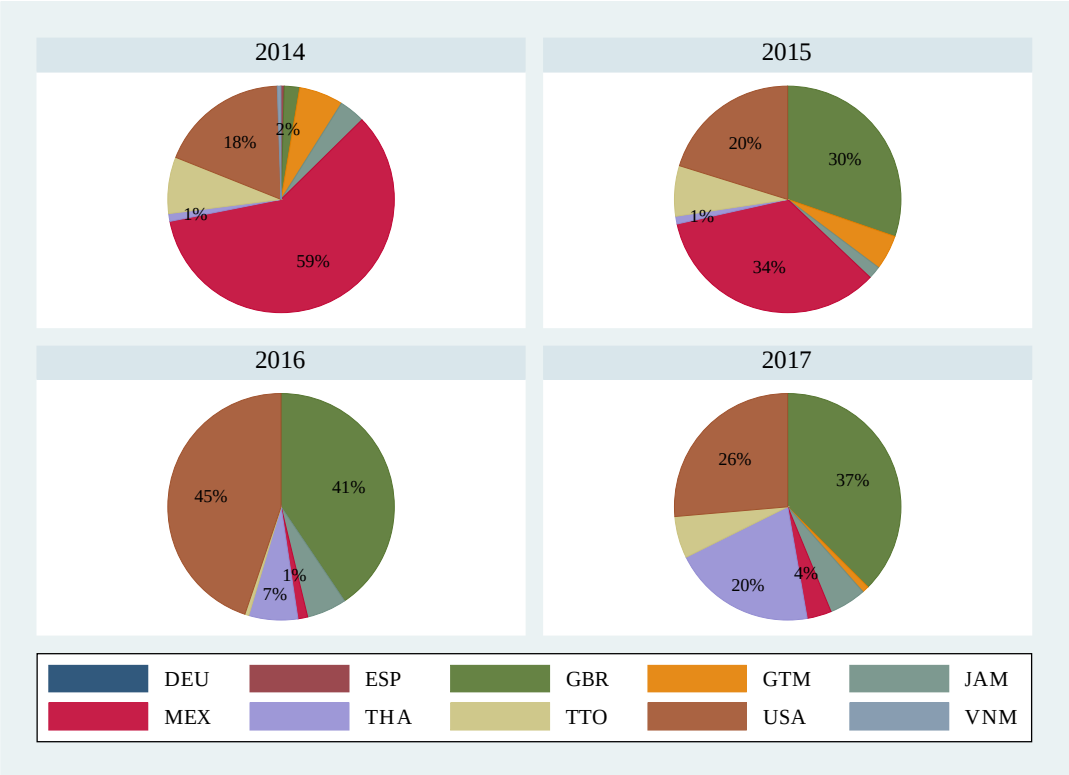


SOURCE: COMTRADE IN WITS (EXPORTS DATA) (2018)

NOTE: RELEVANT HS CODES FOR AQUACULTURE PRODUCTS ARE AROUND FRESH OR FROZEN SHRIMPS AND TILAPIA AS WELL AS FILLETS AS SHOWN IN TABLE A1 OF THE APPENDIX.

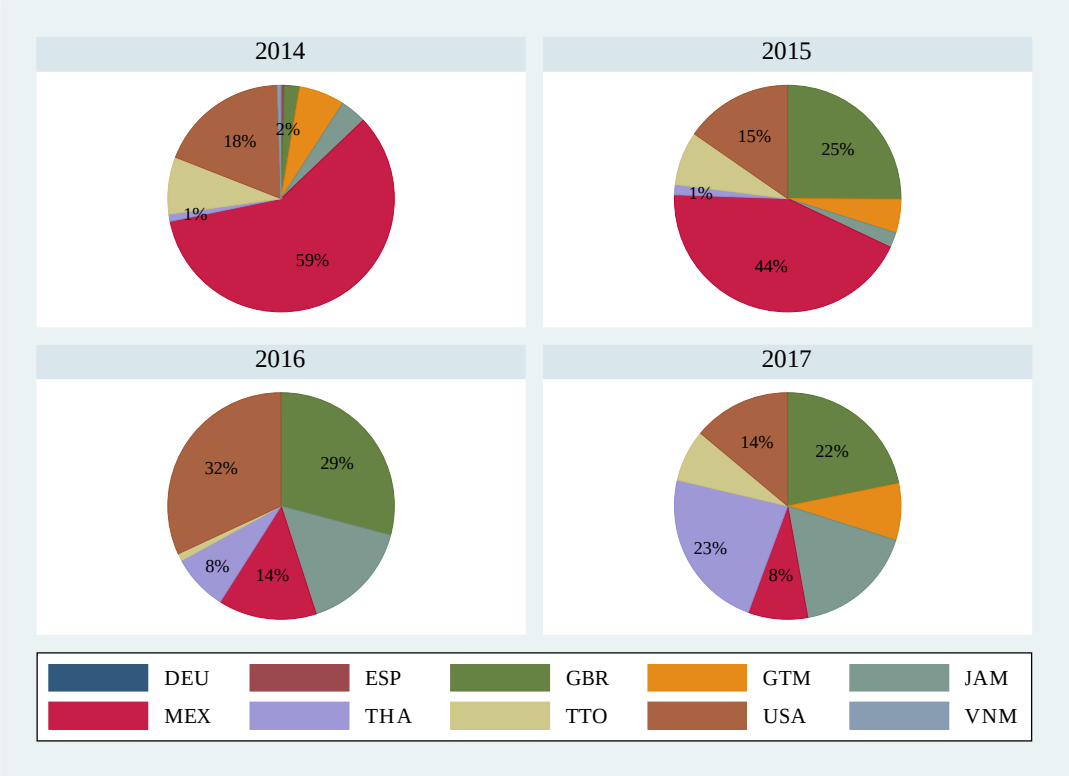
Figure 7 and Figure 8 point to a drastic re-composition of Belize export destinations basket. Major destinations in 2017 in value terms are the Great Britain, Thailand and the USA representing more than 30 percent of all aquaculture exports. In 2014 Mexico was holding the largest share with about 60 percent. In quantity terms, Thailand is the largest export market in 2017 with a share equal to 23 percent while Mexico occupied that position in 2014 with again about 60 percent of all Belize export quantity. Jamaica appears as the third important destination in terms of quantity with more than 20 percent but counting for less than 7 percent in terms of value.

FIGURE 7: EXPORT VALUE (SHARE) BY DESTINATION: 2014-2017



SOURCE: COMTRADE IN WITS (EXPORTS DATA)

FIGURE 8: EXPORT QUANTITY (SHARE) BY DESTINATION: 2014-2017

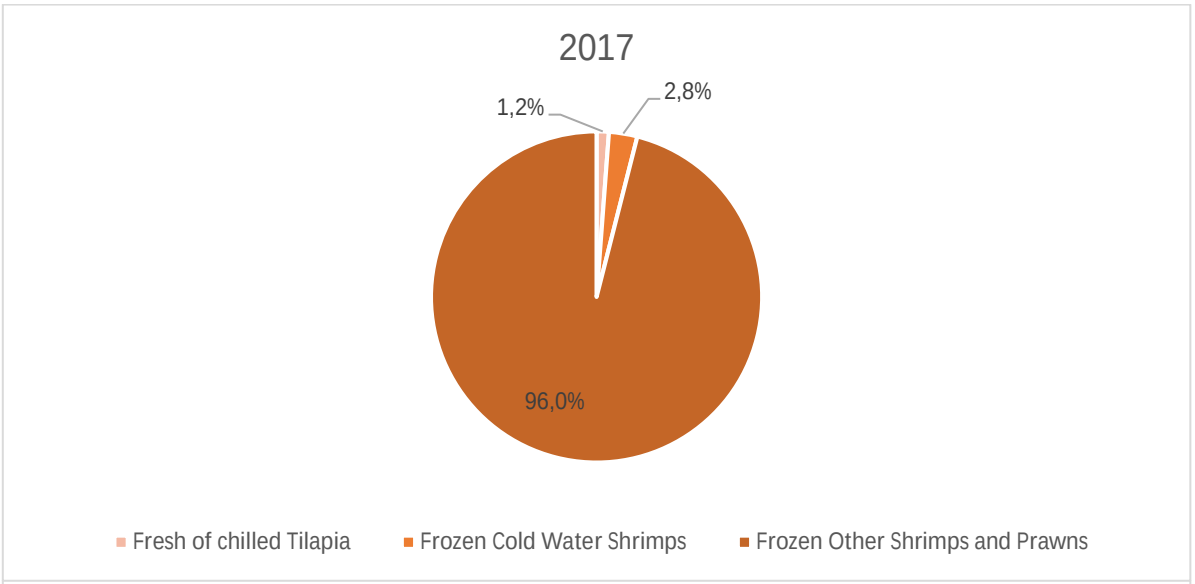


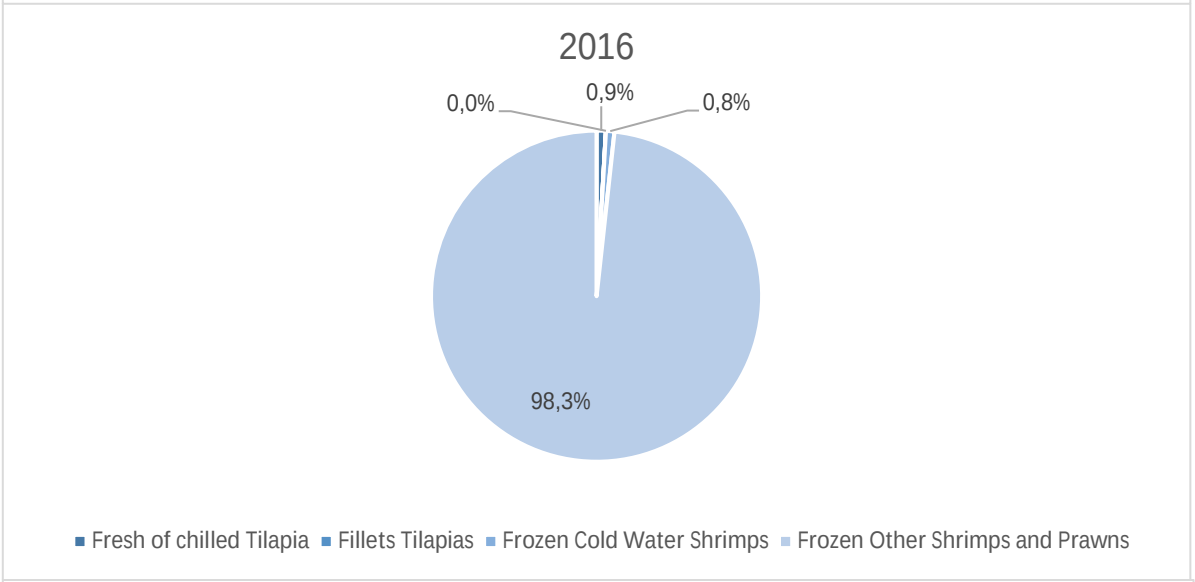
SOURCE: COMTRADE IN WITS (EXPORTS DATA)

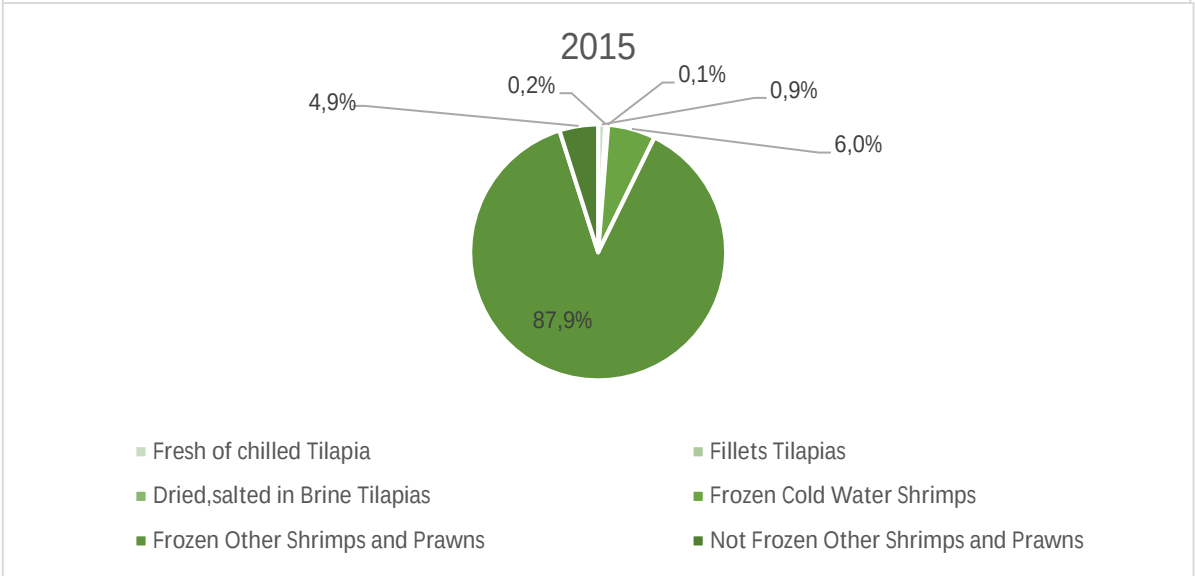
4.2. SUPPLY CAPACITIES

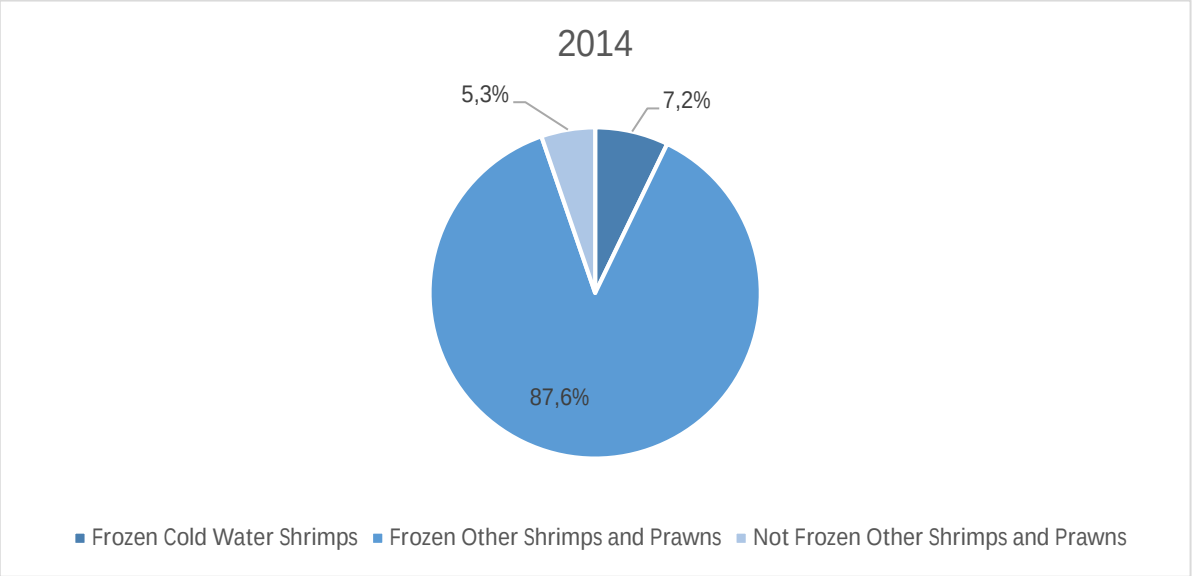
Figure 9 shows the composition of exports of aquaculture products as defined in the 2012 version of the HS classification. The predominance of shrimp products is obvious. However, three facts may be worth underlined. First, Tilapia was exported as fresh or chilled since 2015. Tilapias fillets have been exported in 2015 and 2016 but not in 2017. Second, white shrimps were exported only as frozen after 2015. Finally, cold-water shrimps and prawns are declared to be exported while they do not necessarily appear amongst the species found in production data.

FIGURE 9: EXPORTED AQUACULTURE PRODUCTS


2017
1,2%
2,8%
96,0%
Fresh of chilled Tilapia
Frozen Cold Water Shrimps
Frozen Other Shrimps and Prawns


2016
0,0%
0,9%
0,8%
98,3%
Fresh of chilled Tilapia
Fillets Tilapias
Frozen Cold Water Shrimps
Frozen Other Shrimps and Prawns

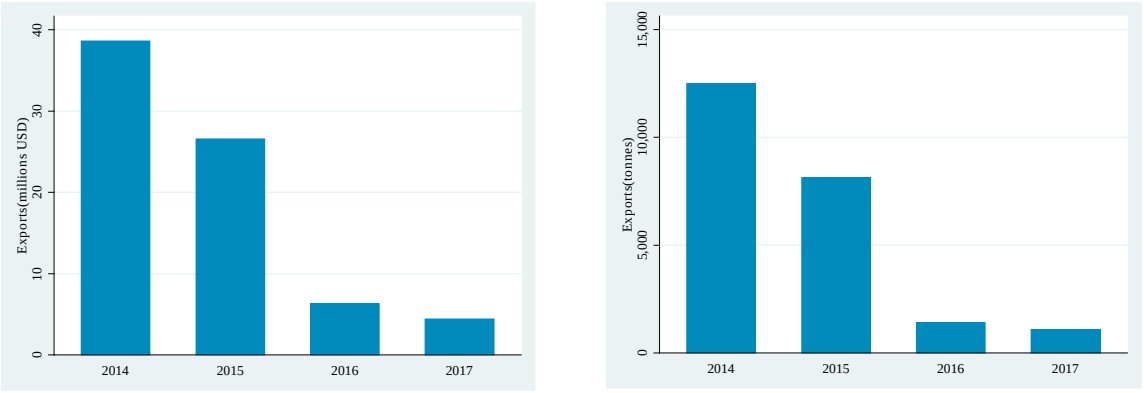

2015
4,9%
0,2%
0,1%
0,9%
6,0%
87,9%
Fresh of chilled Tilapia
Fillets Tilapias
Dried,salted in Brine Tilapias
Frozen Cold Water Shrimps
Frozen Other Shrimps and Prawns
Not Frozen Other Shrimps and Prawns



SOURCE: COMTRADE IN WITS (EXPORTS DATA)

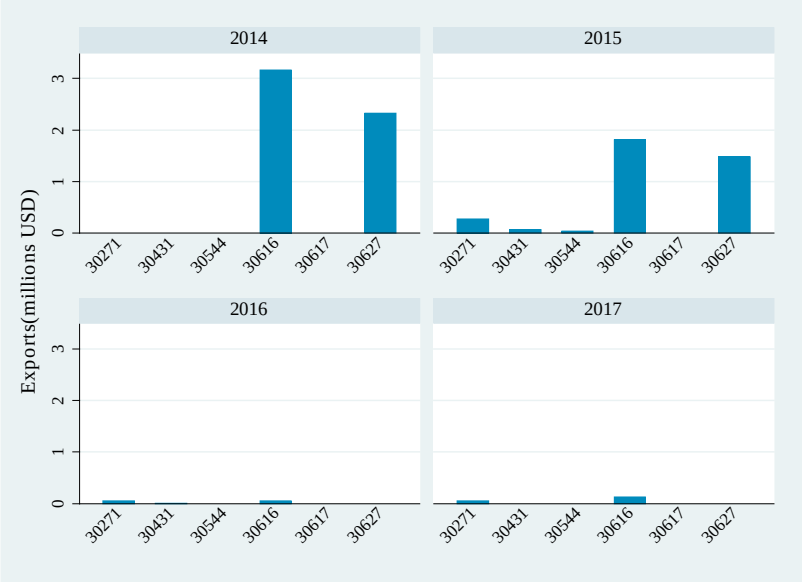
Figure 10 is a precise relfection of what occurs with production of shrimps. With the outbreak of EMS in 2015 exports collpased in the following two years and the tendency dos no appear to be fully reversed yet. This represents a major loss in exports revenues and clearly call not only for a long lasting recovery strategy but also for the definition of a sutainable diversification plan of actions. This is corroborated by Figure 11 which reports the evolution of exports in aquaculture products other than frozen White shrimps. Only Tilapia prodcuts have been exported besides shrimps products. There as well we observe a non insignificant decrease in exports both in quantity and in value terms which reflects an inflection in domestic production. The possible sources of such trend are not necessarily clearly identiifed. Disease outbreak could be the main reason but there could be other factors to be analysed as tilapia was not affected by the EMS. Increased internal demand or fall in international demand or prices could have also been factors in this decline. Revenue from Tilapia exports remains tiny and the sector may desserve specific attention to identify sustainable expansion strategies.

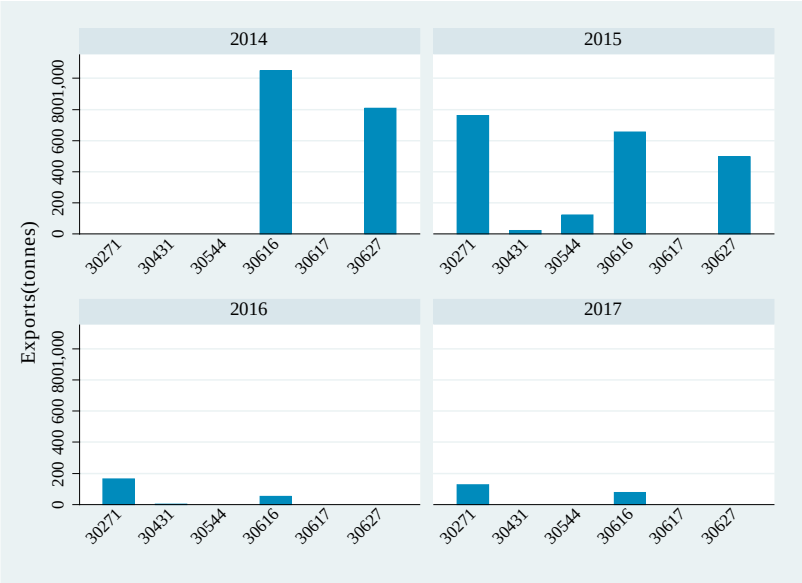
FIGURE 10: FROZEN COLD WATER SHRIMPS EXPORTS (VALUE AND QUANTITY)



SOURCE: COMTRADE IN WITS (EXPORTS DATA) (2018)

FIGURE 11: OTHER AQUACULTURE PRODUCTS EXPORTS (VALUE AND QUANTITY)





SOURCE: COMTRADE IN WITS (EXPORTS DATA) (2018)

FIGURE 12: EXPORTS PER PRODUCT-DESTINATION (MILLIONS USD)

SOURCE: COMTRADE IN WITS (EXPORTS DATA) (2018)

As indicated in figure 12, Top markets for crustaceans' products from Belize have been Mexico, the United States and Guatemala followed by some CARICOM Members such as Jamaica. Closeness, demand, culture, business relations historical relations with these countries may be the main reason for these markets to most relevant ones for Belize. With the outbreak of the EMS in 2015 exports to Mexico collapsed almost instantaneously. Exports to Great Britain and to Thailand somewhat resist as well as those to the USA although to a lesser extent.

4.3. DEMAND

Figure 13 reports the average of the annual growth rates of imports in Belize historical destination markets for its aquaculture products. We can again easily associate the negative values found for shrimp products with the collapse of the production that occurred in 2015. An interesting feature is on one side the strong increase in demand for fresh or chilled Tilapia (30271) and on the other side the fall in demand for Tilapia fillets (30431) and in dried or salted Tilapia (30544).

FIGURE 13: AVERAGE IMPORT GROWTH IN BLZ'S DESTINATION MARKETS (2014-2017)

SOURCE: COMTRADE IN WITS (IMPORTS DATA) (2018)

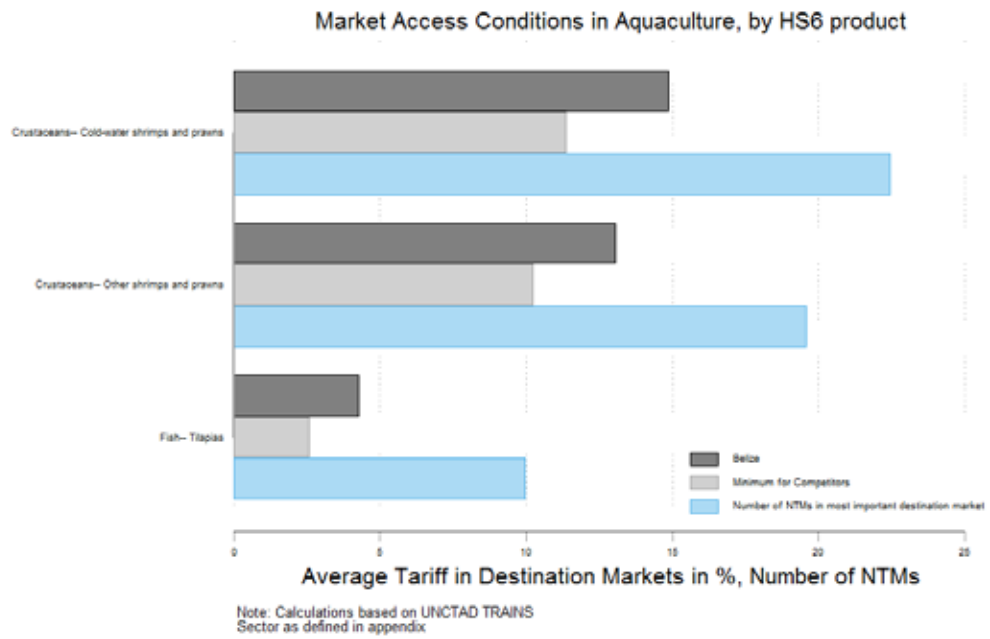
Figure 14 reports average annual growth rates of demand on international markets. A general finding is the strong positive growth obtained for all products produced in aquaculture in Belize. Tilapia products (30271 to 30544) appear to be the most dynamic with growth rates of both value and quantity always above 15 percent and even reaching 50 percent for the quantity of frozen Tilapia (30323) imported over the period between 2014 and 2017. Growth rate of the shrimp markets have been less spectacular but remain at levels that reflect a steadily increasing demand around the world. Certification may even boost it further but no clear evidence has been identified so far.

FIGURE 14: AVERAGE IMPORT GROWTH IN WORLD MARKETS (2014-2017)

SOURCE: COMTRADE IN WITS (IMPORTS DATA) (2018)

4.4. MARKET ACCESS CONDITIONS

FIGURE 15: TARIFFS AND NTMS



Beside supply side capacity and competitiveness, the level of market access (tariff and non-tariff measures) is another important determinant for the export success for Belize aquaculture products. Figure 15 shows that market destinations of Belize aquaculture products tend to have higher average tariffs being applied to them (dark grey bars) than the ones applied by some of its competitors (light grey bars) in Belize destination markets. There is scope for Belize to explore further tariff concessions or preferential market access in its main market destinations thought bilateral, regional multilateral trade negotiations. Such an effort could put Belize in an equal or better position in relation to some of its competitors. The same could apply to non-tariffs measures which show to be significant in number in the case crustaceans exports.

5. EMPLOYMENT.

About 11 active shrimp farms generate about 800-1'200 jobs (depending of the year), predominantly from the southern Belize communities. Drops in employment in 2016 as shown in Table 2 have occurred parallel with the production and exports reductions consequential to the EMS outbreak in 2015-2016 period. Data recently published by the SIB reports 1543 jobs in aquaculture (1 percent of total employment) as of April 2018. This may indicate some strong recovery of the sector or maybe only some seasonal phenomenon that could translate into a much smaller figure if expressed on an annual basis.[6] Two thirds of the jobs are located in the Belize district. According to this publication female employment represented less than 2.5 percent of total employment in the sector. This again may reflect some seasonal trend.

The availability of skilled labour has not so far represented a major constraint in the shrimp and aquaculture industries. About 60% of workers in the sector are usually lower-skilled employees, and there is available supply of such individuals who live in rural communities close to the coast.

[6] Indeed, on March 23, 2018, Belize Aquaculture Limited (BAL), one of the largest shrimp farms in Belize, laid-off approximately 100 employees. downsizing has been justified by "a costly disease epidemic that is affecting the entire shrimp farming industry in Belize."

TABLE 2: SOCIAL INDICATORS FOR THE AQUACULTURE SECTOR

	2014	2015	2016
Employment	1,189	1,185	772
Wage Bill (BZ$)	6'593'804	8'106'042	4'152'616

SOURCE: BELIZE MINISTRY OF INVESTMENT, TRADE AND COMMERCE (2017), DAILY AND FERNANDEZ-STARK (2018).

TABLE 3: EMPLOYMENT IN AQUACULTURE REPORTED IN APRIL 18

	Sex			District					
	Male	Female	Total	Corozal	Orange Walk	Belize	Cayo	Stann Creek	Toledo
	Count	Count	Count	Count	Count	Count	Count	Count	Count
Aquaculture	1543	38	1581	108	25	1058	0	178	212
Share in Total	96442	59508	155950	20545	19677	50816	35638	16298	12976

SOURCE: SIB LABOUR BULLETIN APRIL 2018

Information about salaries and more generally speaking earnings in the sector remain scarce. Table 2 report some yearly earnings not necessarily annualized. The reason may be a strong seasonality in employment. Reported total earnings would mount to about 3,500 USD in 2014 to 2,750 USD in 2015 and 2,700 in 2016. Considering that the minimum salary in Belize is about 700 USD per month previous earnings appear to be relatively low and clearly need some adjustment maybe to reflect seasonality properly as already mentioned. Some soft evidence suggests that while still active sea cucumber harvesting increased fishers' income to 154 times the minimum wage in 2010 and 5 times the minimum wage in 2016. A more detailed analysis appears to be necessary before reaching any conclusion.

6. ENVIRONMENT

Belize is the first developing country in the world to achieve Aquaculture Stewardship Council (ASC) certification, with 90% of its shrimp farms output fully certified (Belize NBSAP, 2016 -2020). In 2015, five shrimp farms in Belize attained ASC shrimp certification. This process was facilitated by the World Wildlife Fund and included Compete Caribbean and Belize Shrimp Growers Association. With ASC certification shrimp farms in Belize gain a competitive advantage in high-quality international markets since it demonstrates that shrimps were produced with minimal impact to the environment and communities where farms are located. Opportunities available from ASC shrimp certification include: reduction of adverse environmental impacts through wetland and mangrove preservation, improved water and management, responsible use of feed, disease control and addressing biodiversity issues;encourages improvements to coastal zone and fisheries management; future food security; improved social conditions; and improved production methods and technology. With this certification, Belizean shrimp farms will set the standards for best practices in shrimp production and processing for this region, enhancing the sustainability of the industry (UNCTAD-DOALOS, 2018. Belize's Legal and Institutional Framework for Ocean Affairs). Nerveless, it still is a fragile industry, as shrimp farms have suffered considerable loss following bacterial infection (i.e. EMS) in early 2015, leading to all major farms in the country being drained and dried, and restocked in 2016 (Belize NBSAP, 2016 -2020).

7. RELEVANT NATIONAL AND INTERNATIONAL REGULATORY FRAMEWORK

There is no specific governing legislation for the aquaculture industry which is governed by default through various laws and regulations in other economic sectors.

Relevant International Trade Treaties:

a. World Trade Organisation (WTO) and goods and services related Uruguay Round Agreements (1994)
b. The Economic Partnership Agreement between the EU and CARIFOURM (2008)
c. Founding Member of CARICOM and the Member of the Central American Integration System (SICA)
d. Various Free Trade Agreements with Colombia, Costa Rica, Cuba, Dominican Republic, Guatemala and Venezuela.

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. Fisheries Regional bodies relevant to aquaculture
    a. Latin American Organization for. Fisheries Development (OLDEPESCA)
    b. Central America Fisheries and Aquaculture Organization (OSPESCA)
    c. Caribbean Regional Fisheries Mechanism (CRFM)
4. Environment:
    a. Convention on Biological Diversity (1992)
    b. Convention on International Trade in Endangered Species of Wild Fauna and Flora (1975).

APPENDIX

TABLE A1: SECTOR DEFINITION

Sector	Product Name	HS6 Product code
Aquaculture	Fish-- Tilapias	30271
Aquaculture	Fish-- Tilapias	30323
Aquaculture	Fish fillets-- Tilapias	30431
Aquaculture	Fish fillets-- Tilapias	30493
Aquaculture	Fish-- Tilapias	30544
Aquaculture	Crustaceans-- Cold-water shrimps and prawns	30616
Aquaculture	Crustaceans-- Other shrimps and prawns	30617
Aquaculture	Crustaceans-- Cold-water shrimps and prawns	30626
Aquaculture	Crustaceans-- Other shrimps and prawns	30627

NOTE: PRODUCT CODES ARE FROM THE 2012 VERSION OF THE HARMONIZED SYSTEM CLASSIFICATION (LINK TO WCO)

TABLE A2: ABBREVIATIONS

BF	Belize Fisheries Department
CIF	Cost, Insurance and Freight
DOALOS	Division for Ocean Affairs and the Law of the Sea of the Office of Legal Affairs
FAO	Food and Agricultural Organisation
LDC´s	Least Developed Countries
OECD	Organization for Economic Co-operation and Development
OETS	Oceans Economy and Trade Strategies
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