

13 BFAR




ANNUAL REPORT

2020

OUR VISION

An Institution of excellence in sustainable fisheries management and innovative services contributing to the nation's food security and improving fisherfolk quality of life.





To ensure sustainable use
of fisheries and aquatic resources
by empowering fisherfolk towards
productivity and resiliency.

AGRICULTURE



OUR MISSION

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Since the birth of the Bureau of Fisheries and Aquatic Resources (BFAR) in 1974, our mission has always been the development, improvement, management and conservation of the country's fisheries and aquatic resources. Even the fiscal year 2020, filled as it is with unexpected challenges, did not hinder the Bureau to continue to push through the hurdles and deliver the services needed by our stakeholders. Early in the year, we faced the threat of the corona virus disease (COVID-19) which eventually led us to perform our job in the "new normal". Despite this, we strived to deliver our services to our clients. Implementation of our regular programs, the Special Area for Agricultural Development (SAAD) Program, and the Fisheries, Coastal Resources and Livelihood (FishCORAL) Project continued.

The Kadiwa ni Ani at Kita Program for fisheries was launched to help our fisherfolk sell their produce and enable consumers to access fresh and affordable fish especially during community quarantine situations.

Aquaponics system was also demonstrated to promote urban agriculture and encourage city-dwellers to plant, plant, plant, and at the same time, culture fish in the comfort of their homes.

As frontliners in-charge of protecting our fisheries resources, we continued our fight against illegal, unreported and unregulated fishing to better protect the men who fish, fish, fish amidst the pandemic.

Thus, with honor and gratitude, allow me to present to you the fruits of our hardwork and resolve during this challenging year. May this be instrument for us to forge stronger partnerships with people and organizations involved in the development of the fisheries industry and the fisherfolk's prosperity.


VISA JAN-DIMERIN, CESO V
Regional Director



The year 2020 was truly another challenging year for the Regional Bureau. During this time of pandemic, we have faced the pressure brought by the increasing demand for safe and affordable food fish. In spite of this, we emerged victorious in the pursuit of our mission to improve fisheries production and contribute to the nation's food security.

Allow me to express my heartfelt gratitude to the Local Government Units, other regional line agencies and the private sector, who are our key players and partners towards inclusive growth. Have it not for your constant support and dedication, we would not be able to realize and sustain our activities and interventions throughout the year. My appreciation also goes well to the hardworking and dedicated personnel of BFAR Caraga for another fruitful year. May we all continue to be inspired in our efforts to ensure sustainability of the fisheries sector. I personally believe that with our unity and teamwork, we will surmount any obstacle that will come along the way.

It is with great pleasure and pride to present the accomplishments of the DA-BFAR Caraga for these are the fruit of our collaborative efforts towards the development of our region.


EDGARDO P. BALAMBAO
Assistant Regional Director



A YEAR'S OVERVIEW OF
BFAR

FISHERIES DEVELOPMENT PROGRAM



CAPTURE FISHERIES

The Capture Fisheries Section of the Bureau provides the over-all technical advisory and support services related to fishing technology to various stakeholders. In addition to technical assistance are programs and projects that would benefit the marginalized fishermen and encourage the sustainable utilization of the region's wild fishery resources.

FRP BOAT DISTRIBUTION

In 2020, the FB Pagbabago Livelihood Development Program distributed 12 units of 30-footer motorized boat and 50 units non-motorized boats to various fisherfolk organizations throughout the region. These boats were made from fiber-reinforced plastic which is more durable than traditional wooden boats.



Republic of the Philippines
 Department of Agriculture
 BUREAU OF FISHERIES AND AQUACULTURE
 MUNICIPALITY OF SAN AGUSTIN
 Special Areas for Agricultural Development (SAAD) Program
 Name of Project: ESTABLISHMENT OF ONE (1) UNIT BANGCUS CULTURE IN FISH PEN
 Implementing Agency: LGU - SAN AGUSTIN
 Beneficiary Group: MARIKINA FISHERFOLK ORGANIZATION (MFO)

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 Implementing Agency: BIRAC, RFO #3, CALADA
 Beneficiary Group: MARIKINA FISHERFOLK ORGANIZATION (MFO)



FISHING GEAR/ PARAPHERNALIA DISTRIBUTION

The distribution of 3,000 units of fishing gears/paraphernalia was also conducted. A total of 400 units gill net, 1,000 units hook and line, 313 units fish pots, 221 units squid jiggers, 50 units tuna handline, 650 crab pots, and 280 spear fishing gadgets were provided to 740 fishermen beneficiaries in the region. The project is aimed to provide livelihood intervention, promote responsible fishing through the use of selective and easy to operate gears, and reduce illegal fishing such as the use of fine mesh net, explosives and poisonous substances.

| Fishing Boat/Gear | No. of Fishing Boats/Gears Distributed in 2020 | | | | | |
|----------------------------|--|------------|--------------|------------|------------|--------------|
| | ADN | ADS | PDI | SDN | SDS | Total |
| Gill net | 86 | 64 | 90 | 94 | 66 | 400 |
| Hook & line | 256 | 84 | 248 | 304 | 108 | 1,000 |
| Fish pot | 50 | 90 | 63 | 60 | 50 | 313 |
| Squid jigger | | | 100 | 121 | | 221 |
| Tuna handline | | | | 50 | | 50 |
| Crab pot | 150 | | 500 | | | 650 |
| Spear fishing gadget | | | 80 | | 200 | 280 |
| Total (by Province) | 542 | 238 | 1,081 | 629 | 424 | 2,914 |



AQUACULTURE

Aquaculture has supplied 21% of the total fisheries production of the region in the past five years. It significantly contributes to food security, providing income and employment and as a reliable supply of in-demand and affordable aquatic products. Thus, efforts to promote aquaculture growth were made.



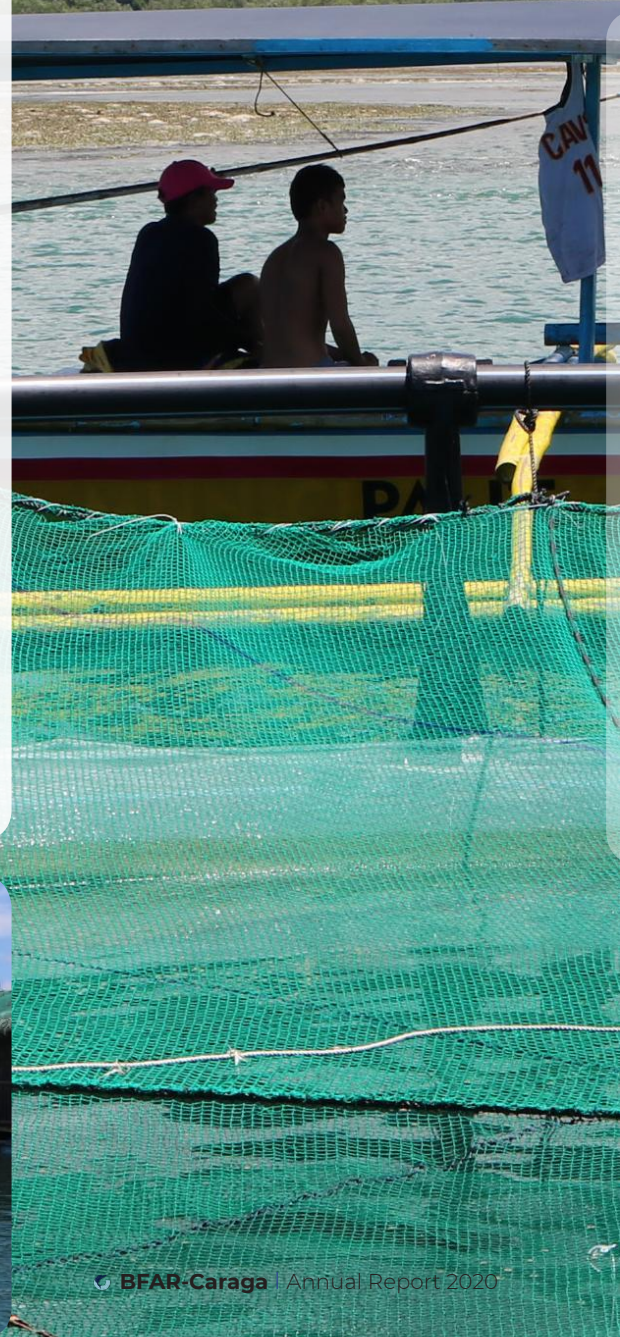
BROODSTOCK DEVELOPMENT AND MAINTENANCE

In support to aquaculture development, three (3) BFAR Technology and Stations and one (1) multi-species hatchery continues to operate to help meet the fingerlings requirement of the region.

The Cortes Multi-species Hatchery in Cortes, Surigao del Sur continues to maintain and develop a total of 228 milkfish broodstock, which is aimed to bolster production of milkfish fingerlings in the region. Matured broodstock in the hatchery are continuously being observed for breeding activities.

The Kitcharao Technology Outreach Station in Agusan del Norte, which serves as the hatchery for freshwater species, also maintained a total of 800 carp and 4,974 tilapia breeders. Additional 69,261 pieces of GET-EXCEL tilapia were obtained for broodstock development.

The Placer Technology Outreach Station in Surigao del Norte and the Masao Aquaculture Center in Butuan City also continues to develop additional milkfish broodstock to further support production enhancement activities of the Bureau.



FINGERLINGS/SEEDSTOCK PRODUCTION AND DISTRIBUTION

In an effort to supply good quality fingerlings in the region, production and distribution activities were carried out. A total of 7 million tilapia and 1.94 million carp fingerlings were produced by Kitcharao Station. Of which, 6.31 million (90%) tilapia and 1.4 million (72%) million carp were distributed to 1,567 fish farmers throughout the region. Carp was also dispersed in strategic areas under the Balik Sigla sa Ilog at Lawa (BASIL) Program for stock enhancement purposes.

Similarly, the Placer Station and Masao Aquaculture Center, also produced a total of 1,000,000 milkfish fingerlings. The fingerlings will be distributed/sold to milkfish growers throughout the region.



SEAWEED DEVELOPMENT PROGRAM

The Seaweed Development Program focuses on the enhancement and management of seaweed resources. Under this banner, the BFAR operates three (3) seaweed nurseries located in Cagdianao, Province of Dinagat Islands and Barobo and Lianga, Surigao del Sur.

The nurseries produced a total of 30,350 kilograms of seaweed propagules in 2020. In addition, 32,000 kilograms of seaweed propagules were procured and distributed to other seaweed farmers in Surigao del Norte and Dinagat Islands. These were distributed to 161 fisherfolk households/associations willing to engage in seaweed production.

Moreover, 58 sets of farm implements were also provided to seaweed farmers. Each set is composed of new lines and buoys for longline culture activities of the fisherfolk.





MARICULTURE PARKS

Mariculture Parks are marine water areas provided with appropriate infrastructures such as mooring systems for floating cages, fish landings and other support facilities and services for producing, processing, transporting and marketing of fish. It is aimed to reduce poverty in the coastal areas and promote marine fish culture as an alternative source of livelihood, particularly for marginalized fishermen who are dependent on the wild for food.

Throughout the years, the Bureau has helped partner Local Government Units and fisherfolk organizations in managing and maintaining established mariculture parks in the region. For 2020, the Bureau has maintained two (2) mariculture parks located in Barobo, Surigao del Sur and Brgy. Nabago, Surigao City. Meanwhile, support services were also provided to LGU-established mariculture areas such as the technology demonstration using high density polyethylene (HDPE) cages in Basilisa, Dinagat Islands; Dapa, Surigao del Norte; and Cantilan, Surigao del Sur.



LEGISLATED HATCHERIES

The establishment of legislated hatcheries in Caraga Region is underway in 2020. Construction of multi-species hatcheries are designed for research, breeding and production of freshwater and marine species to address the demand for fingerlings and seedstock in the region.

There are eight (8) legislated hatcheries approved for Caraga Region with the following progress of development:

| Republic Act | Facility | Location | Updates/Status as of December 2020 |
|--------------|-----------------------------------|--|--|
| 10787 | Marine Multi-species Hatchery | Lingig, Surigao del Sur | On-going Phase 1 and Phase 2 construction. |
| 10813 | Freshwater Multi-species Hatchery | Jabonga, Agusan del Norte | Site embankment on-going. |
| 10825 | Marine Multi-species Hatchery/ | Del Carmen, Surigao del Norte/ Surigao City, Surigao Del Norte | Processing of Environment Compliance Certificate and development of access road for the hatchery are on-going. |
| 10944 | Marine Multi-species Hatchery | Hinatuan, Surigao del Sur | On-going preparation of Feasibility Study. |
| 10937 | Marine Multi-species Hatchery | Bislig, Surigao del Sur | On-going site selection process. |
| 10941 | Marine Multi-species Hatchery | Barobo, Surigao del Sur | On-going site selection process. |
| 10858 | Marine Multi-species Hatchery | Nasipit , Agusan del Norte | Water quality monitoring in the proposed site is still on-going. |

Furthermore, two House Bills No. 5499 and 6428 are lobbied for approval for the establishment of Marine Multi-species Hatchery in Basilisa, Province of Dinagat Islands and Freshwater Hatchery in Talacogon, Agusan del Sur, respectively. To expedite the process, the BFAR Legislated Hatchery Project Technical Working Group, with the Provincial Fisheries Offices and the concerned Local Government Units have started the proposed project site selection and evaluation during the year.



POST HARVEST

The Post Harvest program of the Bureau is aimed towards the reduction of post harvest losses through processing and developing value-added products of fish and fishery products.

To support this sector, 32 units of post harvest equipment were provided to various fisherfolk associations in the region. These include: 10 units processing utensils, two (2) units seaweed dryers, 13 units vacuum packers, two (2) units pressure cookers and twelve (12) units impulse sealers.

| Post Harvest Equipment | No. of Fishing Boats/Gears Distributed in 2020 | | | | | |
|----------------------------|--|----------|----------|----------|----------|-----------|
| | ADN | ADS | PDI | SDN | SDS | Total |
| Seaweed dryers | | | | | 2 | 2 |
| Vacuum packers | 2 | 2 | 4 | 2 | 1 | 13 |
| Pressure cooker | 1 | | | | 1 | 2 |
| Plastic sealers | 7 | | | | | 7 |
| Processing utensils | | 3 | 5 | 2 | | 10 |
| Total (by Province) | 12 | 5 | 9 | 4 | 4 | 32 |

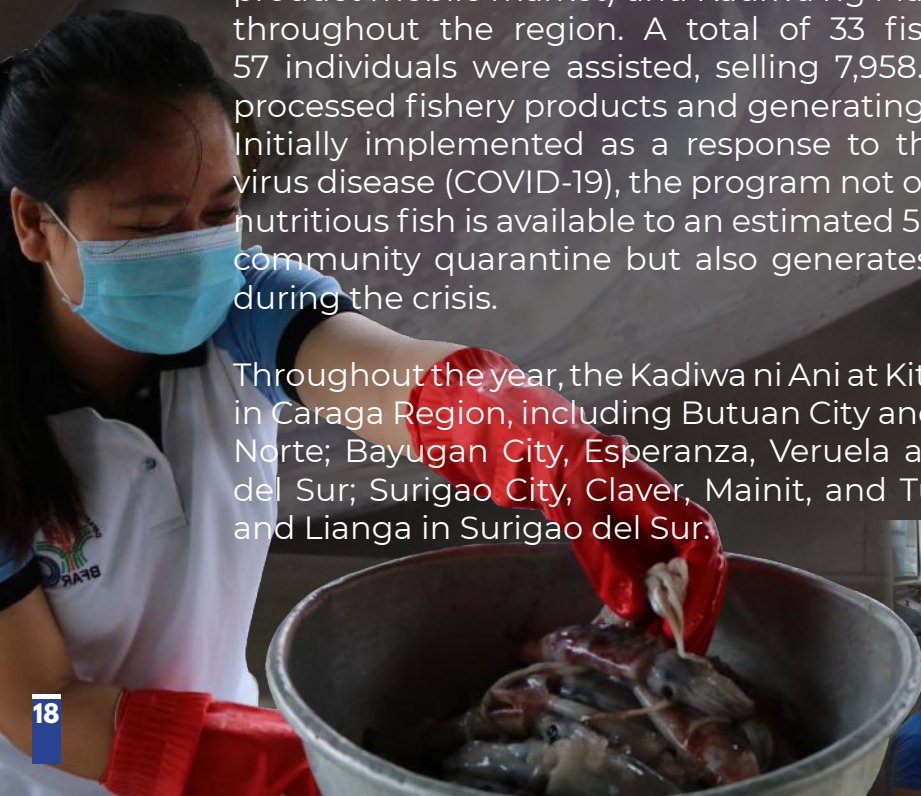


MARKET DEVELOPMENT SERVICES

Key players in the food fish value chain in Caraga Region benefit from the Department of Agriculture's (DA) "Kadiwa ni Ani at Kita" direct marketing program, wherein fisherfolk-producers could directly sell their produce to consumers who in turn gain better access to fresh and affordable fish.

In the implementation of the Kadiwa program, the Fisheries Postharvest and Marketing Section and the Provincial Fishery Offices partnered with the Department of Agriculture and the Local Government Units to conduct and participate in Kadiwa on Wheels (fish and fishery product mobile market) and Kadiwa ng Masa (Kadiwa Retail) activities throughout the region. A total of 33 fisherfolk organizations and 57 individuals were assisted, selling 7,958.33 kilograms of fresh and processed fishery products and generating total sales of P1,555,026.63. Initially implemented as a response to the outbreak of the corona virus disease (COVID-19), the program not only ensures that cheap and nutritious fish is available to an estimated 5,500 consumers amidst the community quarantine but also generates income for the fisherfolk during the crisis.

Throughout the year, the Kadiwa ni Ani at Kita has rolled in 57 barangays in Caraga Region, including Butuan City and Magallanes in Agusan del Norte; Bayugan City, Esperanza, Veruela and Prosperidad in Agusan del Sur; Surigao City, Claver, Mainit, and Tubod in Surigao del Norte; and Lianga in Surigao del Sur.



SPECIAL AREAS FOR AGRICULTURAL DEVELOPMENT PROGRAM

The year 2020 marked another significant accomplishment for the BFAR Caraga as the Special Areas... (SAAD) Program successfully took on its second year of implementation amidst the challenge of the pandemic. The regional Bureau was able to implement 11 livelihood packages from its 15 annual targets and 25 technical trainings out of 19 targets.

Province of Agusan del Sur

For Agusan del Sur, livelihood projects focused on fish production support, particularly tilapia culture in fishponds and fish cages. The aquaculture projects comprised 91% of the 8.2M total allocated budget for SAAD Program livelihood projects. Out of these, 10 fisherfolk groups and 120 household beneficiaries were served.

Provision of environment-friendly fishing gears such as hook and lines and gill nets for existing 120 household beneficiaries living around the Agusan Marsh was also conducted.

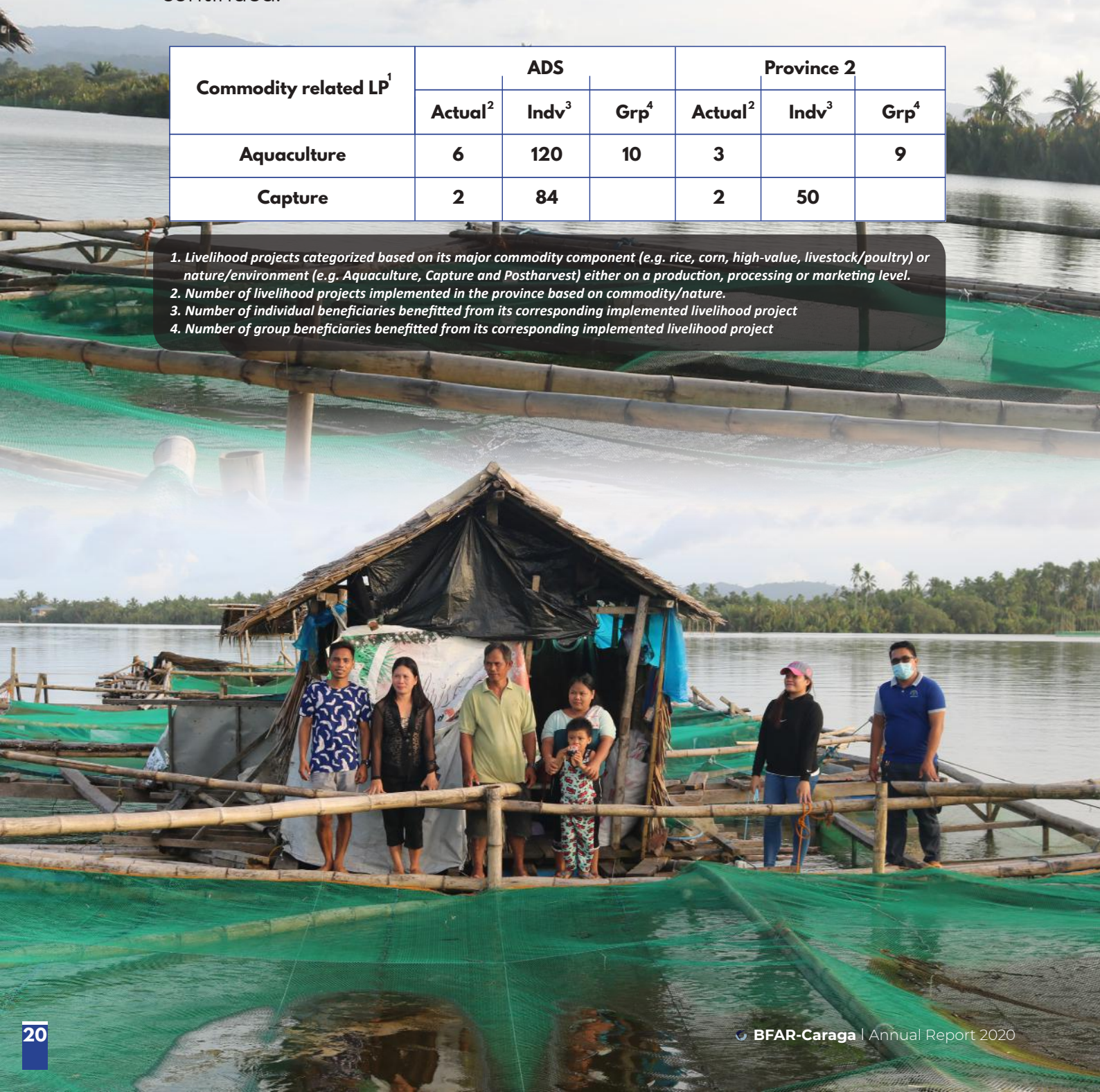
Province of Surigao del Sur

In Surigao del Sur, livelihood projects also focused on production of various aquaculture commodities, commonly milkfish, in fish cages, fishponds and fish pens. During the year in review, milkfish culture projects comprised around 50% of the total allocated budget for SAAD Program livelihood projects in the province, amounting to 4.6M, wherein 21 group beneficiaries were served.

Hooks and lines and gill nets were also provided to 72 household beneficiaries. Meanwhile, fish nursery, aquasilviculture, seaweed culture and shellfish culture activities of the previous year’s beneficiaries continued.

| Commodity related LP ¹ | ADS | | | Province 2 | | |
|-----------------------------------|---------------------|-------------------|------------------|---------------------|-------------------|------------------|
| | Actual ² | Indv ³ | Grp ⁴ | Actual ² | Indv ³ | Grp ⁴ |
| Aquaculture | 6 | 120 | 10 | 3 | | 9 |
| Capture | 2 | 84 | | 2 | 50 | |

1. Livelihood projects categorized based on its major commodity component (e.g. rice, corn, high-value, livestock/poultry) or nature/environment (e.g. Aquaculture, Capture and Postharvest) either on a production, processing or marketing level.
2. Number of livelihood projects implemented in the province based on commodity/nature.
3. Number of individual beneficiaries benefitted from its corresponding implemented livelihood project
4. Number of group beneficiaries benefitted from its corresponding implemented livelihood project





FISHERIES, COASTAL RESOURCES AND LIVELIHOOD PROJECT

Fisheries Coastal Resources and Livelihood (FishCORAL) Project is a joint endeavour of the Philippine Government and the International Fund for Agricultural Development or the (IFAD). The Department of Agriculture is the executing agency with the Bureau of Fisheries and Aquatic Resources as the lead implementing agency.

The overall goal of the Project is to contribute to the reduction of poverty incidence in the coastal communities of the 11 target bays in the country. The project will raise household incomes of target coastal communities through the sustainable management of the coastal and fisheries resources and implementation of community-based enterprises.

In Caraga Region, all of the components and activities under the FishCORAL Project are being implemented in the two (2) Bays, the Lianga-Hinatuan Bislig Bays in Surigao del Sur and the Butuan Bay in Agusan del Norte which covers 15 municipalities and three (3) cities; with a total of 146 coastal barangays.



Physical Performance

The highlights of accomplishments of the Project for the year 2020 are as follows;

I. Coastal Resources Management Component

1. The Project assisted the formation and strengthening of the two (2) Bay Management Councils (BMCs), the Butuan Bay Development Alliance (BBDA) in Agusan del Norte and the Coastal Community Alliance Unified for Sustainable Ecosystem (CCAUSE) in Surigao del Sur. Both BMCs are functional with management board and technical working group (TWG). They work together to unified efforts and interventions for bay-wide coastal fisheries sustainability. Ordinance on the Regulation of collection, gathering and sale of lobster fry was formulated in the Lianga-Hinatuan- Bislig Bay. Annual contribution for the operation of the BMCs is implemented. Academes such as Caraga State University in Butuan Bay and Surigao del Sur State University in Lianga-Hinatuan-Bislig Bay served as secretariat for their respective BMCs.

2. The Project has been continuously providing support in the formation, reactivation and strengthening of Fishery Law Enforcement Teams (FLETs) and Fisheries and Aquatic Resources Management Councils (FARMCs). These groups normally conduct regular meetings that served as a venue for discussing matters related to protection, conservation and sustainable management of marine and coastal resources. The meetings were participated by PNP, Coast Guard, SB representatives, Bantay Dagat, LGUs, and POs members. For this year, the project accomplished the formation/reactivation of 6 M/CFLET and two (2) Integrated Fishery Law Enforcement Team (IFLET). These are the FLETs of LGU Bayabas, Lianga, Bislig City, Marihatag, Surigao del Sur and Buenavista and Magallanes, Agusan del Norte and IFLET in both bays.

3. Continuous assistance in guiding the LGUs for the delineation and zoning of their municipal waters. A series of coordination meetings with the National Mapping and Resource Information Authority (NAMRIA) were done for technical assistance. There were also consultation meetings and dialogues conducted between LGU Tago & Tandag City, Surigao del Sur and between LGU Jabonga, Agusan del Norte, Mainit & Malimono, Surigao del Norte.

4. Office furniture and fixture amounting Php 208,080.00 were delivered to BBDA and CCAUSE.

5. The Project assisted 16 LGUs in the formulation and drafting of their Coastal Resources Management (CRM) plan. Five CRM plans from LGU Lianga, Bislig City, Surigao del Sur and Buenavista, Tubay and Nasipit, Agusan del Norte, were approved and adopted.

6. Two Jetty Port projects were completed. These are the following; a.) 54 linear meters constructed at Barangay Calibunan, Cabadbaran City amounting to Php 2,480,000.00 and b.) 215 linear meters at Cagwait, Surigao del Sur amounting to Php 3,688,816.89.

7. Mangrove Management Sustainability Planning Workshop was conducted last November 12-13, 2020. The output of the workshop is the formulation of Mangrove Sustainability Plan for the 100 hectares mangrove areas of Cabadbaran City. The activity was done with the collaboration of the following: a.) Cabadbaran Mangrove Ecopark Livelihood Enterprise and Disaster Resilience (CaMe-LEAD) Program, b.) BFAR Caraga through the FishCORAL Project, c.) CSU-Cabadbaran City Campus and the d.) Community Environment and Natural Resources Office (CENRO).

8. Construction/Rehabilitation of the three (3) units Watch Tower project were completed. The WT were constructed in Magallanes, Agusan del Norte, Marihatag and Hinatuan, Surigao del Sur. Total project cost of constructed WTs is Php 876,000.00.

9. Marine Protected Area (MPA) Network equipment such as Monitoring Equipment, Enforcement Equipment, and Safety equipment for Resource Management Measures were also distributed. The equipment were distributed in Carmen, Nasipit and Cabadbaran City, Agusan del Norte and San Agustin, Marihatag and Cagwait, Surigao del Sur. Total amount of equipment is Php 593,975.00

10. A total of 67 Fish Sanctuary solar marker bouys were installed in the 15 fish sanctuaries covering 566.58 hectares situated in the two (2) bays.

II. Livelihood Development Component

1. Continuous technical support was provided to 162 People's Organization from the two (2) bays. The project assisted the POs in acquiring and preparing PO registration and business proposals, and strengthening and capacity building activities.
2. The Project has strengthened and monitored 42 Savings club with 217 total members. Total Savings Fund has reached Php 4,135,054.00 then total loan amount disbursed to 217 members reached Php 1,837,610.00.
3. Five POs assisted by the Project thru Aqua-based Business School were sent to Samar province for benchmarking activity. The POs visited the processing facilities of Shellfish, Seaweeds and Cassava in the municipalities of Salcedo, & Gen Mc Arthur, Eastern Samar and Basey & Jiabong, Samar last March 13-15, 2020.
4. The Project has identified and approved 14 livelihood business plans. Details below:
 - a. Four (4) Fish Culture projects
 - b. Four (4) Aquasilviculture projects
 - c. One (1) Mussel Culture project
 - d. One (1) Fish Processing
 - e. Four (4) Other Enterprise projects
5. Continuous assistance for the implementation of Livelihood projects was conducted and was able to complete 106 Livelihood projects. Of the completed Livelihood projects, 67 of these underwent several production cycles and 39 still on its first production cycle.
6. Underwent Installation of Roots Blower and Water Pump at Cortes Multi-Species Hatchery in Cortes, Surigao del Sur was completed with project cost amounting to Php 122,275.00.
7. Installation of 3 Phase Electrical Line of Cortes Multi-Species Hatchery in Cortes, Surigao del Sur was completed with project cost amounting to Php 2,349,712.00;
8. Installation of Primary Metering of Cortes Multi-Species Hatchery in Cortes, Surigao del Sur was also completed with project cost amounting to Php 413,062.69. With these developments, Cortes Multi-Species Hatchery is now ready for operation.

For CY 2020, allotment received from IFAD loan was P 14,357,700.00 and government counterpart was P6,249,200.00 Total obligation for GPH and IFAD loan totaled to P 18,686,478.25 and total disbursement amounted to Php 11,876,305.65, with budget utilization rate at 90.68 percent. Unspent funds will remain accessible until December 2021; it will become 2020 continuing budget.

For 2019-continuing funds, allotment received from IFAD loan and GPH counterpart totaled to Php 4,833,0441.55 with an obligation of Php 4,828,315.71. Total disbursement was Php 1, 509,350.01, with budget utilization rate at 99.90 percent.



FISHERIES REGULATORY AND LAW ENFORCEMENT PROGRAM



I. MONITORING, CONTROL AND SURVEILLANCE Regulation and Enforcement Activities

The Bureau of Fisheries and Aquatic Resources – Caraga, through the Fisheries Protection and Law Enforcement Group (FPLEG), continued its efforts to combat illegal, unreported and unregulated fishing in the waters of the region amidst the corona virus 2019 (covid-19) pandemic.

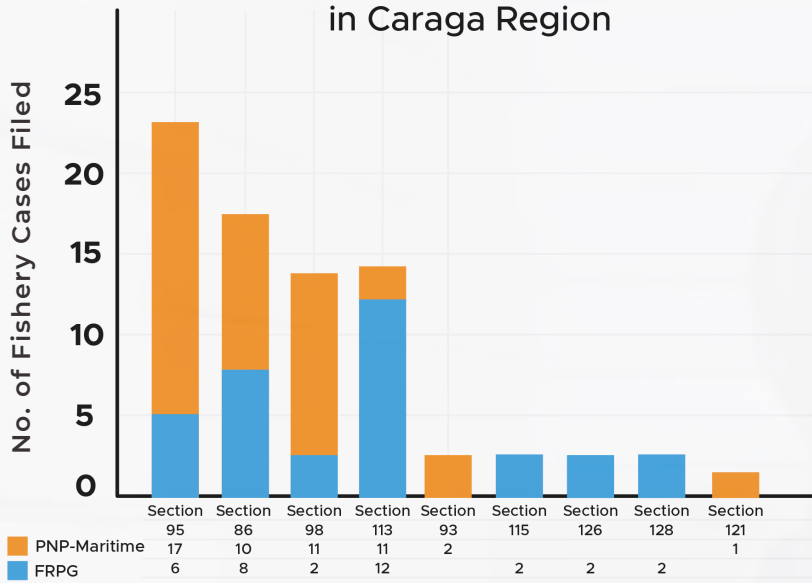
For the year in review, a total of 104 seaborne patrol and 17 market, landing and mobile checkpoint operations were conducted in collaboration with other law enforcement agencies such as Philippine National Police (PNP), PNP – Maritime Group, Philippine Navy and Philippine Coast Guard. With the said operations, the team boarded and inspected one (1) municipal boat/vessel and 20 commercial fishing vessels, 51 market stalls, and 219 fish carriers.

Out of these operations, 16 apprehensions were made: 15 commercial fishing vessels and one (1) market stall, due to violations against fishery laws, rules and regulations. This is 52% and 47% lower than the 33 and 30 apprehensions recorded in 2019 and 2018.

A total of 68 administrative and eight (8) criminal cases were filed against the violators of the provisions of Republic Act No. 10654, 34 of these were filed by the FPLEG. Majority of these cases are violations against Section 95 (use of active gear in municipal waters), Section 86 (unauthorized fishing), Section 98 (illegal use of superlight or fishing light attractors) and Section 113 (commercial fishing vessel operators employing unlicensed fisherfolk, fishworker or crew). Other violations include Section 93 (use of fine mesh net), Section 115 (obstruction to Fishery Law Enforcement Officer), Section 126 (possessing, dealing in/ or disposing illegally caught or taken fish), Section 128 and Section 121 (use of unlicensed gear).



Common Violations against RA 10654 in Caraga Region



Red Tide Monitoring

Red tide is associated with the blooms of toxic and non-toxic algae, which may be dangerous to the environment and human due to the toxin they contain. Monitoring the occurrence of red tide is part of the functions of the Regional Fisheries Laboratory, in order to safeguard the general public against harmful marine toxins present in shellfish particularly in the areas of Lianga, Hinatuan and Bislig Bays, where red tide had been previously recorded.

Throughout the year, weekly monitoring activities were conducted along the coastal waters of San Agustin, Lianga, Barobo, Hinatuan and Bislig City in Surigao del Sur. Seawater and shellfish samples were collected from established sampling area per municipality, and analyzed for plankton count at the laboratory and Enzyme-Linked Immunosorbent Assay (ELISA) at the Aquatic Toxicology Laboratory (ATL) of BFAR National Fisheries Laboratory Division (NFLD) in Quezon City. The results of the analyses were issued by BFAR Fisheries Resource Management Division through the Shellfish Bulletins, which were accessible online through bfar.gov.ph/redtide. Dissemination of these advisories were conducted as part of the information campaign of the Bureau against consumption of shellfish gathered from red tide positive areas.





II. QUALITY CONTROL AND INSPECTION

Inspection of Fisheries Facilities

Food security means food is available in sufficient quantity, quality, and is safe for human consumption. Thus, all aspects of the production chain, from fishing vessels to processing establishments and loading of finished products, must be compliant to applicable food safety regulations and policies of both national and international certifying bodies.

In line with this, the Fisheries Inspection Unit of the Fisheries Inspection and Quarantine Section (FIQS) takes charge in implementing the official control system, based on risk assessment and Hazard Analysis Critical Control Point (HACCP) principles and consistent with the protocols Codex Alimentarius or the international “Food Code,” World Trade Organization (WTO), and Sanitary and Phytosanitary (SPS) measures.

Eight (8) system audits to fishery establishments engaged in processing fresh-frozen/chilled cephalo[ods, shrimps, lobster, abalone meat and grilled eel were conducted.

Five (5) pre-shipment inspections to verify compliance of outgoing fishery products to labeling requirements and biosecurity protocols of importing countries were done. Samples were collected and sent to BFAR Central Office Laboratory for analyses on presence of chloramphenicol, nitrofurans, heavy metals, and antibiotics. Results of these were furnished to the respective processing plants and buying stations for verification.

One (1) food safety training for fish processing plants and buying stations were also conducted and five (5) fishing boats were inspected for traceability purposes.

National Antibiotic Residue Monitoring and Control Program

The National Antibiotic Residue Monitoring and Control Program was developed to implement surveillance strategies of substances that promote Antimicrobial Resistance (AMR) and health toxicity to humans. It covers all aquaculture farms that culture tilapia, milkfish, and shrimp and is aimed at detecting illegal treatments (particularly, prohibited/banned antibiotics) and controlling compliance with the maximum residue limits of veterinary drugs and other substances used in aquaculture.

A total of 12 samples were collected from 30 aquaculture farms and facilities visited for inspection related to farm hygiene, on-site disease surveillance and residue monitoring. The gathered samples were subcontracted to the National Fisheries Laboratory Division in Quezon City for the analysis of banned antibiotics: Chloramphenicol and Nitrofurantoin metabolites such as 3-amino-5-morpholino-methyl-1,3-oxazolidinone (AMOZ) and 3-amino-2-oxazolidinone (AOZ). The action limit for these parameters is Negative Detection which is evident on the results of residue analysis from the collected samples.

Analyses Conducted

As per the Fisheries Office Order No. 80 series of 2018 with the subject, "*Functions of the National Fisheries Laboratory Division and Designation of Fish Health Officers and/or Laboratory Analysts*", the fish health unit is a conglomerate of various physical, molecular, and biological tests that help correlate aquatic animal diseases-- relative to production, biosecurity, health certification and trade, fish mortality investigations, and water quality to the health status of fishes.

Fish kills and aquaculture monitoring are responded to by field visits that are conducted vis-à-vis in aquaculture areas covering the entire Region. Collected samples of fish and water are then subjected for qualitative and quantitative tests such as Molecular Diagnostics via Polymerase Chain Reaction, Physico-chemical analysis, Quantitative Bacteriology, Shrimp Fry Quality Assessment, Parasitology, and Plankton Count.



A total of 2,599 out of the 1,500-physical target of analysis was accomplished by the RFL. The figure is an integration of all tests conducted for the Fish Health Unit. The increase in the number of analyses accomplished was due to the increase in water quality monitoring activities in support to the site suitability assessment for the legislated hatchery in Nasipit, Agusan del Norte.

Analyses conducted under the Fish Health Unit.

| Test | Method | Sample |
|-------------------------------|---------------------------|---------------------|
| Molecular Diagnostics | Conventional PCR | Crustacean |
| Physico-chemical Analysis | Colorimetry and Titration | Water |
| Parasitological Examination | Wet-mount Microscopy | Fish gills and skin |
| Quantitative Bacteriology | Serial Dilution | Water and Shrimp |
| Shrimp Fry Quality Assessment | Microscopy | Shrimp Fry |
| Plankton Count | Microscopy | water |

III. QUARANTINE, REGISTRATION AND LICENSING

The FIQS is the competent authority that implements policies, guidelines and protocols concerning fisheries quarantine measures to ensure safe movement or trade of fish and aquatic products. The section facilitates the inspection and issuance of permits of all incoming and outgoing fisheries products in seaports and airports in the region, namely Bancasi, Surigao City and Sayak Airports, and Nasipit, Surigao City and Lipata Seaports.

Amidst the coronavirus outbreak in 2020, unhampered movement of fish and fishery products within and outside the region were facilitated through the issuance of 594 Food Lane Accreditations to fish traders in response to the industry's need for reliable food channels during the trying situation.

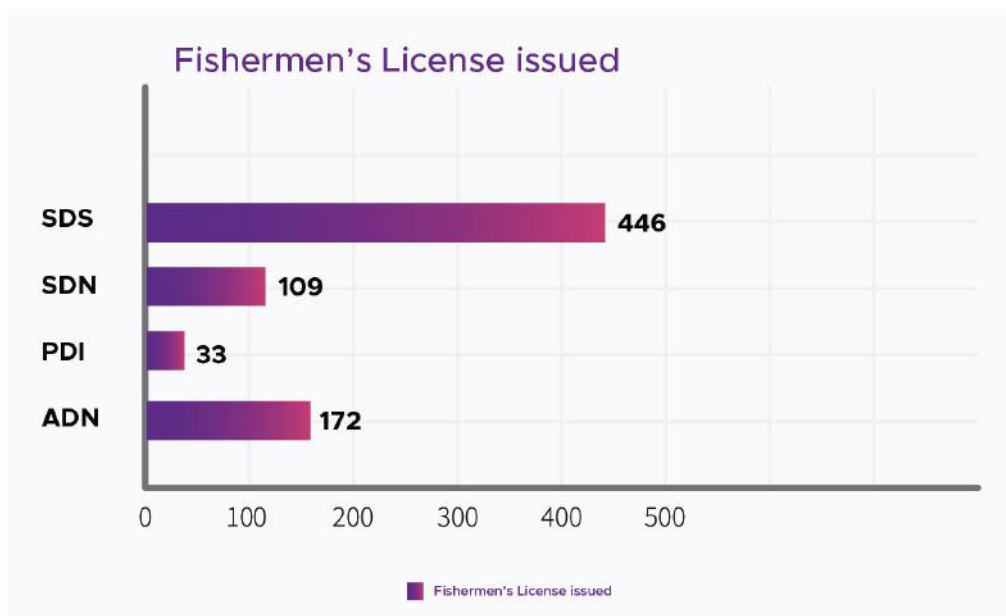
Despite the pandemic crisis, a total of 907 and 8,024 inspections were conducted for incoming and outgoing fishery products, respectively. In addition, 1,652 incoming and outgoing fish cars/trucks were inspected. Out of these, there were 6,750 Aquatic Wildlife Transport Permits (AWLTP) with Official Receipts issued for the clearance of domestic movement of fish and fishery products.

Boarding formalities were also conducted and 441 clearances for incoming and outgoing foreign vessels were issued.

Leasing and Licensing

The Leasing and Licensing Section issues licenses for the operation of commercial fishing vessels, register and issue licenses for commercial fishing gears, and issues identification cards to fishworkers engaged in commercial fishing vessels.

For 2020, a total of 760 fish workers from the four (4) provinces of the region were issued with identification cards. Majority of the fisherman's ID (58.7%) issued were from the province of Surigao del Sur.



In addition, a total of 14 commercial fishing vessel licenses were renewed during the year in review: 11 from Agusan del Norte, two (2) from Surigao del Sur and one (1) from Dinagat Islands.

IV. FISHERIES MANAGEMENT AREAS (FMA) IMPLEMENTATION

The implementation of the Fisheries Management Areas (FMAs) is spearheaded by BFAR. FMAs refer to delineated bodies of water based on the consideration of fish stock boundaries, range and distribution. There are 12 FMAs established nationwide; three (3) of these include fishing grounds in Caraga Region, particularly FMAs:

| FMA | Regional Composition | Provincial Composition | BFAR RFO Lead |
|-----|----------------------|--|---------------|
| 2 | 2, 8, 11, 13 | Compostela Valley, Davao del Norte, Davao del Sur, Davao Oriental, Eastern Samar, Northern Samar, Sarangani, Surigao del Norte, Surigao del Sur | Region 11 |
| 8 | 8, 13 | Dinagat Islands, Eastern Samar, Leyte, Samar, Southern Leyte, Surigao del Norte, Surigao del Sur | Region 8 |
| 9 | 7, 8, 9, 10, 13 | Agusan del Norte, Bohol, Camiguin, Lanao del Norte, Misamis Occidental, Misamis Oriental, Siquijor, Southern Leyte, Surigao del Norte, Zamboanga del Norte | Region 10 |

For 2020, FMA activities focused on the establishment of management bodies led by the BFAR, co-led by a representative of the LGU and composed of representatives from key stakeholders within the three FMAs.



Fisheries Resource Management

Various activities related to fisheries resource management were conducted during the year. Assistance to LGUs in drafting unified fisheries ordinances, delineation of fish sanctuaries, site evaluation of proposed marine protected areas and deployment of artificial reefs were successfully rendered.

Six (6) fish sanctuaries were monitored/ assisted in the provinces of Agusan del Norte, Surigao del Norte and Surigao del Sur. Based on data gathered during these activities, coral cover and fish biomass in monitored sites ranged from poor to good condition and poor to moderate, respectively.

Fifty units of artificial reefs were also deployed in Hanagdong Fish Sanctuary in Malimono, Surigao del Norte. Pre-assessment of the site was also conducted prior to the deployment to obtain initial data on the status of coral and fish abundance in the area.

Malinis at Masaganang Karagatan (MMK)

As the National Search for Outstanding Coastal Community popularly known as Malinis at Masaganang Karagatan (MMK) Program continues, three (3) municipalities from Caraga Region competed for the 2020 MMK Regional Search namely: Del Carmen, Surigao del Norte, San Jose, Dinagat Islands and Bayabas, Surigao del Sur.

The exemplary initiatives and accomplishments of the Municipality of Del Carmen on coastal fisheries management made them the Regional Winner and thus they will be competing at the national level with the other regions.



Fish Conservation Week Celebration

During the Fish Conservation Week in September 2020, the BFAR conducted a nationwide simultaneous kick-off program via online platform to officially open the activity.

In the region, the Week was highlighted through the simultaneous Coastal Clean-up and Scubasurero in the Municipality of Carmen, Agusan del Norte.



BA

BALIK SIGLA SA ILOG AT LAWA PROGRAM

ASIL

Amidst the pandemic, the BFAR Caraga continues to advocate productive fishery resources and poverty alleviation among fisherfolk living in inland areas, through the Balik Sigla sa Ilog at Lawa (BASIL) Program, a program under the National Inland Fisheries Enhancement Program (NIFEP). BASIL aims to rehabilitate/restore physical conditions of minor lakes and reservoirs, enhance inland fisheries production, and repopulate indigenous species in support to biodiversity conservation.

In 2020, four (4) lakes were rehabilitated namely: Lake Lago in San Miguel, Surigao del Sur, Lake Oro in Esperanza, Agusan del Sur, Lake Kamansihan and Lake Panlabuhan in Loreto, Agusan del Sur. In addition, 13 new sites were also validated within the year, such such the Lake Suyok nan Ubong Lake, Lake Mandaoy, Pangaylan Dam, Cacea Dam, Rizal Dam, Dal-as Lake, Sanghan Communal Irrigation System and Panlaison Diversion Dam in Agusan del Norte and Lake Kalibon, Tudela Dam, Gibong Dam, Diversion Dam and Sianib SIP Dam in Agusan del Sur.

Throughout the year, the program also successfully dispersed 700 pieces of goby, carp and tilapia breeders and 1.3 million pieces of carp, tilapia, mudfish and bugwan (*Hypseleotris agilis*) fingerlings as well as freshwater prawn juveniles in various lakes, rivers and dams in the region. Moreover, 713 pieces of freshwater mangrove propagules *Barringtonia acutangula* were also dispersed to LGU Las Nieves for planting in Agusan River banks, 200 pieces planted in Lake Silop and 50 pieces planted in Lake Oro. This initiative is aimed to repopulate or enhance fish stock in order to facilitate biodiversity and increase fisheries production in barren freshwater areas.

FISHERIES EXTENSION PROGRAM



The Fisheries Extension Program strives to help fisherfolk improve fishing, fish farming, post-harvest, and regulatory procedures by imparting knowledge and skills on technologies aimed to boost productivity and profitability.

In 2020, extension support, education and training services were facilitated through the joint efforts of the Regional Fisheries Training and Fisherfolk Coordination Division (RFTFCD), the Fisheries Production and Support Services Division (FPSSD), the Fisheries Management, Regulatory and Enforcement Division (FMRED), the Provincial Fisheries Offices, and the Local Government Units (LGUs).

Trainings and Technical Assistance

For the year in review, a total of 29 trainings in the fields of aquaculture, capture fisheries, post-harvest, and regulatory were conducted with 626 fisherfolk trained throughout the region.

Eighteen aquaculture training workshops were held, imparting technical knowledge and skills to 452 fish farmer groups, on the efficient and sustainable production and management of commodities like milkfish, abalone, seaweed, and tilapia.

Seven (7) trainings on fiber-reinforced plastic boat fabrication were also facilitated to develop the technical skills of 75 small-scale fishers in boat-making.

Four (4) trainings on proper fish handling and processing, and operationalization of community fish landing centers were also conducted to 99 beneficiaries.

Moreover, a total of 3,100 technical assistance in the fields of aquaculture, capture fisheries (municipal and commercial), post-harvest, marketing and credit facilitation were rendered for the entire year.



FARMC Strengthening

While LGUs continue to implement safety protocols to prevent the spread of the corona virus, the RFTFCD was able to conduct activities related to strengthening of the Fisheries and Aquatic Resources Management Councils (FARMCs) throughout the region.

Re-orientation and re-organization activities were initiated for 20 FARMCs throughout the region to further capacitate members in the formulation of policies for the sustainable development and management of the fishery resources. Whereas, 1,600 booklets on Fisheries Administrative Order (FAO) No. 196, *“Guidelines on the Creation and Implementation of Fisheries and Aquatic Resources Management Council (FARMCs)”* and 1,600 books on the illustrative Filipino version of the Republic Act No. 10654, *“An Act to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing, amending Republic Act No. 8550, Otherwise Known As “The Philippine Fisheries Code Of 1998”* were distributed to provide additional guidance and information to other FARMCs.

Part of this also is the Fisherfolk Directorship Program which aims to promote strengthened partnership in fisheries management and to popularize fisherfolk empowerment and participation as government partners. Seminar and election of the Regional Fisherfolk Director for CY 2020 was conducted on March 2, 2020. Mr. Eddie G. Matula, Chairperson of the Municipal FARMC of Loreto, Agusan del Sur, was elected as RFD.

Establishment of Technology Demonstrations

The application of the techniques and principles into practical situations is the aim of technology demonstration (techno-demo).

Led by the Provincial Fishery Offices, there are three (3) techno-demo projects on bangus culture in high density polyethylene cages in potential mariculture areas in Dinagat Islands, Surigao del Norte and Surigao del Sur. Another technology demonstration on milkfish breeding captivity was also established in Placer Technology Outreach Station.

Information, Education and Communication Activities

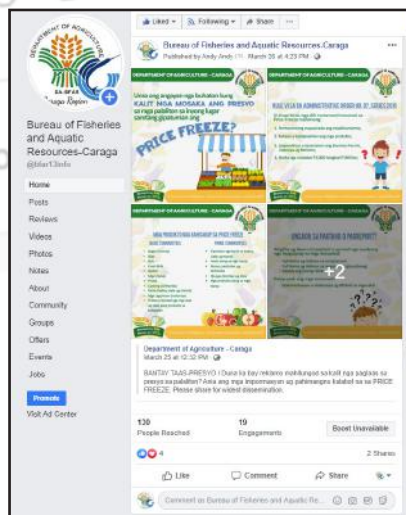
Despite the threat of the COVID-19 pandemic, the Fisheries Information Unit has continued to intensify information, education and communication (IEC) campaign on the mandates, programs and projects of BFAR thru different media such as print, radio, audio-visual presentations (AVPs), social media and events.

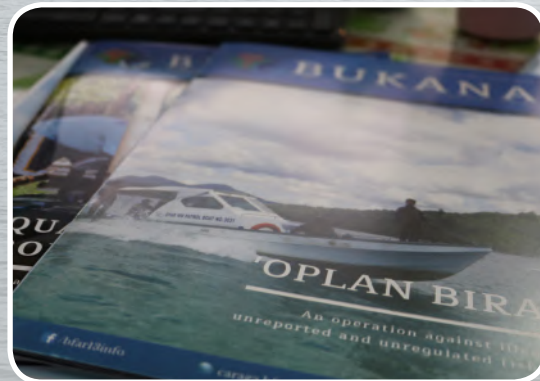
The unit has documented activities conducted by the office before and during the pandemic, with 54 press releases/announcements posted online for the whole year.

A promising increase in the number of engagements of the official Facebook Page of the BFAR Caraga recorded 8,329 likes and 8,695 follows from its 5,258 likes and follows in 2019. The Information Unit has actively addressed inquiries online especially during the time of declaration of Enhanced Community Quarantine, and was involved in communicating with the netizens thru its real-quick updates on its Facebook page and contributed to the content management of the Bureau's website.



Bureau of Fisheries and Aquatic Resources-Caraga
 Government Organization





To ensure that the Bureau’s announcements reached the stakeholders, regular radio plugging of Red Tide Alerts and advertising the Malinis at Masaganang Karagatan (MMK) was facilitated. The radio advertisement was observed from July to December 2020, aired during Mondays-Fridays by Real Radyo in Butuan City. The unit also facilitated phone patch interviews of local media practitioners to RD Visa Tan-Dimerin and some BFAR personnel on matters such as red tide occurrence, marine mammal stranding and beaching, and fish kill incidence.

As for the distribution of IEC materials, the unit distributed 5,748 pcs of IEC materials in the form of booklet, brochures, posters and newsletters that were released to 905 fisherfolk individuals and students.



Fisheries Scholarship Program

The BFAR through the Fisheries Scholarship Program (FSP), is granting full college scholarships to qualified high school graduates taking up Bachelor of Science in Fisheries (BSFi). The FSP has three (3) components: (a) the Fisheries Industry Leader Grant (FILG) for Senior High School graduates and graduating students with Honors, (b) the Fisherfolk Children Educational Grant (FCEG) for Senior High School graduates and graduating students whose parents are registered municipal fisherfolk and (c) the Indigenous Cultural Communities/Indigenous People's (FSP-ICCs/IPs) Grant for poor but deserving Alternative Learning System (ALS)/High School /Senior High School graduates/graduating students who are members of a particular tribe recognized by the National Commission on Indigenous Peoples (NCIP).

As of 2020, 59 students in Caraga Region were provided with the Fisheries Scholarship, five (5) under the FILG and 54 under the FCEG component.

The Fisheries Scholarship Qualifying Examination was conducted simultaneously on December 5, 2020 at eight identified testing centers throughout the region. A total of 68 examinees, 64 for FCEG and four (4) for FILG took the examination. The top twenty FCEG and top three (3) FILG examinees who will successfully ace the exam will be the next batch of scholars for school year 2021-2022.





NATIONAL STOCK ASSESSMENT PROGRAM (NSAP)

The National Stock Assessment Program (NSAP) in the region with its 49 workforce has successfully conducted its catch and effort monitoring, encoding, processing and analysis for CY 2020 amidst the CoViD-19 pandemic. The milestone of data gathering is substantial to come up with results to support Fisheries Administrative Order No. 263 s. 2019 on the establishment of Fisheries Management Areas (FMAs) for the conservation and management of Philippine fisheries waters.

The NSAP is tasked to provide science-based information such as Performance Indicators, Reference Points and harvest control rules of key species in each respective FMAs.

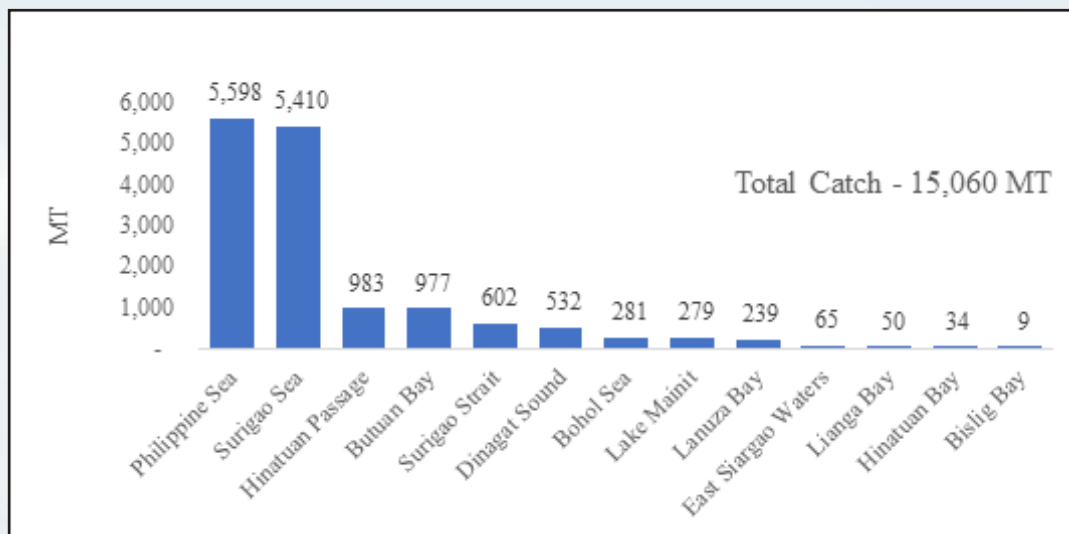
In terms of data analysis, the NSAP teams from BFAR 7,8,9, 10, 11 and 13 with experts from the Environmental Defense Fund and National Fisheries Research and Development Institute, conducted weekly workshops on data consolidation and analysis from May to December 2020 for FMA 2, 8 and 9.

The results of the analyzed top species per FMA were prepared for review and validation of the Scientific Advisory Group (SAG) before its presentation to the Management Board. For FMA 2, 8 and 9, the list of species were completely analyzed from 2015 to 2018 with Performance indicators and reference points. However as soon as all indicators are generated the harvest control rules and goals are to be formulated. Apart from this, other significant information were gathered for CY 2020, to wit:



A. Baseline Catch Estimates by Fishing Ground for CY 2020

For 2020, the total catch monitored was 15,060 MT. This is dominated by Philippine Sea (37%) catches were consisted of tuna species and followed by Surigao Sea (36%) in Surigao del Sur, Hinatuan Passage (7%), Butuan Bay (6%) and Surigao Strait (4%). The rest of the catches were coming from other fishing ground including the freshwater system, Lake Mainit.



Baseline catch estimates by fishing ground for CY 2020, monitored by NSAP.

B. Regional Top Species

The regional top species for 2020 were constituted by three (3) dominant species namely; *Thunnus albacares*, *Katsuwonus pelamis* and *Sardinella lemuru* 34%, 33.3% and 6.1%, respectively. Majority of the regional species belongs to the oceanic tuna and small pelagic. Included in the top seven (7) was the freshwater goby from Lake Mainit and one invertebrate squid from Bohol Sea.

Regional Top Ten species in CARAGA for 2020.



1.SN : *Thunnus albacares* (34%)
LN : Panit, Barilis



2.SN : *Katsuwonus pelamis* (33.3%)
LN : Pawayan



3.SN : *Sardinella lemuru* (6.1%)
LN : Tamban



4. SN : *Decapterus macarellus* (5.2%)
LN : Bodloy



5. SN : *Selar crumenophthalmus* (2.6%)
LN : Tamarong, Matangbaka



6. SN : *Amblygaster sirm* (1.8%)
LN : Hawol-hawol



7. SN : *Glossogobius giuris* (1.4%)
LN : Pijanga



8. SN : *Photololigo duvauceli* (1.4%)
LN : Nocus-bulingit



9. SN : *Coryphaena hippurus* (1%)
LN : Tamarang



10. SN : *Elagatis bipinnulata* (0.8%)
LN : Salindatu

C. Status of Top Species Analyzed with guidance by Environment Defense Fund (EDF) experts

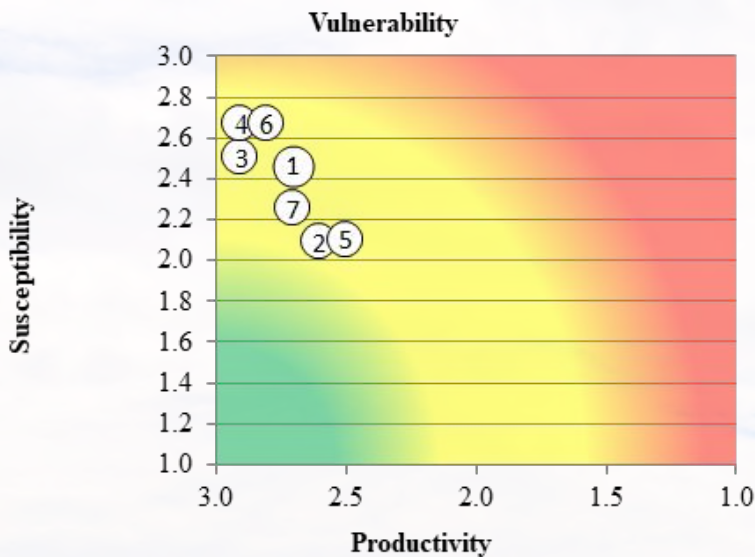
In support to the FMA implementation, NSAP team with FMA 2,8 and 9 had a regular online workshops on weekly basis with the EDF experts.

For FMA 2, we have analyzed ten (10) species out of 20 and these were *Selar crumenophthalmus* (big-eye scad), *Decapterus macarellus* (mackerel scad), *D. macrosoma* (shortfin scad), *Sardinella lemuru* (Bali sardine), *Auxis rochei* (bullet tuna), *Euthynnus affinis* (mackerel tuna), *Elagatis bipinnulata* (rainbow runner), *Coryphaena hippurus* (dolphin fish), *Thunnus albacares* (yellowfin tuna) and *T. obesus* (big-eye tuna). Performance indicators using FROESE in determining % mature, +10% of LOptimum, % megaspawners, L-bar and fishing mortality were generated. Noted that a reference point and limit reference are the level to be achieved or maintained and the level to be avoided, respectively.

Moreover, FMA 8 is far more advanced on its analysis apart from the mentioned performance indicators in FMA 2. The FMA 8 had analyzed 20 species namely; *Encrasicholina heteroloba* (**anchovy**), *Rastrelliger kanagurta* (**indian macherel**), *Selar boops* (**oxeye scad**), *Sardinella lemuru* (**bali sardines**) *Sardinella gibbosa* (**goldtripe sardinella**), *Amblysgaster sirm* (**spotted sardinella**), *Decapterus russelli* (**Indian scad**), *Selar crumenophthalmus* (**bigeye scad**), *Elagatis bipinnulata* (**rainbow runner**), *Auxis thazad* (**bullet tuna**), *Caesio cunning* (**fusilier**), *Euthynnus affinis* (**mackerel tuna**) *Gazza minuta* (**ponyfish**), *Priacanthus tayenus* (**purple-spotted bigeye**), *Siganus canaliculatus* (**rabitifsh**), *Siganus guttatus* (**rabbitfish**), *Nemipterus hexodon* (**threadfin bream**), *Upeneus sulphureus* (**goatfish**), *Uroteuthis bartschi* (**squid**) and *Sepioteuthis lessoniana* (**bigfin reef squid**).

PRODUCTIVITY SUSCEPTIBILITY ANALYSIS (PSA) AS ANOTHER PERFORMANCE INDICATOR

To assess the vulnerability of target stocks to fishing pressure using basic biological and fishery information, the NSAP used the Productivity Susceptibility Analysis Tool as one performance indicators for the seven highly commercially important species in FMA 8. Additionally, the results for Productivity, Susceptibility, Vulnerability and data quality are color code to a stop light; green (low concern), yellow (moderate concern) and red (high concern). Results showed that all species fall under yellow color, which means have moderate concern but high score in terms of susceptibility of fishing particularly: (a) *Panulirus penicillatus*, (b) *Penaeus monodon* (c) *P. merguinsis* and (d) *P. indicus*. On the other hand, in terms of productivity all species fall in the yellow or moderate concern but the score were close to 3 value which means high in productivity. This implies that management measures should be done to make the level become low in terms of susceptibility in order to attain the level green to achieve high productivity.



| Species | Local Name |
|----------------------------------|--------------|
| 1. <i>Panulirus penicillatus</i> | Banagan |
| 2. <i>Portunus saguinolentus</i> | Lambay |
| 3. <i>Penaeus monodon</i> | Lokon |
| 4. <i>P. merguensis</i> | Pasayan |
| 5. <i>Acetes spp.</i> | Uyap |
| 6. <i>Penaeus indicus</i> | Pasayan-puti |
| 7. <i>Lambis lambis</i> | Ganga |

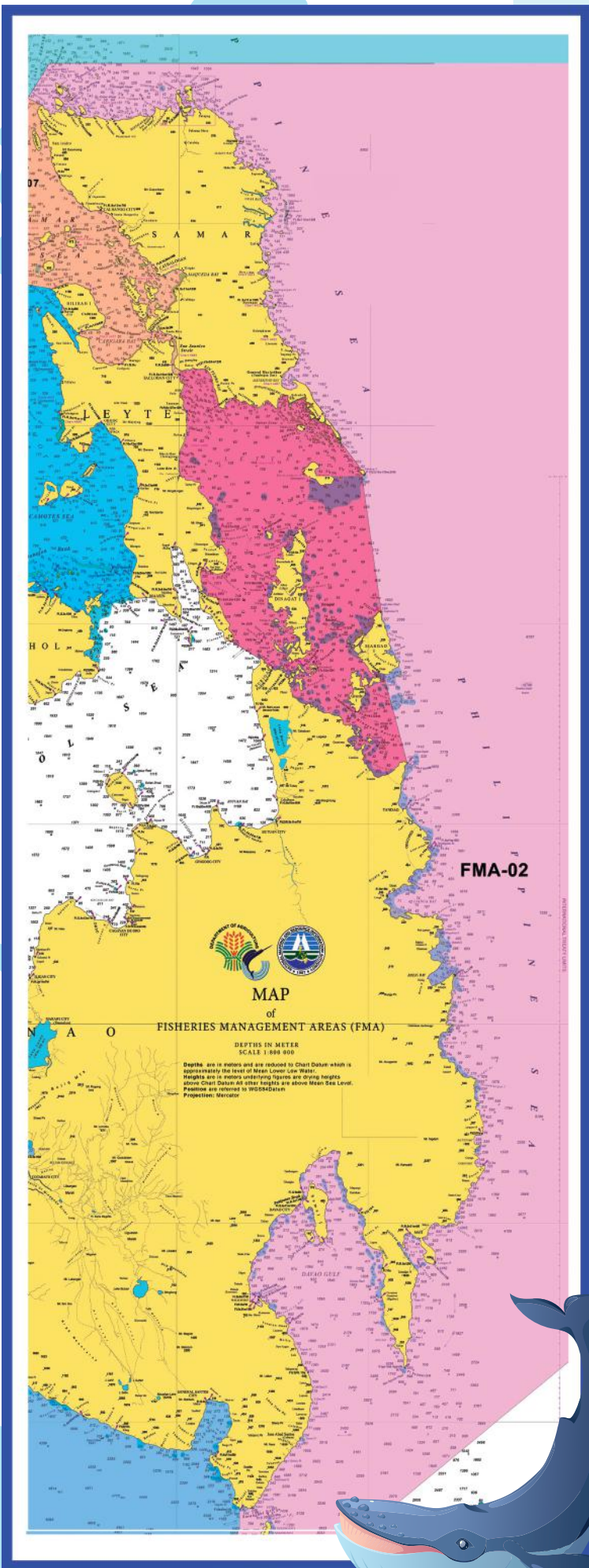
COMPREHENSIVE ASSESSMENT OF RISK TO ECOSYSTEMS (CARE)

Another Performance Indicator used in the FMA 8 for the three ecosystems namely; seagrass beds, coral reefs and mangrove forests was the Comprehensive Assessment of Risk to Ecosystems (CARE) model, designed to systematically analyze the full suite of risk related target (ecosystem) within a spatially explicit site from all the potential threats that might impact that site. Included in the CARE is the climate vulnerability assessment component that allows the users in data limited to evaluate the expected impact of climate change in their system.

And lastly for FMA 9, the NSAP have analyzed the top ten (10) species namely; *Sardinella lemuru* (bali sardines), *Auxis rochei* (bullet tuna), *Decapterus macrosoma* (shortfin scad), *Sardinella gibbosa* (goldstriped sardinella), *Selar boops* (oxeye scad), *Katsuwonus pelamis* (skip jack), *Selar crumenophthalmus* (big-eye scad) and *Decapterus kurroides* (redtail scad).

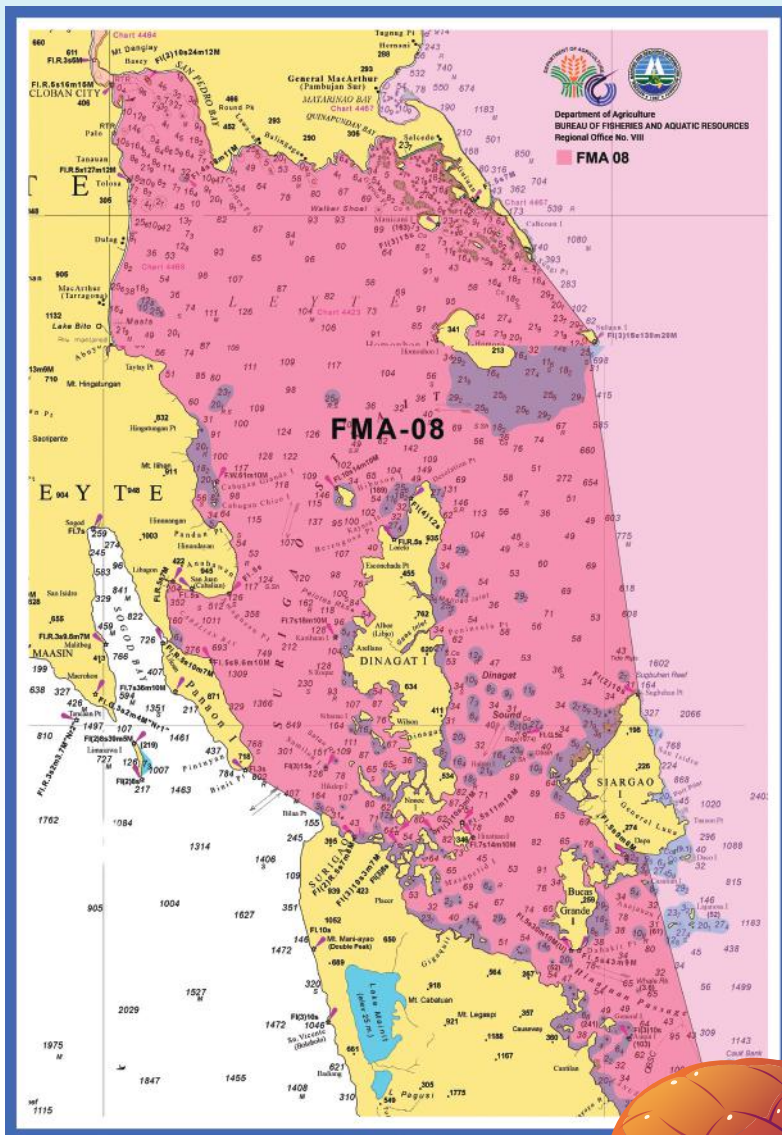
D. Technical Papers

For CY 2020, the NSAP has able to publish a scientific paper to the Philippine Journal of Fisheries last Jan-June issue entitled : Status of Agusan Marsh Fisheries : Lapaz and Talacogon, Agusan del Sur, Mindanao in support to policy formulation of fisheries in Agusan Marsh. Another two papers are on the way of editing and for review, these were : The overview of Surigao Strait fisheries and Status of Butuan Bay Fisheries with emphasis on *Sardinella lemuru* (Bleeker 1853).



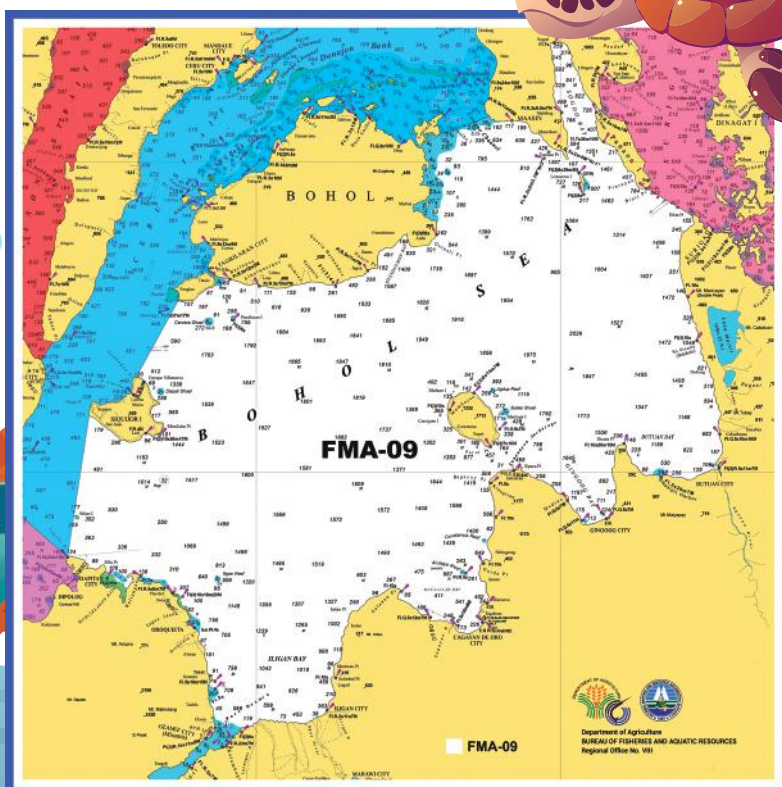
- LIST OF MUNICIPALITIES COVERED BY FMA 2**
- Barobo, Surigao del Sur**
 - Bayabas, Surigao del Sur**
 - Bislig, Surigao del Sur**
 - Cagwait, Surigao del Sur**
 - General Luna, Surigao del Norte**
 - Hinatuan, Surigao del Sur**
 - Lianga, Surigao del Sur**
 - Lingig, Surigao del Sur**
 - Marihatag, Surigao del Sur**
 - Pilar, Surigao del Norte**
 - San Agustin, Surigao del Sur**
 - Tago, Surigao del Sur**





FMA 8

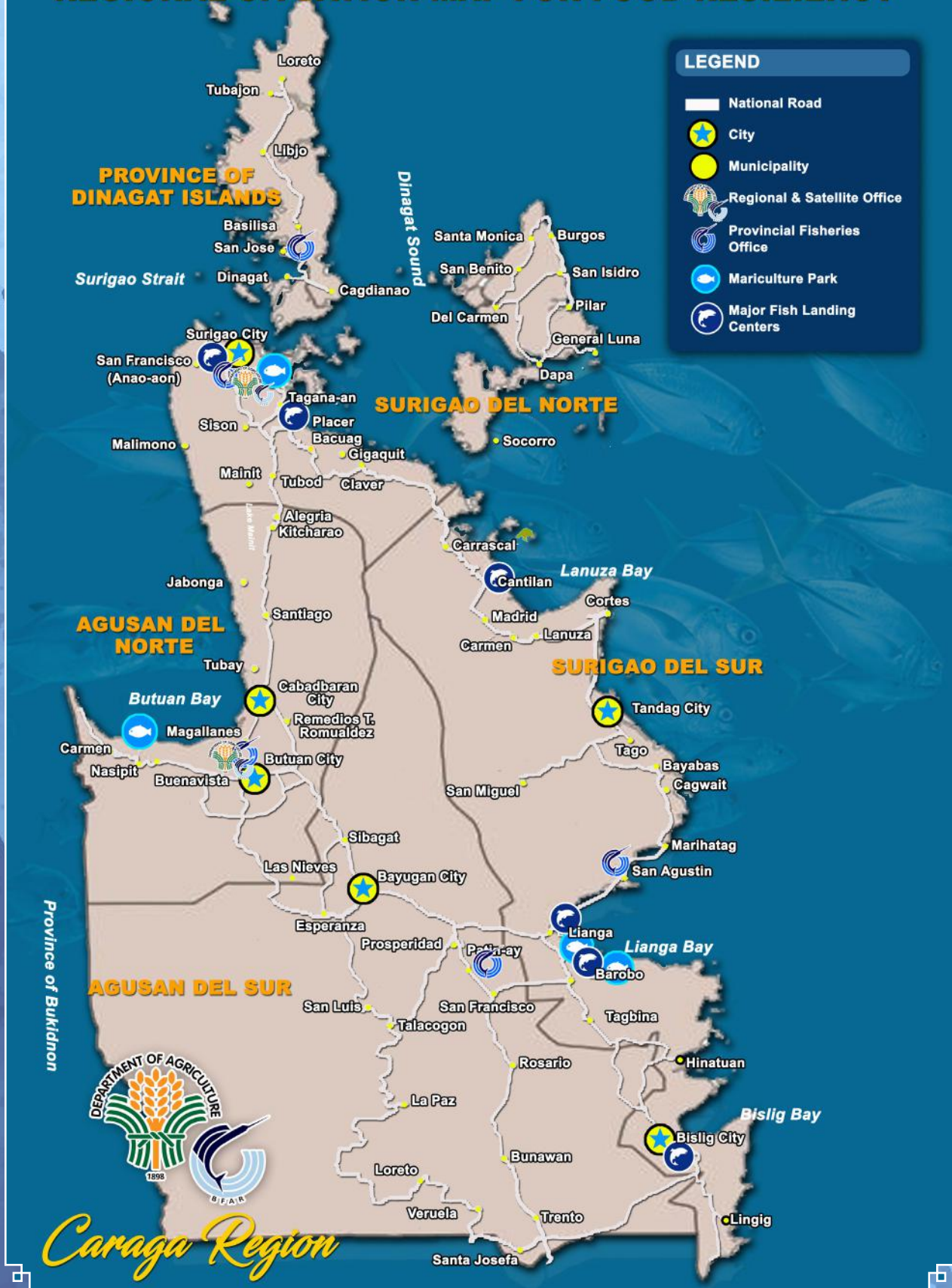
- Basilisa (Rizal), Dinagat Islands
- Cagdianao, Dinagat Islands
- Dinagat, Dinagat Islands
- Libjo, Dinagat Islands
- Loreto, Dinagat Islands
- San Jose, Dinagat Islands
- Tubajon, Dinagat Islands
- Cantilan, Surigao del Sur
- Carmen, Surigao del Sur
- Carrascal, Surigao del Sur
- Cortes, Surigao del Sur
- Lanuza, Surigao del Sur
- Madrid, Surigao del Sur
- Bacuag, Surigao del Norte
- Claver, Surigao del Norte
- Dapa, Surigao del Norte
- Del Carmen, Surigao del Norte
- Gigaquit, Surigao del Norte
- Placer, Surigao del Norte
- San Benito, Surigao del Norte
- San Isidro, Surigao del Norte
- Santa Monica, Surigao del Norte
- Socorro, Surigao del Norte
- Surigao City, Surigao del Norte
- Tagana-an, Surigao del Norte



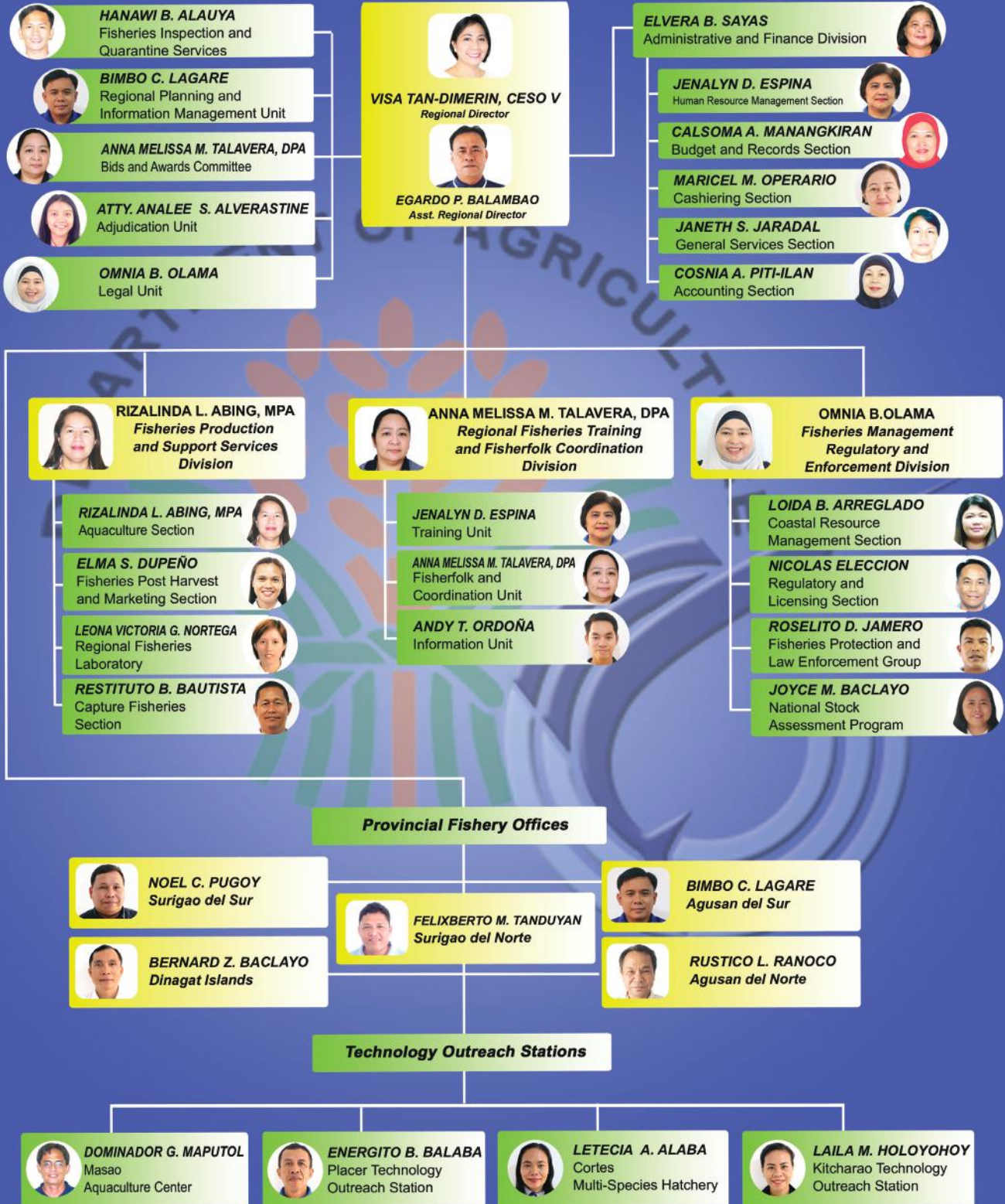
FMA 9

- Buenavista, Agusan del Norte
- Butuan City
- Cabadbaran City, Agusan del Norte
- Carmen, Agusan del Norte
- Jabonga, Agusan del Norte
- Magallanes, Agusan del Norte
- Nasipit, Agusan del Norte
- Tubay, Agusan del Norte
- Malimono, Surigao del Norte
- San Francisco, Surigao del Norte

REGIONAL SITUATION MAP FOR FOOD RESILIENCY



ORGANIZATIONAL STRUCTURE





*“A food-secure and resilient Philippines,
with empowered and prosperous farmers and fisherfolk”*