

UPDATES ON THE DENR INPUTS TO THE PRESIDENT’S REPORT TO THE PEOPLE 2022-2023 IN HIS 2ND STATE OF THE NATION ADDRESS (SONA)

Promoting the Sustainable Management of Natural Resources and Protecting the Environment

SAFEGUARDING THE INTEGRITY OF THE ENVIRONMENT

Advancing Integrated Management of Water Resources

It is primordial to continually protect, preserve and improve water as it is one of the most important natural resources that sustains all forms of life. Hence, it is necessary that water management is established. The DENR in Region VI has a program on water resource utilization. The activities are inventory of water sources (129%), all of which are groundwater; inventory of water users (129.20%), i.e. domestic/households, refilling stations, and municipal use.; and verification of water permit applications (WPA) (133.33%).

In order to understand the importance of water and applicable laws on water management, information, education, communication campaigns (200%) were conducted to water users and other stakeholders. The Presidential Decree No. 1067 or The Water Code of the Philippines and other relevant laws and requirements for permit application were discussed.

In support to National Water Resource Board’s (NWRB) Water Security Roadmap, the



Conduct of monitoring of wells in support to NWRB’s Water Security Roadmap



Solar Water System Projects implemented in Bacolod City, Negros Occidental





Well water sampling in the municipality of Leon in the province of Iloilo during the dry season



Well water sampling in the municipality of Maasin in the province of Iloilo during the dry season

Region conducted monitoring of eight (8) wells using manual and telemetry. These wells are located in the following municipalities in the province of Iloilo : Oton—2, Pavia—2, Alimodian—2, and San Miguel—2.

With the creation of Water Resource Management Office (WRMO) by virtue of Executive Order No. 22 as part of the implementation of Integrated Water Resource Management (IWRM), 82 Solar Water System Projects were implemented across the region. The total budget for the projects was Php 804,045,277.95. However, only eight (8) have been completed which are located in Bacolod City, Negros Occidental, while those in Guimaras and Panay Islands are still on-going.

The objective of the project is to distribute the water to the community ensuring the ease of water accessibility. Water tests have been conducted already including water distribution, but there is still a need for further test to warrant the safety of the water quality. The barangays are waiting for the endorsement of the said project from the Local Government Unit (LGU).

Furthermore, the Mines and Geosciences Bureau (MGB) 6 focuses on the assessment and evaluation of groundwater resources in the region. It is divided into two (2) components: the first component includes well data survey consisting of on-site water sampling and well data

Table 1. Groundwater Resources Assessment, CY 2023

Municipality, Province	Date of Assessment (Dry Season)	Date of Assessment (Wet Season)	(Wet Season)
New Lucena, Iloilo	February 6-24, 2023	July 17-21, 2023/ July 31-August 4, 2023	
Leon, Iloilo	March 13 - April 21, 2023	August 14 - September 22, 2023	
Maasin, Iloilo	May 22 - June 19, 2023	September 29 - October 24, 2023	

collection of open/dug wells and springs, done separately during the dry and wet seasons; the second component consists of geophysical study through the conduct of georesistivity surveys.

Protecting and Conserving the Country’s Rich Biodiversity

The DENR in Western Visayas supports the aim of the government to protect and conserve the integrity of the ecosystems in pursuance to SDGs 14 and 15 for the protection of life below water and on land.

Enhanced National Greening Program (ENGP)

Under the National Greening Program (NGP), for the year the Region maintained and protected 8,028.5 hectares. These established plantations were planted with different commodities such as bamboo, timber, rattan, indigenous, fuelwood and agroforestry species.

Contracting parties for the maintenance and protection of eNGP established plantations involved the 424 beneficiaries composed of Peoples Organizations and individual families. The contractors with the assistance of site coordinators and forest extension officers undertook various activities to include brushing/ring weeding, replanting, fertilizer application, replanting, establishment/maintenance of firelines, and patrol works.

On the other hand, a 448-hectare plantation was established under Central Office-based fund in the provinces of Iloilo and Negros Occidental. A total of 688,163 seedlings was planted



of different species composed of the following commodities: nipa, fuelwood, timber, fruit trees and indigenous species.

In anticipation of establishing plantations for the succeeding year, the Region surveyed and mapped 7,200.65 hectares (100%) covering various municipalities in the provinces of Aklan, Antique, Capiz, Iloilo and Negros Occidental. Most of the surveyed sites were inhabited with grasses and sedges cogon, haras and other dominant plants such as agsam and hagonoy; vegetation observed were open forests and brushland; and some areas have traces of old kaingin. Soil sampling was also conducted to determine the suitability of the species that will thrive in the area.

For the year, 502,219 seedlings were produced for the maintenance of ENGP established plantations and distribution to requesting parties, i.e. other national government agencies, people’s organizations, academe, local government units, and private entities. The planting stocks were produced from the 11 nurseries (198,242) maintained by six (6) provinces and (303,977) from Modernized and Mechanized Forest Nursery (MMFN) in Jawili, Tangalan, Aklan.

Sixteen (16) Small Water Impounding Structures equivalent to 322.70 cubic meters were constructed in the provinces of Aklan (3), Antique (3), Capiz (3), Iloilo (5), and Negros Occidental (2). These structures provide water to established ENGP plantations and have been



PENRO AKlan—Seedlings raised in MMFN at Jawili, Tangalan, Aklan



PENRO Antique—FGD with Community Monitoring Group (CMG) in Brgy. Nalusdan, Barbaza, Antique for preparation of IWMP for Dalanas River Watershed



PENRO Negros Occidental—Levelling Off for the IWMP of Tanolo Watershed

very useful to the community which open accessibility to water supply by the residents.

With the threats on watersheds, three (3) Integrated Watershed Management Plans (IWMPs) were drafted for Dalanas River Watershed in Antique; Sibalom-Tigbauan River Watershed in Iloilo; and Tanolo River Watershed in Negros Occidental.

To have a ready information on the status of the resources in the basin, five (5) databases have been maintained by the Region for Iloilo-Batiano River Basin and Jalaur River Basin in the province of Iloilo; Panay River Basin in Capiz; and Ilog-Hilabangan in Negros Occidental.

To warrant the successful implementation of the program, the following were hired: 74 Forest Extension Officers, 10 Technical and/or Support Staff, 17 Technical Staff, 7 Financial Staff, 17 Data Base Management Staff, and one (1) Database Manager for instrumentation of watershed. These hired personnel augmented the regular employees in the conduct of ENGP-related various activities.

The program not only improves the forest cover of the Region, it also generated 6,013 jobs for nursery operation, maintenance and protection activities of eNGP established plantations.



Intensified Forest Protection

As part of the protection efforts, 7,277.310 kilometers (137%) were the distance patrolled by 433 LAWIN patrollers composed of Forest Rangers, Forest Protection Officers, Forest Technicians, and volunteers. The areas patrolled included the 14 protected areas in Western Visayas, five (5) are legislated and eight (8) are under initial component of Expanded National Integrated Protected Areas (E-NIPAS). The province of Iloilo covered an impressive 2,060 kilometers through 365 patrols followed by the province of Negros Occidental, where 103 patrollers carried out 272 patrols, covering a distance of 1,848 kilometers. These accomplishments were facilitated by the collaborative work of three (3) CENROs of the said provinces. Other provinces, including Aklan, Antique, Capiz, and Guimaras, also made substantial contributions, achieving 973, 1,546, 425, and 423 kilometers, respectively.

Regarding the threats, for CY 2023 128 incidents were documented encompassing activities such as annual and perennial farming, charcoal making, tree cutting, hunting, presence of infrastructure, invasive species, landslide/mudslide, pest and diseases, kaingin, and typhoon-related threats. Notably, typhoon-related incidents topped with 42 occurrences, followed by tree-cutting incidents, totaling to 31.

The presence of the patrollers deters the conduct of illegal activities which would eventually enrich the region's natural resources. This can be evidenced by the 90% decrease (65) on the observed threats in 2020 as compared in the last three (3) years, particularly in 2017 (1,036) and 2018 (1,454). Moreover, for this year a significant reduction in threats compared to CY 2022, where a total of 313 threats were recorded as against the 128 for 2023. The efforts of patrollers in conducting information, education, and communication (IEC) activities played a fundamental role in informing the communities about the negative impact of illegal activities as well as the potential penalties violation of ENR laws. This has contributed to the overall success of conservation initiatives.

Partnership with law enforcement agencies to carry out environmental laws facilitated the



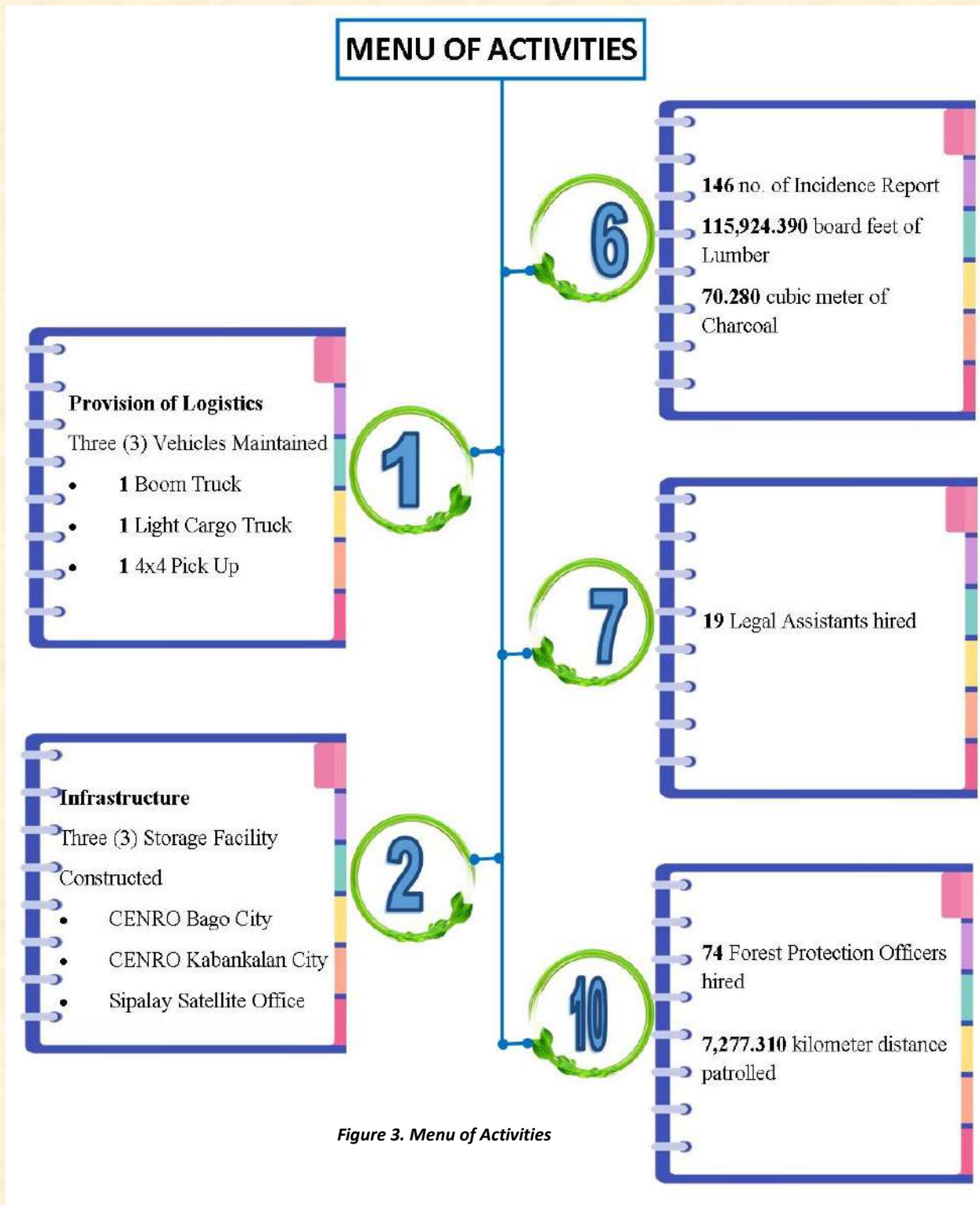


Figure 3. Menu of Activities

For CY 2023, these are the menu of activities conducted as part of the intensified forest protection efforts of the Region.



Patrollers during Lawin activities



apprehension of undocumented products composed of 115,924.390 (249%) board feet of lumber and 70.280 cubic meter charcoal. Consequently, 129 (177%) administrative adjudication proceedings were conducted with the hiring of 19 Legal Assistants.

To support the LAWIN patrollers, 74 Forest Protection Officers (FPOs) were hired. Hence, green jobs were created.

Php 3,789,388.03 were collected out of the intensification of forest revenue collection for the current year.

Payapa at Masaganang PamayaNAn (PAMANA)

The agency supports the peace process of the government through the implementation of PAYapa at MASaganang PamayaNAn (PAMANA) where members of opposition groups were hired as partners in the protection and rehabilitation of forests. The Office of the Presidential Adviser on the Peace Process (OPAPP) now Office of the Presidential Adviser on Peace, Reconciliation, and Unity (OPAPRU) provides the names to DENR who will be hired as Forest Guards. For CY 2023, 100 FGs (100%) were hired to conduct foot patrol. In addition, they produced 20,930 seedlings for ENGP sites and tree planting activities of ENR partners.





PENRO AKlan—*Philippine pit viper*
Trimeresurus flavomaculatus
“Other Threatened Species”



PENRO AKlan—*Scarlet Earth Ginger*
Etilingera megalochelios



PENRO AKlan—*Badlan*
Radermachera pinnata (Blanco)
Seem

Operation Against Illegal Environment and Natural Resources

Still as part of intensified forest protection, the Region implemented the operation against illegal environment and natural resources activities. In support thereof, the activities were conducted of one (1) meeting on operations of Amlig Western Visayas (AWV)/Regional Anti-Illegal Logging Task Force (RAILTF)/Regional Task Force for Environmental Protection (RTFEP); 63 investigations on ENR violations and complaints; mobilization of wildlife monitoring units (WTMUs) in seaports (3) and airports (4); and deputization of 111 wildlife enforcement officers (WEOs).

In line with the Anti-illegal Logging Campaign and in order to tackle the rampant timber poaching, encroachment and other illegal activities in Mt. Tag.ao Experimental Forest in the Province of Capiz, DENR 6 entered into a memorandum of Agreement (MOA) with the PNP Regional Office 6 (PRO6) as member of the Regional Anti-Illegal Logging Task Force (RAILTF).

Protected Areas Development and Management

As part of the management of the 14 protected areas, monitoring was conducted through Biodiversity Monitoring System (BMS). Activities conducted include Focus Group Discussion (FGD) with the residents within the area where their perception on the trends in the use of

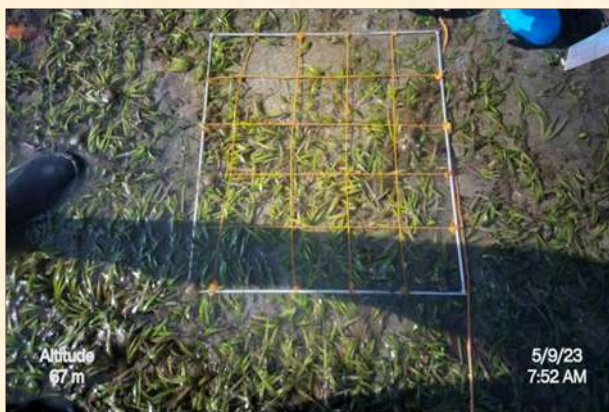


resources and households benefiting on the resources; field diaries/on-site observations through the conduct of regular patrol using standardized recording of routine observations in a simple notebook or data; and establishment of transects through demarcated routes conducted every quarter.

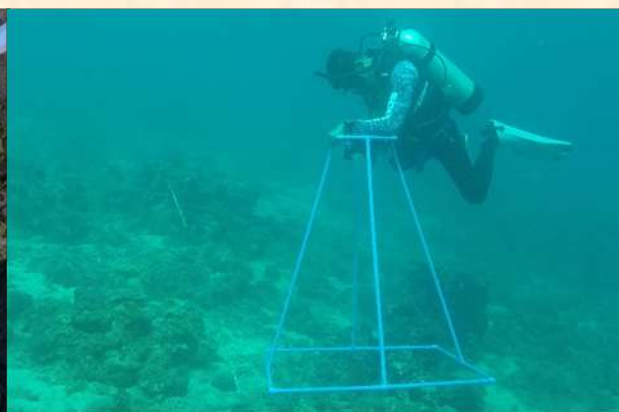
In the province of Aklan, the BMS site is within the Aklan River Watershed Forest Reserve (ARWFR). Based on the result of the BMS using the transect method, there were 37 flora species found, but 235 were recorded, of which six (6) species were considered threatened; 22 were categorized as native which indicate that they naturally occur in the region; two (2) exotic; and seven (7) for further identification to determine their classification.

The fauna species in the study area comprised a total of eight (8) species. Among these, five (5) species (62.5%) were classified as resident species, while the remaining three (3) species (37.5%) were identified as endemic. However, the total population of the fauna species could not be determined since it was only identified through sound. Notably, two (2) of the observed species were considered threatened according to DAO 2019-09. The Tirik (*Penelopides panini*) was categorized as "Critically Endangered," while the Philippine pit viper (*Trimeresurus flavomaculatus*) was classified as an "Other Threatened Species."

The forests in Sitio Lakawon, traversing to Kalunga Forests of Brgy. Galicia, exhibit characteristics of understory re-initiation in forest succession. Within these forests, a



PENRO Negros Occidental—identification of seagrass species inside the quadrant Sagay Marine Reserve



PENRO Negros Occidental—Observation and recording of macro-inverts present in Sagay Marine Reserve



Forest cover in BMS site in Aklan River Watershed Forest Reserve

on-site observations within the BMS site in ARWFR

transect walk within the BMS site in ARWFR

combination of mature trees and those approaching maturity can be observed, with the latter beginning to produce seeds. Additionally, new understory initiates have been identified in these forests, including species such as Narra (*Pterocarpus indicus* Wild. f. *indicus*), Badlan (*Radermachera pinnata*), and Nato (*Palaquium luzoniense*). These species contribute to the regeneration and development of the forest understory.

One (1) Community Monitoring Group (CMG) was for the FGD. assemblage of Barangay Council representative, WEOs, People Organizations representative and PA Resource Users in the Brgy. Galicia who are currently residing in the barangay. Based on their monitoring, there were 10 priority species identified which include Amo (*Macaca fascicularis philippensis*), Tirik (*Penelipides panini*), Ilahas (*Gallus gallus*), Alimukon (*Phapitreron leucotis nigrorum*), Kusi (*Loriculus philippinensis*), Narra (*Pterocarpus indicus*), Batino (*Alstonia macrophylla*), Lawaan (Red and White), Nato (*Palaquium luzoniense*) (Fern.-Vill.) S. Vidal Biri (*Ficus* sp.). They concluded that the present status of the forests is more abundant compared in the previous decades. In terms of livelihood, the community's major livelihood is bamboo stick production and marketing.

In the province of Negros Occidental, the BMS was conducted in Mt. Kanlaon Natural Park (MKNP), Northern Negros Natural Park (NNNP), Sagay Marine Reserve (SMR), and Ilog-Hilabangan Watershed Forest Reserve. In MKNP, 19 bird species comprising of 101 individuals were observed along with traces of the Visayan Warty Pig, Asian Palm Civet, and Visayan Leopard Cat during the 1st Quarter CY 2023 monitoring, while during the 2nd Quarter CY 2023 monitoring, 20 bird species and 117 individuals, with traces of the Asian Palm Civet

were observed. For the year, noteworthy species sighted were Negros Bleeding Heart Pigeon, Visayan Warty Pig, Visayan Tarictic Horn Bill, and Visayan Spotted Deer—all classified as critically endangered or endangered—highlight the importance of the park for conservation efforts.

The BMS in Sagay Marine Reserve (SMR) monitored the mangrove ecosystem, seagrass, and coral reefs. There are four (4) permanent monitoring stations for mangrove ecosystems and five (5) BMS sites; four (4) permanent monitoring stations for seagrass ecosystem; and three (3) permanent monitoring stations for coral reef ecosystems.

Among the four (4) monitoring stations for mangrove ecosystem, there was a notable increase in mangrove forest cover in Brgy. Bulanon, while the seagrass ecosystem in the four (4) monitoring stations showed a steady trend in mangrove forest cover. The coral monitoring activities indicated a positive trend in hard coral cover, potentially attributed to the ecosystem's recovery amid reduced disturbances during the COVID-19 pandemic.

The Biodiversity Monitoring System (BMS) in Northern Negros Natural Park (NNP) was conducted in Spur 20, Brgy. Kumaliskis, Don Salvador Benedicto, Negros Occidental. The monitoring revealed an increase in vegetation since October 2018, attributed to the favorable climatic conditions, protection efforts, and reforestation projects.

To intensify the protection of the different PAs in the Region, Communication, Education and Public Awareness (CEPA) were conducted particularly in Sibalom Natural Park (SNP) and Northwest Panay Peninsula Natural Park (NPPNP) in Antique (100%); Sicogon Wildlife Sanctuary (SWS) in Iloilo (100%); and Mount Kanlaon Natural Park (MKNP), Northern Negros Natural Park (NNNP), and Sagay Marine Reserve (SMR) in Negros Occidental (791%). These CEPAs include installation of signages and billboards, flyers, brochures, distribution of campaign tee-shirts, and TV/radio plugs. These signages play a vital role in advocating policies, raising environmental consciousness, and promoting collaboration for the sustainable use of the natural resources.





PENRO Aklan— *The Punong Barangay of San Jose, Madalag, Aklan during the 41st ARWFR PAMB Meeting*

PENRO Guimaras— *PAMB meeting in the province of Guimaras where they are able to pass 16 resolutions for CY 2023*

The management of the PA is one enormous responsibility that heavily relies on the Protected Area Management Board (PAMB). It is chaired by the Regional Executive Director (RED) with members coming from the offices of congressman, governor, mayor and punong barangays of the barangays within the PA. Hence, as part of its operationalization 11 (110%) trainings/learning events and meetings were conducted resulting in 48 (109%) minutes of meeting and 130 (3,250%) PAMB resolutions were approved. Some of these resolutions include: 1) Allowing the conduct of research interview on the thesis entitled: “Ethnobotanical Survey of Indigenous Floral Species Utilized by the local people in the barangays covered by ARWFR in the Municipality of Madalag, Aklan”; 2) Resolution interposing no objection on the proposed programs, activities and project under the Enhanced National Greening Program and Soil and Water Conservation Measures within ARWFR for CY 2024; 3) Requiring all adopters of Maasin Watershed Forest Reserve (MWFR) to submit the development plan on the area adopted; 4) Resolution Approving the Request for Clearance of Haribon Foundation Incorporated for the conduct of Governance Assessment for Protected Areas (GAPA) in NNNP; 5) Resolution Approving the Request for PAMB Clearance for the proposed tree growing site under the Environmental Protection Enhancement Program (EPEP) of LGU Talisay City, Negros Occidental within the Multiple Use Zone (MUZ) of NNNP; 6) Enjoining the punong barangays/municipal mayors to strictly regulate or restrict the entry of unauthorized individual to NPPNP”; and 7) creation of Task Force to Support the Northwest Panay Peninsula Natural



Regional Ecotourism Committee (REC) members composed of Department of Tourism (DOT R6), Department of Environment and Natural Resources (DENR R6), National Economic Development Authority (NEDA R6), Tourism Officers of Antique, Capiz, Iloilo and Negros Occidental. The invited guests were representatives from the Department of the Interior and Local Government (DILG R6), Department of Agriculture (DA R6) and National Commission on Indigenous Peoples (NCIP R6/7), DENR R6-Provincial Environment and Natural Resources Office (PENRO) of Aklan, Antique and Iloilo during the meeting on September 22, 2023 at Villa Valderrama Mountain Resort, Valderrama, Antique

Park Enforcement Team” among others.

The PAMB meetings was a Gender and Development (GAD) mainstreamed activity with the objective to involve women in the management of PAs to address women and issues. Notably, some of the women members were active in the discussion and decision making, although they were outnumbered by men counterpart.

To enhance the tourism experience of tourists and even researchers, 39 ecotourism facilities were constructed and continually maintained. Some of these facilities are livelihood center, cottages, gazebo, hanging bridges, foot trail with hand rail, look out towers, entrance/exit gate, canopy walk, toilets, pavilion, kiosks, viewing decks, information center, ranger stations, homestay, administration building, dormitory, and watch tower.

The Department has been a member of the Regional Ecotourism Committee (REC) since its establishment as a formal organizational structure for the development of ecotourism in the Philippines by virtue of Executive Order (EO) 111 issued on June 17, 1999. For 2023 until 2026, DENR 6 will sit as the Chairperson. All projects, activities and dialogues will be under the directive of the agency and in collaboration with the Department of Tourism (DOT), National Economic and Development Authority (NEDA), Department of Agriculture (DA), and



National Commission on Indigenous People (NCIP). The REC aims at strengthening the Western Visayas Ecotourism Loop which would also include the Seven Cities, Alimodian Ecotourism Site, Bucari Pine Forest and Campsite, and Sibalom Natural Park, among others.

Impact of ecotourism activities in NPPNP, SNP, MKNP, NNNP, and SMR was monitored for the region to keep abreast whether these activities have contributed on the quality of life of the host communities in providing livelihood opportunities, thus increases household income. Assessment on the visitors' impact on the biodiversity and ecology of the ecotourism destinations was also made. Detrimental effect to the protected areas and the resources was found therein. Consequently, it is necessary to formulate policies that would meet the economic value of the communities, while the use of the resources are properly managed so as not to compromise the needs of the future generation.

For CY 2023, the Integrated Protected Area Fund (IPAF) amounted to Php7,495,780.15 which is largely higher compared to CY 2022's collection of Php 1,621,349.00. The increase can be attributed to the revenues collected in the five (5) PAs for the year, while there were only two (2) PAs in 2022.

Coastal and Marine Ecosystems Management Program (CMEMP)

In as much as we protect and rehabilitate forestland and managed protected areas, it is also important to manage and conserve coastal and marine ecosystems through the implementation of Coastal and Marine Ecosystems Management Program (CMEMP). Thus, Marine Protected Area Management Strengthening and Networking activities were conduct in Taklong Island National Marine Reserve (TINMR) in Guimaras and Sagay Marine Reserves in Negros Occidental. It includes monitoring of 322.311 hectares of corals, 3,023.388 hectares seagrass, and 411.35 hectares mangrove in; water quality monitoring within the said PAs where there are 10 sampling stations established; conduct of Regular Habitat Survey; and clean and active rehabilitation.



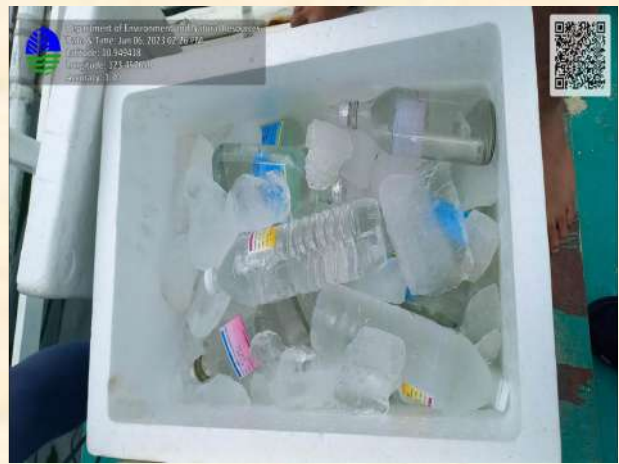


PENRO Guimaras— Conduct of on-site water analysis at TINMR

For TINMR, there were seven (7) primary and one (1) secondary water parameters measured: temperature, pH, dissolved oxygen (DO), color, total suspended solids, phosphates, fecal coliform, and oil and grease. Water temperature (°C), pH and DO were measured onsite while other parameters were determined through laboratory analysis at EMB Region VI Laboratory. Throughout the year, it was noted that all parameters in TINMR were able to pass the standards for Class SA waters except for: (1) fecal coliform in Alman Sur, Luzaran and Masai for the 1st quarter; (2) DO in Alman Sur, Luzaran and Piagau, and oil and grease in Masai and Piagau during the 2nd quarter; and (3) DO in Alman Sur and Piagau during the 3rd Quarter of CY 2023. Continuous regulation of tourism activities (limitation in number of PA visitors), coastal clean-up, survey of human activities in areas immediately adjacent to the PA, strict implementation of carry-in and carry-out policies for solid wastes and monitoring of



PENRO Negros Occidental— WQM in SMR



PENRO Negros Occidental—Water samples collected in SMR





PENRO Guimaras—Habitat survey in TINMR



PENRO Guimaras—Coastal clean up along the coastline and mangrove areas of TINMR

wastes transferred to mainland for documentation are among the recommendations drawn.

In the conduct of WQM there were seven (7) parameters used in SMR—temperature, pH, dissolved oxygen, nitrate, color, total suspended solids, and fecal coliform. In SMR in all its four (4) monitoring stations the pH, nitrate, color and TSS have passed the normal and acceptable value. However, the result in terms of temperature in all stations showed that the temperature range was below the requirement; dissolved oxygen was below the required level in September 2023, although have passed values in June and March 2023 assessments; and fecal coliform exceeded the maximum tolerable level.

In the conduct of regular habitat survey of coastal and marine ecosystems through sea-borne and foot patrol was carried out for the entire year within TINMR and SMR. Patrolling and surveillance was performed twice (2x) daily in TINMR which resulted in the apprehension of eight (8) fishermen. The cases were filed for violation of Municipal Fishery Ordinance No. 06 of the municipality of Nueva Valencia and seven (7) accused were found guilty beyond reasonable doubt.

Clean-up activities were regularly conducted as part of the direct activities to address identified threats in the coastal and marine ecosystems in the PA. Majority of the wastes collected composed of single-use plastics, Styrofoam, fishnets, PET bottles, used foot wears,

glass bottles, etc.

Protected Area Suitability Assessment (PASA) targeted in the province of Guimaras for Guimaras Strait, which is a narrow passage of water in Western Visayas that connects the Visayan Sea and the Panay Gulf. It covers 18 coastal LGUs, of which six (6) belong in the province of Iloilo namely Ajuy, Anilao, Banate, Barotac Nuevo, Barotac Viejo, and Dumangas. It was conducted for the proposed Guimaras Strait Protected Seascape (GSPS).

As a result of the conduct of the biophysical assessments and extant data sources Guimaras Strait serves as an abode for important coastal and marine ecosystems such as mangrove forests, seagrass beds and coral reefs. The waterbody is home for 20 species of mangroves, nine (9) species of seagrass and 51 species of corals. The Strait also supports over 120 faunal assemblages comprised of avifauna, marine mammals and reptiles, fish and benthic macroinvertebrates. Notable was the presence of species of concern such as the “Critically Endangered” Dugong dungon and *Eretmochelys imbricata*, the “Vulnerable” waterfowls *Anas luzonica* and *Egretta eulophotes*, the “Vulnerable” corals *Montipora capricornis*, *Pachyseris rugose*, *Pavona decussata*, *Heliofungia actiniformis* and *Pectinia lactuca*, and the “Endangered” *Anacropora spinosa*. With 39 fish taxa documented, the water body is also considered a valuable fishery ground, hosting commercially and ecological important fish species.

Recognizing the significance of collaboration, that while the agency pursues proper management of marine resources helping the fisherfolks through development of Biodiversity-Friendly Social Enterprises (BDFE) with municipality within/outside NIPAS MPA was seen to be one of the instruments to attain such pursuit. For Region 6, a total of 24 (109%) POs with enterprise enhanced was accomplished. The types of enterprise are oyster and mussel production and marketing, oyster culture production, crab fattening, community-based ecotourism, and micro-enterprise. In return, these partners helped out in the habitat restoration nature and landscape service/forest protection and maintenance and reforestation.



Moreover, Lapaz Fisherfolks Aquatic Resources and Management Association, Inc. (LAFARMA) in the province of Guimaras was the recipient PO for the grant of financial assistance amounting to Php 900,000.00.

Another partnership undertaken by the Region in its yearning to mobilize the citizenry in the management of natural resources was the provision of three (3) technical assistance on coastal and marine concerns to the municipalities of Libertad, Antique; Pilar, Capiz; and Nueva, Valencia, Guimaras , and one (1) on MPA networking for LGU-managed MPAs.

Mid-term Knowledge, Attitude and Practices (KAP) survey was conducted to the 208 respondents in the two (2) barangays in the province of Guimaras. The respondents composed of local chief executives, local organizations, youth (students and out-of-school), household heads, local business owners, and school heads and teachers.

The KAP was done through a survey and FGD as part of the triangulation to validate and ensure the accuracy of information gathered and interpreted during the survey. It indicated that the local community demonstrated awareness/ knowledge on biodiversity and its components, their importance through provision of livelihood and food, natural protection and source of life. They also showed involvement in environmental activities such as tree planting, clean-up drives and proper waste management in the community. The community showed familiarity with the concepts of ocean/ marine pollution and climate change, and are largely mindful of critical issues about biodiversity.



PENRO Guimaras— *Conduct of Mid-Term KAP Survey in Brgys. San Roque and La Paz, Nueva Valencia, Guimaras*



PENRO Aklan— *Visayan Warty Pig*



PENRO Aklan— *Monkey*

To augment the working force in the implementation of the different programs, and projects under CMEMP, the following were hired: three (3) CMEMP Extension Officers (EOs); two (2) Boat Captains/Operators; and two (2) Crew/Motorman.

Wildlife Resources Conservation

With the observance of the presence of these wildlife considered as priority threatened species, six (6) field surveys were conducted in Hinobaan, Negros Occidental for Visayan Spotted Deer, MKNP for Negros Bleeding Heart Pigeon, NNNP and MKNP for Negros Fruit Dove and Walden's Hornbill, and Central Panay Mountain Ranges for Visayan Warty Pig. Also monitored was the population of marine turtles in the provinces of Aklan, Antique, Capiz, Guimaras, Iloilo and Negros Occidental; Dugong in Guimaras; Philippine Cockatoo in Negros Occidental; Bats (flying foxes) in Antique, Guimaras and Negros Occidental; and Asian Waterbird Census in the six (6) provinces.

Two (2) Wildlife Rescue Centers (WRC) are maintained by the Region located in Kinirayan, Miag-ao, Iloilo and Jawili, Tangalan, Aklan. These centers served as the temporary shelter of confiscated and turned-over wildlife while being treated and conditioned for release in their natural habitat. Some of the wildlife sheltered are Visayan Warty Pig (*Sus cebifrons*),

Philippine Serpent Eagle (*Spilornis holospilus*), Southern Hawk-Eagle, Brahminy Kite (*Haliastur indus*), Philippine long-tailed macaque (*Macaca fascicularis philippensis*), Python.

The facilities maintained in the centers are cages for snakes and monkeys and pen box.

In the province of Capiz, four (4) wildlife disease surveillance in wild fauna were conducted to ensure that the wildlife will not perish due to animal diseases. Moreover, biological samples of endemic and indigenous species were collected for DNA bar coding. By doing so, mortality rate of wildlife will be prevented to occur.

From ridge to reef, the Region has been very keen in the conservation and protection of the biodiversity including the relationship of the human beings who co-exist in the ecosystem with other creatures and organisms.

Employing Innovative Science and Technology in Environmental and Natural Resource Management

According to the National Economic Development Authority (NEDA) the interdisciplinary coordination of Science, Technology, and Innovation (STI) will act as a catalyst in driving economic growth and addressing global risks and challenges to which the Department supports. Hence, the Region created One Control Map (OCM) Office and hired GIS operators responsible to work on the geospatial data needs of the agency. Particularly, the office through the GIS experts manages the shapefiles depicting ENR PPAs including analysis whether these datasets are projected properly using Arcmap; verifies application of tenures to determine if there is overlapping of existing ENR programs and projects on subject areas/sites; facilitates submission of datasets to the bureaus concerned for updating/consolidation; and supports the Geospatial Database Office (GDO) on acquiring data needed from their respective offices.

For the year, the OCM was able to consolidate and standardized the attributes of 20



forestry and 13 biodiversity; verified 15 applied tenures; uploaded 41 shapefiles at DENR OCM portal; and converted 23 maps to joint photographic experts group (jpeg) thematic maps per request by different offices. The activities undertaken in the OCM will provide the management and concerned offices geospatial information on the status of ENR PPAs that at some point requires the conduct of ground verification.

With the advancement of technology and in support to the institutionalization of Natural Capital Accounting (NCA) in the Philippines where DENR is one of the agencies that

1	List of coastal municipalities including their coastal barangays
2	List of Coastal Extension Officers (CEO) hired (sex disaggregated) from CY 2017 to CY 2023
3	List of Boat Captain and Boat Crew hired (sex disaggregated) from CY 2020 to CY 2023
4	List of Biodiversity-Friendly Enterprises (BDFEs)
5	Diver and Dive Equipment Updated Registry
6	DENR Statistical Form 5/PAWCZMS Statistical Form 7a and 7b
7	List of Established MPA Information Centers and Procured Watercrafts under CMEMP Implementation in the Province of Antique
8	List of Locally Managed Marine Protected Areas
9	NIPAS MPA Water Quality Monitoring Data
10	List of Municipalities with CRM Plan, ICM Plan and provided with TA on ICM
11	Consolidated BMS and NIPAS MPA Patrolling Database
12	Marine Protected Area Network (MPAN) Roadmap

developed the approach with Philippine Statistics Authority (PSA) and NEDA, the Region procured ICT equipment, i.e. laptops; maintained/updated databases on the (1) CMEMP related/ concerns (GAD Mainstreamed), (2) River Basin Integrated Information Management System (RBIIMS) containing biological and bioresource data and other data, (3) Wildlife Tenure Instrument Holders, and (4) patents (GAD Mainstreamed); and hired (1) database management staff under ENGP, and (2) database manager for instrumentation.

These databases provide information on the status of the ENR PPAs implemented as well



as the natural resources found therein, list of beneficiaries/partners, and other ENR-related data which serve as basis on the projects and intervention to be undertaken. It can also be the source of information by ENR partners in furtherance of their field of interest.

ACCELERATING CLIMATE ACTION AND STRENGTHENING DISASTER RESILIENCY

Hazard Management

The Region actively responded to the occurrence of oil spill when MT Princess Empress capsized off the coast of Naujan, Oriental Mindoro on February 28, 2023. However, despite the clean-up efforts to prevent the spread of the spilled oil, some have already reached the coast of the municipality of Caluya in the province of Antique. The DENR in Region 6 created a composite team to conduct the rapid assessment of oil spill affected areas in Caluya, antique. RED Duran spearheaded the conduct of this activity covering the affected areas in Semirara, Nagubat and Liwagao Islands, Caluya. Moreover, Oil Spill Monitoring was created to monitor the status of the clean-up, the affected coastal habitats especially the mangroves and seagrass beds together with the water and air quality monitoring and collection of oiled debris by the EMB 6. The teams were deployed every week for the 1st three (3) months post spill.



Inside the “Workshop Area” – sorbent booms lining with layered plastic tarp to contain oil during cleaning



“Workshop Area” of Harbor Star for cleaning of used drums using high temperature, high pressurized seawater



Le Floch provides daily clean up plan to Harbor Star to manage manpower and tasking of hired workers. A total of 201 workers are doing the clean up on April 12, 2023.



The Region's key officials including the PENR Officer of Antique attended meetings called by the Disaster Risk Reduction Management Council (DRRMC), Technical Working Group Oil Spill and LGUs of Antique and municipality of Caluya. The CENRO Culasi was instructed to conduct assessment to determine the clean-up endpoints.

The inter-agency activities include Inspection of Staging Area in Sitio Pooacan, Tinogboc, Caluya, Antique; Observation of clean-up operation; and Mangrove Clean-up by Philippine Coast Guard (PCG) - Low Pressure Flushing.

The response to the oil spill that affected Caluya, Antique was a collaborative among agencies to prevent further damage to the marine resources in the area.

Engaging Local Government Units in Multi-Stakeholder ENR Governance

Recognizing the importance of collaboration and partnership, the Region strengthened its alliance and networking with the Local Government Units (LGUs). The instruments that would encourage and bind collaboration with the LGUs are DENR's Forest Land Use Plan (FLUP) and LGUs Comprehensive Land Use Plan (CLUP) and Integrated Coastal Management (ICM). Moreover, the membership to the Protected Area Management Board (PAMB), Watershed management Council and other committees of both are also appropriate avenues to improve collaboration toward ENR governance.

