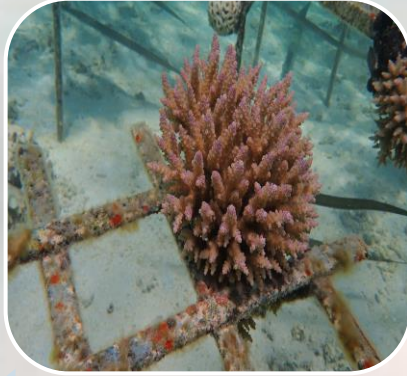


*Ministry of Blue Economy, Marine Resources,  
Fisheries and Shipping*



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Annual Report on Performance for the Financial Year 2022-2023



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## STATEMENT

### FROM HONOURABLE MINISTER



I have the pleasure to present the Annual Report of the Ministry of Blue Economy, Marine Resources, Fisheries and Shipping for the Financial Year 2022-2023.

In order to address the global impacts of climate change, the Ministry of Blue Economy is working to establish itself as a significant economic force while contributing to food security, job creation, import reduction and export promotion with focus on the protection and conservation of marine resources and marine ecosystems.

The main strategy and policy of the Ministry of Blue Economy, Marine Resources, Fisheries and Shipping remains the development of the Blue Economy into a major pole of socio-economic growth within the framework of good governance and sustainability.

With the aim of improving fish stocks in the lagoon and concurrently implementing measures to adapt and mitigate the impacts of climate change, the Marine Ranching Programme is being continued whereby a total of 55,000 sea bream fingerlings were produced in the hatchery and stocked in the ponds at the Albion Fisheries Research Centre (AFRC) for release.

In a bid to encourage small-scale and backyard fish farmers and in order to boost aquaculture production, a total of 5,535 berri rouge fingerlings were either partly sold or distributed free of charge for aquaculture activities in tanks and small size ponds. In addition, a total of 12,277 units of berri rouge fingerlings were provided to 47 persons to undertake aquaponics project. A total of 321,205 freshwater prawn juveniles was produced in the hatchery at the AFRC and sold to 31 persons.

Protection and conservation of marine aquatic organisms remain one of the main objectives of the Fisheries Division. A closure in the Octopus Fishery spanning from 15 August to 15 October of each year has been implemented to allow mature female octopuses to spawn and replenish the stock, followed by a second closure from the 15 January to 15 March of each year to allow infant octopus to attain maturity size.



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A resolution with respect to voluntary policy closure proposed by Mauritius was adopted at the 27th Session of the Indian Ocean Tuna Commission (IOTC) in May 2023. A total of 8 Conservation and Management Measures including Resolution 23/03 and 1 recommendation were adopted during the 27th Session of the Commission which was held in Mauritius from 8 to 12 May 2023. Moreover, with a view to ensure the protection and conservation of deep-sea demersal species, the Ministry participated in 7th Compliance Committee of the Southern Indian Ocean Fishing Agreement (SIOFA), held in Balaclava, Mauritius from 28 to 30 June 2023.

The local fish production was 38,279 tonnes. The production in the coastal fishery was 1,303 tonnes, comprising catch from the artisanal, amateur and sports fisheries. The Fish Aggregating Devices (FADS) fishery produced 191 tonnes. Banks fishery produced a total of 1,234 tonnes of fresh, frozen, salted and chilled fish. The pelagic fishery produced some 33,871 tonnes tuna and associated species. The total production from aquaculture was 1,680 tonnes.

According to the Statistics Mauritius, some 134,000 tonnes of fish and fish products valued at about Rs. 12.784 billion were imported and 90,588 tonnes of seafood products valued at Rs. 16.493 billion were exported, resulting in a positive trade balance of Rs.3.709 billion.

Long-term monitoring of the coral reefs ecosystem has been carried out at the five established permanent stations in each of Blue Bay and Balaclava Marine Parks. One fibre-glass research boat was received as donation from Japan International Cooperation Agency (JICA) on 31 May 2023 to help in the monitoring of ecosystem.

The Ministry is implementing a seagrass mapping and blue carbon evaluation project, entitled “Assessment of Blue Carbon Ecosystem (Seagrass) around the island of Mauritius: Relevance for Marine Spatial Planning” under the Western Indian Ocean from land-based sources and activities - WIOSAP under the Nairobi Convention, funded by the UNEP to the tune of USD 100,000.

In the context of the oil spill from MV Wakashio, 24 new long-term monitoring stations that were established under the Integrated Environmental Monitoring Plan (IEMP) in the South-Eastern region were monitored twice.

Under the IEMP, the monitoring program for hydrocarbon contamination in seawater, marine sediment and fish was continuous.





## MINISTRY OF BLUE ECONOMY, MARINE RESOURCES, FISHERIES AND SHIPPING

The Fisheries Training and Extension Centre (FiTEC) was awarded the MS ISO 9001:2015 certification for its training component by the Mauritius Standard Bureau on 18 November 2022 and which is valid until 17 November 2025.

The Research Vessel Investigator II carried out a total of 36 sea trips for research, training, deployment and maintenance of FADs. In addition to Sphyrna II, the Ministry received two more boats donated by the Japanese Government, one patrol boat under the FAO REEFFISH Project and one FAD Fisheries training boat under the JICA Livelihood Project.

A total of sixteen (16) FADs have been deployed for the year 2022-2023 including six SMART FADs equipped with Satellite Buoy. A Mobile App namely, RodMoFAD has been developed under the UNDP EcoFish Project with the aim to help FADs' fishermen to locate and have access to fish biomass data.

A total of 31 licences were issued to boats engaged in semi-industrial fishery, three (3) fishing licences to boats operating in the Advanced Coastal Fishery, five (5) licences were issued to (4) purse seiners and (1) supply vessel which are active in the pelagic fishery. Licences were also issued to 16 Mauritian longliners.

53 licences were issued to boats operating under different Fishing Agreements. 13 Letters of Intent, including 10 extensions were issued to fishing promoters in respect of new fishing development projects.

A new Protocol under the Fisheries Partnership Agreement with the European Union was signed on 21 December 2022. Under the new Agreement, 40 licensed European tuna purse seiners, 45 long liners, including supply vessels in line with IOTC Resolutions on supply vessels, can undertake fishing operation in Mauritius waters.

The Fisheries Protection Service (FPS) of the Ministry continued the monitoring of fish landings at the fish landing stations around the island to prevent, deter and eliminate illegal fishing. In this respect, a total of 1,822 units and 38.4kg of marine species were forwarded to the AFRC for examination, identification and disposal purposes from 108 occurrences from the National Coast Guard (NCG), Fisheries Protection Service (FPS), Import and Export Unit and Port State Control Unit (PSCU) in respect of various offences under the Fisheries and Marine Resources Act 2007.

This Ministry has demonstrated remarkable progress in adhering to standards and protocols. The Shipping Division which had implemented the ISO 9001:2015 Quality Management System in March 2018 and which subsequently underwent a successful



## MINISTRY OF BLUE ECONOMY, MARINE RESOURCES, FISHERIES AND SHIPPING

recertification by the Mauritius Standards Bureau in 2021, achieved yet another milestone with a successful surveillance audit on 31 March 2023, showcasing their unwavering commitment to the operational excellence.

Furthermore, the division's efforts in providing The Long-Range Identification and Tracking of Ships (LRIT) which is a system put in place by the International Maritime Organization (IMO) whereby LRIT information is provided to Contracting Governments to the 1974 International Convention for the Safety of Life at Sea (SOLAS) and Search and Rescue services has been commendable.

The Mauritius LRIT National Data Centre, managed by Fulcrum Ltd has successfully passed the International Mobile Satellite Organization (IMSO) audit in February 2023, thereby upholding the Ministry's role in ensuring the safety and security of maritime activities.

I thank all the staff for their performance and support and hope that they will continue with the same dedication and enthusiasm to meet the challenges facing the blue economy sector.

**Sudheer Maudhoo**  
**Minister of Blue Economy,**  
**Marine Resources,**  
**Fisheries and Shipping**



## STATEMENT FROM THE SUPERVISING OFFICER



It is with great pleasure that I present to you the Annual Report on Performance of the Ministry of Blue Economy, Marine Resources, Fisheries and Shipping for the Financial Year 2022-2023. This report highlights the significant progress and achievements made by our Ministry over the past year in promoting sustainable development and effective management of our coastal and marine resources, including the protection and conservation of the ecosystems.

The Ministry continues to play a pivotal role in our nation's economic growth and development. We have witnessed remarkable advancements in various sectors comprising fisheries, aquaculture and maritime transportation. These achievements bear testimony to the dedication and hard work of our ministry, staff, stakeholders and the entire marine community.

One of the key areas of focus of our ministry has been the sustainable management of fisheries resources. Enhanced monitoring and enforcement measures of our Monitoring, Control and Surveillance Systems have increased our effort to prevent, deter and eliminate Illegal, Unreported and Unregulated (IUU) Fishing activities. Better monitoring of activities has not only contributed to enhanced protection of our marine ecosystem but have raised the standard of living of the fisher community.

Lastly, I extend my sincerest appreciation to all the dedicated staff, individuals, organisations, fishers and partners who have contributed to our accomplishment throughout the year as well as the editorial team of the report.

**Dr Dhanandjay Kawol**  
**Supervising Officer**



## Overview of the Ministry

### Vision and Mission

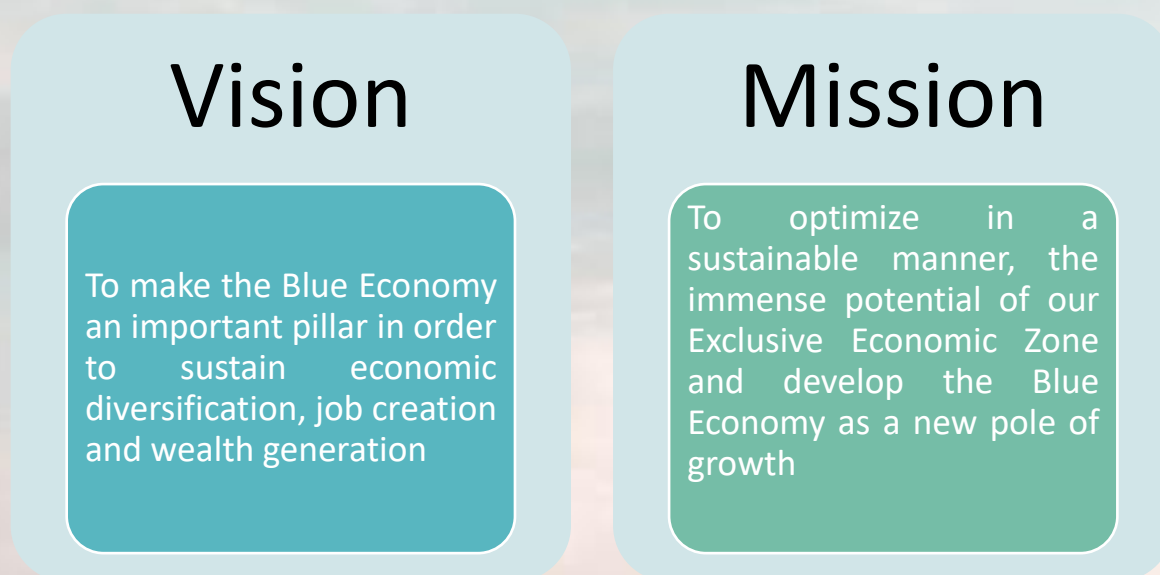


Figure 1 – Vision and Mission of the Ministry

### Key Objectives

The key objectives of the Ministry are to:

- ensure long-term benefits of the sustainable use of marine resources
- develop local capacity in the blue economy
- improve ocean hazards management for greater climate resilience
- enhance efficiency as a Maritime Safety Administration



## Core Values



Figure 2 - Core Values of the Ministry

## Strategy and Policy

Develop the blue economy as a major economic pillar with the objective of doubling the contribution of the blue economy to GDP by 2025 by tapping into the economic potential of the ocean while at the same time protecting this resource.



## Our customers

The customers of the Ministry are the fisher community comprising artisanal fishers, semi-industrial fishing operators, fishers involved in aquaculture projects, amongst others, the fishing industry, ship owners, shipping agents, seafarers' welfare associations, the maritime industry, maritime training institutions, oceanography experts, coastal zone users, non-governmental organisations, the public sector, the private sector, researchers, students, international partners/lending institutions and the public at large.

## Services offered by the Ministry

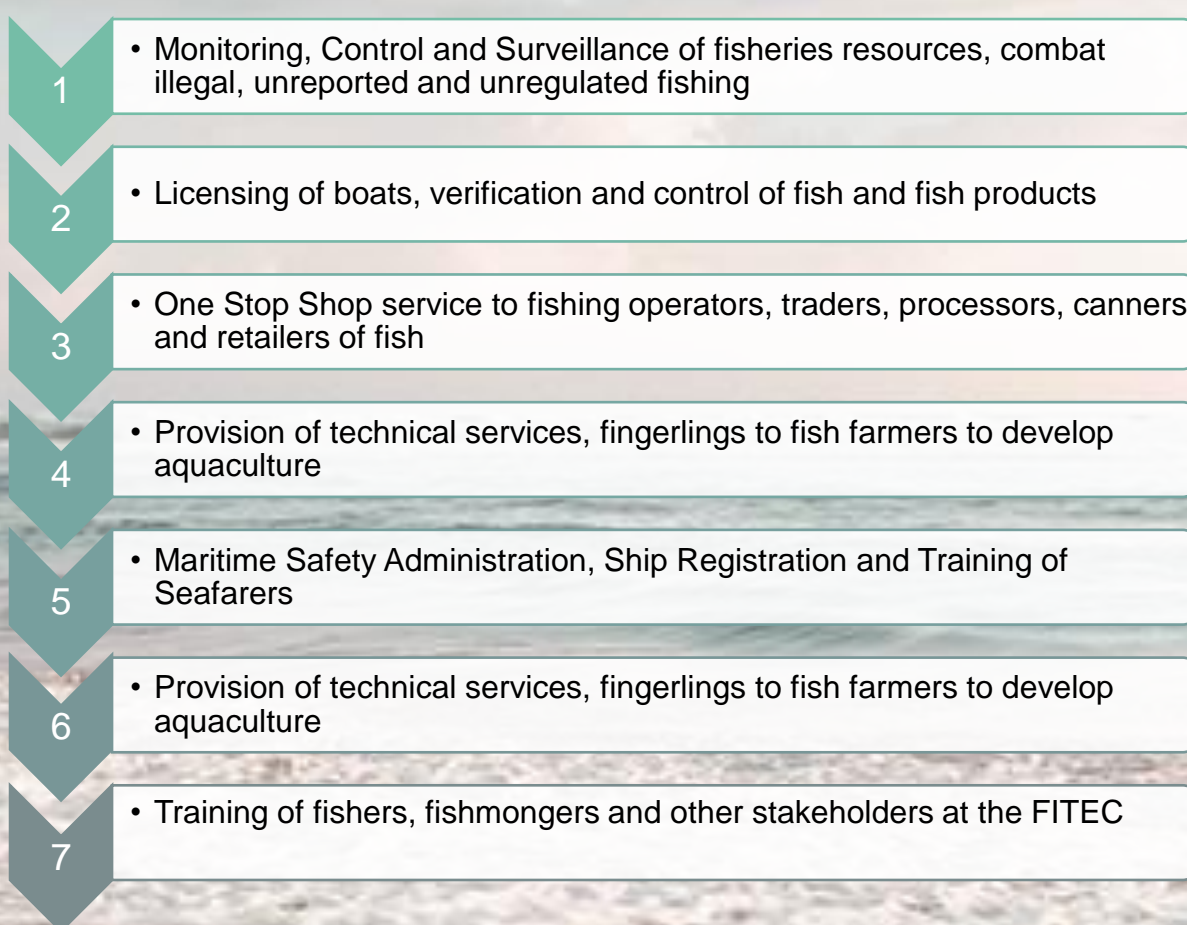


Figure 3 - Services offered by the Ministry



## Blue Economy

Mauritius is focusing on the Blue Economy as a new frontier for development. The Government of Mauritius is endeavouring to make its nation fully aware of its potential as a coastal state and Blue Economy is believed to create more jobs and economic development in the future.

In 2015, the Ministry of Ocean Economy, Marine Resources, Fisheries and Shipping was set up in line with Government vision to make the ocean economy an important industry to sustain economic diversification, job creation and wealth generation. In 2019 the Ministry was renamed as Ministry of Blue Economy, Marine Resources, Fisheries and Shipping.

The Government, in its “Vision 2030” strategy, has clearly stated the vision to transform Mauritius into an Ocean State by promoting ocean/blue economy as one of its main pillars of development.

Presently, the Blue economy is driven by established sectors, namely coastal tourism, fishing, seafood processing, aquaculture and port-related services. Emerging sectors include sea bed explorations, ocean-based energy and maritime digitization, amongst others.

## Divisions

**The divisions of the Ministry are as follows:**

1. Fisheries Division
2. Fisheries Protection Service
3. Shipping Division

### 1. Fisheries Division

The Fisheries Division is the technical arm of the Ministry and is headed by the Director of Fisheries.

The Fisheries Division is responsible for the:

- sustainable development of the fisheries sector
- protection and conservation of aquatic resources and coastal ecosystems
- promoting aquaculture development



## MINISTRY OF BLUE ECONOMY, MARINE RESOURCES, FISHERIES AND SHIPPING

- training of fishers and fishmongers
- monitoring of fishing and related activities
- monitoring, control and surveillance
- combatting Illegal, Unregulated and Unreported (IUU) fishing
- import and export of fish and fish products

The different units falling under the Fisheries Division are:

### 1.1 The Albion Fisheries Research Centre (AFRC)

The AFRC was set up in 1982 with the assistance of the Government of Japan. It carries out applied research, development and management activities through specific units/divisions, namely:

- Aquaculture
- Marine Resources
- Marine Science
- Marine Conservation
- Planning/Licensing
- Port State Control/Import & Export/Vessel Monitoring System
- Fisheries Training and Extension Centre (FiTEC)
- Laboratory

#### 1.1.1 Aquaculture Division

The Aquaculture Division is responsible for the promotion and development of aquaculture with a view to increase fish production through research on different marine and freshwater species. It is also involved in the dissemination of information on aquaculture and provision of technical advice and support to different stakeholders.

The Aquaculture Division is also responsible for:

- transfer of aquaculture techniques to fish farmers for the production of different fish species and improvement of aquaculture techniques for quality seed production





## MINISTRY OF BLUE ECONOMY, MARINE RESOURCES, FISHERIES AND SHIPPING

- production of fish fingerlings for stock enhancement in the lagoon
- appraisal of aquaculture projects
- providing technical assistance to promoters
- monitoring aquaculture projects

### 1.1.2 Marine Resources Division

This section is responsible for carrying out research, development and management of the fishery resources in a sustainable manner for the benefit of all stakeholders of the fisheries sector and the public at large. It is also responsible for development activities aimed at increasing knowledge on the fishery resources found in our Exclusive Economic Zone (EEZ) with a view to enabling its sustainable utilisation. The Marine Resources Division deals with the Coastal Fishery, Pelagic Fishery and Offshore Demersal Fishery projects.

#### (i) Coastal Fishery

- monitoring, sampling and estimation of coastal catch data around the island of Mauritius
- processing data for the Producer's and Consumer's Price of fish
- computation of fishery-dependent and fishery-independent variables such as the number of fishing days and the catch per fishermen day
- identification and examination of seized fish specimens and submission of reports to allow prosecution of defaulters by the Fisheries Protection Service and Police
- identification and examination of fish specimens submitted by the Laboratories Division
- biological analysis of commercial fish specimens to determine sex of fish and gonad maturity stage
- sampling of octopus specimens island-wide to determine sex, weight and mantle length, during pre-closure, opening and post-opening of the closed seasons for octopus fishing
- technical assistance to the Food and Agricultural Organisation (FAO) for estimation software to review current data collection methodology,



## MINISTRY OF BLUE ECONOMY, MARINE RESOURCES, FISHERIES AND SHIPPING

implementing new forms to accommodate requirements of software and compile data on catch, effort and price of fish

### **(ii) Pelagic Fishery**

- Input of data received from the fishing logbooks of Mauritian flagged and foreign licensed purse seiners and longliners
- Collection, verification and processing of catch and effort data received from Mauritian flagged and foreign licensed tuna fishing vessels
- Analysis of tuna data for the study of exploitation rates, species composition, stock structure and spatial distribution
- Sampling of tuna and tuna like species during unloading of tuna fishing vessels at Port Louis
- Submission of tuna fishery statistics to the Indian Ocean Tuna Commission (IOTC)
- Implementation of IOTC Conservation and Management Measures
- Regional Cooperation for the management of tuna and tuna-like resources

### **(iii) Offshore Demersal Fishery**

- Collection, verification and processing of logbook data from the different fisheries
- Monitoring of quota allocated to fishing companies, through analysis of catch data and exploitation rates
- Analysis of trends in catch and effort
- Collection of length and weight data through sampling exercises during unloading of fishing vessels/boats
- Analysis of length frequency data and length/weight relationships of targeted species
- Complying to the Southern Indian Ocean Fisheries Agreement (SIOFA) Conservation and Management Measures (CMMs)
- Submission of demersal fisheries statistics and reports to SIOFA



- Compilation and submission of data to the Statistics unit

### 1.1.3 Marine Science Division

The Marine Science division is responsible for:

- the long-term protection and conservation of coastal marine ecosystems for ecosystem resilience and sustainable use of marine resources
- sustainable development and management of coastal areas
- projects regarding mangroves propagation, seagrass mapping and blue carbon around the island, marine turtles' conservation, stranded marine mammals/turtles, climate change adaptation and scientific research

#### The main activities of the Marine Science Division are:

- long-term coral reef monitoring at selected sites around the island
- hosting of the Coral Reef Network
- mangrove Propagation Programme in collaboration with NGOs
- mangrove sensitization campaign
- carry out Integrated Environment Monitoring Plan in connection with the Wakashio Oil Spill
- seagrass mapping around the island
- blue carbon assessment in seagrass meadows
- monitoring Crown-of-Thorns (COTs) outbreaks in Mauritius
- conducting underwater ecological surveys to provide views in connection with tourism seabased activities and coastal development works
- assessing requests for marine scientific research, film shooting and other projects in connection with the ocean matters and marine mammals/ turtles and marine ecosystem
- attending to cases of stranded marine turtles/mammals
- treating and rehabilitating of injured turtles
- coastal area development and coastal erosion
- stakeholder in the Integrated Coastal Zone Management



## MINISTRY OF BLUE ECONOMY, MARINE RESOURCES, FISHERIES AND SHIPPING

- participating in Commonwealth Blue Charter champion groups
- hosting of International delegations

### 1.1.4 Marine Conservation Division

The Marine Conservation Division is responsible for the long-term protection and conservation of marine bio-diversity and habitats for sustainable use while maximizing economic and social benefits derived from the coastal zone.

#### The main activities Marine Conservation Division are:

- managing Marine Protected Areas (MPAs) and monitoring of permissible activities in the Blue Bay Marine Park and other MPAs around the island of Mauritius
- monitoring state of corals, seagrass and associated biota, through field and underwater surveys
- conducting underwater ecological surveys for coastal development and tourism related projects
- assessing Environmental Impact Assessment (EIA) applications and Preliminary Environmental Reports and submission of appropriate recommendations to the Ministry of Environment, Solid Waste Management and Climate Change and representing the Ministry at the statutory EIA Committee
- carrying out Post Environmental Impact Assessment monitoring for projects along the coast as an enforcing agency
- regulating permissible activities through the issue of permits for the Blue Bay Marine Park and interference permits for Marine Protected Areas
- providing views and recommendations on projects, in the vicinity of or within wetlands, to the National Ramsar Committee
- sensitization of members of the public on MPAs, sustainable development and use of the coastal zone



- sensitization of members of the public on MPAs, sustainable development and use of the coastal zone

### 1.1.5 Laboratories Division

This Division comprises three Laboratories, namely, Marine Chemistry, Marine Microbiology and Fish Toxicity, and the Quality Control Unit. The Division is committed to instil the highest standard of quality for the testing of seawater, the screening of fish for toxicity and dispensing associated services in view of monitoring, protecting, conserving marine resources and safeguarding public health. The Marine Chemistry and Marine Microbiology Laboratories of the Division are accredited to MS ISO/IEC 17025:2017.

#### Main activities:

- perform tests, monitor and provide scientific information on seawater quality, marine sediment and biota for a sustainable coastal zone management and to ensure the safety of lagoon waters for recreational purposes
- provide information and initiate appropriate measures in cases of fish kills and marine pollution
- screen fish deemed to cause fish intoxication and conduct toxicity tests for ciguatoxin and other bio-toxins in fish and fish products
- monitor the density of harmful marine microalgae and occurrence of harmful algal blooms
- carry out public awareness campaigns on harmful marine microalgae, algal blooms and toxic fish poisoning

### 1.2 Fisheries Training and Extension Centre (FiTEC)

The Fisheries Training and Extension Centre (FiTEC) situated at Pointe aux Sables was set up through a grant from the Government of Japan and became operational in 2004.

The centre provides training to fishermen and other stakeholders of the fishing industry in order to meet government's fisheries development objectives that are:



## MINISTRY OF BLUE ECONOMY, MARINE RESOURCES, FISHERIES AND SHIPPING

- Empowering fishermen to earn a better livelihood
- Enhancing knowledge and skills of fishermen to operate in the off-lagoon area around Fish Aggregating Devices (FADs) and the oceanic banks
- Encourage effective and efficient fishing techniques
- Provide training for enhanced safety and security at sea and in navigation
- Creating awareness on the protection and conservation of the marine environment
- Promoting an ecosystem approach to fisheries

### 1.2.1 Ministry's Research/Multi-Purpose Vessels

The Ministry has one research vessel and one multipurpose vessel which are used to carry out research, fishing, training and deployment of Fish Aggregating Devices (FADs) in the coastal waters of the Republic of Mauritius.

- A total of 36 sea trips were carried out for the Financial Year 2022-2023 using Multi-Purpose vessel Investigator II
- The Multi-Purpose vessel Investigator II was also used for performing other sea-based research activities for various Divisions of the Ministry such as the Laboratory Division for sea water sampling around Mauritius and the Marine Science Division for underwater surveys at Coin de Mire
- Contracts for the dry docking of the Multi-Purpose vessel Investigator II and Research Vessel Sphyrna II were awarded. It is expected that both vessels will be fully operational by end of September 2023
- The Ministry received two more boats donated by the Japanese Government, one patrol boat under the FAO REEFFISH Project and one FAD Fisheries training boat under the JICA Livelihood Project



### 1.2.2 Fish Aggregating Devices (FADs)

**Aims:** To increase and diversify the income of fishermen, concurrently diverting fishing effort from the heavily exploited lagoon to the outer lagoon, thus allowing the marine ecosystems to rehabilitate; and increase the supply of fresh fish on the market.

- Sea trips were carried out using the Multi-Purpose vessel Investigator II for the setting up, verification and repair of Traditional Rosary-Type FADs as well as setting up of SMART FADs
- As at 31 July 2023, 23 FADs were active out of a total of 28
- Sixteen (16) FADs have been deployed during for the Financial Year 2022-2023 including six (6) SMART FADs equipped with Satellite Buoy which were deployed at La Preneuse, Médine, Port Louis I, Port Louis II, Trou D'Eau Douce and Baie du Cap
- A Mobile App namely, RodMoFAD has been developed under the UNDP EcoFish Project and last testing of the App has been carried out in July 2023. The app aims to help FADs' fishermen to locate and have access to fish biomass data

### 1.2.3 The General Course for Fisher

**Aim:** To provide artisanal fishermen with basic knowledge and skills to efficiently, responsibly and safely fish outside the lagoon and around Fish Aggregating Devices.

A total of 170 fishers (159 males & 11 females) followed the 'General Course for Fishers' (GCF) from July 2022 to June 2023. A certificate of attendance was awarded to the trainees after completion of the training course.

### 1.2.4 Fédération des Pêcheurs Artisans de L'Océan Indien (FPAOI)

#### Aims

- Train and equip fishermen/participants in terms of knowledge to face the challenges of the artisanal fisheries
- Initiate the various fishing techniques commonly used around FADs
- Disseminate good practices and sustainable conservation of catches



- Help fishermen increasing their income through valorisation of catches

### **1.3 MCS/VMS/Port State Control and Import/Export Division**

#### **1.3.1 MCS/VMS/Port State Control Unit**

This Unit is responsible for the implementation of conservation and management measures to:

- combat Illegal, Unreported and Unregulated (IUU) fishing
- keep the port free of illegal fishing boats/vessels
- ensure that only legally caught fish are traded
- ensure a continuous supply of safe fish and fish products for local consumption
- monitor licensed fishing boats/vessels in the EEZ of Mauritius through the VMS

#### **1.3.2 Import/Export Unit**

The Import/Export Unit mainly controls the import and export of fish and fish products to ensure that:

- good quality and wholesome fish and fish products are marketed in the country
- there are fair trade practices
- the products intended for import or export do not originate from illegal sources
- imported fish and fish products conform to international requirements (World Trade Organisation, Codex Alimentarius and the EU)

### **1.4 Planning and Licensing Units**

#### **1.4.1 Planning Unit**

The Planning Unit is responsible for planning and implementation of fisheries policies as well as the compilation and processing of information in the fisheries sector. Its main activities include:





## MINISTRY OF BLUE ECONOMY, MARINE RESOURCES, FISHERIES AND SHIPPING

- drafting and reviewing of fishing agreements and Memorandum of Understanding (MoU) for cooperation in the fisheries sector
- coordinating with the seafood processing sector and other stakeholders
- following-up actions on international fisheries negotiations

### 1.4.2 Licensing Unit

The Licensing Unit is mainly responsible for the processing and issue of fishing licences in respect of local and foreign fishing vessels. Local fishing vessels operate in industrial banks fishery, semi-industrial chilled fish fishery and industrial pelagic fishery (purse seine fishery).

## 1.5 Competent Authority Seafood Hub

The Competent Authority Seafood (CASF) is responsible for the inspection and certification of fish and fish products for export primarily to Member States of the European Union (EU) as well as to non-EU countries.

### Activities:

Its activities are governed by the Government Notice 147 of 2009 (Export of Fish and Fish Products Regulations), Government Notice 204 of 2010 (Export of Fish and Fish Products [Amendment] Regulations) and Government Notice 209 of 2012 (Export of Fish and Fish Products [Amendment] Regulations) under the Fisheries and Marine Resources Act 2007. The activities include:

- registration of Fish Business Operators (processing plants, cold stores, freezer vessels, reefer vessels, aquaculture farms, exporters etc.) involved directly or indirectly in the export of fish and fish products to EU and non-EU countries
- issuance of Export Veterinary Health Certificates for all consignments of fish and fish products according to the importing country's requirements
- inspection of consignments of fish and fish products for compliance before export to EU and non-EU countries
- official audits, routine/follow-up/ad-hoc inspections of approved facilities for verification of compliance with national legislations and importing countries' requirements



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- inspection of fishing vessels providing raw materials to registered processing plants prior to departure for fishing campaign
- inspection of landing sites for whole brine-frozen tuna and pelagic/demersal fish
- inspection and random organoleptic evaluation of all fish and fish products imported for further processing before re-export
- sampling of water, ice, fish and fish products from each EU-approved facility for analysis in a designated laboratory as per EU regulations
- preparation of a national residue monitoring plan for aquaculture products on a yearly basis for approval by the Health and Consumers Directorate-General of the European Commission (DG SANTE)
- control of imported live fish larvae meant for aquaculture at all stages from point of entry, transfer to nursery, transfer to sea cages, harvesting and transfer to processing plant
- control of imported live fish brood stock meant for aquaculture at all stages from point of entry, transfer to quarantine facilities and transfer to brood stock farm
- control of imported live ornamental fish at point of entry and quarantine premises
- inspection and approval of quarantine facilities of registered ornamental fish importers and follow-up during quarantine period
- regular monitoring of fish growth at hatchery, nursery and cage level on aquaculture farms
- approval of Veterinary Medicinal Products' prescriptions before being administered to farmed fish by registered aquaculture farms and ornamental fish establishments



## 2. Fisheries Protection Service

The Fisheries Protection Service (FPS) is the enforcement unit of the Ministry. It is mainly responsible for the protection and conservation of the fishery resources to warrant sustainable development and ensuring that fish and fisheries products which are safe for human consumption are marketed. One of its core duties is also the enforcement of the Fisheries and Marine Resources Act and promoting the welfare of fishers registered with the Ministry.

The FPS comprises 14 Fisheries Posts (figure 4) and oversees 61 Fish Landing Stations around the island of Mauritius (figure 5).

### Services offered by FPS:

- Control and surveillance of lagoon and off lagoon fishing
- Issue of fishmonger's licence
- Inspection of fish quality at point of sales
- Registration and issue of fisher cards
- Registration of fishing boats
- Inspection of fishing vessels for safety and security compliance before authorisation is obtained for fishing trip
- Provision of information related to fisheries sector to stakeholders
- Issue of licence for fishing gear
- Renewal of large nets, gill nets and bait nets licences
- Payment of bad weather allowance on days declared bad to registered artisanal fishers
- Payment of closed season allowance to net fishers during closed period from October to end of February of each year
- Participation in search and rescue exercises at sea
- Sensitisation of fishers and the public on matters relating to the Fisheries Sector



**MINISTRY OF BLUE ECONOMY, MARINE RESOURCES, FISHERIES AND SHIPPING**

- Maintain and update data on all registered bank and artisanal fishers and boats
- Attend to fishers in difficulty at sea

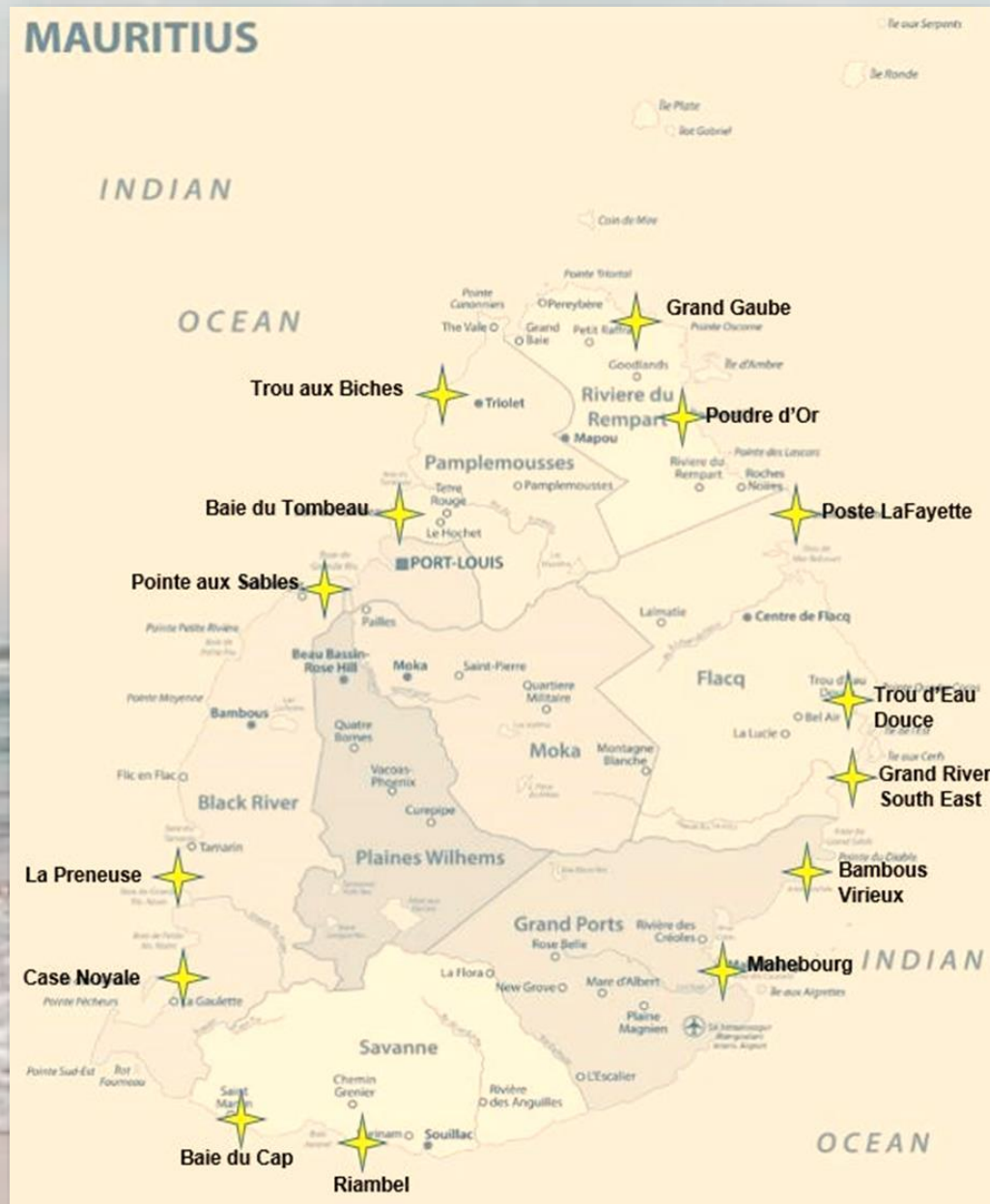


Figure 4 - Fisheries Posts of the Ministry





### 3. Shipping Division

The Shipping Division of this Ministry is responsible for Maritime Safety, Security, and Prevention of Pollution of the Marine Environment from ships, thus facilitating and providing a policy environment for maritime business in Mauritius.

It ensures compliance with International Maritime Laws and Conventions and also acts as the Maritime Administration responsible for ensuring that all vessels registered under the Mauritius Flag and all foreign vessels plying in the Mauritian territorial waters comply with international standards and for the development of the Mauritius Shipping Sector.

To maintain the status of Mauritius on the International Maritime Organisation (IMO) Standards of Training, Certification, and Watchkeeping (STCW) for Seafarers "White List", the Shipping Division has implemented the new provisions of ISO 9001:2015 standards and transited to ISO 9001:2015 in March 2018. The Division has been recertified by the Mauritius Standard Bureau (MSB) on 11 April 2021 and the first Surveillance audit was conducted by the MSB on 28 April 2022.

#### Objectives

- To ensure that Mauritian seafarers meet the highest possible standard of competence as specified in the STCW Convention
- To ensure the authenticity of certificates of competency issued by Foreign Administrations to seafarers working on Mauritian vessels
- Certification of Seafarers: Examination and certification according to requirements of the STCW Convention
- Registration of Ships: Registration of vessels under the Mauritius flag within three working days, if all documents submitted including certificates/surveys are in order
- Inquiries into casualties affecting ships: Report of preliminary inquiry completed within seven days after completion of inquiry



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- Survey and certification of fishing and non-convention size vessels: All processes completed within two weeks, if vessel is seaworthy
- Approval and Monitoring of Maritime Training Institutions/ Courses

### 3.1 Mauritius Maritime Training Academy

The Mauritius Maritime Training Academy (MMTA) is mandated to provide quality maritime training in line with international standards.

#### Objectives/Responsibilities

The MMTA provides training to all categories of ratings for merchant and fishing vessels and for personnel working in the catering/hospitality department of passenger/cruise vessels. Additionally, the MMTA also dispenses officer courses for fishing vessels of 24 metres in length and over and fishing vessels with propulsion power up to 1500 KW, namely Skipper, Second Hand, Chief Engineer and Second Engineer. The MMTA is ISO Certified (ISO 900: 2015).

#### Regular courses delivered to prospective Seafarers:

- Basic Safety Training
- Crowd Management and Safety Training for Personnel Providing Direct Services to Passengers in Passenger Spaces
- Crisis Management and Human Behaviour
- Proficiency in Security Awareness Training
- Proficiency in Designated Security Duties
- Refresher Course in Basic Safety Training, Crowd Management and Crisis Management and Human Behaviour Training
- Rating Forming Part of a Navigational Watch
- Refresher Training for Rating Forming Part of a Navigational Watch
- Rating Forming Part of an Engineering Watch
- Refresher Training for Rating Forming Part of an Engineering Watch



## MINISTRY OF BLUE ECONOMY, MARINE RESOURCES, FISHERIES AND SHIPPING

### Number of Seafarers trained for the period 01 July 2022 to 30 June 2023

The shortage of staff affected the operations of MMTA in terms of training activities. However, the MMTA managed to train 381 students during the Financial Year 2022/2023.

### Parastatals

The Parastatal Bodies operating under the aegis of the Ministry and their main objectives are as below:

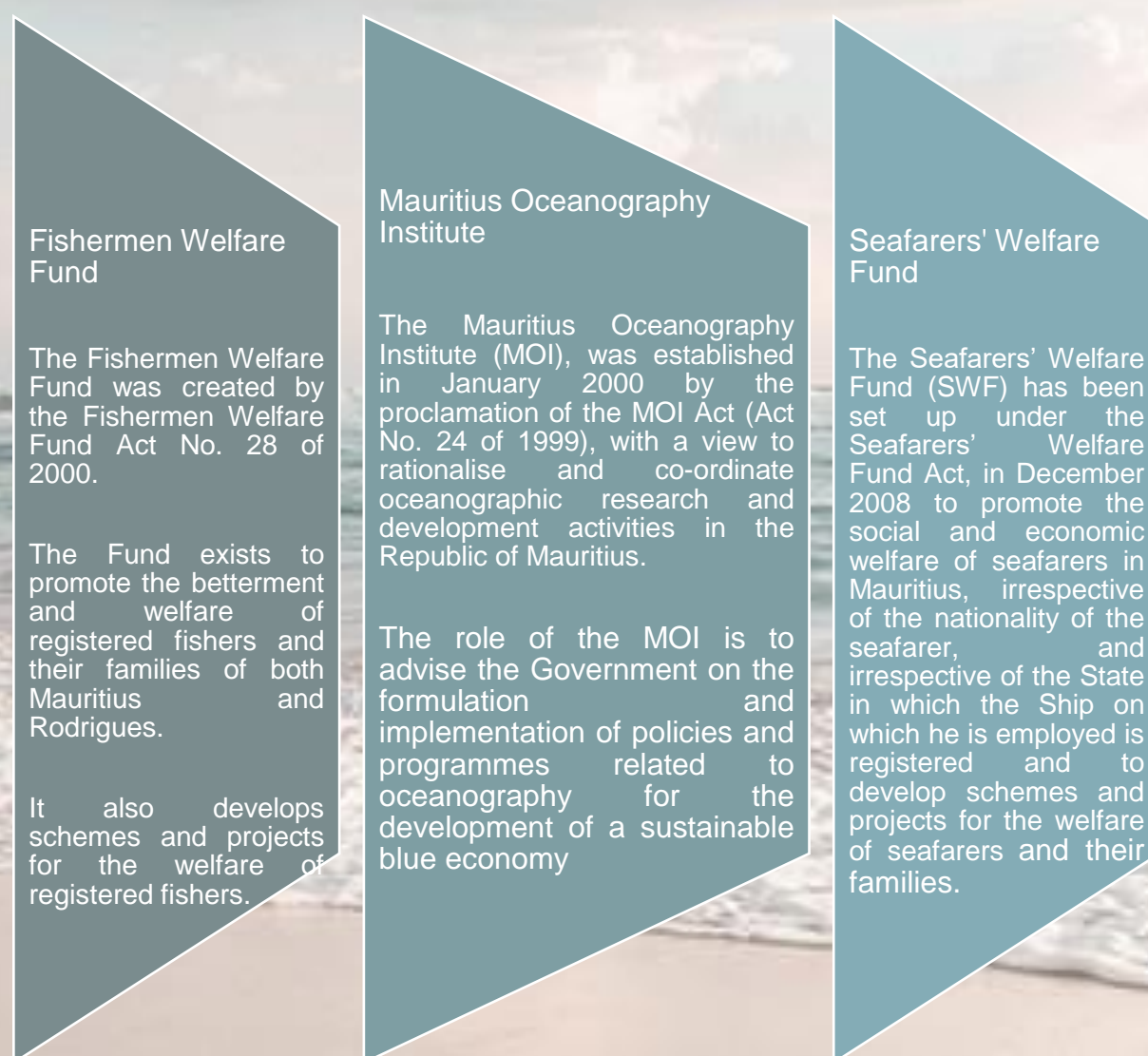


Figure 6 - Main Objectives of Parastatal Bodies





## Gender Statement

The Ministry of Blue Economy, Marine Resources, Fisheries and Shipping complies with all legislations and policies of the government in the context of gender equality and empowerment. The Ministry has set up a Gender Cell under the chair of a Deputy Permanent Secretary to look into the issues related to gender streaming policies, strategies and programmes.

The Ministry of Blue Economy, Marine Resources, Fisheries and Shipping is committed to ensuring gender equality and empowerment within projects and programmes of this Ministry, emphasizing inclusivity and equal opportunities for all genders in the maritime, fisheries and shipping sectors.

Under the vote item 'Gender Mainstreaming', an amount of Rs 200,000 has been provided in the budget of this Ministry for Financial Year 2022-2023, to implement an activity/project to promote gender equality and enhance awareness on gender sensitivity within the Ministry.

Thus, with a view to sensitising our staff about gender equity, equality, social justice and sustainable development, a workshop was organised in three batches for 90 officers, including Fisheries Protection Service Officers and officers of the Finance and Procurement Sections at Le Labourdonnais Hotel, Caudan, Port Louis. A survey was also initiated in respect of women fishers in view of identifying their needs.

### About our people

The Supervising Officer is the Accounting Officer and is responsible for the overall administration and general supervision of the Ministry of Blue Economy, Marine Resources, Fisheries and Shipping.

He is assisted by two Deputy Permanent Secretaries, the Director of Fisheries, the Director of Shipping, the Acting Deputy Controller, Fisheries Protection Service and other officers in the administrative and technical cadres of the Ministry, as well as line managers from the Human Resources, Financial Operations and Procurement and



**MINISTRY OF BLUE ECONOMY, MARINE RESOURCES, FISHERIES AND SHIPPING**

Supply departments. The Senior Management Team of the Ministry for the Financial Year 2022-2023 is presented in table 1 below.

| <b>Designation</b>                                     | <b>Name</b>  |
|--|--|
| Supervising Officer                                    | Dr KAWOL Dhananjay                                   |
| Senior Chief Executive                                 | Mr BOODHUN Maubarakahmad<br>(01.07.22 – 10.02.23)    |
| Permanent Secretary                                    | Mr BOODHNA Veersingh                                 |
| Deputy Permanent Secretaries                           | Mrs RAMDHAREE Dhanita                                |
|  | Mrs MOOSOOHUR Devika                                 |
| Assistant Permanent Secretaries                        | Mr RUGHOO Dashyant                                   |
|  | Mrs DOOKHIT Sarita                                   |
|  | Mr RAJABALEE Mohammad Belal (01.07.22 – 23.04.23)    |
|  | Miss RAGGOO Deenishabye (24.04.23 till date)         |
| Manager, Human Resources                               | Miss AULUM Rubeena                                   |
|  | Mrs JANMAHAMOD Shirine                               |
| Manager, Financial Operations                          | Mrs MILLIEN Sattamah                                 |
|  | Mr ETWAREE Satyawan                                  |
| Manager, Procurement and Supply                        | Mr DHUWAL Subash                                     |
| Director of Fisheries                                  | Mrs KOONJUL Meera Satishchandra (15.11.22 till date) |
| Acting Deputy Controller, Fisheries Protection Service | Mr PONNAN Rajkoomar                                  |
| Director of Shipping                                   | Captain COOPEN Asiva                                 |
| Officer in Charge, Mauritius Maritime Training Academy | Mr MOORGHEN Marday Armoogum                          |
| Acting Head, Competent Authority Seafood               | Dr. (Mrs.) LAKE Bakshi Diya                          |

*Table 1: Senior management team of the Ministry for the FY 2022-2023*



MINISTRY OF BLUE ECONOMY, MARINE RESOURCES, FISHERIES AND SHIPPING

The Ministry comprised a workforce of 480 employees as listed in the table 2 below:

| Employees by Grade & Cadre                                    | Male       | Female     | Total      |
|---|------------|------------|------------|
| Supervising Officer   | 1          | -          | 1          |
| Permanent Secretary   | 1          | -          | 1          |
| Deputy Permanent Secretary                                    | -          | 2          | 2          |
| Assistant Permanent Secretary                                 | 1          | 3          | 4          |
| Director of Fisheries   |            | 1          | 1          |
| Temporary Assistant Director of Fisheries                     | 3          | -          | 3          |
| Technical (Fisheries)   | 30         | 26         | 56         |
| Director of Shipping  | 1          | -          | 1          |
| Secretary for Shipping Development                            | -          | 1          | 1          |
| Deputy Director of Shipping                                   | 1          | -          | 1          |
| Technical (Shipping)  | 6          | 5          | 11         |
| Officer in Charge, Mauritius Maritime Training Academy (MMTA) | 1          | -          | 1          |
| Technical (MMTA)  | 2          | -          | 2          |
| Acting Head, Competent Authority                              | -          | 1          | 1          |
| Technical (Competent Authority)                               | 2          | 3          | 5          |
| Acting Deputy Controller, Fisheries Protection Service        | 1          | -          | 1          |
| Technical (Fisheries Protection Service)                      | 196        | 1          | 197        |
| Human Resources Cadre   | -          | 5          | 5          |
| Finance Cadre   | 1          | 6          | 7          |
| Procurement and Supply Cadre                                  | 4          | 4          | 8          |
| General Services Cadre  | 11         | 74         | 85         |
| Workmen's Group   | 46         | 12         | 58         |
| Advisers  | 3          | -          | 3          |
| Analyst Cadre   | 2          | -          | 2          |
| Internal Control Cadre  | 1          | 2          | 3          |
| Health and Safety Cadre (part time)                           | -          | 1          | 1          |
| IT Cadre  | 1          | 1          | 2          |
| Statistics Cadre  | -          | 1          | 1          |
| Library Officer   | -          | 1          | 1          |
| Receptionist/Telephone Operator                               | 2          | 2          | 4          |
| Agricultural Clerk  | 1          | -          | 1          |
| Office Auxiliary Cadre  | 6          | 4          | 10         |
| <b>All employees by Grades and Cadres</b>                     | <b>324</b> | <b>156</b> | <b>480</b> |

Table 2 : Number of employees in post as at June 2023



## MINISTRY OF BLUE ECONOMY, MARINE RESOURCES, FISHERIES AND SHIPPING

- Gender Parity: the workforce of the Ministry comprised of 67% male officers and 33% female officers
- Number of vacancies advertised: 30
- Number of vacancies filled: 52
- Number of officers who retired from the service: 17
- Number of Schemes of Service prescribed: 7
- Number of officers who attended training programmes: 156

### Organisational Chart

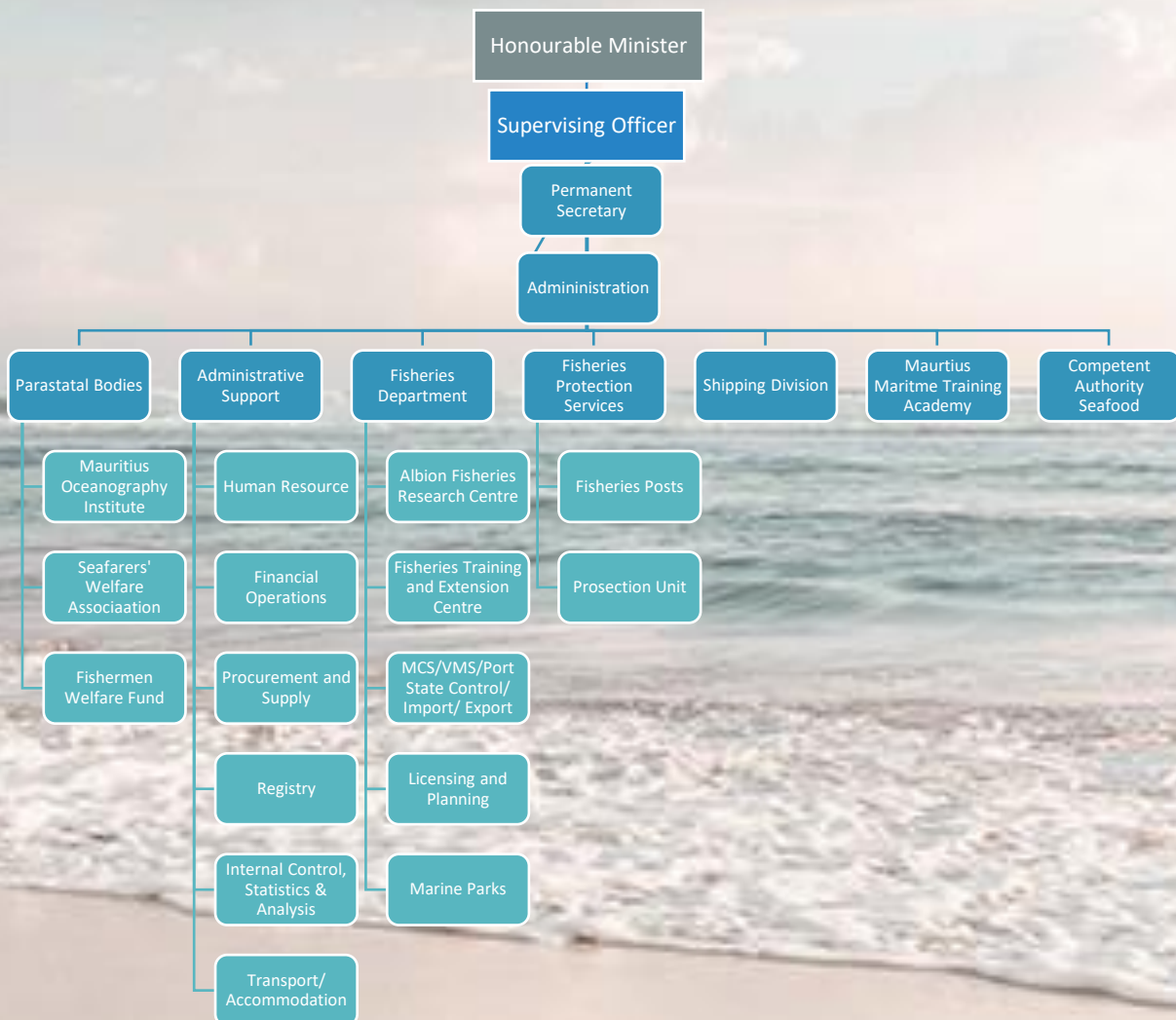


Figure 7-Organigram of the Ministry



## MINISTRY OF BLUE ECONOMY, MARINE RESOURCES, FISHERIES AND SHIPPING

### Scarcity Areas

The Ministry of Blue Economy, Marine Resources, Fisheries and Shipping has encountered difficulties to fill in certain vacancies due to scarce human resources with specific know how and qualifications.

These grades have been categorised as scarcity areas and are listed in table 3 below:

| SN  | Division/Unit Section               | Grade   |
|-----|-------------------------------------|---|
| 1.  | Fisheries Development               | Fishing Boat Inspector (Engineering)          |
| 2.  |                                     | Fishing Boat Inspector (Nautical)             |
| 3.  |                                     | Skipper (on contract)                         |
| 4.  |                                     | Second Hand Fishing (Limited)                 |
| 5.  |                                     | Deckhand/Fisherman                            |
| 6.  |                                     | Motorman/Engine Driver                        |
| 7.  | Shipping Division                   | Principal Marine Engineering Surveyor         |
| 8.  |                                     | Marine Engineering Surveyor                   |
| 9.  |                                     | Training, Certification and Standards Officer |
| 10. |                                     | Nautical Surveyor                             |
| 11. |                                     | Nautical Inspector                            |
| 12. |                                     | Naval Architect                               |
| 13. |                                     | Marine Engineering Inspector                  |
| 14. | Mauritius Maritime Training Academy | Head, Deck Department                         |
| 15. |                                     | Head, Engineering Department                  |
| 16. |                                     | Instructor, Mechanical Workshop               |
| 17. |                                     | Marine Training Officer                       |
| 18. |                                     | Petty Officer                                 |

Table 3: Details of Grades falling under scarcity areas



Part 1

# Major Achievements



## 1. Aquaculture Division

- Under the Marine Ranching Programme for stock enhancement, a total of 105,000 sea bream fingerlings were produced in the hatchery at the AFRC and were released at Poste de Flacq, Albion, Pointes aux Sables, Sables Noires, Rivière Noire, Balaclava Marine Park and Blue Bay Marine Park
- Some 976 units of berri rouge fingerlings were sold to four small scale fish farmers and 1,270 units of fingerlings were sold to five individuals for culture in an aquaponic system
- Some 1,193 units of berri rouge fingerlings were distributed free of charge to 18 individuals for aquaculture activities in tanks / small size ponds
- Some 3,490 units of berri rouge fingerlings were distributed free of charge to 59 individuals for aquaponic purposes
- A total of 300,000 freshwater prawn juveniles were produced in the hatchery at AFRC out of which some 12,000 juveniles were stocked in pond at AFRC to constitute future broodstock and the remaining 281,750 juveniles were sold to 97 individuals
- A total of 138 individuals were provided with technical assistance and support for aquaculture related activities at the Albion Fisheries Research Centre
- During a culling exercise carried out at AFRC, a total of 84 kg of Red Tilapia Hybrid (Berri rouge) fish was harvested from ponds at AFRC and sold to the staff of the Ministry
- Mass production of phytoplankton (*Nannochloropsis* sp.) was carried out in nine tanks of capacity 3,000L and zooplankton/rotifers (*Brachionus plicatilis*) were undertaken in seven tanks of capacity 2,000L and two tanks of 500L respectively for the larval rearing of silver seabream



## 2. Marine Resources Division

### 2.1 Coastal Fishery

#### Exhibits at the Coastal Fishery

A total of 1,822 units and 38.4kg of marine species were received for examination, identification and disposal purposes from 108 occurrences from the National Coast Guard (NCG), Fisheries Protection Service (FPS), Import and Export Unit and Port State Control Unit (PSCU) in respect of various offences under the Fisheries and Marine Resources Act 2007.

105 units of marine species were received from the Laboratories Division which were examined, identified and reported accordingly by the Coastal Fishery Unit.

A total of 1,977 units of marine species were examined and 106 reports were submitted to the National Coast Guard, Fisheries Protection Service, Import and Export Unit, Port State Control Unit (PSCU) and the Laboratories Division.

| 2022      |                | 2023     |                |
|-----------|----------------|----------|----------------|
| Month     | No. of Exhibit | Month    | No. of Exhibit |
| July      | 36             | January  | 180            |
| August    | 122            | February | 238            |
| September | 50             | March    | 369            |
| October   | 317            | April    | 167            |
| November  | 359            | May      | 19             |
| December  | 61             | June     | 59             |
| Total     | 945            | Total    | 1032           |

Table 4: Number of Exhibits examined for FY 2022-2023

### 2.2 Octopus Fishery

A closure in the octopus fishery was established from 15 August to 15 October of each year to allow mature female octopuses to spawn and replenish the stock, followed by a second closure from the 15 January to 15 March of each year to allow new recruits to attain maturity size.





## MINISTRY OF BLUE ECONOMY, MARINE RESOURCES, FISHERIES AND SHIPPING

597 octopus specimens were sampled at different Fish Landing Stations to monitor parameters such as mantle length, weight, sex, and species from octopus catch landings.

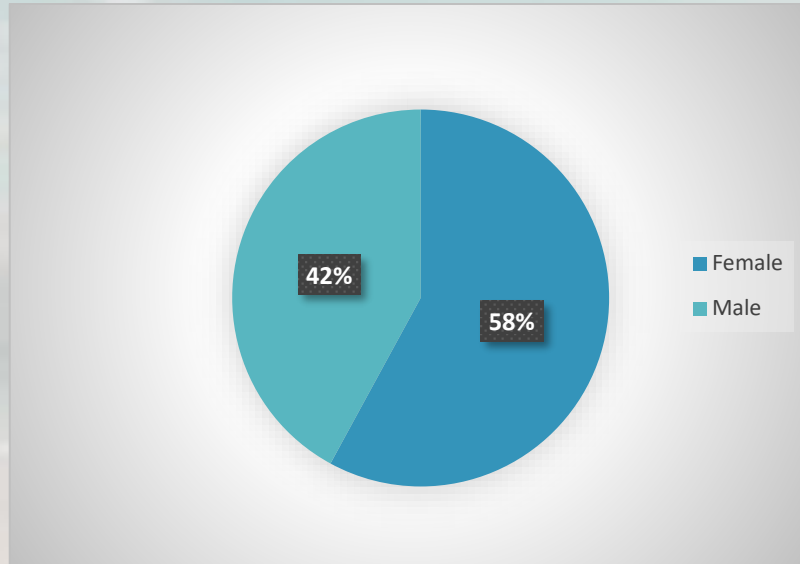


Figure 8: Percentage of female and male octopus sampled FY 2022-2023



Figure 9: Sampling exercises at *Bambous virieux* Fish Landing Station

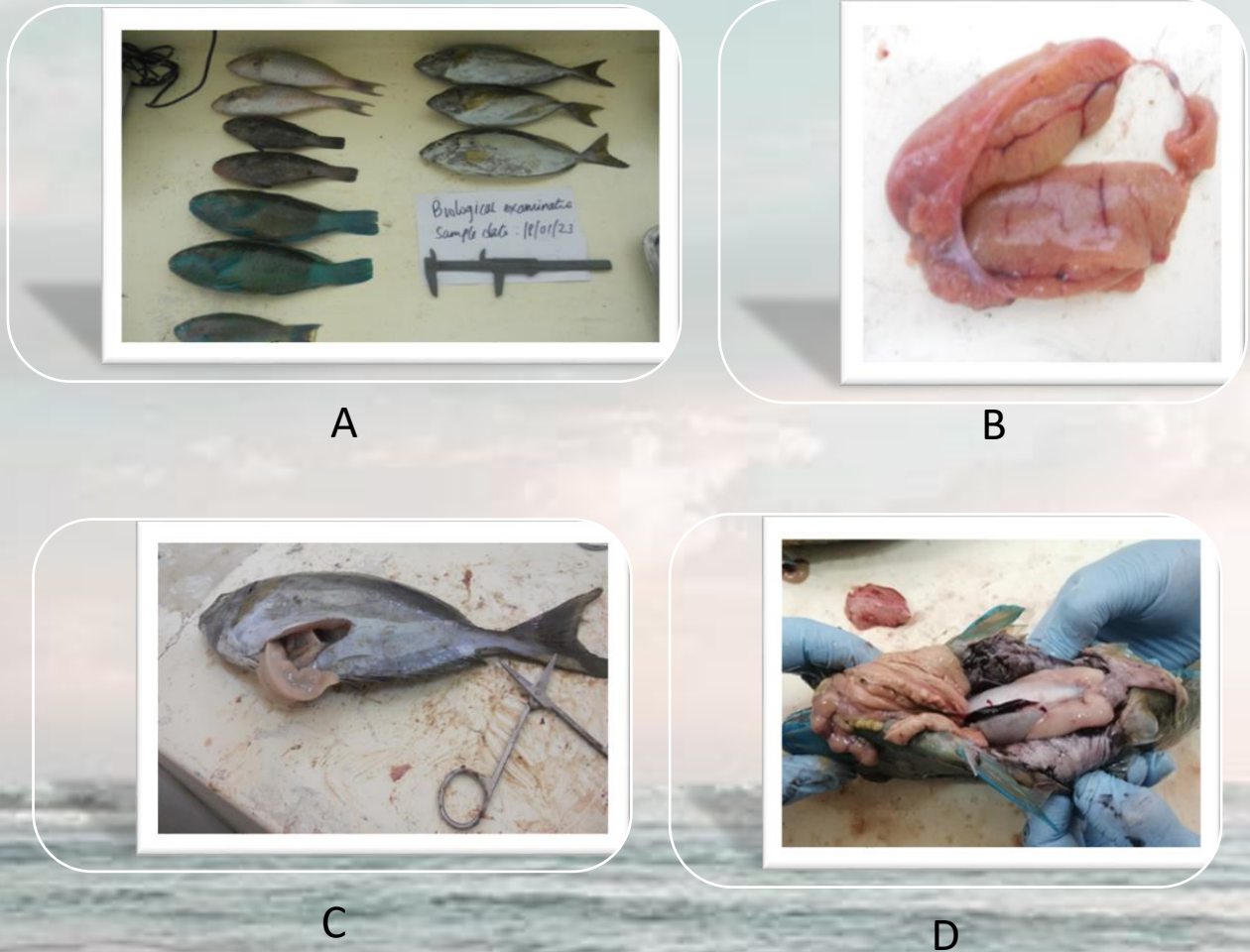
### 2.3 Biological examination of fish

Biological studies on commercial fishes of Mauritius are undertaken to assess the seasonality of the coastal fishes so as to protect the spawners and new recruits entering the fisheries stock and hence allow the recruits to reach maturity and attain first spawning prior to the subsequent opening of net fishing season.



**MINISTRY OF BLUE ECONOMY, MARINE RESOURCES, FISHERIES AND SHIPPING**

281 fish specimens were analysed for species, sex, gonad maturity stage and gonadosomatic index.



*Figure 10: Biological examination of coastal fishes*

- A. Fish purchased in the East Stratum
- B. Female gonads of Cordonnier, *Siganus sutor* (Valenciennes, 1835), Maturity Stage: III
- C. Male gonads of Cordonnier, *Siganus sutor* (Valenciennes, 1835), Maturity Stage: V
- D. Male gonads from *Scarus* species.



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**2.4 Survey**

Survey on sea cucumber was undertaken in the lagoon of Mauritius to better understand their relative distribution and abundance. The survey consisted of sea cucumber counts within six 30m transects at randomly selected stations at each site along with data collection on substrate cover.

97 sea cucumbers, consisting 8 species, were recorded at 17 study sites.

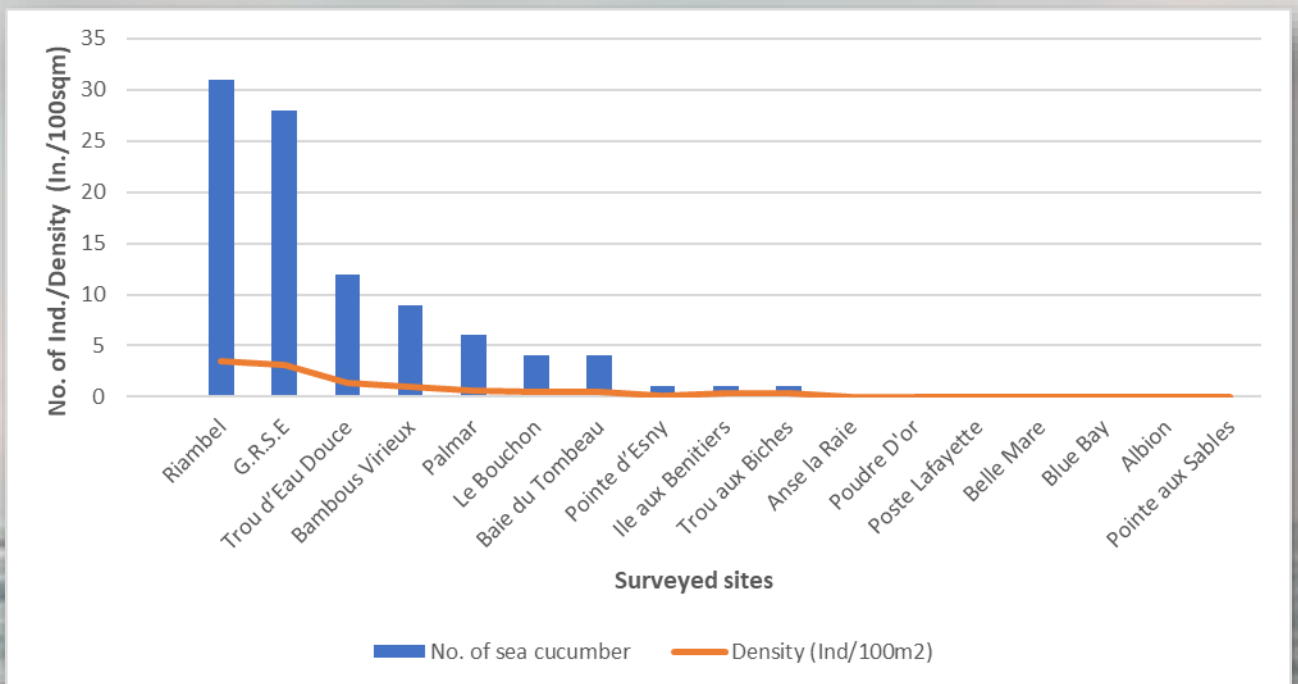


Figure 11: Population density of sea cucumber (no. of individuals per 100m2) at each survey site based on the number of sea cucumber recorded during the survey of 900 m2

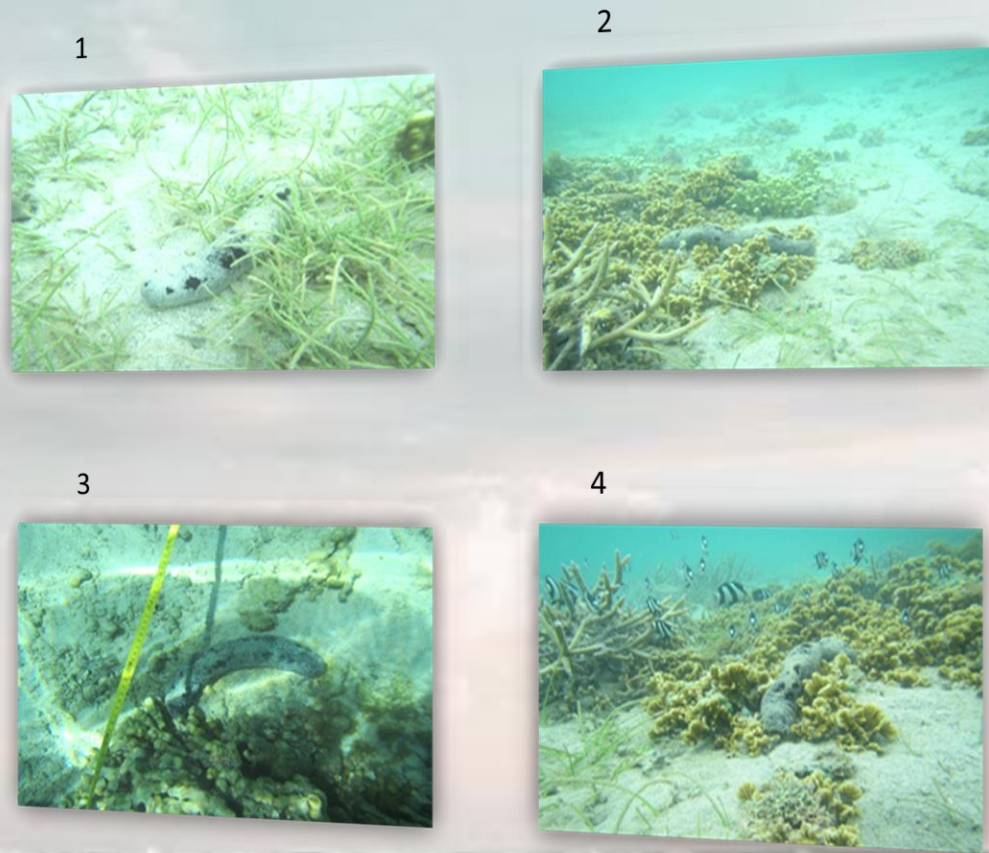


Figure 12: *Holothuria atra* species recorded during surveys at different sites



## MINISTRY OF BLUE ECONOMY, MARINE RESOURCES, FISHERIES AND SHIPPING

### 2.5 Offshore Demersal Fishery

During the period of July 2022 to June 2023, a total of 29 fishing boats were active in the Offshore Demersal Fishery, and landed 1227.9 T of fish. Details on the statistical data are in Table 5.

| Type of Fishery                                   | No. of boats involved in fishing activities | No. of fishing trips | Total catch Landed (T) | Main species caught                                   | Data collection   |
|---|---|----------------------|------------------------|---|---|
| Semi-Industrial St Brandon Fishery                | 29  | 248                  | 181.9                  | White Fish  | 506 specimens of white fish were sampled for length and weight data |
| Semi-Industrial Chilled Fish Fishery              |   |                      | 895.6                  | White Fish  | 879 specimens of white fish were sampled for length and weight data |
| Semi-Industrial Deepwater snapper/Grouper Fishery |   |                      | 150.4                  | Sacrechien<br>Gueule Pavee<br>Doree<br>Vieille laboue | 205 specimens of sacrechien sampled for length and weight data      |

Table 5: Statistics on Offshore Demersal Fishery for FY 2022-2023

#### 2.5.1 Southern Indian Ocean Fisheries Agreement (SIOFA)

The following activities were carried out with respect to the Southern Indian Ocean Fisheries Agreement (SIOFA):

- Participation (in-person and online) in the SIOFA 6th Compliance Committee, from 29 June to 01 July 2023



## MINISTRY OF BLUE ECONOMY, MARINE RESOURCES, FISHERIES AND SHIPPING

- Participation (in-person and online) in the SIOFA 9th Meeting of Parties, from 4 to 8 July 2023
- Submission of fisheries data for boats which operated in the SIOFA Agreement Area
- Submission of Annual National Report for 2022
- Attending the online SIOFA workshop on 'Harvest Strategy pre-assessment', from 17 to 18 March 2023
- Attending the online SIOFA workshop on 'Deepwater shark in the SIOFA Area', from 20 to 21 March 2023
- Participating in the online SIOFA 8th Scientific Committee, from 22 to 31 March 2023
- Submission of the Compliance Report for 2022
- Participating in the online SIOFA 'Extraordinary meeting of the Scientific Committee on 01 June 2023
- Participating in the SIOFA 7th Compliance Committee, held in Balaclava, Mauritius from 28 – 30 June 2023

### 2.6 Pelagic Fishery



Figure 13: 80 percent of the total tuna catches in 2022

A total of 84 fishing logbooks were collected from the tuna fishing vessels for input and processing of data.

Catch from the purse seiners accounted for more than 80 percent of the total tuna catches in 2022.

Length measurements were taken on 5591 specimens. These data were processed and submitted to the IOTC for tuna stock assessment



| Type of Vessels  | Number of vessels involved in tuna fishing activities | Total Catch (Tonnes) | Targeted Species | Data collection   |
|--|---|----------------------|------------------|---|
| Mauritian flagged purse seiners                                      | 4   | 29,039               | Tuna             | 41 fishing logbooks<br>3549 fish specimens sampled for length frequency |
| Mauritian flagged longliners involved in the industrial tuna fishery | 17  | 4,877.7              | Tuna             | 33 fishing logbooks<br>1348 fish specimens sampled for length frequency |
| Foreign purse seiners licensed to fish in our EEZ                    | 3   | 729                  | Tuna             | 3 fishing logbooks<br>694 fish specimens sampled for length frequency   |
| Foreign longliners licensed to fish in our EEZ                       | 7   | 94.2                 | Tuna             | 7 fishing logbooks  |

Table 6: Unloading of tuna by a Mauritian Flagged longliner for the local market

### 2.6.1 Conservation and Management Measures

A resolution proposed by Mauritius was adopted at the 27th Session of the IOTC in May 2023. The Resolution 23/3 On Establishing a Voluntary Fishing Closure in the Indian Ocean for the Conservation of Tropical Tunas will be effective from 01 January 2024.

The Resolution 23/03, as a precautionary measure, encourages all the Contracting Parties to the IOTC to ensure that their flag vessels fishing for bigeye, yellowfin and skipjack tuna do not fish in the IOTC area of competence for a minimum period of 31



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consecutive days, decided in advance, and communicated to IOTC Secretariat no later than 31st of December 2023.

It is to be noted that a total of 8 Conservation and Management Measures including Resolution 23/03 and 1 recommendation were adopted during the 27th Session of the Commission which was held in Mauritius from 08 to 12 May 2023 in Mauritius.

### Fish Production Statistics

The total fish production for FY 2022-2023 was 38,279 tonnes comprising of:

| SN           | Type of Fishery   | Quantity (Tonnes) |
|--------------|---|-------------------|
| 1.           | Coastal fisheries (including artisanal, amateur and sports fisheries) | 1, 303            |
| 2.           | FAD fishery   | 191               |
| 3.           | Pelagic fishery   | 33, 871           |
| 4.           | Offshore Demersal fishery   | 1, 234            |
| 5.           | Aquaculture production  | 1, 680            |
| <b>Total</b> |   | <b>38, 279</b>    |

Table 7: Statistics on Pelagic Fishery for FY 2022-2023

## 3. Marine Science Division

### 3.1 Long Term Coral Reef Monitoring

The Marine Science Division conducted the long-term coral reef monitoring at eleven (11) stations namely Albion (Back Reef), Baie du Tombeau (Back Reef), Belle Mare (Back Reef I), Trou aux Biches (Fore Reef), Anse la Raie (Shore Reef), Poudre d'Or (Back Reef I), Trou d'Eau Douce (Back Reef), Belle Mare (Back Reef II), Baie du Tombeau (Fore Reef) Anse la Raie (Back Reef), Bambous Virieux (Back Reef) between July 2022 and June 2023.



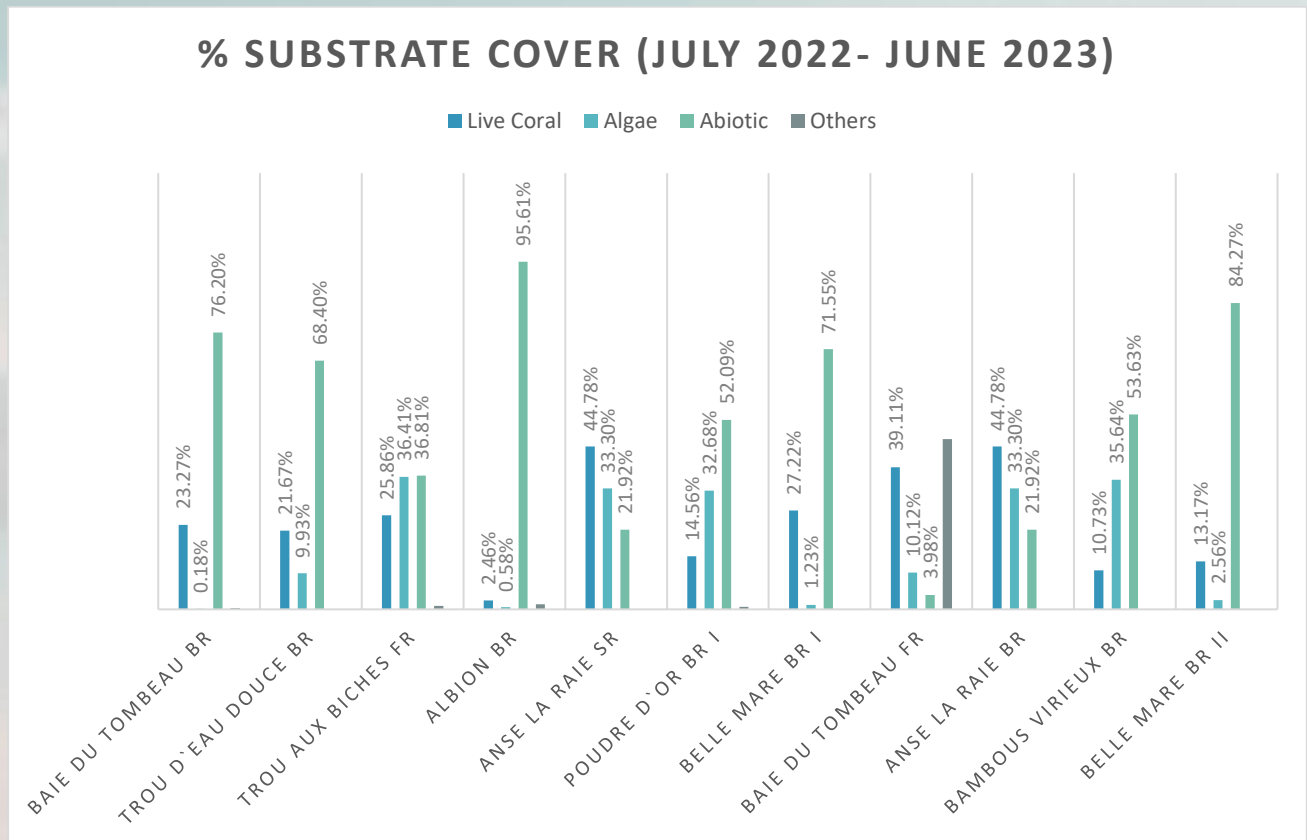


Figure 14: Percentage substrate cover at monitoring site in 2022-2023 (July 2022- June 2023)

### 3.2 Stranded Mammals & Turtles

A total of 21 cases of stranded/dead marine turtles and mammals were reported between July 2022 and June 2023.

Amongst the cases reported, the following are to be highlighted:

- 18 cases of dead marine turtles were reported around Mauritius.
- On 01 July 2022, a stranded marine mammal which appeared to be a fur seal of the *Arctocephalus* sp, re. figure. 3, was seen in the lagoon of Trou d'Eau Douce. The fur seal was in satisfactory physical condition and was identified to be a male. Experts on fur seals recommended leave the seal as it was and not to attempt to push/transport the animal into high seas or to trap/isolate the seal while maintaining continuous monitoring.
- There was one case of dead whale, presumably a sperm whale which was found dead in Rodrigues on 13 September 2022.



- On 22 August 2022, a dead marine mammal was found at Agalega which was suspected to be a dolphin.



*Figure 15: Stranded fur seal*

### **3.3 Seagrass Project**

In 2019, a budget of Rs 600, 000 (every year for 5 years) was approved (under vote item 19-2) for the implementation of the “Seagrass Conservation and Management in Mauritius” Project under the Ministry of Blue Economy, Marine Resources, Fisheries and Shipping.

In addition, in 2020 the Ministry has embarked on a seagrass mapping and blue carbon evaluation project under the Western Indian Ocean from land-based sources and activities - WIOSAP by the Nairobi Convention funded by UNEP which is over a period of 2 years entitled “Assessment of Blue Carbon Ecosystem (Seagrass) around the island of Mauritius: Relevance for Marine Spatial Planning”.

The letter of Agreement for Small Scale Funding Agreement (SSFA) between this Ministry and the Nairobi Convention was signed on 03 November 2022.



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There are 4 major components in the project as follows:

| Component | Project   |
|-----------|---|
| 1.        | Seagrass Mapping and Ground truthing around the island                      |
| 2.        | Seagrass Monitoring Program   |
| 3.        | Blue Carbon Storage Capacity in Seagrass                                    |
| 4.        | Sensitisation and Educational programme for Coastal Community and Sea Users |

*Table 8: Assessment of Blue Carbon Ecosystem (Seagrass) around the island of Mauritius - major components*

To date, island-wide seagrass surveys, comprising ground-truthing, species composition and distribution have been completed around Mauritius. Surveys were carried out 21 sites namely Le Bouchon, Mahebourg, Blue Bay, Albion, Poste La Fayette, Palmar, Le Morne, Mon Choisy, Wolmar, Merville Beach Hotel, Pointe aux Biches (Veranda Hotel), Pointe aux Sable, Trou d'Eau Douce, Anse La Raie, Bambous Virieux, Pointe aux Cannonier, Eau Bleue, Vieux Grand Port, Ile aux Aigrettes, Fer a Cheval and banc d'olive.

Permanent long term monitoring sites have been established at Le Morne, Albion, Banc d'Olive (Mahebourg), Poste La Fayette and Mon Choisy.

The carbon sequestration work within the project has already started in April and May 2022. Sediment coring at the five specific seagrass meadow were carried out in triplicate to determine the carbon sink potential in seagrass meadows around Mauritius.

A total of 141 sediment samples were obtained and pretreated in the Marine Ecological Laboratory at the Albion Fisheries Research Centre, and sent to the Commonwealth Scientific and Industrial Research Organisation (CSIRO) and University of Western Australia (UWA) for elemental analysis and determination of organic and inorganic carbon (blue carbon content). Components 1 to 3 of the project have been completed.

At present, this Ministry is carrying out component 4 which consists of Sensitisation and Educational programme for Coastal Community and Sea Users.

Funding, already received from the UNEP/ Nairobi Convention, is to the tune of USD 100 000.



### 3.4 Mangroves Propagation Programme

The Mangrove Propagation Programme was officially launched in 1995 by the Ministry to plant mangroves in denuded areas on the west, north and east coasts. Since the start of the mangrove restoration programme in June 1995, propagules and seedlings have been planted on the west, north, south and east coasts amounting to more than 400,000 propagules/seedlings planted, covering an area of more than 20 hectares.

To date, the area under mangroves covering Mauritius is around 243 hectares. This area includes both planted and naturally regenerated mangroves. Officers of the MSD attend monthly meetings of the National Environment and Climate Change Fund (NECCF) at the Ministry of Environment, Solid Waste Management and Climate Change to discuss on progress made with regard to mangrove propagation.



*Figure 16: Mangrove Plantation*

A concept note was submitted to the Ministry of Finance, Economic Planning and Development, and Rs 2 M has been made available for mangrove propagation and sensitization. Two sites were identified at Le Morne namely Coteau Raffin and Batterie Cassé for planting of 9000 mangrove seedlings.

Bidding exercise to allocate contract to an NGO for mangrove planting at Le Morne was carried out and contract was awarded to the NGO Association pour le Développement Durable (ADD). Following a meeting at AFRC on 29 June 2022 with ADD and a site visit at Le Morne, the sites for mangrove planting were handed over to the NGO.

Mangroves transplantation, which started at the end of May, continued during the whole month of June. More than 4000 seedlings have been planted at Cotteau Raffin.



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1000 mangroves were planted at Le Morne public beach, Pointe Cassis. As part of the Mangrove Propagation Programme, the MSD has undertaken a Mangrove Sensitisation Campaign along the West coast.

In this context, under the funding from the NECCF, sensitization materials have been prepared including an educational pack comprising posters, pamphlets, bookmarks, stickers and a notebook. T-shirts and eco-craft bags were also prepared for the sensitization campaign.

The Integrated Environment Monitoring Programme (IEMP) is being implemented following the Wakashio oil spill at a quarterly interval. 7 permanent monitoring sites have been set up in Mangroves areas namely at Rivière des Creoles-Cemetery, Rivière des Creoles-Mosque, Niyon River, Bois des Amourettes Public beach, Vieux Grand Port-débarcadère, Mahebourg (Pointe Canon) and Case Noyale. 38 sediment cores were taken and sent to an accredited laboratory for analysis of residual content of petroleum hydrocarbon.

Monitoring/fieldworks have been carried out at 7 sites in October 2022 and June 2023 as per the plan. The Integrated Environment Monitoring Programme (IEMP) is being implemented following the Wakashio oil spill biannually for the year 2022 to 2023.

### 3.5 Climate Change

The Marine Science Division has contributed in the preparation of several reports in connection with climate change by providing inputs and comments on:

- The First Biennial Update Report (BUR) to the United Nations Framework Convention on Climate Change which was finalised in December 2022;
- Review and finalised Mauritius National Adaptation Plan (NAP) in December 2022;
- the Nationally Determined Contribution (NDC) of the Republic of Mauritius;
- the NDC Action Plan Report;
- the National Climate Change Adaptation Policy Framework;
- Climate Change Vulnerability Assessment of Mauritius and Rodrigues;
- Climate Change Policy Toolkit prepared as part of the process to review the Mauritius' Nationally Determined Contributions;



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- technical assistance for an institutional gap and needs assessment to implement the provisions of the Climate Change Act 2020 in the Republic of Mauritius; and
- Components 1 and 3 under the project Nationally Appropriate Mitigation Actions (NAMAs) for Low Carbon Island Development Strategy for the Republic of Mauritius (NAMA Project).

Figure 11 and figure 12 below show the percentage substrate cover at monitoring sites for periods July 2022 to December 2022 and January 2023 to June 2023 respectively while table 7 represents the Fish visual census for Financial Year 2022-2023.

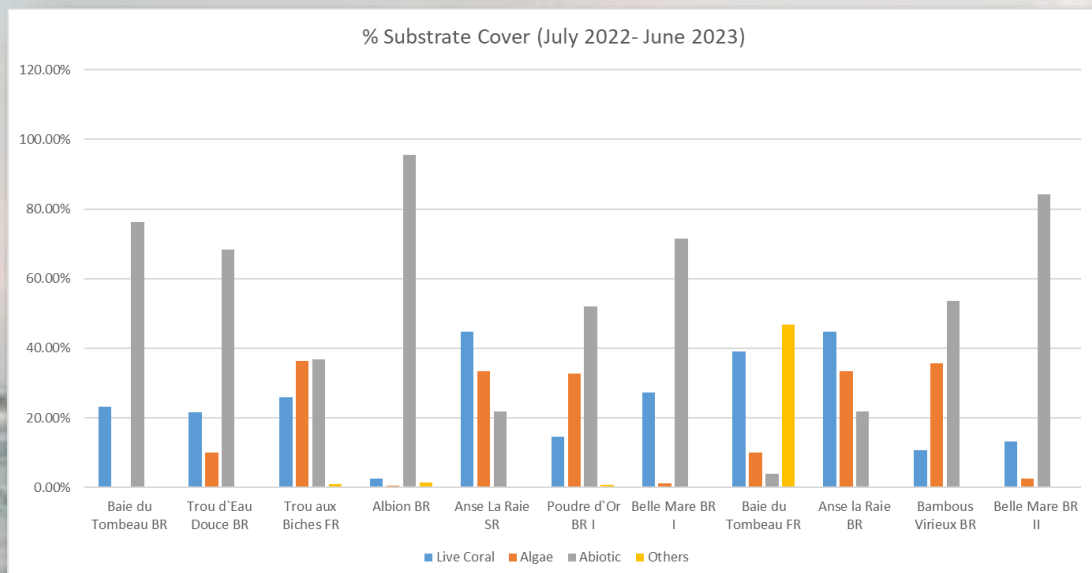


Figure 17: Percentage substrate cover at monitoring site in 2022-2023 (July 2022- June 2023)

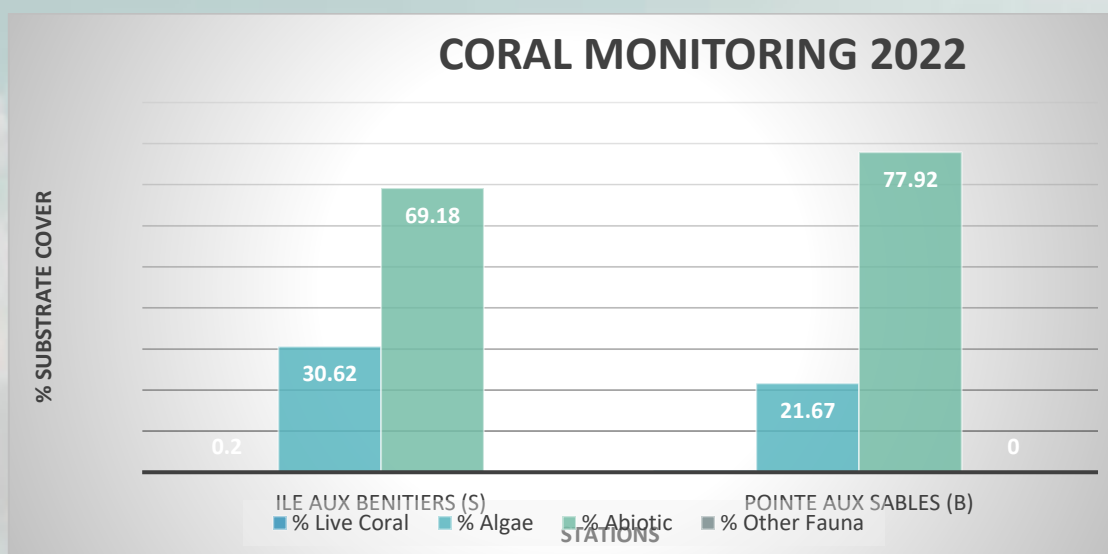


Figure 18: Coral Monitoring 2022

| Fish Diversity July 2022- December 2023 |             |               |              |          |            |          |                |          |           |          |            |
|---|-------------|---------------|--------------|----------|------------|----------|----------------|----------|-----------|----------|------------|
| Site                                    | Stations    | Pomacentridae | Acanthuridae | Labridae | Serranidae | Scaridae | Chaetodontidae | Mullidae | Zanclidae | Gobiidae | Ambassidae |
| Trou d`Eau Douce                        | Back Reef   | 165           |              | 3        | 3          |          | 2              |          |           |          |            |
| Anse La Raie                            | Shore Reef  | 71            |              | 2        | 2          |          |                |          |           |          |            |
| Albion                                  | Back Reef   |               | 2            |          |            | 7        | 2              | 2        |           |          |            |
| Trou aux Biches                         | Fore Reef   | 10            | 27           |          | 7          | 9        | 5              |          |           |          |            |
| Belle Mare                              | Back Reef 1 | 39            | 23           | 1        |            | 11       | 3              |          |           |          |            |
| Poudre d`Or                             | Back Reef   | 51            | 8            | 2        |            |          | 5              |          | 2         | 1        | 1          |
| Baie du Tombeau                         | Back Reef   | 258           | 5            |          |            |          | 1              |          |           |          |            |

Table 9: Fish Diversity July 2022- December 2023



| Fish Diversity January 2023- June 2023 |              |               |              |          |            |           |              |          |                |             |           |               |          |
|--|--------------|---------------|--------------|----------|------------|-----------|--------------|----------|----------------|-------------|-----------|---------------|----------|
| Site                                   | Stations     | Pomacentridae | Acanthuridae | Labridae | Serranidae | Zanclidae | Aulostomidae | Scaridae | Chaetodontidae | Ostraciidae | Siganidae | Epinephelidae | Mullidae |
| <b>Anse La Raie</b>                    | Back Reef    | 51            | 3            |          | 6          |           |              | > 200    | 3              |             | > 50      |               | 2        |
| <b>Bambous Virieux</b>                 | Back Reef    | > 200         |              | 53       |            |           |              | 65       |                |             |           |               | 63       |
| <b>Baie du Tombeau</b>                 | Fore Reef    | 113           | 67           | 19       |            |           |              |          | 5              |             | 64        | 1             |          |
| <b>Belle Mare</b>                      | Back Reef II | 11+73         | 28           | 2        |            | 1         | 3            | 1        | 1              | 1           |           |               |          |

Table 10: Fish Diversity January 2023- June 2023

## 4. Marine Conservation Division

### 4.1 Coral Rehabilitation

- The coral nurseries established at Blue Bay Marine Park and Trou aux Biches were repopulated with coral fragments as follows:
  - 1,000 coral fragments were successfully planted in the nurseries of the Blue Bay Marine Park, which included 650 fragments placed by AFRC and 350 fragments in joint collaboration with Seaground through coral triage project
  - 500 cultured coral fragments were grown in the coral nursery located at Trou aux Biches
- 24 new long-term monitoring stations that were established in the South-Eastern region following the grounding of MV Wakashio were also monitored twice after the oil spill. The project is ongoing under the Integrated Environmental Monitoring Plan (IEMP);





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- Monitoring and servicing of coral nurseries were carried out at Trou aux Biches and Blue Bay Marine Park;
- Two new coral nurseries have been established at Mon Choisy and Eau Bleue, with five coral tables at each site left for acclimatization;
- Through the project of “Assistance scheme for coral farming and fish breeding” for fishers, four regions around Mauritius for coral nurseries have been selected;
- As at date, around 270 trainee fishers and 70 trainer fishers have been registered for the project. Theoretical training of trainers and trainees has already started and registration is ongoing;
- Official launching of the project was done at Le Morne on 08 June 2022 on the occasion of the World Ocean Day 2022 celebration with the deployment of three coral nursery tables and populating the coral tables with coral fragments; and
- Coral samples were collected at five sites around Mauritius and three sites around Rodrigues for genetic analysis under the UNDP funded project “Restoring Marine Ecosystem Services by Restoring Coral Reefs to Meet a Changing Climate Future”.

### 4.2 Coral Reef Monitoring in Marine Parks

- Long-term monitoring of the coral reefs ecosystem has been carried out at the five established permanent stations in Blue Bay and Balaclava Marine Parks.

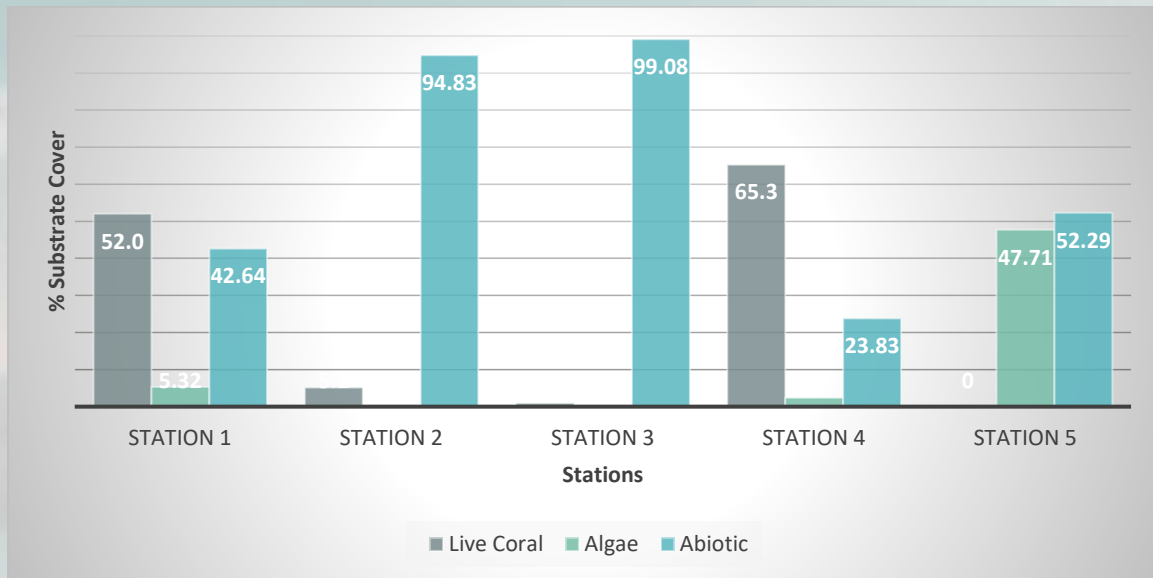


Figure 19: Monitoring of coral reefs at Blue Bay Marine Park

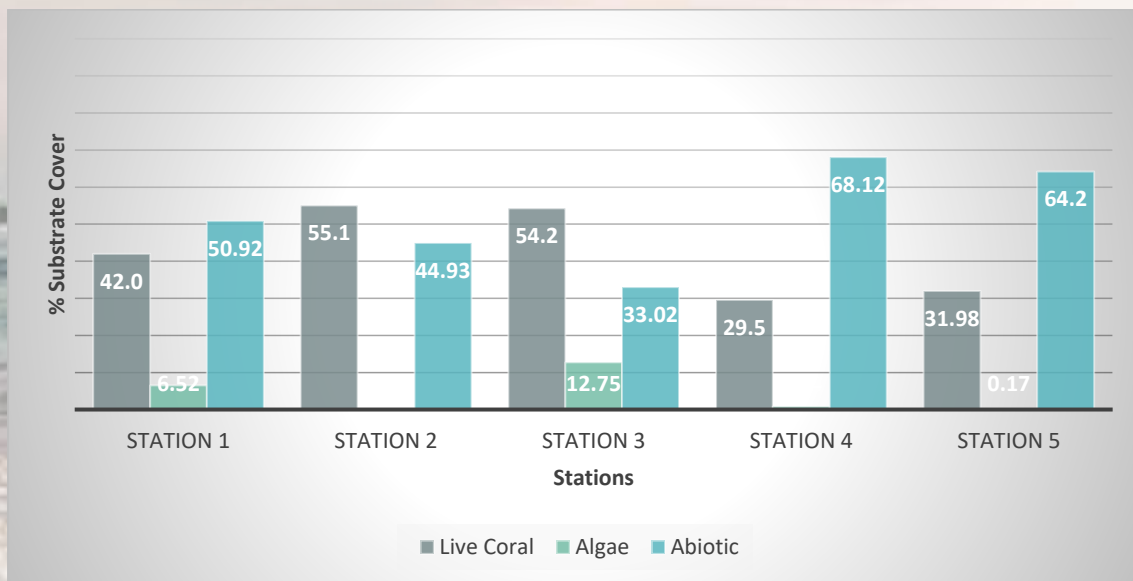


Figure 20: Monitoring of coral reefs at Balaclava Marine Park

### 4.3 Management of Marine Protected Areas

- 499 Coast patrols were effected at the Blue Bay Marine Park to monitor & sensitize activities of fishers and stakeholders & arrest defaulters.
- 758 Afloat patrols were effected at the Blue Bay Marine Park - the activities carried out by the FPS officers were regular afloat patrols, assist AFRC staff in collection of sea water for sampling and control of Crown of Thorns Starfish



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(COTs), conduct bathymetric surveys with staff of MOI and Integrated Monitoring Programme for the setting up of three stations by officers of MOI, University of Mauritius, Eco Sud, Reef Conservation, FPS & AFRC officers for monitoring of stations under the IEMP.

- Funds generated from a total of 74 interference permits and 139 permits for permissible activities in marine protected areas issued amounted to a sum of Rs. 1,750,400.
- Nine contraventions were established and one pick up case of fishing equipment was recorded during the period under report.
- One fibre glass research boat was received as donation from JICA on 31 May 2023. The boat will be used by JICA experts and FPS officers for research and scientific works in the Blue Bay Marine Park.

### 4.4 Environmental Impact Assessment Reports

29 Environmental Impact Assessment reports, among which 16 coastal projects, were processed and views submitted to the Ministry of Environment, Solid Waste Management and Climate Change.

## 5. Laboratories Division

- 85 fish samples including bivalves and cultured fish were collected in the south east coast under the Integrated Environmental Monitoring Program (IEMP) and submitted to Quantilab Ltd for the analysis of Total Hydrocarbon Index (HCT), Polycyclic Aromatic Hydrocarbons (PAHs) and Heavy Metals
- 61 seawater and marine sediments were collected in the south east coast including shoreline, lagoon and off lagoon in the context of the IEMP and submitted to SGS for analysis including HCT, PAH and heavy metals
- 7 seawater samples were collected in the lagoon at St Brandon and analyzed to assess the possible presence of oil and grease arising from the grounding of Fishing Vessel Yu Feng 67 in December 2022
- 242 seawater samples were collected from 30 permanent representative sites, in cases of marine pollution & fish kills and were analysed for physico-chemical parameters



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- 239 seawater samples were collected from 13 selected public beaches, in cases of marine pollution and fish kills to determine the level of Total Coliform and Faecal Coliform bacteria
- 2 alleged cases of Marine Pollution and 4 alleged cases of fish kill at sea were attended to
- 67 fish samples were analysed for ciguatoxin toxicity tests and 122 macro-algae samples were collected from eight representative sites and examined for harmful marine microalgae
- 32 Environmental Monitoring Reports in connection with coastal development projects including desalination plants were received and the test results for seawater quality therein were compared to the Coastal Water Quality Guidelines for compliance

## 6. Fisheries Training and Extension Centre (FiTEC)

### **‘Fish Handling, Preservation and Marketing training course**

A total of 128 fishmongers (81 males and 47 females) attended the ‘Fish Handling, Preservation and Marketing (FHPM) training course from July 2022 to June 2023. A certificate of attendance was awarded to the trainees after successful completion of the course.

### **MS ISO 9001:2015**

FiTEC was awarded the certification MS ISO 9001:2015 for its training component by the Mauritius Standard Bureau on 18 November 2022 and is valid until 17 November 2025.

The **FPAOI** organized a training workshop targeting Comorian and Malagasy fishermen from 25 September to 05 October 2022 in Mauritius. Since FiTEC is a fully equipped training centre with logistics and facilities and to support the initiative of the FPAOI to assist other fishermen in the Indian Ocean Region, FiTEC was made available to the FPAOI free of charge, whereby FPAOI made use of the training facilities at FiTEC as well as the training boat with crew to undertake the practical at sea. The training course was carried out for 10 days (60 hours) including 4 days practical at sea. By the end of the training, the participants became familiar with the fishing techniques at FADs including handling and keeping fish on board, basic seamanship, safety at sea, setting up of fishing gear and construction of FADs, which



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will ultimately contribute to increase their daily fish catch as well as improving the quality of life of the trained fishermen in the long run.

### 7. MCS/VMS/Port State Control and Import & Export Division

#### 7.1 Import/Export Unit

- 199 individuals/companies were registered as importers for the import of fish and fish products
- Each importer paid a registration licence fee of Rs 25,000 to the Mauritius Revenue Authority, which amounted to Rs 4,975,000 for the 199 registered importers
- 4,037 export authorisations were issued
- 3,391 landing permits were issued

The details on the import and export of fish and fish products for the FY 2022-2023 are presented in tables below:

| Type                     | Products                | Jul- Dec 2022<br>(Tonnes) | Jan- Jun 2023<br>(Tonnes) | Total |
|--------------------------|-------------------------|---------------------------|---------------------------|-------|
| Chilled                  | Fish                    | 147                       | 176                       | 323   |
|                          | Crustacean              | 7                         | 12                        | 19    |
|                          | Cephalopod              | 3                         | 8                         | 11    |
|                          | Shell Fish              | 18                        | 39                        | 57    |
| Frozen                   | Fish                    | 5,692                     | 3,337                     | 9,029 |
|                          | By Catch                | 576                       | 683                       | 1,259 |
|                          | Controlled fish species | 137                       | 134                       | 271   |
|                          | Crustacean              | 558                       | 855                       | 1,413 |
|                          | Cephalopod              | 843                       | 765                       | 1,608 |
|                          | Shell Fish              | 94                        | 39                        | 133   |
| Frozen Prepared Products | Fish                    | 1,387                     | 543                       | 1,930 |
|                          | Cephalopod              | 55                        | 70                        | 125   |
|                          | Crustacean              | 63                        | 97                        | 160   |
| Canned Products          | Fish                    | 2,376                     | 1,958                     | 4,334 |
|                          | Crustacean              | 2                         | 2                         | 4     |
| Dry                      | Fish                    | 371                       | 216                       | 587   |
|                          | Crustacean              | 209                       | 33                        | 242   |
|                          | Cephalopod              | 0.2                       | -                         | 0.2   |
| Frozen<br>For Processing | Barracouta              | 440                       | 208                       | 648   |



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|                              |                                      |                               |                               |              |
|------------------------------|--------------------------------------|-------------------------------|-------------------------------|--------------|
| Frozen Tuna For Processing   | Tuna/Processing                      | 52,983                        | 38,168                        | 91,151       |
| Frozen Tuna                  | Tuna/Processing/Export               | 2,223                         | 180                           | 2,403        |
| Frozen fish in Freeport area | Fish                                 | -                             | -                             | -            |
| Dry                          | Fish Feed                            | 2,879                         | 2,916                         | 5,795        |
| Fish waste (frozen)          | For processing of fish meal/fish oil | 249                           | 195                           | 444          |
| Frozen baits                 |                                      | 3,118                         | 2,595                         | 5,713        |
| <b>Type</b>                  | <b>Products</b>                      | <b>Jul - Dec 2022 (Units)</b> | <b>Jan - Jun 2023 (Units)</b> | <b>Total</b> |
| Live                         | Ornamental Fish                      | 2,283,147                     | 1,397,882                     | 3,681,029    |
|                              | Fish For Culture                     | -                             | -                             | -            |
|                              | Oyster For Culture                   | -                             | -                             | -            |

Table 11: Exports of Fish and Fish Products for FY 2022-2023

| Products                      | Jul- Dec 2022 (Tonnes)       | Jan- Jun 2023 (Tonnes)      | Total (Tonnes)       |
|-------------------------------|------------------------------|-----------------------------|----------------------|
| Salted snoek                  | 27.1                         | 32.4                        | 59.5                 |
| Chilled fish                  | 1.1                          | 2.1                         | 3.3                  |
| Chilled fish from Aquaculture | 833.8                        | 730.7                       | 1,564.5              |
| Fish meal (dry)               | 5,239.3                      | 6,105.1                     | 11,344.4             |
| Fish oil                      | 960.7                        | 807.3                       | 1,768                |
| Frozen/precooked tuna         | 7,896                        | 7,562.5                     | 15,458.5             |
| Frozen fish                   | 22,755.6                     | 13,051.2                    | 35,806.8             |
| Tuna in jars                  | 6,065.7                      | 5,558                       | 11,623.7             |
| Canned tuna                   | 16,749.5                     | 15,094.2                    | 31,843.7             |
| Baits                         | 2,877.6                      | 2,356.9                     | 5,234.5              |
| <b>Products</b>               | <b>Jul- Dec 2022 (Units)</b> | <b>Jan-Jun 2023 (Units)</b> | <b>Total (Units)</b> |



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|                             |     |     |       |
|-----------------------------|-----|-----|-------|
| Live marine ornamental fish | 415 | 672 | 1,087 |
| Live water ornamental fish  | -   | -   | -     |
| Export Authorisation        | -   | -   | -     |

Table 12: Import of fish and fish products for the FY 2022-2023

7.2 MCS/VMS/Port State Control Unit

| SN | Activity  | Statistics |
|----|---|------------|
| 1  | <b>Local Vessels</b>  |            |
|    | Number of Callings  | 214        |
|    | Number of boarding and inspection   | 213        |
| 2  | <b>Foreign Vessels</b>  |            |
|    | Number of Callings  | 731        |
|    | Number of boarding and inspection   | 541        |
| 3  | Number of surveys carried out on board local boats/vessels for departure clearances | 319        |
| 4  | Number of departure clearances issued (local boats/vessels)                         | 292        |
| 5  | Number of Processing Statements validated and endorsed                              | 1,549      |
| 6  | Number of Mauritius Catch Certificates (Master) validated and endorsed              | 214        |
| 7  | Number of Mauritius Catch Certificates (Re-Export) validated and endorsed           | 1,087      |
| 8  | Number of Swordfish Statistical Documents validated and endorsed                    | 31         |
| 9  | Number of Big Eye Statistical Documents validated and endorsed – Mauritian Flag     | 308        |
| 10 | Number of Big Eye Re-Export Certificates validated and endorsed – Foreign Flag      | 192        |
| 11 | <b>Patagonian Toothfish Vessels</b>   |            |
|    | Number of callings  | 12         |
|    | Number of boarding and inspection   | 9          |
|    | Number of DCD issued  | 13         |
|    | Number of DED issued  | 155        |
| 12 | <b>Trawlers</b>   |            |
|    | Number of callings  | 12         |
|    | Number of boarding and inspection   | 11         |
| 13 | <b>Vessel Monitoring system</b>   |            |
|    | Number of logbooks information verified against VMS data                            | 583        |



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|    |   |       |
|----|---|-------|
|    | Number of local fishing vessels monitored daily in the EEZ and Indian ocean region  | 346   |
|    | Number of foreign fishing vessels monitored daily in the EEZ                        | 110   |
|    | Number of VMS report produced for departure clearance to local fishing vessels      | 321   |
|    | Number of VMS report produced for validation of Master-Mauritius Catch Certificates | 66    |
|    | Number of new transponders of local and foreign fishing vessels registered          | 53    |
| 14 | <b>Import/Export unit</b>   |       |
|    | Number of registered importers of fish and fish products                            | 195   |
|    | Number of landing authorisations (delivery allowed/clearances) issued               | 3,020 |
|    | Number of export authorisations issued  | 3,385 |
|    | Number of inspections at point of entry   | 60    |
|    | Number of inspections at importer's premises  | 80    |

Table 13: Statistics pertaining to Port State Control Unit/Vessel Monitoring System for FY 2022-2023

## 8. Planning and Licensing Division

### 8.1 Planning Unit

#### (1) Implementation of fishing schemes

##### (i) 'Canotte' Scheme

This Ministry is implementing a scheme so as to provide financial support to fishers to enable them to purchase better equipped boats "Canottes" of length 7 – 12 meters in order to enhance their livelihood and encourage them to fish off lagoon.

Under the scheme, a registered fisher is eligible for a grant representing 50% of the cost of a "Canotte" and up to an amount of Rs. 200,000 per "Canotte".

During the financial year, a total of 29 Canottes were registered by the Fisheries Protection Services and 8 fishers have availed of financial assistance under the Canotte scheme.

##### (ii) Semi-Industrial Scheme

In order to encourage outer-reef and bank fishing, financial support in the form of a grant of 50 percent, up to a cap of Rs. 6 million is given to cooperative societies to enable them to acquire semi-industrial vessels less than 24 metres in length





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overall fitted with inboard engine and all navigation, communication, safety and appropriate fishing equipment.

Since the beginning of the scheme in 2016, a total of 4 fishermen cooperative societies, have benefitted from the semi-industrial scheme. As at date three fishing boats have been acquired and registered with the Ministry.

## **(2) Signature of Agreements and Memorandum of Understandings (MoUs)**

### **(i) Bilateral Cooperation**

- a) MOU between the Ministry of Blue Economy, Marine Resources, Fisheries and Shipping and University of Sunshine Coast Australia, on cooperation on the sea cucumber project. The MOU was signed on 17 February 2022 during a virtual signing ceremony. Under this MOU, Parties shall cooperate in the elaboration and implementation of a project research plan and project on sea cucumber seed production, field culture and training with a view to transferring technology already acquired by the University of Sunshine Coast.
- b) An Interim Bilateral reciprocal Fishing Agreement was signed between Mauritius and Seychelles for fishing in each other's waters in April 2022, which is valid for a period of one year. Negotiations are now being made to renew the reciprocal Fishing Agreement between both countries.
- c) The 8<sup>th</sup> Fisheries Protocol to the Fisheries Partnership Agreement between the European Union and the Republic of Mauritius was signed on 21 December 2022 for a period of four years (2022-2026).

### **(ii) EU Sectoral Programme**

A new Fisheries Protocol was signed on 21 December 2022 and covers a period of 4 years that is till December 2026. In this respect, a Joint Committee Meeting (JCM) was held virtually on 23 and 24 May 2023 respectively via web conference.

During the JCM, the Mauritian side provided an overview of its multi-annual work plan for 2023-2026, and provided a detailed description of a series of key projects related



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to the monitoring and surveillances activities (inspections, upgrading and maintenance of VMS, training of scientific and technical operators, implementation of the ERS, training of observers), but also infrastructural development (sign-making and beacons along selected coral-reef breaks, centralised information and operation facilities), support to fishermen and maritime sector (ice-making machines, welfare fund, scholarships, Marine Park Centre) amongst others.

### 8.2 Licensing Unit

Three new fishing boats joined in the semi-industrial fishery. A total of 31 licences were issued, representing an amount of Rs. 31,000 as licence fees.

- Three licences were issued to fishing boats operating in the Advanced Coastal Fishery.
- Licences were issued to 4 Mauritian Purse Seiners, representing an amount of USD 150,315.04 as licence fees.
- Licence was issued to 1 Supply vessel, representing an amount of USD 2155.24 as licence fees.
- Licences were issued to 16 Mauritian Longliners, representing an amount of Rs3000 and USD 98,856.17 as licence fees.
- One new vessel (Freezer Trawler) has joined in the Mid-Water Trawling. One licence was issued and an amount of USD 15,000 was generated as licence fees.
- Under the Interim Bilateral Fishing Agreement (2022-2023) between the Republic of Mauritius and the Republic of Seychelles, a total of 5 licences were issued, generating revenue of EUR 5697.53.
- Under the Fishing Agreement between the Republic of Mauritius and the European Union, a total of 48 licences were issued to purse seiners/longliners/Supply vessels and the total licence fees amounted to EUR 299,560.
- A total of thirteen (13) Letters of Intent and ten (10) extensions were issued to promoters in respect of fishing development projects.



## 9. Competent Authority Seafood (CASF)

**Statistics pertaining to inspection and certification of fish and fish product exported for FY 2022/2023**

| 01 July 2022 to 30 June 2023 |   |                  |
|------------------------------|---|------------------|
| 1                            | Number of EU Export Health Certificates issued by the CASF              | 2,309            |
| 2                            | Number of non-EU Export Health Certificates issued by the CASF          | 1,134            |
| 3                            | Total Number of Export Health Certificates issued by the CASF           | 3,443            |
| 4                            | Number of inspections carried out at Registered Fish Business Operators | 985              |
| 5                            | Number of registered Fish Business Operators                            | 35               |
| 6                            | Number of newly registered Fish Business Operators                      | 3                |
| 7                            | Number of EU-approved establishments                                    | 19               |
| 8                            | <b>Total Revenue (Rs)</b>   | <b>3,991,000</b> |

Table 14: Statistics from Competent Authority Seafood for FY 2022-2023

**Note:** Revenue collected at the CASF account for fees stipulated in the First and Third Schedule of the GN 147 of 2009 (Fisheries and Marine Resources - Export of fish and fish products).

## 10. Fisheries Protection Service

- Total number of registered fishmongers as at 30 June 2023: 1,152
- Number of new fishers registered during FY 2022-2023: 274
- Total number of registered artisanal fishers as at 30 June 2023: 1,839
- Total number of registered fishing boats as at 30 June 2023: 1,363
- Total amount of Bad Weather Allowance paid in FY 2022-2023:  
Rs 118,080,425
- Number of contraventions established for prosecution in FY 2022-2023: 98
- Number of pick up cases in FY 2022-2023: 156



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**10.1 EXHIBITS at the Coastal Fishery**

During the Financial Year 2022-2023, the Prosecution Unit has seized a total of 1292 units and 34 kg of several marine species from various offences under the Fisheries and Marine Resources Act 2007.

| SN   | Period                     | Seized Items (Units) | Marine Species (Kg) |
|------|----------------------------|----------------------|---------------------|
| (i)  | July 2022 to December 2022 | 484                  | 34                  |
| (ii) | January 2023 to June 2023  | 808                  |                     |

Table 15: The Prosecution Unit has seized a total of 1292 units and 34 kg of several marine species

| Month (2022) | Illegal Nets (Units) | Underwater Fishing (Units) | Undersized fish (Units) | Other Cases | Total Cases | Illegal Net Seized (Metres) |
|--------------|----------------------|----------------------------|-------------------------|-------------|-------------|-----------------------------|
| July         | 3                    | Nil                        | Nil                     | Nil         | 3           | 251.0                       |
| August       | 4                    | 3                          | Nil                     | 2           | 9           | 323.0                       |
| September    | 2                    | Nil                        | Nil                     | 2           | 4           | 32.2                        |
| October      | 9                    | 12                         | Nil                     | 9           | 30          | 719.9                       |
| November     | 4                    | 7                          | 2                       | 3           | 16          | 122.5                       |
| December     | 1                    | 9                          | 8                       | 3           | 21          | 130.0                       |
| <b>Total</b> | <b>23</b>            | <b>31</b>                  | <b>10</b>               | <b>19</b>   | <b>83</b>   | <b>1,578.6</b>              |

Table 16: Number of cases reported in breach of Fisheries Act and length of illegal nets seized



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| Month (2023) | Illegal Nets (Units) | Underwater Fishing (Units) | Undersized fish (Units) | Other Cases | Total Cases | Illegal Net Seized (Metres) |
|--------------|----------------------|----------------------------|-------------------------|-------------|-------------|-----------------------------|
| January      | 4                    | 9                          | 1                       | 2           | 16          | 131.0                       |
| February     | 9                    | 19                         | 4                       | 6           | 38          | 480.7                       |
| March        | 7                    | 9                          | 2                       | 3           | 21          | 642.2                       |
| April        | 6                    | 3                          | Nil                     | Nil         | 9           | 150.0                       |
| May          | 5                    | 4                          | 3                       | 1           | 13          | 289.9                       |
| June         | 6                    | 4                          | 3                       | 1           | 14          | 199.0                       |
| <b>Total</b> | <b>37</b>            | <b>48</b>                  | <b>13</b>               | <b>13</b>   | <b>111</b>  | <b>1,892.8</b>              |

Table 17: Number of cases reported in breach of Fisheries Act and length of illegal nets seized

| 2022         |              |              | 2023         |              |              |
|--------------|--------------|--------------|--------------|--------------|--------------|
| Month        | No. of Cases | Fine (Rs)    | Month        | No. of Cases | Fine (RS)    |
| July         | 1            | 4000         | January      | 5            | 11000        |
| August       | Nil          | Nil          | February     | 4            | 4100         |
| September    | 3            | 6400         | March        | 1            | 2000         |
| October      | 1            | 4000         | April        | 4            | 7000         |
| November     | 2            | 10000        | May          | 1            | 2400         |
| December     | 4            | 10000        | June         | Nil          | Nil          |
| <b>Total</b> | <b>11</b>    | <b>34400</b> | <b>Total</b> | <b>15</b>    | <b>26500</b> |

Table 18: Number of cases prosecuted and amount collected as fine



## 11. Shipping Division

### 11.1 AIS second phase trial 2022

The Shipping Division had embarked in a second phase of the trial project for the testing of Five (5) units of WEATHERDOCK (VMS- Track Pro) and Two (2) units of Angel Fish- solar powered in 2022. The first trial phase has been successful and has demonstrated the usefulness and applicability of these devices and the tracking system for the safety of life at sea specially those of fishermen.

The 7 AIS Transponders were tested at the Mauritius Radio Services (MRS) at Cassis in June 2022 are ready to be deployed on vessels. A web meeting was held on 20 April 2022 with Mr Alfred Kotouczek, CEO of Weatherdock AG and the modus operandi was established. The second phase of the trial project is expected to start in the second quarter of the year.

### 11.2 Ferry-Boat Service at Grand River South East

A ferry boat service has been established on the Grand River South East (GRSE) in the district of Flacq. The service connects the two remote communities of “Deux Frères” and GRSE, and offers a faster alternative to the residents of these communities who would otherwise travel a long distance by road across the GRSE Bridge to reach their respective villages. Passengers are of all ages and use the service for different reasons, such as going to school and work.

The ferry operates at the mouth of the river, where many pleasure boats navigate carrying tourists upstream to the famous waterfall of GRSE, from 6 a.m. to 6 p.m. and even later if required.

### 10.3 Ballast Water Management

The International Maritime Organization (IMO) has developed an International Convention for the Control and Management of Ships Ballast Water & Sediments (BW Convention) to prevent, minimize and ultimately eliminate the transfer of harmful aquatic organisms and pathogens through the control and management of ships' ballast water and sediments.

So far, two PBBSs have been conducted in port of Port-Louis and Port Mathurin to identify the types of species existing in the port waters of both Mauritius and Rodrigues. Two projects have been extended for two years at no additional cost, namely “Ballast Water Management project for Port Mathurin” and the “Ships' BioFouling in Port Louis Harbour”, which started in July 2021



#### 11.4 Guidelines for Maritime Training Institutions conducting online courses under the STCW Convention 1978 (as amended).

These Guidelines are intended for Maritime Training Institutions who are already accredited to deliver specific “face-to-face” (Traditional Instruction) courses, where e-learning (online learning) will be an alternative method of delivering the same training and conducting the related assessment as prescribed under the International Convention of Standards of Training, Certification and Watch keeping for Seafarers (STCW), 1978 (as amended).

#### 11.5 Ship's Biofouling in Port Louis Harbour, November 2022

Taking into account the significant and well-documented role that ships' biofouling is playing in moving potentially harmful fouling organisms between ports and coastal waters of the world, the Shipping Division, along with the Mauritius Oceanography Institute and with the assistance and cooperation of the National Coast guard (NCG) and the Mauritius Ports Authority (MPA) has initiated the Ship's Biofouling in the Port Louis Harbour project to complement the Ballast Water Management project which was initiated earlier.

The Ship's Biofouling in the Port Louis Harbour reports were released in November 2022.

#### Number of Casualties at Sea (July 2012 - June 2023)

| Year                    | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|-------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| No of casualties at sea | 2    | 2    | 0    | 1    | 1    | 1    | 0    | 0    | 0    | 1    | 4    | 1    |

Table 19: Number of Casualties at Sea (July 2012 - June 2023)



### Port State Control Inspections (July 2012 - June 2023)

| Year                                 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|--------------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| No of Port State Control Inspections | 2    | 1    | 0    | 0    | 3    | 3    | 1    | 2    | 3    | 0    | 7    | 1    |

Table 20: Port State Control Inspections (July 2012 - June 2023)

### Other Services Provided by the Shipping Division (July 2022 to June 2023)

| SN | Service   | Statistics |
|----|---|------------|
| 1  | Endorsement Certificates Issued                     | 210        |
| 2  | Attestation Certificates Issued                     | 96         |
| 3  | Certificates of Competency/Proficiency Issued       | 29         |
| 4  | Ship's Cook Certificates issued                     | 12         |
| 5  | Minimum Safe Manning Certificates                   | 75         |
| 6  | Port Clearances Issued                              | 2,469      |
| 7  | Discharge Books Issued                              | 966        |
| 8  | Vessels registered under the Mauritian Flag         | 121        |
| 9  | Surveys and Inspections                             | 72         |
| 10 | No. of Safety Inspection of Foreign Fishing Vessels | 249        |

Table 21: Number of Vessels registered under the Mauritius Flag, July 2022-June 2023

### Types of Vessels Registered under the Mauritius Flag – July 2022 to June 2023

| Types of Vessels | Number | GT   |
|------------------|--------|------|
| Barge            | 12     | 3159 |
| Booster Station  | 1      | 256  |
| Product Carrier  | 1      | 6952 |





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|                         |     |            |
|-------------------------|-----|------------|
| Bunker Barge            | 4   | 4385       |
| Passenger/Cargo         | 1   | 5492       |
| Reefer                  | 1   | 5100       |
| Crew Boat               | 3   | 60.05      |
| Dredgers                | 10  | 47442      |
| Fishing Vessels         | 7   | 11321.72   |
| Floating Crane          | 1   | 250        |
| Launch                  | 6   | 242.04     |
| Leisure Submersible     | 2   | 35.5       |
| Pontoon                 | 13  | 1459.8     |
| Split Hooper Barge      | 4   | 11430      |
| Survey Vessels          | 3   | 228.11     |
| Tug Boat                | 17  | 2102.84    |
| Work Boat               | 6   | 429.77     |
| Yachts/ Pleasure crafts | 21  | 435.495    |
| Cable ship              | 1   | 5887       |
| Freezer Trawler         | 1   | 1490       |
| Oil Tanker              | 2   | 3581       |
| Service Boat            | 2   | 87.95      |
| Steel Flat Top Deck     | 1   | 1878       |
| Cargo Barge             |     |            |
| Survey Boat             | 1   | 7          |
| Total                   | 121 | 113712.275 |

Table 22: Other statistics pertaining to the Shipping Division



## 12. Mauritius Maritime Training Academy

| SN           | Course   | Male       | Female    | Total      | Trainees (place of employment- Cruise/Cargo/both/other) |
|--------------|--|------------|-----------|------------|---|
| 1            | Basic Safety/Crowd Management/Crisis Management/Proficiency Security Awareness | 149        | 78        | 227        | Mostly employed on cruise vessels                       |
| 2            | Refresher Course   | 74         | 11        | 85         |   |
| 3            | Second Engineer course for Fishing Vessel with Propulsion Power up to 1500 kW  | 5          | -         | 5          |   |
| 4            | Secondhand course for Fishing Vessel of 24m in length & over                   | 6          | -         | 6          |   |
| 5            | Rating Forming Part of Navigational Watch                                      | 17         | -         | 17         |   |
| 6            | Rating Forming Part of Engineering Watch                                       | 20         | -         | 20         |   |
| 7            | Able Seafarer (Deck)   | 9          | -         | 9          |   |
| 8            | Able Seafarer (Engine)   | 1          | -         | 1          |   |
| 9            | PSCRB  | 5          | -         | 5          |   |
| 10           | Tug Engineer   | 8          | -         | 8          |   |
| <b>TOTAL</b> |  | <b>300</b> | <b>81</b> | <b>381</b> |   |

Table 23: Number of Seafarers trained for the FY 2022-2023

## Implementation of Budget Measures

A series of key budget actions and measures were announced by the Minister of Finance, Economic Planning and Development for the Financial Year 2022-23 pertaining to the Ministry.



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A status of the achievements of the budget measures and key actions are provided in Tables 24 and 25 respectively.

| SN | Budget paragraph | Budget Measure   | Status as at 30 June 2023   |
|----|------------------|--|---|
| 1  | C1030            | Mangroves Plantation and Restoration   | Mangroves Plantation (9000 plants) and Restoration at 2 sites in Le Morne |
| 2  | 80               | Seven Fish Aggregating Devices will be replaced around the island                          | Installation of all seven (7) FADs has been completed as at November 2022 |
| 3  | 85 (b)           | Rs 5,000 per fisher will be provided for the purchase of materials to construct fish traps | All registered fishers have already benefited from the Scheme             |
| 4  | 85 (c)           | Financial assistance for the purchase of hooks   | All registered fishers have already benefited from the Scheme             |
| 5  | 86               | Increasing the daily Bad Weather Allowance for fishers from Rs 475 to Rs 575               | 1716 fishers have benefitted from the allowance                           |

Table 24: Status on Implementation of Budget Measures

| Key Action   | Key Performance Indicator  | Target for FY 2022-2023 | Actual for FY 2022-2023 |
|--|--|-------------------------|-------------------------|
| Increase local fish production and fish export                 | Tonnes of fish produced  | 35,000                  | 38,279                  |
| Development of local fleet and promotion of off-lagoon fishing | Number of canottes acquired by registered fishers                      | 50                      | 29                      |
| Preservation of marine ecosystems through coral farming        | Number of coral reef sites rehabilitated                               | 4                       | 3                       |
| Enforce compliance of merchant vessels with maritime standards | Number of audit inspections on vessels registered under Mauritian Flag | 45                      | 142                     |



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|                                    |                           |     |     |
|------------------------------------|---------------------------|-----|-----|
| Provision of training to seafarers | Number of trainees        | 500 | 290 |
| Empowerment of fishers             | Number of fishers trained | 500 | 323 |

Table 25: Status on Key Actions and KPIs of the Ministry

## Workshop/Training

### 1. General Training Course on Biofouling Management

The General Training Course on Biofouling Management was organized by the Ministry of Blue Economy, Marine Resources, Fisheries and Shipping with the collaboration of the International Maritime Organization and is part of the capacity-building initiative of the GloFouling Partnerships project.

This IMO training was held from 08 to 09 December 2022 at the Caudan Arts Centre and was attended some 50 participants from both public and private sector entities involved in the Biofouling Control and Management in Mauritius.

The training was very beneficial for raising awareness on the issue of biofouling mediated marine invasive species and securing their collaboration in the effective implementation of the Guidelines for the control and management of ships' biofouling to minimize the transfer of invasive aquatic species (Biofouling Guidelines) which are intended to provide a globally consistent approach to the management of biofouling, which is the accumulation of various aquatic organisms on ships' hulls.

### 2. Maritime Security Awareness Workshop, 02 to 04 May 2023

The Ministry of Blue Economy, Marine Resources, Fisheries and Shipping with the collaboration of the International Maritime Organization, has organized a national workshop on Maritime Security Awareness, more specifically on the Domestication of International Maritime Security Instruments, from 02 to 04 May 2023.

The workshop was organized under the Ports Security and Safety of Navigation project which is a 6-year programme for Eastern Africa, Southern Africa and the Indian Ocean region coordinated and co-implemented by the Indian Ocean Commission and funded by the European Union.

The overall objective of the programme was to enhance maritime security and safety in the Eastern Africa, Southern Africa and the Indian Ocean region (EA-SA-IO) in line



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with the 2050 African Integrated Maritime Strategy (AIMS 2050) which addresses the maritime challenges of Africa.

Hence, the International Maritime Organization is assisting Mauritius to enhance the Maritime Security and Safety of Navigation in our waters in both the National Administration and the Port Facility levels.



*Figure 21: National Workshop on Maritime Security Awareness Workshop  
with the International Maritime Organization*

### **3. Oil Pollution Preparedness, Response and Co-operation Level 3 Training Course, 22 to 24 May 2023**

The International Convention on Oil Pollution Preparedness, Response and Cooperation, 1990 (OPRC Convention) came into force internationally on 13 May 1995. The OPRC Convention came into force in Mauritius on 02 March 2000. The main objectives of the OPRC Convention are to facilitate international co-operation and mutual assistance in preparing for and responding to a marine pollution incident and to encourage states to develop and maintain adequate capability to deal credibly with oil pollution emergencies.

One of the basic obligations of the Convention is the establishment of a national system for responding promptly and effectively to oil pollution incidents. Therefore, IMO has assigned a high priority in its technical assistance programme to providing technical advice to countries which are in the throes of developing national and local contingency plans and obtaining the necessary oil spill combating equipment.

The Ministry of Blue Economy, Marine Resources, Fisheries and Shipping, with the collaboration of the International Maritime Organization (IMO) has organized a



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workshop in Mauritius from 22 to 24 May 2023 to train key management and on-scene commanders on how to manage pollution incidents safely, efficiently and effectively. This course is also known as IMO OPRC Level 3 training.

The Workshop discussed issues such as international, national and local oil spill preparedness, response and co-operation, including the National Oil Spill Contingency Plan (NOSCP), response management and organization, response policy, media relations, claims and compensation. The workshop also considered designation of responsibilities, organizational structure, command issues and included a Table Top exercise.

The Target Audience was Senior Managers/Administrators who are assigned responsibility under the National Contingency Plan and may be called upon to make management decisions relating to national policy and financial responsibility for oil spill response activities (such as commitment of people, materials and/or finances in the event of an incident).



*Figure 21: Specialised training course on International Convention on Oil Pollution Preparedness, Response and Co-operation*

### **3 Second Surveillance Audit - ISO Certification of the Shipping Division**

Mauritius is party to the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers (STCW), 1978, as amended. According to amendments to the Convention, all member States are required to have a quality standard system in place covering all activities related training, assessment of competence, certification, endorsement and revalidation as per Regulation I/8 (Quality Standards) of the Convention, and Section A-I/8 of the STCW Code.

The Shipping Division has implemented ISO 9001:2015 quality management system standards in March 2018, recertified by the Mauritius Standards Bureau on 11 April 2021 and had a successful second surveillance audit on 31 March 2023.



#### **4 IMSO Audit - Long Range Identification and Tracking of Ships (LRIT)**

The Long-Range Identification and Tracking of Ships (LRIT) is a system put in place by the International Maritime Organization (IMO) whereby LRIT information is provided to Contracting Governments to the 1974 International Convention for the Safety of Life at Sea (SOLAS) and Search and Rescue Services entitled to receive the information, upon request, through a system of National, Regional, Cooperative or International LRIT Data Centres.

The Mauritius LRIT National Data Centre, managed by Fulcrum Ltd has successfully passed the International Mobile Satellite Organization (IMSO) audit in February 2023.

#### **5 Sensitization by the Mauritius Maritime Training Academy**

Talk delivered by Mr. M.A. Moorghen at the Forest Side Boys SSS on 26 May 2023.

#### **6 Workshop on “Gender Mainstreaming”**

The Ministry of Blue Economy, Marine Resources, Fisheries and Shipping, in collaboration with the Ministry of Gender Equality, Child Development and Family Welfare, organised a workshop on “Gender Mainstreaming” at Le Labourdonnais Waterfront Hotel, Caudan, Port Louis on 17, 29 and 31 May 2023. 72 staff participated in the workshop. The aim of the workshop was to raise awareness on gender concept.



## Events

### 1. Mauritius Maritime Week: Mauritius showcased as a key maritime logistics and transport hub in the Indian Ocean region

The second edition of the Mauritius Maritime Week, the biggest annual container ports, shipping and transport logistics exhibition and conference in the Indian Ocean region, was held from 13 to 15 December 2022 at the Ravenala Attitude Hotel, Balaclava.

The event was organised by the Mauritius Shipping Corporation Ltd in collaboration with the Port Management Association of Eastern and Southern Africa and the Association of Indian Ocean Islands Ports.



The Conference featured around 30 world class conference speakers addressing issues, challenges, solutions and innovations in port operations, shipping, supply chain and logistics strategies.

Figure 22: Mauritius Maritime Week at Ravenala Attitude Hotel, Balaclava

### 2. Exchange of 8<sup>th</sup> Fisheries Protocol between the European Union and Mauritius

The eighth Fisheries Protocol, which sets out the provisions for economic, financial, technical, and scientific cooperation in the fisheries sector between the European Union and the Republic of Mauritius for the period 2022 to 2026, was exchanged on 16 January 2023 in Port Louis.





Figure 23: Exchange of 8th Fisheries Protocol between the European Union and Mauritius

The Minister of Land Transport and Light Rail, Minister of Foreign Affairs, Regional Integration and International Trade, Hon. Alan Ganoo; the Minister of Blue Economy, Marine Resources, Fisheries and Shipping, Hon. Sudheer Maudhoo; and the Ambassador and Head of the EU Delegation in Mauritius, Mr Vincent Degert, were present on the occasion.

### 3. Recognition Certificates and Protective Equipment presented to Fisheries Protection Officers

A batch of 58 Fisheries Protection Officers were awarded 'Recognition Certificates' for their dedication and commitment in the combat against illegal fishing during a ceremony organised by this Ministry on 09 February 2023. The Officers also received protective tools and equipment on that occasion.



Figure 24: 58 Fisheries Protection Officers awarded

The Minister of Blue Economy, Marine Resources, Fisheries and Shipping, Mr Sudheer Maudhoo, and the Senior Chief Executive of the Ministry, Mr Mubarakahmad Boodhun, were present.



#### **4. The World Seagrass Day is celebrated on 01 March 2023**

In the context of the World Seagrass Day, the Ministry organised sensitisation and



*Figure 25: World Seagrass Day celebrated in March 2023*

educational programmes, targeting school children, fishers and coastal communities, at eight places around the island.

On that occasion, an Information Board regarding the importance of seagrass was unveiled by the Hon. Sudheer Maudhoo, Minister of Blue Economy, Marine Resources, Fisheries and Shipping at the Poste Lafayette public beach.

#### **5. Open Days at Fisheries Posts organised on 20 and 21 March 2023 for registration of new fishers**

In line with Government objective to continue to strive for the welfare of the fishermen community and to accelerate efforts to ensure that more fishermen receive their registration cards as earliest as possible, the Ministry organised a 'Walk-in Application for New Applicant Fishers' exercise on 20 and 21 March 2023 around the island to invite eligible candidates to submit their applications.

#### **6. Inauguration of the new Case Noyale Fisheries Post**

With a view to better serve the fisher community of Case Noyale, a new fisheries post was constructed.

The new Case Noyale Fisheries Post was inaugurated on 26 April 2023 by the Honourable Sudheer Maudhoo in the presence of other eminent personalities.



Figure 26: New Case Noyale Fisheries Post

## 7. 27<sup>th</sup> Session of Indian Ocean Tuna Commission stresses sustainability of fisheries industry



Figure 27: 27<sup>th</sup> Session of the Indian Ocean Tuna Commission

The 27<sup>th</sup> Session of the Indian Ocean Tuna Commission Ministerial Meeting was held from 30 April to 12 May 2023 at the Intercontinental Hotel in Balaclava.

“The fishing industry contributes 1.4% to the Gross Domestic Product and provides employment to 22 000 people, including 10 000 in direct employment.

The tuna industry accounts for 25% of our exports and Mauritius, as a Small Island Developing State, is highly dependent on the tuna industry for the social and economic sustainability of the country” said the Honourable Minister as part of his address during the conference.



## 7 World Oceans Day 2023

The World Oceans Day is celebrated on 08 June each year. The theme for the year 2023 was – ‘**Planet Ocean: tides are changing.**’

The Ministry celebrated the event on 08 June 2023 on a plot of land earmarked for the construction of the Balaclava Marine Park Centre at Pointe aux Piments.



Figure 28: World Oceans Day 2023

To mark the event, 200,000 juvenile fish known as fingerlings, were released in the lagoons at Balaclava. Students from several secondary educational institutions participated in the celebration.

## 8 Celebration of “Day of the Seafarer” 2023

The Day of the Seafarer is celebrated on every 25 June to recognize the unique contribution made by seafarers from all over the world to international seaborne trade, the world economy and civil society as a whole.



Figure 29: Celebration of “Day of the Seafarer” 2023

To mark the event, the Seafarers' Welfare Fund, a parastatal body operating under the aegis of this Ministry, organised a celebration on 26 June 2023 at Trevesa House, Mer Rouge.

To honour the contribution of seafarers to the global economy, a memorial was unveiled by the Hon. Sudheer Maudhoo, Minister of Blue Economy, Marine Resources, Fisheries and Shipping in the presence of other eminent personalities.



## **Audit Committee**

The Audit Committee at the Ministry is chaired by a Deputy Permanent Secretary and has as members, an Assistant Permanent Secretary and a Scientific Officer and the duties of secretary are performed by an Office Management Assistant. During the Financial Year 2022-23, the Audit Committee had six meetings.

For the Financial Year (FY) 2022-23, the Audit Committee:

- Considered the issues raised in the National Audit Office Report for the FY 2020-21 which are still in progress.
- Followed up and implemented on the recommendations made in Internal Control Reports for FY 2021-22.
- Ensured follow up on issues raised by the National Audit Office in its Management Letter for the FY 2022-23.



Part 2

# Financial Performance



## Financial Highlights of the Ministry

The Ministry is allocated its yearly budget through two votes: Vote 19-1 Blue Economy and Vote 19-2-Fisheries.

### Statement of Revenue of the Ministry

| STATEMENT OF REVENUE OF THE MINISTRY |  |                       |                       |                       |
|--------------------------------------|--|-----------------------|-----------------------|-----------------------|
| S/N                                  | Description  | 2021-2022             | 2022-2023             | 2022-2023             |
|                                      |  | Actual (Rs)           | Estimates (Rs)        | Actual (Rs)           |
| 1                                    | Fishing Vessel Licence                                 | 91,953,693.00         | 95,000,000.00         | 28,272,746.49         |
| 2                                    | Fishmonger Licence                                     | 345,125.00            | 400,000.00            | 353,970.18            |
| 3                                    | Ship's Registration Fee                                | 458,074.00            | 550,000.00            | 32,372.97             |
| 4                                    | Annual Fees (Shipping)                                 | 7,530,102.00          | 9,000,000.00          | 6,281,482.71          |
| 5                                    | Processing fees for Inspection                         | 4,800,000.00          | 6,000,000.00          | 4,975,000.00          |
| 6                                    | Permits/ Fees to Operate in Marine Protected Areas     | 954,400.00            | 900,000.00            | 1,669,400.00          |
| 7                                    | Fees for services provided at the Competent Authority  | 2,935,800.00          | 5,000,000.00          | 4,026,100.00          |
| 8                                    | Sale of Produce  | 185,346.00            | 875,000.00            | 448,429.85            |
| 9                                    | Miscellaneous. Sales of Goods and services (Fisheries) | 10,533,108.00         | 12,000,000.00         | 71,363,278.60         |
| 10                                   | Miscellaneous Sales of Goods and Services - (Shipping) | 4,972,046.00          | 5,700,000.00          | 6,156,084.43          |
|                                      | <b>TOTAL</b>   | <b>124,667,694.00</b> | <b>135,425,000.00</b> | <b>123,578,865.23</b> |

Table 26: Statement of Revenue of the Ministry



## MINISTRY OF BLUE ECONOMY, MARINE RESOURCES, FISHERIES AND SHIPPING

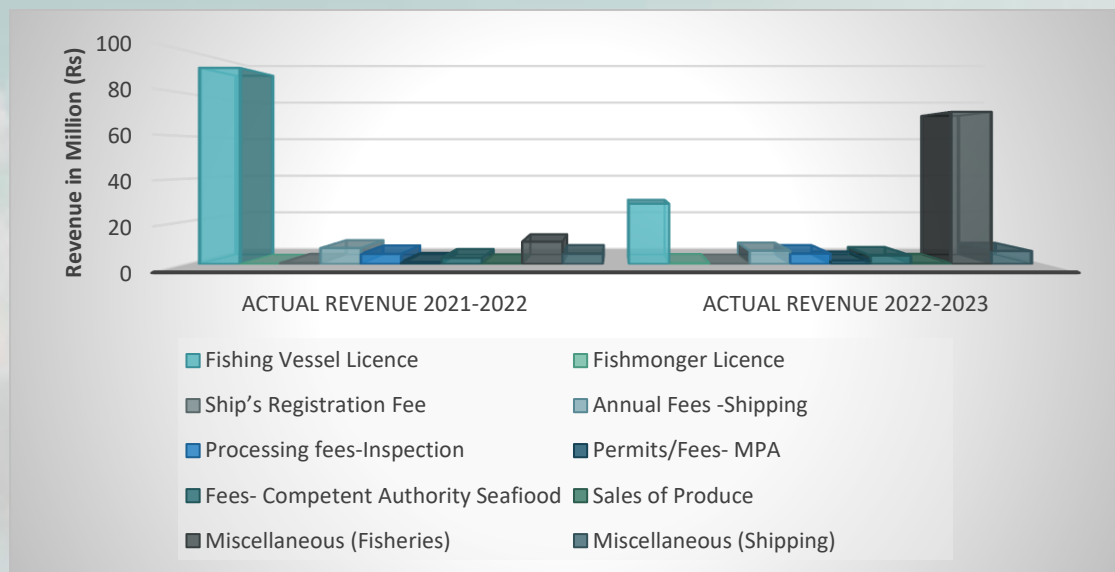


Figure 30: Actual Revenue of the Ministry for FY 2021-2022 and FY 2022-2023

The financial highlights of the Expenditure by Votes and the Categories therein for the Financial Year 2022-2023 are illustrated below:

### Expenditure for Vote 19-1-Blue Economy

| SN | Head/Sub-Head of Expenditure        | 2021-2022          | 2022-2023          | 2022-2023          |
|----|-------------------------------------|--------------------|--------------------|--------------------|
|    |                                     | Actual (Rs)        | Estimates (Rs)     | Actual (Rs)        |
| 1  | Compensation of Employees           | 80,317,327         | 97,540,000         | 85,575,782         |
| 2  | Goods and Services                  | 55,768,640         | 76,900,000         | 57,630,323         |
| 3  | Subsidies                           | 428,800            | 450,000            | 383,900            |
| 4  | Recurrent Grants                    | 58,288,290         | 50,500,000         | 46,193,778         |
| 5  | Capital Grants                      | 2,901,367          | 15,200,000         | -                  |
| 6  | Social Benefits                     | 10,000             | 10,000             | 10,000             |
| 7  | Other Expenses                      | 330,000            | 400,000            | 369,516            |
| 8  | Acquisition of Non-Financial Assets | -                  | 4,000,000          | 2,024,387          |
|    | <b>TOTAL</b>                        | <b>198,044,424</b> | <b>245,000,000</b> | <b>192,187,686</b> |

Table 27: Statement of Expenditure of Blue Economy



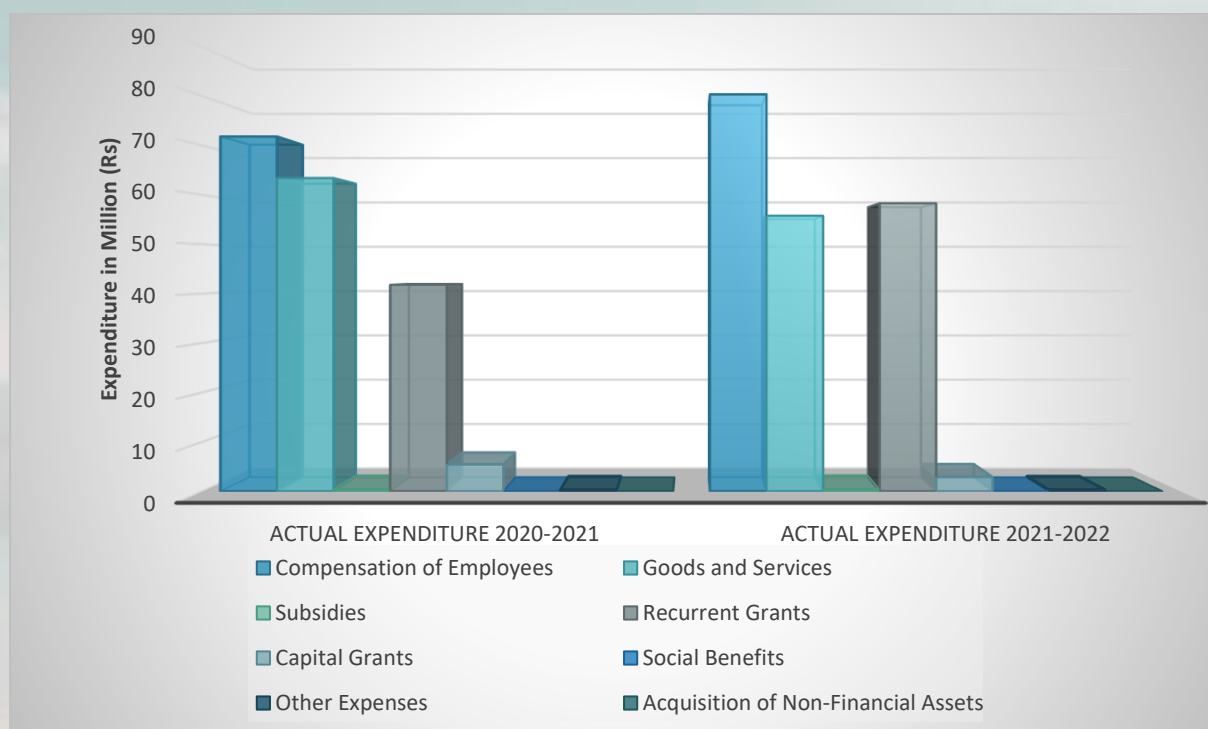


Figure 31: Estimated and Actual Expenditure of Blue Economy for FY 2022-2023

## Expenditure for Vote 19-2-Fisheries

| SN | Head/Sub-Head of Expenditure        | 2021-2022          | 2022-2023          | 2022-2023          |
|----|-------------------------------------|--------------------|--------------------|--------------------|
|    |                                     | Actual (Rs)        | Estimates (Rs)     | Actual (Rs)        |
| 1  | Compensation of Employees           | 165,315,867        | 190,300,000        | 168,080,382        |
| 2  | Goods and Services                  | 47,192,242         | 89,300,000         | 62,119,288         |
| 3  | Recurrent Grants                    | 15,241,932         | 13,900,000         | 12,131,819         |
| 4  | Other Expenses (Recurrent)          | 21,922,927         | 33,100,000         | 13,439,816         |
| 5  | Other Expenses (Capital)            |                    | 16,000,000         | -                  |
| 6  | Acquisition of Non Financial Assets | 20,064,914         | 57,400,000         | 16,453,144         |
|    | <b>TOTAL</b>                        | <b>269,737,882</b> | <b>400,000,000</b> | <b>272,224,449</b> |

Table 28: Statement of Expenditure of Fisheries

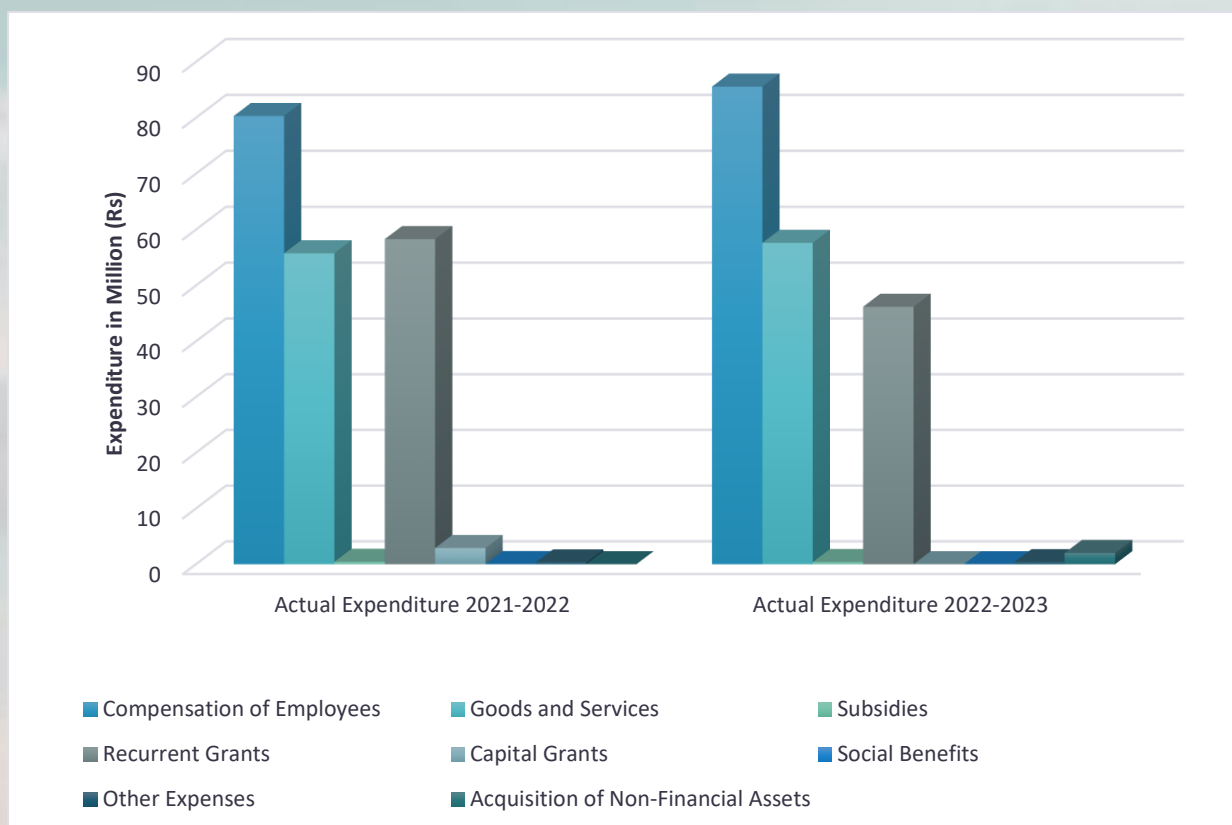


Figure 32: Estimated and Actual Expenditure of Fisheries for FY 2022-2023

## Analysis of Major Changes

### Revenue

A decrease of 8.7% in Financial Year 2022-2023 is noted when comparing the estimated total revenue with the actual total revenue of the same Financial Year.

The decrease in revenue for fishing licence is mainly accounted to the fact that this Ministry has taken a decision not to issue licences in respect to non-EU fishing vessels due to recent grounding of Taiwanese vessels in the waters of Mauritius. No licence has been issued in respect of such vessels for the period July 2022-June 2023.

### Miscellaneous. Sales of goods and services (Fisheries)

The increase in revenue is accounted due to the introduction of tonnage fee, in year 2022, applicable on Foreign owned Mauritian fishing vessels operating in the industrial tuna fishery.



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The tonnage fee is charged for all fish that are exported or transhipped as follows:

- i. EUR 100 for every tons of yellow fin tuna; and
- ii. EUR 50 for every tons of tuna and tuna-like fish (excluding yellowfin tuna)

### Expenditures

The total expenditure in Financial Year 2022-2023 shows a decrease of 21.5% for Blue Economy when compared to that Financial Year 2021-2022. This decline is due to a reduction in expenditure for “Compensation of Employees”, “Goods and Services” and “Capital Grants”.

The actual total Expenditure in Financial Year 2022-2023 shows a decrease of 31.9% for Fisheries when compared to Financial Year 2022-2023. This is mainly due to decreases in expenditure for “Recurrent Grants”, “Goods and Services”, “Compensation of Employees” and “Other Expenses” and “Acquisition of Non-Financial Assets”.

### Performance of Procurement and Supply

The Procurement and Supply Section of the Ministry carried out its activities in order to ensure that the objectives of the different Departments of the Ministry are achieved.

A breakdown of the different activities carried out by the Procurement and Supply Section and the value of contracts awarded during the Financial Year 2022-2023 under report is given in Table 29 hereunder:

| <b>Tenders launched/Contracts awarded</b>                | <b>Number</b>      |
|--|--------------------|
| Formal tenders   | 119                |
| Informal tenders   | 518                |
| <b>Value of Contracts awarded/ Donation</b>              | <b>Amount (Rs)</b> |
| Total value of contract amount awarded above Rs. 100,000 | 28,101,874.51      |
| Total value of contract amount awarded below Rs. 100,000 | 7,377,611.79       |



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|   |               |
|---|---------------|
| Total contract amount awarded to SMEs   | 23,487,093.05 |
| Donations received                      | 10,457,606.59 |
| Value of physical stock as 30 June 2023 | 5,190,473.20  |
| <b>Number of Contracts awarded</b>      | <b>Number</b> |
| Contracts awarded to SMEs               | 547           |

Table 29: Activities carried out by the Procurement Section for FY 2022-2023



Part 3

# Strategic Direction and Way Forward



## SWOT Analysis

### Strengths

- Good international relations with relevant organizations (WOAH, SADC, FAO) and Competent Authorities of other countries for official control
- Proximity and trading relations with main markets (EU and non-EU countries)
- Mauritius has a good Aquatic Animal Health Status with regard to infectious fish diseases listed by the World Organization for Animal Health (WOAH)
- Reliable and reputable International Ship Registry
- Pool of qualified technical staff

### Weaknesses

- Poor regulatory framework restraining commercial aquaculture development (weak legislation related to aquatic animal health)
- No aquatic animal health laboratory in Mauritius
- Ageing seafaring elite
- Lack of financial incentives to develop the luxury yachts industry
- Lack of capacity to carry out risk analysis on aquatic animal health diseases
- Leading to undefined epidemiological zones.
- Limited or no capacity for emergency response.
- Limited diagnostic capacity and disease surveillance.
- Poor regulatory oversight of aquatic veterinary pharmaceutical.
- Limited opportunities for training in aquatic animal health.
- Lack of adequate technical staff for imparting instructions/training

### Opportunities

- Increasing sustainable aquaculture production
- Diversification of production by introducing new species in commercial farming



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- Establishment of land-based recirculating aquaculture systems (RAS) on the island
- Application of biosecurity standards and protocols for aquaculture projects (NAAHS & BS plan)
- Increased local and foreign investment opportunities in aquaculture.
- Improved shared responsibility for aquatic animal health between government, producers and academia
- Development of the ship building/ship repair industry

### Threats

- Disease threats from high-intensity aquaculture systems
- Possibility of environmental pollution from high intensity aquaculture systems
- Rapid growth of other Maritime Administration in the Indian Ocean to compete with Mauritius
- A global shortfall of seafarers
- MMTA is facing competitions with private training Institutions

### Challenges

- The Competent Authority Seafood has to constantly meet international standards and importing countries' requirements during its day-to-day activities. In this respect, CA staff have the responsibility to stay updated with regards to those requirements
- A decrease in total revenue for the financial year has been observed in the export of fish and fish products since the Covid-19 pandemic. This was mainly due to:
  - a) Borders being closed in the importing countries
  - b) Cargo vessels not calling at port in Mauritius, and
  - c) Fish Processing Plants were closed during the pandemic period.
- Adverse impact of climate change such as warming of sea water and rise in sea level on the marine ecosystem, biodiversity and fish stocks



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- Maritime insecurity resulting from Illegal, Unreported and Unregulated fishing in the EEZ
- Inadequate investment in vessels and other equipment to further develop the fishing industry
- Inadequate stock assessment of untapped living marine resources in the EEZ of Mauritius and limited local fishing fleet
- Shortage of skilled personnel in the maritime sector and inadequate skilled fishers in the longline/purse seine fisheries
- Degrading of coastal and marine environment
- Lack of resources and opportunities for enhancement of visibility for the research work and activities undertaken
- Staff turnover thus impacting on the capacity to be adequately responsive to various requests from stakeholder Ministries.
- Promotion of registration of vessels and luxury yachts under the Mauritian Flag
- Pollution risks due to increasing number of vessels passing through the region





## Current and Future Projects

### **1. Restoring marine ecosystem services by rehabilitating coral reefs to meet a changing climate future**

The United Nations Development Programme - Adaptation Fund (UNDP-AF) project is a regional project with components in the Republic of Mauritius and Republic of Seychelles. The Project which was approved by the Adaptation Fund in October 2018 started in 2020 and will be implemented over a period of 6 years (72 months).

In the Republic of Mauritius, the partners involved are the Ministry of Blue Economy, Marine Resources, Fisheries and Shipping, Mauritius Oceanography Institute (MOI), the Albion Fisheries Research Centre (AFRC) and Rodrigues Regional Assembly. The aim of the project is enhancement of food security and reduction of risks from natural disasters through the restoration of degraded reefs in Mauritius and Seychelles and knowledge management and sharing, training and sensitization to build regional capacity for sustainable reef restoration.

### **2. Assessment of marine living resources**

MOI initiated an inventory of marine living resources in the EEZ of Mauritius using contemporary tools such as DNA-based techniques combined with taxonomical identification.

In order to meet the objectives, set for the project, an inventory of crustaceans is important so as to understand the diversity of this phyla in Mauritius waters. The project is in line with the sustainable development goal 14 (SDG14) of the United Nations as well as the Government's Vision 2030 whereby protection and preservation of marine living resources is key to the establishment of a sustainable ocean economy in Mauritius.



### **3. Provision of amenities to the fisher community**

With a view to providing a better service to the fisher community, the Ministry has embarked on several projects, which include:

- Installation of solar powered lights at jetties to facilitate navigation at night
- Upgrading of jetties and slipways at Trou d'Eau Douce, Grand Gaube, Poudre d'Or and Case Noyale
- Construction of fish landing stations at Bain des Dames and Pointe aux Sables (fish sheds)
- Construction of new slipway at Case Noyale

### **4. Development of new courses at MMTA**

MMTA has already embarked in the design and development of new courses in line with 2010 Manila Amendments to the STCW Convention, 1978, as amended and guidelines from the Shipping Division.

The new courses are as hereunder:

- Pre-Sea Course for Deck and Engine Room Rating (New Entrants)
- Medical First Aid/Medical Care
- Officer of the Watch (OOW) Course for Deck and Engine Watch

Collaboration with well-established maritime Institutions in the region will be explored to start Officer courses.



## Strategic Direction and Way forward

- Enhance the capabilities of the Shipping Division and achieve excellence as a Maritime Safety Administration
- Develop an appropriate legal and Regulatory Framework
- Addressing the acute shortage of seafarers
- Provide Maritime Education and Training
- Preparation of a Barachois Policy for allocation of barachois vested in the Ministry for aquaculture development
- Construction of an additional hatchery at AFRC to increase fish fingerlings production
- Provide support for acquisition of fishing vessels to increase the local fleet
- Boost local fish and fishery resources production by encouraging sustainable aquaculture
- Identify new fishing ground and exploitation of untapped resources and adopt new fishing techniques
- Promote flagging of tuna fishing vessels in Mauritius
- Establish additional Marine Protected Areas
- Implement coral farming programme for restoration of degraded reef
- Monitoring of the coral reef ecosystem, aquaculture sites and seawater quality
- Screening of fish for toxicity
- Propagation of mangroves and restoration of the seagrass ecosystem
- Monitoring of aquaculture sites for biosecurity reasons
- Reinforce surveillance and patrols at sea and the port
- Characterization of four additional off lagoon fish farming zone



## List of Acronyms

|          |  |
|----------|--|
| AFRC     | Albion Fisheries Research Centre   |
| CASF     | Competent Authority Seafood  |
| DCD      | Dissostichus Catch Document  |
| DED      | Dissostichus Export Document   |
| EEZ      | Exclusive Economic Zone  |
| EU       | European Union   |
| FAD      | Fish Aggregating Devices   |
| FiTEC    | Fisheries Training & Extension Centre  |
| FPS      | Fisheries Protection Service   |
| FY       | Financial Year   |
| GMDSS    | Global Maritime Distress and Safety System   |
| GRSE     | Grand River South East   |
| ILO      | International Labour Organisation  |
| IMO      | International Maritime Organization  |
| IMSO     | International Mobile Satellite Organisation  |
| IOTC     | Indian Ocean Tuna Commission   |
| IUU      | Illegal, Unreported and Unregulated  |
| LRIT     | Long Range Identification and Tracking of Ships  |
| MAURITAS | Mauritius Accreditation Services   |
| MCS      | Monitoring, Control and Surveillance   |
| MMTA     | Mauritius Maritime Training Academy  |
| MSA      | Merchant Shipping Act  |
| NGO      | Non-Governmental Organisation  |
| PBBS     | Port Biological Baseline Survey  |
| SOLAS    | International Convention for the Safety of Life at Sea, 1974 (as amended)  |
| STCW     | International Convention on Standards of Training, Certification and Watchkeeping for Seafarers, 1978 (as amended) |
| VGM      | Verified Gross Mass  |
| VMS      | Vessel Monitoring System   |