

Oceans Economy and Trade Strategy: Belize



4–5 December 2019, Belize

Second National Stakeholder Workshop:
Discussion and validation of an Oceans Economy and Trade Strategy for Belize.
Marine finfish species and seafood manufacturing

Ocean Economy and Trade Strategies (OETS)

Organized by



In cooperation with



Report review and validation

Overview

Oceans economy and trade strategies project

Sector review Marine Fisheries and Seafood Processing

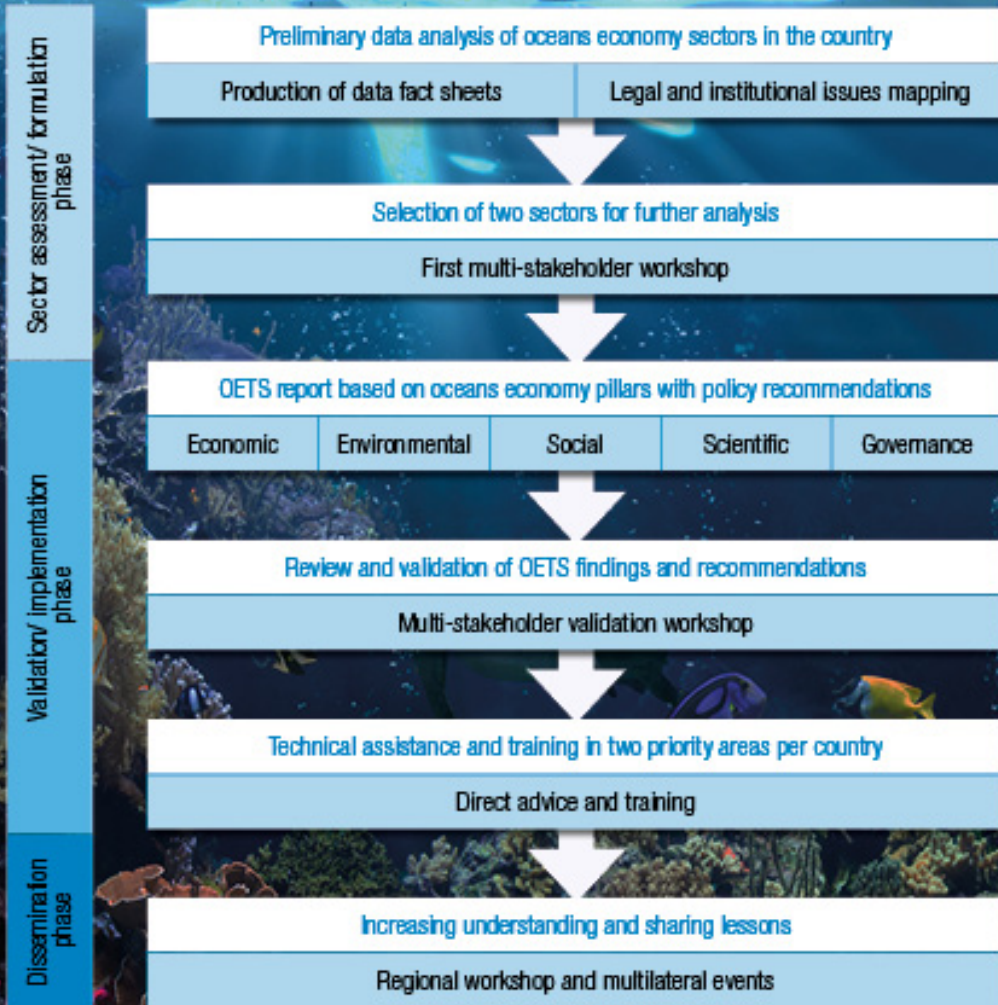
Oceans economy assessment

Presentation of the SWOT analysis

Review of issues highlighted



Oceans Economy and Trade Strategies



Objective:

The main objective of this report is to provide analytical inputs needed to elaborate a national strategy to promote sustainable trade products and services in ocean-based economic sectors within the UNCLOS framework.

Source: UNCTAD, 2018 <https://unctad.org/en/Pages/DITC/Trade-and-Environment/Oceans-Economy-Trade-Strategies.aspx>

METHODOLOGY

Institutional and legal review

https://unctad.org/en/PublicationsLibrary/ditctedinf2019d11_en.pdf

Economic and trade assessment

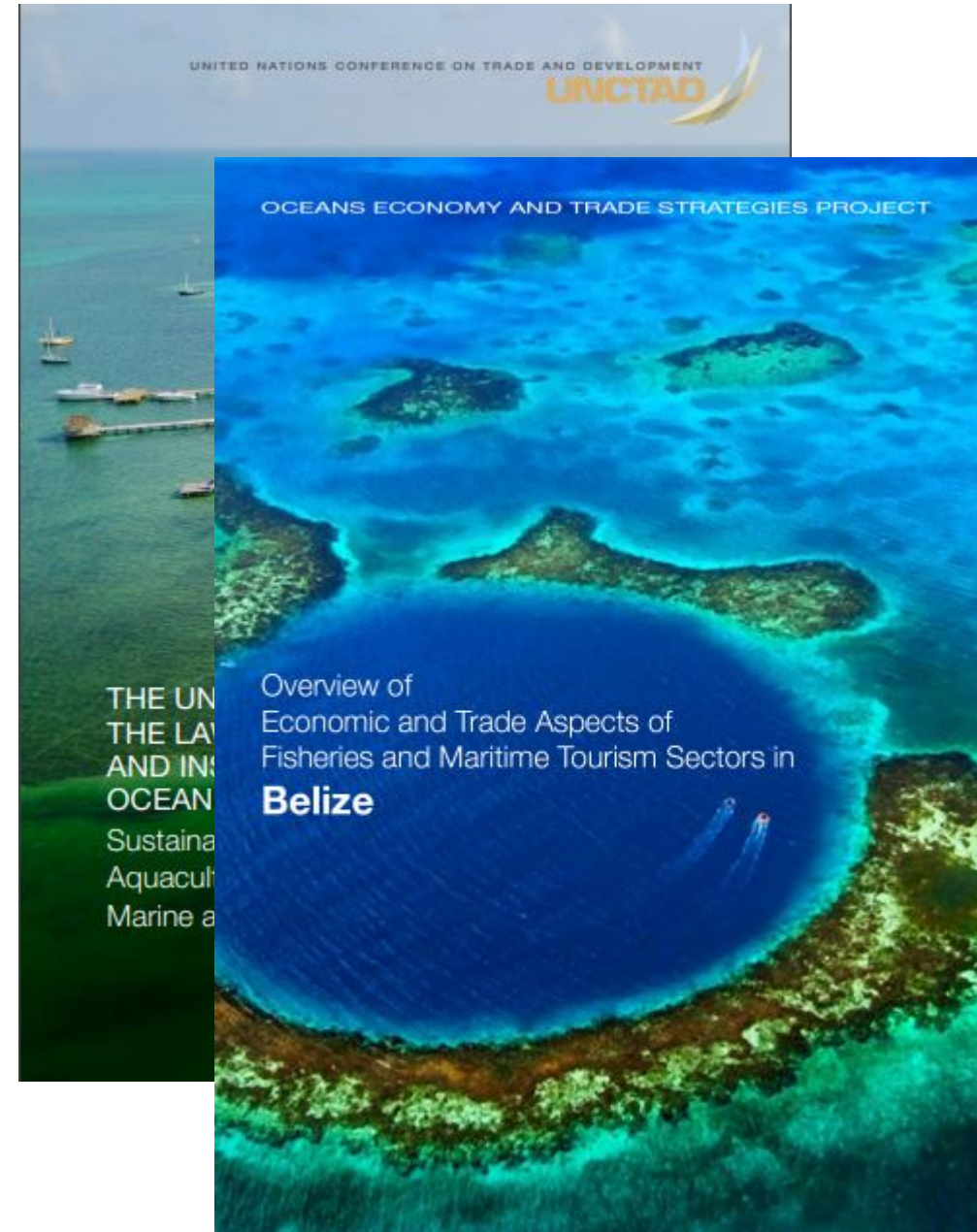
<https://unctad.org/meetings/en/SessionalDocuments/ditc-ted-04122019-belize-Economic-7.pdf>

Stakeholder workshop (November, 2018)

Selection of sectors

SWOT analysis

Follow-up Interviews with key stakeholders in the selected sectors



Chosen sectors of focus

Marine fisheries within the exclusive economic zone

Focusing on the sustainable use of deep slope, and underutilized finfish species

Seafood processing of spiny lobster (*Panulirus argus*) and queen conch (*Strombus gigas*)

Focusing on value addition of the targeted species through access to niche markets.

Linkages between marine fisheries and tourism sector were also investigated and of particular interest arising from the stakeholder workshop.

Outcomes

Increased capacity of stakeholders in ocean-based economic sectors by creating an enabling environment for research and development (R&D).

Economic resilience through diversification of fisheries and seafood production by identifying opportunities for market access.

Production of high-quality marine products through value added options.

Enhanced synergies with ongoing projects, national plans, strategies, and policies of Belize.

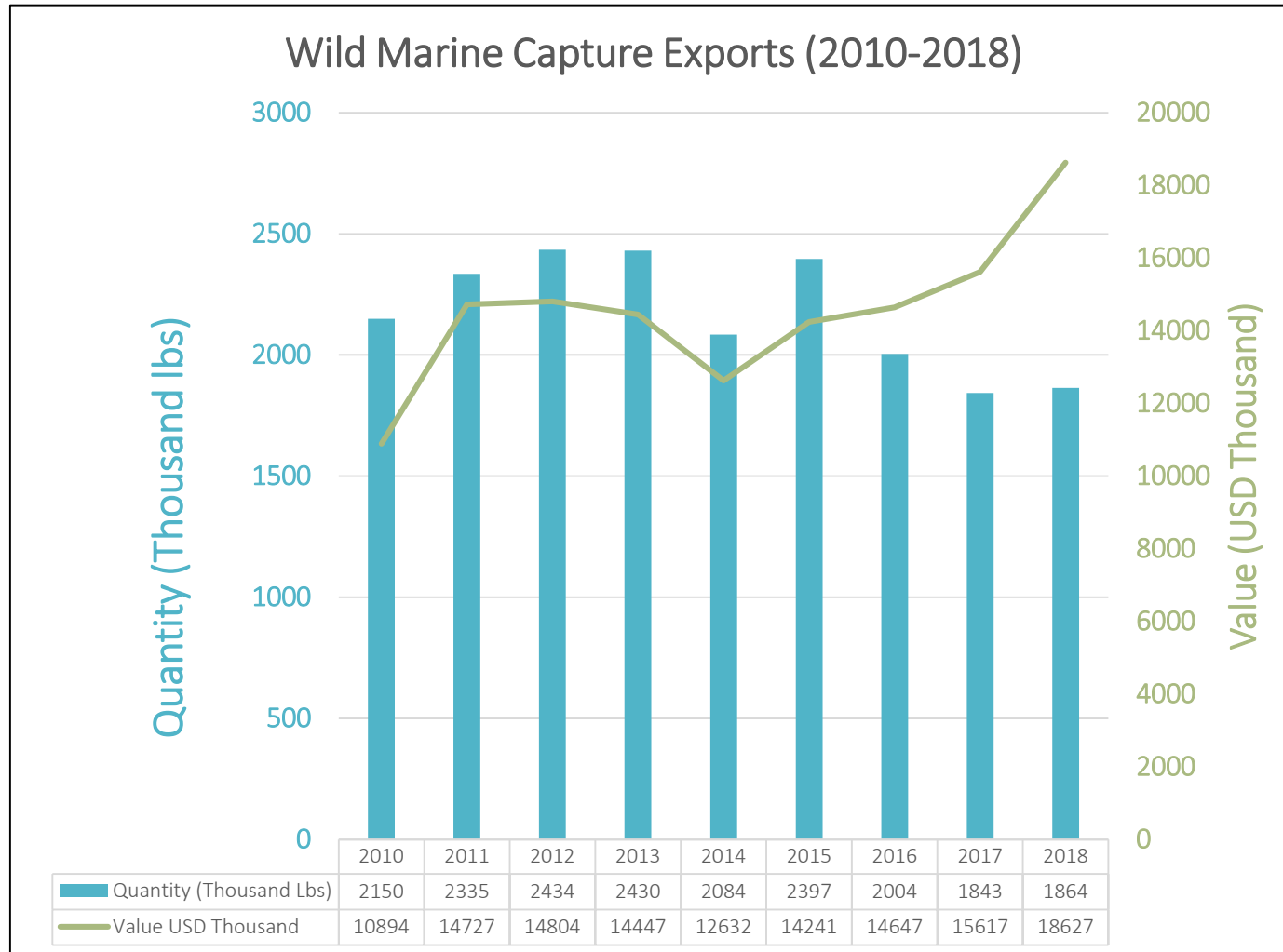
Overall sustainable economic growth in ocean-based economic sectors thus improving livelihoods of those involved directly in the ocean economy.

PART II: Review of institutional framework & challenges highlighted

Issue Code	Key issues highlighted	Proposed Strategies
I1	Limited regulations addressing finfish which may result in unselective fishing practices causing over-fishing and production of lower grade fish	Develop regulations pertaining to finfish stock management
I2	Challenges in streamlining and accessing fisherfolk datasets for monitoring and reporting which results in the inability to access information in real time to make evidence-based decisions	Streamline fisherfolk database to provide the most up-to-date information
I3	Limited resources for the enforcement of fisheries regulations	Enhance and support collaborative approaches to enforcement monitoring to combat IUU fishing

Trends in identified sectors

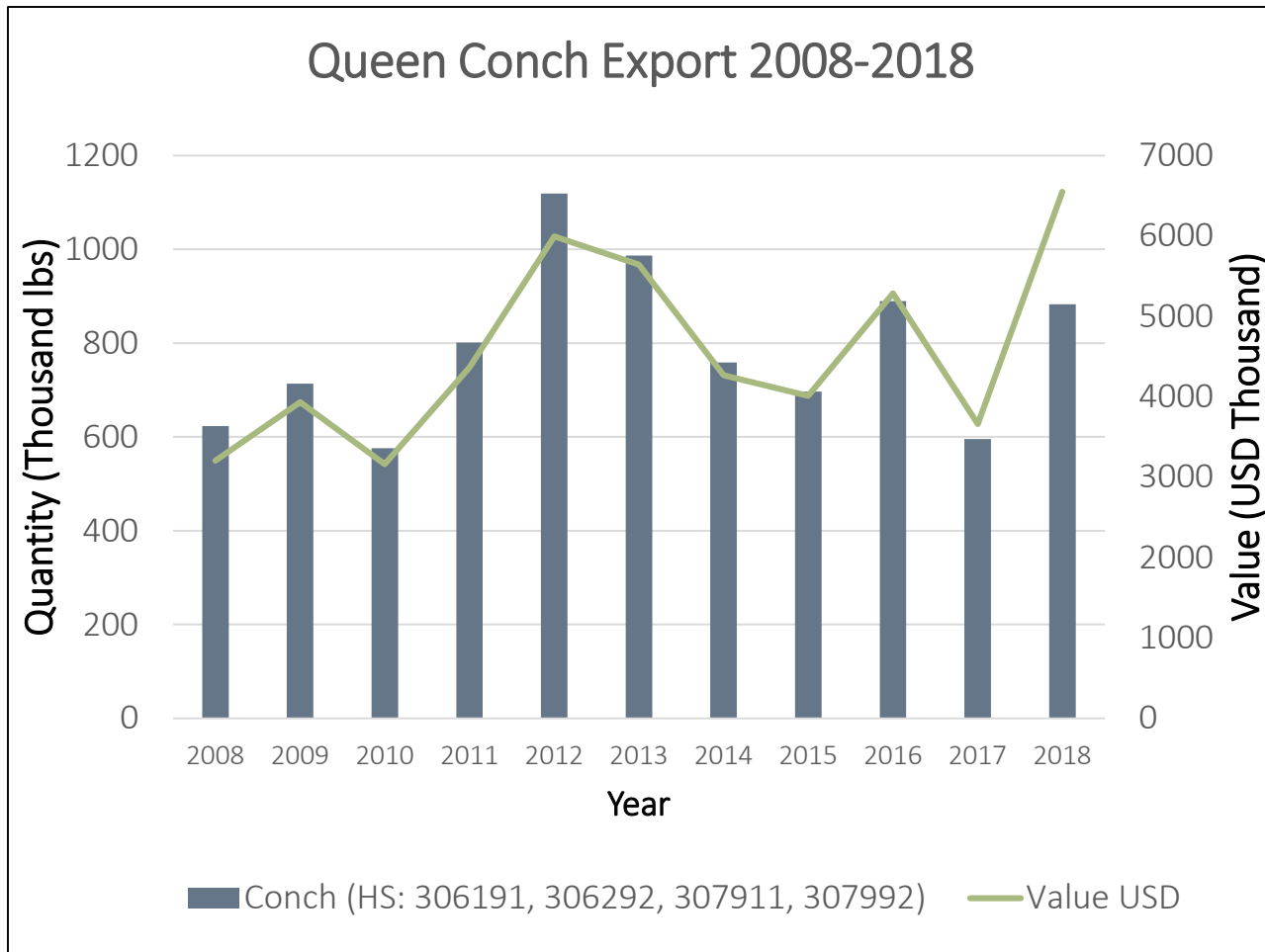
Capture fisheries 2010-2018



- Total capture fisheries exports have remained steady
- Value of marine exports has increased
- In 2018 the total capture fisheries export amounted to **1.8 million lbs** valuing at **18.6 million USD**
- Capture fisheries directly supports 2,525 fishers and approximately 15,000 Belizean indirectly.

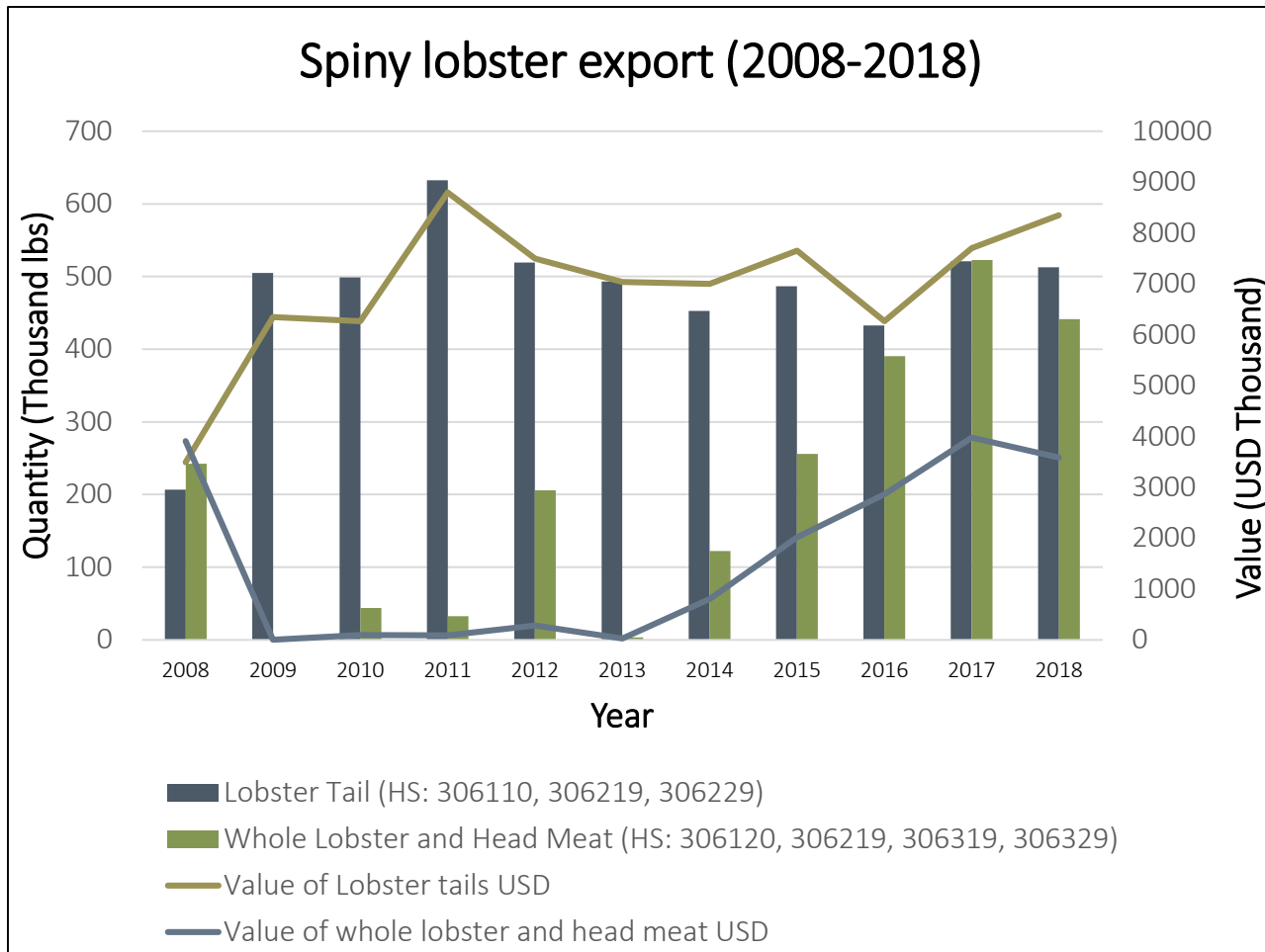
Queen Conch Export

- Queen conch export has remained steady while value has increased.
- In 2018, Belize exported *883,000lbs* valuing *at 6.5 million USD*.

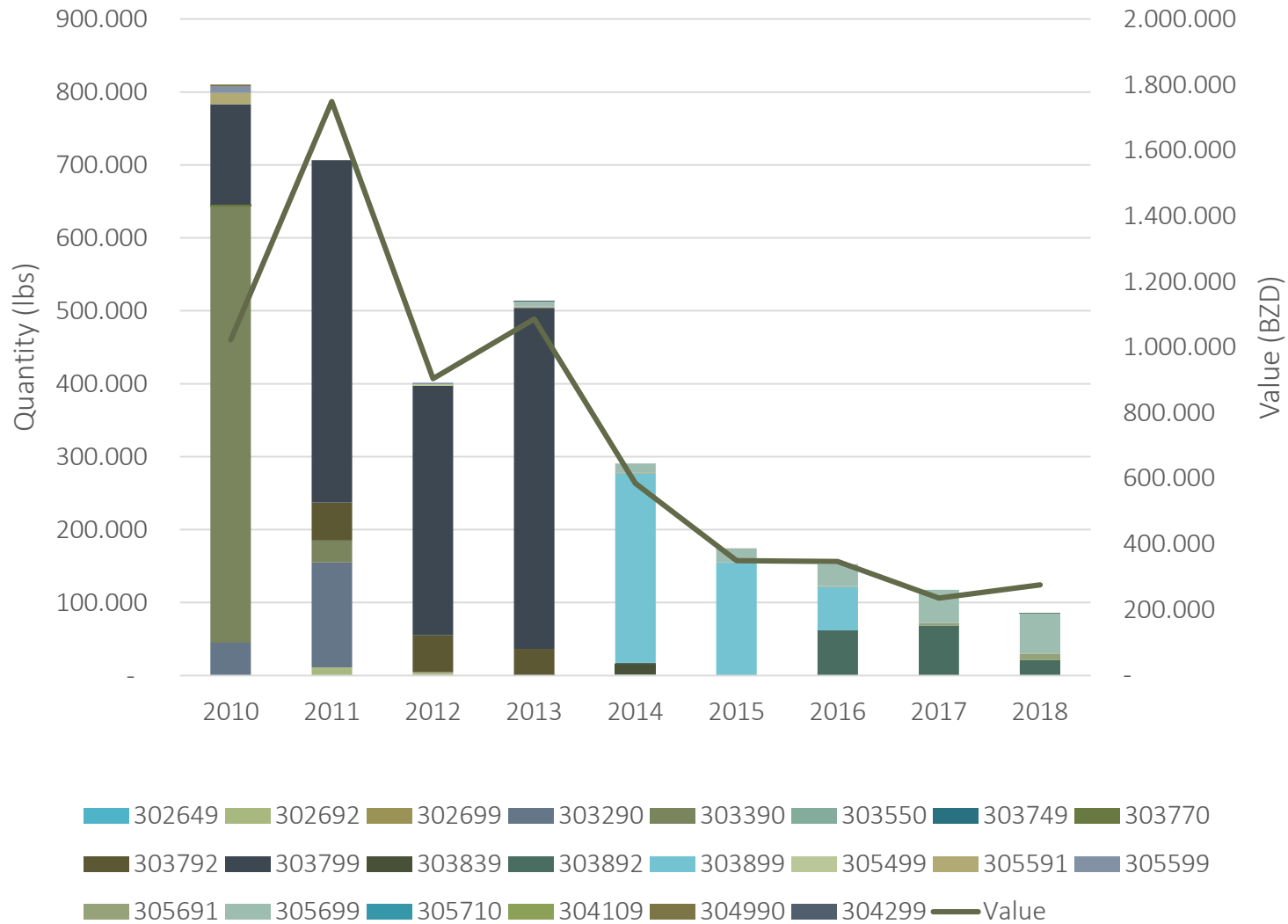


Spiny Lobster Export

- Similar trends exist for spiny lobster products: steady exports with value increase.
- Steady increase of whole lobster exports 2014-2018
- In 2018 Belize exported *a total of 954,000 lbs* valuing at *11.9 million USD*.



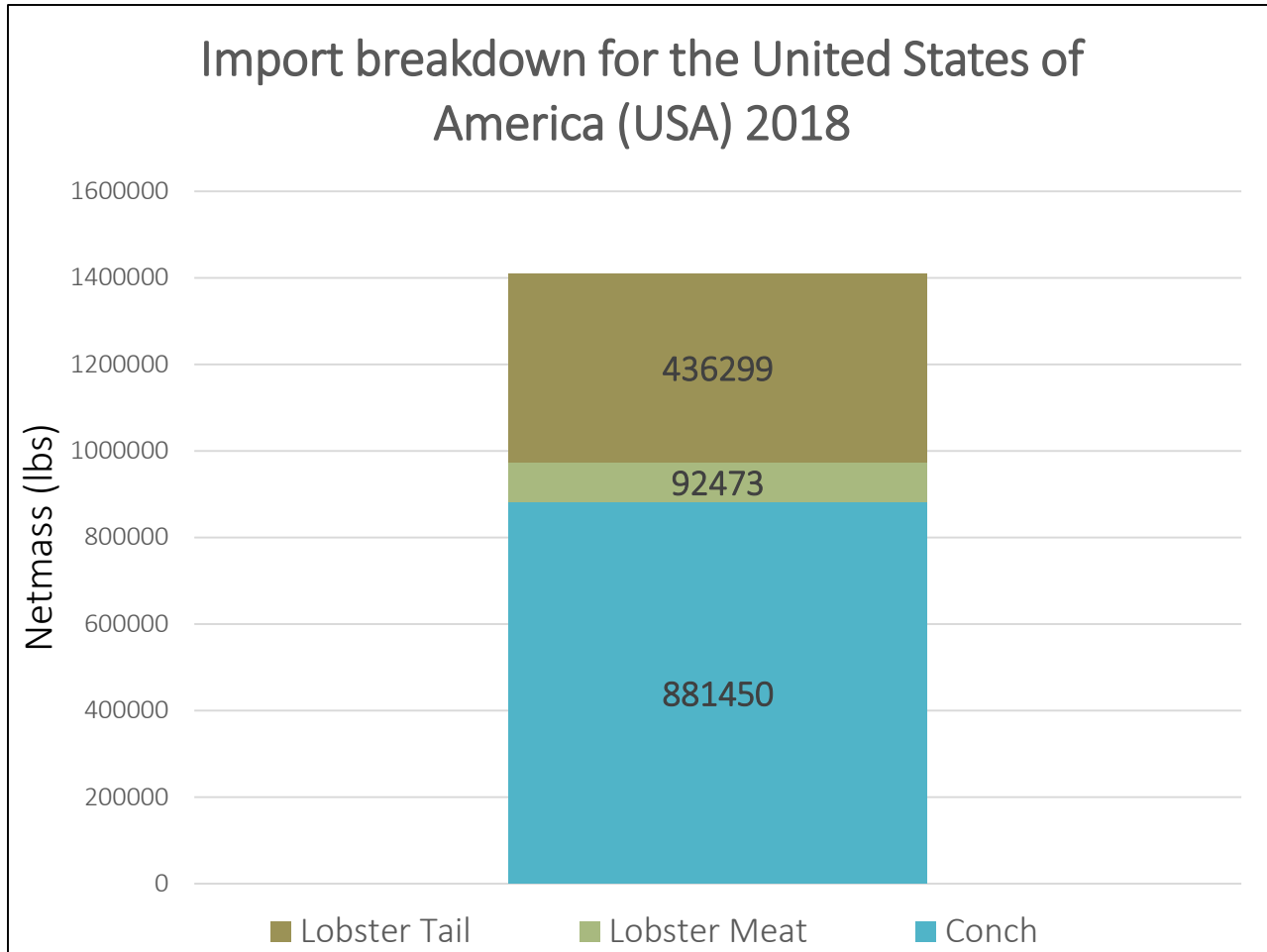
Finfish export breakdown 2010-2018



Finfish Exports

- Finfish exports have steadily decreased as exporters shift focus to products of higher value.
- Main importers of finfish from Belize include Jamaica, Guatemala, and the USA.

Source: SIB, 2019



Major importers

- Most marine fisheries and seafood products are exported to the United States
- This dependency increases risk and exacerbates Belize's vulnerability to sudden economic changes.
- *Belize needs to identify additional and niche markets for marine and seafood products.*

Source: Belize Fisheries Department , 2019

Buyer price range

Seafood Product	Price Change	Fishing Cooperatives	Fish Processors	Independent fisher
		USD/lb	USD/lb	USD/lb
Queen conch	Increase	3.75- 5.00		4.50
Spiny Lobster	Increase	15.00	11.50-15.50	10.00
Finfish	Fluctuates	8.00	0.50-2.00	1.75-8.00

Rainforest Seafood Company Price breakdown	
Category	USD \$/lb
Mutton Snapper	1.75
Snappers/groupers	1.50
Grunts/Jack/Shad	0.50
Mackerel/Snook	1.00
Yellowtail Snapper	1.80

Source: Rainforest Seafoods Company & Belize Fisheries Department, 2018; Interview UNCTAD, 2019

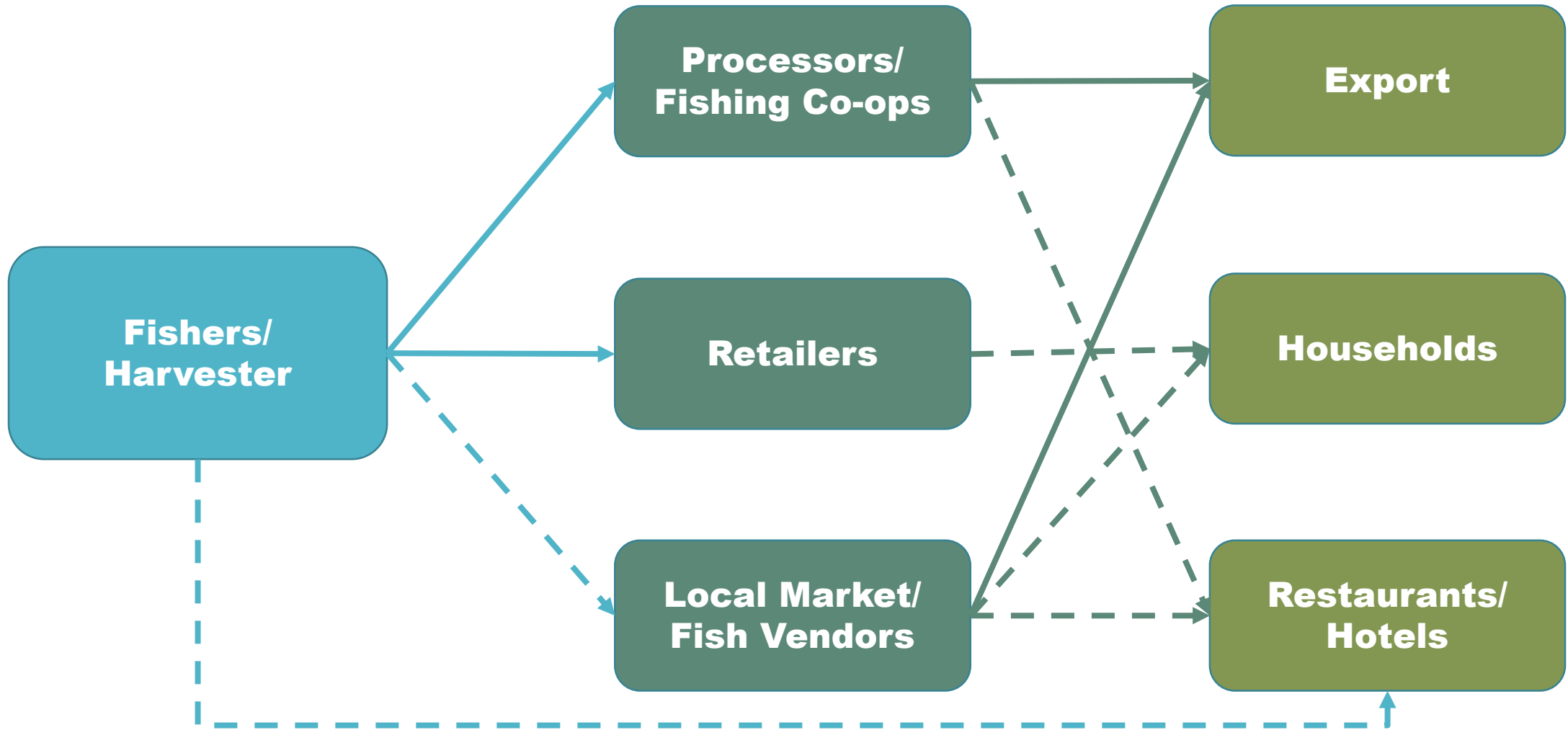
Major commercial players

- Commercial fish processors
- Cooperatives
 - Certified entities SPS and HCCAP
- Independent fishers

SUPPLIER

INTERMEDIARY

CONSUMER



Source: Author's own elaboration



Fish name as seen on label	Price per pound (\$/lb) BZD
Bait (Sprat)	2.95
Bait	5.00
Bay Snook	7.50
Scaled snapper	8.60
Fish fillet	9.99
Sea bass fillet	10.50
Scraped whole snapper	11.25
Basa fillet (assumed imported)	11.25
Snapper fillet	18.25
Grouper fillet	18.25
Rock fish fillet	19.20
Salmon portion (assumed imported)	31.95
Tuna portion (assumed imported)	31.95

Local retail market

- Market survey was conducted
- Packaging
- Labelling

Source: Publix Supermarket, Save-U, & James Brodie and Co. (2019)

Ongoing projects and initiatives

Marine Fisheries:

Marine Conservation and Climate Adaptation Project

Deep Slope Fishing subproject

PESCA tourism subproject

Seafood Processing:

National Fishermen Producers Cooperative Society Limited and The Nature Conservancy (TNC)

Spiny lobster traceability pilot project

Sector	Issue Code	Key issued highlight	Proposed Strategy
Marine Fisheries	14	Finfish exports have decreased in the past five years and fishing pressure on spiny lobster and queen conch has increased.	Support the increased exports of finfish (fresh and frozen fish) and finfish products to regional and international markets
			Supports the Increased domestic consumption through tourism sector
			Design and implement SPS measures at fish markets, and other landing sites selling finfish
Seafood Processing	15	Need to identify additional and niche markets for Belizean marine and seafood products.	Provide access to new and strategic niche markets with the assistance of BELTRAIDE and other government agencies
			Support export-oriented seafood business establishments to increase revenue through use of smart marketing techniques (market intelligence gathering, sale/export of fishery products during highest demand/highest tourism periods)
			Incorporate technological tools to increase market access for seafood products (i.e. multi-species traceability systems)
			Support the application to other certification programs to increase market access, innovation, and competitiveness in the seafood sector
			To support increased domestic consumption of lobster head meat.
			To explore options for processing and export of currently discarded fishery by-products such as queen conch trimming, shell and pearls.

Oceans economy pillars

<p>UNCTAD's OCEANS ECONOMY PILLARS (based on trade related targets of SDG 14) A conceptual framework for Oceans Economy and Trade Strategies</p>	<p>Economic and Trade pillar</p>	<ul style="list-style-type: none"> • Promote sustainable economic growth in key oceans sectors • Sustainably trade and market access for oceans-based products and services • Seek to enable connectivity for people and markets • Increase value addition • Strengthening value chains integration and forward and backwards linkages with relevant goods and services production
	<p>Environmental pillar</p>	<ul style="list-style-type: none"> • Sustainably access and use of living and non-living resources within safe ecological limits (MSY) • Apply the precautionary and ecosystem approaches • Seek to address climate change mitigation and adaptation
	<p>Social pillar</p>	<ul style="list-style-type: none"> • Incorporate the maintenance of coastal populations livelihoods, specially of small scale and artisanal fishermen • Consider local employment sources • Respect access and tenure and rights over marine resources by local communities
	<p>Scientific & technology pillar</p>	<ul style="list-style-type: none"> • Incorporate low carbon activities and technologies • Promote investment in applied R&D • Seek to enable access to knowledge, transfer of technology and knowledge cooperative frameworks
	<p>Governance pillar</p>	<ul style="list-style-type: none"> • Include regulatory and policy obligations under UNCLOS and other Un treaties and soft law • In compliance with Multilateral Trade and Fisheries Agreements (WTO, UNCTAD and FAO) • In line with national development priorities/plans (including marine spatial planning) • Promote interagency and intergovernmental cooperation (internal, regional or multilateral)

Economic and Trade Pillar

Description	Marine Fisheries	Seafood Processing
<ul style="list-style-type: none"> Promote sustainable economic growth in key oceans sectors Sustainably trade and market access for oceans-based products and services Seek to enable connectivity for people and markets Increase value addition Strengthening value chains integration and forward and backwards linkages with relevant goods and services production 	<p><i>The BFD may consider working with BELTRAIDE in identifying financial access to fishers for obtaining DSF equipment.</i></p>	<p><i>Traceability pilot may be further expanded to cover queen conch and, possibly, finfish to create a multispecies traceability system.</i></p>
	<p><i>Marketing for finfish should be improved to increase domestic consumption of high-quality finfish products. Opportunities to improve fish market displays and access may include providing access to ice, running water, and an effective drainage system.</i></p>	<p><i>Domestic marketing of local seafood brand should be considered (Seafare Group, 2015)</i> <i>Packaging and selling in smaller quantities</i></p>
	<p><i>Seek to develop a standardized labelling protocol for retail markets</i></p>	<p><i>Consideration should be given in encouraging a shift in fishing behaviour to increase whole lobster exports (Seafare Group, 2015)</i></p>

Environmental Pillar

Description	Marine Fisheries	Seafood Processing
<ul style="list-style-type: none"> • Sustainably access and use of living and non-living resources within safe ecological limits (MSY) • Apply the precautionary and ecosystem approaches • Seek to address climate change mitigation and adaptation 	<p><i>Develop means for immediate electronic data entry should be explored by the department. For example, real-time data entry through electronic tablets whereby catch landing information may be access in real time.</i></p>	<p><i>Data collection program exists</i></p>
	<p><i>Establish a robust data collection program for finfish where relevant and credible data streams are identified in order to adopt the AMF framework for finfish as well.</i></p>	<p><i>AMF Framework exists</i></p>
	<p><i>Strategies should be adopted to include monitoring and reporting on domestic seafood consumption. This can be achieved by DSF boats (alongside registered fishing fleet) maintaining proper managed access logbook records of catch landings.</i></p>	<p><i>Precautionary principle has been incorporated into queen conch quota system</i></p> <p><i>Consideration should be given to establishing a TAC for spiny lobster</i></p>

Social Pillar

Description	Marine Fisheries	Seafood Processing
<ul style="list-style-type: none">• Incorporate the maintenance of coastal populations livelihoods, specially of small scale and artisanal fishermen• Consider local employment sources• Respect access and tenure and rights over marine resources by local communities	<p><i>The introduction of PESCA tourism to involve other actors and families in coastal communities</i></p> <p><i>Continued support and expansion on the deep-sea Fishing pilot project based upon the criteria developed under the MCCAP subproject</i></p>	<p><i>Working conditions and social security for processing personnel should be of high priority when determining actions for value addition and accessing niche markets of seafood products.</i></p>

Scientific and Technology Pillar

Description	Marine Fisheries	Seafood Processing
<ul style="list-style-type: none">• Incorporate low carbon activities and technologies• Promote investment in applied R&D• Seek to enable access to knowledge, transfer of technology and knowledge cooperative frameworks	<ul style="list-style-type: none">• <i>Training, capacity building, and knowledge transfer of sanitary fin fish handling standards</i>	<ul style="list-style-type: none">• <i>The incorporation of green technologies could offset the cost of production and further validate sustainability aspects in the seafood processing sector. (E.g. Development Finance Cooperation (DFC) now offering renewable energy loans of up to \$300,000)</i>
		<ul style="list-style-type: none">• <i>Training and capacity building to incorporate multispecies traceability system</i>
		<ul style="list-style-type: none">• <i>Investigate the potential for developing by-products to reduce waste for example:</i> Spiny lobster may be explored to generate additional products such as food ingredients and pharmaceuticals Queen conch trimmings may be dried or repurposed as fishing bait

Governance Pillar

Description

- Include regulatory and policy obligations under UNCLOS and other Un treaties and soft law
- In compliance with Multilateral Trade and Fisheries Agreements (WTO, UNCTAD and FAO)
- In line with national development priorities/plans (including marine spatial planning)
- Promote interagency and intergovernmental cooperation (internal, regional or multilateral)

Marine Fisheries & Seafood Processing

Work with international partners and mirror importing states to assess and quantify volume of marine species extracted and exported from IUU fishing

Enhance synergies identified in the National Trade Policy and the National Fisheries Policy

SWOT analysis: Marine Fisheries

STRENGTHS

- Existing legal framework for fisheries is in development
- Presence of a Management Authority
- Manage Access System exists
- Pilot study available through the MCCAP subproject
- Research & Training Capacity exists
- Best practice guidelines exist
- Trade Policy space exists
- Processing capacity and some infrastructure
- Logistic capacity to ship by land, air and water
- Availability for knowledge transfer and training independent fishers

WEAKNESSES

- Minimal legislation regarding finfish
- Lack of access to appropriate fishing gear
- Limited capacity of current fishing fleet
- Informal distribution channels
- Lack of understanding of the market demand
- Lack of access to credit facilities
- Limited knowledge of supply of finfish in domestic markets
- Limited capacity to comply with sanitary standards at local retail markets

SWOT analysis: Marine Fisheries

OPPORTUNITIES

- Market expansion (domestic, regional and international)
- Diversification of fishermen income
- Harvesting from un-utilized fishery stock
- High demand by tourists
- Proximity to markets
- Inputs readily and easily accessible (e.g. Fish gears)
- Current negotiations for a Preferential Trade Agreements are underway
- Use of fish waste, biproducts and handicrafts for new product creation
- Job creation for fish processing

THREATS

- Over-fishing and contribution to illegal fishing
- Tropical weather disturbances and climate variability
- Competition/importation from low-value foreign fish and fishery products
- Low level of political will
- Inconsistency of supply and quality

SWOT analysis: Seafood Processing

STRENGTHS

- Sustained production volume under MSY (consistent supply and quality)
- Stable market and access
- High reputation in the seafood market
- High quality standards (Fishermen Cooperatives)
- Existence of fishing organizations (fishermen cooperatives)
- Strong fishery management in place
- Availability of fishing fleet and manpower
- Branding strategy exists for lobster and conch
- CITES compliance

WEAKNESSES

- Low potential for increase production for traditional species
- Low capacity for secondary manufacturing e.g. canned conch
- Insufficient capacity for product diversification
- Incomplete traceability system
- Inadequate working conditions for women

SWOT analysis: Marine Fisheries

OPPORTUNITIES

- Potential for marine macro algae manufacturing
- Potential market expansion into niche markets (i.e. pharmaceuticals from spiny lobster shells)
- Increase consumption by tourists
- Finance options exists for clean energy technologies through DFC renewable energy loans

THREATS

- Illegal harvesting
- Input cost is relatively high in the region
- Correspondence banking challenges
- Income for fishers are not allowing them to retire early
- **High dependency on few destination markets**

Sector	Related Issue Code	Potential actions
Marine Fisheries	I2	Paper-based system requires data entry by fisheries personnel thus resulting in a delay and lack of real-time information access. (I2)
	I1	With the development of DSF, the BFD may consider establishing a robust data collection program for finfish and adopting the AMF framework for finfish as well. (I1)
	I4	The BFD may consider working with BELTRAIDE in providing financial access to fishers for obtaining DSF equipment. (I4)
	I4	Management authorities should seek to support its development by facilitating investors for the development of investment in transport and processing infrastructure. (I4)
	I4	Marketing for finfish should be improved to increase the domestic consumption of high-quality finfish products. Opportunities to improve fish market displays and access may include providing access to ice, running water, and an effective drainage system. (I4)
Seafood Processing	I5	Improve the working conditions and social security for processing personnel. (I5)
	I5	Reduce the entry of 'rejected' seafood product into local markets (I5)

Formulated strategies

Marine fisheries

Goal: to increase capacity of fishers for the sustainable harvest of commercially important deep slope fish species.

Strategy Code	Strategies
MF1	To support training and capacity building opportunities for fishers to develop the deep slope fishing sector.
MF2	To support the acquisition of suitable fishing vessels, gear and equipment to allow fishers access to the fishery resources.
MF3	To support increased export of finfish (fresh and frozen fish) and finfish products to regional and international markets (the United States and Mexico, etc.)
MF4	To support the adoption of HACCP standards for fish processing/handling facilities for fish and fish products destined for domestic consumption
MF5	To support increased domestic consumption (including tourism) through national fish consumption (Such as educational campaigns (media presentations on social media, radio and tv, posters, video clips, fliers, etc.)
MF6	To cement the undeniable linkages between fishing and tourism with the goal of optimizing economic benefits for both sectors (e.g. pesca-tourism that is currently being tested in Sarteneja and northern communities)

Source: UNCTAD Stakeholder workshop, 2018

Seafood processing

Goal: to add value to commercially targeted species to access to niche markets and to develop and implement smart marketing approaches for fishery products.

Strategy Code	Strategies
SP1	To support access to new and strategic niche markets with the assistance of BELTRAIDE and other government agencies.
SP2	To support export-oriented seafood business establishments to increase revenue generation through use of smart marketing techniques (market intelligence gathering, sale/export of fishery products during highest demand/highest tourism periods).
SP3	To support and expand domestic sale (marketing of small packages and increase availability of high-quality seafood products in the domestic markets).
SP4	To support increased domestic consumption of fishery products by tourism sector through legal acquisition from BAHA and HACCP certified and licensed seafood business establishments.
SP5	To strengthen the linkages between fishing and tourism to increase economic benefits to both sectors.
SP6	To support increased domestic use (lobster head meat) and marketing, including export of currently discarded fishery by-products such as queen conch trimming that can potentially generate additional revenue to stakeholders.
SP7	To support fisheries law enforcement through increased monitoring, control and surveillance.

Source: UNCTAD Stakeholder workshop, 2018