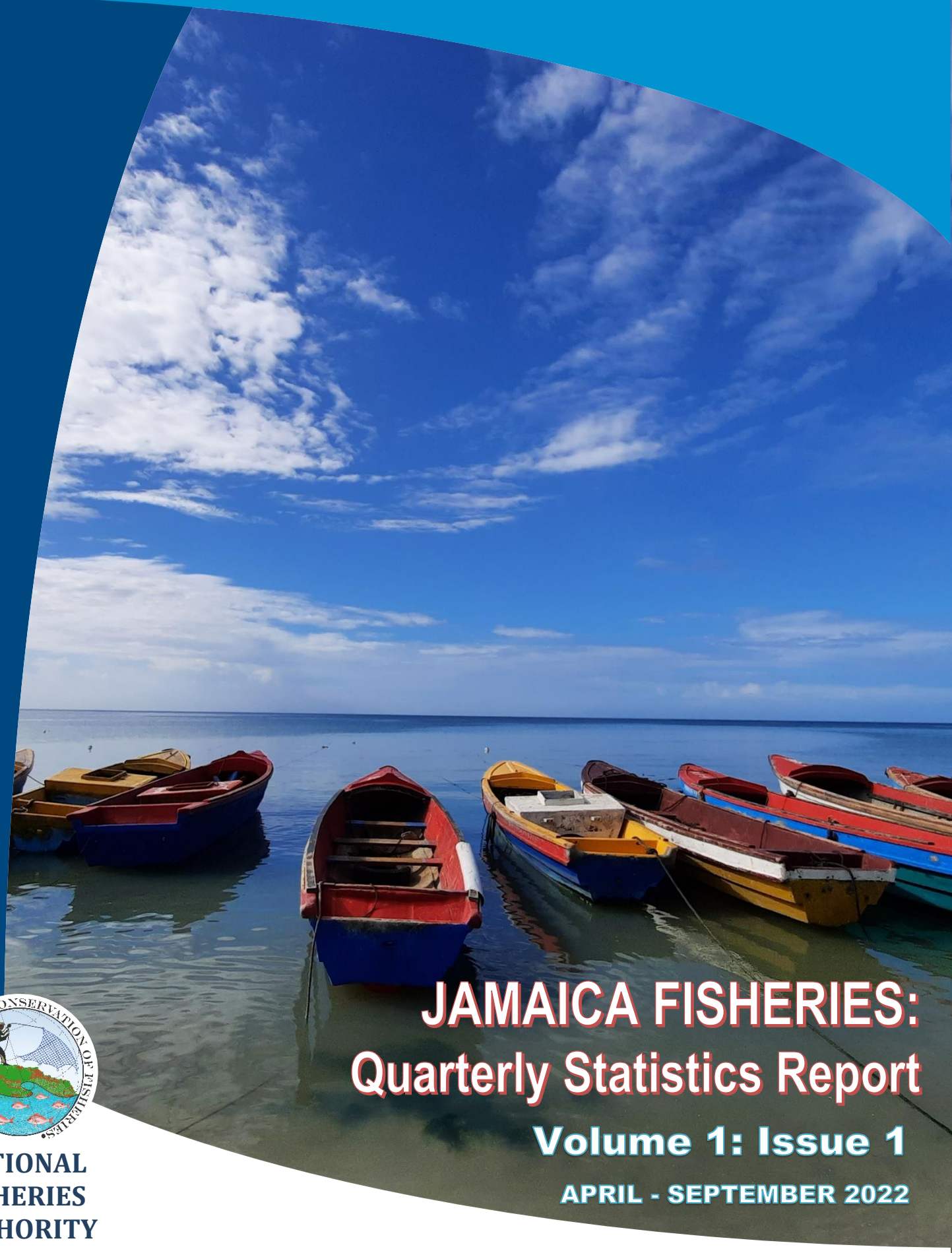

JAMAICA FISHERIES:
Quarterly Statistics Report

Volume 1: Issue 1

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NATIONAL
FISHERIES
AUTHORITY

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The contribution made by all staff members is appreciated. In particular, the Extension Officers and Data Collection Officers that conducted the data collection, compilation, processing and analyzing accordingly.

The report was produced by the Fisheries Statistics and Data Management Branch of the Fisheries Compliance, Licensing and Statistics (FCLS) Division in collaboration with the Capture Fisheries and Aquaculture Divisions of the NFA.

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Part 1
Introduction

PART 1

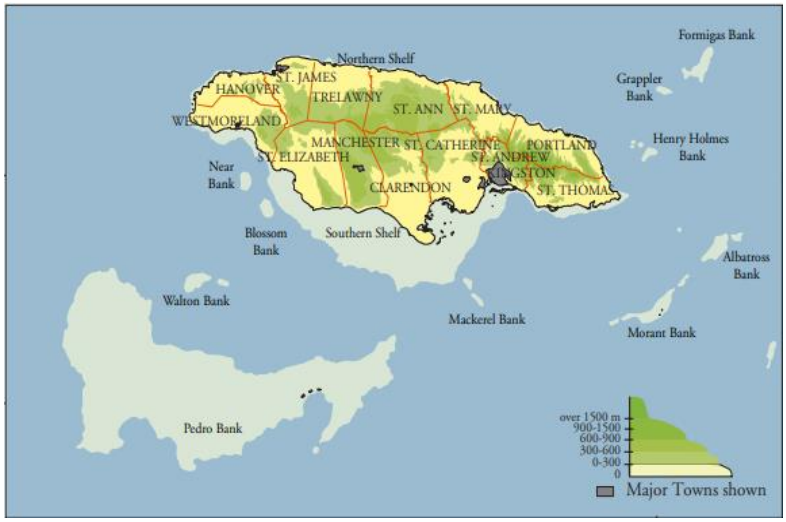
Introduction: Fisheries Sector of Jamaica
The National Fisheries Authority – Role and Oversight
Purpose and Scope of the Report
Methodology

A. Capture fisheries sampling plan
B. Aquaculture sector

1. INTRODUCTION: FISHERIES SECTOR OF JAMAICA

The structure of the fisheries sector of Jamaica is comprised of Capture Fisheries and Aquaculture. Capture Fisheries primarily consists of artisanal fishers (over 28,000 registered since 1996) operating from open type canoe or reinforced fiberglass-type boats, powered by either outboard motors or oars, over inshore and offshore areas. The inshore fishery takes place in the coastal waters of the Island Shelf with its nine proximal banks while the offshore fishery is limited to the southern coast.

Generally, fishers operate from various landing sites across the island and from two offshore locations – Morant and Pedro Cays. Industrial fishers (large-scale fishing) have been a significant part of the industry since the 1960s – their target fishery includes conch, lobster and sea cucumber. Commercial sports fishery (such as fishing tournaments) and small recreational fishery are other important sub-sectors. The production from capture fisheries in 2021 was 10,093.72 MT, which represented a decline of 15.6% from the previous years.



The importance of aquaculture globally continues to be highlighted, especially considering the impact of climate change on the more traditional capture fisheries. Aquaculture deals with farming of aquatic organisms, including fish, molluscs, crustaceans and aquatic plants in fresh, brackish and saltwater environments. Jamaica has a rich history in aquaculture from the introduction of freshwater tilapia in the 1940s. Today, the aquaculture industry occurs primarily in freshwater (mainly tilapia and ornamental fish species), but elements also occur in brackish (such as coastal fish farms) and saltwater environments; for example, culture of mangrove oyster (*Crassostrea rhizophorae*) and production of white leg shrimp *(Penaeus vannamei*).

Additionally, there are 4 mariculture operations (three private and one government owned), 63 registered ornamental farmers and 9 Tilapia Hatcheries. In the 1980s, there were approximately 63 fish farmers producing 32.6 MT of fish annually in 58 hectares of pond. In 2006/7 the highest level of production was recorded, where 8,019 MT of fish was produced by 189 farmers from approximately 1,100 hectares of pond. Data from 2021 showed that 104 farmers were utilizing an estimated 274.03 hectares to produce 869.20 MT.

1.1 The National Fisheries Authority – Role and Oversight

The National Fisheries Authority (NFA) was established as a body corporate, pursuant to Section 5(1) of the Fisheries Act, 2018, with the mandate being that the Authority will be responsible for the management and development of fisheries and aquaculture in accordance with the Fisheries Act, 2018. The Authority therefore facilitates the management and development of Jamaica's fisheries sector through the collection, compilation, and analysis of statistics; monitoring, control, surveillance and enforcement of activities related to fisheries and aquaculture; as well as, granting of licences, authorizations and permits, and allocation of fishing rights and quotas for specific fisheries.

1.2 Purpose And Scope of the Report

Solid policy design and decision making, which are predicated on hard evidence, are achievable through the provision and availability of timely, accurate and high-quality data and statistics. This is recognized by Governments world-wide and as such there is a high level of commitment at the policy level, as is stated in several sectoral and national development plans, as well as regional and global development agendas.

This publication is the first in a series of publications of Quarterly Reports which will be presented by the National Fisheries Authority (NFA), as part of its ongoing programme to provide data and statistical information (production, social and economic) on the performance of the fisheries and aquaculture sector.

The data and statistical information in this report highlights the sector performance for the first two quarters (April – September 2022) of the current financial year (2022-2023). The publication of this Report is intended to support sound decision making and policy development for the sustainable growth and development of the fisheries and aquaculture sector locally and internationally.

1.3 Methodology

1.3.1 Capture Fisheries Sampling Plan

The objective of the present data acquisition system is to collect basic fisheries data by sampling representative landing sites in Jamaica. The monitoring system provides accurate data on catches, effort, catch by fishing ground, the value of catch, length of fish landed and data on fishing gear.

The strategy for sampling from artisanal fishers is as follows:

1. Jamaica is divided into three statistical areas, the North Coast, South Coast and Offshore Cays (Morant and Pedro), based on the nature of the fishery.
2. Landing sites are stratified by fishing ground, beach size (according to the number of boats), gears and fish type. The categories are used as sampling strata and it is assumed that within a stratum, the gears, vessels, and fishing grounds are homogeneous throughout the area. This means that fishermen at all beaches within a category have access to fisheries of similar productivity. Once all the beaches were classified into strata, one or more beaches were selected to be sampled in each stratum (Figure 1).
3. Each sample beach is visited two days per month and the data collected from vessels landing that day. The data include vessel identification, fishing effort (amount of gear, number of crew, hours fished), fishing

ground, species landed by weight and the price. Other data collected include total number of vessels that went to sea that day, the number of fishing days for the month and descriptive comments on the weather and beach conditions.

4. The data are collected from fishers by the Data Collection and Extension Officers of the NFA.
5. Biological data such as weight, length, sex and maturity of select species are also collected monthly. These species include Caribbean spiny lobster, dolphinfish, skipjack tuna and conch. In conjunction with the catch and effort data, the biological data are used for stock assessment and for detecting trends etc., which are necessary for proper decision making.
6. Estimation of the total landings is based on the following:
    - ✓ Percentage of active vessels/gears for sampled site(s)
    - ✓ Total fish landings at known site for sampled site(s)
    - ✓ Estimate of the Catch per unit of effort (CPUE) for sampled site(s)
    - ✓ Calculate estimate of active vessels/gears that went to sea multiplied by CPUE for un-sampled sites
    - ✓ Summation of sampled and un-sampled sites will give total landings.
    - ✓ Calculations are done by stratification e.g. coastal pelagics.

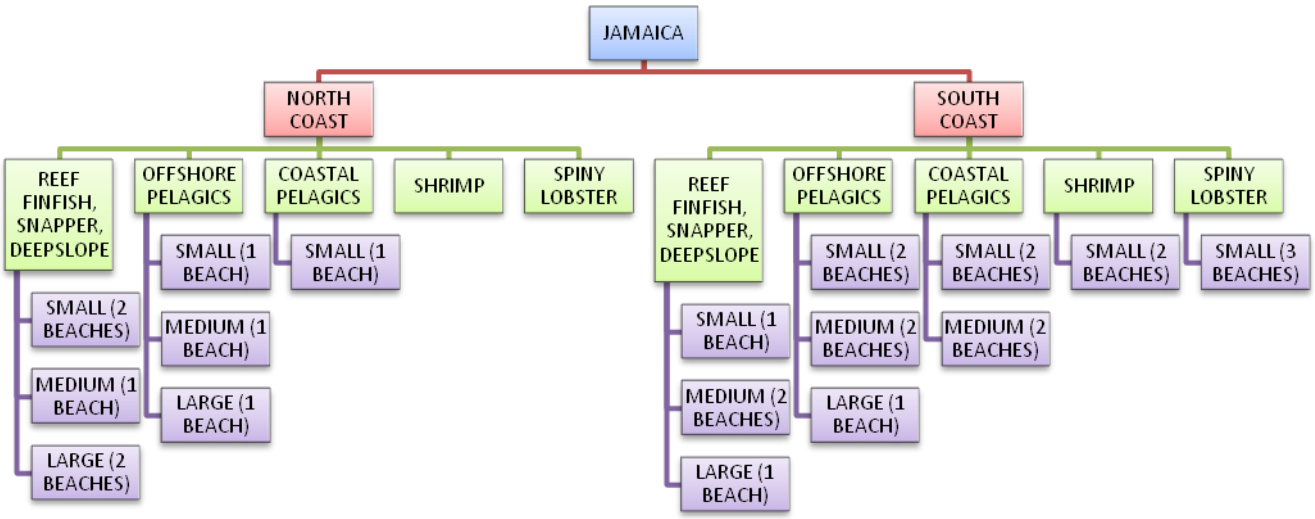


Figure 1 Overview of the sampling plan for the artisanal fishery of Jamaica

As it relates to the industrial (large-scale) fisheries, completed vessel log sheets are collected from the operators of industrial fishing vessels on the day of landing. The data captured on the log sheet include, but are not limited to, catch, effort, location, gear type, level of processing on factory vessels and fishing ground. Landings are verified through inspections of catch at the landing sites.

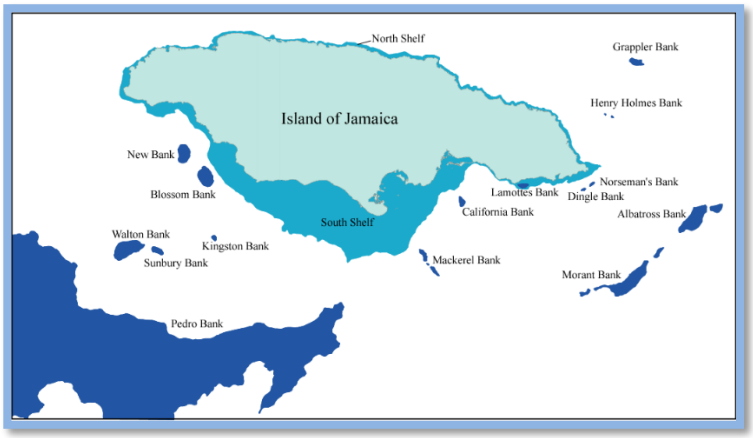


Figure 2 The fishery areas of Jamaica

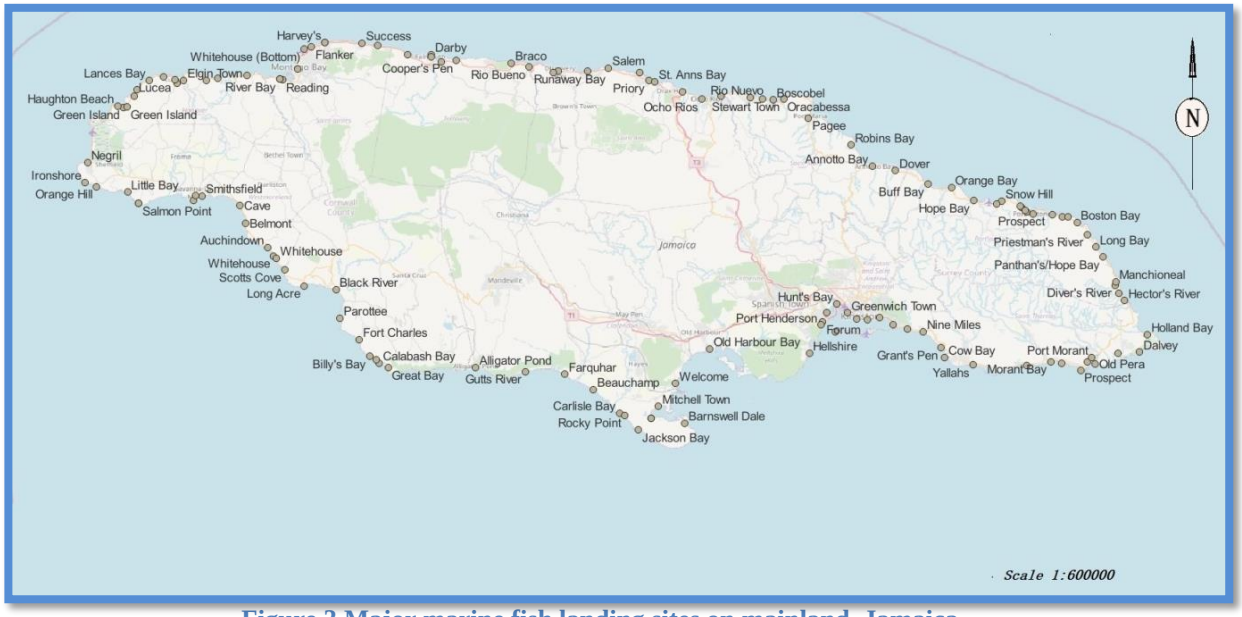


Figure 3 Major marine fish landing sites on mainland, Jamaica

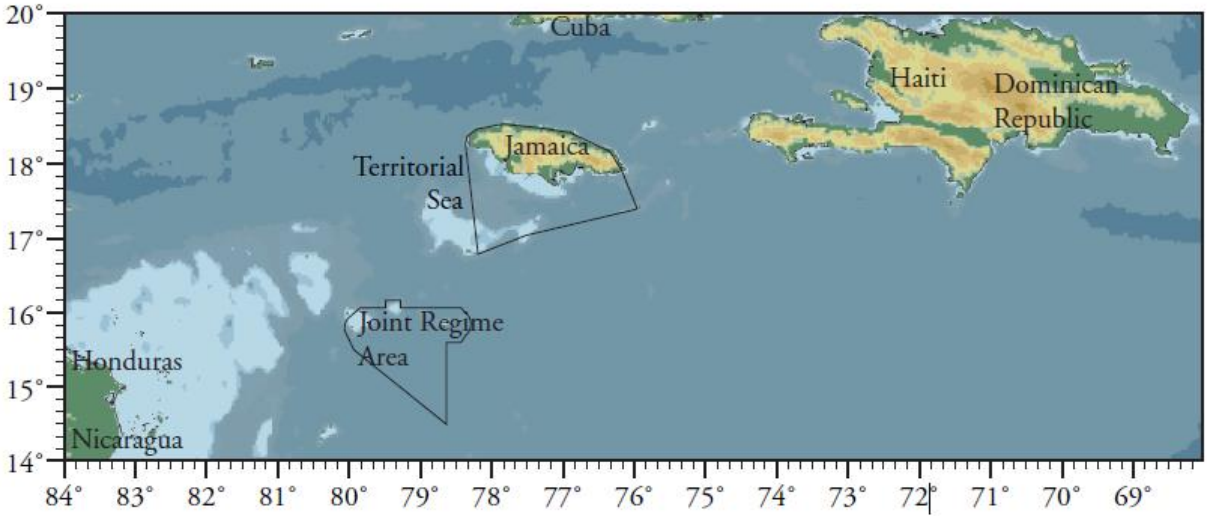


Figure 4 Regional position of Jamaica including delimited territorial waters and the Jamaica-Colombia Joint Regime Area

1.3.2 Aquaculture sector

Data are collected quarterly by the Aquaculture Extension Officers. The Extension Officers work closely with fish farmers and vendors in acquiring data specific to ponds/tanks in production, farm gate and vendor prices, fish production and feed consumption. This is achieved through emails, phone calls, farm visits and WhatsApp messaging. Verification is done through routine farm visits fortnightly and monthly.

The aquaculture industry can be categorised into two components, food and ornamental fish, and aquatic plants. The food fish subsector comprises primarily of the red hybrid tilapia (*Oreochromis* sp., of which there are several varieties (Jamaica Red, Taiwanese Red, Rocky Mountain White, Sterling Red). The Nile tilapia *Oreochromis niloticus* is also cultured, as well as *Oreochromis mossambicus,* which is also found primarily in rivers across Jamaica. The ornamental fish subsector produces a variety of species which include egg layers (goldfish and koi), live bearers (mollies swordtail, guppies) and mouth brooders (African cichlids and jack dempsey). For the purposes of this report, only data gathered on the tilapia will be presented.

Barton Isle, St. Elizabeth, Jamaica

Part 2
Status Report
Capture Fisheries

PART 2

Status Report – Capture Fisheries

Fishing Fleet
Licensing Categories
Estimated Production and Value
Factors affecting the Industry

2. STATUS REPORT - CAPTURE FISHERIES

2.1 Fishing Fleet

A variety of mechanised and non-mechanised fishing boats operate in Jamaican waters. The non-mechanised boats are generally propelled by oars and are made of wood or a mixture of wood and fibreglass. The mechanised boats are of the fibre reinforced plastic (FRP) open hull canoe type, propelled by outboard engines (25 - 75 HP) with dimensions of 8.4 x 1.5 x 0.9 m on average. The decked vessels are generally made of steel with lengths averaging 15 - 30 m.

Table 1 provides information on the number of vessels registered up to the second quarter of the financial year 2022/2023.

Table 1 Number of vessel licences issued since 1996

	Period	Number
Registered Vessels	1996 – Sept 2022	8,920
New	Jan – Sep 2022	99
Renewals	Jan – Sep 2022	313

During the first two quarters (April-September 2022), the highest level of renewal of licences was noted in August, whilst May reflected the highest number of new registration of vessels (Figure 4). Of the total number of boat licences issued, the majority were renewals from the Kingston and St. Catherine areas (Figure 5). Approximately half of the vessels that have been issued licences during the period April-September 2022 fell within the 12-17.9m vessel length category (Figure 6).

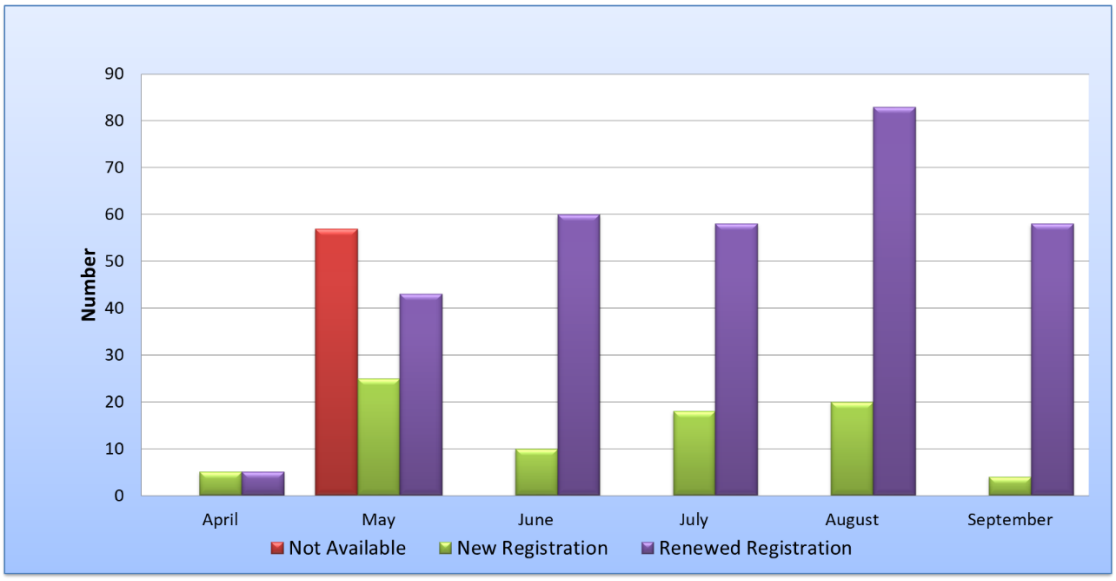


Figure 5 Number of boat licenses issued by category during April-September 2022

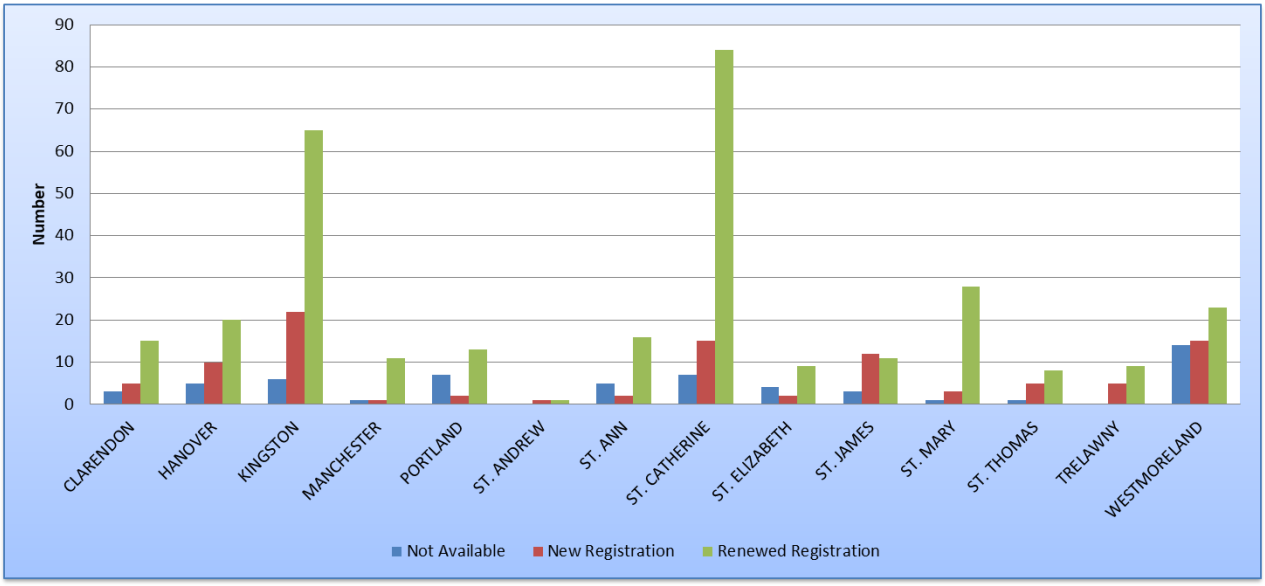


Figure 6 Number of boat licences issued by category and parish, April-September 2022

***NB**: Data were not available on the registration status of vessels in May 2022 and this is noted in Figures 4 and 5. The lack of data was due to an internal issue regarding data being captures on the system.*

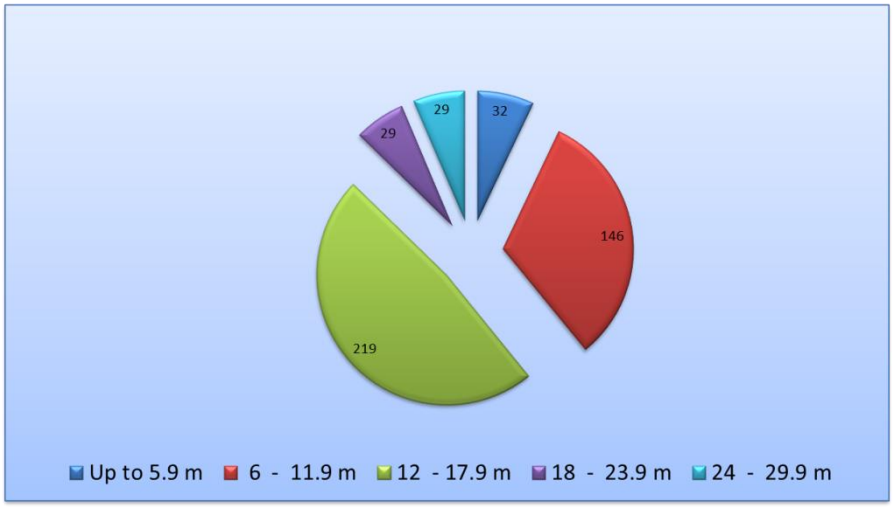


Figure 7 Distribution of vessel size classes renewed by number during April-September 2022

2.2 Licensing Categories

During the period April to September 2022, a total of 2,975 licences were issued with the highest number recorded during August (Figure 7). From this total, 92.4% represents the artisanal fishery, 6.5% represents the recreational fishery, 0.87% the industrial while to a lesser extent (0.02%) the riverine fishery (Table 2). Most fishers that were licensed fell within the 40-55 age groups (Figure 8) and approximately 92% were males (Figure 9).

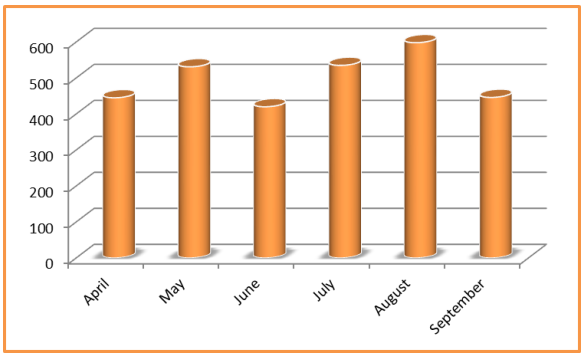


Figure 8 Number of Fisher Licences issued by month April-September 2022

Table 2 Number and percentage composition of fisher licence issued April-September 2022

License Type	Number	Percentage
COMMERCIAL FISHING (ARTISANAL FINFISH)	2,750	92.44
COMMERCIAL FISHING (IRISH MOSS)	3	0.10
INDUSTRIAL FISHING	26	0.87
RECREATIONAL FISHING	194	6.52
RIVERINE FINFISH	2	0.07

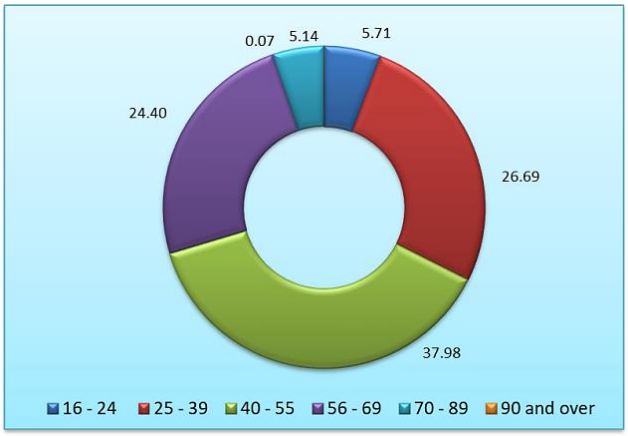


Figure 9 Age distribution of licensed fishers April-September 2022

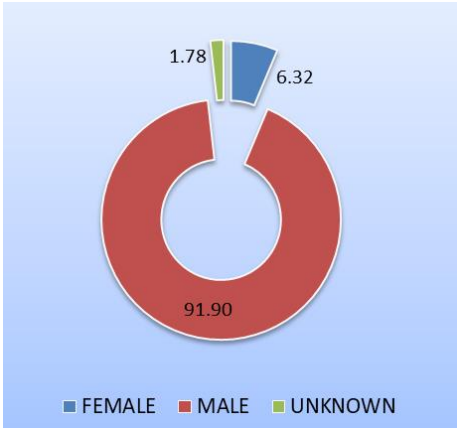


Figure 10 Sex distribution (%) of licensed fishers April-September 2022

2.3 Estimated Production and Value

The data collection system for the artisanal fisheries is based on landings at individual beaches. The average number of days fished per month is twenty days. The artisanal fish production is diverse and includes finfish species (such as snappers, parrotfish, jacks, and grunts), lobster, and conch.

The overall marine finfish production for the period April - September 2022 was 4,624.84 MT (Table 3, Figure 10) valuing approximately US$59.7 Mil or over JMD$9 billion (Table 4). The artisanal fishery accounted for ~94% of total marine fish production by quantity. The industrial spiny lobster fishery is based on reported landings and includes weights of whole, tails and head meat combined.

Table 3 Marine fish production (MT) trend by fishery type, April-September 2022

Fishery	Production (MT)							% Composition
	April	May	June	July	August	September	Total	
Atrisanal finfish	473.6	516.03	801.62	953.9	1,375.11	504.58	**4,624.84**	93.65
Industrial Conch	50.32	110.60	65.53	34.26			**260.70**	5.28
Industrial Spiny Lobster*				0	7.17	45.98	**53.15**	1.08
Total Marine Production	**523.92**	**626.63**	**867.15**	**988.16**	**1382.28**	**550.56**	**4,938.69**	100

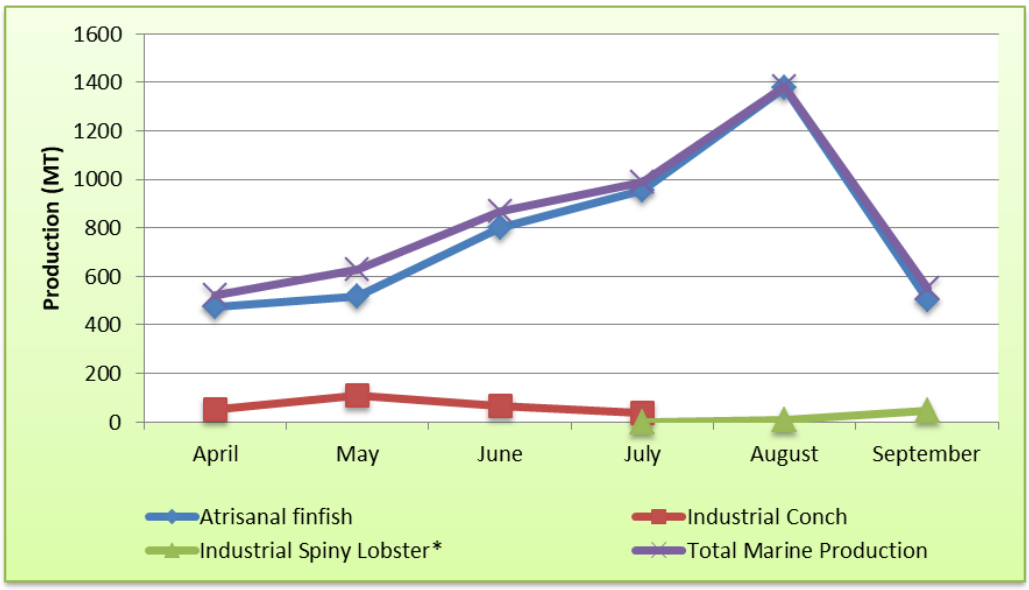
** Reported weight for whole, tail and head meat*

Close Season

Table 4 Estimated value (USD for Marine fish production (MT) by fishery type, April-September 2022

Fishery	Estimated Value (USD)						
	April	May	June	July	August	September	Total
Atrisanal finfish	5,172,454.24	7,055,236.75	10,095,239.24	11,643,546.46	14,960,602.27	6,183,415.72	55,110,494.69
Industrial Conch	721,045.00	1,584,869.00	938,983.50	490,919.00			3,735,816.50
Industrial Spiny Lobster*				0.00	126,350.12	810,671.96	**937,022.08**
Total Marine Production	**5,893,499.24**	**8,640,105.75**	**11,034,222.74**	**12,134,465.46**	**15,086,952.39**	**6,994,087.68**	**59,783,333.27**

Figure 11 Marine fish production trend by fishery type, April-September 2022



Further examination of the artisanal fishery shows that landings from the southern shelf and the proximal banks contributed to over 55 percent of the total production for the period April – September 2022 (Figure 11). Peak productivity was observed in August for both north and south coast (Figure 12). The reef, offshore and deep slope fisheries yielded the greatest productivity during the period (Figure 13).

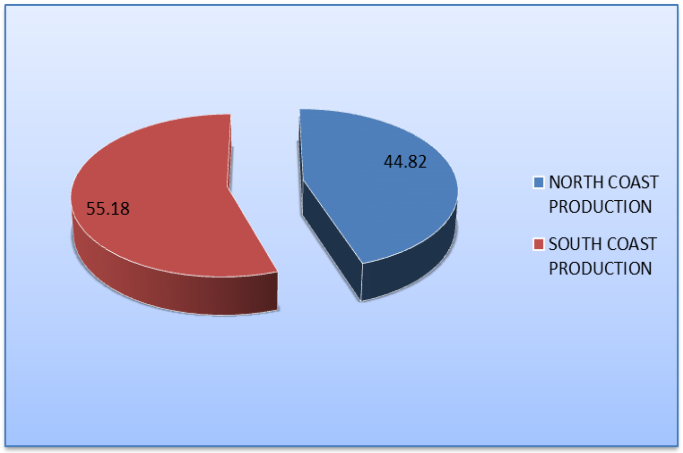


Figure 13 North vs South coast percentage composition

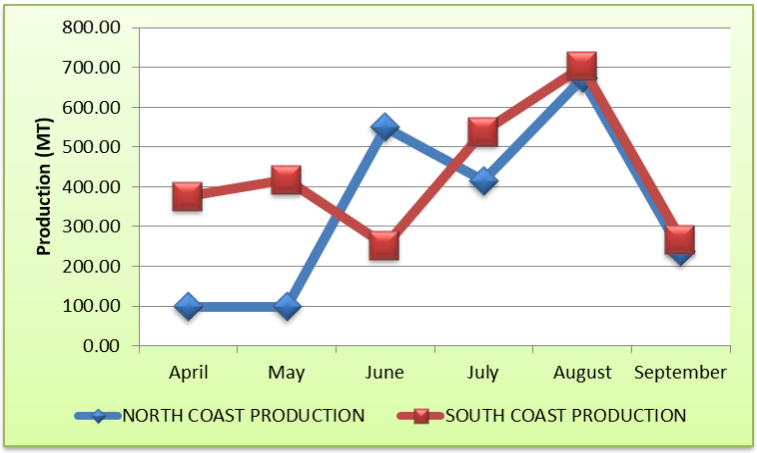


Figure 12 Artisanal fish production trend by Coastal communities, April-September 2022

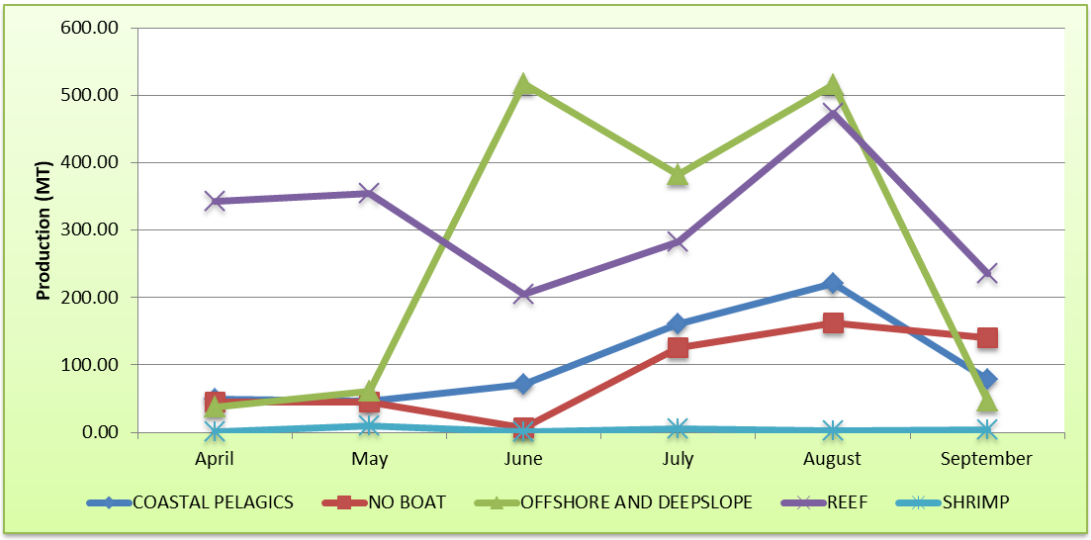


Figure 14 Artisanal fish production trend by fishery groups April-September 2022

2.4 Factors affecting the Industry

The capture fisheries sub-sector has been affected negatively by several factors. During the reporting period, the factors reported include:

- ✓ Weather conditions, including strong winds, rough seas, heavy rainfalls, hurricanes and tropical storms
- ✓ Poor water visibility due to pollution, land run-off, mixing of the ocean
- ✓ Influx of the *Sargassum* seaweed especially along south coast for an extensive period
- ✓ Strong currents
- ✓ Fish-kill, due to pollution or climate change impacts.

Part 3
Status Report
Aquaculture Sector

PART 3

Status Report – Aquaculture

Production
Fish Farmers
Price
Factors affecting the Industry

3. STATUS REPORT - AQUACULTURE SECTOR

Workers harvest fish from a local fishpond (Photo: Aquaculture Division)

3.1 Production

Aquaculture occurs primarily on the south-central plains of St. Catherine and Clarendon, as well as in the parishes of St. Elizabeth and Westmoreland where the topography and soil type are suitable for aquaculture production. There is minor production in the parishes of St. Thomas, Portland, St. Mary, St. Ann and Hanover. In the main production areas, production systems are primarily semi-intensive utilizing earthen ponds averaging 0.405 hectares (1 acre). In the minor production areas, production is mainly subsistence and small scale with ponds being less than 0.405 hectares. The production systems are mainly concrete tanks or ponds lined with high-density polyethylene (HDPE) liners using mainly semi-intensive production methods. Presently there are a total of 860 earthen ponds and concrete tanks across Jamaica. From these production systems approximately 455.96 MT of tilapia was produced during the period April – September 2022.

3.2 Fish Farmers

At the end of 2021, there were a total of 104 registered fish farmers. During the period January – March 2022, two farms were sold to new operators. This resulted in two farmers exiting the aquaculture subsector. During this period also, twelve new farmers entered including the operators of the two farms that were sold. For the period under review (April-June and July September, 2022), only one new entrant was recorded. This brings the total number of fish farmers to 115 at the end of September 2022. New entrants were recorded from the parishes of St. Catherine, Clarendon and St. Elizabeth. Also noteworthy is that the majority of fish farmers currently own their farms while a few are managers and supervisor.

3.3 Price

All tilapia produced is absorbed by the local market. Most fish farmers rely on vendors to buy and distribute their product. The product is usually sold at the farm-gate to the vendor who takes it to markets. The farmer may also sell tilapia to restaurants, hotels, supermarkets and other distributors. The size preferred by local consumers is 227–340 g. Sale price for tilapia per quarter is shown in the table below.

Table 5 Farm gate and retail price of tilapia

Quarter	Farm gate price	Retail price
April – June	$440- 450 per pound	$600 per pound
July – Sept	$440 per pound	$600- 650 per pound

The price of fry for the stocking of fishponds was J$4.00 each.

3.4 Factors affecting the Industry

During the period April-June and July-September 2022, challenges that fish farmers faced included the following:

- ✓ There was occasional disruption in the supply of fish feed due to manufacturing/ importation constraints.
- ✓ Water supply is limited in some areas. Water supply is sourced through various means – surface water, wells and irrigation systems.
- ✓ Poor road conditions
- ✓ Seasonal flooding of ponds in some areas

Ornamental Fish – Koi (Photo: Aquaculture Division)

Part 4
Compliance

PART 4

Compliance

Introduction
Compliance with Licensing Requirements

4 COMPLIANCE

4.1 Introduction

The Compliance Branch is within the FCLS Division, and it is responsible for planning and implementing fisheries and aquaculture compliance, and enforcement programmes for the Authority.

During the first quarter of the financial year (April to June 2002) nine persons were charged and will be brought before the Parish Courts for illegal possession of lobsters during the Lobster Close Season. A total of 83 Inspections and public education sessions were carried out in major tourist areas in Negril, Montego Bay, Ocho Rios and Portland. During the second quarter (July-September), neither charges nor inspections were made; however, intelligence gathering during the Conch Close Season was executed. All the enforcement requests received by the Unit were responded to, during both quarters.

Table 6 provides an overview of the Fines by Parish Courts for Close Season offences from 2019-2022. For the 2022 Lobster Close Season, total fines to date are at $654,000. Since the 2019 Enforcement programme began with funding from the Fisheries Management and Development Fund, a total of $2,721,000 in fines was recorded. This does not include fines of $1.9M for the detention and seizure of two (2) Dominican Republic Vessels and charges laid against their crew in 2019 by the JCF/JDF; as well as other pending court cases including abscondment and warrants for arrests.

Table 6 Fines by Parish Courts for Close Season offences from 2019-2022

2019	2020	2021	2022
$742,000	$180,000	$1,145,000	$654,000
$1.9M (Foreign poaching by 2 Dominican Republic Vessels and their fishers)			

Sub-Total: $2,721,000 (National and for Close Season Offences only)

Total: $4,621,000

4.2 Compliance with Licensing Requirements

Another area of compliance being tracked by the FCLS Division concerns the high incidence of individuals fishing without a licence, which is part of Illegal Unreported and Unregulated (IUU) fishing. The data show that on average, only 24% of persons being licensed each year, are renewing their licence from the previous year although there is evidence to suggest that they continued to engage in fishing activity.

Table 7 shows the rate of renewal for individual licences to fish from 2017 to 2021.

Table 7 Number of Individual Fisher Licences issued and Renewal percentage (excluding temporary permits)

Year	Number of Individual Fisher Licences Issued	% Renewing from previous year
2017	2530	
2018	3467	19
2019	3654	26
2020	4979	24
2021	3995	25
	Total: 18625	**Mean: 23.5 ± 2.69**

The total number of discrete fishers licensed from 2017 – 2021 was 12,424 individuals, of which:

- 19% renewed their fishing licence once,
- 9% renewed their fishing licence twice,
- 3% renewed their licence three times, and
- only 1% renewed every year from 2018 – 2021.

The data show that on average, fishers renew their licence every 2 – 3 years and this lack of consistency shows non-compliance with the requirement by law for an individual to be in possession of a valid licence when fishing. For the two quarters under review, of the 2975 individual fishers licensed during the period, 810 were renewing from the previous year; this represents 27%, which is consistent with the annual renewal trend.

As it relates to the licensing of vessels, although over 8,000 vessels have been registered since 1996, less than 900 vessel licences are licensed (new and renewals) each year. The rate at which vessel owners return to renew their licence from the previous year is also as inconsistent as observed with individual licences.

The FCLS Division is responding to the trends highlighted by hosting monthly in-field licensing sessions and increasing enforcement by training and deploying more compliance officers.

Part 5
Conclusion

PART 5

Conclusion

5. Conclusion

This first issue of the Jamaica Fisheries: Quarterly Statistics Report for the NFA, shows the performance of the Jamaican fisheries sector over the first two quarters of the Financial Year 2022 – 2023.

From the data presented for capture fisheries, it is evident that the artisanal fishery plays a critical role in food security with 94% of total fish production coming from this group of individuals. Fish production overall accounted for 4,938.69MT which, at a value of US$59.7M, can be considered economically significant. However, with 2021 recording ~10,000 MT, the sector may not be on track to surpass this figure based on the data for the first two quarters of 2022-2023. Future issues will show the progress in this area. It is noteworthy that in August and September, both the north and south coast artisanal fish production values were similar with reef, offshore and deep slope fisheries being the most productive. The capture fisheries sub-sector is impacted by a number of factors linked to climate change and human behaviour, and these areas are important to consider when developing management strategies.

Although fish production from Aquaculture is not to the extent it was in the past, this sub-sector plays a critical role in food and nutritional security and its performance will become increasingly more important as fish production from marine capture fisheries is projected to continue its decline.

The production value of 455.96 MT of tilapia produced in the first two quarters was lower than what was projected for the sub-sector; however, historically, the expectation is for improvement in the remaining quarters of the financial year. With 115 registered fish farmers producing freshwater tilapia for the local market at prices more affordable than marine fish, there is great potential for expansion of this sub-sector which is positioned to meet the protein needs of the population. The factors affecting the sub-sector were also highlighted and a major one is water supply, which is critical for the success of any aquaculture facility.

Compliance with the Fisheries Act, 2018 and the regulations for the sector, is critical to ensure that the resources are not overexploited. In the first two quarters, persons were charged and prosecuted under the new legislation and the work of the compliance team continues. The data presented in this report show where failure to renew one's licence is a prevailing issue which, the NFA has started to address through public education and increased enforcement.

Part 6
Appendices

PART 6

Appendices

Appendices

Number and percentage of fishers licensed by age group

Age Groups	Numbers	% Composition
16 - 24	170	5.71
25 - 39	794	26.69
40 - 55	1,130	37.98
56 - 69	726	24.40
70 - 89	153	5.14
90 and over	2	0.07
Grand Total	2,975	100.00

Artisanal fish production (MT) trend by coastal communities April-September 2022

Strata Production	April	May	June	July	August	September	Grand Total
NORTH COAST PRODUCTION	98.53	98.25	549.42	415.72	673.04	237.90	2,072.86
SOUTH COAST PRODUCTION	375.06	417.78	252.21	538.19	702.07	266.68	2,551.99
Grand Total	**473.60**	**516.03**	**801.63**	**953.90**	**1,375.11**	**504.58**	**4,624.85**

Artisanal fish production (MT) trend by fishery groups April-September 2022

Fishery	April	May	June	July	August	September	Grand Total
COASTAL PELAGICS	48.65	46.15	71.86	159.99	220.87	77.96	625.47
NO BOAT	44.48	44.48	6.76	124.95	162.34	140.06	523.08
OFFSHORE AND DEEPSLOPE	38.15	61.12	517.53	382.49	515.92	46.80	1,562.01
REEF	342.16	354.91	205.32	281.81	473.18	236.18	1,893.55
SHRIMP	0.16	9.36	0.16	4.66	2.81	3.59	20.73
Grand Total	**473.60**	**516.03**	**801.63**	**953.90**	**1,375.11**	**504.58**	**4,624.85**

Estimated value (J$) for the artisanal fish production

Fishery	April	May	June	July	August	September	Grand Total
REEF	603,471,184.23	782,441,252.66	294,226,644.21	559,147,969.98	834,537,766.88	520,682,480.07	3,594,507,298.03
COASTAL PELAGICS	53,625,249.65	61,045,624.47	95,053,372.71	176,363,253.97	243,462,602.21	85,932,082.82	715,482,185.83
OFFSHORE AND DEEPSLOPE	67,282,260.54	134,751,333.33	1,140,946,159.00	758,928,180.17	909,929,296.97	82,539,482.52	3,094,376,712.53
NO BOAT	78,456,000.00	98,070,000.00	14,910,000.00	275,473,400.00	286,322,938.18	247,017,866.67	1,000,250,204.85
SHRIMP	344,000.00	20,640,000.00	344,000.00	10,269,014.29	6,192,000.00	7,912,000.00	45,701,014.29
Grand Total	**803,178,694.42**	**1,096,948,210.46**	**1,545,480,175.92**	**1,780,181,818.41**	**2,280,444,604.24**	**944,083,912.08**	**8,450,317,415.53**

Average Ex-vessel price (J$) per pound

Fishery	April	May	June	July	August	September
REEF	800	1000	650	900	800	1000
COASTAL PELAGICS	500	600	600	500	500	500
OFFSHORE AND DEEPSLOPE	800	1000	1000	900	800	800
NO BOAT	800	1000	1000	1000	800	800
SHRIMP	1000	1000	1000	1000	1000	1000

Tilapia production (MT), Pond in production (Acres) and the number of registered fish farmers by parish, April – September 2022

Parish	Production (MT)	Acres in Production	Registered Farmers
St Catherine	290.44	500.2	10
St Elizabeth	57.1	132	3
St Ann	0	1	1
Portland	0.3	0.25	2
St Mary	0	0.25	86
Clarendon	107.8	78	3
St Thomas	0.3	2.5	1
Westmoreland	0.02	4.5	4
Hanover	0	6.5	5
Total	455.96	725.2	115

List of common ornamental species cultured in Jamaica

Tetra	Kio
Neon Tetra	Goldfish
Cardinal Tetra	Angel Fish
Fresh water shark	Discus
Red-Tail Black	African Cichlid
Shark Sevrum	Rosy Barb
Zebra Danio	Moss Green Barb
Giant Danio	Tiger Barb
Fighter Fish.	Gourami
Oscar	Paradise Fish