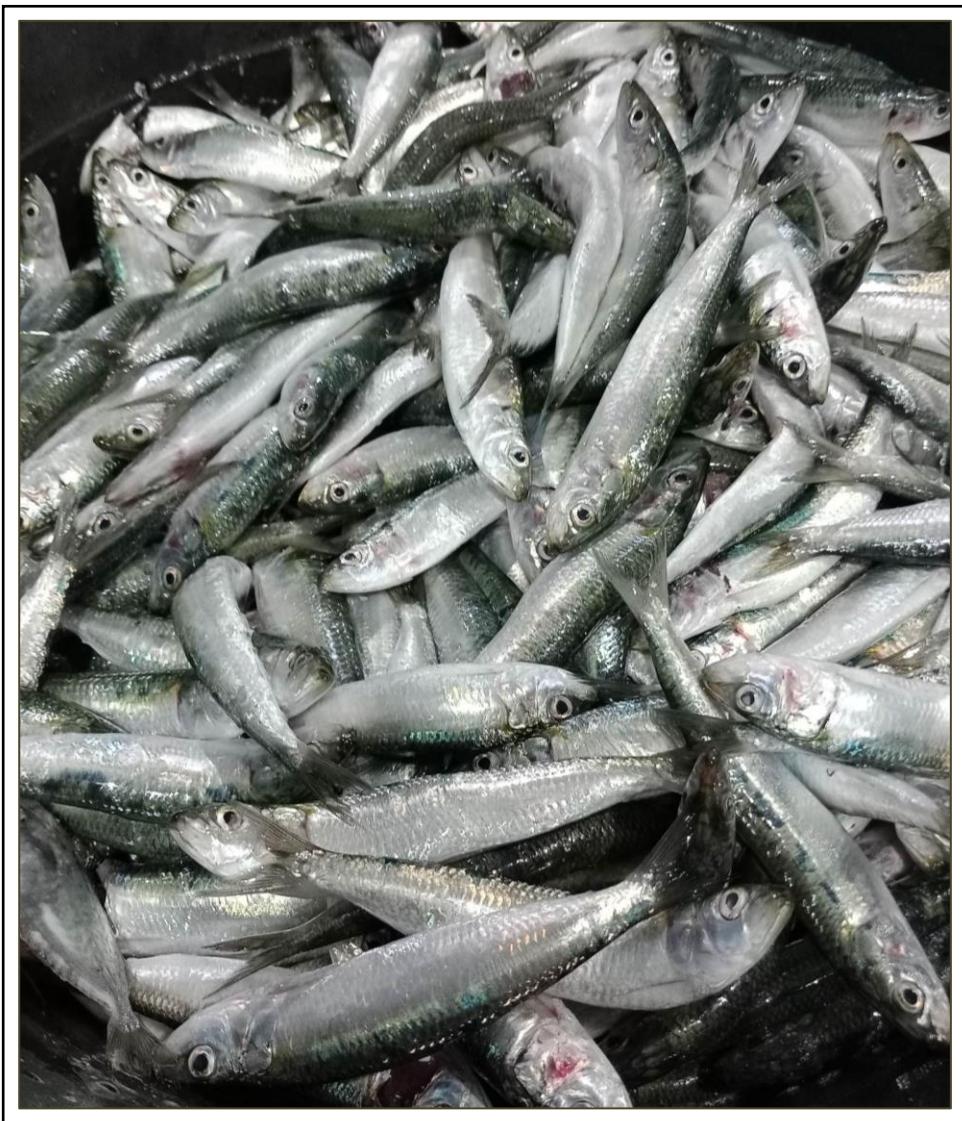


FISHERIES MANAGEMENT AREA 12

Fisheries Management Area Framework Plan (2024-2028)



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DECEMBER 2022



FISHERIES MANAGEMENT AREA 12

Fisheries Management Area Framework Plan (2024-2028)

**BATANGAS • QUEZON • MARINDUQUE • OCCIDENTAL MINDORO •
ORIENTAL MINDORO • ROMBLON • MASBATE • AKLAN • ANTIQUE • CAPIZ**

DECEMBER 2020
LOS BAÑOS, LAGUNA



Message



The establishment of Fisheries Management Areas (FMAs) in the country is a significant milestone in fisheries -- a breakthrough to address illegal fishing while mainstreaming science-based management of our fisheries resources.

Through the FMA system, the conservation and sustainable management of our fishery resources now demands transparency and the participation of all concerned agencies/stakeholders.

As the lead region for FMA 12, BFAR 4A is committed to ensuring a decentralized, science-based, participatory, and transparent implementation of FMA. To this end, this *Handbook on FMA 12 Management Framework Plan* was crafted. This handbook is a product of the 'meeting of minds' where diverse perspectives contribute to the development of comprehensive and effective strategies.

We offer in this handbook a brief background and profile of FMA 12, the issues and threats that challenge the area, and the management action framework that will serve as a guide for achieving FMA 12's goals and objectives.

Indeed, challenges like climate change, habitat degradation, illegal, unreported and unregulated fishing, and other environmental stressors continue to loom and pose formidable threats to FMA 12. But, with the steadfast dedication and passion we share for our natural resources, we can confront these challenges head-on and forge a sustainable path forward.

Together, let us be the stewards of our FMA 12!

SAMMY A. MALVAS

Regional Director, BFAR IV-A
Chairperson, Fisheries Management Area 12



Message



As the Vice Chairman of the FMA 12 Management Board and the representative of Local Chief Executives, I, Mayor Matt Erwin V. Florido of General Luna, Quezon, extend my warmest greetings to our esteemed partners, policymakers, and program implementers.

I would like to express our deepest appreciation to everyone who shared their time and knowledge in crafting the framework plan of FMA 12 or Fisheries Management Area 12. Your contributions were essential in ensuring that the framework plan is comprehensive and effective in promoting the conservation and sustainable management of our fishery resources.

Since the establishment of FMA under Fisheries Administrative Order No. 263 issued by the Department of Agriculture - Bureau of Fisheries and Aquatic Resources, our ten provinces have taken on the shared responsibility for the conservation and sustainable management of fishery resources in our respective areas under FMA 12.

FMA 12 covers a significant portion of the Philippine archipelago, which is home to diverse marine ecosystems and is a vital source of livelihood for our communities. Our FMA 12 constitutes municipalities from the provinces of Quezon, Batangas, Romblon, Marinduque, Occidental Mindoro, Oriental Mindoro, Masbate, Antique, Capiz, and Aklan, each with unique coastal ecosystems and fishery resources. With FMA 12, we have found our path to the conservation of the coastal ecosystem together with the LGUs within our jurisdiction, partners, and fisherfolks.

We have been implementing various initiatives, such as coastal resource management, mangrove planting, and marine protected area establishment, to promote the sustainable use and management of our fishery resources. With the growing number of citizen scientists and eco-warriors, there is no doubt that FMA 12 will be able to reach its goals.

As representatives of FMA 12, we reiterate our commitment to supporting its endeavors in promoting sustainable fisheries and growth for our beloved fishers. We recognize that our marine resources are finite and that we must ensure their conservation and sustainable use for the benefit of future generations. We will continue to work together and collaborate for the protection, conservation, and growth of our shared natural resources in our respective areas.

Let us continue to uphold the principles of sustainability, responsible management, and interconnectivity in our ecosystem and work towards a brighter future for our fishery resources and communities.

Thank you again to everyone who contributed to the crafting of the framework plan of FMA 12. We look forward to our continued partnership in the conservation and sustainable management of fishery resources in the Philippine archipelago.

A handwritten signature in black ink, appearing to read "MATT ERWIN V. FLORIDO".

HON. MATT ERWIN V. FLORIDO
Mayor, General Luna, Quezon
Co-Chairperson, Fisheries Management Area 12



Table of Contents

Message of the FMA 12 Chairperson	iv
Message of the FMA 12 Co-Chairperson	v
Table of Contents	vi
List of Figures	vii
List of Tables	vii
Annexes	viii
Acronyms and Abbreviation	viii
Executive Summary	xv
Chapter I – Introduction	1
Background; The 12 FMA in Philippine Water	2
Overview of the Planning process	3
The Ecosystem Approach to Fisheries Management	4
Chapter 2 – FMA 12 Profile	5
The Fisheries Management Area 12	6
Municipalities / Cities in FMA 12	6
Major key fishing ground	8
Dominant species	9
Municipal and Commercial Fisheries Sector	10
Marine Fisheries Production	12
Aquaculture Sector	14
Marine Ecosystem and Habitat	17
Protected Areas under NIPAS	21
LGU Alliances and Ancestral Domain	22
Chapter 3 – Issues and Threats	23
Major Issues and Threats	24
Prioritize Issues and Problems	25
Problem Tree Analysis	29
Chapter 4 – Management Action Framework	32
Vision	33
Goals	34
Objectives	35
Management Actions	36
Implementation Schedule Arrangements	50
Monitoring and Evaluation	51
Communication Strategy	51
FMA 12 Institutional Arrangement	52



List of Figures

Figure 1	The 12 Fisheries Management Areas	2
Figure 2	The Fisheries Management Area 12	7
Figure 3	Major key fishing grounds	8
Figure 4	Dominant fish species	9
Figure 5	Registered fisherfolk in FMA 12	10
Figure 6	Registered municipal boat	11
Figure 7	Registered commercial fishing vessel and gear	11
Figure 8	Top commercial fishing gear	12
Figure 9	Volume of marine fisheries production by Province (2018-2020)	12
Figure 10	Value of marine fisheries production by Province (2018-2020)	13
Figure 11	Volume of production of selected species (2018-2020)	13
Figure 12	Volume of production of selected species by Province (2018-2020)	14
Figure 13	Percentage of aquaculture production by Province	15
Figure 14	Percentage of aquaculture production by commodities	15
Figure 15	Volume of aquaculture production by commodities	16
Figure 16	Fishpond lease agreement in FMA 12	16
Figure 17	Major fishing ground, coral reef and mangrove areas	17
Figure 18	Location of MPAs and FS in FMA 12	20
Figure 19	E-NIPAS Protected Area	21
Figure 20	Location LGU alliances and ancestral domain	22
Figure 21	Volume of marine fisheries production by province	26
Figure 22	IUU fishing index	26
Figure 23	Location of IUUF apprehensions	27
Figure 24	Poverty Incidence Rate; by Sector	28
Figure 25	Poverty Incidence Rate Among Fisherfolk, By Region	28
Figure 26	Functional Relationship of FMA Diagram	54

List of Tables

Table 1	List of Municipalities and Cities in FMA 12	6
Table 2	Number of coastal municipalities/cities, barangays and coastal length per Province	8
Table 3	FMA 12 Major Key Fishing Ground	9
Table 4	Marine and Brackish Aquaculture Production Volume of 10 Provinces	14
Table 5	Marine and Brackish Aquaculture Production Value of 10 Provinces	15
Table 6	Number fisherfolk in Aquaculture sector and aquafarm area	16
Table 7	List Fish sanctuaries and Marine Protected Areas in FMA 12	18
Table 8	List of NIPAS area within FMA 12	21
Table 9	Issues and threats	24
Table 10	Poverty Incidence Among Fisherfolks, by Region	29
Table 11	Goals and Objectives	35
Table 12	Implementation schedules of the Key Management Actions	50



List of Annexes

Annex 1	Technical Description of Fishery Management Area 12	55
Annex 2	The Fisheries Management Area 12 Management Board	56
Annex 3	The Fisheries Management Area 12 Science Advisory group	56
Annex 4	FMA 12 EAFM Technical Working Group / Contributors	57
Annex 5	About the FMA 12 Logo	58
Annex 6	FMA 12 MB Resolution No. 10-2022 series 2022	59
Annex 7	National Government Agencies in FMA 12 Management Board	66

Acronyms and Abbreviations

BFAR	Bureau of Fisheries and Aquatic Resources
DA	Department of Agriculture
EAFM	Ecosystem-based Approach to Fisheries Management
ETP	Endangered, Threatened, Protected species
FAO	Fisheries Administrative Order
FARMC	Fisheries and Aquatic Resources Management Council
FMA	Fisheries Management Area
FMA FP	Fisheries Management Area Framework Plan
FOO	Fisheries Office Order
HCM	Harvest Control Measure
HCR	Harvest Control rules
IFARMC	Integrated Fisheries and Aquatic Resources Management Council
JAO	Joint Administrative Order
LCE	Local Chief Executive
LGU	Local Government Unit
MB	Management Board
MFO	Municipal Fisheries Ordinance
MPA	Marine Protected Area
NGA	National Government Agency
NGO	Non-Government Organization
NSAP	National Stock Assessment Program
RP	Reference Points
SAG	Science Advisory group
TWG	Technical Working Group



Executive Summary

This document is titled the Fisheries Management Framework Plan for Fisheries Management Area 12, or simply FMA Plan. Its purpose is to guide the Fisheries Management Area Management Board, Local Government Unit, Bureau of Fisheries and Aquatic Resources, other relevant National Government Agencies, academe, and significant stakeholders in the management of fishery stocks within FMA 12. The plan aims to strengthen the protection and conservation of fishery stocks in the key fishing grounds, and address the main challenges facing the fisheries sectors, including the decline in catch and value of fish, low incomes, declining biodiversity, prevalence of illegal, unreported, unregulated fishing, and insufficient science-based policy for fishery management.

The significant stakeholders have adopted the Ecosystem Approach to Fisheries Management (EAFM) to improve the participatory and collaborative management of fisheries resources in FMA 12 for the shared benefits of the stakeholders and fisherfolks. The plan's goal over five years is to ensure the management system in FMA is enabled, effective, and responsive to the issues and threats contributing to the decline of fish catch. Additionally, the plan aims to improve coastal and marine ecosystems to support and sustain abundant and productive fishery resources, while empowering resource users to be compliant and covered with social security.

The framework plan emphasizes the importance of a science-based approach to fisheries management, utilizing Reference Points and appropriate Harvest Control Rules and Measures to attain acceptable population parameters and sustainable fishery resources.

The FMA Plan is organized into four main chapters. **Chapter 1** provides the general background of the FMA plan, including the legal basis of the plan, the geographical settings of FMAs, the planning context, and the linkages of the FMA plan to existing management plans, providing guidance to coastal managers in the development and updating of the fisheries plan at the local level.

Chapter 2 provides a synopsis of the fisheries sector situation in FMA 12, including current information on the socio-demographic profile, fisheries productions of top commodities, and the IUU fishing index.

Chapter 3 categorizes the common significant issues and threats occurring in FMA 12 into three categories: (i) fisheries, (ii) fisherfolk well-being, and (iii) governance.

Chapter 4 describes the management framework plan, including the Vision, Goals, and Objectives to be attained within five years. It presents the framework and action plan to be implemented in the FMA, discusses the monitoring and evaluation framework, and communication plan.



CHAPTER 1

INTRODUCTION



Background: The 12 Fisheries Management Areas

The Philippine fisheries sector has made significant contributions to the daily lives of Filipinos. As an archipelagic country, many communities rely on various ecological services provided by natural and fisheries resources. However, the utilization of these resources can significantly impact natural resources, particularly if used unsustainably. Sound management and science-based approaches can reduce the adverse impacts of human activities.

To address this, the Department of Agriculture-Bureau of Fisheries and Aquatic Resources (DA-BFAR) established the 12 Fisheries Management Areas in the Philippine waters through Fisheries Administrative Order (FAO) No. 263, s. 2019, "Establishment of the 12 Fisheries Management Areas for the Conservation and Management of Fisheries in Philippine Waters," on January 28, 2019. The objective of the FAO is to establish FMAs in Philippine waters and provide a science-based, participatory, and transparent governance framework and mechanism to sustainably manage fisheries in such areas, consistent with the principle of EAFM anchored on food security. The FAO applies to all concerned national government agencies (NGAs), local government units (LGUs), FARMCs, the commercial fishing industry, municipal fisherfolk, academe, non-government organizations (NGOs), and other stakeholders as fisheries managers to take on joint responsibilities for the conservation and sustainable management of fishery resources.

After public consultations, the FMAs were delineated based on the range or distribution of fish stocks, the structure of fisheries, and administrative divisions, and informed by the best available scientific information, especially from the National Stock Assessment Program (NSAP). It approximates an ecosystem scale for managing fisheries in the Philippines and provides a science-based, participatory, and transparent governance framework and mechanism to sustainably manage fisheries consistent with the principles of the ecosystem approach to fisheries management.

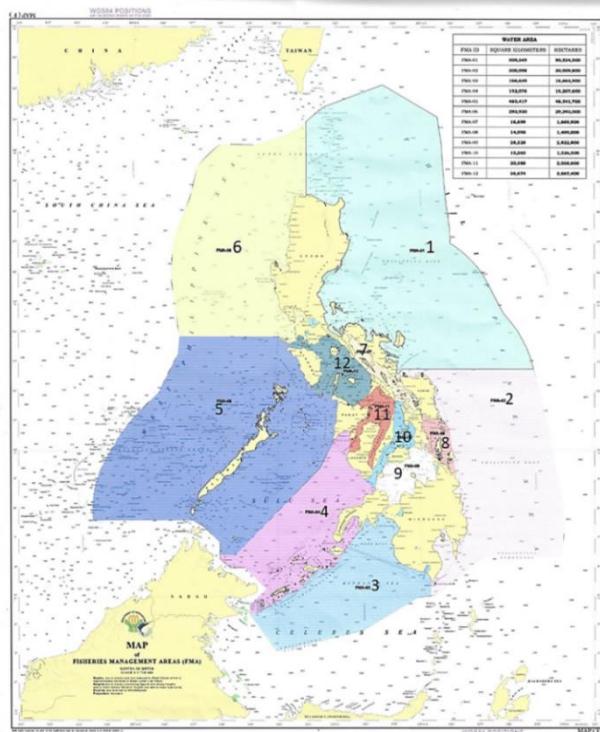


Figure 1. The 12 Fisheries Management Areas

Overview of the FMA Framework Planning Process

The management of fisheries dramatically depends on the comprehensive knowledge of the biological aspect and its surrounding ecosystem. The lack of this scientific knowledge will misinform and misguide many management actions toward sustainable utilization of the resources. According to the Fisheries Code of the Philippines, it is the policy of the State to adopt the precautionary principles and manage the fishery and aquatic resources in a manner consistent with the concept of an Ecosystem Approach to Fisheries Management. Thus, in establishing the FMAs in the Philippines water, the DA-BFAR and



critical stakeholders' oath to prepare the management plans following the EAFM principle for the fisheries sectors. Below are the critical elements of the planning process:

- Identification of common issues and threats
- Establishing fishery management goals and objectives;
- Developing a fisheries profile that includes assessing the status of essential stocks;
- Establishment of reference points and harvest control measures;
- Identifying the most appropriate management measures based on the current fishery situation
- Review of the existing fisheries management plans and management measures
- Establishing monitoring, control, and surveillance (MCS), and enforcement mechanism

In 2020 The Department of Agriculture issued a particular order to create the National Technical Working Group for Fisheries Management Areas to effectively implement the Fisheries Administrative Order No. 263 (FAO 263). The NTWG-FMA was tasked to spearhead the creation of the Fisheries Management Area Focal Point System or FMA focal, which members are among the technical staff of BFAR Regional Offices, to work in the implementation of activities and programs in the FMAs. The NTWG-FMA designated the lead RFO and member RFO per each FMA to coordinate with each other to implement critical tasks stated in the provision of the FAO. The essential activities are; (1) the Establishment of the FMA Management Board, (2) the Establishment of the Scientific Advisory Group); (3) Establishment of FMA 12 Technical Working Groups; (4) crafting of FMA plan and fisheries management plan; and establish reference points and harvest control measures.

In FMA 12, the BFAR Region IV-A was assigned as the lead region. Together its member regions are BFAR Region MIMAROPA, Region V, and Region VI to implement the order. The BFAR technical working group conducted a series of orientations on fisheries management areas to local government units and various stakeholders. It facilitated the establishment of the FMA 12 Management Board on December 2020 and the Scientific Advisory Group on February 2021. From April to October 2021, the DA-BFAR, the Management Board, SAG, and TWG conducted a series of workshops and meetings; initial planning, start-up planning workshop, engaging the stakeholder, and the EAFM planning workshop to draft the FMA 12 Management Framework Plan.

Upon the approval of the Fisheries Management Area Framework Plan, it will serve as an overarching plan. It will be adopted by the FMA 12 MB and supported by the LGUs and various stakeholders.

The Ecosystem Approach to Fisheries Management

The Ecosystem Approach to Fisheries Management (EAFM) aims to balance societal objectives by considering the biotic, abiotic, and human components of ecosystems and their interactions, and by applying an integrated approach to fisheries management within ecologically meaningful boundaries.

In August 2021, the FMA 12 Management Board and FMA 12 Technical Working Group organized the EAFM Start-Up workshop to mainstream EAFM principles to stakeholders in FMA 12. The workshop aimed to determine and consolidate background information and data needed in the planning process and stakeholder analysis, as well as establish the EAFM Technical Working Group that will lead in the EAFM framework planning.

Representatives from various stakeholders attended the workshop, including those from academe, National Government Agencies (NGAs), Law Enforcement Groups (e.g., the Philippine Coast Guard,



Maritime Group, and fish wardens), municipal and commercial fishers, boat operators, and non-government organizations (NGO)/ civil society organizations (CSO).

The EAFM Technical Working Group conducted an orientation on mainstreaming EAFM principles and updated the FMA 12 planning process for significant stakeholders at the provincial level. The workshop aimed to re-orient stakeholders in the principles of EAFM, gather common issues and threats at the provincial level, and engage stakeholders to participate in EAFM planning. These workshops were conducted from September 2021 via virtual meetings and were attended by fisherfolk leaders from municipal and commercial fishers, MFARMC, LGUs, NGAs, indigenous people groups, and NGOs.

From September to October 2021, the EAFM planning workshop was conducted through a series of meetings using the modified EAFM modules for FMA planning. The planning workshops were attended by the FMA 12 management board members, scientific advisory group, NGAs, NGOs, and various stakeholders within FMA 12.

The management framework plan is a working document that reflects the current understanding of the fisheries resources of Fisheries Management Area 12, which is expected to change over time. Accordingly, upon preparation of this document, various existing national fisheries management plans such as the Comprehensive National Fisheries Industry and National protected area management plans (NIPAs Plan) were reviewed and linked toward specific goals and critical management actions in conservation and protection of fishery resources.



CHAPTER 2

FISHERIES MANAGEMENT AREA PROFILE



The Fisheries Management Area 12

The Fisheries Management Area No. 12 comprises four (4) regions: CALABARZON, MIMAROPA, Region 5, and Region 6, covering a total area of 3,667,400 hectares. It encompasses the provinces of Batangas, Quezon, Marinduque, Occidental Mindoro, Oriental Mindoro, Romblon, Masbate, Aklan, Antique, and Capiz, as well as eighty-five (85) coastal cities and municipalities. The area includes major fishing grounds such as Balayan Bay, Calatagan Bay (Pagapas), Batangas Bay, Tayabas Bay, Tablas Strait, Mogpog Pass, Sibuyan Sea, and Southern Sibuyan Sea, which are known to provide various ecosystem services, such as a significant quantity of fish catch, particularly pelagic fishes. These services support the livelihood and source of nutrition of the fisherfolk and other stakeholders.

Municipalities/Cities in FMA 12

Table 1. List of Municipalities and Cities in FMA 12

Quezon Province		Batangas Province	
Agdangan	Padre Burgos	Balyan	Mabini
Catanauan	Pagbilao	Batangas City	San Juan
General Luna	Pitogo	Bauan	San Luis
Lucena City	San Francisco	Calaca	San Pascual
Macalelon	Sariaya	Calatagan	Taal
Mulanay	Unisan	Lemery	Tingloy
		Lobo	
Occidental Mindoro Province		Oriental Mindoro Province	
Abra de Ilog	Paluan	Baco	Naujan
Looc	San Jose	Bansud	Pinamalayan
Magsaysay		Bongabong	Pola
Marinduque Province		Calapan City	Puerto Galera
Boac	Mogpog	Gloria	Roxas
Buenavista	Santa Cruz	Mansalay	San Teodoro
Gasan	Torrijos		
Romblon Province		Masbate Province	
Alcantara	Odiongan	Aroroy	Mandaon
Banton	Romblon	Balud	San Pascual
Cajidiocan	San Agustin		
Calatrava	San Andress	Aklan Province	
Concepcion	San Fernando	Altavas	Malay
Corcuera	San Jose	Batan	Nabas
Ferrol	Santa Fe	Buruanga	New Washington
Looc	Santa Maria	Ibajay	Numancia
Magdiwang		Kalibo	Tangalan
		Makato	
Antique Province		Municipality/City in Capiz Province	
Caluya		Ivisan	Sapi-An
		Roxas	



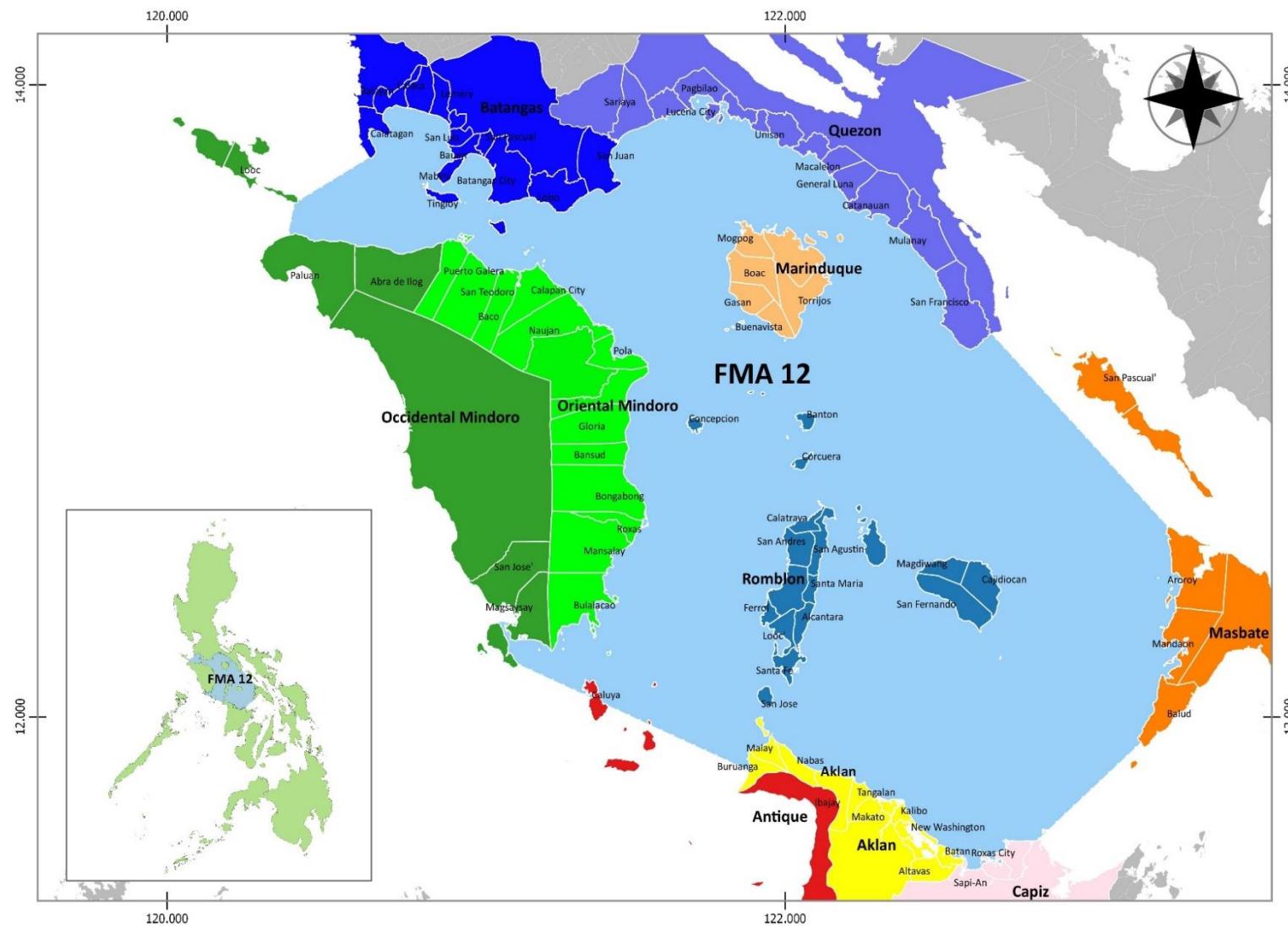


Figure 2. The Fisheries Management Area 12



Table 2. Number of coastal municipalities/cities, barangays and coastal length per Province

Provinces	No. of Coastal LGU	No. of Coastal Barangays	Coastal Length (km)
Batangas	13	155	247.71
Quezon	12	76	246.7
Marinduque	6	61	161
Occidental Mindoro	5	82	334.8
Oriental Mindoro	13	111	342.45
Romblon	17	31	478.7
Masbate	4	55	No data
Aklan	11	73	155
Antique	1	18	35
Capiz	3	19	25

Major key fishing ground

The fishing activities in FMA 12 are primarily concentrated in its key fishing grounds. These fishing grounds are crucial sources of fishery resources, including small-pelagic fishes, demersal fishes, pelagic tunas, and various invertebrates, which support the livelihoods and provide a source of nutrition to almost 150,000 fisherfolks. The Sibuyan Sea covers most of the key fishing ground, followed by Tablas Strait and the three large bays, namely Balayan Bay, Batangas Bay, and Tayabas Bay. Table 2.1 shows the location and area of the critical significant fishing grounds in FMA 12.

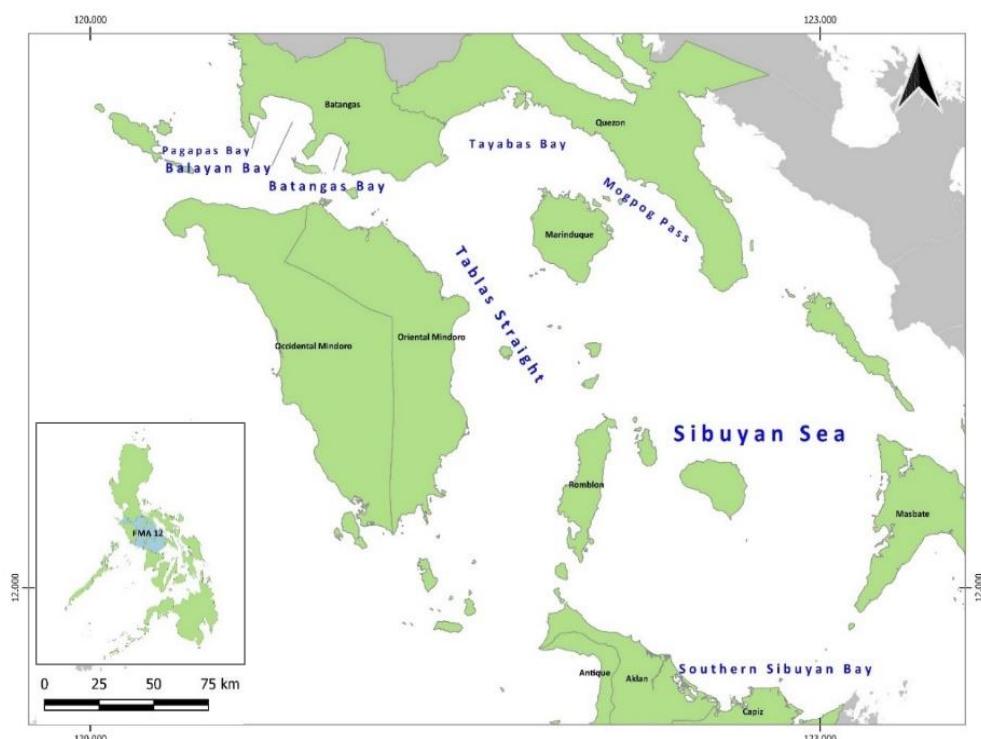


Figure 3. Major key fishing grounds

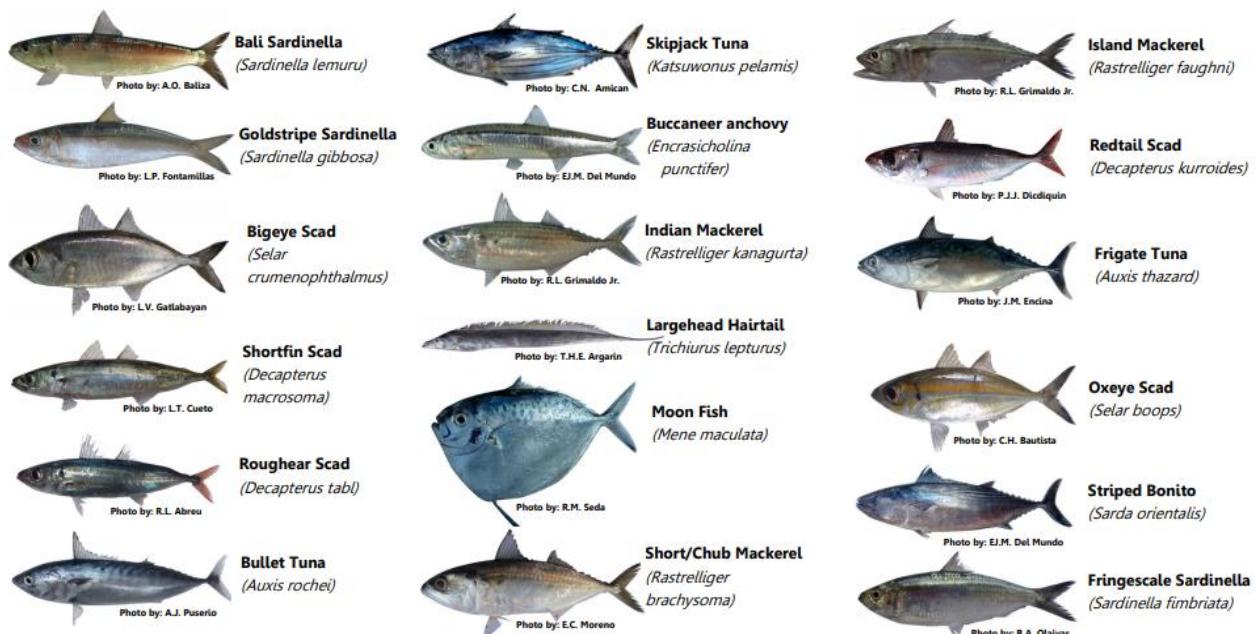


Table 3. FMA 12 Major Key Fishing Ground

Key Fishing Ground	Area (km ²)	Location
Seas		
Sibuyan Sea	8127	Aklan / Masbate / Romblon / Antique / Capiz
Bays		
Balayan Bay	541	Batangas / Quezon
Batangas Bay	187	Batangas
Tayabas Bay	2213	Quezon / Marinduque
Straight		
Tablas Straight	3870	Marinduque / Occidental Mindoro / Oriental Mindoro / Romblon
Pass		
Mogpog Pass	8	Marinduque / Quezon

Dominant fish species

The BFAR and NSAP have determined the dominant species in FMA 12 by consolidating the volume of municipal and commercial fishers' landed catch in the monitored sites of BFAR/NFRDI-NSAP. Sardines, scad, tuna, and mackerel are among the prevalent fish species.



***Top species** are determined based on percentage volume of monitored landed catch of both commercial and municipal fishers in monitored landing centers of BFAR/NFRDI National Stock Assessment Program. This is clustered information from 2015-2018 from the regional teams forming the FMA, unless date is otherwise specified.

Figure 4. Dominant fish species

Municipal and Commercial Fisheries Sector

Currently, about 150 thousand fisherfolk including the commercial and municipal fisheries, processors, and aquaculture sector are within the FMA based on the data collected by BFAR from the reports of the Local Government Units. In addition, about 31,910 municipal fishing boat was determined by BFAR at the provincial level (Boat Registration System (BoatR), 2022).

Municipal fisherfolk uses fishing boats usually made of wood, marine plywood, or fiberglass materials traditionally sourced from local suppliers. The typical design is a single hull with bamboo or PVC materials outriggers. In some areas within FMA 12, the model varies depending on the traditional design and the local fishing gear use. For instance, fisherfolks who utilize fish traps or crab pots tend to use a fishing boat with a spacious bow and outrigger for fish trap storage during transport.

The typical setting of the fishing ground in FMA 12 consists of reef areas together with adjacent habitats from shoreward to landward within 15km of municipal water. The reef flats are where fish corrals were installed, and reef slopes are areas for handlines and spearfishing. The most common species targeted by fisherfolks are pelagic and demersal reef fishes. In the shallow water are groupers, fusiliers, parrotfishes, and rabbitfish. In the open sea, the most targeted species are scads, neritic tunas, and sardines.

The landing site for municipal fisherfolks is nearby beach landing areas, community fish landing centers, and significant landing sites. This area also served as a trading area for fish commodities.

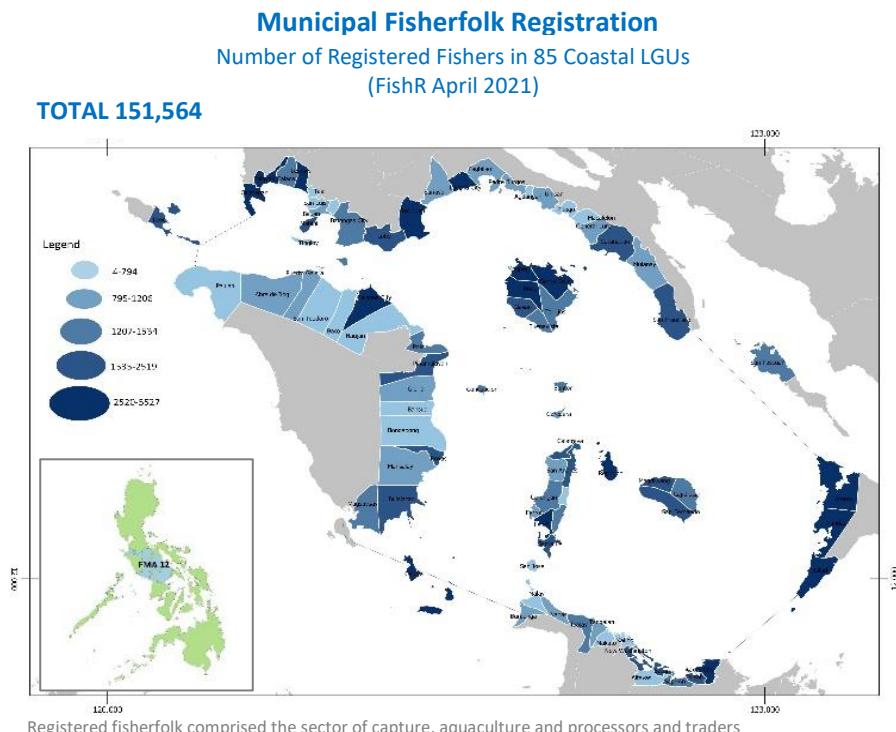


Figure 5. Registered fisherfolk in FMA 12



The municipalities within FMA 12 have a diverse range of geographical features, and the local fisherfolks have adapted their fishing gears to these settings. The most commonly used fishing gears by municipal fisherfolks in the area are hook and line, gillnet, and fish traps, such as fish corrals and crab pots. These fishing gears are selected based on the targeted species, fishing location, and fishing method. For instance, hook and line is commonly used for pelagic and demersal fishes, while gillnets are typically used for catching schooling fishes. Fish traps, on the other hand, are utilized for the capture of fishes that dwell in reef areas, such as rabbitfishes and groupers.

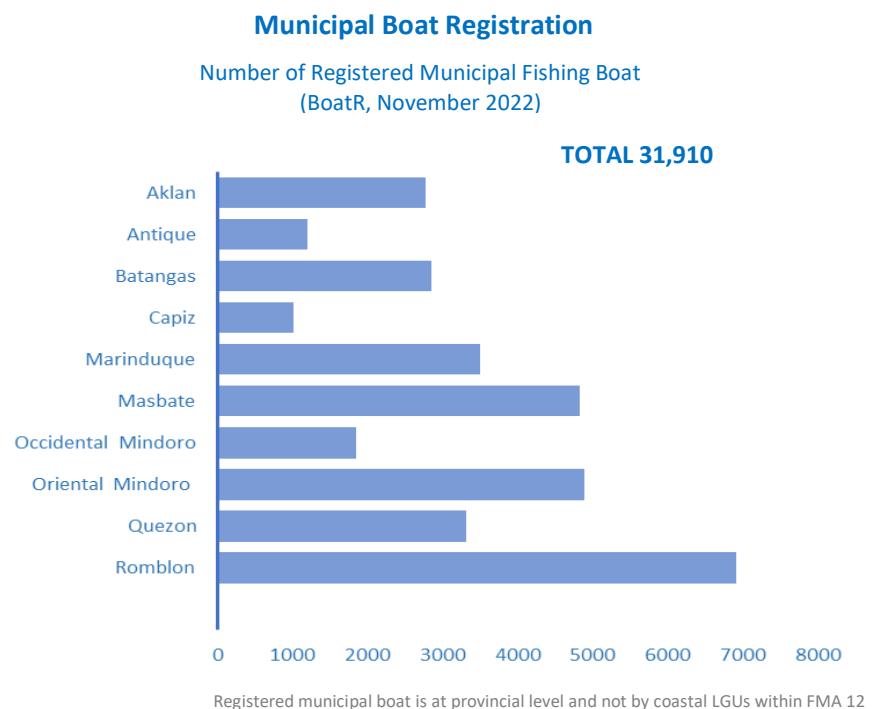


Figure 6. Registered municipal boat

The estimated number of commercial fishing vessels operating in FMA 12 is around 517, as reported by individual BFAR RFOs as of August 2022. The typical commercial fishing gears used in the area include ring net, bag net, drift gillnet, hook and line, and purse seine. According to BFAR data, the ring net is the most commonly used gear in commercial fishing in the region.



Figure 7. Registered commercial fishing vessel and gear



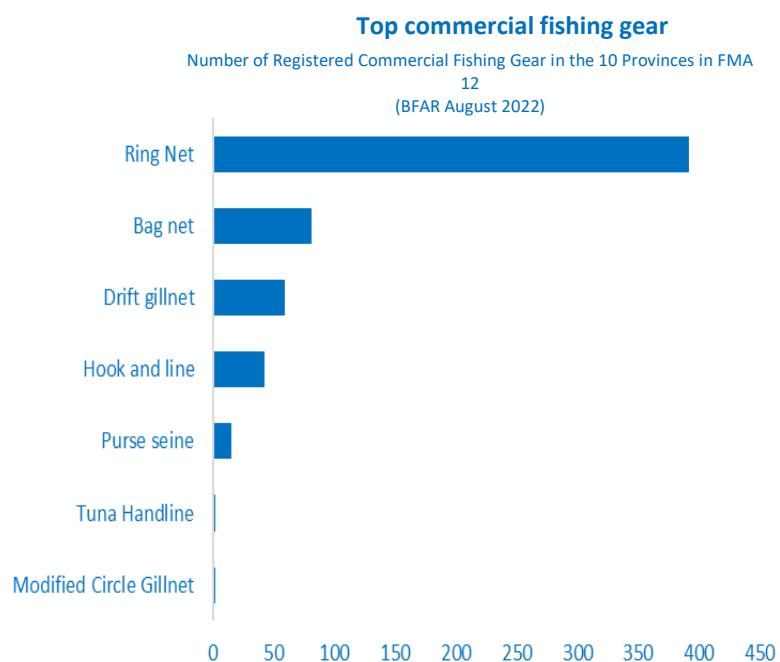


Figure 8. Top commercial fishing gear in FMA 12

Marine Fisheries Production

Based on the data from the Philippines Statistics Authority, the production volume of municipal marine fisheries in the ten provinces of FMA 12 was recorded at 117,195 metric tons, amounting to Php 11,651,641.68. However, this figure is lower than the production volume recorded in the previous three years. The production volume has been declining from 2017 to 2020 in most areas except in Occidental Mindoro and Marinduque. One of the challenges in accurately accounting for the production volume in FMA 12 is the lack of data at the municipal and city levels. At present, fisheries data are only available at the provincial level. Therefore, specific municipalities and cities must be included in the production data to determine the accurate production at the FMA level.

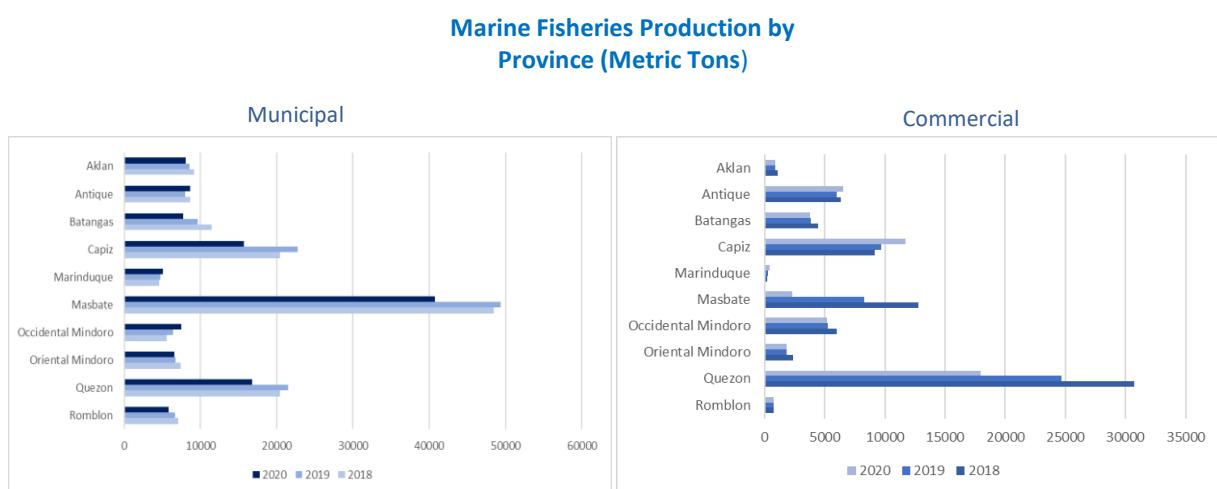
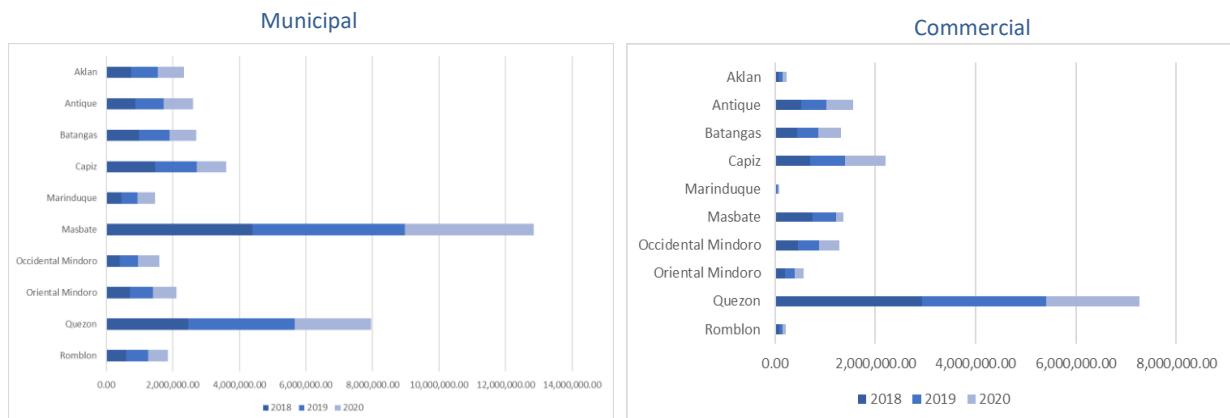


Figure 9. Volume of marine fisheries production by Province (2018-2020)



Value of Marine Fisheries by Province (in Thousand)



Production data from Philippines Statistics Authority from 2017 to 2020 was in Provincial scale and not at FMA scale.

Figure 10. Value of marine fisheries production by Province (2018-2020)

Out of the 20 dominant species identified by the consolidated data from BFAR and NSAP in FMA 12, only seven species had production data reported per province in the Fisheries Statistics of the Philippines from 2018 to 2020. In 2018 and 2019, the top species was the Frigate tuna, followed by the Bali sardinella. However, in 2020, the Bali sardinella recorded the highest production volume, replacing the Frigate tuna as the top commodity. It is worth noting that the production of some species may vary across provinces, and other important fish species in the region may not have been fully accounted for due to the limitations of current fisheries data collection methods.

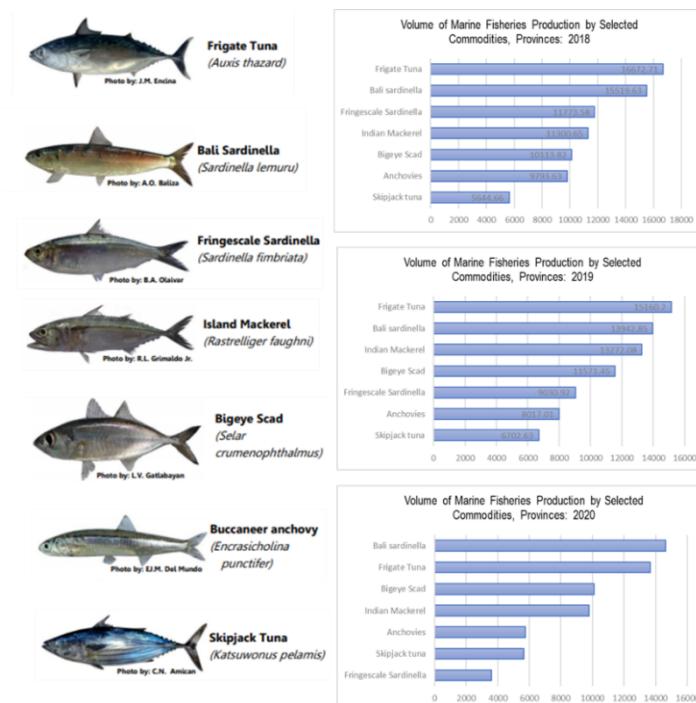


Figure 11. Volume of production of selected species (2018-2020)



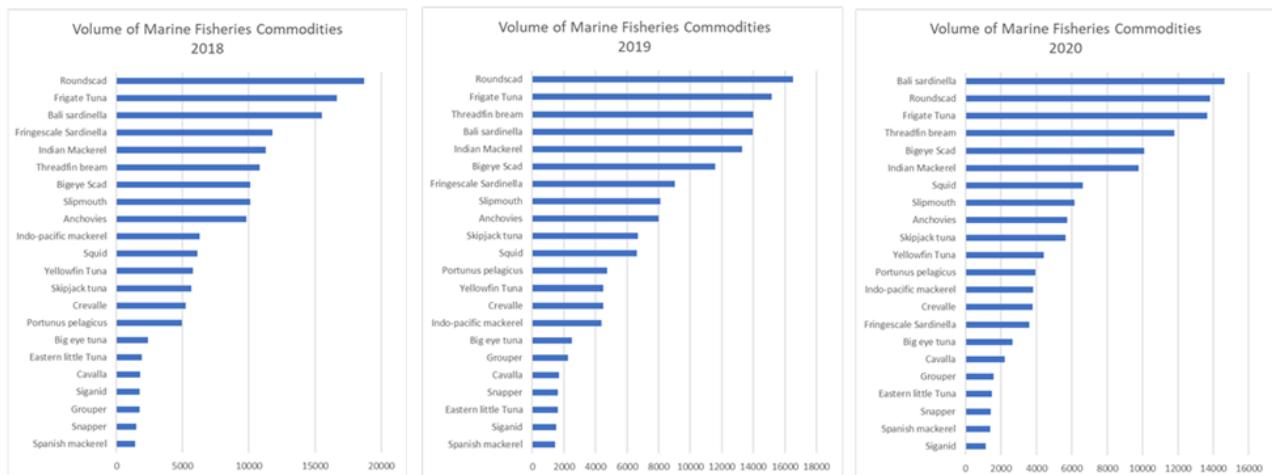


Figure 12. Volume of production of selected species by Province (2018-2020)

The Philippines Statistics Authority recorded the volume of marine fisheries commodities in ten provinces comprising Batangas, Quezon, Marinduque, Occidental Mindoro, Oriental Mindoro, Romblon, Masbate, Aklan, Antique, and Capiz from 2018 to 2020. However, this production data is only based on the provincial level and does not provide an accurate representation of the top commodities in terms of volume landed in Fisheries Management Area 12 (FMA 12). Therefore, there is a significant gap in the production data at the FMA 12 level, and further validation and evaluation are necessary to determine the actual top commodities in this area.

Aquaculture Sector

The aquaculture sector is a crucial source of employment, income, and livelihoods, particularly in the coastal and inland rural communities of FMA 12. Based on the PSA fisheries statistics, the volume of aquaculture production in 2020 was estimated at 94 thousand tons, with a value of around Php.11 billion.

Table 4. Marine and Brackish Aquaculture Production Volume of 10 Provinces in FMA 12

Province	Production (Metric Tonnes)					
	2020					
Marine fishpen	Marine fishcage	Brackish fishpond	Brackish fispen	Brackish fish cage	Total Production	
Capiz		52.4	45,336.97		3.82	45,393.19
Quezon		362.8	28,344.60			28,707.40
Aklan		2.32	15,615.06			15,679.65
Batangas			1,660.09			1,660.09
Oriental Mindoro			1,316.95			1,316.95
Masbate	85.66		567.78			653.44
Occidental Mindoro	0.22	0.05	217.34			217.61
Antique			147.88	3.17		151.05
Marinduque		0.24	150.39			150.63
Romblon		0.7	18.92		0.22	19.84
TOTAL	85.88	418.51	93,375.98	59.11	10.37	93,949.85

Data Source: PSA Fisheries Production Data, 2020

Table 5. Marine and Brackish Aquaculture Production Value of 10 Provinces in FMA 12



Province	Production (Metric Tonnes)						Total Production
	Marine fishpen	Marine fishcage	Brackish fishpond	Brackish fispen	Brackish fish cage		
Capiz		23642.08	5,045,123.88		707.88		5,069,473.84
Quezon		38946.05	4,156,983.71				4,195,929.76
Aklan		257.55	1,544,999.31	5,839.57	2,444.30		1,553,540.73
Batangas			521,411.14				521,411.14
Oriental Mindoro			171,825.70				171,825.70
Masbate	10707.46		92,854.75				103,562.21
Marinduque		84.58	33,582.60				33,667.18
Antique			20,958.53	340.02			21,298.55
Occidental Mindoro	94.35	25	19,880.95				20,000.30
Romblon		105	2,966.44		28.60		3,100.04
TOTAL	10801.81	63060.26	11,610,587.01	6179.59	3180.78		11,693,809.45

Data Source: PSA Fisheries Production Data, 2020

As shown in Figure 13, which illustrates the production share of the ten provinces, Capiz accounts for 48% of the total provincial output. The next four provinces in terms of contribution to aquaculture production are Quezon, Aklan, Batangas, and Oriental Mindoro, which account for 31%, 17%, 2%, and 1% of the production, respectively. It is worth noting that the consolidated production data only pertains to marine and brackish aquaculture, and freshwater aquaculture is not included.

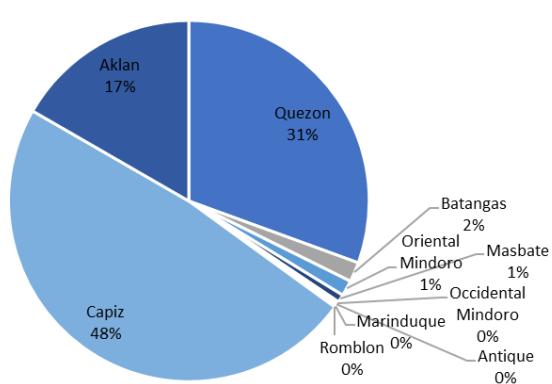


Figure 13. Percentage of aquaculture production by Province

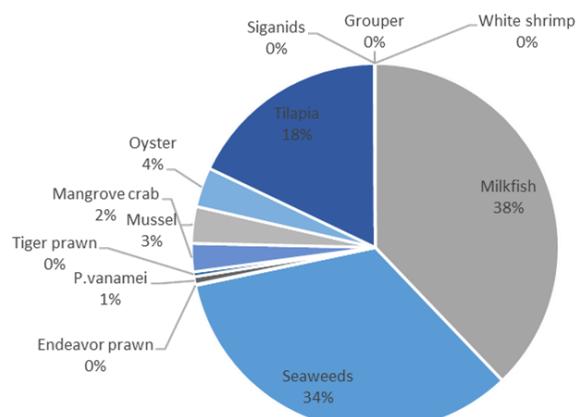


Figure 14. Percentage of aquaculture production by commodities

The top aquaculture commodities in FMA 12 are milkfish, tilapia, seaweeds, oysters, and mussels. The production volume per species is sourced from the ten provinces within the area. In 2020, milkfish and seaweeds accounted for the highest production volume, contributing 38% (93,645.6 tonnes) and 34% (83,677.37 tonnes), respectively.



Table 6. Number fisherfolk in Aquaculture sector and aquafarm area

Provinces	Aquafarms	
	No. of Operator	Area (ha)
Batangas	22	246
Quezon	320	1880
Marinduque	No data	No data
Occidental Mindoro	No data	No data
Oriental Mindoro	1181	2068
Romblon	0	0
Masbate	103	300
Aklan	354	3324
Antique	No data	No data
Capiz	529	3139

Data Source: BFAR and Provincial Local Government Unit

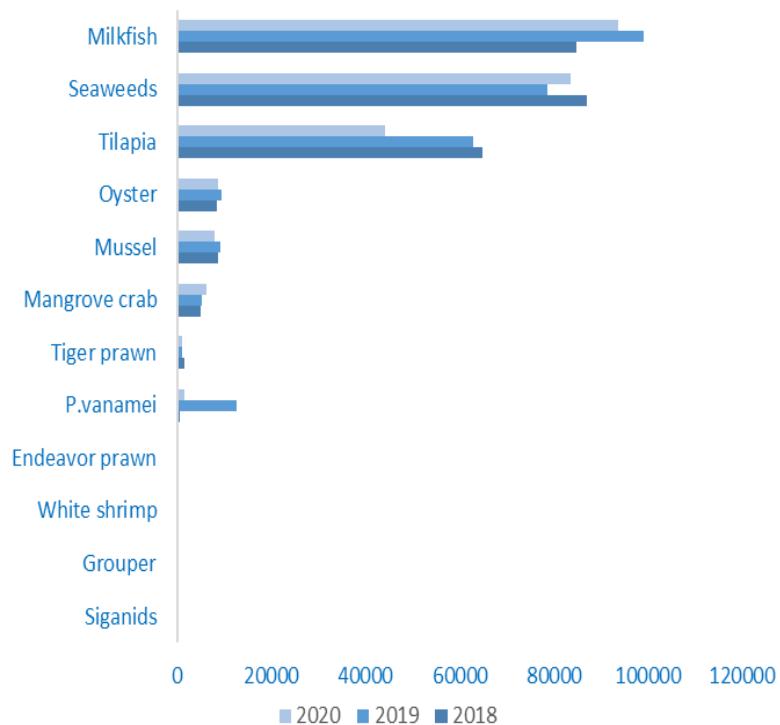


Figure 15. Volume of aquaculture production by commodities



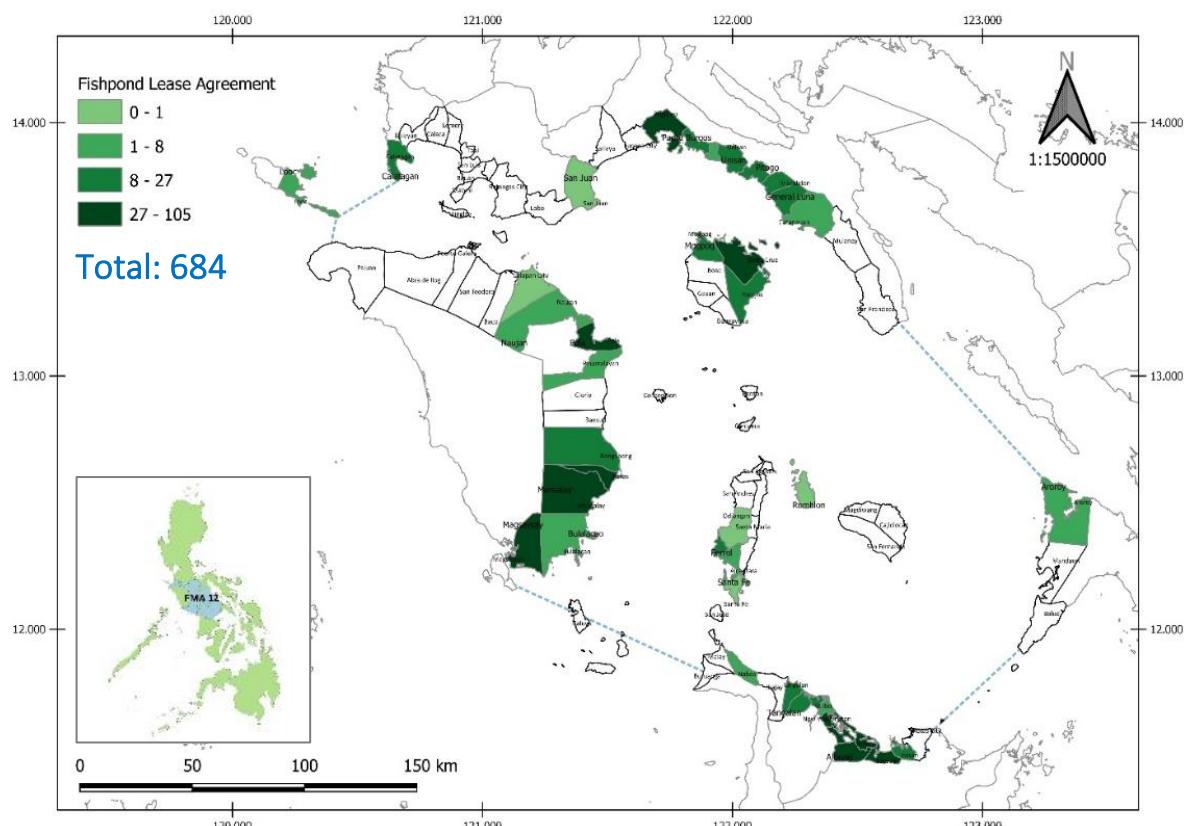


Figure 16. Fishpond lease agreement in FMA 12

Marine Ecosystem and Habitat

The significant bodies of water in Fisheries Management Areas harbor a vast array of marine life. One of these is the Verde Island Passage, encompassing the provinces of Batangas, Occidental Mindoro, Oriental Mindoro, Marinduque, and Romblon, which has been recognized as the center of marine biodiversity. The Tayabas Bay and Mogpog Pass are also linked to the Verde Island Passage and are abundant with marine life and fishery resources. Additionally, the Sibuyan Sea, which separates the Visayas from the northern Philippine island of Luzon, also boasts an astounding amount of marine life.

Based on the best available data, there are 488 species of corals, 5,000 species of clams, snails, and mollusks, 981 species of bottom-living algae, 5 species of sea turtles, and 2,824 species of marine fish in these areas.

Marine Protected Areas, Fish Sanctuaries and Fishery Reserves

Protected areas are crucial habitats for marine life, including coral reefs, mangrove forests, and seagrass meadows. These areas, such as locally managed MPAs and fish sanctuaries, provide undisturbed spaces for nurturing and breeding of various aquatic organisms. In FMA 12, there are 126



locally managed MPAs, fish sanctuaries, and fishery reserves established in the 46 coastal municipalities and cities.

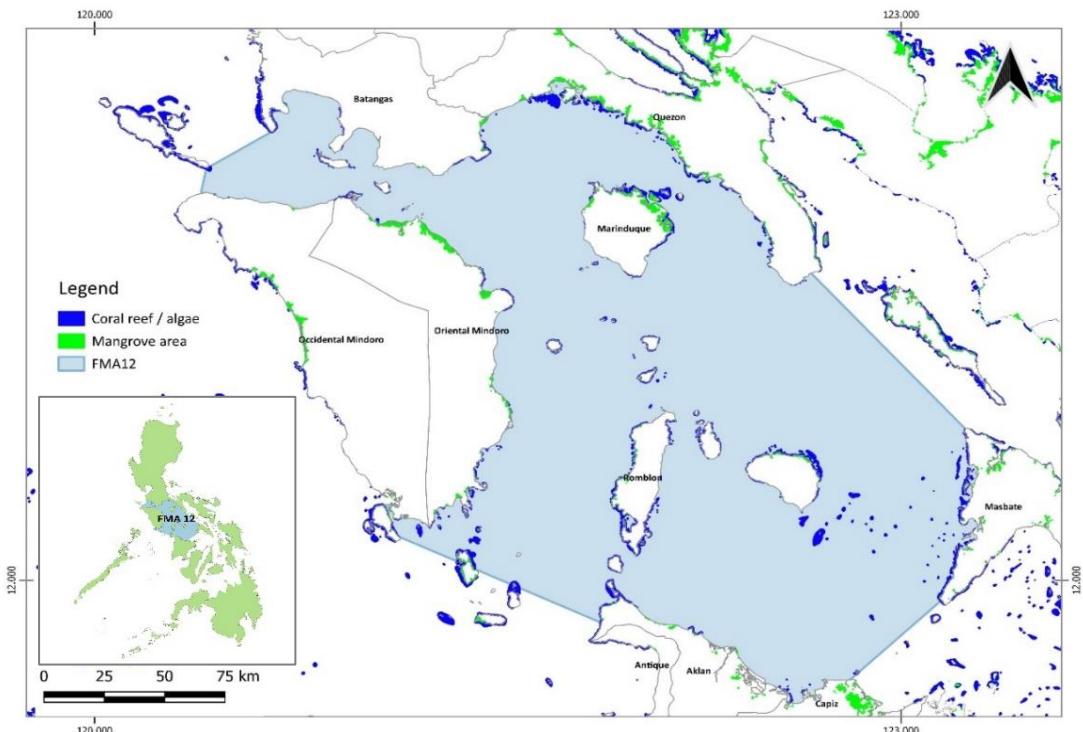


Figure 17. Major fishing ground, coral reef and mangrove areas

Table 7. List Fish sanctuaries and Marine Protected Areas in FMA 12

Provinces	Location	Marine Fish Sanctuary
Batangas	Balayan	Carenahan FS
		Palikpikan Fishery reserve
	Batangas City	Verde Island MPA
		Pulong Bato MPA
		Nalayag MPA
		San Luis FS
		Ilijan MPA
	Bauan	Pagkilatan MPA
		Bauan FS
		Divers Marine Sanctuary
		Portulano Marine Sanctuary
		Binukbok Marine Sanctuary
		Seammate Marine Sanctuary
	Calaca	Locloc Marine Sanctuary
		Calaca FS
	Calatagan	B. Silang AR FS
		Carretonan FS



		Sta. Ana FS Talisay FS Tanagan FS Calatagan Pyramid AR Quilitisan Seagrass Protected Areas Palobandera MPA
	Lemery	Lemery FS AR Mataas na Bayan MPA Sinisian West MPA
	Lobo	Sawang Oloolo FS Biga FS Malabriga FS Simbahang bato FS Malagundi Point FS Balibago FS Soloc FS Banalo FS
	Mabini	San Teodoro & Bagalangit FS (Twin rock reef) Batomg Buhay FS Arthur's Rock FS Cathedral FS
	San Juan	Putting Buhangin FS Hugom MPA Catmon MPA Ticalan MPA Abung MPA Calubcub MPA San Juan Seascape MPA Imelda FS Submarine Garden MPA Laiya Aplaya MPA
	San Luis	San Luis FS
	Taal	Butong MPA
Quezon	Agdangan	Silangan Calotan FS Bahurang Silag
	Catanauan	Bgy. Ajos FS Matandang Sabang Kanluran FS
	General Luna	Bgy. Bacong Ibaba (Bayas bayas FS)
	Lucena	Bgy. Mayao Castillo FS Barra Ransohan FS
	Macalelon	Macalelon FS
	Padre Burgos	Danlagan FS
	Pagbilao	Ibabang Pulo FS Patayan FS
	Pitogo	Pacatin/Soliyao FS Amang Kalaingin FS
	San Francisco	Cawayan FS Pagsangahan FS
	Sariaya	San Roque FS
	Marinduque	Yook - Libas Kalangkang



		Banot	
	Torrijos	Kay Duke	
	Gasan	Tres Reyes Reserve	
Occidental Mindoro	Magsaysay	Alibog FS	
Oriental Mindoro	Calapan City	Harka Piloto	
		Silonay Mangrove Conservation Area	
	San Teodoro	Punta Ilag FS	
		Tamauyan Reef Fish Sanctuary	
	Puerto Galera	San Antonio	
	Naujan	Tujod FS	
		Masaguising FS	
	Pola	Bacawan FS	
		St. John the Baptist FS	
		St. Peter the Rock MPA	
		Stella Mariz FS	
		Song of the Sea Fish Sanctuary	
		Kingfisher Fishery Reserve	
	Pinamalayan	Ranzo FS	
		Banilad-Simboryo MPA	
		Banilad-Ginapangan, MPA	
		Pili Marine Protected Area	
	Gloria	Agsalin FS	
		Sta. Theresa Fishery Reserve	
		Tambong Fishery Reserve	
	Bongabong	Masaguising Fish Sanctuary	
	Mansalay	Palaypay Cove FS	
		Allegria Sea Turtle Habitat (Tikling Ponit)	
	Roxas	Paclasan Seagrass Protected Area	
	Bulalacao	Balatasan FS	
		Maujao FS	
	Bansud	Bansud FS	
	Romblon	Sta. Fe	
		Guinbirayan FS	
	Sta. Maria	Charles Islet FS	
		Concepcion FS	
	Masbate	Aroroy	Parayhog FS
			Matalangtalang MPA
			Tangig MPA
			Talib MPA
	Ibajay	Colorada MPA	Colorada MPA
			Bugtong Bato Marine FS and Fishery Reserve
	Batan	Aquino-Ondoy Marine FS and Fishery Reserve	Aquino-Ondoy Marine FS and Fishery Reserve
			Mamboquiao Marine FS and Fishery Reserve
	Buruanga	Bel-is Marine FS and Fishery Reserve	Bel-is Marine FS and Fishery Reserve
			Bagongbayan Marine FS and Fishery Reserve
	Libertad, Nabas	Libertad Marine FS and Fishery Reserve	
	Tangalan	Tangalan Marine Sanctuary	
		Jawili Nearshore Marine Sanctuary (Sipak Reef)	
	Antique	Caluya	Hininga-an MPA
			Dionela MPA
			Bacong MPA
			Sabang MPA



Dawis MPA
Masanag MPA
Harigue MPA
Alegria MPA
Tinogboc MPA
Semirara MPA

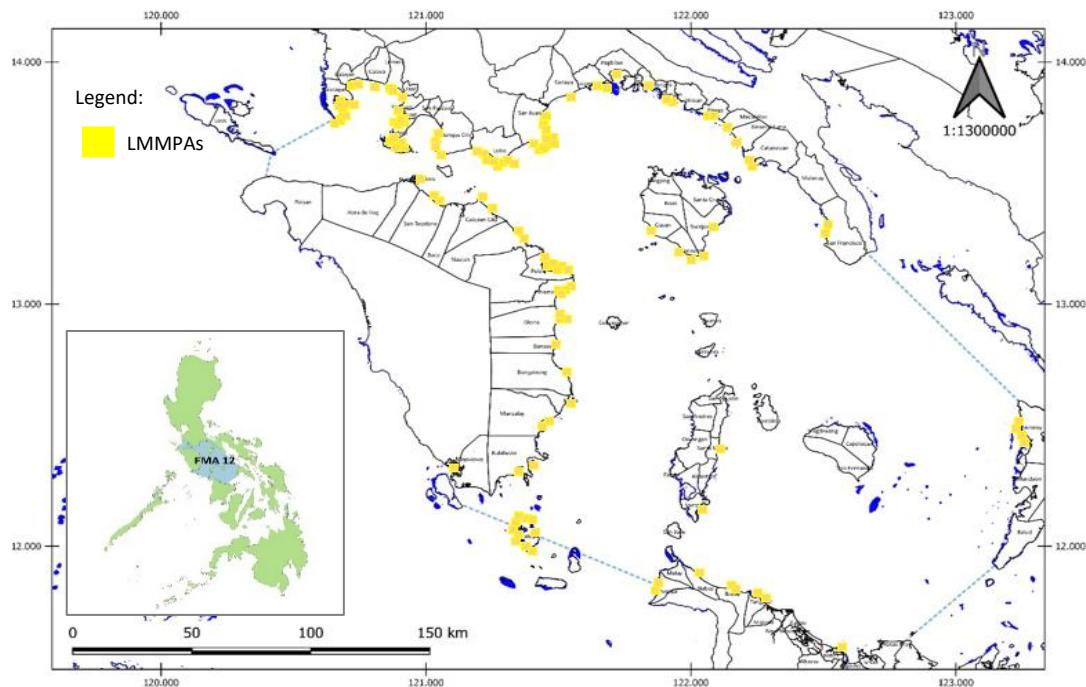


Figure 18. Location of LMMPAs and FS in FMA 12

Protected Areas under NIPAS

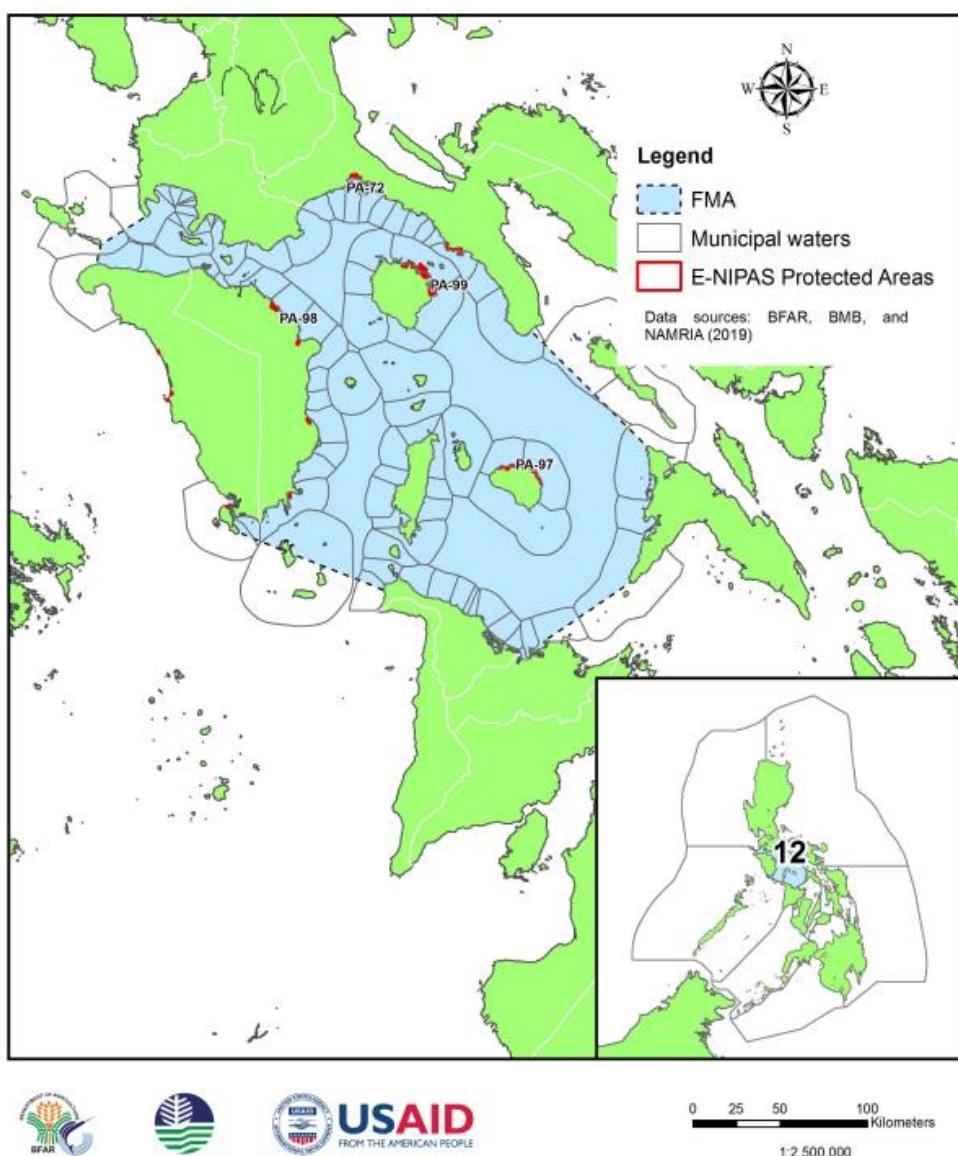
There are four important mangrove swamp forests located in Quezon, Marinduque, Oriental Mindoro, and Romblon provinces that are part of the National Integrated Protected Areas System (NIPAS) within FMA 12. These protected areas are currently in the initial component stage and have not yet been fully legislated and proclaimed as protected areas under the E-NIPAS law.

Table 8. List of NIPAS area within FMA 12

NIPAS MPA Name	PA Code	Ecosystem	Category	Area (Ha)	Status
Island of Sta. Cruz and Salomague, foreshoreline of Dapdap and Alabo to the mouth of tagum river, Malinao Creek to Salomague Point, foreshoreline of Barrio Cabuyagan to eastern side of Dating Bayan River in Calancan Bay	99	Terrestrial	Mangrove Swamp Forest Reserve	2351.4	I



Mangrove areas along banks of Mamburao River, Buluan River to Lagarum River, Naujan, bank of betel Creek, Sablayan pt. to Bagong Sabang River, Labangan to Calalayuan pt. Sukol River, Casiliga river, Island of Soguicay	98	Terrestrial	Mangrove Swamp Forest Reserve	997.4	I
Palsabangan River up to Mazintuto river, Bacong River to Sandoval Point	72	Terrestrial	Mangrove Swamp Forest Reserve	866.6	I
Sibuyan Island MSFR	97	Terrestrial	Mangrove Swamp Forest Reserve	504.7	I



This map is prepared by USAID Fish Right Program for its partnership with BFAR and BMB.

Figure 19. E-NIPAS Protected Area



LGU Alliances and Ancestral Domain

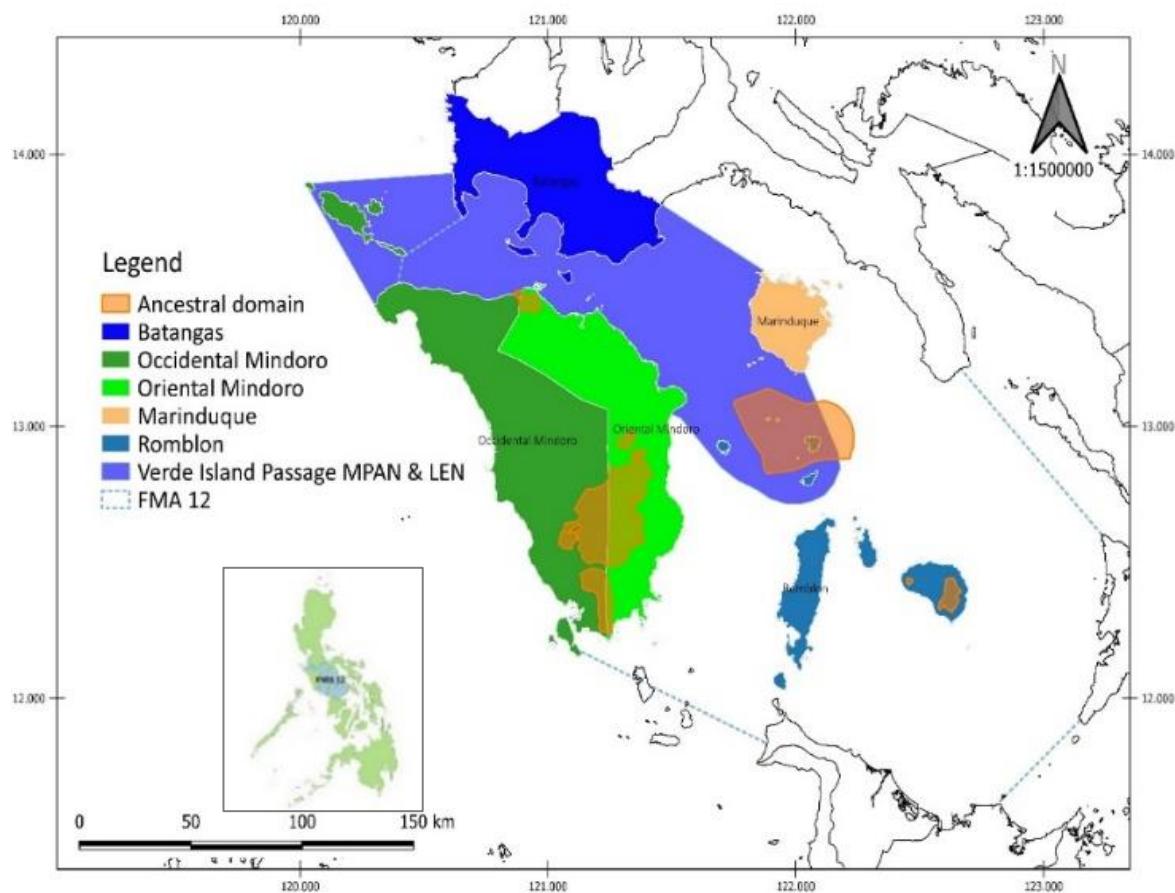


Figure 20. Location LGU alliances and ancestral domain

The five provinces of Batangas, Marinduque, Occidental Mindoro, Oriental Mindoro, and Romblon, along with national agencies, have allied to strengthen the protection and management of the Verde Island Passage, considered the epicenter of marine shore fish biodiversity. The Verde Island Passage Marine Protected Area Network and Law Enforcement Network (VIP MPAN & LEN) aim to ensure the conservation and protection of the VIP.

Meanwhile, the ancestral domain of the Indigenous People is located in the provinces of Romblon and Aklan. The Indigenous People in the area serve as stewards of the ancestral domain and contribute to the management of fishery resources.

CHAPTER 3

ISSUES AND THREATS



Major Issues and Threats

The Philippines is a country with abundant marine and fishery resources, but it also faces several challenges and dangers arising from natural phenomena and human activities. With the population continuously growing, the demand for limited fishery resources has also risen, leading to various resource-use conflicts among stakeholders.

During stakeholder consultations, it was discovered that the issues and threats faced by fishermen in FMA 12 are common in every coastal area. The decrease in fish catch and value, low income, loss of biodiversity, and illegal, unreported, and unregulated fishing are evident issues within the FMA, caused by various collective problems resulting from natural and anthropogenic activities.

The major issues and threats were categorized into three (3) groups:

- (1) Fisheries and ecological well-being,
- (2) Fisherfolk well-being, and
- (3) Governance.

Table 9. Issues and threats

Fisheries and Ecological	<ul style="list-style-type: none">• Declined in the catch of fisheries resources• Declined in value of fisheries resources• Increase in rate of coastal erosion• Declined in biodiversity• Inadequate fisheries management• Catching of juvenile fish• Land-based pollution• Degradation of marine habitat, i.e., coral reef destruction• Seabed quarry in the traditional fishing ground and near critical marine habitat• Ghost fishing• Limited policy in the protection of mangrove species• Cutting of mangrove trees• Crown of Thorns sea star outbreak
Fisherfolks well-being	<ul style="list-style-type: none">• Loss of property due to sea-level rise• Decrease in revenue and income• Low income and profits• Lack or limited support for fishers in terms of social security• Poor accessibility of source of fry for aquafarms• Insufficient or lack of hatchery facilities for most high-value fish species• Not updated Fishpond Lease Agreement (FLA)• Reversion of Fishpond Lease Agreement (FLA) to mangrove areas



Governance	<ul style="list-style-type: none"> • Not updated Fishpond Lease Agreement (FLA) • Reversion of Fishpond Lease Agreement (FLA) to mangrove areas • Prevalence of reoccurring IUU fishing, i.e., dynamite fishing, use of the noxious substance with the aid of compressor, use of fine mesh net, and use of modified Danish seine (buli-buli/ hulbot-hulbot) • Inadequate fisheries management • Weak and poor support for the fishery law enforcement team • Inactive fish warden in local government units • Unestablished municipal water delineation • Resource use conflict among fishers, e.g., unauthorized fishing, zonation issues, and conflicts in the use of fishing gears and mesh size of net • Encroachment of small to medium commercial fishing vessels, e.g., trawlers • Unsustain management action • No unified ordinance in some management action by the LGUs Lack of social mobilization and advocacy, extension work, and technical support for fisherfolk associations • Poor management of river systems • Unsustainable tourism-related practices • Disproportionate and poor implementation of fishery and other environmental laws • Poor compliance with fishery and other environmental laws
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Priority Issues and Problems

Prevalence of IUU fishing

Despite the efforts of local government units in enforcing fisheries laws within municipal waters, illegal, unreported, and unregulated fishing remains widespread in most major fishing grounds in FMA12. These recurring illegal fishing methods directly affect the marine habitat and the food security of fisherfolk.

According to the Philippines' IUU Fishing Assessment Report of 2021 (BFAR, USAID, 2022), the national IUU fishing index has an average score of 2.58, and at the FMA12 level, it is 2.57. The report's results suggest that IUU fishing in municipalities is closely associated with the area's vulnerability to IUU fishing.



At the national level, the most common types of IUU fishing reported are the use of fine mesh nets, active fishing gear in municipal waters, and fishing without a permit. The report estimates that the annual catch of IUU fishing was about 113,000 tons, with an estimated value of around Php. 5.6 billion.

IUU fishing is also a significant factor and is correlated with the decline of fish catch. The PSA fisheries data shows a decreasing trend in the volume of marine fish catch from 2017 to 2020.

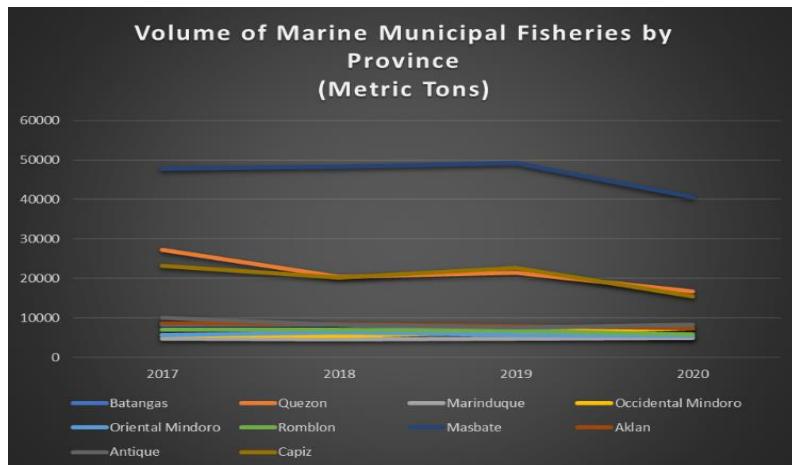


Figure 21. Volume of marine fisheries production by province

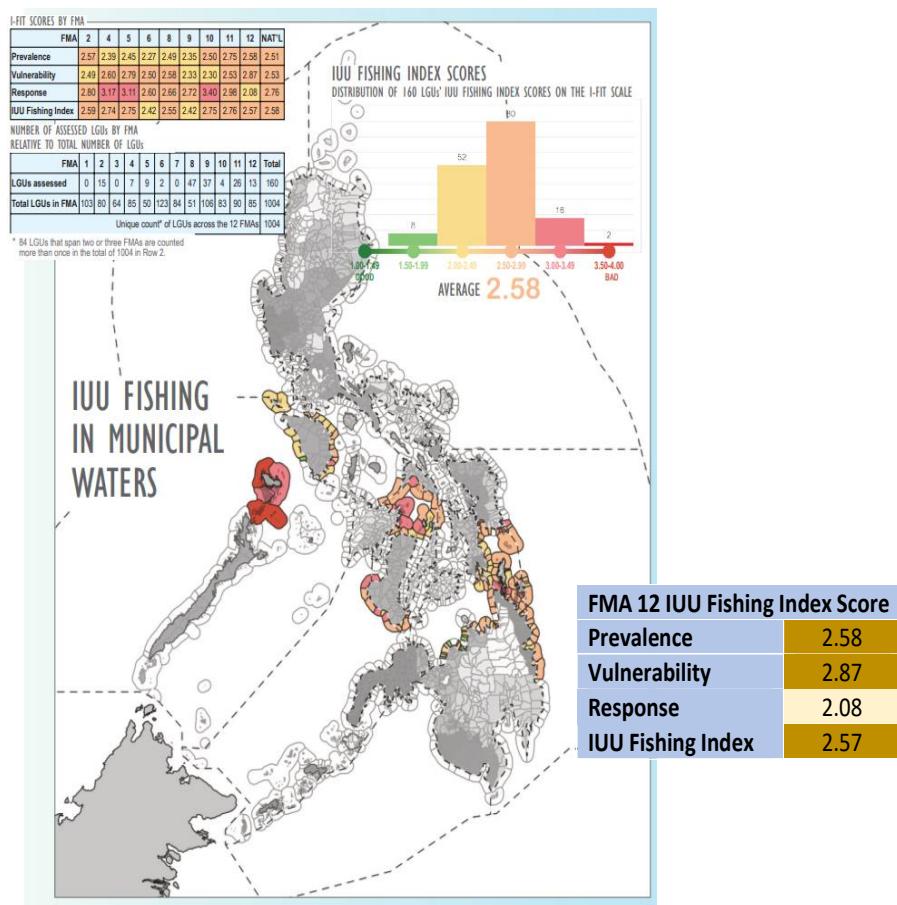


Figure 22. IUU fishing



Destructive fishing; Buli-buli

The Modified Danish Seine is a common fishing method used in FMA 12, but it poses significant issues. Locally known as holbot-holbot, zipper, palusot, bira-bira, hulahoop, liba-liba, and buli-buli, it consists of a conical net with a pair of wings, and the ends are connected to a rope embedded with plastic strips and sinkers that serve as scaring devices. The hauling ropes pass through a ring that is permanently attached to a tom weight, and the net is hauled through a mechanical winch or manual hauling by manpower. However, the tom weights and heavily weighted scare lines contribute to the destruction of marine habitats and fishery resources. Buli-buli, in particular, reportedly operates along Tayabas Bay to Mogpog Pass and the Sibuyan Sea.

Catching of juvenile fish – Dulong

-Associated with the use of fine mesh net

The term "Dulong fish" refers to a group of various fish species, such as sardines and anchovies, which are typically caught during their fry or juvenile stage. The fishing is often conducted in shallow reef areas using two common types of fishing gear: boat-based scoop nets with halogen lamps to attract the Dulong, and modified beach seine where a fishing boat casts the net offshore and is then pulled to shore by a group of fisherfolk in a Bayanihan-style effort. Catching fish at the fry or juvenile stage, also known as recruitment overfishing, poses a significant risk to the fisheries industry and biodiversity.

Cyanide fishing

Cyanide fishing, which involves the use of noxious substances to catch fish, remains prevalent in FMA 12. This method of fishing is commonly used to stun or stupefy fish that are hiding in crevices within coral reefs. However, the use of cyanide also results in the death of other marine organisms, including corals and algae. This practice is particularly widespread in island municipalities and remote barangays, which are vulnerable regions that are difficult for Bantay-dagat to patrol due to their relative distance from urban centers.

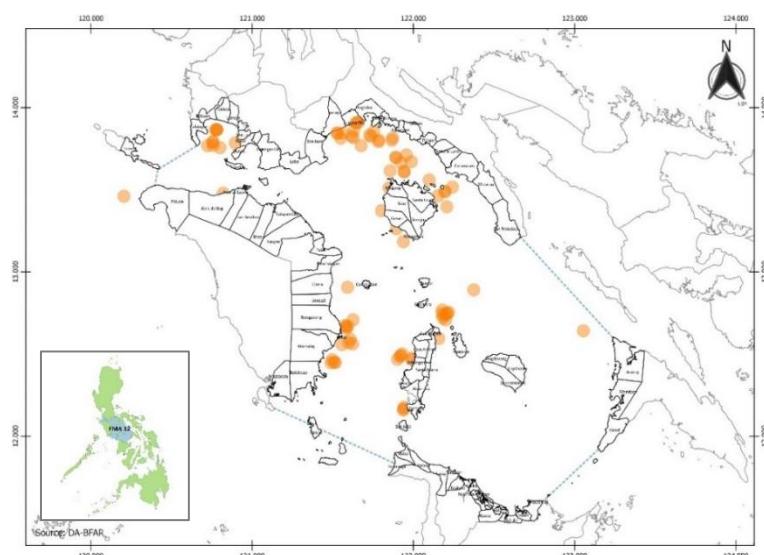


Figure 23. Location of IUUF apprehensions

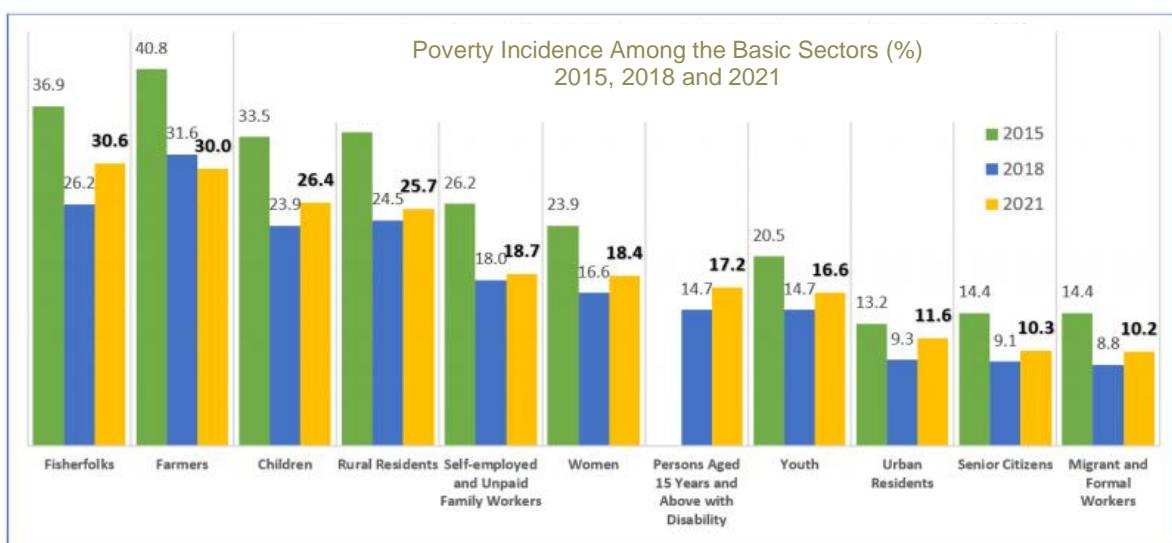
Recorded IUU fishing in FMA 12 from 2017 to 2020. Multiple occurrences of IUU fishing in the same spot imply the prevalence and vulnerability of the area. Data Source: DA-BFAR 4-A and MIMAROPA



Poverty Incidence Among Fisherfolks

According to Figure 24 from the Philippine Statistics Authority, in 2021, fisherfolks, farmers, children, and individuals living in rural areas remained the most economically disadvantaged sectors in terms of poverty rates. These sectors had the highest proportion of individuals from families with incomes below the official poverty thresholds compared to other basic sectors. The poverty rates for these sectors in 2021 were as follows: fisherfolks at 30.6 percent, farmers at 30.0 percent, children at 26.4 percent, and individuals residing in rural areas at 25.7 percent. It is worth noting that these sectors also had the highest poverty rates in 2015 and 2018.

In the context of FMA 12, it is important to highlight that among fisherfolks, the highest poverty incidence was observed in Region V, followed by Region MIMAROPA, Region 6, and Region IV-A.



Source: Merged datafile of the 2015 Family Income and Expenditure Survey (FIES) and January 2016 Labor Force Survey (LFS), merged datafile of the 2018 FIES and January 2019 LFS and merged datafile of the preliminary 2021 FIES and January 2022 LFS, Philippine Statistics Authority

Figure 24. Poverty Incidence Among the Basic Sectors (%) 2015, 2018 and 2021

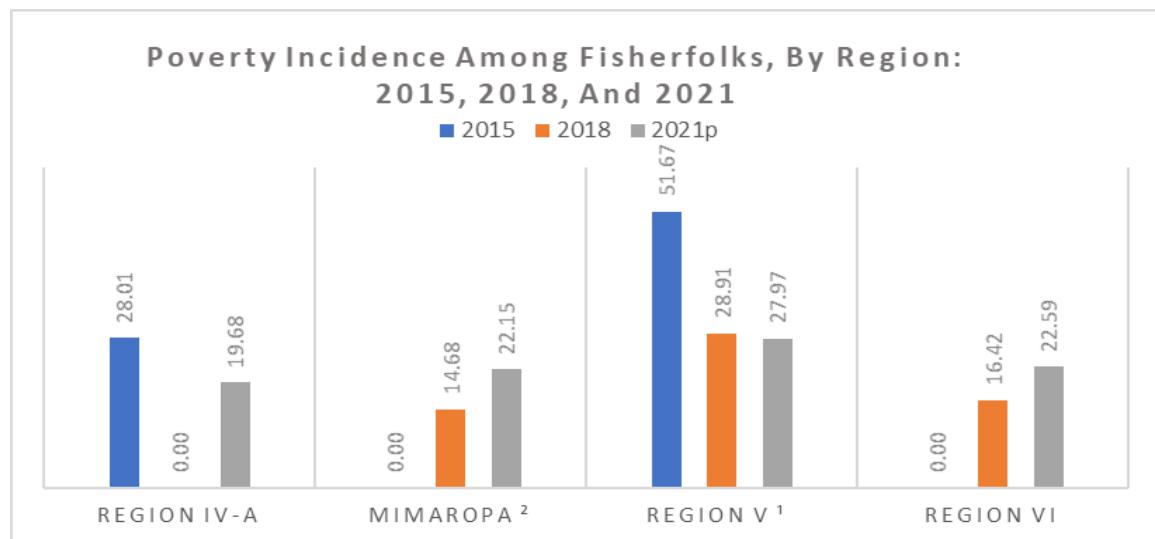


Figure 25. Poverty Incidence Among Fisherfolks, By Region (%) 2015, 2018 and 2021



Table 10. Poverty Incidence Among Fisherfolks, by Region: 2015, 2018, and 2021

Region	Poverty Incidence among Fisherfolks														
	Estimate (%)			Coefficient of Variation			Standard Error			90% Confidence Interval					
	2015	2018	2021 ^p	2015	2018	2021 ^p	2015	2018	2021 ^p	Lower Limit	Upper Limit	Lower Limit	Upper Limit	Lower Limit	Upper Limit
Region IV-A	28.0	*	19.7	19.0	*	19.2	5.3	*	3.8	19.2	36.8	*	*	13.5	25.9
MIMAROPA²	*	14.7	22.2	*	13.8	10.3	*	2.0	2.3	*	*	11.4	18.0	18.4	25.9
Region V¹	51.7	28.9	28.0	10.3	9.3	8.4	5.3	2.7	2.3	42.9	60.4	24.5	33.4	24.1	31.8
Region VI	*	16.4	22.6	*	18.5	16.2	*	3.0	3.7	*	*	11.4	21.4	16.6	28.6

Source: Philippine Statistics Authority

Notes:

Fisherfolks refer to employed individuals 15 years old and over whose primary occupation is fishing. These include occupations under Skilled Agricultural, Forestry and Fishery Works and Elementary Occupations in the 2012 Philippine Standard Occupational Classification (PSOC).

Poverty incidence among fisherfolks refers to the proportion of fisherfolks (belonging to poor families) with per capita income less than the per capita poverty threshold to the total number of fisherfolks.

* - Coefficient of variation of regional poverty incidence among fisherfolks is greater than 20%.

p - This is based on the preliminary results of the 2021 Family Income and Expenditure Survey (FIES).

1/ significant change; The increase or decrease in the poverty incidence among fisherfolks between 2015 and 2018 is significant at 10% level of significance ($\alpha = 0.10$).

2/ significant change; The increase or decrease in the poverty incidence among fisherfolks between 2018 and 2021 is significant at 10% level of significance ($\alpha = 0.10$).

a/ Caution in utilizing the estimate for these regions must be observed due to its very small sample size (<50) in 2015.

b/ Caution in utilizing the estimate for these regions must be observed due to its very small sample size (<50) in 2018.

c/ Caution in utilizing the estimate for these regions must be observed due to its very small sample size (<50) in 2021.

d/ BARMM estimates exclude the 63 barangays from different municipalities of the Province of Cotabato.



Additional common issues and problems to fisheries

Degradation of marine habitat

Marine habitat degradation is a major problem that contributes to the decline in fishery resources, loss of biodiversity, and increased coastal erosion rates. This degradation is mainly caused by anthropogenic activities, both directly and indirectly by stakeholders.

Improper disposal of land-based pollution

Improper disposal of land-based pollution is a major factor in marine habitat degradation. Many stakeholder activities, such as fishing villages, fish trading, docking areas, and tourism-related activities, are centered in coastal areas. However, if waste disposal is not properly observed, all these activities can contribute to coastal pollution.

In upland areas, agricultural and aquacultural waste also contributes to water pollution. Some farmers irresponsibly discharge their waste directly into water tributaries, while copra waste, such as large numbers of coconut shells, is also disposed of in rivers and can destroy seagrass beds and coral reefs.

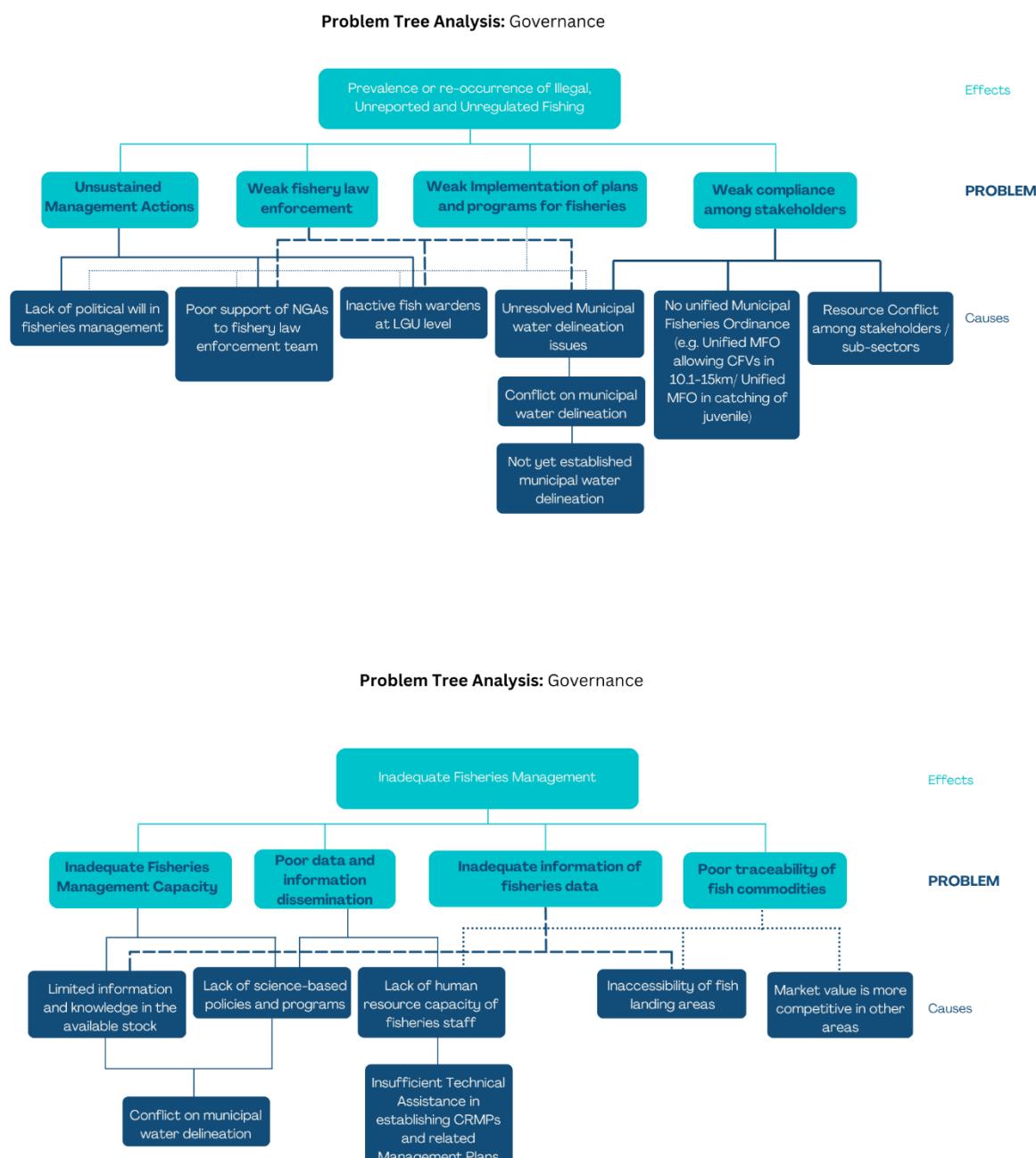
Increase bycatch and use of non-selective gear for endangered, threatened, and protected species.

Bycatch and the use of non-selective gear for endangered, threatened, and protected species is also a significant issue. Whales, dolphins, sharks, and marine turtles are often accidentally caught by destructive fishing gear such as modified Danish seine, locally known as lambaklad or baklad na lubog. In Tayabas Bay and Mogpog Pass, the impacts of such bycatch are devastating, especially for endangered sea turtles and juvenile fish. The fishing gear is not selective, and effective management policies need to be implemented to address this issue.

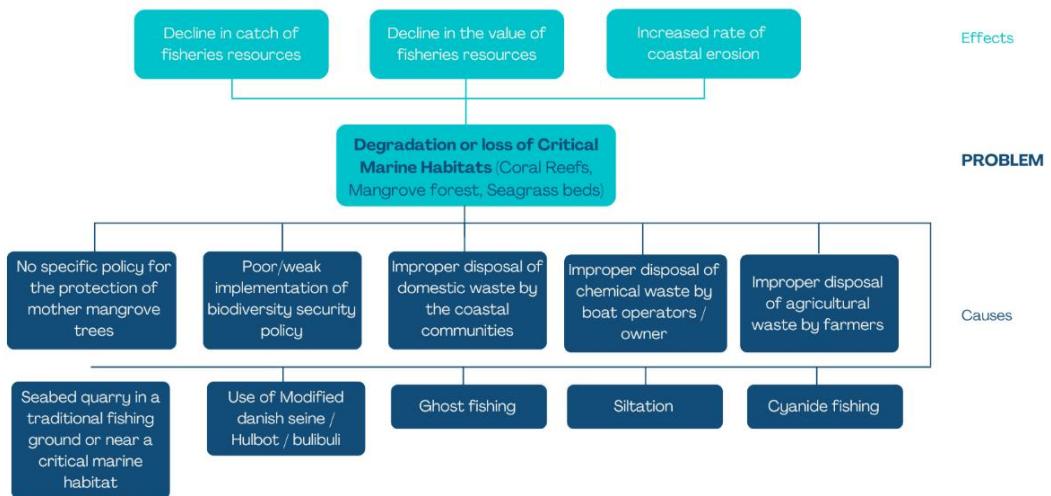


Problem Tree Analysis

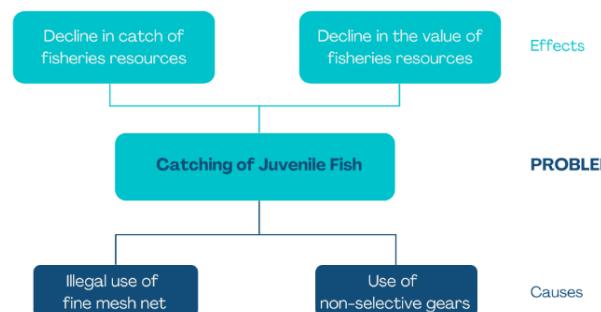
This section presents the problem tree analysis of all the common issues and threats in FMA 12. The common issues and threats have been categorized into three categories: Governance, Fisherfolk well-being and Fisheries, and Ecological well-being. Issues and threats have been further classified into effects, core problems, and causes to provide a comprehensive understanding of the underlying issues and their root causes. wherein, the results of analysis were used to set the goals, objectives and management action in this framework plan.



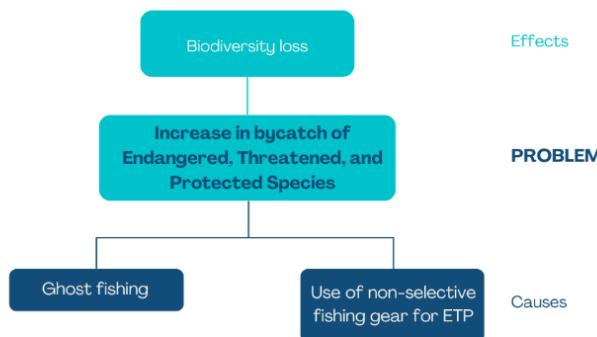
Problem Tree Analysis: Fishery and Ecological Well-being



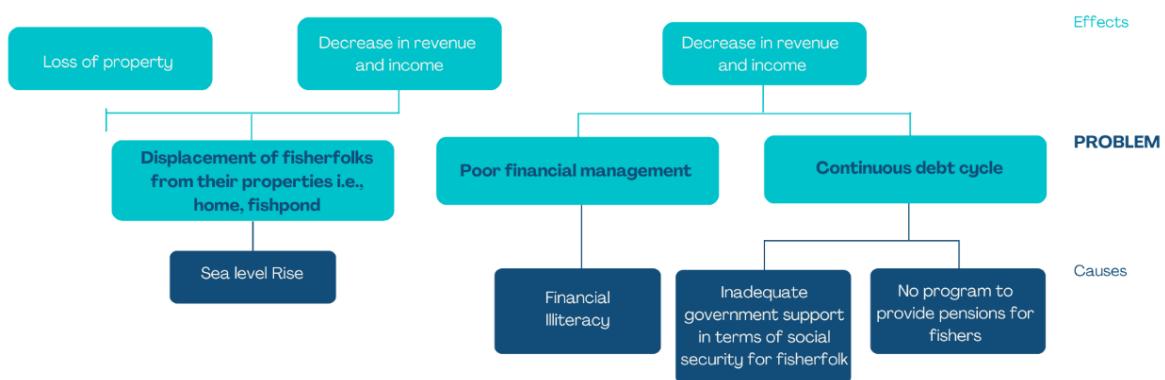
Problem Tree Analysis: Fishery and Ecological Well-being



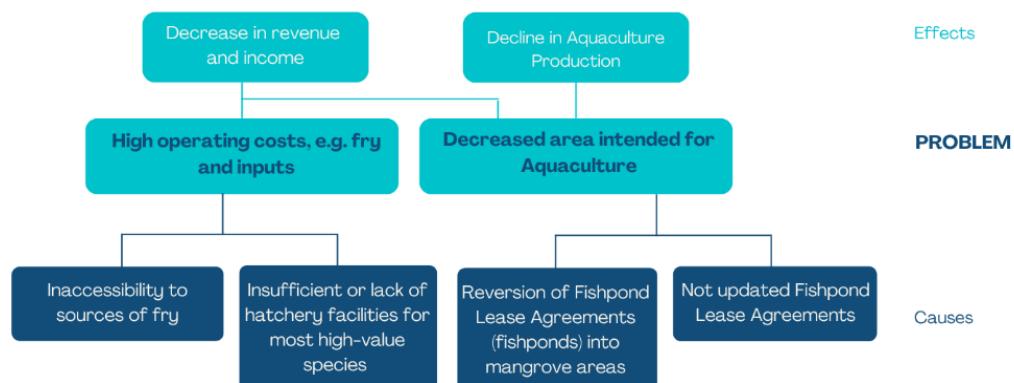
Problem Tree Analysis: Fishery and Ecological Well-being



Problem Tree Analysis: Fisherfolks Well-being



Problem Tree Analysis: Fisherfolks Well-being



CHAPTER 4

MANAGEMENT FRAMEWORK PLAN



Vision

“Fisheries Management Area 12 is a productive ecosystem and fishery resource area, sustainably managed thru a responsive and accountable governance system that empowers the range of stakeholders and promotes an equitable share of its benefits.”



GOALS

- 1. Management system is enabled, effective and responsive.**
- 2. Improved and healthy coastal and marine ecosystems to support and sustain abundant and productive fishery resources.**
- 3. Resource users are empowered, compliant, and covered by social security.**



Objectives

Based on the common priority issues and problems identified, stakeholders have established objectives for the plan to harmonize the management actions of resource users towards achieving the sustainability of fisheries stocks in FMA 12.

Table 12. Goals and Objectives

Goals	Objectives
	Objective 1.1: By Y5, fisheries management can maintain or enhance the above-acceptable population parameters of its major commercially valuable fish stocks
	Objective 1.2: Improved management and regulation thru science-based management of fisheries stocks to ensure maintenance of viable populations by Y5
	Objective 1.3: By 2026, Eliminate the juvenile fish catch of all registered fishing boats in FMA 12. Reduction of juvenile fish caught scaled by year: Y1 – 10%, Y2 – 20%, Y3 – 30%, Y4 – 50%, and Y5 – eliminate the juvenile fish catch
1. Management system is enabled, effective and responsive	Objective 1.4: Intensify the market and trade (transport) monitoring to reduce the illegally caught fishery products by 75% by Y5
	Objective 1.5: Prepare a Joint Administrative Order between BFAR, DENR, and DILG for Local Government Units to adopt the FMA framework plan for all coastal municipalities/cities within FMA12 by Y5
	Objective 1.6: Creation of an institutional mechanism to lead the implementation of the FMA Framework Plan at the provincial level by Y1
	Objective 1.7: In Y1 to Y5, strengthen monitoring and evaluation support to LGUs in monitoring fish stocks and priority environmental and governance issues, including the capacity-building program for science-based management actions



	Objective 1.8: By Y5, strengthen management and protection of critical marine habitat and traditional fishing grounds to the impacts of aquaculture, seabed quarry, and offshore mining activities
2. Improved and healthy coastal and marine ecosystems to support and sustain an abundant and productive fishery resources	<p>Objective 2.1: By Y5, establish or expand protection of coastal and marine ecosystems contributing to at least 15% of the total area</p> <p>Objective 2.2: Improve the management effectiveness of existing marine protected areas (MPAs) and fishery regimes by Y5</p> <p>Objective 2.3: Enhanced monitoring and enforcement to reduce by 20% the bycatch and resulting mortality of endangered, threatened, and protected marine mammals and reptiles by Y5</p>
3. Resource users are empowered, compliant, and covered by social security	<p>Objective 3.1: Y1, Assess, identify and establish appropriate livelihood (Fisheries and non-fisheries) intervention and financial opportunity</p> <p>Objective 3.2: Y1 Develop Partnership programs to support FMA livelihood and financial intervention</p> <p>Objective 3.3: Y2-Y5 Implement developed livelihood and financial program with M&E on the impact of the intervention</p>



Management action framework

Based on the data, information, issues, and threats gathered, management actions, benchmarks, and indicators were identified to formulate the Management Action Framework for the period of 2024 to 2028.

Goal 1. Management system is enabled, effective and responsive

Objective 1.1.

By Y5, fisheries management can maintain or enhance the above-acceptable population parameters of its major commercially valuable fish stocks.

Management actions:

1. Generate and implement policies on harvest control measures and references points (target reference points and limit reference points) and include the following guidelines:
 - a. When the Reference Points exceed the Target Reference Points:
 - i. Improve catch/ capacity/efforts
 - ii. Sustain management regime
 - b. When Reference Points are within the value of Target Reference Points:
 1. Improve catch/ capacity/efforts
 2. Sustain management regime
 - c. When Reference Points are within the value of Trigger Reference Points:
 1. Reduce or maintain capacity/efforts through:
 - Effort reduction may be thru a reduction in the number of fishing days
 - Reduction in the number of boats operating in the area (i.e., license control)
 - Enforce rules regulating the operation of specific fishing gears using fine mesh nets
 - d. When RP has reached Limit Reference Points:
 - i. Refer to rule 8.2 of RA 10654
 - ii. Market rules and mechanisms
 - iii. All of C rules and other harvest control rules
2. Strict implementation of existing fishery laws to prevent illegal, unreported, unregulated fishing (IUUF)

Outcome:

1. The level of population parameters of commercially valuable fish stocks is sustained.

Key activity framework

Key activities	Key indicators	Benchmark	Responsible group	Timeframe	Indicative Budget (Php)
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1. Generate reference points and harvest control rules	# of indicator generated <i>a. Performance Indicator</i> <i>b. Target Reference Points</i> <i>c. Limit Reference Points</i>	RPs of 2 fish species per year <i>Target: Top 20 fish commodities in 2027</i> <i>Priority: Sardinella spp.</i>	BFAR NFRDI MB SAG FMA TWG	Y1 – Y5	10,000,000.00
2. Adopting Reference points and Harvest Control Rules thru FAO AND MFOs	# of policies formulated	Adopted RPs and HCR of 2 species annually <i>Target: 1 FAO drafted</i> <i>Target: 20% of LGU annually</i>	BFAR LGU MB	Y1 – Y5	2,000,000.00

Objective 1.2.

Improved management and regulation thru science-based management of fisheries stocks to ensure maintenance of viable populations by Y5.

Management actions:

1. SAG (in consultation with MB) to determine related fisheries stock assessment studies of top commodity species for science-based policy recommendations.
 - a. seasonal and spatial distribution of fish stocks/larvae and egg distribution
 - b. impact of fishing gear related to the fishing mortality
 - c. maximum sustainable yield
 - d. gonadal maturity determination / reproductive biology
 - e. right-sizing
 - f. fisheries socio-economic study

Outcome:

1. Adequate science-based fisheries management is attained.

Key activity framework

Key activities	Key indicators	Benchmark	Responsible group	Timeframe	Indicative Budget (Php)
1. SAG, BFAR, and NFRDI to conduct research studies on:	# of research agenda adopted	3 research studies / technical report	BFAR NFRDI SAG	Y1 – Y5	8,000,000.00



a. impact of fishing gear related to the fishing mortality	# of Technical report/paper prepared	Priority: Sardinella spp.			
b. maximum sustainable yield (MSY)					
c. gonadal maturity determination / reproductive biology					
d. fisheries socio-economic study					

2. SAG to review and endorse resolution/management policy recommendation to MB

# management policy recommendations per fish stock	3 policy brief / management policy recommendation	SAG	Y1-Y5	2,000,000.00
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Objective 1.3.

By 2026, Eliminate the juvenile fish catch of all registered fishing boats in FMA 12. Reduction of juvenile fish caught scaled by year: Y1 – 10%, Y2- 20%, Y3 – 30%, Y4 – 50%, and Y5 – eliminate the juvenile fish catch.

Management actions:

- Establish control measures for regulating fine mesh nets.
- Adopt policies that will reduce juvenile fish catch.
- Strictly implementing existing fishery laws to prevent illegal, unreported, unregulated fishing (IUUF).

Outcome:

Reduction or elimination of juvenile fish catch by fisherfolk

Key activity framework

Key activities	Key indicators	Benchmark	Responsible group	Timeframe	Indicative Budget (Php)
1. Enforce rules regulating operation of specific fishing gears using fine mesh nets.	# of policies formulated	20% of LGU enforced regulation on the use of fine-mesh net annually	BFAR LGU	Y1 – Y5	20,000,000.00

Note: FOA or MFOs



			<i>Target: 100% MFO of LGU regulating the use of fine-mesh net by 2027</i>			
2. Intensify MCS activities: (i) Conduct market denial (ii) Seaborne patrol activity/ joint seaborne activity	# of MCS operation	400 of MCS operation	BFAR	Y1 – Y5	20,000,000.00	
3. Monitoring and evaluation	# of evaluation report	1 evaluation report annually	BFAR	Y1 – Y5	5,000,000.00	

Objective 1.4.

Intensify the market and trade (transport) monitoring to reduce the illegally caught fishery products by 75% by Y5.

Management actions:

1. Strengthen MCS activities in the chain of market, trade and transport.
2. Strengthen IEC dissemination.

Outcome:

1. The level of population parameters of commercially valuable fish stocks is sustained.
2. Reduction of illegally caught fishery products by 75%

Key activity framework

Key activities	Key indicators	Benchmark	Responsible group	Timeframe	Indicative Budget (Php)
1. Baseline data gathering for illegally caught fishery products in the market and during transport, monitoring, and evaluation annually	# of Technical reports <i>Output:</i> <i>% of illegally caught fishery products at the market, trade, and transport chain in FMA 12</i>	1 Technical report/paper prepared <i>Target:</i> 1 Technical report annually <i>Priority:</i> Sardinella spp.	BFAR LGU	Y2 – Y5	2,000,000.00
2. Conduct market denial operation	# of MCS operations	200 MCS operation conducted	LGU BFAR		2,000,000.00
3. Improve coordination with LGUs in reporting	# of coordination / network system established	1 coordination / network	LGU BFAR	Y1 – Y5	1,000,000.00



banned species for market denial		system established			
4. Capacitation of LGUs re: conduct of training on the identification of fish products caught/collected by illegal means	# of trainings conducted # trained personnel	1 Training program	BFAR	Y2	900,000.00
5. Undertake information, education campaign (IEC)	# of IEC program	1 IEC program	BFAR LGU	Y1 – Y5	5,000,000.00

Objective 1.5.

Prepare a Joint Administrative Order between BFAR, DENR, and DILG for Local Government Units to adopt the FMA framework plan for all coastal municipalities/cities within FMA12 by Y5.

Management actions:

1. Strengthen Inter-Agency linkages
2. Encourage LGUs to maximize FISHCA, FAO 263, and FMA Framework Plan compliance.

Outcome:

1. Empowered legislated policy for FMA management, conservation, and protection.

Key activity framework

Key activities	Key indicators	Benchmark	Responsible group	Timeframe	Indicative Budget (Php)
1. Conduct interagency consultations, workshops, and meetings	# of meetings, consultation and workshops conducted	2 Series of interagency consultation workshop <i>Target: 2 workshops to draft the JAO</i>	DA-BFAR	Y3	900,000.00
1. Draft Joint Administrative Order	# of draft JAO	1 draft JAO	DA-BFAR	Y3 – Y5	200,000.00
2. FMA-wide consultation	# of revised JAO		DA-BFAR DENR DILG		2,000,000.00
3. Approval of JAO	# of approved JAO	1 Approved JAO-DA-DENR-DILG <i>Target: 100% LGUs adopted the FMA Plan</i>	DA-BFAR DENR DILG	Y5	



Objective 1.6.

Creation of an institutional mechanism to lead the implementation of the FMA Framework Plan at the provincial level by Y1.

Management actions:

1. Strengthen Inter-Agency linkages
2. Encourage LGUs to maximize compliance on FISHCA, FAO 263, and FMA Framework Plan

Outcome:

1. Empowered coordination between stakeholders in the management, conservation, and protection of resources in FMA 12.

Key activity framework

Key activities	Key indicators	Benchmark	Responsible group	Timeframe	Indicative Budget (Php)
1. MB institutionalizes the formation of the FMA-wide/provincial-wide Bantay-dagat network and LGUs coastal resource managers thru MOA	# of FMA wide task force / network formed	1 FMA-wide IUUF task force/ network formed <i>Target: 1 FMA-wide LGU network, IFARMCs and fish wardens – IUUF task force</i>	BFAR LGU IFARMC	Y1	300,000.00
2. Capability building of the LGU staff and fish warden in fisheries management and law enforcement	# of training conducted # of bantay-dagat trained	1 Training program <i>Target: 1 training per province / management network</i>	BFAR	Y1 – Y5	1,200,000.00
3. BFAR and LGU to provide an annual budget for the network's operational requirements	% of fund allocated and disbursed	20% of fund allocated and disbursed	BFAR LGU	Y1-Y5	
4. Creation of FMA 12 Technical Working Group	TWG established	1 TWG established	FMA 12 MB	Y1	400,000.00



Objective 1.7.

In Y1 to Y5, strengthen monitoring and evaluation support to LGUs in monitoring fish stocks and priority environmental and governance issues, including the capacity-building program for science-based management actions.

Management actions:

1. BFAR to adapt and implement the training program for LGUs and stakeholders modified for FMA 12 current context.

Outcome:

1. Empowered stakeholders in fisheries management
2. Sustainable management of fish stock

Key activity framework

Key activities	Key indicators	Benchmark	Responsible group	Timeframe	Indicative Budget (Php)
1. BFAR facilitates to conduct of a training needs assessment for monitoring and evaluation of priority LGUs	# of training needs assessment conducted	1 TNA result	BFAR	Y1	300,000.00
2. BFAR to facilitate the conduct of capacity and capability building based on the result of TNA or the following relevant topics <ul style="list-style-type: none"> - Reproductive biology - Stock assessment - Boat and Gear Inventory - Law enforcement 	# of trainings conducted # of trained personnel	1 training program <i>Target: 1 training per year based on the result of training assessment needs</i>	BFAR	Y2	500,000.00

Objective 1.8.

By Y5, strengthen management and protection of critical marine habitat and traditional fishing grounds to the impacts of aquaculture, seabed quarry, and offshore mining activities.

Management actions:

1. Periodic review and evaluation of fisheries and ecological-related policies (mangrove management, seabed quarry and offshore mining, aquaculture activity).

Outcome:

1. Improved policy regulation.



Key activity framework

Key activities	Key indicators	Benchmark	Responsible group	Timeframe	Indicative Budget (Php)
1. Review existing policies related to mangrove species protection and management. <i>Note: A review of policies aims to determine appropriate management measures in the current context of mangrove related management scheme</i>	# of meetings and consultation conducted	2 consultations and meetings conducted	BFAR DENR	Y3	800,000.00
2. Review existing policies, monitoring, and evaluation guidelines related to seabed quarry and offshore mining. <i>Note: The review of policies aims to generate inputs in the formulation of guidelines for offshore mining</i>	# of meetings and consultation conducted	3 consultations and meetings conducted	BFAR DENR	Y4, Y5	900,000.00
3. Review existing policies on Good Aquaculture Practices for top commodity species. <i>Note: A review of existing policies aims to provide additional inputs in the Aquaculture Standards (Philippine National Standard)</i> <i>Target: Milkfish, Tilapia, Shrimp</i>	# of meetings and consultation conducted	3 consultations and meetings conducted	BFAR BAFS	Y4, Y5	900,000.00



Goal 2. Improved and healthy coastal and marine ecosystem to support and sustain an abundant and productive fishery resources.

Objective 2.1.

By Y5, establish or expand protection of coastal and marine ecosystems contributing to at least 15% of the total area.

Management actions:

1. Determine the spatial distribution of critical marine habitat.
2. Establish critical marine habitat protected areas for coral reefs, mangrove forests, seagrass beds, and beach forests, contributing to at least 15% of the total area.

Outcome:

1. Increase in habitat cover, species richness, diversity, and biomass of associated fish and marine species within the marine protected areas, fish sanctuaries, and non-protected marine ecosystems.

Key activity framework

Key activities	Key indicators	Benchmark	Responsible group	Timeframe	Indicative Budget (Php)
1. Survey of ideal sites for the establishment of new FS / MPA <i>Note: Survey aims to determine the total area of critical habitat</i>	# of survey conducted # of area (hectare) surveyed	3 survey conducted Total area of habitat determined	LGU BFAR	Y2	1,200,000.00
2. Formulation of MPA/FS management plan	# of FS /MPA plan drafted	85 FS / MPA plan drafted	LGU BFAR FARMC	Y2 – Y3	800,000.00
3. Formulate/update local ordinances for the MPAs / FS establishing the MPA and adaption of the management plan	# Approved /Updated FS / MPA ordinance	85 Approved / updated	LGU FARMC BFAR	Y3 – Y5	800,000.00

Objective 2.2.

Improve the management effectiveness of existing marine protected areas (MPAs) and fishery regimes by Y5.



Management actions:

1. Strengthen the management and monitoring scheme of locally managed MPAs / FS thru the LGU network at the FMA-wide level.

Outcome:

1. The status of MPAs / Fish sanctuaries was determined and improved.

Key activity framework

Key activities	Key indicators	Benchmark	Responsible group	Timeframe	Indicative Budget (Php)
1. Establish a monitoring station, conduct annual monitoring in the existing FS and control sites and conduct MPA evaluation using MEAT & METT or similar evaluation tools at the FMA-wide level	# of monitoring site established # MPA/FS monitored % Hard coral cover Increase fish biomass Improved evaluation scores	<i>Target: 12 monitoring stations</i> <i>12 monitoring annually</i> <i>2 % increase in hard coral cover</i> <i>5% increase fish biomass</i>	BFAR LGU	Y2-Y5	2,000,000.00
2. Creation of a monitoring team / Citizen Science Network at an FMA-wide level	# of monitoring team / citizen science network	1 monitoring team established and sustained	FMA 12 MB LGU BFAR	Y2	600,000.00
3. Establish mechanisms to incentivize fisherfolk associations to control the Crown of Thorns outbreak in their reefs system	# Proposed program developed Amount allocated and disbursed	1 Proposed program developed	LGU	Y2	400,000.00

Objective 2.3.

Enhanced monitoring and enforcement to reduce by 20% the bycatch and resulting mortality of endangered, threatened, and protected marine mammals and reptiles by Y5.

Management actions:

1. Adopt policies that will reduce the bycatch of endangered, threatened, and protected marine species.
2. Strengthening MCS activities focusing on regulating fishing gear and fishing practices contributed to the bycatch of endangered, threatened, and protected marine species.



Outcome:

1. The population parameters of endangered, threatened, and protected marine species are sustained.

Key activity framework

Key activities	Key indicators	Benchmark	Responsible group	Timeframe	Indicative Budget (Php)
1. Data gathering to identify levels of bycatch of ETP of fishing gears	# of studies conducted.	1 study prepared in Y1 (baseline) <i>Target: monitoring from Y2 to Y5 indicating the 20% reduction at Y5</i>	BFAR NFRDI	Y2 – Y5	1,500,000.00
2. Drafting/updating of local ordinances regulating the fishing gear contributed to bycatch	Approved /Updated local ordinance	85 approved / updated local ordinance	LGU FARMC	Y2 – Y5	2,000,000.00
3. Intensify MCS activities	# of MCS activities	600 MCS activities conducted	LGY	Y3 – Y5	20,000,000.00

Goal 3. Resource users are empowered, compliant, and covered with social security.

Objective 3.1.

Y1, Assess, identify and establish appropriate livelihood (Fisheries and non-fisheries) intervention and financial opportunity.

Management actions:

1. The TWG will assess existing livelihood and financial opportunities from other NGA (DA, DOLA, DENR, TESDA, DSWD, DTI, DOT.)
2. The TWG is to consolidate and establish livelihood and financial opportunities appropriate and accessible to the needs of Fisherfolk and in response to the implementation of HCR and HCM.

Outcome:

1. Appropriate livelihood interventions for displaced and affected Fisherfolk were identified and sustained and increased the income level of the Fisherfolk.

Key activity framework



Key activities	Key indicators	Benchmark	Responsible group	Timeframe	Indicative Budget (Php)
1. Conduct a workshop on the formulation of the evaluation tool	# of workshops # of evaluation tool developed	1 workshop conducted 1 evaluation tool developed	FMA TWG	Y1	400,000.00
2. Coordination and meeting with possible partners for livelihood and financial opportunity	# of coordination and meetings	4 consultation meetings	BFAR, LGU, NGOs, other NGAs	Y1	400,000.00
3. Conduct of Partnership Forum for the presentation of Livelihood and Financial services/project	# of forums conducted	1 forum conducted	BFAR, LGU, NGOs other NGAs	Y1	400,000.00
4. Workshop and write shop in the Establishment of livelihood and financial opportunity for Fisherfolk; includes: Organizing, Strengthening, and Enterprise development	# of workshop and writeshop	4 workshop and writeshop conducted	BFAR and key TWG member	Y1	400,000.00
5. Develop a convergence program for livelihood and financial opportunity for Fisherfolk in FMA 12 includes: Organizing, Strengthening, and Enterprise development	# of livelihood and financial opportunity program developed	1 livelihood and financial opportunity program developed	BFAR and TWG	Y2	400,000.00
6. TWG to Present and propose to the MB the established and developed convergence livelihood and financial opportunity; MB to adopt and approve	# of livelihood and financial opportunity program approved and adopted	1 livelihood and financial opportunity program approved and adopted	MB	Y2	400,000.00

Objective 3.2:

In Y1, develop partnership programs to support FMA livelihood and financial intervention.

Management actions:

1. The TWG to conduct an assessment of existing livelihood and financial partnerships in FMA 12
2. Create a convergence partnership program in FMA 12 though TWG

Outcome:

1. Created and Strengthened partnerships in Livelihood and financial programs in FMA 12
2. Sustainable livelihood and Increased income level of the Fisherfolk

Key activity framework

Key activities	Key indicators	Benchmark	Responsible group	Timeframe	Indicative Budget (Php)
1. Conduct a workshop on the formulation of the evaluation tool	# of Evaluation Tool formulated	1 of Evaluation Tool formulated	TWG BFAR	Y1	400,000.00
2. Assessment of existing livelihood and financial partnership program in FMA 12; includes meeting and coordination.	# livelihood and financial partnership program determined	4 livelihood and financial partnership program determined	TWG BFAR	Y1	400,000.00
3. TWG to present and propose the created livelihood and financial partnership program in FMA 12 to MB	# of proposed livelihood and financial partnership program	1 of proposed livelihood and financial partnership program	TWG BFAR	Y1	800,000.00
4. Institutionalization of partnership thru a MOA/MOU	# of MOA/MOU executed	1 of MOA/MOU executed	BFAR, NGA, NGOs and LGU	Y1	400,000.00
5. Budget appropriation for the livelihood and financial program by partners	% of funds allocated and disbursed	20% of funds allocated and disbursed	BFAR, NGA, NGOs and LGU	Y1	

Objective 3.3:

Y2-Y5 Implement developed livelihood and financial program with M&E on the impact of the intervention.

Management actions:



1. Implement developed livelihood and financial program in FMA 12.
2. Organized, Strengthened, enterprise FAs in FMA 12.
3. Impact assessment to the Socio-economic condition of fisherfolk on the intervention.

Outcome:

1. Self-sustained, Capacitated and Strengthened FAs in FMA 12

Key activity framework

Key activities	Key indicators	Benchmark	Responsible group	Timeframe	Indicative Budget (Php)
1. Conduct Training needs assessment for fisherfolk and conduct capacity building for MSME	# TNA report	1 TNA report	BFAR, LGU, NGOs and NGAs	Y3	500,000,00
2. Conduct organizing, capability, and strengthening activities for the communities	# of FA organized and capacitated	85 of FA organized and capacitated	BFAR, LGU, NGOs and NGAs	Y2 – Y5	2,000,000.00
3. Implementation of appropriate livelihood and financial opportunities for fisherfolk	# of livelihood program distributed	4 of livelihood program distributed	BFAR and TWG	Y2 – Y5	10,000,000.00
4. Identify and determine the fishing community model with successful FAs and sustained livelihood.	# of organized, strengthened and developed enterprise	4 of organized, strengthened and developed enterprise	TWG and SAG; MB	Y3 – Y5	2,000,000.00
5. TWG and SAG will create an M&E tool to assess the impact of livelihood, financial and capacity-building intervention in FMA 12; MB will adopt and approve the tool.	# of M&E tool developed # of tool adopted and approved	1 of M&E tool developed 1 of tool adopted and approved	BFAR, LGU, NGOs and NGAs	Y2	1,500,000.00



Implementation Schedule Arrangements

Table 11. Implementation schedules of the Key Management Actions

Item	Activities	Y1	Y2	Y3	Y4	Y5
1.	Generate and implement policies on harvest control measures and references points.					
2.	Strict implementation of existing fishery laws to prevent illegal, unreported, unregulated fishing (IUUF).					
3.	SAG (in consultation with MB) to determine related fisheries stock assessment studies of top commodity species for science-based policy recommendations.					
4.	Establish control measures for regulating fine mesh nets.					
5.	Adopt policies that will reduce juvenile fish catch.					
6.	Strengthen MCS activities in the chain of market, trade and transport.					
7.	Strengthen IEC dissemination.					
8.	Strengthen Inter-Agency linkages.					
9.	Encourage LGUs to maximize FISHCA, FAO 263, and FMA Framework Plan compliance.					
12.	BFAR to adapt and implement the training program for LGUs and stakeholders modified for FMA 12 current context.					
13.	Determine the spatial distribution of critical marine habitat.					
14.	Establish critical marine habitat protected areas for coral reefs, mangrove forests, seagrass beds, and beach forests, contributing to at least 15% of the total area.					
15.	Strengthen the management and monitoring scheme of locally managed MPAs / FS thru the LGU network at the FMA-wide level.					
16.	Adopt policies that will reduce the bycatch of endangered, threatened, and protected marine species.					
17.	The TWG will assess existing livelihood and financial opportunities from other national government agencies.					
18.	The TWG to conduct an assessment of existing livelihood and financial partnerships in FMA 12.					
19.	Create a convergence partnership program in FMA 12 though TWG.					
20.	Implement developed livelihood and financial program in FMA 12.					
21.	Organized, Strengthened, enterprise FAs in FMA 12.					
22.	Impact assessment to the Socio-economic condition of fisherfolk on the intervention.					

Monitoring and Evaluation

The Technical Working Group (TWG) and Science Advisory Group (SAG) will play a crucial role in implementing, monitoring, reviewing, and evaluating the framework plan. Consistent assessment of progress in implementing the framework plan and its impact on fisheries stock will lead to continual re-examination and improvement of programs and policies. Regular monitoring and data collection are imperative to ensure effective management actions and meet specified management targets. The following programs should be prioritized.

- Consultation meetings with TWG and SAG on the performance indicators of fishery stocks.
- Consolidation of evaluation results, such as MEAT scores.
- Preparation of annual progress reports on plan implementation.
- Annual monitoring of implementation
- Review and evaluation of plan effectiveness every five years.

Communication Strategy

The Technical Working Group will lead the preparation and implementation of communication strategies.

Regional Level Communication Strategy

The Regional Level Communication Strategy involves working with stakeholders at the regional level. This process will involve a series of stakeholder consultative meetings in the four (4) regions to provide feedback on the FMA framework plan, MB Resolutions, and approved harvest control measures. The stakeholders to be engaged at this level include but are not limited to the following: Integrated Fisheries and Aquatic Resources Council, Regional Agricultural and Fishery Council, relevant NGAs, Local Government Units, Non-Government Organizations, and Fisherfolk Organizations.

Sectoral Level Communications Strategy

The key purpose of the sectoral level campaign is to provide regular feedback on the FMA framework plan and its progress to various fishery sectors. The approach will involve communication to inform and gather information through a bottom-up approach.

Key Activities

- Stakeholder forums in all four Regions.
- Stakeholder consultations; FGD, Sectoral fisheries dialogues
- Information, education campaign on FMAs thru social media platform and FMA websites
- Campaign against IUU fishing.



Institutional Framework in Fisheries Management Area 12

Fisheries Management Board

A management body shall be established for each FMA, which can be in the form of a Council or Board, depending on the needs and appropriateness. At a minimum, the Council or Board shall be chaired by the Regional Director of the Bureau of Fisheries and Aquatic Resources and co-chaired by a representative from the Local Chief Executives of the coastal local government units. The board members shall be composed of key stakeholders from the municipal fishing, commercial fishing, aquaculture sector, traders/market organizations/processors, academe, indigenous people, non-government organizations, and relevant National Government Agencies. Furthermore, a representative from the Integrated Fisheries and Aquatic Resources Management Council (IFARMC) and Protected Area Management Board shall automatically have a seat on the board in case of NIPAS Areas within FMA.

Responsibilities of the Management Board

The MB is responsible for formulating internal operational rules and regulations for the FMA and setting policies and programs for the FMAs, including the development of the FMA Plan, establishment of the Reference Points and Harvest Control Rules, and other conservation and management measures. Each FMA shall decide and agree on financing mechanisms and funding requirements for specific actions in the FMA Plan.

In consultation with stakeholders, the minimum functions of the MB shall be the following:

- Develop and implement an EAFM Plan or FMA Plan to guide the actions of BFAR, LGUs, and other stakeholders within the established FMA;
- Establish RPs for key species found in the FMA based on scientific studies from the National Stock Assessment Program (NSAP) of the BFAR-RFOs and NFRDI, as well as academic and research institutions at the national and regional levels;
- Adopt Harvest Control Rules and other conservation and management measures based on the established Reference Points;
- Ensure that plans, programs, management measures, and ordinances are consistent with the FMA plan.

Scientific Advisory Group

The Management Board shall establish a scientific advisory group (SAG) among scientists, researchers, and technical representatives from BFAR Regional Offices through its National Stocks Assessment Program (NSAP), academic institutions, LGUs, commercial and municipal fishing sector, aquaculture, and NGOs.

Role of Scientific Advisory Group

The primary role of the Scientific Advisory Group (SAG) is to provide technical advice to the Management Board based on the best available data. The SAG members shall ensure transparency in their studies and proposals and that they will be based on scientific studies, the best available evidence, and the precautionary principles. The policy recommendations of the SAG shall be science-based and independent from sociopolitical and economic pressures.



Technical Working Group

The Management Board may create sub-groups such as but not limited to committees, technical working groups, secretariat, and other relevant groups, as may be necessary. The creation of sub-groups is to support the Management Board in various technical tasks and concerns for the efficient and effective delivery of the FMA programs and activities.

Science Provider

Science providers comprise but are not limited to the following: Research Centers/ Institutions from the National Government Agencies, the academe, the NFRDI, BFAR, and other organizations, among others. All the scientific information, data, studies, and research shall include both natural and social science and traditional ecological and local fishers' knowledge. Upon review and deliberation of the SAG, the science provided will be vital in the MB's management, policy, and decision-making.

The science of fisheries management includes the compilation and assessment of data on key species and fishing grounds in FMA. Thus, the NFRDI is critical in providing the necessary scientific information. The NFRDI's National Stock Assessment Program will generate RPs of key species within the FMA. Furthermore, the NFRDI may recommend the HCRs and HCMs based on the RPs.



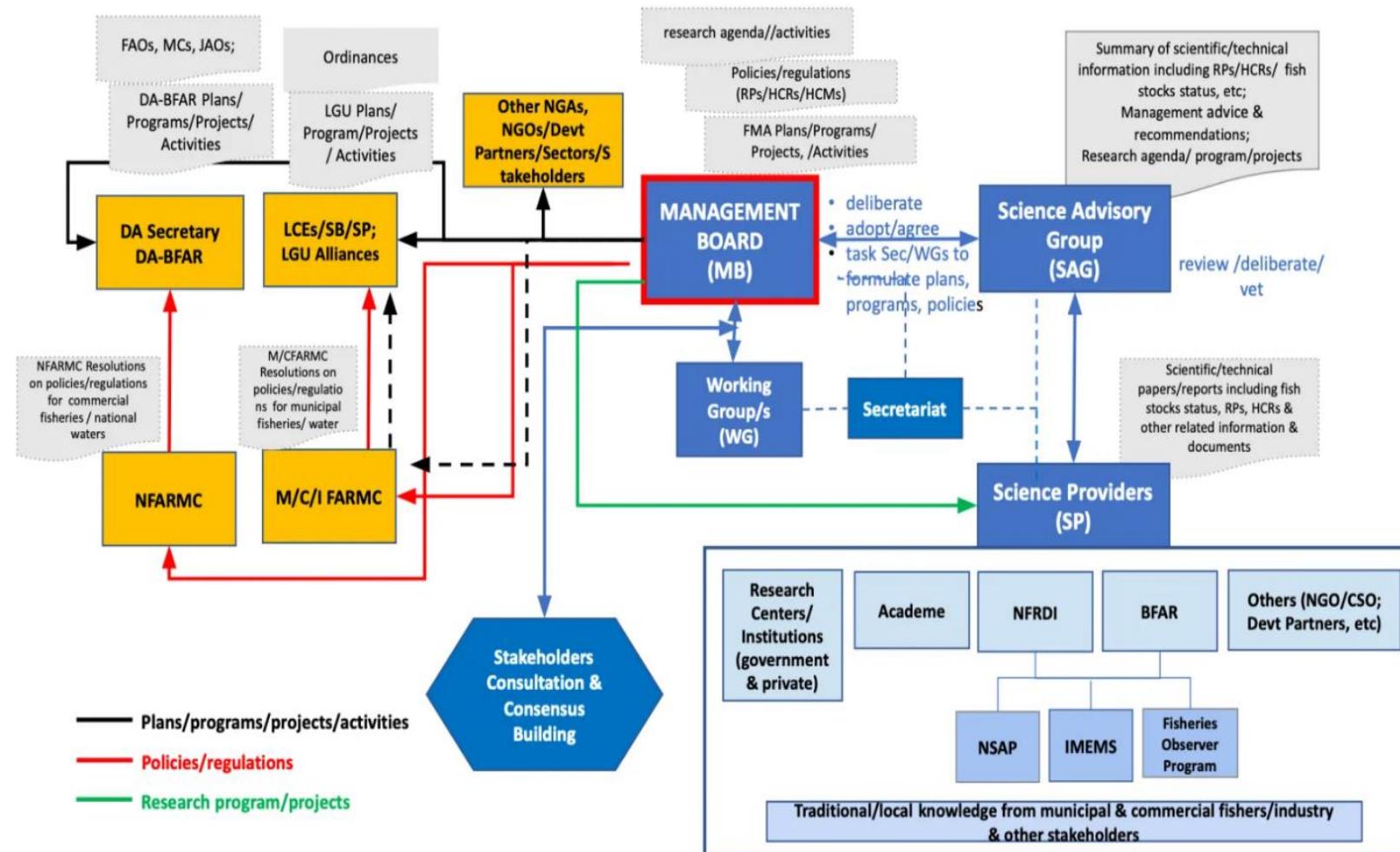
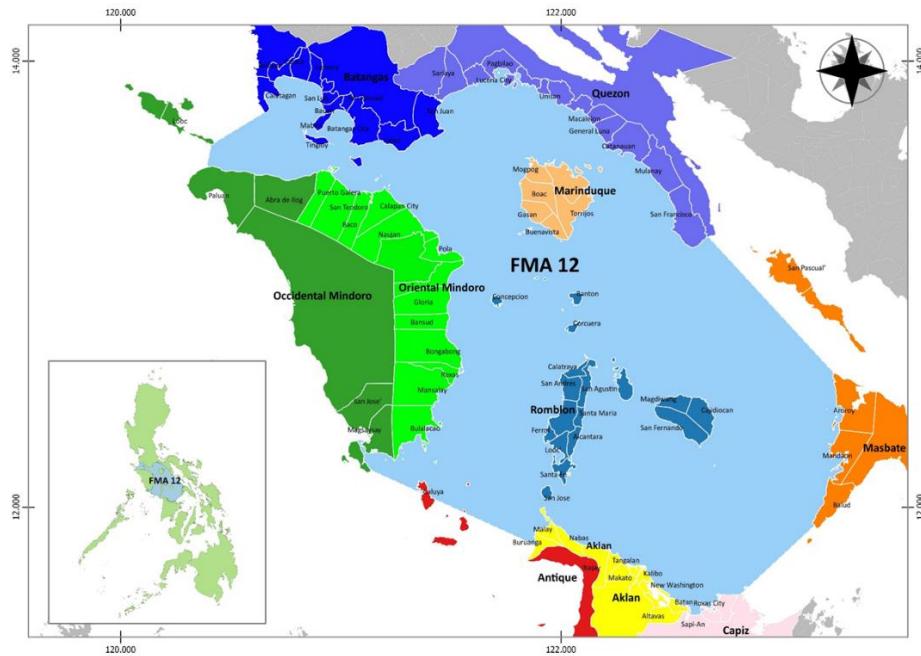


Figure 26. Functional Relationship of Fisheries Management Bodies Diagram

ANNEXES

Annex 1. Technical Description of Fishery Management Area 12



POINTS	WGS84 DATUM		REMARKS
Beginning at 1	12° 17' 38.4351" N	121° 04' 38.6396" E	= to point 5 of FMA-05
thence 2	12° 18' 03.7407" N	121° 06' 03.8086" E	= to point 4 of FMA-05
thence following the coastline of Oriental Mindoro to point 3			
thence 3	13° 31' 38.6881" N	120° 24' 06.7072" E	= to point 3 of FMA-05
thence 4	13° 37' 36.8733" N	120° 25' 21.6339" E	= to point 2 of FMA-05 = to point 2 of FMA-06
thence 5	13° 46' 10.2747" N	120° 39' 20.7971" E	= to point 1 of FMA-06
thence following the southern coastline of Luzon Island to point 6			
thence 6	13° 11' 14.3305" N	122° 38' 24.1077" E	= to point 4 of FMA-07
thence 7	12° 36' 02.0510" N	123° 14' 06.9635" E	= to point 3 of FMA-07
thence following the western coastline Masbate Island to point 8			
thence 8	11° 54' 41.5104" N	123° 09' 23.2566" E	= to point 3 of FMA-11
thence 9	11° 36' 49.7534" N	122° 42' 54.4038" E	= to point 3 of FMA-11
thence following the northern coastline of Panay Island to point 10			
thence 10	11° 52' 08.5795" N	121° 52' 49.6995" E	= to point 9 of FMA-05
thence 11	12° 03' 14.7876" N	121° 24' 18.4076" E	= to point 8 of FMA-05
thence following the east-north-west coastline of Semirara Island to point 12			
thence 12	12° 04' 23.5527" N	121° 21' 24.1333" E	= to point 7 of FMA-05
thence 13	12° 09' 37.5263" N	121° 08.2809" E	= to point 6 of FMA-05
thence following the eastern coastline of Ilin Island to point 1			

This technical description is subject and pursuant to the exclusion clause of section 40 Rule 40.1 of the Implementing Rules and Regulations (IRR) of RA 8550, otherwise known as the Philippine Fishery Code of 1998, and as amended by RA 110654, otherwise known as an Act to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing, amending RA 8550, and for other purposes, the technical description of Fishery Management Area-Twelve (FMA-12) are bounded by the general coastline and the lines described as follows:

Annex 2. The Fisheries Management Area 12 Management Board

FMA 12 MANAGEMENT BOARD



Annex 3. The Fisheries Management Area 12 Science Advisory group

FMA 12 SCIENCE ADVISORY GROUP



Appendix 4. FMA 12 EAFM Technical Working Group / Contributors in the Development of FMA Framework Plan CY 2024-2028

1. Dr. Sonia G. Olaivar-Eloso	BFAR 4A, FMRED
2. Edmundo M. Amican, III	BFAR 4A, FMRED
3. Allan U. Castillo	BFAR 4A, PFO Quezon
4. Krsytine O. Escosura	BFAR 4A, PFO Batangas
5. Catherine N. Amican	BFAR 4A, PFO Batangas
6. John Ernest Lauriles	BFAR 4A, PFO Quezon
7. Cyruz T. Saraza	BFAR 4A, FMRED
8. Jomar L. Villamor	BFAR 4A, FMRED
9. Gemaica C. Moloboco	BFAR 4A, FMRED
10. Jesreel M. Narido	BFAR 4A, FMRED
11. Mark Joseph G. Culaste	BFAR 4A, FMRED
12. Marvin Rañada	BFAR MIMAROPA, FMRED
13. Brenda S. Labiaga	BFAR MIMAROPA, FMRED
14. Alfonso Dela Torre	BFAR MIMAROPA, FMRED
15. Claress S. Jamilla	BFAR MIMAROPA, FMRED
16. Ariel U. Pioquinto	BFAR 5, FMRED
17. Diomedes P. Ballebar	BFAR 5, PFO Masbate
18. Nonie P. Enolva	BFAR 5, FMRED
19. Richmar B. Villas	BFAR 5, PFO Masbate
20. Lorna Angor	BFAR 6, FMRED
21. Ryan O. Doronilla	BFAR 6, FMRED
22. Maria Aimee A. Sobrevega	BFAR 6, PFO Iloilo
23. Edwin Barrientos	BFAR 6, PFO Capiz
24. Alvin D. Beltran	BFAR 6, PFO Capiz
25. Kima Karla H. Cedo	BFAR Central Office, CFD
26. Ma Bernadette Christina Lintag	BFAR Central Office, FRMD
27. Rochelle P. Amboya	Provincial Government of Batangas
28. Ma. Sherylyn P. Barot	Provincial Government of Batangas
29. Grace Anne V. Perlas	Provincial Government of Aklan,
30. Joey I. Dela Cruz	Provincial Government of Capiz
31. Marilyn Alcanices	Provincial Government of Oriental Mindoro
32. Darwin B. Altabano	Provincial Government of Masbate
33. Abraham Manacho	Provincial Government of Masbate
34. Jorge V. Umali Jr.	Tambuyog Development Center
35. Pacifico D. Beldia II	Malampaya Foundation Inc.

Annex 5. About the FMA 12 Logo



The logo represents the ecological system of a sustainably governed resource management area that empowers significant stakeholders sharing equitable benefits in the Fisheries Management Area 12.

The logo is shaped like a circle to show the ecological system and its components, including the water, which represents life and holds all creatures (fish and other aquatic organisms) living beneath its surface; individuals who utilize the resources and are responsible for the welfare of the marine environment, and the management system is the extent of how the policies are being implemented to address the issues and concerns in the fisheries management area.

	Blue – Blue is known for its authoritative appeal and ability to evoke success and security.
	Dark Blue – It evokes feelings of power and authority rather than the ideas of relaxation and peace that go along with more standard shades of blue. Darker shades of blue tend to lean more toward ideas of authority and importance.
	Green – Green is associated with nature and growth. It represents hope for a better future. It is the color of balance and renewal, primarily associated with success.
	Orange – Orange suggests cheerfulness and optimism. It is spontaneous and dynamic. Orange is uplifting, offering emotional endurance and igniting motivation in dark times. It is the color of encouragement, success, and social communication.

Detailed explanation of the elements used in the logo are as follows:

1. **Water** – Water represents life. It is associated with the flow of life, which sometimes may be challenging or beautiful. Like how fishery managers manage the area, it will significantly affect the lives beneath and surrounding the water, either positively or negatively.
2. **Fish** – Fish are commonly associated with the water symbol, which denotes stability, balance, and tranquility. It is also a metaphor for deeper awareness and intelligence and thought processes. The fish can also relate to how the decision-makers should see every aspect of the Fishery Management Area to develop an effective management strategy.
3. **Humans/Individuals** – The Human represents the significant stakeholders that share the responsibility to maintain the ecological well-being and sustainability of the area, as they will equally benefit from the success of implemented fisheries management and imposed regulations and policies in the area. The fisheries authorities serve as the support system to achieve the benefits of a better living for a wide range of stakeholders.
4. **Leaves** – The leaves symbolize hope, abundance, growth and development, and life. It brings hope to everyone that the fish in the ocean will be abundant to sustain people's needs and develop the implementation system of policies and regulations within the area of jurisdiction.
5. **Area** – The element used to represent the area or "A" in the Fisheries Management Area (FMA) is shaped like a fish, and in the center, we can find the map of the FMA 12.



Annex 6. Fisheries Management Area 12 Management Board
Resolution No. 2022-10
Series Of 2022

FMA 12 MB
Resolution No. 2022-10 Series of 2022



Republic of the Philippines
Department of Agriculture
Bureau of Fisheries and Aquatic Resources
FISHERIES MANAGEMENT AREA 12 MANAGEMENT BOARD
Purok 3, Brgy. Bambang, Los Baños, Laguna
(049)-554-8183
fma12mb@gmail.com

291

**AN EXCERPT FROM THE MINUTES OF 4TH QUARTER REGULAR MEETING OF
FISHERIES MANAGEMENT AREA 12 MANAGEMENT BOARD HELD IN BLENDED
MANNER AT BFAR REGIONAL OFFICE IV-A, LOS BAÑOS, LAGUNA ON 06
DECEMBER 2022**

PRESENT:

MR. SAMMY A. MALVAS – MB Chairperson
HON. MATT ERWIN V. FLORIDO – Co-Chairperson
MR. RODRIGO A. DE JESUS – Member, Municipal Fishing Sector Representative
MS. MELANIE P. CATAPANG – Member, Commercial Fishing Sector Representative
DR. YASMIN H. PRIMAVERA-TIROL – Member, Academe Sector Representative
MS. ROSALIE G. RECARO – Member, NGO Sector Representative
MR. PACIFICO D. BELDIA II – Member, NGO Sector (Alternate) Representative
MR. WILFREDO A. HERNANDEZ – Member, IFARMC (Balayan Bay)
MR. JOSEPH GASCON – Member, PAMB (PENRO BATANGAS)
PCPT EDWIN A. CABALAG – Member, NGA Sector Rep. (PNP-Maritime Unit)
CG LTJG ANGELINE VICTORIA A. MADRONA – Representative for NGA Sector (PCG)
MR. CUSTODIO L. BALAOING JR. – Member, NGA Sector Representative (PFDA)
MR. MICHAEL CASTO A. RAS, II – Member, NGA Sector Representative (DILG)

ABSENT:

ATTY. IMMANUEL L. SODUSTA – Member, Aquaculture Sector Representative
MS. DYNA V. BONITES – Member, Marketing/Processor Sector Representative
MR. OLIVER S. TAMBOON – Member, Indigenous People Representative
MR. EDDY P. DE MESA – Member, IFARMC (Tayabas Bay)

RESOLUTION NO. 2022-10
SERIES OF 2022

**A RESOLUTION ADOPTING THE FISHERIES MANAGEMENT AREA 12
FRAMEWORK PLAN 2023-2027**

WHEREAS, Section 2 (f) of Republic Act (RA) No. 8550, as amended by RA No. 10654, declared that it is the policy of the State: To adopt the precautionary principle and manage fishery and aquatic resources, in a manner consistent with the concept of an ecosystem-based approach to fisheries management and integrated coastal area management in specific natural fishery management areas, appropriately supported by research, technical services and guidance provided by the State;

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DR. SONIA G. OLAIVAR-ELLOSO
CHIEF, FMRED

Page 1 | 3



WHEREAS, Section 1 of Fisheries Administrative Order (FAO) No. 263, s. 2019, provides that: The objective of this Order is to establish FMAs and provide a science-based, participatory and transparent governance framework and mechanism to sustainably manage fisheries in such areas, consistent with the principles of EAFM anchored on food security, and supplementary livelihood for poverty alleviation consistent with the objectives of the Amended Fisheries Code;

WHEREAS, pursuant to Sections 6 and 7 of FAO No. 263, s. 2019, the FMA Management Body (MB) shall be responsible for setting the policies and programs for the FMAs concerned, including the development of the FMA Plan, the establishment of Reference Points and Harvest Control Rules as well as other conservation and management measures and the FMA concerned MB shall ensure that plans, programs, management measures and ordinance are consistent with FMA Plan;

WHEREAS, on August 3-4, 2021, the Fisheries Management Area 12 Management Board and Bureau of Fisheries and Aquatic Resources Region 4-A (CALABARZON), Region 4-B (MIMAROPA), Region 5 and Region 6 conducted an Ecosystem Approach to Fisheries Management Start-Up Planning Workshop which specifically aimed to: (1) Orient the stakeholders on the principles of EAFM; (2) Gather common issues and threats in FMA 12; (3) Determine the information and data needed for FMA Planning; (4) Identify the stakeholders to be part in the FMA Planning; and (5) Create the EAFM Technical Working Group;

WHEREAS, on September 15-24, 2021, a stakeholder engagement workshop was conducted by the EAFM Technical Working group to identify the most pressing issues and concerns of the stakeholders, categorize the data needs and gaps, and analyze the stakeholder groups at the FMA level;

WHEREAS, on September 30 – October 26, 2021, a planning workshop was facilitated by the lead region to collate relevant data needed for the framework, prepare the working document, and assigned tasks to the technical working group;

WHEREAS, on May 25, 2022 the FMA 12 Planning Workshop was held to validate data gathered, prioritize the issues and problems, and identify management actions which will constitute the FMA 12 Management Framework;

WHEREAS, the FMA 12 Management Framework Plan seeks to address priority issues considered to be trans-boundary in scale (across Regions IV-A, MIMAROPA, V and VI encompassing the 10 provinces) and require high-level coordination among national agencies, local government units and stakeholder groups. These issues include: (1) declining fish catch; (2) prevalence of IUU fishing, and (3) insufficient and unsustainable livelihood programs for marginal fishers. Such that, the Framework also takes cognizance and supports actions to address other local issues, such as waste management, quarrying, coastal habitat degradation, poor science-based fisheries policy etc., that are area-specific and/or primary concern of local institutions;

WHEREAS, on December 06, 2022, during the FMA 12 MB regular meeting for the last quarter of 2022, the FMA 12 MB approved the adoption of the FMA 12 Management Framework Plan (Annex A) and hereby directing the FMA 12 EAFM Technical Working Group through the FMA 12 Secretariat to finalize the framework as deemed necessary.

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DR. SONIA G. OLAIVAR-ELLOSO
CHIEF, FMRED

Page 2 | 3



FMA 12 MB
Resolution No. 2022-10 Series of 2022

NOW THEREFORE, PREMISES CONSIDERED, BE IT RESOLVED, as it is hereby resolved, that the FMA 12 Management Framework Plan is approved for adoption.

RESOLVED, FURTHER, to request the Secretariat of FMA 12 Management Board and the BFAR Region IV-A FMRED staff, to cause the dissemination of the framework by posting at the BFAR Region IVA website and such other practicable means for the information of stakeholders and the general public.

APPROVED UNANIMOUSLY.

We hereby certify to the correctness of the foregoing resolution, an excerpt of the minutes of the FMA 12 MB meeting held in blended manner at BFAR 4A Regional Office, Los Baños, Laguna on the 6th of December 2022.

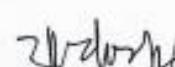
Certified True and Correct:


EDMUNDO M. AMICAN, III
Secretariat Member, FMA 12

Attested:


DR. SONIA G. OLAIVAR-ELLOSO
Head Secretariat, FMA 12

APPROVED:


SAMMY A. MALVAS
Chairperson, FMA 12

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DR. SONIA G. OLAIVAR-ELLOSO
CHIEF, FMRED

Page 3 | 3



Annex 7. National Agency in Fisheries Management Board

1. Department of Interior and Local Government
2. Department of Environment and Natural Resources
3. Philippine National Police – Maritime Group
4. Philippines Coast Guard
5. Philippine Fisheries Development Authority







Department of Agriculture
Bureau of Fisheries and Aquatic Resources 4-A
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