



USAID PROTECT WILDLIFE

# PROTECT WILDLIFE QUARTERLY PROGRESS REPORT 13

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# ABBREVIATIONS

BARMM-MENRE	Bangsamoro Autonomous Region in Muslim Mindanao-Ministry of Environment, Natural Resources and Energy
BCC	behavior change communication
BIOFIN	Biodiversity Finance Initiative
BRAIN	Biodiversity Resources Access Information Network
BSAP	Biodiversity Strategy and Action Plan
CAVCS	Carbon Accounting, Verification and Certification System
CAPTURED	concealable, available, processable, transferrable, useable, removable, enjoyable, and desirable
CENRO	Community Environment and Natural Resources Office
CFLET	Composite Fishery Law Enforcement Team
CHED	Commission on Higher Education
CLUP	comprehensive land use plan
CLWUP	comprehensive land and water use plan
CSO	civil society organization
CWT	combating wildlife trafficking
DA-BFAR	Department of Agriculture-Bureau of Fisheries and Aquatic Resources
DENR	Department of Environment and Natural Resources
DENR-BMB	DENR Biodiversity Management Bureau
DENR-FMB	DENR Forest Management Bureau
DOST	Department of Science and Technology
EG	Economic Growth
ELEMIS	Environmental Law Enforcement Management Information System
ELP	Environmental Law and Protection
ENIPAS	Expanded National Integrated Protected Areas System
EPEB	Environmental Protection and Enforcement Bureau
EPETF	Environmental Protection and Enforcement Task Force
FLUP	forest land use plan
FSSI	Foundation for a Sustainable Society, Inc.
GenSan	General Santos City
ICD	integrated conservation and development

KAP	knowledge, attitudes and practices
LGU	local government unit
LOP	life of project
LTTA	long-term technical assistance
MASEPLA	Mampang Seaweed Planters Association
METT	Management Effectiveness Tracking Tool
NGP	National Greening Program
NIPAS	National Integrated Protected Areas System
NWRRC	National Wildlife Rescue and Research Center
PAMB	Protected Area Management Board
OCA	Office of the City Agriculturist – Zamboanga City
OCENR	Office of the City Environment and Natural Resources – Zamboanga City
PBSAP	Philippine Biodiversity Strategy and Action Plan
PCSD	Palawan Council for Sustainable Development
PCSDS	Palawan Council for Sustainable Development Staff
PES	payment for ecosystem services
PhilBio	Philippines Biodiversity Conservation Foundation, Inc.
PhilFIDA	Philippine Fiber Industry Development Authority
PhilMech	Philippine Center for Postharvest Development and Mechanization
PSCCJP	Philippine Society of Criminologists and Criminal Justice Professionals
SA	Strategic Approach
SFI	Sustainable Forest Management
SILAW	Salabusob Integrated Livelihood Association of Women
STTA	short-term technical assistance
UAV	unmanned aerial vehicle
USAID	United States Agency for International Development
USDA PhilCAFE	United States Department of Agriculture - Philippine Coffee Advancement and Farm Enterprise
USG	United States Government
WEO	wildlife enforcement officer
W-GDP	Women’s Global Development Initiative
ZCAWTF	Zamboanga City Anti-Wildlife Trafficking Task Force



# INTRODUCTION

The Protect Wildlife activity supports initiatives to align conservation policy with on-the-ground wildlife management actions and enforcement. The activity works in target landscapes to reduce threats to biodiversity, reduce poaching and use of illegally harvested wildlife and wildlife products, and improve ecosystem goods and services for human well-being.

Protect Wildlife fits within the USAID Biodiversity Policy (USAID 2014) that “builds upon the Agency’s long history of conserving a global biological heritage for current and future generations and reflects a deep understanding of the role that healthy natural systems play in achieving the Agency’s human-development goals.” The activity is the first USAID/Philippines initiative to combat wildlife trafficking and directly implement the U.S. Government’s Eliminate, Neutralize and Disrupt Wildlife Trafficking Act of 2016. Protect Wildlife supports the Philippines’ current policies and programs on biodiversity conservation and reduction of wildlife trafficking under the National Integrated Protected Areas System (NIPAS) Act and the Wildlife Resources Conservation and Protection Act.

Protect Wildlife’s principal counterpart is the DENR-Biodiversity Management Bureau (DENR-BMB) in coordination with the DENR-Forest Management Bureau (DENR-FMB), Department of Agriculture-Bureau of Fisheries and Aquatic Resources (DA-BFAR), the National Commission on Indigenous Peoples (NCIP), and various national level law enforcement agencies. At the local level, Protect Wildlife works directly with DENR Regional Offices; Provincial and Community Environment and Natural Resources Offices (PENROs and CENROs); and provincial, city and municipal local government units (LGUs), as well as local offices of DA-BFAR and NCIP. In Palawan, the activity coordinates with the Palawan Council for Sustainable Development Staff (PCSDS). At various levels, the activity works with non-government and civil society organizations (NGOs and CSOs); colleges and universities; and land and resource managers, such as ancestral domain and tenure holders and fisherfolk and coastal community organizations.

## ACTIVITY OVERVIEW

As a megadiverse country, the Philippines claims to be the “center of the center” of nearshore marine diversity, including corals and reef fishes. It is home to approximately 1,100 terrestrial vertebrates and five percent of the world’s flora, a significant proportion of which is endemic. However, much of these biodiversity assets continue to face risks and pressures from both natural and human interventions, such as land conversion for agriculture and settlements; illegal, unregulated and unreported harvesting; and destructive mining and quarrying. The value of biodiversity and the ecosystem goods and services they provide are not effectively communicated to local stakeholders. Capacities are limited with unrealized economic incentives and inadequate financial support to manage wildlife habitats and regulate uses in highly diverse areas.

## TARGET SITES

Protect Wildlife strives to target wildlife trafficking hotspots and work with local stakeholders with initiatives to improve local capacities; incentivize communities and LGUs; leverage financing support; and deepen knowledge, attitudes and behaviors for the effective management, regulation and enforcement of wildlife habitats and wildlife trafficking transshipment points such as ports. The activity works across geographies in the Philippines to address wildlife trafficking transshipment, but implements a more comprehensive ecosystem-based approach in biologically significant areas presented below:

- **Palawan:** From the activity's Puerto Princesa City office, Protect Wildlife implements technical activities in threatened terrestrial, marine and coastal areas; wildlife habitats in forest lands and protected areas, such as the Mount Mantalingahan Protected Landscape, Tubbataha Reefs Natural Park, Rasa Island Wildlife Sanctuary, Ursula Island Game Refuge and Bird Sanctuary, Cleopatra's Needle Critical Habitat, El Nido-Taytay Managed Resource Protected Area, and Puerto Princesa Subterranean River National Park.
- **Zamboanga City-Sulu Archipelago:** From offices in Zamboanga City and Tawi-Tawi, Protect Wildlife implements activities in forest lands, including foreshore and mangrove areas; and protected areas, such as Pasonanca Natural Park and Great and Little Santa Cruz Islands Protected Landscape and Seascape.
- **General Santos City (GenSan), Sarangani and South Cotabato in Region 12:** From its office in General Santos City, Protect Wildlife implements activities in forest lands and protected areas, such as Mount Matutum Protected Landscape, Sarangani Bay Protected Seascape and Allah Valley Protected Landscape. Mount Busa Key Biodiversity Area in Sarangani and South Cotabato is also one of the target sites in Region 12.
- **Region 3 or Central Luzon, with selected sites in Aurora, Nueva Ecija and Bataan:** From its office in Palayan City, Protect Wildlife implements activities in Aurora Memorial National Park, Mount Mingan mountain range and the Bataan side of Manila Bay.

The Manila office maintains the national advisors and specialists who lead the development of the activity and Strategic Approach (SA) work plans; provide technical support to field activities; and work with national-level agencies, Manila-based private and non-government organizations, and relevant donor-funded projects.

# COVER STORY



**Freshly harvested turmeric** paves the way for opportunities in economic empowerment and sustainable farming for members of Salabusob Integrated Livelihood Association of Women (SILAW), one of the people's organizations in the Philippines supported by the United States Government's Women's Global Development and Prosperity (W-GDP) Initiative.

## **W-GDP INITIATIVE STRENGTHENS WOMEN'S ROLES IN CONSERVATION-BASED LIVELIHOODS**

Women are drivers of development and play important roles in the sustainable use of natural resources in the Philippines. Not only do they ensure food security at the household level, but they are also agricultural producers, postharvest processors, traders, seasonal workers and entrepreneurs. Their livelihood activities depend heavily on natural assets in landscapes and seascapes; hence, their economic empowerment and meaningful participation in the management and protection of natural resources in their localities must be reinforced.

Under the Protect Wildlife activity, USAID has focused its livelihood development work on upland and coastal people's organizations that integrate environmental protection and conservation into their microenterprise activities. Through this lens, the activity delivers technical assistance to women

entrepreneurs under its Strategic Approach 2, which focuses on intensifying private and public sector involvement in biodiversity conservation and conservation financing. The activity's strategy and targets align closely with the United States Government's Women's Global Development and Prosperity (W-GDP) Initiative and its second pillar—Women Succeeding as Entrepreneurs—which centers on entrepreneurship and access to capital, markets and networks.

Building on this natural linkage, Protect Wildlife has become an implementer of the W-GDP Initiative in the Philippines, bringing partner enterprises on the “Journey to Self-Reliance through Women's Economic Empowerment” and delivering on the Initiative's vision in the Philippines. Through the W-GDP Initiative, Protect Wildlife is helping women-led organizations gain access to microfinancing, networks and marketing opportunities; training and mentoring on business strategy and operations; and catalytic investments in their infrastructure and tools. These various forms of support help ensure that the organizations will be able to sustain their livelihoods well beyond the life of the activity.

## **W-GDP INITIATIVE IN PROTECT WILDLIFE SITES**

Through the W-GDP Initiative, Protect Wildlife supports 20 enterprises with active women members and aims to benefit around 5,000 household members by strengthening the economic benefits derived from biodiversity conservation and sustainable management of natural resources.

Protect Wildlife's approach focuses on strengthening the leaders' organizational development and management skills, facilitating improved access to finance, and making investments in training, infrastructure and resources needed to help the enterprises either transition into postharvest processing and trading or produce higher quality commodities that command a higher price in the market. The longer-term objective is to enjoin these people's organizations into a network so they can continue to grow and further develop and diversify their products by learning from other producers and buyers and understanding their industry better.

In late 2019 and early 2020, Protect Wildlife applied an organizational and enterprise readiness assessment tool to target women-led organizations that aligned with the W-GDP Initiative vision, and were in position to strengthen or expand promising enterprises. Of the 40 organizations assessed, Protect Wildlife rated 28 as functional, sufficiently linked to the activity's co-objectives for natural resources management, and with capacity to absorb technical assistance and investments in improved processing capacity.

With the beneficiary selection complete, Protect Wildlife transitioned in the latter half of 2020 to design and delivery of customized technical support to each people's organization based on assessments of their organizational development and enterprise management capacity and systems. Interventions include organizational development and business planning and management training; strengthening access to market information, networks and credit; and supporting capital investments in technology, basic infrastructure and postharvest equipment.

While Protect Wildlife develops a targeted technical assistance package for each partner organization that is aligned to their specific needs and ambitions, the activity also brought together a group of public

### Thriving with Partnerships under the W-GDP Initiative

Across all W-GDP Initiative activities, Protect Wildlife engages public and private sector partners to help design, deliver and sustain interventions beyond the life of the activity. Partners from the public sector and civil society are contributing their respective expertise toward the initiative through technical support; training design and facilitation; and design, operations and maintenance of processing equipment. Below, we present background on select partners.

- **Philippine Fiber Industry Development Authority, Maasim LGU, and Conrado and Ladislawa Alcantara Foundation** for abaca production through technical assistance and the Climate Smart Farmers Field School.
- **Philippine Center for Postharvest Development and Mechanization** to introduce postharvest and processing improvements for agricultural commodities and provide support for procurement, management and maintenance of equipment.
- **Foundation for a Sustainable Society, Inc.** on strengthening enterprise management capacity of partner people's organizations and extending access to finance for microenterprises.
- **Department of Science and Technology** shares designs and technical support for postharvest processing, including production of designs and support for procurement, management and maintenance of postharvest processing equipment for seaweed and other commodities.
- **World Bank's Philippine Rural Development Project and the Department of Agriculture** to jointly implement training on appropriate practices for the cultivation and processing of major commodities, such as abaca, cacao and coffee in South Cotabato; and to develop a pool of para-technicians to expand service delivery in upland and indigenous communities.

and private sector partners (see text box) to deliver highly specialized technical services across activity sites, and developed a suite of common trainings on various subjects, including the following:

- **Strategic Planning.** Assessing external environment (opportunities, threats, markets and competitors) and internal organization (strengths and weaknesses); defining strategic direction, vision, mission, goals, activities and resource requirements for three to five years; and establishing clear organizational arrangements and policies.
- **Financial Management and Bookkeeping.** Understanding basic concepts of bookkeeping and financial management, keeping accounting records, calculating business profit and losses, and overseeing cash management and financial controls and systems.
- **Business Planning Workshops.** Establishing clear direction and policies for marketing, technical production, operations, skills-building and financing of the enterprise; identifying critical partnerships; and developing proposals for lending, assisting or support institutions.

Over the last two quarters, Protect Wildlife delivered targeted support to eight people's organizations, including Salabusob Integrated Livelihood Association of Women (SILAW), Cherish Fisherfolk Association, Rural Improvement Club of Labuan, Cooperative of Women for Health and Development, and Lake Sebu Indigenous Women Weavers Association. In the following section, we illustrate the activity's approach to the W-GDP Initiative with a case study on SILAW and its "Journey to Self-Reliance through Women's Economic Empowerment."



**SILAW women** harvest their turmeric, which will be processed into dried form before being transported to their buyer in Manila. Even with a high market demand for turmeric products, SILAW struggled to capitalize on this opportunity due to outdated and inefficient processing equipment, limited business management capacity, and logistics challenges in distribution.

## **SALABUSOB INTEGRATED LIVELIHOOD ASSOCIATION OF WOMEN**

Salabusob Integrated Livelihood Association of Women from Bongabon town in Nueva Ecija province was informally organized in 2008 by a faith-based organization, who trained its 40 all-female membership—mostly from the indigenous Kankana-ey community—on turmeric production and processing. The organization also linked SILAW with Tropical Palm Herb, a Manila-based herbal supplement manufacturer.

For the initial six years of their operations, SILAW members managed a communal-run turmeric farm, but then transitioned to household-based planting due to land tenure issues. While the members continuously supplied fresh turmeric and dried chips to Tropical Palm Herb, they relied heavily on their benefactor organization for marketing and transportation. When the assistance stopped, marketing and transportation grew more challenging. With members struggling to organize collective transportation to the buyer in Manila, more and more of their raw turmeric went unprocessed and unsold.

Despite their buyer's consistent demand for dried turmeric—6,000 kilograms over a six-month period, paying at ₱280 per kilogram—SILAW struggled to capitalize due to outdated and inefficient processing equipment, limited business management capacity, and logistics challenges with distribution of their product. The members would spend long hours manually slicing turmeric using kitchen knives prior to the drying process. Even if the group was able to manually slice a large volume, SILAW relied on a turmeric dryer that simply could not process the amount of product that its supplier demands. The group's improvised dryer was fashioned with trays and plastic sheets and can only accommodate up to 10 kilograms of turmeric at a time that takes five days to dry, constraining the women from expanding their production and processing.

An equally great constraint on SILAW's capacity is its lack of organizational backbone—clear policies and procedures—financial management systems and tools, and business and organizational management training that its leaders need to oversee and sustain its turmeric enterprise. Discouraged by

their benefactor's departure and the enterprise's increasing challenges, many became inactive and pursued other livelihood opportunities in the intervening years.

When Protect Wildlife was introduced to the group in 2020, SILAW was down to eight highly dedicated members whose drive to keep the organization alive sustained them over the difficult five years that followed their benefactor's departure. These farmer-entrepreneurs remained focused on turmeric cultivation but only at the household-level. They continued processing turmeric into chips and selling them in small quantities to Tropical Palm Herb, doing what they could to keep the marketing arrangement active.

After completing its organizational assessment of SILAW and identifying it as a beneficiary under the W-GDP Initiative, Protect Wildlife designed a targeted technical assistance package focused on three core areas: (1) to build the enterprise's organizational and business planning capacity, (2) to make catalytic investments in postharvest processing, and (3) to revitalize its market linkages.

Prior to delivering technical support, however, Protect Wildlife led meetings with the organization to discuss conservation issues and sustainable agriculture concepts. The activity also executed a turmeric market assessment to gain a clearer understanding of the value chain, and to identify the specific technical investments that will produce the greatest returns for the group.

### **Methodical, Conservation-Oriented 'Reboot' Renews Interest in Group Membership**

As part of its learning sessions, the Department of Environment and Natural Resources, with Protect Wildlife support, led an orientation on the Aurora Memorial National Park management plan, and the linkages between its protection and conservation and the ecosystem services that businesses, farmers and the general population depends on. SILAW members committed to sustainable practices, such as rotational planting, intercropping with fruit trees, and using organic fertilizers to reduce contamination of their groundwater sources.

After analyzing the zoning regime and guidelines on permitted and restricted land and resource uses in the protected area, SILAW members determined that their current turmeric plantation fell within the park's multiple-use zone, clearing the way for the women to sustain their current planting operations. They also opened discussions with the DENR to launch their pursuit of land tenure for their plantation in the multiple-use zone.

SILAW's core membership also gathered for a session on Protect Wildlife's turmeric market assessment. There, the activity presented findings regarding the prospective buyers' existing market demand for turmeric products (raw, chips, powder); and the comparative profitability of raw turmeric tuber and turmeric chips production, including an analysis of return on investment for turmeric production and processing as an enterprise.

After gaining an understanding of the landscape and the potential return on investment for various turmeric products, the group discussed which turmeric product and enterprise they felt best placed to pursue. The group then analyzed its resources, existing membership and capacity—critically assessing their available plantation area, their capacity to manage it, and the volume of raw turmeric they could



**“We are now confident** to renew our government registration as a farmers’ organization using the outputs from our strategic organizational planning, and use our business plan with proper recording of our transactions to guide our turmeric enterprise.”

SILAW Treasurer Judith Bucago

realistically produce. After this session, the group agreed to expand their plantation to a minimum of one hectare to address challenges with the volume of their production, and to strengthen their existing turmeric chip processing operation.

The activity served as a turning point for the organization. The more methodical approach to assess the market and the establishment of a technical support plan both set a clear pathway for the organization to move forward and served as a draw for the group’s inactive members. SILAW’s roster grew to 17, including new, young women recruits who saw the potential of the turmeric enterprise.

### **Filling in Capacity Gaps with Targeted Training Initiatives**

After establishing a direction for its technical assistance program under the W-GDP Initiative, Protect Wildlife mobilized partners from local DENR offices to lead a training on business planning and bookkeeping for SILAW’s turmeric processing enterprise. Beyond the hands-on financial management and accounting lessons, the trainers worked with SILAW to develop strategies to monitor market demand, production and sales on behalf of its members.

The DENR helped participants to craft written rules and standards on turmeric production and processing and to establish clear protocols on consolidation of product from its members. The participants worked with their own financial data to develop a system to manage their finances, and to compute standard pricing and income projections for their dried turmeric chips and other secondary products. Finally, the group looked to the future, identifying prospective buyers to pursue if they are able to meet their increased production goals.

Protect Wildlife placed equal weight on the tangible benefits of the training—written policies and improved accounting procedures—and its more intangible outcomes, the relationship that SILAW cultivated with its trainers. Through training with public and private sector partners across activity sites, Protect Wildlife aims to build enduring partnerships between beneficiary groups and local resource providers.





**A new solar tunnel dryer** provided by the W-GDP Initiative will help members of SILAW boost their production of dried turmeric and meet the volume requirements of their buyer.

Following these trainings, SILAW members worked with Protect Wildlife to craft their group's vision, mission, goals and strategies. They also prepared a basic organizational structure with committees on agroforestry, education and promotion, and membership systems and services. These outputs were organized into a three-year organizational plan that addresses development activities, such as maintaining agroforestry practices and recruiting more women members.

### **Making Catalytic Investments in Postharvest Processing**

In parallel to organizational and enterprise development trainings and workshops, SILAW members, with Protect Wildlife support, opened discussions with the Philippine Center for Postharvest Development and Mechanization (PhilMech) in regards to postharvest processing. As presented earlier, two of SILAW's core weaknesses were their reliance on hand-slicing and an improvised turmeric dryer. Recognizing these crippling inefficiencies, PhilMech examined existing technologies for turmeric drying, and conducted a site visit to SILAW where they conceptualized the design for a more efficient drying facility. Protect Wildlife also conducted additional research to identify other relevant processing tools.

After finalizing specifications, Protect Wildlife applied W-GDP Initiative resources to open procurement for a suite of postharvest processing technologies to improve efficiency, boost volume, and produce a higher quality product under more sanitary conditions. Toward the end of the quarter, the activity oversaw the delivery of mechanized slicers and food-grade kitchen tools to replace the time-intensive process of hand slicing with more efficient and sanitary tools; while early the next quarter, Protect Wildlife will oversee delivery and installation of a solar tunnel dryer. The dryer boasts a processing



**“We are excited** for our harvest this December. Tropical Palm Herb has already ordered our dried turmeric chips. We are confident that we can deliver their required volume of 200 kilograms every month from December to April.”

SILAW President Erlic de Guzman

capacity of up to 700 kilograms per week, while also reducing the moisture content of the turmeric chips, producing a higher-quality product.

After the delivery and installation, PhilMech will deliver an operations and maintenance training, and with Protect Wildlife, will develop a manual to guide the group’s maintenance activity going forward. PhilMech also committed to maintain its linkage with the group to provide continuing assistance beyond the life of Protect Wildlife. Before the activity closes, USAID looks forward to celebrating with SILAW following their December turmeric harvest, when PhilMech will oversee the use of the solar tunnel dryer.

## **WRITING STORIES OF WOMEN EMPOWERMENT ACROSS ACTIVITY SITES**

Protect Wildlife is helping its partner enterprises across activity sites to write similar W-GDP Initiative success stories. In Zamboanga City, members of Tolosa and Salaan Buffer Zone Associations are learning updated cacao production practices designed to help diversify their income streams and reduce their dependence on unsustainable and destructive farming practices. In Palawan, Cherish Fisherfolk Association and Rural Improvement Club of Labuan are building floating seaweed dryers designed by the Department of Science and Technology that will enhance the groups’ production capacity and lead to higher-quality seaweed. In Region 12, the activity is working with eight people’s organizations engaged in abaca fiber production, consolidation, processing and marketing, delivering a range of assistance from the Climate Smart Farmers Field School, to business development and bookkeeping training to investments in processing equipment that produces higher quality fiber.

For many of these people’s organizations, the W-GDP Initiative has helped them to re-discover their potential and inject new life into their enterprises. Through the network they’re building with their fellow W-GDP Initiative beneficiaries, and the public and private partners that have committed to work with them over the long term, they’re also well positioned to sustain it.

# MONITORING, EVALUATION & LEARNING

In this section, Protect Wildlife presents a status update on progress achieved this quarter through implementation of the activity's five Strategic Approaches. Achievements are presented in reference to Protect Wildlife's contract deliverables and Year 4 targets, and USAID Economic Growth indicator targets.

## THEORY OF CHANGE STATUS REPORT

Protect Wildlife's work in target sites is guided by the following Theory of Change:

**IF** national and local stakeholders understand the economic value and sociocultural significance of habitats and wildlife species, including the ecosystem services that they provide in conservation areas, as a combined result of:

- **Improved** and positively changed communities' knowledge, attitudes and behaviors toward wildlife and biodiversity conservation;
- **Increased** public and private sector investments and increased revenues from environment and natural resources-related enterprises to finance conservation, support to biodiversity-friendly and sustainable livelihoods and enterprises for local communities in priority sites;
- **Improved** conservation competencies of governance bodies, local government units, civil society organizations, and landowners, tenure and domain holders in managing and regulating land and resource uses in landscapes of habitats and wildlife species;
- **Improved** capacities of higher education institutions to generate scientifically rigorous evidence and knowledge essential for conservation and for enriching curricula and outreach programs; and
- **Enhanced** capacities of national and local enforcement entities to identify, capture, prosecute and adjudicate wildlife crimes and habitat losses,

**THEN**, Protect Wildlife can significantly contribute to the reduction of threats to habitats and to wildlife species,

**THEREBY**, directly and indirectly enhancing capacities of various threatened habitats of wildlife species, as part of larger ecosystems and seascapes-landscapes, to supply and provide ecosystem services that benefit human well-being.

Protect Wildlife operationalizes the Theory of Change via five SAs and their corresponding results and targets:

**Strategic Approach 1:** Improve attitudes and behavior toward biodiversity and its conservation in target areas at a statistically significant level, with these five-year targets:

- 100 people trained to lead behavior change campaigns
- 25 behavior change communication (BCC) campaigns implemented
- 300,000 people reached by BCC campaigns

**Strategic Approach 2:** Intensify financing from private and public sectors and internally generated revenues for biodiversity conservation, with these five-year targets:

- US\$500,000 revenues generated from the sale of ecosystem services in target sites
- 100 payments for ecosystem services (PES) or tourism initiatives
- US\$5 million in public-private investments in Protect Wildlife anti-poaching and trafficking efforts

**Strategic Approach 3:** Improve biodiversity conservation competencies of local government units, governance bodies, civil society organizations, and land and resource management units, with these five-year targets:

- 200 LGU staff trained in participatory planning for integrated conservation and development
- 2,500 community members trained in planning and implementation of integrated conservation and development
- 200 LGU staff trained, certified and formally deputized as Wildlife Enforcement Officers (WEOs) by government agencies
- 500 community members trained and certified as WEOs by government agencies

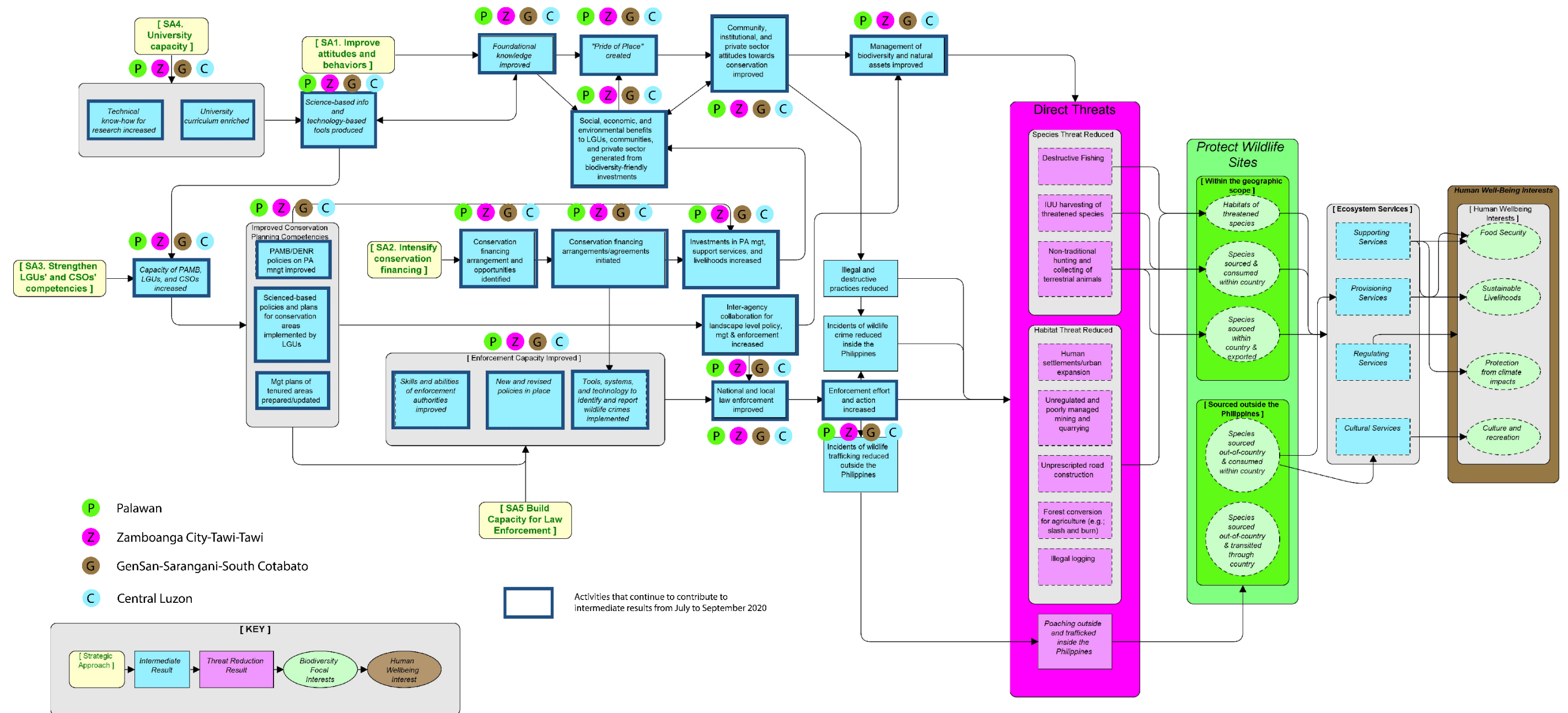
**Strategic Approach 4:** Enhance capacities of universities to advance biodiversity conservation education, research, monitoring and innovation, with these five-year targets:

- 25 university-supported research initiatives implemented at Protect Wildlife sites
- 10 universities developing conservation curricula with support from Protect Wildlife

**Strategic Approach 5:** Enhance competencies of national and local government agencies in enforcing biodiversity conservation-related laws and policies, with these five-year targets:

- 1,000 government staff trained in combating wildlife and environmental crime
- 50 new or revised laws and regulations adopted to combat wildlife crimes
- 1,000 confiscations, seizures and arrests resulting from capacity building provided by Protect Wildlife.

FIGURE 1: OVERALL PROTECT WILDLIFE THEORY OF CHANGE RESULTS CHAIN HIGHLIGHTING INTERMEDIATE RESULTS BEING ACHIEVED FROM SA-SPECIFIC AND INTER-SA ACTIVITIES



## MONITORING AND EVALUATION STATUS REPORT

This report addresses activities and accomplishments achieved during the July 1 to September 30, 2020 period. In the following sections, Protect Wildlife presents a narrative summary of progress against deliverable targets for each Strategic Approach, which is followed by an update for each USAID Economic Growth output and outcome indicator. The narrative sections are followed by a presentation of the Deliverable and Outcome tables, which included detailed reporting against quarterly and life-of-project (LOP) targets.

### PROGRESS AGAINST TARGETS

Protect Wildlife maintained progress this quarter against indicator targets for each Strategic Approach, as well as the Economic Growth Output and Outcome indicator targets, as detailed in Tables 1 and 2. While LOP targets for the activity were originally based on an assumed 60-month implementation period, Protect Wildlife has achieved 11 of 16 contract deliverable targets and 8 of 10 USAID Economic Growth output and outcome targets in only 51 months of implementation.

This quarter, Protect Wildlife eclipsed LOP indicator targets for:

1. LGU staff trained in participatory planning for integrated conservation and development (ICD) (Deliverable 3.1);
2. New or revised laws and regulations adopted to combat wildlife crimes (Deliverable 5.2);
3. Confiscations, seizures and arrests resulting from capacity building provided by Protect Wildlife (Deliverable 5.3);
4. Number of women (household members) with economic benefits derived from sustainable natural resource management and/or biodiversity conservation as a result of USG assistance (Special W-GDP Outcome Indicator)
5. Number of people that apply improved conservation law enforcement practices as a result of USG assistance (EG.10.2-6); and
6. Number of microenterprises supported by USG assistance (EG. 5-3-W-GDP).

Despite disruptions caused by the COVID-19 pandemic, the activity remains on pace to meet all remaining targets by the March 31, 2021 end date.

In the following sections, Protect Wildlife highlights achievements and other significant developments recorded this quarter. Reporting is presented by Strategic Approach and Economic Growth outcomes and outputs, including those indicators that the activity has proposed for the Women's Global Development and Prosperity (W-GDP) Initiative. Where relevant, we report on the impact of the declaration of the enhanced community quarantine on planned activities and deliverables.

### Strategic Approach 1: Behavior Change Communication

This quarter, Protect Wildlife continued to support DENR Region 3's implementation of the Wild and Alive campaign. Originally designed as an airport campaign, following the pandemic, the activity helped to pivot the campaign for delivery via social media in collaboration with DENR Region 3's Public Affairs

Office. The Facebook-based campaign continued to draw numbers this quarter, reaching more than 700,000 unique individuals and achieving a 9 percent engagement rate.

## **Strategic Approach 2: Conservation Financing**

Of the PES initiatives supported by the activity, Protect Wildlife verified US\$6,912 in PES revenues from its LGU-run water utility partners in Palawan—Taytay Waterworks and Rizal and Brooke’s Point LGUs—this quarter. Although not reported here, partners across sites continue to implement PES schemes. Due to challenges linked to the COVID-19 pandemic, however, PES partners have experienced challenges with collections and preparation of documentation required to verify revenue generation. These PES partners include the Zamboanga City Water District, and those engaged in PES-like tourism collections from Pasonanca National Park (Zamboanga City), Bud Bongao Forest Park (Tawi-Tawi), and Mount Mantalingahan (southern Palawan).

Finally, Protect Wildlife was also able to report an additional US\$45,389 leveraged from partners to support conservation and combating wildlife trafficking (CWT) efforts. This quarter, the activity leveraged new commitments from the following:

- Kasanyangan Center for Community Development and Microfinance Foundation, which donated 10,000 seedlings of Arabica coffee planting materials valued at US\$7,221 (₱350,000) to Tolosa and Salaan Buffer Zone Associations (Zamboanga City) as part of their agroforestry work in Pasonanca Natural Park buffer zones; and
- Smart Communications, which formalized its commitment to provide ten School in a Bag learning kits as counterpart resources, including the cost of 100 tablets, for rural classrooms in activity sites. Protect Wildlife helped integrate conservation lessons and materials into Smart’s existing kits, strengthening its education program. Smart’s commitment is equivalent to an investment of US\$38,168 (₱1.85 million).

Alongside this new investment, Protect Wildlife is also reporting a US\$90,000 (₱5 million) reduction in the total investment leveraged to date. As previously reported in QPR 7, this amount represented a commitment from Abraham Holdings, Inc. for community-based social enterprises and protection of coastal and marine habitats in selected sites in Palawan. Following the drastic slowdown of tourism driven by the COVID-19 pandemic, the company has closed its business operations in Puerto Princesa, thus, could no longer pursue their commitments to the activity.

## **Strategic Approach 3: Conservation and Governance**

Between March and June 2020, Protect Wildlife paused the majority of its training initiatives in order to redesign them for compliance with local government and activity health and safety requirements related to the COVID-19 pandemic. This quarter, the activity successfully rolled out the revised curriculum for integrated conservation and development in Region 12.

Rather than gathering all trainees in a central training facility, Protect Wildlife executed trainings on-site in each target community, which allowed for the activity to ensure social distancing and universal mask-wearing, while also providing a more intimate setting that lent itself to more focused training and support. Under this approach, 577 community members from nine LGUs in South Cotabato completed

the required ICD trainings. An additional 24 farmer-beneficiaries from southern Palawan also completed the training in a similar site-based setting, as part of the activity’s agroforestry initiative.

Also this quarter, 18 community members from Villa Aurora in Maria Aurora municipality, who received training on August 11 to 13, 2020, were certified by the DENR as enforcers for Aurora Memorial National Park and Mount Mingan. In addition to those who secured certifications, 48 additional community members and 46 LGU officials have completed all prerequisite trainings required to secure WEO certification and deputation, respectively. Protect Wildlife continues to liaise with government partners to help secure their official approval for these future WEOs.

#### **Strategic Approach 4: Conservation Research and Curriculum Development**

This quarter, Protect Wildlife is reporting on one new research study, while also removing one study from its previous accomplishments—as a result of challenges stemming from the COVID-19 pandemic—maintaining its accomplished total of 27 initiatives implemented in target sites.

- **CAPTURED Study.** Protect Wildlife completed data collection for its study on wildlife trafficking using the CAPTURED (Concealable, Available, Processable, Transferable, Useable, Removable, Desirable) framework, which was initiated in collaboration with Dr. William Moreto of University of Central Florida. The study will focus on understanding factors that influence the trading of priority wildlife species in the activity sites.
- **Mount Matutum Tarsier Sanctuary Research.** Because of COVID-19-driven work and travel restrictions that were implemented by LGUs in Region 12, Protect Wildlife determined that it could no longer pursue its tarsier sanctuary research project in Mount Matutum with the University of the Philippines Institute of Biology. After the study team’s initial reconnaissance, its first expedition to Mount Matutum, which was scheduled for mid-March, was canceled due to the onset of the pandemic. Despite efforts to complete the research, quarantine restrictions and intermittent lockdowns and travel restrictions in the region prevent the activity from mobilizing the research team to the field.

Protect Wildlife was able to secure traction for its conservation curriculum development efforts. Following a June 22, 2020 Commission on Higher Education (CHED) Region 11 memorandum to all colleges and universities offering Bachelor of Science in Criminology, five additional schools confirmed their adoption of the Environmental Law and Protection (ELP) syllabus. Their confirmation follows their participation in a workshop led by the Philippine Society of Criminologist and Criminal Justice Professionals (PSCCJP) on the ELP syllabus and development of teaching tools and materials that Protect Wildlife helped develop.

#### **Strategic Approach 5: Wildlife Law Enforcement**

Protect Wildlife eclipsed LOP targets for two wildlife and environmental law enforcement indicators this quarter, on new or revised laws and regulations adopted to combat wildlife crimes; and confiscations, seizures and arrests resulting from capacity building provided by the activity.



With Protect Wildlife support, partner officials issued the following:

- Six LGU ordinances, five of which declared their respective flagship species, namely the Sulu hornbill (Panglima Sugala, Tawi-Tawi), green sea turtle (Turtle Islands, Tawi-Tawi), civet cat (Polomolok, South Cotabato), Philippine eagle and Zamboanga bulbul (Zamboanga City), and green humphead parrotfish (Kiamba, Sarangani); and one declaring a Local Conservation Area (Central Mangrove Forests, Zamboanga City).
- Protected Area Management Board Resolution No. 2020-048, Series of 2020, Approving and Adopting the Proposed Schedule of Administrative Fines Applicable to Reported Violations within Sarangani Bay Protected Seascape

Protect Wildlife also eclipsed its LOP target for 1,000 confiscations, seizures and arrests resulting from capacity building provided by Protect Wildlife by reporting on 488 additional enforcement actions by DA-BFAR and enforcement officials in Palawan, Zamboanga City and Region 12.

## **OUTCOME TARGETS**

### **EG 10.2-2: Number of hectares of biologically significant areas under improved natural resource management as a result of USG assistance**

No updates this quarter.

### **EG 10.2-3: Number of people with improved economic benefits derived from sustainable natural resource management and/or biodiversity conservation as a result of USG assistance**

This quarter, Protect Wildlife recorded 3,768 individuals (18,840 household members) with improved economic benefits, thanks in part to support for the following initiatives and their outcomes:

- Training delivered under the W-GDP Initiative covering one or more of the following topics: (1) turmeric, cacao and abaca production and processing, (2) strategic planning and business planning, (3) bookkeeping and financial management, and (4) conservation-based agroforestry systems;
- Agroforestry training and distribution of rambutan seedlings and farm tools to community members in southern Palawan as part of the activity's agroforestry initiative;
- Various interventions in Mount Mantalingahan geared toward improving the management of the protected area and conserving its resources, which serve as critical inputs to upland residents' livelihoods; and
- Conservation and management planning activities that are helping to preserve ecosystem services, which benefit irrigation facilities drawing water from the Mount Matutum watershed and serving 138 hectares of rice farms.

### **EG 10.2-3 (W-GDP): Number of women and their households with improved economic benefits derived from sustainable natural resource management and/or biodiversity conservation as a result of USG assistance**

Protect Wildlife eclipsed its LOP target for the indicator this quarter, helping to secure improved economic benefits for 744 additional women (3,720 household members) from people’s organizations engaged in the W-GDP Initiative. Through training and mentorship on a range of subjects—such as cacao harvesting and processing, organizational development, business planning and basic bookkeeping—and catalytic investments in postharvest processing or other enterprise operations, Protect Wildlife initiated support for eight enterprises from Regions 3 and 12 and Zamboanga City. The enterprises are engaged in abaca production and processing, turmeric processing and cacao production.

**EG 10.2-6: Number of people that apply improved conservation law enforcement practices as a result of USG assistance**

Protect Wildlife eclipsed its LOP target for the indicator this quarter, with confirmation of 850 individuals applying improved practices, thanks in part to Protect Wildlife assistance. This quarter, the activity conducted validation interviews with trainees from five DENR and DA-BFAR enforcement units, and two LGUs in South Cotabato (T’boli and Surallah). Based on these interviews, the activity determined that 188 individuals gained knowledge and skills through participation in enforcement trainings and subsequent mentoring, and are applying those lessons on the job.

Protect Wildlife is also reporting on 662 DENR and LGU task force and field-level enforcement unit members who remain in enforcement positions, applying knowledge and skills gained from activity interventions; and sharing them with colleagues—strengthening their units’ enforcement practices.

**EG 10.3-4: Amount of investment mobilized (in US\$) for sustainable landscapes, natural resource management and biodiversity conservation as supported by USG assistance**

As noted under the Strategic Approach 2 section on Conservation Financing, Protect Wildlife is able to report on additional US\$45,389 leveraged from partners to support conservation and combating wildlife trafficking efforts.

**EG 10.3-6: Greenhouse gas emissions, estimated in metric tons of CO<sub>2</sub> equivalent reduced, sequestered or avoided through sustainable landscape activities supported by USG assistance**

No updates this quarter.

**OUTPUT TARGETS**

**EG 10.2-4: Number of people trained in sustainable natural resources management and/or biodiversity conservation as a result of USG assistance**

This quarter, Protect Wildlife reports on 1,467 new people trained in sustainable natural resources management and/or biodiversity conservation as a result of USG assistance. This figure includes the following:

- New conservation-based agroforestry trainees from southern Palawan who are participating in the agroforestry activity designed to increase forest cover, while also introducing a new potential source of potential livelihoods through cultivation of fruit-bearing trees;
- Integrated conservation and development trainees from Region 12;
- National and local government officials from Region 3 who completed a field-based, practical marine turtle conservation training in Mariveles, Bataan; and
- Community members and national and local government officials in Region 3 who participated in WEO training.

**EG 10.2-5: Number of laws, policies, or regulations that address biodiversity conservation and/or other environmental themes officially proposed, adopted or implemented as a result of USG assistance**

In addition to seven new policies reported under Strategic Approach 5 section on Wildlife Law Enforcement, Protect Wildlife also supported the following:

- One ordinance issued by Glan municipality declaring the months of September and October for the celebration of Langyaw Langgam Festival or Raptor Festival. The ordinance includes provisions on prohibitions and penalties on killing, hunting and possessing migratory birds, as well as their parts.
- Protected Area Management Board Resolution No. 2020-048, Series of 2020, Approving and Adopting the Proposed Schedule of Administrative Fines Applicable to Reported Violations within Sarangani Bay Protected Seascape

**EG 4.2.4 (W-GDP): Number of person-days of USG funded training provided to support microenterprise**

This quarter, Protect Wildlife facilitated training and mentoring activities for 509 individuals (144 males, 365 females). Resource persons devoted 1,302 person-days during training sessions, which were supplemented by 485.25 person-days of coaching and mentoring. Training and mentoring activities this quarter covered a range of topics, including strategic management planning, financial management and bookkeeping, and agricultural cultivation and processing for abaca and cacao.

**EG 5-3 (W-GDP): Number of microenterprises supported by USG assistance**

Protect Wildlife eclipsed its LOP target for the indicator, supporting eight additional enterprises on abaca, agroforestry, coffee and aquaculture from Regions 3 and 12 and Zamboanga City.

**TABLES 1 AND 2, FEATURING QUARTER 13 RESULTS**

Tables 1 and 2, respectively, provide a more comprehensive presentation of accomplishments per contract deliverable and outcome and output targets. Progress in the achievement of the targets for W-GDP are included in Table 2. Further details on the activities are found in the Manila and site reports.

**TABLE I: CONTRACT DELIVERABLES: YEAR 5 ACCOMPLISHMENTS (as of September 30, 2020)**

INDICATORS	TARGETS		ACCOMPLISHMENTS			RATING FOR YEAR 5	NARRATIVE PROGRESS
	LOP	Year 5 (Adjusted) <sup>1</sup>	Year 5, Quarter 1	Year 5	Inception to Date		
<b>SA 1</b>							
1.1	People trained to lead behavior change campaigns	100	-	-	-	101 Male: 45 Female: 56	LOP target achieved  The LOP target was achieved in November 2018.
1.2	Behavior change campaigns implemented	25	1	-	-	24 (23 site-level; 1 national)	On schedule  Protect Wildlife plans to launch two campaigns in November 2020: <ul style="list-style-type: none"> <li>• Signages and information materials for Palawan Wildlife Rescue and Conservation Center; and</li> <li>• School in a Bag digital classroom kits, featuring wildlife conservation materials to be distributed to 20 remote schools in activity sites, in collaboration with Smart Communications.</li> </ul>
1.3	People reached by behavior change campaigns	300,000	-	704,440 (site-level)	704,440 (site-level)	1,146,541 (site-level) 3,576,103 (national)	LOP target achieved  Protect Wildlife achieved its LOP target for this indicator in June 2020. During the quarter, 704,440 individuals saw Facebook posts for the Wild and Alive campaign in Region 3, with a 9% engagement rate.
<b>SA 2</b>							
2.1	Revenue generated from the sale of ecosystem services in target sites	US\$500,000	-	US\$6,912 <sup>2</sup>	US\$6,912	US\$616,190	LOP target achieved  PES collections were generated from LGU-run water utilities in Palawan: <ul style="list-style-type: none"> <li>• Taytay: US\$925 (₱44,861)</li> <li>• Rizal: US\$1,467 (₱71,085)</li> <li>• Brooke's Point: US\$4,520 (₱219,089)</li> </ul>
2.2	Payment for ecosystem	100	-	-	-	147	LOP target achieved  No new PES schemes were added this quarter, but Protect Wildlife continued to

<sup>1</sup> Represents the remaining number required to meet Protect Wildlife's contractual LOP target.

<sup>2</sup> Exchange rate used this quarter: US\$1 = ₱48.47

INDICATORS	TARGETS		ACCOMPLISHMENTS				RATING FOR YEAR 5	NARRATIVE PROGRESS
	LOP	Year 5 (Adjusted) <sup>1</sup>	Year 5, Quarter 1	Year 5	Inception to Date			
services or tourism initiatives supported in target sites								support partners to advance progress on their prior PES commitments.
2.3 Private-Public investments in Protect Wildlife anti-poaching and trafficking efforts	US\$5 million	-	US\$45,389	US\$45,389	US\$7,499,810 <sup>3</sup>	LOP target achieved	Investments this quarter were committed by the following partners: <ul style="list-style-type: none"> <li>Kasanyangan Center for Community Development and Microfinance Foundation, who donated 10,000 seedlings of Arabica coffee planting materials valued at US\$7,221 (₱350,000) to Tolosa and Salaan Buffer Zone Associations (Zamboanga City).</li> <li>Smart Communications formalized its commitment to provide 10 School in a Bag learning kits as counterpart resources, including the cost of 100 tablets. Smart's commitment is equivalent to an investment of US\$38,168 (₱1.85 million).</li> </ul>	
<b>SA 3</b>								
3.1 LGU staff trained in participatory planning for integrated conservation and development	200	-	20 Male: 14 Female: 6	20 Male: 14 Female: 6	205 Male: 116 Female: 89	LOP target achieved	This quarter, we are reporting 20 LGU staff from who participated in past planning and ICD trainings dating to 2019, but have not yet been counted toward this indicator: <ul style="list-style-type: none"> <li>11 LGU staff from El Nido, Palawan involved in the planning activities</li> </ul>	

<sup>3</sup> We recorded a US\$90,000 (₱5 million) reduction in the total investment leveraged to date. The deduction was made because Abraham Holdings, Inc. could not maintain its commitment (QPR 7) to support community-based social enterprises and protection of coastal and marine habitats in selected sites in Palawan. The company closed operations in Puerto Princesa due to hardships experienced from the COVID-19 pandemic.

INDICATORS	TARGETS		ACCOMPLISHMENTS			RATING FOR YEAR 5	NARRATIVE PROGRESS	
	LOP	Year 5 (Adjusted) <sup>1</sup>	Year 5, Quarter 1	Year 5	Inception to Date			
							<p>toward the crafting of FLUP and CLUP</p> <ul style="list-style-type: none"> <li>• Six officers and staff from various offices of Zamboanga City local government</li> <li>• Three LGU staff from San Luis, Aurora, who were trained in integrated conservation and development, land use zoning and management plan formulation.</li> </ul>	
3.2	Community members trained in planning and implementation of integrated conservation and development	2,500	1,002	601 Male: 384 Female: 217	601 Male: 384 Female: 217	2,099 Male: 1,413 Female: 686	On schedule	<p>This quarter, 601 community members completed the required trainings on integrated conservation and development:</p> <ul style="list-style-type: none"> <li>• 24 farmer-beneficiaries in southern Palawan who recently underwent the orientation and training on conservation agriculture and agroforestry were also engaged in previous land use and zoning validation activities and ICD trainings.</li> <li>• 577 community members in nine LGUs of South Cotabato completed ICD training.</li> </ul> <p>More than 500 community members in Mount Busa Local Conservation Area are expected to participate in ICD trainings scheduled from October to November.</p>
3.3	LGU staff trained, certified and formally deputized as Wildlife Enforcement Officers (WEOs) by government agencies	200	120	-	-	80 Male: 68 Female: 12	On schedule	<p>Although they have already completed all prerequisite training requirements:</p> <ul style="list-style-type: none"> <li>• DENR has yet to issue official deputation orders for 40 forest guards of Puerto Princesa Subterranean River National Park; and</li> <li>• DENR-Region 3 has yet to issue official deputation orders for six officials of Laur and Bongabon municipalities in Nueva Ecija</li> </ul>

INDICATORS	TARGETS		ACCOMPLISHMENTS			RATING FOR YEAR 5	NARRATIVE PROGRESS
	LOP	Year 5 (Adjusted) <sup>1</sup>	Year 5, Quarter 1	Year 5	Inception to Date		
							<p>Once deputation orders are filed, these 46 officials will be counted against the target.</p> <p>Next quarter, Protect Wildlife will implement enforcement training for 40 LGU staff from Puerto Princesa, Brooke's, Rizal and El Nido in Palawan and 40 LGU officials from Sarangani. The activity expects these trainees to meet all requirements for deputation.</p>
3.4	Community members trained and certified as WEOs by government agencies	500	133	18 Male: 12 Female: 6	18 Male: 12 Female: 6	385 Male: 367 Female: 18	<p>On schedule</p> <p>This quarter, 18 community members from Villa Aurora in Maria Aurora, who received training on August 11 to 13, 2020, were certified by the DENR as enforcers for Aurora Memorial National Park and Mount Mingan.</p> <p>Although they have already completed all prerequisite training requirements:</p> <ul style="list-style-type: none"> <li>• 21 community members from Mampang and Talon-Talon are awaiting official certification as Bantay Kalikasan (environmental patrols) for the Central Mangrove Forests;</li> <li>• 14 community members from Laur and Bongabon municipalities are awaiting official certification as community enforcers; and</li> <li>• 13 Maasim community members are awaiting official certification as community enforcers.</li> </ul> <p>Once they are fully certified by their respective LGUs, these 48 community members will be counted against the target.</p> <p>Next quarter, Protect Wildlife will implement enforcement training for 40 community members from Palawan and 30 from Kiamba in Sarangani. The activity</p>

INDICATORS	TARGETS		ACCOMPLISHMENTS			RATING FOR YEAR 5	NARRATIVE PROGRESS	
	LOP	Year 5 (Adjusted) <sup>1</sup>	Year 5, Quarter 1	Year 5	Inception to Date			
							expects these trainees to meet all requirements for LGU certification.	
<b>SA 4</b>								
4.1	University-supported research initiatives implemented in target sites	25	-	1	1	27	LOP target achieved	<p>This quarter, Protect Wildlife is reporting on its study on wildlife trafficking using the CAPTURED framework, which was initiated in collaboration with Dr. William Moreto of University of Central Florida. The study will focus on understanding factors that influence the trading of priority wildlife species in activity sites.</p> <p>Because of work and travel restrictions that were implemented by LGUs in Region 12 in response to the COVID-19 pandemic, Protect Wildlife determined that it could no longer pursue its Mount Matutum Tarsier Sanctuary Research Project with the University of the Philippines Institute of Biology. This research has been removed from the activity's tally.</p> <p>Of the 27 research initiatives, 11 have been fully or substantially completed, and 15 are completing field activities, analysis of data and reporting. The remaining study on the Sulu hornbill is presently being revised to limit findings to its first expedition. The second and final expedition was canceled due to work and travel restrictions in Bacolod, the research team's base of operations, and Tawi-Tawi, the field site.</p>
4.2	Universities developing conservation curricula with support from Protect Wildlife	10	-	5	5	19	LOP target achieved	<p>Following a June 22, 2020 CHED Region 11 memorandum to all colleges and universities offering Bachelor of Science in Criminology, five schools have confirmed their adoption of the ELP syllabus:</p> <ul style="list-style-type: none"> <li>University of Mindanao Digos College (Digos City, Davao del Sur);</li> </ul>



INDICATORS	TARGETS		ACCOMPLISHMENTS			RATING FOR YEAR 5	NARRATIVE PROGRESS	
	LOP	Year 5 (Adjusted) <sup>1</sup>	Year 5, Quarter 1	Year 5	Inception to Date			
							<ul style="list-style-type: none"> <li>Southern Philippines Agri-Business and Marine and Aquatic School of Technology (Malinta, Davao Occidental);</li> <li>Holy Cross of Davao College (Davao City);</li> <li>Rizal Memorial Colleges (Davao City); and</li> <li>Jose Maria College (Davao City).</li> </ul> <p>These schools participated in the PSCCJP workshop on the ELP syllabus and development of teaching tools and materials. Protect Wildlife will continue to collaborate with PSCCJP to monitor the adoption of the ELP syllabus in schools outside of activity sites.</p>	
<b>SA 5</b>								
5.1	Government staff trained in combating wildlife and environmental crime	1,000	-	29 Male: 21 Female: 8	29 Male: 21 Female: 8	1,487 Male: 911 Female: 576	LOP target achieved	Protect Wildlife facilitated two enforcement trainings this quarter in Region 3, engaging 29 government staff. WEO trainings for Aurora Memorial National Park and Mount Mingan officials were held in Bongabon (August 25-27, 2020) and Laur (September 3-5, 2020).
5.2	New or revised laws and regulations adopted to combat wildlife crimes	50	2	7	7	55	LOP target achieved	Protect Wildlife eclipsed its LOP target this quarter. The following policies were approved during the quarter: <ol style="list-style-type: none"> <li>Ordinance Establishing a Local Conservation Area in the Central Mangrove Forests of Zamboanga City has passed first reading by the City Council</li> <li>Ordinance Declaring Sulu Hornbill as the Flagship Species of the Municipality of Panglima Sugala, Province of Tawi-Tawi and Providing for its Protection and Conservation</li> <li>Ordinance Declaring the Green Sea Turtle as the Flagship Species of the</li> </ol>

INDICATORS	TARGETS		ACCOMPLISHMENTS				RATING FOR YEAR 5	NARRATIVE PROGRESS
	LOP	Year 5 (Adjusted) <sup>1</sup>	Year 5, Quarter 1	Year 5	Inception to Date			
								<p>Municipality of Turtle Islands, Province of Tawi-Tawi</p> <ol style="list-style-type: none"> <li>4. Ordinance Declaring the Civet Cat as the Flagship Species of the Municipality of Polomolok</li> <li>5. Ordinance Declaring the Philippine Eagle and Zamboanga Bulbul as the Flagship Species of the City of Zamboanga</li> <li>6. Ordinance Declaring the Green Humphead Parrotfish as the Flagship Species of the Municipality of Kiamba, Sarangani Province</li> <li>7. Protected Area Management Board Resolution No. 2020-048, Series of 2020, Approving and Adopting the Proposed Schedule of Administrative Fines Applicable to Reported Violations within Sarangani Bay Protected Seascape</li> </ol>
5.3	Confiscations, seizures and arrests resulting from capacity building provided by Protect Wildlife	1,000	184	488	488	1,304	LOP target achieved	<p>Protect Wildlife eclipsed its LOP target for this quarter. Data collected this quarter by enforcement units supported by the activity are presented as follows:</p> <ul style="list-style-type: none"> <li>• DENR Region 12 (CENROs and Mount Matutum): 105 actions</li> <li>• DA-BFAR: 293 actions</li> <li>• PCSDS: 35 actions</li> <li>• Zamboanga City Composite Fisheries Law Enforcement Team: 54 actions</li> <li>• Polomolok LGU: 1 action</li> </ul>

**TABLE 2: ECONOMIC GROWTH OUTCOMES AND OUTPUTS: YEAR 5 ACCOMPLISHMENTS (as of September 30, 2020)**

INDICATORS		TARGETS		ACCOMPLISHMENTS			RATING FOR YEAR 5	NARRATIVE PROGRESS
		LOP	Year 5 (Adjusted)	Year 5, Quarter 1	Year 5	Inception to Date		
<b>Outcome Indicators</b>								
EG.10.2-2	Number of hectares of biologically significant areas under improved natural resource management as a result of USG assistance	500,000	-	-	-	751,077 <sup>4</sup>	LOP target achieved	Improved management of a cumulative area of 751,077 hectares was recorded as of June 2020.
EG.10.2-3	Number of people with improved economic benefits derived from sustainable natural resource management and/or biodiversity conservation as a result of USG assistance	100,000	41,915	18,840	18,840	76,925 <sup>5</sup>	On track for LOP target	This quarter, 3,768 individuals (18,840 household members) secured improved economic benefits, thanks in part to Protect Wildlife support as follows: <ul style="list-style-type: none"> <li>• Training, mentoring and general technical assistance for members of eight people’s organizations assisted under the W-GDP Initiative covering one or more of the following topics: (1) turmeric, cacao and abaca production and processing, (2) strategic planning and business planning, (3) bookkeeping and financial management, and (4) conservation-based agroforestry systems (982 active members [4,910 household members]);</li> </ul>

<sup>4</sup> Adjusted figure from 757,719 to correct double counting of the watershed area in Ayala and Manichan watersheds in Zamboanga City.

<sup>5</sup> Protect Wildlife is correcting an error from the Year 4 Annual Report, where it reported 8,410 people with improved benefits from April to June 2020. The correct total was 8,520. The activity referred to an outdated W-GDP people’s organizations membership number. The correct number is incorporated in the inception-to-date number.

INDICATORS		TARGETS		ACCOMPLISHMENTS			RATING FOR YEAR 5	NARRATIVE PROGRESS
		LOP	Year 5 (Adjusted)	Year 5, Quarter I	Year 5	Inception to Date		
								<ul style="list-style-type: none"> <li>• Agroforestry training and distribution of seedlings and farm tools to community members in southern Palawan as part of the activity's agroforestry initiative (1,217 new trainees/beneficiaries [6,085 household members])</li> <li>• Various interventions in Mount Mantalingahan geared toward improving the management of the protected area and conserving its resources, which serve as critical inputs to upland residents' livelihoods (1,501 community members [7,505 household members])</li> <li>• Irrigation facilities drawing water from Mount Matutum watershed and serving 138 hectares of rice farms (68 farmers [340 household members])</li> </ul>
W-GDP	Number of women (household members) with economic benefits derived from sustainable natural resource management and/or biodiversity conservation as a	1,000 (5,000)	-	744 women (3,720 household members)	744 women (3,720 household members)	1,238 <sup>6</sup> women (6190 household members)	LOP target achieved	<p>Protect Wildlife eclipsed its LOP target for this quarter.</p> <p>During the quarter, 744 women (3,720 household members) from people's organizations engaged in the W-GDP Initiative secured economic benefits from various interventions. Progress against targets is presented by region as follows:</p>

<sup>6</sup> Inception-to-date data reflects adjustments to accomplishments reported in the Year 4 Annual Report. Protect Wildlife erroneously reported 499 women (2,495 household members) as its annual and inception-to-date accomplishments. The correct number of women and households was 494 and 2,470, respectively.

INDICATORS		TARGETS		ACCOMPLISHMENTS			RATING FOR YEAR 5	NARRATIVE PROGRESS
		LOP	Year 5 (Adjusted)	Year 5, Quarter 1	Year 5	Inception to Date		
	result of USG assistance							<p>Region 12</p> <ul style="list-style-type: none"> <li>Upper Valley Rural Improvement Club: 40 women (200 household members)</li> <li>Cooperative of Women for Health and Development: 214 women (1,070 household members)</li> <li>Lake Sebu Indigenous Women Weavers Association: 250 women (1,250 household members)</li> <li>Sapu Masla Fish Cage Operators Association: 31 women (155 household members)</li> <li>Moto Ladal Farmers Association: 5 women (25 household members)</li> </ul> <p>Zamboanga City</p> <ul style="list-style-type: none"> <li>Salaan Buffer Zone Association: 36 women (180 household members)</li> <li>Tolosa Buffer Zone Association: 39 women (195 household members)</li> </ul> <p>Region 3</p> <ul style="list-style-type: none"> <li>Salabusob Integrated Livelihood Association of Women: 15 women (75 household members)</li> </ul>
EG.10.2-6	Number of people that apply improved conservation law enforcement practices as a result of USG assistance	1,200	180	850	850	1,870	LOP target achieved	<p>Protect Wildlife eclipsed its LOP target for this quarter.</p> <p>The activity team conducted additional validation exercises by interviewing either trainees, their supervisors, and/or fellow enforcers to determine whether the trainees remain engaged in enforcement, and are applying skills, tools, systems and knowledge gained through Protect Wildlife assistance. Through these exercises, the activity is able to validate 850 people applying improved conservation law enforcement practices as a result of activity assistance.</p>

INDICATORS		TARGETS		ACCOMPLISHMENTS			RATING FOR YEAR 5	NARRATIVE PROGRESS
		LOP	Year 5 (Adjusted)	Year 5, Quarter 1	Year 5	Inception to Date		
								The 850 enforcers represent DENR and DA-BFAR enforcement units; T'boli and Surallah municipalities in South Cotabato; CENRO staff and Bantay Gubat (forest guards) in Palawan; members of Anti-Wildlife Trafficking Task Force, fishery law enforcement, forest guards, Bantay Dagat (sea patrols) and Bantay Kalikasan (environmental patrols) in Zamboanga City and Tawi-Tawi; and Bantay Dagat members in Sarangani.
EG.10.3-4	Amount of investment mobilized (in US\$) for sustainable landscapes, natural resource management and biodiversity conservation as supported by USG assistance	US\$5 million	-	US\$45,389	US\$45,389	\$8,428,535 <sup>7</sup>	LOP target achieved	As referenced in Table 1, this quarter, Protect Wildlife leveraged investments from the following partners: <ul style="list-style-type: none"> <li>• Kasanyangan Center for Community Development and Microfinance Foundation, which donated 10,000 seedlings of Arabica coffee planting materials valued at US\$7,221 (₱350,000) to Tolosa and Salaan Buffer Zone Associations (Zamboanga City) as part of its partnership with Protect Wildlife.</li> <li>• Smart Communications, which committed to provide 10 School in a Bag learning kits as counterpart resources, including the cost of 100 additional tablets. Smart's commitment is equivalent to an</li> </ul>

<sup>7</sup> We recorded a US\$90,000 (₱5 million) reduction in the total investment leveraged to date. The deduction was made because Abraham Holdings, Inc. could not maintain its commitment (QPR 7) to support community-based social enterprises and protection of coastal and marine habitats in selected sites in Palawan. The company closed operations in Puerto Princesa due to hardships experienced from the COVID-19 pandemic.

INDICATORS		TARGETS		ACCOMPLISHMENTS			RATING FOR YEAR 5	NARRATIVE PROGRESS
		LOP	Year 5 (Adjusted)	Year 5, Quarter 1	Year 5	Inception to Date		
								investment of US\$38,168 (P1.85 million).
EG.13-6	Greenhouse gas (GHG) emissions, estimated in metric tons of CO <sub>2</sub> equivalent reduced, sequestered or avoided through sustainable landscape activities supported by USG assistance	703,930	-	-	-	1,250,333	LOP target achieved	As a result of improved management of protected areas and forest lands reported in EG 10.2-2, greenhouse gas emissions avoided as of June 30, 2020 is estimated at 1,250,333 metric tons.
<b>Output Indicators</b>								
EG.10.2-4	Number of people trained in sustainable natural resources management and/or biodiversity conservation as a result of USG assistance	4,500	-	1,467	1,467	6,328	LOP Target Achieved	<p>This quarter, Protect Wildlife reports on the following:</p> <ul style="list-style-type: none"> <li>• Second batch of new conservation-based agroforestry trainees (781 community members) from southern Palawan;</li> <li>• Integrated conservation and development trainees from Region 12 (577 individuals);</li> <li>• National and local government officials from Region 3 who completed marine turtle conservation training activities (35 officials); and</li> <li>• Community members and national and local government staff in Region 3 who participated in WEO training (74 individuals).</li> </ul>
EG.10.2-5	Number of laws, policies, or regulations that address biodiversity conservation and/or other environmental themes officially proposed, adopted,	50	-	9	9	75	LOP target achieved	<p>Protect Wildlife reports on nine policies from this quarter, as follows:</p> <ul style="list-style-type: none"> <li>• Five LGU ordinances declaring their respective flagship species, namely, Sulu hornbill (Panglima Sugala, Tawi-Tawi), green sea turtle (Turtle Islands, Tawi-Tawi), civet cat (Polomolok, South Cotabato), Philippine eagle and Zamboanga</li> </ul>

INDICATORS		TARGETS		ACCOMPLISHMENTS			RATING FOR YEAR 5	NARRATIVE PROGRESS
		LOP	Year 5 (Adjusted)	Year 5, Quarter I	Year 5	Inception to Date		
	or implemented as a result of USG assistance							<p>bulbul (Zamboanga City), and green humphead parrotfish (Kiamba, Sarangani); and establishing a Local Conservation Area (Zamboanga City). The list of ordinances with the complete title is presented under SA 5.2 of Table I;</p> <ul style="list-style-type: none"> <li>• Ordinance Establishing a Local Conservation Area in the Central Mangrove Forests of Zamboanga City;</li> <li>• Resolution passed by Pasonanca Natural Park management board adopting Philippine eagle and Zamboanga bulbul as Zamboanga Hermosa birds and flagship species for the protected area;</li> <li>• One ordinance issued by Glan, Sarangani declaring the months of September and October for the celebration of Langyaw Langgam Festival or Raptor Festival. The ordinance includes provisions on prohibitions and penalties on killing, hunting and possessing migratory birds, as well as their parts; and</li> <li>• Protected Area Management Board Resolution No. 2020-048, Series of 2020, Approving and Adopting the Proposed Schedule of Administrative Fines Applicable to Reported Violations within the Sarangani Bay Protected Seascape.</li> </ul>
EG.4.2.4 (W-GDP)	Number of person days of USG funded technical assistance provided to support microenterprise	5,500	-	1,787.25	1,787.25	2,582.75	On Track for LOP Target	<p>This quarter, Protect Wildlife facilitated training and mentoring activities for 509 individuals (144 males, 365 females). Resource persons devoted 1,302 person-days during training sessions, which were supplemented by 485.25 person-days of coaching and mentoring.</p>



INDICATORS		TARGETS		ACCOMPLISHMENTS			RATING FOR YEAR 5	NARRATIVE PROGRESS
		LOP	Year 5 (Adjusted)	Year 5, Quarter I	Year 5	Inception to Date		
EG. 5-3 (W-GDP)	Number of microenterprises supported by USG assistance	20	-	8	8	22	LOP target achieved	<p>This quarter, Protect Wildlife eclipsed its LOP target, supporting eight additional abaca, agroforestry, coffee and aquaculture enterprises under the W-GDP Initiative:</p> <p>Abaca production and processing</p> <ul style="list-style-type: none"> <li>• Cooperative of Women for Health and Development: 295 active members</li> <li>• Lake Sebu Indigenous Women Weavers Association: 283 active members</li> <li>• Moto Ladal Farmers Association: 32 active members</li> <li>• Upper Valley Rural Improvement Club: 104 active members</li> </ul> <p>Agroforestry management and cacao production</p> <ul style="list-style-type: none"> <li>• Salaan Buffer Zone Association: 51 active members</li> <li>• Tolosa Buffer Zone Association: 114 active members</li> </ul> <p>Turmeric production and marketing</p> <ul style="list-style-type: none"> <li>• Salabusob Integrated Livelihood Association of Women: 15 active members</li> </ul> <p>Aquaculture</p> <ul style="list-style-type: none"> <li>• Sapu Masla Fish Cage Operators Association: 88 active members</li> </ul>

# QUARTERLY PROGRESS REPORT

In this section of the Quarterly Progress Report, Protect Wildlife highlights its most impactful activities and results from Year 5, Quarter 1: July 1 to September 30, 2020. Reports and results are presented in sections for each field site and for Manila. Major activities are described in detail, while all other activities carried out during the quarter are summarized in a table. We close each section by previewing priority activities scheduled for the next quarter—from October 1 to December 31, 2020—which are listed according to the SA Theory of Change results.

## MANILA

In the following section, Protect Wildlife presents activity highlights for national-level and cross-cutting initiatives that were led from Manila during the July to September 2020 period, and previews priority activities scheduled for the next quarter—from October 1 to December 31, 2020—which are listed according to the SA Theory of Change results.

### HIGHLIGHTS FOR THE QUARTER

Highlights from July to September 2020—which are presented under sub-sections for Policy Development, Capacity Building Support and Systems, Research, and the W-GDP Initiative—include initiatives for the following:

- Launch an advocacy communications plan for the newly filed Environmental Protection and Enforcement Bureau (EPEB) Bill, with a widely attended webinar anchored on bill author Representative Loren Legarda’s passionate case for its passage;
- Finalize IT investments in WildALERT, a new digital tool to contribute to wildlife crime enforcement; and WildBase, a cloud-based system to monitor rescued wildlife;
- Celebrating award-winning student research into important biodiversity issues that was supported under Protect Wildlife’s student research assistantship program; and
- Launch support for eight new enterprises under the W-GDP Initiative, providing training on enterprise management and commodity production, and making catalytic investments to improve enterprises’ processing capacity.

These stories and others are presented in the following sections.

### Policy Development

#### Conserving Almaciga Resources through Reforms in Resin Tapping Permitting

Among the Philippines’ most lucrative non-timber forest products, almaciga resin exported to Germany, Hong Kong, Japan, Taiwan and other countries generated more than US\$1.1 million in export revenue between 2006 and 2015. Beyond its importance on a macroeconomic scale, almaciga tapping—the collection of resin from the almaciga tree—is a primary source of livelihoods for indigenous communities in Palawan, the source of the highest quality resin in the Philippines.

Given the centrality of the almaciga resin trade to indigenous communities' livelihoods, and the opportunity to promote sustainable production methods to conserve almaciga trees, Protect Wildlife worked throughout 2020 with DENR-FMB officials and communities in Palawan to revise the administrative order that governs almaciga tapping and trade. Through these efforts, the activity helped develop Administrative Order No. 11 (Revised) and Forestry Administrative Order No. 63, series of 1972, focusing on the following three core policy objectives:

- Streamlining the permitting process to remove administrative burden for indigenous almaciga tappers;
- Transferring responsibility and financial burden of required almaciga tree inventory from indigenous permittees to the DENR; and
- Introducing training on science-based almaciga tapping methods developed to promote the health of source trees.

To inform the activity's efforts, Protect Wildlife conducted key informant interviews between June 30 and July 2, 2020, targeting resin tappers in Brooke's Point and Rizal in southern Palawan; and, with the DENR, issued letters to CSOs, provincial local government, NCIP and PCSDS, seeking inputs into the proposed revisions to the administrative order. The case of Palawan is considered the microcosm of the basic issues and concerns of permittees and resin tappers in the country, which informed the activity's decision to focus the interviews in the province. In the following paragraphs, we present the core policy objectives and changes alongside feedback gathered from local stakeholders.

### ***Streamlining the Permitting Process to Remove Administrative Burden for Indigenous Almaciga Tappers.***

The major recommendations contained in the proposed administrative order are the streamlined processing and renewal of permit, lengthening the life of the permit from one year to five years. Through interviews and discussions with the NCIP office in Palawan, Protect Wildlife learned that permitting requirements are both costly and administratively burdensome for almaciga tappers, who are often low-income and reside in remote locations. Under the



**Almaciga** (*Agathis philippinensis*) is a large coniferous evergreen tree that typically grows in high altitude. Its bark produces a resin commonly referred to in the market as Manila copal. The Philippines has been exporting almaciga resin since the turn of the 20th century.

Two types of resins come from almaciga tree: fossil resin is formed from the roots of the tree, while exudites are produced by tapping the bark of the tree. Collection of exudites is done by incising the bark to induce resin to exude from the tree. The resin is collected below the incision line.

Almaciga resin is a vital ingredient in making lacquer, paint, varnish, soap, printing ink, linoleum, shoe polish, floor wax, plastic, water-proofing materials, and many other products. It is a top dollar earner among the country's non-timber forest products, raking in US\$1,139,900 worth of export revenues from 2006 to 2015. Importing countries include Germany, Hong Kong, Japan and Taiwan.

The best quality almaciga resin comes from Palawan. The solubility of resin coming from Palawan is almost 100%, while the solubility of resin from other places is only about 80%.

current version of the administrative order, permits are for one-year periods. To secure a permit, almaciga tappers from Palawan incur up to ₱6,500 per year in costs from required fees for administration of permits, applications, inspection and evaluation that are payable to PCSDS and the DENR. Under the proposed administrative order, those fees will be incurred across a five-year period, rather than annually.

***Transferring Responsibility of Required Almaciga Tree Inventory.*** The premise of Protect Wildlife’s recommendation to the DENR for changes to the almaciga tree inventory process is that the State owns the resources and indigenous permittees have limited income and resources to meet the demands of inventory; and that resin tapping is not an extractive activity that negatively changes habitat structure and condition, so the inventory need not be done annually. Under the proposed administrative order, the inventory burden is transferred to the DENR.

***Introducing Training on Science-Based Almaciga Tapping Methods.*** Protect Wildlife’s core objective in promoting science-based training on almaciga tapping is to introduce new methods crafted to sustain production of resin per mature almaciga tree. Under the traditional method, tappers use blunt instruments that are difficult to control—axes or machetes—to make incisions in the tree to tap the resin ducts. Because these instruments are difficult to control, tappers are at greater risk of penetrating the cambium layer of the bark, which results in lower volume of resin and exposing the wood to fungal and insect attacks.

The administrative order outlines a new method, with tappers using smaller knives that are more easily leveraged and controlled. This method presents less risk to the cambium layer of the tree, and is therefore more sustainable. Further, the administrative order recommends a specific incision type and size that has been found to produce higher-volume flows of resin.

***Summary and Next Steps.*** Based on inputs gathered from the field, Protect Wildlife contributed input into the final revised version of the administrative order, which was submitted to DENR-FMB on August 24, 2020. As of September, the bureau’s Policy Review Committee is finalizing it for submission to the DENR Policy Technical Working Group for official DENR review. If the proposed administrative order is approved, it will economically benefit numerous and deserving indigenous and non-indigenous local communities in southern Palawan (Mount Mantalingahan and forest lands), forest lands and conservation sites in Puerto Princesa City (Puerto Princesa Subterranean River Natural Park and Cleopatra’s Needle), and other provinces of the country—promising higher incomes for the vulnerable almaciga tapping community, while also promoting long-term conservation of these important natural resources.

## **Reviewing the Sustainable Forest Management Bill**

Over the past three decades, the DENR, with support of various forestry sector stakeholders, have championed the Sustainable Forest Management (SFM) bill that will update the 45-year-old Presidential Decree No. 705, also known as the Revised Forestry Reform Code of the Philippines, with language that is more responsive to the needs of the forestry sector. Despite the challenges faced, the Society of Filipino Foresters have committed to renew efforts this year, recently submitting the bill to the House of Representatives.

USAID and the Food and Agriculture Organization of the United Nations engaged Protect Wildlife to conduct an independent review of the SFM bill to assess whether it would be effective in promoting sustainability of forest management. Protect Wildlife is tasked to assess the governance structure, programs, financial support, policy, product certification processes, corporate and communal engagements, and protection and conservation of centers of biodiversity, as proposed in the draft bill. Specifically, the activity shall conduct an analysis of strengths, weaknesses, opportunities and threats (SWOT), and prepare an annotated version of the revised bill identifying specific weaknesses, contradictions and gaps, including proposing language to strengthen the bill.

In carrying out this task, Protect Wildlife proposes to do a three-level SWOT: a general expert review and analysis of the SFM bill, and two SWOT exercises to analyze the impacts of implementing SFM through the DENR-FMB as a line or staff bureau.

**Level One: SWOT of SFM Based on Review of Secondary Data and Initial Consultations with Stakeholders.** Through the review of available secondary documents, data, sector and industry reports, consultations with selected stakeholders, and with expert knowledge, Protect Wildlife analyzed the sixth version of the SFM bill as to its strengths (responsiveness and adequacy) and weaknesses (unresponsiveness, inadequacy and limitations) to address the sector opportunities and confront the threats. The activity also examined how the bill may contribute to economic recovery, and to confront the threats of climate change, increased upland migration, worsening poverty, and land conversion.

Among the opportunities were the potential to increase productivity of up to 11 million hectares of forest lands with remaining natural forests, leveraging its various ecosystem goods and services for the well-being of 25 million upland community residents through development of the existing 16 major forestry-related industries; and the presence of strong advocacy groups, academic and training institutions that can provide research-and-development investments for sustainable forestry production and to help professionalize forestry professions.

The reviewers also noted major threats, including weak on-site governance and management of forests and forest lands, and the forest lands present low productivity, among others. The bill notes the sector's potential contribution to mitigating the impacts of climate change, but may need clear provisions to address these threats and balance improvements to productivity with mitigation goals.

**Levels Two and Three: Constitution of DENR-FMB under SFM.** The SFM bill proposes to make the DENR-FMB a line bureau. The review will, therefore, assess the strengths and weaknesses of the bureau to identify its capability building needs, so it can effectively function as a line bureau; as well as the opportunities and threats it will face if it mobilizes, plans and implements the bill. This analysis will be contrasted with the scenario where DENR-FMB will remain as a staff bureau (Level Three). In this scenario, the bureau will provide policy, technical, regulatory and enforcement guidelines, while DENR field offices will serve as the implementing units of the bill.

**Summary.** In the coming quarter, Protect Wildlife will finalize analysis of information gathered during SWOT 1 and SWOT 3, and will continue generating inputs from stakeholders, including those for SWOT 2, with a targeted completion in late November.

## Environmental Protection and Enforcement Bureau Bill

In June 2020, Representative Loren Legarda filed a bill for creating the Environmental Protection and Enforcement Bureau, which Protect Wildlife helped to workshop and draft. House Bill No. 6973 calls for creation of a standalone bureau under the DENR for enforcement, citing linkages between the illegal wildlife trade and habitat destruction to zoonotic diseases; threats to nature and water sources from wastewater and hospital and hazardous wastes; and the general weak enforcement of other environmental laws.

Specifically, the bill supports the following:

- Capacitation of the DENR's enforcement agents to be achieved through an academy that will teach basic and advanced level skills—such as forensics, intelligence and surveillance, and criminalistics—which lends itself to professional career advancement in environmental law enforcement within the DENR, completely overhauling the ad hoc nature of the present system;
- Mainstreaming environmental and wildlife laws into traditional enforcement agencies, such as the Philippine National Police and the National Bureau of Investigation; and
- Directing the DENR to develop a dedicated forensics laboratory to help solve environmental crimes involving wildlife, forestry, protected areas, pollution and toxic substances; and to create technical positions within the laboratory that will bring scientific approaches to law enforcement.

## Development of Advocacy Communications Plan to Support the Passage of the EPEB Bill

With the filing of the Environmental Protection and Enforcement Bureau (EPEB) bill in the House of Representatives, there is now a need to build a broad base of support for its passage by legislators. The bill is identified as a core priority by the DENR, with the Secretary himself advocating for the creation of a dedicated bureau that will take the lead in enforcing environmental laws under the mandate of the department, covering forestry, wildlife, protected areas, mining, pollution and solid waste (see text box). Although the bill is a priority for the DENR, its passage through the legislative process is far from a guarantee, and will require dedicated advocacy to best ensure its success. Protect Wildlife will now match its support for drafting the bill toward efforts to design a communications initiative that will generate a wellspring of support for its passage.

This quarter, Protect Wildlife contributed to DENR efforts to develop a communications plan for the bill, with targeted interventions to build a constituency to support the creation of the EPEB. Protect Wildlife provided expert support to design and deliver writeshops with officials representing the Environmental Protection and Enforcement Task Force (EPETF), Office of the Undersecretary for Enforcement, the Legislative Liaison Office, and the Strategic Communications and Initiatives Service, among others, throughout the quarter. The draft communications plan identifies enforcers, policymakers from Congress and the DENR, and the general public as target groups for constituency-building. The plan also outlines issue-based messages on key components of the bill to be mobilized toward these target groups.

The communications plan is being refined with another round of comments before it is finalized and submitted next quarter to the EPETF. The draft plan will be accompanied by key messages for the DENR staff, with targeted talking points for the general public and for legislators. The final version of the communications plan will reflect the inputs of nearly all major DENR offices, bureaus and services, as well as regional voices from CENROs and implementing PENROs.

To launch constituency building-efforts, DENR, with Protect Wildlife, planned and executed a webinar on the EPEB bill on August 28, 2020, drawing more than 7,000 views on Facebook, broadening the exposure of the issue within the DENR and within broader constituencies in environmental protection and wildlife conservation. Two weeks prior to the webinar, Protect Wildlife contributed to daily briefings, contacting speakers and resource persons, and developing materials and key messaging. The following partner agencies joined the webinar: National Law Enforcement Coordinating Committee-Sub-Committee on Environment and Natural Resources, Palawan Council for Sustainable Development, Anti-Money Laundering Council, Philippine Air Force, Philippine Navy, Philippine National Police-Maritime Group, Office for Transportation Security, Office of the Special Envoy for Transnational Crime, Philippine Coast Guard, and Land Transportation Office.

Messages from DENR Secretary Roy Cimatu, Undersecretary for Field Operations and Enforcement Jim Sampulna, Assistant Secretary Darius Nicer and others highlighted the need for the DENR to expand the capacities of their enforcement and legal teams in light of their experience in addressing the massive pollution in Boracay and in Manila Bay, as well as their continuing efforts to stop the degradation of our country’s forests and wildlife habitats. Speakers noted that enforcement is particularly relevant now with the rise of zoonotic diseases such as COVID-19 and the need to take new approaches to tackle wildlife trafficking. Of particular concern to the DENR was the increasing number of their forest enforcers being killed in the line of duty.

The webinar highlighted the benefits of centralizing the different enforcement and monitoring functions of the different bureaus in a dedicated enforcement bureau within the department that will be staffed by specialists in enforcement. The webinar also highlighted the thrust of the DENR to improve their technical capabilities in gathering and analyzing evidence to improve their conviction rates. Finally, field agents from the DENR and PCSDS joined the webinar to share their experiences in environmental law enforcement and the challenges they face in the field.



**The webinar on the EPEB Bill** was headlined by Representative Loren Legarda, the bill’s champion, who provided an introductory message of support.

“We have seen the urgent need for a separate enforcement unit within the DENR to match the growing threats to the environment and biodiversity. Once enacted into law, House Bill 6973 will allow the DENR to target syndicates responsible for wildlife and timber trafficking, or individuals who thwart the DENR’s intent and resolve to effectively carry out their mandate and to successfully implement current environmental laws and regulations,” Representative Legarda said.

Through the webinar and its promotional campaign, the DENR, with support from Protect Wildlife, generated the following reach:

- Promotional posts reached 37,392 non-unique Facebook users over a course of five days;
- The Facebook livestream and video replays attracted 958 views of one minute or more; and
- The livestream audience peaked at 153 Facebook users, which does not include the number of Zoom participants, which reached up to 80 persons at a given time.

Protect Wildlife will help facilitate additional webinars on environmental law enforcement to help build a constituency to advocate the passage of the EPEB bill. Once the EPETF approves the communications plan next quarter, the activity will support the development, and possible reproduction, of an EPEB bill policy primer. As Protect Wildlife also downscales its activities in the next few months, it will be coordinating with the incoming USAID SIBOL activity so that they can continue with the technical capacity building for the EPEB.

### **Advancing Other DENR Policy Efforts**

Protect Wildlife consolidated inputs generated from discussions and workshops with the concerned DENR bureaus to refine several draft policy products this quarter. The policy documents will provide a framework to sustain gains achieved through partnership with Protect Wildlife. The initiatives are presented below.

#### ***DENR Administrative Order on the Localization of Philippine Biodiversity Strategic Action Plan.***

A draft administrative order with attached guidelines on localizing the Philippine Biodiversity Strategic Action Plan (PBSAP) was prepared by DENR-BMB with support from Protect Wildlife and the UNDP Biodiversity Finance Initiative (BIOFIN). In previous quarterly reports, Protect Wildlife reported efforts to draft a technical bulletin for this purpose, but in recent months, DENR-BMB elected to pursue an administrative order—changing the title and format of the product. The local PBSAP provides opportunity for the integration of all environment and natural resources-related local management plans and programs beginning with the integration of all biodiversity-focused management strategies by all stakeholders.

The draft features best processes identified through pilot BSAP exercises held in Zamboanga City, Zamboanga Sibugay, Aurora and South Cotabato, which were facilitated by Protect Wildlife. During the quarter, the draft administrative order and the guidelines went through a series of reviews by all offices. The working drafts shall be presented for final review next quarter. If the administrative order is approved in 2020, the DENR will begin allocating funds starting in 2021 for the preparation of local BSAPs at the provincial and municipal levels.

***DENR Administrative Order for Enhanced Protected Area Planning Processes.*** In previous quarterly reports, Protect Wildlife reported efforts to draft a technical bulletin for this purpose, but in recent months, DENR-BMB elected to pursue an administrative order—changing the title and format of the product. The administrative order and the attached guidelines submitted to DENR-BMB were improvements of the bureau's Technical Bulletin 2016-08, the guide in the preparation of the protected area management plan. The simplified guide returns to the General Management Planning Strategy with adjustments based on the lessons acquired by Protect Wildlife through implementation in the activity sites, such as the importance of differentiating management prescriptions from management standards and guidelines and preparing decision criteria. The guide applies to all protected areas proclaimed by the President and legislated by Congress. Other conservation areas may use this guideline, or parts of it, upon discretion by the technical working group or governance body.

Contents from DENR Administrative Order No. 2013-19, Series of 2013: Guidelines on Ecotourism Planning and Management in Protected Areas have been integrated in the guidelines. As a mother plan,



protected area management plans integrate all relevant sectors and allowed uses by way of developing integrated management prescriptions for the identified zones and sub-zones. All other management plans for habitats within the protected area, such as cave management and coastal management plans, are incorporated in the guidelines as habitat- or zone-specific management prescriptions. The draft administrative order and guidelines are still awaiting review by DENR-BMB, which is expected to take place in the following quarter.

***DENR Administrative Order on Carbon Accounting, Verification and Certification System.***

Protect Wildlife facilitated another review of the Carbon Accounting, Verification and Certification System (CAVCS) Manuals 1 through 3, and Forest Carbon Assessment Report and Forest Carbon Project Plan templates to incorporate additional inputs from private companies. Manual 1 went through another review afterwards by DENR-BMB and Protect Wildlife to improve the process flow by providing target days per major step of the process to inform the forest carbon project proponent of the time involved to accomplish the task of securing registration.

Pending procurement by DENR-FMB of the International Organization for Standardization documents to complete the standardization of terms used in the CAVCS manuals and the Guide for Independent Third-Party Validator and Verifier, the planned online workshop with the Philippines Accreditation Bureau had been rescheduled from last quarter to November 2020. The new schedule allows enough time to procure the ISO documents and adjust the CAVCS manuals on terms used.

***DENR Administrative Order on the Selection and Conservation of Candidate Flagship Species.***

DENR-BMB's Wildlife Resources Division, with Protect Wildlife support, began efforts to convert the draft guidelines on the selection of management indicator species and flagship species into an administrative order, thus superseding DENR Memorandum Order No. 7, Series of 1993. Under the administrative order, all DENR offices will be compelled to follow an official order, hence providing a rational selection of management indicator species and flagship species in all national parks, protected areas and other related conservation areas and forest lands.

The administrative order will include language to more strictly define the term “priority species” and how it may be used by the DENR. The administrative order refers to priority species either as an endangered species, an economically important species, a threatened species, or an indicator species. Protect Wildlife issued recommendations regarding more careful application of the term, given that each representation as priority species can be a management indicator species, depending on the objective of usage. In other words, whether endangered, economically important or threatened, a priority species can be a management indicator species. For instance, an economically important species is a priority species and a management indicator species at the same time because its stable population is indicative of the quality of the habitat and other life forms that share its habitat requirements. In another case, an endangered species is a priority species and a management indicator species because the population of the species is a function of the quality of the habitat. Likewise, all other life forms that share its habitat requirements benefit in conserving the surviving population of the endangered species.

In the draft administrative order, “flagship species” and “management indicator species” will be the official DENR terms to be adopted in all conservation programs in national parks, protected areas and similar conservation areas, forest lands, mineral lands, and alienable and disposable lands, as applicable.

***Environmental Impact Assessment Checklists for Environmentally Critical Projects.*** The DENR-BMB requested assistance to inform its strategy and tactics for active participation in the review of Environmental Impact Assessments (EIAs) sponsored by DENR Environmental Management Bureau (DENR-EMB). DENR-BMB's goal for participation in the review process is to ensure that biodiversity conservation concerns are better integrated into the process, thus helping to ensure that local biodiversity be given greater concern when DENR-EMB reviews and determines the outcomes of EIAs.

With the plan by DENR-BMB to be more involved in every critical step of EIA preparation and review involving environmentally critical projects, Protect Wildlife helped to design and deliver a capacity building program for its technical personnel, equipping them with the knowledge and skills to serve as effective members or resource persons during EIA scoping meetings and reviews. As part of its support, Protect Wildlife reviewed the initial set of checklists for environmentally critical projects that DENR-BMB prepared. The final set included checklists for forestry, reclamation, renewable energy, agriculture, road, coal-fired power plant, mining and hydropower projects. The approved checklists will be submitted by DENR-BMB to DENR-EMB for consideration and inclusion in its official EIA checklists.

### **Capability Building Support and Systems**

Protect Wildlife facilitated a range of capacity building and systems development initiatives during the quarter, including highly technical training on unmanned aerial vehicle (UAV) imagery and processing; conservation training designed to strengthen monitoring and enterprise management under the National Greening Program (NGP), and to develop a cadre of trainers who will help run the DENR's Protected Area Academy, once launched; investments in new technology to strengthen wildlife crime enforcement; and a wide range of support to the National Wildlife Rescue and Rehabilitation Center (NWRRC).

### **Training Regional Staff to Transform Drone Photos into Geospatial Data**

Building on Protect Wildlife's support throughout 2020 to the DENR's efforts to train regional officials on how to apply geospatial data derived from UAVs for forest and protected area management, monitoring, and enforcement activities (see text box), Protect Wildlife designed and led training programs in Regions 3 and 9 this quarter.

Following a January 2020 pilot training for DENR-FMB and DENR-BMB staff on using UAVs to verify land cover and uses, monitor the growth stages of NGP plantations, and identify hazard zones, among other applications, Protect Wildlife refined the curriculum and resource materials based on feedback from pilot session trainees. Last quarter, Protect Wildlife helped to facilitate the blended training program for DENR officials in Regions 3 and 9. The weekly online training was held over six consecutive weeks from August 11 to September 16—a total of 18 lecture hours. There were 115 participants, primarily representing the enforcement divisions of the DENR, NGP project staff, protected area staff, and some from representatives from LGUs.

The majority of trainees have completed basic post-processing of drone imagery (downloading and stitching of drone images after fieldwork). Questions during the training centered on how drone deployments impact the resulting imagery. Through the training, Protect Wildlife explored various drone deployment contexts—such as the terrain of area being surveyed, time of the day, weather,

amount of overlaps, etc.)—that impacts drone image and, therefore, geospatial by-product quality. The participants asked questions that were grounded on their experiences and, therefore, have clear impact on how they can improve the quality of their drone images.

Training for Regions 4B and 12 will follow next quarter, following the same blended training scheme.

### Honing WildALERT for Launch in November

Protect Wildlife issued a final presentation of the Wildlife Agency and Citizen Law Enforcement Reporting Tool (WildALERT) to the DENR-BMB senior staff meeting on July 6, 2020. The activity helped to lead the development of the mobile tool, which has the following two core functions:

- **Wildlife Identification.** WildALERT is an accessible offline digital reference for DENR personnel and law enforcers to help them correctly identify 480 fauna species, which are easily searchable using a filtering feature that narrows down selections using descriptive categories, such as animal group, size, color, body cover, and additional features. WildALERT can aid enforcers in quickly identifying species, which is crucial in reporting wildlife crimes.
- **Wildlife Crime Reporting.** The application allows users to take photos, record key information and submit these to the WildALERT report management platform, making it easier for enforcers to report wildlife crimes in real time.

Pursuant to its review, the DENR-BMB director has ordered that WildALERT manuals be finalized and that officials develop a training of trainers. The technical, user and system manuals are presently with DENR-BMB's Wildlife Resources Division and the two groups that will manage the technical aspects of the system—the Biodiversity Policy and Knowledge Management Division and Knowledge and Information Systems Service of the DENR—for review and approval.

Protect Wildlife contributed to several meetings with the Wildlife Resources Division to finalize the training designs and identify participants for the training of trainers. The activity also worked with DENR-BMB to finalize the

### New Normal: Adaptive Management and Resilience in the Face of COVID-19

Originally envisioned as an in-person exercise, Protect Wildlife redesigned the UAV training for online formats in light of COVID-19 work and travel restrictions. Notable approaches and lessons learned are highlighted below.

*Protect Wildlife anticipated that internet connectivity of participants could be a challenge.*

- Protect Wildlife recorded lectures and provided participants access to recordings after training, so those whose service was disrupted can download and catch up.
- Given the highly technical nature of the material, the recording is an important resource for participants to refer to as they advance their image processing and analysis skills in the future.

*Participants lost valuable time with lecturers for person-to-person mentoring and troubleshooting during application exercises.*

- To avoid meeting fatigue, Protect Wildlife elected to limit online sessions to lectures. For post-training lab exercises, the activity provided step-by-step guides and offered “office hours” for support between sessions. At the beginning of each session, select trainees present their homework to the group and the activity offers time for question-and-answer sessions.
- The blended scheme provided participants ample time to complete and absorb the lab assignments using the processing software on their own.

application's taxonomic wildlife identification function and its taxonomic database. Following a memorandum and directive on the training series by the DENR-BMB Director, Protect Wildlife helped to facilitate the first session for KISS and BPKMD officials on September 24, 2020. The training centered on technical aspects of the WildALERT System. Protect Wildlife led discussions on the manual covering the system requirements, installation needs and software maintenance. The training of trainers and taxonomic identification training will be conducted next quarter with the turnover of the entire WildALERT system targeted for November 2020.

### **Recalibrating NGP Training Modules for Delivery to More Than 1,000 New Extension Officers**

As of October 2020—nine years after the program's introduction—only 2.1 of the 8.6 million hectares targeted under the National Greening Program have been planted. This leaves the DENR with eight years to plant the 6.5 million hectares remaining to achieve its target. The DENR aims to ramp up its efforts in the coming years by training and deploying more than 1,000 forest extension officers to help NGP participants, who are primarily upland farmers and indigenous peoples, deliver community organizing initiatives and trainings on management of NGP sites and entrepreneurship.

To support the DENR's large-scale training initiative, Protect Wildlife is providing technical assistance to DENR-FMB to strengthen materials from the NGP's earlier training program, which was last implemented in 2017. In close coordination with the DENR-FMB, Protect Wildlife is helping to complete a holistic review and redesign of the existing NGP training program. The review features the following core objectives:

- Review NGP and other relevant policies to identify common themes for training;
- Develop user-oriented training modules and materials to meet the grassroots-level concerns and capacity gaps in successfully implementing NGP programs and projects;
- Design a multi-day program and training schedule that seamlessly integrates various thematic focuses;
- Apply a mixed methods strategy for optimized adult learning that deploys lectures mixed with practical exercises that engage participants; and
- Produce an online version of the training to allow for delivery during the pandemic.

In addition to these structural revisions, Protect Wildlife is helping to introduce a value chain module to expand the training beyond productivity concerns to address marketing and market access, coordination with adjacent NGP beneficiaries that share the same types of crops, and prospects for federating beneficiaries to improve marketable volumes of various crops.

Protect Wildlife is in the process of reviewing, editing and developing content to enhance the existing NGP training modules and training guides and materials. In addition to the training guide, the package includes standardized training presentations; indexed participant handouts in an online cloud storage to promote access by remote-based NGP coordinators and forest extension officers; and other supplementary training materials, like activity checklists, training evaluation forms, trainer's notes, program and synthesis slides and training tips. Thanks to this timely support, the NGP will be in a position to train the 1,078 new forest extension officers recruited this year, readying them for deployment to NGP sites and additional areas under the expanded NGP.

## **Gearing Up for Protected Area Academy Training of Trainers**

In Year 4, Protect Wildlife launched a training needs assessment that targeted 57 protected area superintendents and 41 rangers. The assessment spanned 12 core competencies in protected area management and highlighted low competency across many of the less technical, but equally critical, management- and finance- related aspects of protected area management across a representative sample of those assessed. Capacity gaps were most evident in operations and site management, financial and physical resources management, program development, awareness raising and livelihood competencies.

Based on these competency requirements and findings from the assessment, Protect Wildlife finalized the draft training curricula for protected area superintendents and rangers and presented it to a DENR-BMB technical working group this quarter. The two pilot training course modules and packs are described as the following:

***Part 1 (Protected Area Superintendent): Training of Trainers: An Overview of Protected Area Management Planning Processes, Methods and Tools.*** The three-day training of trainers provides an overview of the legal framework and the concepts, processes, tools and methods in management planning, including those outlined in DENR-BMB Technical Bulletin 2016-08. The curriculum focuses on how the protected area superintendent can perform his or her role in the management planning process efficiently and effectively. It is organized into five modules: (1) The Legal Framework, (2) Protected Area Management Planning Concepts, (3) Protected Area Management Planning Process, (4) Tasks and Activities in the Management Planning Steps, and (5) Managing the Planning Process. Following the training of trainers, the participants will join the pool of national trainers under the Protected Area Academy, bringing with them an understanding of nuances and complexity of training protected area superintendents in the process of protected area planning and protected area management plan preparation.

***Part 2 (Rangers): Protection of Nature and Protected Areas: An Introductory Training of Trainers Course for Rangers.*** The three-day course provides basic knowledge on principles and concepts of conservation and the importance of the work of protected area rangers in protecting these nature reserves. It provides an overview of relevant policies, rules and regulations pertaining to the work of rangers, while equipping them with fundamental ecological concepts so that they understand and appreciate the importance of their work. It is organized into five modules: (1) History and Current State of Nature Conservation and Protected Areas, (2) Basic Ecological Principles, (3) Ecosystems and Ecosystem Services, (4) Characteristics and Special Features of Protected Areas, and (5) The Legal Framework and Roles and Responsibilities of Protected Area Rangers. As with the protected area superintended course, the ranger training of trainers graduates will serve as ranger trainers in the Protected Area Academy.

***Preparation for the Virtual Training Sessions.*** Protect Wildlife also assisted DENR-BMB last quarter in preparing the criteria for selecting national trainers for the training of trainers simulation. A DENR special order will be issued after the selection process in time for the November training. The selected trainers from DENR and BMB will be assigned topics to present. In the two weeks prior to the November training, Protect Wildlife will help lead an orientation for facilitators and trainers, followed by a dry run of the activities a week prior to the launch. The training of trainers will be held across

consecutive weeks, with classroom-style sessions for protected area superintendent trainers from November 9 to 11, and ranger trainers from November 11 to 13; and training simulation exercises for protected area superintendent trainers from November 16 to 18, and ranger trainers from November 18 to 20. Although both training of trainers will be conducted virtually, the design may be implemented on face-to-face mode when conditions allow.

To adequately prepare for the online sessions, an orientation meeting with the facilitators and resource persons from the DENR and BMB is set on October 30, 2020 to level off on the contents and flow of the pilot simulation. Learning notes, presentation slides and facilitator's guides in the training course packs will be provided, as well as an information pack on Bataan National Park, the selected case study.

### **Building the Capacity of National Wildlife Rescue and Rehabilitation Center**

Located at the Ninoy Aquino Parks and Wildlife Center in Quezon City, the National Wildlife Rescue and Research Center operated by DENR-BMB serves as the main repository of wildlife seized in relation to criminal cases filed under the Wildlife Act. NWRRC staff either rehabilitate rescued wildlife for release or—in the case of biosafety concerns, loss of natural instincts or permanent injuries—accommodate the wildlife at the facility, serving as its permanent home.

Protect Wildlife is delivering a technical support package to NWRRC to help them to better monitor and track wildlife in its care, and in the care of its counterpart rescue centers across the country; to improve diagnostic and veterinary services provided to rescued wildlife; and to catalyze a modernization program, featuring an expansion to new grounds.

**WildBase.** WildBase is a centralized database to systematize the recording and monitoring of apprehended wildlife through an online facility. This will improve management of confiscated wildlife records by DENR's 25 regional wildlife rescue centers. The WildBase cloud will make it convenient for rescue center staff, DENR-BMB, and DENR executives to access data needed for decision-making and policy reforms. A mobile app will also be developed for wildlife keepers' offline data gathering, recording, and documentation of apprehended wildlife. WildBase will help shift wildlife rescue centers in the country from paper-based systems to digital. The management information system will include electronic health records for wildlife and tracks how wildlife is disposed.

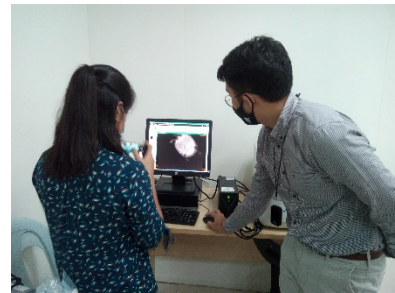
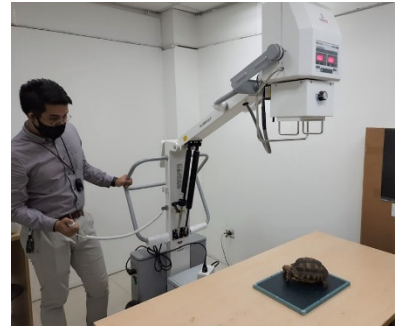
This quarter, Protect Wildlife continued work to make improvements to the alpha version of WildBase. The activity facilitated coaching and feedback sessions that yielded substantial updates and improved process flows for the application. This led to the finalization of the beta version, which was rolled out for testing by NWRCC and the Palawan Wildlife Rescue and Conservation Center last September 24 and 29, respectively.

The beta version for WildBase is now being tested until mid-October to assess its robustness and stability. The system will be finalized and turned over next quarter, followed by a training of trainers to build the capacity of the DENR to roll out the system to rescue centers in other parts of the country.

**Training on New Diagnostic Equipment at NWRRC.** Last August, Protect Wildlife supported investments in modern resources and capacity building for delivery of emergency and diagnostic care for rescued wildlife. Protect Wildlife presented NWRCC officials with a new ultrasound machine, which complements an x-ray machine installed in March, vastly increasing their ability to diagnose diseases, injuries and conditions of rescued wildlife. Presently, wildlife retrieved or rescued in Metro Manila, as well as trafficked exotic wildlife confiscated at airports and other ports of entry, are brought to NWRRC. The center is mandated to take the lead in the care and rehabilitation of wildlife, which often arrive in an agitated state due to their injuries or confinement. Using the new x-ray and ultrasound machines will increase the efficiency and accuracy of the center’s veterinarians and personnel in giving proper care and treatment for wildlife, and improve the management and prevention of diseases. With these investments, the center no longer needs to outsource diagnostic services and can now promptly address immediate needs of their wildlife patients, assess their health, and rehabilitate them for release.

Following installation of the ultrasound machine, Protect Wildlife engaged the x-ray and ultrasound machine vendors to lead a formal training on the proper use of the equipment for NWRRC veterinarians and senior wildlife handlers. The use of the x-ray and ultrasound machines have now become part of the standard diagnostic procedures for receiving wildlife that have been rescued or turned over to the center. With the equipment, research can also be conducted by veterinary students that may benefit the information kept by the center.

**Laying the Foundation for an Expanded NWRRC.** For those rescued wildlife that cannot be rehabilitated and released back into the wild due to loss of natural instincts; permanent injuries that will impair their ability to survive in their natural habitats; or biosafety concerns, particularly invasive species or wildlife seized through international trafficking operations, the NWRRC serves as a permanent home. The current center occupies the first floor of a two-story office building and veterinary facility, and an outdoor park and rescue center area with enclosures for rescued



**New equipment** for the National Wildlife Rescue and Research Center will help increase the efficiency and accuracy of the center’s veterinarians and personnel in giving proper care and treatment for wildlife, and improve the management and prevention of diseases.

wildlife. The outdoor park and rescue center presently has enclosures for different species, including Philippine eagles, reticulated pythons, Philippine pangolins, long-tailed macaques and a tiger. Though it's not a traditional public zoo, the NWRRC permits limited public visits and viewing in order to raise awareness on wildlife protection and conservation.

With the DENR's push to address wildlife trafficking as a national issue, there have been more seizures and turnovers of wildlife to the NWRRC. This increased emphasis on enforcement—and resulting increases in seizures, supported by Protect Wildlife, among others—is expected to further tax the existing NWRRC, which is nearly at full capacity and lacks proper enclosures designed to species needs and international standards. Simply put, the center lacks facilities to properly maintain wildlife in their custody.

To address this challenge, Protect Wildlife is helping DENR-BMB to conduct the first of a phased process to expand the NWRRC in a location within the southwest corner of the Ninoy Aquino Parks and Wildlife Center. DENR-BMB originally requested that Protect Wildlife support the construction of cages or enclosures for rescued wildlife. This was deemed as unsustainable, however, because it does not address the center's overarching limitations on space that result in wildlife being held in close proximity, which is counter to the DENR's objective of providing a healthy and safe setting for wildlife in their custody. To support the NWRRC's long-term viability, instead of building cages or enclosures, Protect Wildlife and DENR-BMB agreed to develop an engineering design for a new rescue center that can be built in phases over the course of several years.

This quarter, Protect Wildlife designed and released two requests for proposals for completion of a topographical survey of the new site, and for a professional architectural and engineering vendor to create a site development plan. This is an ideal first step for DENR-BMB's plan to execute a phased approach to a rescue center extension site, which will be designated a restricted area. Based on annual budget allocations, the bureau will progressively invest in and build upon their rescue center design each year. Once completed, the NWRRC extension site will include enclosures that are well designed to contribute to the well-being and rehabilitation of the wildlife, and the proper demarcation of restricted areas.

Throughout September, Protect Wildlife worked closely with DENR-BMB to develop and strengthen the terms of reference for the topographical survey and architectural and engineering site development plan, releasing it for bid at the end of the month. The terms of reference for the site development plan calls for a site grading plan, a full layout of all facilities to be built on the extension grounds; landscape drawings; and, importantly, the services layout plan that addresses power, potable water, fire water, wastewater, sewerage and drainage systems, and performance requirements. Next quarter, Protect Wildlife will award and oversee the completion of the topographical survey, and complete a pre-bid conference with site development plan offerors and award the contract in October. Once awarded, the activity will provide the selected offeror with the topographical survey, and oversee their execution of the terms of reference with DENR-BMB. The final design products are anticipated to be completed in early 2021.



## **Celebrating Researchers' Success Under Protect Wildlife's Student Research Assistantship Program**

This quarter, Protect Wildlife and its research partners focused efforts on adapting original research designs for application during COVID-19 restrictions. The quarter from July to September proved challenging due to the acceleration of local transmission of COVID-19 and re-issuance of restrictions on work in travel in hotspots. Protect Wildlife worked closely with students to monitor situations on the ground and revise work plans and timelines with university and student research partners.

Despite the obstacles facing university and student researchers, Protect Wildlife's partners were able to nimbly adjust research designs and methods and timelines without compromising the objectives of research. Navigating these obstacles, three students successfully completed the requirements of concerned academic programs:

- Dr. Jayson Caranza completed the requirements to earn a PhD in Environmental Science at the University of the Philippines Los Baños;
- Dr. Leizle Bolivar-Coronica completed the requirements to earn a PhD in Science Education, major in Biology at the Notre Dame of Dadiangas University; and
- Yñigo del Prado completed the requirements to earn a Master of Science in Biological Sciences at the University of Santo Tomas

The remaining graduate students supported by Protect Wildlife made considerable progress in terms of reviewing their data holdings, analyzing results and determining tangible values of their findings to biodiversity conservation, resource use and protected area management.

These gains were made possible, thanks to the tactics proposed by students and their supporting faculty to advance their research despite the pandemic. Adjustments included reduction in required field data collection, use of new software for data validation instead of field visits, and development of communication materials in place of face-to-face presentation of results to communities and stakeholders. The students' significant achievements are presented in the following sections.

### **Showcasing their Work at the Digital Forum of Biodiversity Conservation Society of the Philippines**

Five graduate students shared results of their researches at the Biodiversity Conservation Society digital forum on August 22 and 23 under the postgraduate presentations category. Three of the students were recognized with the following awards at the forum:

- Dr. Leizle Bolivar-Coronica won Best in Narration Award for the video abstract on her presentation on "Biodiversity Assessment of the Marine Ecosystem of Burias, Glan, Sarangani Province: Basis for a Learning Package."
- Joey Cabasan won Best Student Presenter Award in the postgraduate category for his research presentation on "Discriminating populations of leopard coral grouper (*Plectropomus leopardus*) in major trading centers in the Philippines using otolith outline analysis." He is pursuing a Master of Science in Marine Science at the University of the Philippines Marine Science Institute.
- Jhonnell Villegas was awarded Best Sound Design in the post-graduate category for his presentation on "Abundance and distribution of the Philippine brown deer in the Obu Manuvu

ancestral domain, Davao City.” He is pursuing Master of Science in Biology at the Ateneo de Davao University.

Two other students also submitted digital abstracts to forum organizers. Amelita Luna’s abstract addressed her research on “Conservation initiatives for mined-out areas: The use of metallophytes in Acoje, Zambales, Luzon Island, Philippines.” She is a PhD student (Research in Forestry) at the University of the Philippines Los Baños. Finally, Adriane Tobias submitted an abstract on his research, “Rafflesia of Luzon Island: Reinstatement of *R. banoana* and another mysterious species in Cordillera Central.” He is pursuing Master of Science in Forestry at the University of the Philippines Los Baños.

### **Other Student Research Achievements**

In addition to these achievements, student researchers finalized research brief drafts that Protect Wildlife will further develop to raise awareness among university faculty, researchers and policymakers in relevant fields. Other students produced manuscripts for publishing.

The nine students who completed research briefs are the following:

- Adrian Luczon on genetic studies of fruit bats;
- Dr. Jayson Caranza on recreational value of the Capisaan Cave System in Nueva Vizcaya;
- Amelita Luna on metallophytes in mined areas in Zambales;
- Yñigo del Prado on pit vipers of the Luzon Biogeographic Region;
- Joey Cabasan on links of Tawi-Tawi and Palawan leopard coral grouper populations;
- Aris Reginaldo on non-flying mammals of southern Cordillera;
- Jhonnell Villegas on Philippine brown deer in Obu Manuvu ancestral domain in Davao City; and
- Dr. Leizel Coronica on biodiversity assessment of the marine ecosystem in Burias, Glan, Sarangani.

The four students who produced publishable manuscripts are the following:

- Adrian Luczon on “DNA Barcodes Reveal High Genetic Diversity in Philippine Fruit Bats”;
- Dr. Jayson Caranza on “Fragmentation Analysis of Capisaan Karst Landscape through Changes in Land Use and Land Cover Using FRAGSTATS”; and “Recreational Value of Caving: Valuation Using Travel Cost Method in Capisaan Cave System, Nueva Vizcaya, Philippines”;
- Amelita Luna on “Floristic Survey of Vascular Plants in Ultramafic Terrain of Second Growth Forest on Acoje Mine, Zambales, Luzon Island, Philippines”; and
- Adriane Tobias on “Seed Dispersers, Frugivores and Pollinators of *Rafflesia* R. Br. ex Gray (*Rafflesiaceae*): Implications on its Distribution Pattern and Evolution.”

In the next quarter, Protect Wildlife will continue to support the procurement needs of 11 active student researchers to position them to finalize their thesis and dissertation manuscripts, complete laboratory analysis or undertake final field data collection. Protect Wildlife shall also organize a series of webinars as venues for at least ten students to share their findings and recommendations to policymakers, resource managers, environmental planners, communities, educators and students. Among the target audiences are bureaus and regional offices of the DENR and the wider academic community.

## Expansion and Deepening of W-GDP Initiative Interventions

Protect Wildlife continued to build on its efforts to deliver technical assistance and mobilize resources under the Women’s Global Development and Prosperity Initiative to strengthen triple bottom line enterprises, generating economic and natural resources management benefits for 1,000 women and 5,000 household members.

The W-GDP Initiative is anchored on three pillars: Women Prospering in the Workforce, which will support workforce development and skills training; Women Succeeding as Entrepreneurs, which is centered on entrepreneurship and access to capital, markets and networks; and Women Enabled in the Economy, which will address factors that affect women’s ability to reach their economic potential.

Protect Wildlife is helping to lead implementation of the W-GDP Initiative in the Philippines by targeting community-based and people’s organizations in activity sites that are dependent on natural resources and other ecosystem goods and services from forest lands and protected areas, and have significant representation of women in officer positions and their membership. The W-GDP Initiative support for women’s livelihoods include training on organizational development, catalytic investments in processing equipment and postharvest facilities, strengthening access to credit, and facilitating marketing agreements and networking opportunities.

Between July and September, Protect Wildlife launched enterprise development support to eight new organizations, bringing to 22 the total number of microenterprises under the activity’s implementation of the W-GDP Initiative. Each new people’s organization, along with their enterprise, the Protect Wildlife site, and the conservation area they work in are presented in Table 3.

**TABLE 3: NEW W-GDP INITIATIVE PARTNERS**

	PEOPLE’S ORGANIZATIONS	ENTERPRISES	PROTECT WILDLIFE SITES	CONSERVATION AREAS
1	Moto Ladal Farmers Association	Abaca fiber production	Region 12	Mount Busa
2	Cooperative of Women for Health and Development;	Abaca weaving	Region 12	Allah Valley
3	Lake Sebu Indigenous Women Weavers Association	Abaca fiber production and weaving	Region 12	Allah Valley
4	Upper Valley People’s Multipurpose Cooperative	Abaca fiber production	Region 12	Allah Valley
5	Sapu Masla Fish Cage Operators Association	Fish culture and mangrove seedling production	Region 12	Sarangani Bay
6	Salaan Buffer Zone Association	Cacao production and processing, and coffee planting	Zamboanga City	Pasonanca Natural Park
7	Tolosa Buffer Zone Association	Cacao production and processing, and coffee planting	Zamboanga City	Pasonanca Natural Park
8	Salabusob Integrated Livelihood Association of Women	Turmeric production and processing	Region 3	Aurora Memorial National Park

In addition to these groups, Protect Wildlife continued to deliver organizational strengthening and enterprise development support for all 22 partner people’s organizations during the quarter. Across all activities, Protect Wildlife engaged public and private sector partners to help design, deliver and sustain the interventions beyond the life of the activity.

This quarter, training was delivered on the following:

- Strategic management planning provided by site teams in Palawan, Region 3 and Region 12;
- Financial management and bookkeeping with local DENR partners in Region 3 and with Foundation for a Sustainable Society, Inc. (FSSI), and Philippine Institute of Certified Public Accountants (PICPA) in Region 12; and
- Agricultural cultivation with Philippine Fiber Industry Development Authority, local government unit of Maasim, Sarangani, and Conrado and Ladislawa Alcantara Foundation, who facilitated the Climate Smart Farmers Field School for abaca in Region 12; and with JAS Ventures on cacao production in Zamboanga City.

Protect Wildlife also advanced progress on catalytic investments in its partner enterprises, advancing progress on floating seaweed dryers in Zamboanga City and southern Palawan in partnership with the Department of Science and Technology (DOST); and on abaca spindle stripping machines for partner enterprises in Region 12 with PhilFIDA. In the following sections, Protect Wildlife highlights technical assistance delivered to select enterprise partners during the quarter.

### **Training and Investments for Abaca Farmers and Processors in Region 12**

In Region 12, Protect Wildlife delivered training for 12 enterprises on basic enterprise management, through a training on bookkeeping and financial management concepts; on abaca cultivation, through the Climate Smart Farmers Field School; and on abaca processing, through operations and maintenance training on abaca spindle stripping machines and on training on processing fine-quality abaca fiber into a continuous thread called tinagak—the thread of choice for weaving the traditional t'nalak cloth and other abaca handicrafts.

***Tinagak Processing and Spindle Stripping Machine Operations and Maintenance Training.*** In July, Protect Wildlife, with abaca consolidator United Maligang Farmers Multipurpose Cooperative, trained 24 abaca processors from Holik, Moto Ladal, and Datal Basak Farmers Associations on how to process tinagak. The farmers also learned how to package tinagak thread into bundles. The training began with sessions on selecting, harvesting and extracting eschuhido or white abaca fiber, which is in high demand both locally and abroad. When processed into tinagak, it sells for ₱800 to ₱1,000 per kilo—eight to ten times the price of raw abaca.

In parallel with training activities, the participants also worked together to develop their respective manuals of operations and maintenance for their abaca spindle stripping machines, which they received through the W-GDP Initiative. With the equipment, abaca farmer-processors can produce fibers up to 20 times faster than stripping by hand. Mechanized production also greatly improves the quality of abaca fiber and increases its volume by up to 72 percent, helping farmers to command a better price in the market. These improvements can help abaca farmers in Sarangani to respond to growing demand for abaca fiber, which can be used to produce medical-grade and eco-friendly face masks and personal protective equipment.

The operations and maintenance manuals were developed based on PhilFIDA guidelines. PhilFIDA also co-facilitated the operations and maintenance training, a hands-on training with clear demonstrations on

safe operations and troubleshooting. Thanks to the manual, training sessions and ongoing partnership with PhilFIDA, the groups are positioned to sustain the machines long beyond the life of the activity.

**Climate Smart Farmers Field School.** Following a pause in response to COVID-19 work and travel restrictions and the institution of new health and safety requirements, Protect Wildlife re-engaged 30 abaca farmers from indigenous T'boli and B'laan communities in Maasim, Sarangani through the Climate Smart Farmers Field School, a six-month training program designed and facilitated by Protect Wildlife, Conrado and Ladislawa Alcantara Foundation, and PhilFIDA. Through the field school, facilitators introduce new techniques and best practices for advanced abaca production technology and disease prevention, while increasing farmers' knowledge on conservation agriculture and climate change, which will inform their farm-level decision-making for abaca production, pest control and farm preparation.

The field school curriculum comprises three modules on integrated conservation and development, technical capability enhancement, and practical skills and enterprise development that will help the farmers improve abaca farming practices, while also strengthening their enterprise to boost production and sales. In addition to special topics on postharvest handling, the role of women in agroforestry, farm planning and record-keeping, and leadership and values, trainers also conducted a session on value-adding and enterprise development, which includes producing tinagak and extracting eschudo.

Through their participation, farmers from Holik and Datal Basak Farmers Associations are completing the field school. In addition to strengthening their livelihoods, the farmers will graduate from the training, ready to apply their new knowledge on the ecological importance of Mount Busa, its zoning and boundaries, and the allowed and disallowed land and resource uses in the local conservation area.

**Basic Concepts of Bookkeeping and Financial Management Training.** Protect Wildlife leveraged assistance from two organizational partners this quarter to develop and deliver training on bookkeeping and financial management for three people's organizations engaged in



#### **Public and Private Sector Partnerships in Abaca Production and Processing**

##### Production and Processing Training

- Philippine Fiber Industry Development Authority
- Local government unit of Maasim, Sarangani
- Conrado and Ladislawa Alcantara Foundation, Inc.

##### Basic Concepts of Bookkeeping and Financial Management Training

- Foundation for a Sustainable Society, Inc.
- Philippine Institute of Certified Public Accountants



### Public and Private Sector Partnerships in Turmeric Processing

#### Business Planning and Bookkeeping Training

- PENRO Nueva Ecija
- CENRO Cabanatuan

#### Processing Equipment Design and Operations

- Philippine Center for Postharvest Development Mechanization

abaca production—Knoon Highland Farmers Association, Lake Sebu Indigenous Women Weavers Association, and Cooperative of Women for Health and Development; one people’s organization engaged in coffee production—Tupi Coffee Growers Association; and one microlending organization—Tribal Leaders Development Foundation. As outlined in the partnership agreement, Foundation for a Sustainable Society, Inc. is leading training efforts for the people’s organizations supported by Protect Wildlife and will continue to their engagement beyond the life of the activity.

Long-time partners, FSSI and Philippine Institute of Certified Public Accountants have an existing financial management training module, which is part of a suite of capacity building programs they deliver to social enterprise partners and other community enterprises within FSSI’s network. Under their partnership, PICPA, through its local chapters, delivers trainings on basic concepts of bookkeeping and financial management for social enterprises. Following the training, FSSI and PICPA committed to extend support to the trainees by reviewing their book of accounts and mentoring them on other financial management concerns.

### Training and Investments for Turmeric Processors in Region 3

Prior to their work with Protect Wildlife and the W-GDP Initiative, Salabusob Integrated Livelihood Association of Women, based in Bongabon, Nueva Ecija, struggled in meeting its primary buyer’s monthly volume demand for sliced and dried turmeric chips. Currently, individual households are doing backyard drying of their turmeric produce using trays made of bamboo. SILAW’s weekly capacity represents only 16 percent of the total monthly demand. To deliver even this limited output, the women members spend long hours, manually slicing turmeric using kitchen knives.

Protect Wildlife, under the W-GDP Initiative, is targeting its support to SILAW on three primary fronts: to build the enterprise’s organizational and business planning capacity, while also investing in processing enhancements and revitalizing its market linkages. The activity began its support by facilitating a market assessment for their turmeric products, conducting a simple value chain analysis and

organizational review, and delivering a strategic planning workshop. Following these initiatives, the activity mobilized partners from local offices of the DENR in Nueva Ecija to lead a training on business planning and simple bookkeeping for their turmeric processing. Through the training, Protect Wildlife aims to build local partnerships with these local DENR offices, and strengthen SILAW's capacity to monitor market demand, production and sales on behalf of its members.

Also this quarter, the Philippine Center for Postharvest Development Mechanization conducted a site visit to SILAW, where they explored the enterprise's production area and began to plan for the customized design of a multi-commodity solar tunnel dryer for turmeric chips and other products. PhilMech identified this investment as an opportunity to address SILAW's historic challenges with meeting their buyer's volume demands. According to PhilMech experts, the solar tunnel dryers can produce up to 700 kilograms per week, easily positioning SILAW to meet or exceed its target volume, thus restoring confidence in their marketing partnership. The solar tunnel dryer is scheduled for delivery in early October 2020. The installation will be directly followed by a training on operations and maintenance led by PhilMech.

### **Training and Investments for Cacao and Coffee Enterprises in Zamboanga City**

In late August, farmer-members of Tolosa and Salaan Buffer Zone Associations in Zamboanga City completed training on agroforestry focused on cacao production, management and processing. Through the activity, the trainers helped cacao farmers in the buffer zone of Pasonanca Natural Park—a protected area and a major watershed in the city—learn updated cacao production practices designed to help diversify their income streams and reduce their dependence on unsustainable and destructive farming practices. The five-day training of trainers focused on cacao cultural management practices and techniques, value-added cacao-based processing and product development, and proper postharvest processing. Through the training, participants gained the knowledge and skills needed to help them



#### **Public and Private Sector Partnerships in Cacao and Coffee Production**

##### Cacao Production and Processing Training

- JAS Agri-Ventures

##### Conservation-Based Agroforestry Training

- Zamboanga City Office of City Agriculturist
- DENR CENRO Zamboanga City

##### Arabica Coffee Seedlings Donation

- Kasanyangan Center for Community Development and Microfinance Foundation



### **Public and Private Sector Partnerships in Seaweed Production**

#### Seaweed Dryer Design and Construction

- Department of Science and Technology
- Center for Agri-Fisheries and Biosystems Mechanization, College of Engineering and Agro-Industrial Technology, University of the Philippines Los Baños

cultivate and process high-quality cacao beans that will meet market standards.

The training was delivered at partner JAS Agri-Ventures' facility. Its owner, the industry head for the Cacao Zamboanga Cluster in Mindanao, offered JAS farm as a demonstration area for cacao farming. JAS Agri-Ventures also began discussions with the two buffer zone associations regarding marketing agreements for their wet cacao seeds.

Protect Wildlife also supported a subsequent training on conservation-based agroforestry that was led by the Zamboanga City government, CENRO Zamboanga City and Kasanyangan Center for Community Development and Microfinance Foundation. Following the training, Kasanyangan entered into a memorandum of understanding with Protect Wildlife and the buffer zone associations, wherein the foundation will donate 10,000 seedlings of Arabica coffee as commitment to support the farmers. Through application of agroforestry methods introduced at the training, association members have the potential to diversify their cacao farms by cultivating the coffee seedlings donated by Kasanyangan. Protect Wildlife will continue to work with Kasanyangan and the buffer zone associations next quarter. Under the agreement, the activity will fund transportation of the seedlings and the associations will build seedling nurseries as counterparts to Kasanyangan's seedlings donation.

### **Training and Investments for Seaweed Enterprises in Palawan**

This quarter, Protect Wildlife continued to extend support to two seaweed enterprises in southern Palawan, as well as seven people's organizations engaged in ube production—directly leading a training on strategic management planning. To ensure social distancing and compliance with health and safety rules, the activity facilitated the training at the site of each organization. For each session, the activity aimed to train 15 of each organization's core members. This will be followed early in the next quarter by Department of Trade and Industry-led training sessions on business planning and simple bookkeeping.



Also this quarter, Protect Wildlife engaged the Department of Science and Technology as a core partner to support Cherish Fisherfolk Association and Rural Improvement Club of Labuan, both in Quezon, Palawan. DOST provided the activity with its design for floating seaweed dryers and provided extensive support for oversight and quality control during construction.

The most labor-intensive phase of seaweed farming is the preparation of planting materials and the harvested seaweed drying process. The drying process is crucial as the prices of dried seaweed is highly dependent on its moisture content; buyers require 30 percent moisture content. The traditional drying process entails sun-drying on mats or bamboo poles in open areas. This method exposes the seaweed produce to sudden changes in weather and to contamination with sand. To address this problem, the women members have expressed the need for an appropriate drying facility for their harvested seaweeds.

With DOST, Protect Wildlife and the associations elected to construct a floating seaweed dryer, which eliminates the need to haul fresh seaweeds from the production site to the shore and lessens the exposure of harvested seaweeds to contaminants such as sand and dirt. The floating dryers feature a greenhouse cover and UV-treated sheets that drape around the structure, protecting the harvested seaweed from airborne contaminants and reducing the drying time by up to four days (from a maximum of six to a minimum of two, using the floating dryer). The dryer also offers convenience, allowing for users to tow it from the sea to areas along the coast closer to their residences.

In late September, Protect Wildlife and DOST oversaw the completion of dryer construction for both associations. Following the construction monitoring visit and report, and the review and approval by an expert engineer and advisor on construction and the designer for DOST’s floating seaweed dryer, Protect Wildlife and the construction contractor facilitated an operations and maintenance training based on the operations and maintenance manual. During the training, each enterprise builds from the standard manual, customizing it based on their experience in construction and in running their enterprise. The groups incorporated a six-month activity plan and a fee schedule for use of the dryer, which will be used to support its ongoing operations and maintenance.

Following a 30-day defects and liability period, in mid-October, Protect Wildlife will facilitate a handover of the seaweed dryers to the two associations and celebrate an official launch and completion ceremony.

## OTHER MANILA ACTIVITIES

PARTNER ORGANIZATIONS	SA	ACTIVITIES	DATES
Project Steering Committee		The 5th Project Steering Committee online meeting, chaired by the DENR-BMB Director, was attended by DENR member offices and representatives of DENR regional offices and PCSDS. The Protect Wildlife team presented the status and results of its implementation activities in its focal sites and key technical assistance activities with DENR bureaus.	August 27, 2020
DENR-BMB	SA 3	Online presentation to the DENR-BMB Director and senior staff of the training needs analysis results for the Protected Area Academy.	August 24, 2020

PARTNER ORGANIZATIONS	SA	ACTIVITIES	DATES
	SA 3	Online meeting with DENR-BMB, BIOFIN and National Economic and Development Authority to review the draft technical bulletin on the localization of PBSAP.	August 26, 2020
	SA 5	Technical meeting on the procurement of architectural and engineering services for the design of NWRRC.	September 18, 2020
DENR-FMB	SA 3	Online meeting to discuss and finalize DENR-FMB's program for the meeting with and orientation of the PAB on the CAVCS.	July 16, 2020
	SA 3	Online meeting to discuss the revised training guide and workshop design for the Drone Image Processing and Analysis Training for Regions 3 and Region 9.	July 22, 2020
	SA 3	Online meeting to review training modules for NGP extension officers.	July 29, 2020
USAID Fish Right	SA 5	Participation in the Workshop on Quantifying the Prevalence and Impact of Illegal, Unreported and Unregulated Fishing (IUU) in the Philippines. Contributed inputs for validation of fisheries data, such as boat and fisherfolk registration, catch data, and incidence of fisheries violation through Delphi method.	September 2-3, 2020
	SA 5	Presentation in IUU Fishing Quantification Workshop on analyzing poaching in Philippine waters using VIIRS data and on the anti-poaching protocol of DA-BFAR that Protect Wildlife helped craft.	September 17, 2020
USAID SIBOL	SAs 1 to 5	Online meeting to identify key points for collaboration in providing technical support to DENR-FMB, DENR-BMB and DA-BFAR.	August 6, 2020
Smart Communications, Inc.	SA 2	Virtual partnership ceremony to formalize collaboration in the School in a Bag initiative.	August 28, 2020
US Forest Service	SA 3, SA 5	Online meeting to discuss support to DENR-FMB on FREL and to examine latest delivery of FREL data. Also discussed USFS support to the development of the manual for the suppression and management of forest fires.	July 8 and 23, 2020
Philippine Wood Producers Association	SA 3	Online consultation on key provisions in the Sustainable Forest Management bill.	September 23, 2020
University of the Philippines Institute of Biology	SA 4	Online meetings to discuss re-design of tarsier research in view of quarantine protocols and requirements of the host LGU.	August-September 2020
PhilBio	SA 4	Online meetings with PhilBio to strategize Expedition 2 of the Sulu hornbill research in Panglima Sugala, Tawi-Tawi once air travel to study site resumes.	July 17 and September 25, 2020
Student Research Awardees	SA 4	Series meetings with 15 assisted graduate students in Master of Science and PhD programs to assess progress of researches and chart revised timelines for research products.	July, August and September 2020

## PLANS FOR NEXT QUARTER

### SA I: Behavior Change Communication

#### Theory of Change Result: Foundational knowledge improved

- Assist DENR-BMB to develop a Facebook campaign on the link between CWT and zoonotic diseases.
- Assist DENR-BMB Wildlife Resources Division develop digital Wild and Alive materials for its website.

### **Theory of Change Result: Improved community attitudes toward conservation**

- Prepare deployment of School in a Bag kits to partner schools in Protect Wildlife sites.
- Design and conduct end-line knowledge, attitudes and practices (KAP) surveys in southern Palawan and Sarangani Bay.

### **Theory of Change Result: Improved institutional and private sector attitudes toward conservation**

- Monitor construction progress of Connected to the Wild traveling exhibit of The Mind Museum and prepare for target launch within the quarter.

## **SA 2: Conservation Financing**

### **Theory of Change Result: Available financing arrangements are identified and realigned to support conservation**

- Continue collaboration with USDA Philippine Coffee Advancement and Farm Enterprise (PhilCAFE) Project for the development of coffee production manual that integrates conservation-related practices.
- With PhilFIDA, package field-tested and conservation-enhanced Climate Smart Farmers Field School training modules for use of PhilFIDA in other abaca areas.

### **Theory of Change Result: Opportunities for new conservation financing arrangements identified and designed with partners**

- Develop PES case studies based on the experience and lessons learned from Palawan Region 12. The case studies will highlight the technical assistance process and actions taken by partners to establish PES schemes and to re-invest PES revenues into conservation.
- Complete PES training guidebook, integrating results of the PES training of trainers in South Cotabato.

### **Theory of Change Result: Government and CSOs initiate and implement financing arrangements**

- For the implementation of the W-GDP Initiative, continue to coordinate support from national agencies, CSOs and the private sector to organizational strengthening and enterprise development needs of target people's organizations.
- Facilitate handover of postharvest and processing equipment and tools for target people's organizations and community-based organizations.
- Conduct end-of-project assessment of partner people's organizations to report changes and results of Protect Wildlife assistance under the W-GDP Initiative.
- Develop at least two case studies on the empowerment of women in W-GDP-supported microenterprises.

### SA 3: Conservation and Governance

#### Theory of Change: Increased capacity of relevant government agencies, protected area management boards and CSOs in integrated resource planning and management

- Continue technical support to DENR-FMB and DENR-BMB for the finalization of the following policies, guidelines, tools and documentation reports:
  - CAVCS policy, manuals (1, 2 and 3), and templates for the preparation of Forest Carbon Project Plan and Forest Carbon Accomplishment Report (for submission to DENR policy technical working group as attachments to the administrative order on CAVCS);
  - Guide for independent third-party validators and verifiers of Forest Carbon Projects (workshop with the Philippines Accreditation Bureau);
  - Review of the draft FREL report and technical process documentation;
  - Manual on the Prevention, Suppression and Management of Forest and Grass Land Fires (and use it to train selected DENR-FMB trainers);
  - Policy (administrative order) on the selection of management indicator species and flagship species; and
  - Policy (administrative order) and guide on PBSAP localization.
- Finalize the Terms of Reference (under review by DENR-FMB) for the service provider that the bureau is procuring to upgrade the SMART-NGP module and tool.
- Roll-out of adjusted drone image processing and analysis training design in DENR Regions 4B and 12.
- Coordination between DENR-FMB and DENR-BMB in preparing the following:
  - Technical bulletin on harmonization of land and resource uses, definitions and statistical reporting strategies. These will be important inputs to training guides on forest land use plan (FLUP) and protected area management plan preparation.
  - Adjustments to the Biodiversity Monitoring System manual for its integration with the Lawin System. Protect Wildlife will continue to advise DENR-BMB and DENR-FMB on the finalization of the protected area-level list of management indicator species for use in the Lawin System and on the rationale behind shortlisting the species to a minimum number.
- Complete the Protected Area Academy curriculum and support the conduct of the training modules for protected area superintendents and rangers, course syllabi and instructional materials.
- Continue assistance to the field teams in completing integrated FLUP and comprehensive land and water use plan (Palawan), FLUP (Region 12), and local conservation area management plan (Mount Busa in Region 12).
- Develop a summary of potential areas for public and private sector investments based on completed protected area management plans and FLUPs, with recommendations on the promotion of such investment opportunities.
- Complete the review of the Sustainable Forest Management Bill.

### **Theory of Change Result: PAMB formulates improved policies for better protected area management**

- Support protected area management offices in designing management board activities and actions focused on policy development and implementation of strategies and activities per approved management plans.
- Provide technical guidance in drafting bills covering selected protected areas in Palawan. Review draft bills for El Nido-Taytay, Puerto Princesa Underground River, Malampaya Sound and Rasa Island before submission to respective protected area management boards and DENR-BMB.
- Continue Management Effectiveness Tracking Tool (METT) activities and prepare analysis and report on each METT assessment undertaken.

### **SA 4: Conservation Research**

#### **Theory of Change Result: Capacity of partner colleges and universities to leverage funds, do research and curriculum development, and disseminate research results increased**

- Work with partner institutions (PhilBio, University of the Philippines Institute of Biology, Philippine Eagle Foundation, Zamboanga State College of Marine Sciences and Technology, Mindanao State University-Tawi-Tawi College of Technology and Oceanography) in completing research outputs and reports.
- Support graduate students in completing set requirements under the research assistance award.
- Disseminate results of researchers (online research presentations and webinars, social media posts, publications) that are relevant to policy, resource management and wildlife conservation actions. Continue the development of research briefs and other information materials on research findings.
- Monitor and document adoption by partner colleges and universities of the curriculum, syllabi and instruction materials developed with Protect Wildlife assistance. Evaluate results of curriculum development initiatives of partner universities, particularly their contribution to enhancing conservation education.

### **SA 5: Wildlife Law Enforcement**

#### **Theory of Change Result: National and local enforcement capacity to detect, investigate, prosecute and adjudicate improved**

- Support the EPETF in finalizing its advocacy communications plan to build a constituency to pass the EPEB Bill.
- Submit final designs for standardized and advanced courses for the DENR and other partner agencies.
- Complete draft of integrated manual on enforcement.
- Turn over WildALERT and WildBase Systems to the DENR, together with their operating systems and manuals. Conduct training of trainers for these systems to prepare DENR to roll out the tools to its field units.

- Assist in the roll out of BRAIN System to different enforcement agencies in Palawan.
- Conduct training on wildlife handling and restraint.
- Turn over equipment to DENR, including the wildlife ambulance.
- Continue with procurement and implementation of design phases for the NWRRC.
- Organize presentation of completed analyses of wildlife law enforcement data and enforcement related researches (CAPTURED research and ranger and community perception surveys).
- Train DENR Region 4B enforcement personnel on intelligence gathering and analysis for environmental crimes.
- Conduct Workshop on Information Gathering and Enforcement Scenarios in Pre-pandemic and the Current Pandemic Situation in the Philippines.
- Conduct training for Department of Justice prosecutors.

### **Theory of Change Result: Incidents of wildlife, forestry and fisheries crime are reduced**

- In support of monitoring and evaluation, conduct focus group discussions and workshops to gather and analyze data to determine and document improved enforcement practices and impacts of Protect Wildlife interventions at both site and national levels.

## **PALAWAN**

Within the following section, Protect Wildlife is pleased to present activity highlights in Palawan from the July to September 2020 period and to preview activities for the remaining months of the activity which are listed according to the SA Theory of Change result.

### **HIGHLIGHTS FOR THE QUARTER**

This quarter, Protect Wildlife is pleased to share highlights from support to Palawan partners and stakeholders, including the approval of the Cleopatra's Needle Critical Habitat five-year management plan, distribution of lanzones seedlings to farmers in southern Palawan as part of the agroforestry initiative to expand forest cover and strengthen livelihoods, and the implementation of W-GDP Initiative activities with ten partner enterprises.

#### **Approval of the Cleopatra's Needle Critical Habitat Management Plan**

This quarter, Protect Wildlife celebrated the approval of the Cleopatra's Needle Critical Habitat five-year management plan. Approval of the plan on August 20 by the Cleopatra's Needle interim management committee followed months of Protect Wildlife support for multisectoral and participatory data collection, ground validation and planning workshops with the Puerto Princesa city government officials and local community members. All parties involved in its passage shared pride in the process that led to the plan's completion, where indigenous Batak representatives were engaged in each step of the planning process, particularly in setting up management prescriptions. A larger representation of local communities was able to provide feedback and have signified support during the presentation to stakeholders in July 2020. In the following sections, we present core elements of the management plan,

details on the zoning regime, financial requirements for implementation, and oversight of the plan going forward.

### **Cleopatra's Needle Management Plan Overview**

The approved management plan outlines the following themes and areas for implementation that are necessary to embody the plan's vision and achieve its goals: protection and conservation of priority threatened species' habitats; forest rehabilitation and restoration; climate change adaptation and disasters risk resiliency-building; development of ecotourism and other sustainable livelihoods; BCC campaigns to raise awareness and influence conservation actions; research, development and extension to expand the knowledge base regarding the critical habitat and support sustainable development; strengthening environmental law enforcement; financial sustainability; and improving management and governance.

The Puerto Princesa city government and community partners will apply the Lawin System to record the encounter rate (frequency of sightings) of selected priority threatened species, such as the vulnerable almaciga, the critically endangered Philippine pangolin, and the endangered Palawan bearcat. The tool will also be used to monitor threats to these species within the critical habitat.

In the coming months, local officials will launch targeted activities to operationalize the strategies. For example, officials from the community, city government, DENR, PCSDS and other law enforcement agencies will open a joint effort to monitor illegal activities in the critical habitat. Partners will take a clustered approach for patrols, instituting three clusters with varying levels of enforcement that corresponds to the management zone strategy. Officials will also support trainings on nursery establishment for almaciga, silvicultural practices, tapping techniques and resin quality certification.

### **Cleopatra's Needle Zoning Regime**

To provide a framework for spatial and temporal control to support its protection and management, Cleopatra's Needle is allocated into four management zones. LGU and community officials, with Protect Wildlife support,

### **New Normal: Adaptive Management and Resilience in the Face of COVID-19**

In Cleopatra's Needle, Protect Wildlife presented the management plan on a community-by-community basis rather than through a large group gathering. All presentations were limited to 30 participants, including technical working group officials and one Protect Wildlife staff only, to maintain social distancing. Masks were required and lunch and snack vendors follow strict guidance issued in purchase orders for food to be individually packed rather than being served buffet-style, and for servers to wear masks at all times. In compliance with minimum health standards and safety protocols, Protect Wildlife conducted temperature screenings for all participants and provided facilities for disinfection.

In agroforestry activities, Protect Wildlife engaged the Davao-based vendor to revise plans, replacing its 10 laborers and truck drivers with local hires from Palawan based on costs with testing and compliance with local ordinances, and to heed sensitivities regarding travels from outside of Palawan.

In W-GDP Initiative trainings, Protect Wildlife introduced alternative trainers from Palawan in place of original plans to engage external consultants; and revised implementation plans to deliver training directly to each organization at their site, rather than collectively gathering all ten groups to a central location.

Prior to trainings, Protect Wildlife seeks clearance from the municipal inter-agency task force on COVID-19, stipulating the number of participants, the place of origin of the facilitators, and the minimum health and safety protocols to be observed. Protect Wildlife provides a disinfecting mat, alcohol and thermal scanner at the venue and distributes face masks to all participants, ensuring physical distancing at all times.

**Cleopatra's Needle** in Puerto Princesa City, Palawan now has a management plan that will serve as a roadmap for effectively protecting this critical habitat.



established the zones and guidelines following collection and analysis of actual land uses identified and mapped by the communities and the associated issues and problems with regards to resource and land uses. The final zoning regime also considers the existing Environmentally Critical Areas Network zonation of the site and applicable national laws and local policies and regulations.

- The core zone, occupying around 21,565 hectares or 52 percent of the critical habitat's total land area, is the largest management zone. Considered as a closed area for human activities—except for traditional activities and religious and cultural practices of indigenous communities which are not causing ecosystem degradation—it features the strictest management prescriptions and enforcement responses.
- The restricted use zone, which occupies 18,443 hectares or 45 percent of the total land area, is the second largest management zone. By restricting certain activities and implementing strict enforcement of environmental laws, this zone serves as a protective barrier to the core zone. As with the core zone, non-indigenous communities are not allowed to settle within this management zone.
- The controlled use zone comprises only 368 hectares of land or 1 percent of the total critical habitat area. In this zone, limited extractive activities may be permitted, subject to certain conditions.
- The traditional use zone, which covers 928 hectares or 2 percent of the total critical habitat area, features developed areas with human settlements and other infrastructure. Development of socioeconomic infrastructure to support the development needs of occupants are permitted in this management zone. Both indigenous communities and tenured non-indigenous communities are permitted to settle in this management zone.

### **Financing the Execution of the Management Plan**

Using activity-based costing, the implementation of the five-year management plan is estimated to cost more than ₱89 million. Of this, nearly 50 percent of the total estimated cost is designated for activities to strengthen management and governance of the critical habitat. Major investments would be applied



toward boundary delineation and ground demarcation of management zones alongside awareness-raising campaigns, establishment of a Cleopatra's Needle management office with plantilla positions, and design and construction of facilities and amenities. Approximately 15 percent of the management plan budget will be applied toward forest rehabilitation and restoration activities.

The plan will be funded in part by the Puerto Princesa city government, with additional contributions from PCSDS, DENR, NCIP, other national government agencies and communities. Once named, the Cleopatra's Needle management board shall be heavily engaged in working with local NGOs, academic institutions, donor bodies and other groups to leverage the management plan to secure additional funding support for the plan's execution. The management board will also explore the potential of ecotourism and water services to generate funding toward the management of the critical habitat.

### **Oversight of the Management Plan Going Forward**

Cleopatra's Needle current interim management committee shall be replaced with a permanent management board, which will function similar to a protected area management board under the National Integrated Protected Areas System. The management board will assume the primary responsibility for the implementation of the management plan. A critical habitat management office, proposed under the plan, would be led by a manager, whose functions would mirror those of a protected area superintendent. The office is envisioned to cut across four divisions responsible for key aspects of critical habitat operations: administration and finance, biodiversity research and monitoring, habitat protection and law enforcement, and community empowerment and development.

In the final quarter of 2020, the technical working group, spearheaded by the Puerto Princesa City Environment and Natural Resources Office in coordination with the interim management committee, anticipates launching efforts to execute a memorandum of agreement between PCSD and the city government for the management of Cleopatra's Needle (Section 5 of PCSD Resolution No. 13-481). The technical working group also plans to work with the city

### **Mount Mantalingahan Case Study by Protect Wildlife in Top Five of Global Competition**

This quarter, Protect Wildlife's case study "Habitat Management and Wildlife Protection in Mount Mantalingahan Protected Landscape" was awarded a top-five placement in the Conservation Coaches Network and Conservation Measures Partnership's annual global conservation case study competition.

The Global Conservation Case Study Competition is designed to promote cross-organizational, cross-project and cross-practitioner learning about good conservation practices. Entries were evaluated based on whether the case study describes the following:

- An implementation approach that aligns with the Conservation (Open) Standards cycle and clearly defines a theory of change;
- Both the local context and the adaptive management or evidence work that was undertaken; and
- Compelling lessons learned that would be valuable to other conservation practitioners.

The case study outlines Protect Wildlife's work in Mount Mantalingahan, positing that an integrated approach to landscape management that enjoins local government, law enforcement, industry and communities to (1) establish clear tenure rights and land use zoning, (2) build capacity for improved governance of protected areas and buffer zones, for both conservation and enforcement, and (3) incentivize compliance through BCC campaigns and sustainable livelihood opportunities, will secure the preservation of Mount Mantalingahan Protected Landscape, its forested buffer zone, and the essential ecosystem goods and services they afford the residents of southern Palawan.



### W-GDP Initiative Partnerships in Palawan

In Palawan, Protect Wildlife is delivering training and mentoring services on basic business and financial management and organizational development, while also making investments to improve enterprises' efficiency and postharvest processing. Technical assistance is focused on ube production and seaweed farming and processing enterprises.

#### Ube Production

1. Lower Tabud Cassava and Vegetable Growers Association
2. Samahan ng mga Katutubong Nagpapahalaga sa Kagubatan ng Saraza
3. Samahan ng mga Katutubong Palaw'an na Mangangalaga ng Kalikasan sa Sitio Babanga
4. Pulot 3 Farmers Association
5. Bulalacao Community-Based Wildlife Protection
6. Kusor Upland Farmers Association
7. Pinagtibukan It Palaw'an
8. Bunyugen Menge Kepelewanan

#### Seaweed Farming and Processing

9. Cherish Fisherfolks Association
10. Rural Improvement Club of Labuan

government to issue an ordinance to adopt the PCSD resolution on establishment of the Cleopatra's Needle Critical Habitat, and to extend support toward institutionalization of the critical habitat management board.

### Expanding Agroforestry Farms in Multiple-Use Zones of Mount Mantalingahan

Following the distribution of durian seedlings to 400 farmers in 2019 and the training and orientation of additional 1,200 farmers on conservation-based agroforestry in June and July 2020, Protect Wildlife continued working with farmer-beneficiaries to further develop their plots with additional seedlings to diversify their home gardens. Palawan team distributed 20,000 lanzones and 28,000 rambutan seedlings in July and September, respectively.

As of this quarter, 800 hectares in the multiple-use zones of Mount Mantalingahan Protected Landscape and production zones in adjoining forest lands are being utilized for agroforestry. An additional 30,000 rambutan seedlings are expected to be delivered in the next quarter to be distributed to more farmers and to cover a larger area.

The agroforestry initiative is governed by a signed agreement between farmers, community chairpersons and Protect Wildlife, which outlines the responsibilities and commitments of all parties. Land preparation progress and planting activities are monitored to ensure compliance to specific guidelines in site preparation and planting, such as laying-out contour lines for the establishment of natural vegetative strips using A-frames. This initiative is expected to improve the degraded land cover of upland areas and eventually improve food sources and income of the communities.

These initiatives are helping to deliver on the Protect Wildlife's vision to increase forest cover in multiple-use zones in southern Palawan, while also making a long-term investment in high-value fruit trees for the benefit of local livelihoods. Protect Wildlife's iterative key message is that it is investing in quality planting materials and quality planting procedures so that farmers will get the maximum benefits of their labor, as well as providing a good environment for the wildlife they co-exist with.

## Delivering Organizational Strengthening and Business Development Support for Sustainable, Nature-Based Enterprises

Under the W-GDP Initiative, Protect Wildlife is delivering technical assistance on business development and organizational strengthening for ten people’s organizations that are implementing ube production and seaweed processing enterprises in southern Palawan. Women play key roles in each organization.

Through its technical assistance, Protect Wildlife is striving to help community enterprises to develop a clear and realistic strategic direction, design strategic programs that align to the group’s mission and available resources, and to execute monitoring and evaluation activities. In September, Protect Wildlife conducted a series of strategic management training and planning workshops for ten W-GDP Initiative partner enterprises (see text box). Through the training series, each organization was able to develop or update its strategic direction and programs for the next three to five years. These organizations will receive further training on simple business plan preparation and bookkeeping to help them establish sound financial management systems, where financial transactions are regularly recorded and there is sufficient oversight to ensure effective management of their enterprises.

To complement training and mentoring services, Protect Wildlife is also investing in resources—such as land preparation and harvesting tools for the eight ube associations’ 94 farmer-members, and floating seaweed dryers for the two seaweed enterprises—to produce efficiency gains and improve the quality of their enterprises’ products.

To promote the sustainability of all interventions, Protect Wildlife is working closely with existing private sector and local government partners to provide ongoing technical assistance and mentoring services to the W-GDP Initiative enterprises. Taken together, the activity aims to help each nature-based enterprise prosper, improving the livelihoods and fostering community for its members, and demonstrating the viability of sustainable business methods.

### OTHER PALAWAN ACTIVITIES

FOCAL AREAS	SA	ACTIVITIES	DATES
Mount Mantalingahan Protected Landscape and adjoining forest lands	SA 2	Household-level orientation on conservation-based agroforestry in Bataraza, Rizal and Quezon.	July 6-August 11, 2020
	SA 2	Signing of Memorandum of Agreement between Sunlight Foods Corporation and Institute for Development of Educational and Ecological Alternatives, who will serve as consolidator for ube produced by farmer-members of eight people’s organizations.	July 2020
	SA 5	Environmental Legal Assistance Center presentation of draft bill and enforcement protocol to the executive committee of Mount Mantalingahan Protected.	July 7, 2020
	SA 2	Distribution of farm tools to 94 ube farmers in southern Palawan.	July 9-10, 2020
	SA 2	Distribution of lanzones seedlings to trained farmers in Sofronio Española, Bataraza and Brooke’s Point.	July 21-24, 2020
	SA 3	Retrieval of camera traps in Mount Mantalingahan; uploading of images and identification of species.	July to August 2020
	SA 3	Technical meeting on the LGU-adopted FLUP of Rizal at CENRO Quezon.	August 18, 2020

FOCAL AREAS	SA	ACTIVITIES	DATES
	SA 5	Technical working group review of the draft bill, enforcement plan and protocol of Mount Mantalingahan.	August 19, 2020
	SA 2	Strategic management planning workshop for Cherish Fisherfolk Association and Rural Improvement Club of Labuan.	September 3-4, 2020
	SA 5	Presentation of draft protected area bill and Protect Wildlife milestones to Mount Mantalingahan management board.	September 24, 2020
Puerto Princesa Subterranean River National Park	SA 5	Consultation on the enforcement protocol for Puerto Princesa Subterranean River National Park.	July 13-17, 2020
	SA 5	Environmental Legal Assistance Center presentation of enforcement protocol for Puerto Princesa Subterranean River National Park.	July 15, 2020
El Nido-Taytay Managed Resource Protected Area	SA 3	Review of draft management plan of El Nido-Taytay by technical working group.	July 7-9, 2020
	SA 5	Stakeholder consultation on the protected area bill and environmental law enforcement protocol and plan of El Nido-Taytay.	August 25-26, 2020
	SA 3	Presentation of the updated management plan of El Nido-Taytay to protected area management board.	August 27, 2020
Roxas	SA 2	PES orientation for Roxas LGU by PCSDS, with virtual technical support from Protect Wildlife	August 10-14, 2020
Malampaya Sound Protected Landscape and Seascape	SA 3	Stakeholder consultation on the protected area bill of Malampaya Sound	September 29, 2020
Province-wide	SA 1	Pre-testing of learning materials and teacher guides for School in a Bag with select public school teachers in Palawan (Mount Mantalingahan and Cleopatra's Needle communities)	July/August 2020
	SA 4	Workshop on the development of marine laboratory manual for marine biology and other allied sciences. The workshop resulted in the drafting of 7 laboratory exercises that will feed into the manual.	September 3-4, 2020
	SA 3	First session of the virtual training on drone image processing and analysis for PENRO, CENRO and protected area staff in Palawan and DENR Region 4B.	September 22, 2020

## PLANS FOR NEXT QUARTER

### SA I: Behavior Change Communication

#### Theory of Change Result: Foundational knowledge improved

- Complete the delivery of information and communication materials to PCSDS' Biodiversity Resource Center, a facility that will serve as an environmental education hub highlighting the value of biodiversity in Palawan and the threats it faces, such as wildlife crimes.

#### Theory of Change Result: Improved community attitudes toward conservation

- Complete signages and information materials for Palawan Wildlife Rescue and Conservation Center.

- Complete delivery of information materials (2021 calendar and billboards) to Mount Mantalingahan protected area office, in support to Kagubatan ay Kinabukasan (Our Forest is Our Future) thematic campaign.
- Deploy School in a Bag kits to seven public elementary schools in focal sites.
- Continue to assist PCSDS to develop and implement a campaign to support its conservation program for the Palawan pangolin, using the Protect Wildlife-funded pangolin study as input.
- Conduct endline KAP survey in selected communities in southern Palawan.

## **SA 2: Conservation Financing**

### **Theory of Change Result: Available conservation financing arrangements are identified and realigned to support conservation**

- Assist PCSDS in completing the draft provincial policy for PES in Palawan

### **Theory of Change Result: Government and CSOs implement financing arrangements**

- Complete business plans of waterworks systems of Taytay and Sofronio Española.

### **Theory of Change Result: Improved value chains for livelihoods and enterprises generates revenues**

- Complete distribution of seedlings and farm tools to pre-identified farmer cooperators who have undergone training on conservation agriculture and agroforestry.
- Turnover of floating solar seaweed dryers to women-led people's organizations in Quezon.

### **Theory of Change Result: Social, economic and environmental benefits from communities, revenue for LGUs and profit/goodwill for private sector generated**

- Facilitate training on simple business plan preparation and bookkeeping for W-GDP Initiative-assisted organizations. Resource persons are from the Department of Trade and Industry.

## **SA 3: Conservation and Governance**

### **Theory of Change Result: Increased capacity of relevant government agencies, LGUs, PAMBs and CSOs in integrated resource planning and management**

- Secure management board approval on the management plan of El Nido-Taytay Managed Resource Protected Area.
- Complete piloting of integration of land uses in forest lands and protected areas into the comprehensive land use plan (CLUP) of Bataraza and El Nido. Learnings from the two LGUs will serve as guide for Protect Wildlife in drafting the technical bulletins for enhanced FLUP and protected area planning processes.

### **Theory of Change Result: LGUs co-lead with DENR in conservation and enforcement efforts**

- Provide assistance in development and adoption of enforcement coordination protocols and an enforcement operations plan that will serve as a guide to all enforcement units and agencies operating in protected areas and forest lands, in coordination of enforcement operations and reporting of wildlife and environmental crimes.

### **Theory of Change: PAMB formulates improved policies for better protected area management**

- Support formulation of protected area bills for four protected areas in Palawan.
- Facilitate conduct of METT assessments in Mount Mantalingahan.

### **Theory of Change Result: Professional development of WEOs, enforcement groups and LGU zoning officers is supported**

- Train additional LGU-based and community WEOs, forest guards and sea patrols in southern and northern Palawan and facilitate deputation of trained WEOs.

### **SA 4: Conservation Research**

#### **Theory of Change Result: Capacity of universities to leverage funds, do research and curriculum development, and disseminate research results increased**

- Present the results of the Palawan pangolin study to local stakeholders.

### **SA 5: Wildlife Law Enforcement**

#### **Theory of Change Result: National and local law enforcement capacity improved**

- Support rollout of BRAIN System to different enforcement agencies in Palawan
- With SA I, support the establishment of an evidence museum and the PCSDS Biodiversity Resource Center.

## **ZAMBOANGA CITY-SULU ARCHIPELAGO**

In the following section, Protect Wildlife presents activity highlights from Zamboanga City and the Sulu Archipelago from July to September 2020, and previews the limited remaining activities scheduled for the next quarter—from October 1 to December 31, 2020—which are listed according to the SA Theory of Change results. Because the Zamboanga City and Tawi-Tawi offices were closed on September 30, 2020, these activities shall be managed via remote support from the Zamboanga City-based Community Mobilization Specialist and the Manila team going forward.

## HIGHLIGHTS FOR THE QUARTER

This quarter, Protect Wildlife shares highlights from support to Zamboanga City and Sulu Archipelago partners and stakeholders, including the following:

- Approval of Isabela City FLUP;
- Completion of training for community-based Bantay Kalikasan (environmental patrols) to help lead enforcement activities under the newly approved Central Mangrove Forests Framework Plan;
- Capacity building and investments in improved management and coordination systems for environmental and wildlife law enforcement groups and officials; and
- Implementation of W-GDP Initiative activities with three partner enterprises.

### W-GDP Initiative in Zamboanga City

As referenced in the Cover Story and Manila section of the quarterly report, Protect Wildlife continued to build on its efforts to deliver technical assistance and mobilize resources to Zamboanga City enterprises under the W-GDP Initiative this quarter. Protect Wildlife delivered training and initiated catalytic investments for Mampang Seaweed Planters Association (MASEPLA), a people's organization located on a coastal barangay within Zamboanga City's central mangrove forests; and for Tolosa and Salaan Buffer Zone Associations, which live and work in the Pasonanca Natural Park buffer zone.

Leadership from the people's organizations worked with Protect Wildlife in previous years during consultations and participatory land use validation and mapping exercises that informed the management plans for the Central Mangrove Forests and Pasonanca Natural Park, respectively. Ten members of MASEPLA also participated in enforcement trainings and secured deputation as Bantay Kalikasan for the Central Mangroves Forests by the Zamboanga City government (see Enforcement in the Central Mangrove Forests story below). These experiences, and the three associations and their members' roles as stewards of the mangrove forests and the protected area, position them to deliver on the sustainable, nature-based enterprise development goals that Protect Wildlife is championing under the W-GDP Initiative. In the following sections, Protect Wildlife presents the technical support it delivered to the three people's organizations and their approximately 300 members.

### Investing in Improved Postharvest Processing of Seaweeds

Formed in 2001, Mampang Seaweed Planters Association is known throughout Zamboanga City as a major seaweed producer. Combined with revenue from fishing, seaweed production and processing is the primary source of livelihood for its members. A producer-processor, MASEPLA members oversee 37 hectares of seaweed farms leased from the Zamboanga City government. After drying harvested seaweeds, the association distributes their product through traders that travel directly to MASEPLA to execute transactions.

The most critical and labor-intensive component of seaweed farming and initial postharvest processing is the drying process. Dried seaweeds' value is driven in part by its moisture content, and the success of the drying process is driven by the technology employed by producer-processors. Recognizing that investment in seaweed drying could produce both gains in efficiency and in the quality and price of dried

## **New Normal: Adaptive Management and Resilience in the Face of COVID-19**

Behind the scenes of ongoing floating seaweed dryer construction activities, Protect Wildlife has navigated challenging new barriers in the new normal.

To maintain momentum, provide security of equipment at site, and promote efficiency regarding time and cost considerations, the construction program was originally envisioned as a continuous activity, where the contractor from Zamboanga Sibugay province would remain in Zamboanga City to carry through construction from start to finish.

This was not feasible under the pandemic, however, requiring Protect Wildlife to do the following:

- Limit construction to three-day periods, the maximum amount of time permitted in Zamboanga City without triggering a 14-day facility-based quarantine;
- Act as a liaison between the construction vendor and city government authorities to facilitate travel passes for the construction crew and help secure border crossing; and
- Arrange for community officials to provide security at site during gaps in the construction process.

Despite the challenges, thanks to Protect Wildlife's logistical support, the vendor has been able to focus on construction and maximize gains during the three-day construction periods. The vendor is poised to complete construction early next quarter.

seaweeds, MASEPLA, Protect Wildlife and the Department of Science and Technology launched work together to plan and develop a floating seaweed dryer.

Prior to drying, seaweed farmers must first harvest and carry fresh seaweed from production sites to the shore, where MASEPLA seaweed farmer-processors have, to date, applied the traditional method of sun-drying on mats or bamboo. After drying, the seaweed must be carried to the community center for sale—often a long distance considering the scale and dispersion of the association's 37-hectare seaweed farm. Under the W-GDP Initiative and with support from DOST, Protect Wildlife is investing in construction of a communal floating seaweed dryer to make this process more efficient and effective. Floating seaweed dryers—which DOST has prototyped and piloted successfully with people's organizations throughout the Philippines—offer the following advantages:

- **Mobility:** The floating dryer can be rowed or poled from various parts of the seaweed farm to the community center, eliminating the burdensome task of hauling fresh seaweeds from the production site to the shore.
- **Protection from Contamination:** Rather than exposing seaweeds to the elements while carrying to shore and sun-drying, the seaweeds can be dried directly on the dryer, which has plastic sheeting that can be lowered as a canopy on all sides, protecting the seaweeds from wind and debris.
- **Quality and Volume:** The greenhouse-type roofing has been shown by DOST to improve the quality of dried seaweed, producing products with the 30 percent moisture content that is demanded by buyers. Improved quality and efficiency gains are expected to both increase seaweed buying prices, and reduce spoilage and poor quality of seaweed, resulting in a greater quantity of sales.
- **Community:** Improved quality and quantity of seaweeds sold is expected to motivate members to maintain or increase their involvement in the association, and to comply with use and maintenance fees that are required to properly maintain the dryer. The efficiency gains are also expected to reduce the members' time investments in the drying process, leaving more time for community and family activities.

Although Protect Wildlife's Zamboanga City field office closed at the end of the quarter, Protect Wildlife has





**A training of trainers** on cacao management, practices and techniques, value-added processing and product development was hosted by Protect Wildlife and partners to boost economic opportunities for buffer zone associations in Pasonanca Natural Park in Zamboanga City.

retained its Community Mobilization Specialist, who is overseeing the final stage of construction for the seaweed dryer. Prior to the end of the calendar year, Protect Wildlife will also work with DOST to deliver an operations and maintenance training, and support MASEPLA members' preparation of operations and maintenance, and business plans that will help steer the organization going forward.

### **Investing in Improved Cacao Production and Processing**

After their constitution in 2013 and with assistance from the DENR and the Zamboanga City Water District, Pasonanca Natural Park buffer zone community members formed two peoples' organizations—Tolosa and Salaan Buffer Zone Associations—becoming a beneficiary of the National Greening Program. Under the NGP, the two women-led associations received DENR assistance to plant approximately 500 hectares of cacao trees and 50 hectares of other fruit trees in the protected area buffer zone. While the associations were able to successfully cultivate cacao trees—approximately 120 hectares of cacao are now bearing fruit—they have not secured training or resources to develop harvesting, postharvest processing and marketing programs. At present, only select members are successfully harvesting and selling cacao beans to buyers.

Under the W-GDP Initiative, and in consultation with the two associations and CENRO Zamboanga City under their Community-Based Forestry Management Agreement—Protect Wildlife designed and delivered a training package focused on the following areas:

- Proper cacao cultural management practices: Regeneration and rejuvenation techniques, such as grafting, patch budding and side grafting, pruning, pest management and replanting; and
- Postharvest handling and processing: Education regarding market standards and best practices for handling and processing for sale.

Working with the DENR, Zamboanga City Office of the City Agriculturist (OCA) Agribusiness Division, and JAS Agri-Ventures—a Zamboanga City-based producer and buyer and cacao industry lead for the Zamboanga cluster—Protect Wildlife supported a farm-based practical training on sustainable

production and management, and postharvest handling and processing for cacao. The training was highly practical, with demonstrations of concepts in JAS Agri-Ventures' farm. The 15 trainees—limited in number to ensure social distancing—will serve as farmer-trainers for the associations' remaining membership on site in the buffer zones' farms. DENR and the city government committed to continue coordination with the farmers and oversee their certification as para-technicians for cacao after meeting training commitments. Finally, JAS Agri-Ventures' proprietor, the primary trainer and cacao industry lead, committed to buy wet beans from the two associations—addressing a core marketing challenge that was facing the members. Protect Wildlife will help facilitate a formal marketing agreement between JAS Agri-Ventures and the two associations in the coming quarter.

Protect Wildlife also helped facilitate a follow-on training on agroforestry and coffee production with its partners. The Pasonanca Natural Park management plan outlines a core target to increase by 20 percent the buffer zone and multiple-use zone forest cover through agroforestry by 2022. To this end, the activity engaged the DENR, Zamboanga City government, and Kasanyangan Center for Community Development and Microfinance Foundation to lead a training for association members on how to maximize the economic and ecological benefits from agroforestry. At the conclusion of the training, Kasanyangan committed to donate 10,000 Arabica coffee seedlings to the two associations for eventual cultivation in their farm plots. In the coming quarter, the activity will facilitate delivery of the coffee seedlings to Tolosa and Salaan, while the DENR and the protected area office will provide technical support for seedling nursery care and eventual cultivation. Protect Wildlife will also support the associations' efforts to finalize their strategic plans.

### **Approval of Isabela City FLUP**

With upland and mangrove forest lands comprising more than 50 percent of its total land area, Isabela City, the capital of Basilan province, was an ideal target site for CENRO Zamboanga City's forest land use planning rollout in 2018. In August of that year, DENR Region 9 and the Isabela City government entered into a memorandum of agreement to jointly develop a forest land use plan for the city. Following the completion of the agreement, the city local government created a multidisciplinary technical working group and committed to provide counterpart funding for the FLUP effort. As its contribution to the effort, Protect Wildlife agreed to provide technical guidance and training support for the technical working group.

With facilitation support from Protect Wildlife and CENRO Zamboanga City, the technical working group went through the enhanced FLUP process: assessment of biophysical resources and stakeholders; field validation of land uses; analysis of forests and forest lands using map overlay analysis and other tools; and spatial analysis and land use determinations. Following data and spatial analysis, the technical working group proposed a zoning plan that targets more than 5,300 hectares of forest lands for protection and conservation and nearly 6,700 hectares for production. Notably, the plan calls for development and rehabilitation of 1,123 hectares of production areas for timber and fuelwood production.

In early 2020, Protect Wildlife facilitated workshops where the technical working group finalized the plan for presentation to the Isabela City council. In the workshop exercises, the technical working group developed final natural resources management strategies, proposed tenure arrangements at the



**Coastal communities** and people's organizations in Zamboanga City joined a Protect Wildlife-hosted Bantay Kalikasan training to learn the basics of environmental law enforcement to help them protect the city's Central Mangrove Forests.

community level, and analyzed investment requirements for execution of the plan. Last September 4, 2020, the technical working group presented the ten-year FLUP to the Isabela City Development Council. Following the council's unanimous approval, the technical working group presented the FLUP to the DENR Region 9 technical review committee, securing its approval, with minor revisions, on September 16, 2020.

The technical working group's next step will be to present the plan to Isabela City's legislative council for approval. Once approved, the city will be able to allocate funding for its implementation.

### **Strengthening On-site and Off-site Environmental Law Enforcement in Zamboanga City**

Protect Wildlife delivered a range of activities to support both local enforcement efforts delivered via community-based Bantay Kalikasan and city-level terrestrial and marine enforcement operations.

#### **Enforcement in Central Mangrove Forests**

In Protect Wildlife's Quarterly Progress Report 12, we reported on the Zamboanga City Development Council's March 3, 2020 passage of Resolution No. 2020-003: A Resolution Adopting and Endorsing the 2020-2030 Management Framework Plan of the Central Mangrove Forests of Zamboanga City. Under the plan, the city government and DENR Region 9 have a clear management framework for placing 2,700 hectares of the Central Mangrove Forests under improved management.

Aiding in a key implementation initiative outlined in the plan, this August, officials from DA-BFAR and Zamboanga City Office of the City Agriculturist, Office of the City Environment and Natural Resources (OCENR), and Legal Office, with Protect Wildlife support, facilitated a three-day basic training on community-based environmental law enforcement. The training drew 38 coastal community volunteers, including members of MASEPLA. Through the training, participants gained knowledge and skills in enforcing local- and national- level forestry, fisheries and wildlife laws and regulations. The trainees also participated in practical exercises on marine navigation, detection of illegally caught fish, and proper

**Protect Wildlife** turned over new computers and other IT equipment as part of its support to the operations of the Zamboanga City Anti-Wildlife Trafficking Task Force and the Composite Fishery Law Enforcement Team.



techniques for boarding fishing vessels during enforcement operations.

Selected trainees will be deputized as Bantay Kalikasan officers. By creating Bantay Kalikasan officers, local communities and people’s organizations will be able to protect their mangrove forests from habitat degradation brought by expanding human settlements and extracting mangroves for fuelwood. The added security will also produce benefits for MASEPLA, helping to eliminate degradation of seaweed farms.

### **Strengthening Zamboanga City’s Enforcement Operations Center**

On September 4, 2020, USAID and Zamboanga City officials celebrated the completion and handover of environmental plans for Ayala and Manicahan watersheds and Central Mangrove Forests—which span more than 83,000 hectares of critical biodiversity—as well the Zamboanga City Biodiversity Strategy and Action Plan, using the occasion to showcase new IT equipment for environmental, fisheries and wildlife law enforcement planning and management. Zamboanga City Mayor Maria Isabelle Climaco officiated the event, bringing together Protect Wildlife partners from the OCENR and OCA.

With OCENR and OCA, Protect Wildlife helped build the capacity of the Zamboanga City Anti-Wildlife Trafficking Task Force (ZCAWTTTF) and provided technical support for the Composite Fishery Law Enforcement Team (CFLET). The two groups are comprised of various national law enforcement agencies assigned to operate in Zamboanga City, including the DENR, DA-BFAR, Philippine Coast Guard, National Bureau of Investigation, and Philippine National Police-Maritime Group, among others.

As one of Protect Wildlife’s core initiatives to strengthen collaboration and joint operations planning between these various enforcement groups, the activity invested in new computers and printing and photography equipment to be used for building up the groups’ enforcement database. Protect Wildlife also led a workshop for 28 LGU and DENR staff to identify data needs and design data flows and data presentation for the respective OCENR and OCA applications. The activity also led practical exercises on data entry.

With these tools and Protect Wildlife’s technical support, the operations centers of ZCAWTTF and CFLET are positioned to better maintain their database for recording, retrieving and analyzing data on apprehensions, seizures and other information related to enforcing environmental laws and regulations in Zamboanga City. The enhanced database systems will also aid the agencies’ transition from paper-based to electronic processes, providing for easier filing, documentation, and monitoring and updating of cases.

Supplementing the celebration with skills-building, Protect Wildlife also hosted an online training for OCENR and OCA personnel to help them use spatial data for terrestrial and marine applications; develop heat maps for the improved deployment of enforcers and operational planning; and use of Visible Infrared Imaging Radiometer Suite (VIIRS) for monitoring illegal, unreported and unregulated fishing and mapping hotspots. Going forward, VIIRS will be an important tool for enforcement data analysis, allocation of enforcement monitoring resources to hotspots, and for assessing intrusions of commercial fishing in the city’s waters.

## OTHER ZAMBOANGA CITY-SULU ARCHIPELAGO ACTIVITIES

FOCAL AREAS	SA	ACTIVITIES	DATES
Pasonanca Natural Park	SA 3	Actual ground survey by the DENR-led delineation and demarcation team members in the multiple-use zone and a portion of the strict protection zone; Initial laying of ground boundary stakes.	July 17, 2020
	SA 3	Actual laying of boundary stakes on corner points within strict protection zone as part of delineation and demarcation survey.	July 29-30, 2020
	SA 1	Pre-test of School in a Bag materials with select public school teachers from identified recipient schools in Pasonanca Natural Park.	August 3-7, 2020
	SA 3	Meeting of the delineation and demarcation survey team to prepare demarcation plan and report.	August 13, 2020
	SA 3	Technical working group meeting to discuss and address DENR-BMB comments on the management plan. Protect Wildlife assisted the group in revising the plan.	August 14, 2020
	SA 3	Online protected area management board meeting, wherein a resolution declaring the Philippine eagle as its flagship species was approved. A report was presented on the status of the delineation and demarcation activity.	August 19, 2020
	SA 3	Meeting of the DENR, Zamboanga City government and Zamboanga City Water District to review the co-management agreement for Pasonanca Natural Park.	August 28, 2020
	SA 3	METT workshop with DENR, Zamboanga City Water District, protected area management board, protected area office and enforcers.	September 14-16, 2020
	SA 3	Protected area management board meeting where the enhanced 10-Year Management and Development Plan of Pasonanca Natural Park, as well as the Manual of Operations, were presented and approved.	September 30, 2020
Santa Cruz Islands	SA 3	Meeting with protected area office to discuss steps to resume construction work of sinkers to complete the installation of marine and mooring buoys in Santa Cruz Islands.	August 4, 2020
	SA 3	METT workshop with DENR, OCA, OCENR, protected area management board, protected area office and enforcers.	September 17-19, 2020
Zamboanga City	SA 3	Turnover of management plans of Ayala and Manicahan watershed and Central Mangrove Forests; Zamboanga City BSAP; Zamboanga City Environment Code; and IT equipment for ZCAWTTF and CFLET	September 4, 2020
	SA 4	Data management workshop by Zamboanga State College of Marine Sciences and Technology research team and Protect Wildlife to review, consolidate and analyze the data generated from the Coastal Resources Assessment of Eleven Islands	September 11-12, 2020

FOCAL AREAS	SA	ACTIVITIES	DATES
	SA 3	Deliberations of the Committee on Environment and Natural Resources of the Zamboanga City Council on Ayala and Manicahan Watershed Management Plans, Central Mangrove Forests Framework Plan, and Zamboanga City Biodiversity Strategy and Action Plan. The committee unanimously approved these plans.	September 16, 2020
	SA 4	Online presentation by Zamboanga State College of Marine Sciences and Technology to key officials of Zamboanga City LGU on the results of the Eleven Islands Coastal Resource Assessment.	September 18, 2020
Tawi-Tawi	SA 4	PhilBio webinar where findings of the research team on plants and herpetofauna from the first field expedition in Malum watershed of Panglima Sugala were presented.	July 30, 2020
	SA 5	Online meeting with the mayor of Turtle Islands to discuss the Inter-Agency Covenant of Cooperation on Security, Wildlife and Environmental Law Enforcement and the creation of a task force for Turtle Islands Wildlife Sanctuary. The mayor agreed to sign the covenant.	August 7, 2020
	SA 3	Technical working group presentation of Malum Watershed Management and Development Plan 2020-2028 to Panglima Sugala Municipal Development Council. The development council passed a resolution adopting the plan and endorsing it to the municipal council.	September 10, 2020
	SA 5	Online discussions with BARMENRE on the covenant for the establishment of Turtle Islands Wildlife Sanctuary Inter-agency Anti-Wildlife Trafficking Enforcement Task Force.	September 15, 2020
Region 9	SA 3	Technical working group workshop to refine the matrix for Zamboanga Sibugay BSAP.	July 22 and 24, 2020
	SA 5	Meeting with officials and technical staff of PENRO Zamboanga Sibugay and provincial government on the draft Zamboanga Sibugay Provincial Environment Code. This was followed by a technical working group meeting to deliberate on the complete draft of the Environment Code.	August 5 and 14, 2020
	SA 3	Series of online Drone Image Processing and Analysis Training for Region 9 and Tawi-Tawi.	August 11, 18 and 25, 2020; September 1 and 8, 2020

## PLANS FOR NEXT QUARTER

### SA 1: Behavior Change Communication

#### Theory of Change Result: Improved community attitudes toward conservation

- Complete printing and installation of signages and BCC billboards for Santa Cruz Islands, Pasonanca Natural Park and Zamboanga City seaport relaying conservation and CWT messages.
- Deploy School in a Bag kits to three public elementary schools in Zamboanga City and Tawi-Tawi.

### SA 2: Conservation Financing

#### Theory of Change Result: Partners initiate and implement financing arrangements

- Complete and turn over to MASEPLA the floating solar seaweed dryer. Facilitate training by DOST Region 9 on the operation and maintenance of the dryer.
- Support distribution of the donated coffee seedlings to Salaan and Tolosa Buffer Zone Associations. Monitor planting of seedlings, as well as extension of cacao cultural practices and processing by trained farmer-trainers to other community members.

- Conduct organizational strengthening and enterprise management training and mentoring to assisted people's organizations. Assist the organizations in drafting marketing agreements with interested buyers of their products.
- Provide livelihood support to the sambal enterprise of Tawi-Tawi Mothers Club in Bongao.
- Conduct end-of-activity assessments in assisted people's organizations.

### **SA 3: Conservation and Governance**

#### **Theory of Change Result: LGUs co-lead with DENR in conservation and enforcement efforts**

- Coordinate with protected area office of Santa Cruz Islands for the completion of fabrication of sinkers and installation of buoys.
- Coordinate with CENRO Zamboanga City and DENR Region 9 on next steps for the completion of pilot delineation and demarcation in Pasonanca Natural Park.

#### **Theory of Change: PAMB formulates improved policies for better protected area management**

- Provide feedback to concerned protected area management boards the results of the METT assessment.

#### **Theory of Change Result: Professional development of WEOs, enforcement groups and LGU zoning officers is supported**

- Support DENR in training and deputation of enforcers for Pasonanca Natural Park.

### **SA 4: Conservation Research**

#### **Theory of Change: Capacity of partner colleges and universities and CSO partners to leverage funds, do research and curriculum development, and disseminate research results increased**

- Support final data validation of the Eleven Islands research as agreed between Zamboanga State College of Marine Sciences and Technology and Zamboanga City LGU.
- Support the final stages of the sea-based nursery operations of Mindanao State University-Tawi-Tawi College of Technology and Oceanography. Coordinate with university officials on the continuation of the research activity under the university or DOST-funded research program.
- Formally turn over to Zamboanga State College of Marine Sciences and Technology and Mindanao State University-Tawi-Tawi College of Technology and Oceanography the equipment and other materials used in their respective research activities.
- Coordinate the completion and submission of final deliverables and report for four research projects: Philippine eagle in Pasonanca Natural Park, Sulu hornbill in Panglima Sugala, coastal resources assessment in Eleven Islands, and seaweed propagation in Tawi-Tawi.

## **SA 5: Wildlife Law Enforcement**

### **Theory of Change Result: National and local law enforcement capacity improved**

- Coordinate with DENR Region 9 and protected area management office in planning next steps to support the Inter-Agency Covenant of Cooperation on Security, Wildlife and Environmental Law Enforcement initiative for Turtle Islands Wildlife Sanctuary.
- Provide follow-on mentoring for the development of enforcement databases at the OCENR and OCA.
- Conduct end-of-activity assessments of the enforcement capacity of partners in Zamboanga City.

## **GENSAN-SARANGANI-SOUTH COTABATO (REGION 12)**

In this section, Protect Wildlife presents activity highlights in Region 12 for the quarter covering July 1 to September 30, 2020, and previews priority activities scheduled for the next quarter—from October 1 to December 31, 2020—which are listed according to the SA Theory of Change results.

### **HIGHLIGHTS FOR THE QUARTER**

This quarter, Protect Wildlife shares highlights from support to Region 12 partners and stakeholders, including community-driven land use planning and integrated conservation and development training in South Cotabato LGUs, completion of mapping and land and resource use validation activities in Mount Busa Local Conservation Area, and supporting local people's organizations under the W-GDP Initiative. The activity also shares a brief profile of our adaptive management in the face of COVID-19 restrictions in Region 12. These and other highlights are presented in more detail in the following sections.

### **Managing Landscapes with Broader Community Engagement**

In the last quarter, Protect Wildlife put into practice its focus on deepening community engagement in DENR- and LGU-led protected area management and forest land use planning exercises, respectively. To this end, the activity and its local partners are facilitating the highly practical integrated conservation and development training for Tupi, Polomolok, Tampakan, Surallah, T'boli, Tantangan, Norala, Banga and Koronadal City communities. Through ICD training, the communities learn basic concepts and tools for land use planning, and then apply them by producing core inputs into forest land use plans.

The nine LGU partner communities cover 133,952 hectares of forest lands in South Cotabato province. Tupi, Polomolok and Tampakan forest lands serve as a buffer to Mount Matutum Protected Landscape, while Surallah and T'boli forest lands abut the boundaries of Allah Valley Protected Landscape. With DENR Region 12 and the South Cotabato Provincial Environmental Management Office (PEMO), Protect Wildlife is working with these communities to ensure that zoning in their forest land use plans is consistent with the protected area against which it abuts. This streamlined approach—consistent zoning and rules around resource usage throughout the protected areas and forest lands—allows for clear messaging to communities, clear understanding for would-be investors, and clear rules for enforcers.



This quarter, nearly 600 community members who reside within the nine South Cotabato LGU forest lands completed the requirements for ICD training certificates. In the following sections, we present the various activities and outputs they completed through the training series.

### **Geospatial Data Collection and Analysis**

One of the introductory steps in the forest land use planning process—as well as in ICD trainings—is the gathering and analysis of spatial and resource use data. Following lectures on basic concepts of mapping and geospatial analysis, Protect Wildlife helped to facilitate a participatory community mapping and field mapping exercise with the communities, recording actual land and resource uses within forest lands. The information gathered from communities contribute to the following:

- Agreements on the management zones and sub-land uses in the forest lands;
- Establishment of permitted and prohibited land and resource uses within forest lands; and
- Setting boundaries or criteria for land uses and zoning within forest lands in each community of the LGU.

Community representatives who provided inputs in the mapping exercise are also engaged by the activity in discussions and consensus-building on the establishment of these terms.

### **Balancing Development and Conservation Objectives in Adherence with New Plans**

Following participatory mapping exercises, Protect Wildlife helped to facilitate a series of lectures and workshops that address laws and policies governing land and resource uses in the forest lands, and explores the concept of integrated conservation and development—or balancing development and conservation objectives.

The training also serves as a venue to present to community members the FLUP technical working group recommendations on the management zones and the approved and prohibited land and resource uses. The trainees' feedback—which often relates to the location of

### **New Normal: Adaptive Management and Resilience in the Face of COVID-19**

To ensure compliance with local government policies and restrictions, as well as Protect Wildlife's own health and safety guidelines, the Region 12 team made adjustments to its standard ICD training curriculum.

Protect Wildlife elected to execute the ICD training activities on-site in each target community rather than the previous approach—facilitating trainings in hotel venues that could accommodate trainees from clusters of communities.

Although this approach resulted in longer execution timelines and some inefficiencies, the smaller, community-level venues allowed Protect Wildlife to ensure social distancing and universal mask-wearing, while also providing a more intimate setting that lent itself to more focused training and support.

Because Protect Wildlife did not have the labor resources to execute the training across so many communities, the Region 12 team developed and executed a coaching, mentoring and planning exercise with the DENR and LGU technical working group on July 17, 2020. This initiative positioned the DENR and the technical working group to serve as effective resource persons for the ICD trainings.

## Declaring the ‘Last Frontier’ of Region 12 as a Local Conservation Area

Through the passage of Resolution No. 2020-10-042 in March 2020, Mount Busa was declared a Local Conservation Area. Covering nearly 46,000 hectares of forest lands, Mount Busa is recognized as an Important Bird Area and an significant mountain habitat of the critically endangered Philippine eagle.

A biodiversity assessment supported by Mindanao State University-General Santos City, Philippine Eagle Foundation and Sarangani Environmental Conservation and Protection Center found 187 floral species, five of which are critically endangered; 58 species of birds, including the Philippine eagle; and 12 mammal species, including the Philippine tarsiers.

A critical watershed for Sarangani’s eastern municipalities, Mount Busa hosts the headwaters of four major river systems that sustain the hydrological-ecological flow of freshwater for human, animal and farm uses. More than 165,000 individuals from these municipalities depend on Mount Busa resources and ecosystem services for water and their livelihoods.

The assessment also recorded the impacts of years of gradual reductions in forest cover resulting from timber poaching, development of slash-and-burn farms, and human encroachment. After slash-and-burn plots become unproductive and are abandoned, the land is taken over by a highly invasive plant called buyo-buyo (*Piper adduncum*), an emerging ecological threat in the upland areas of Region 12.

In this context, Protect Wildlife begins management planning activities with local partners, aiming to protect Mount Busa’s biodiversity, ecosystem services, and the people that depend on it.

the zones and boundaries, conflicts between planned and actual land or resources uses in the site, and the feasibility of any zoning or resource use restrictions—is relayed to the technical working group and considered for the final version of the FLUP.

After reaching consensus on zoning and resource use, Protect Wildlife helps to facilitate workshop sessions, where trainees identify conservation and development activities for implementation in their respective sites, and identify support needs from the Provincial Environmental Management Office, LGU or private sector. Following discussions, the trainees incorporate activities and resource needs into action plans for future implementation.

## Post-Training Execution

Following the sessions, the trainees return to their respective communities to disseminate their new knowledge and resources regarding the salient provisions of laws affecting land and resource uses and the importance of balancing development with conservation; and then jointly begin plans for executing the conservation and development activities identified in their action plans. Actions plans for all 28 communities shared the following proposed activities in common: reforestation, riverbank rehabilitation (bamboo planting within banks of rivers), and agroforestry initiatives under the National Greening Program (planting falcata trees, cacao, bamboo and fruit trees), among others. Protect Wildlife is working closely with CENRO Kiamba to promote continued engagement with communities on action plans beyond the life of the activity.

## Biodiversity Conservation Planning for Mount Busa Local Conservation Area

Protect Wildlife sought to build on the momentum from Mount Busa’s recent designation as a Local Conservation Area and address the land and resources uses threatening it (see text box) this quarter by helping the Mount Busa Task Force to engage communities on the preparation of a management plan.

After working with partners to execute a situation analysis of Mount Busa that pulled together inputs from the DENR,

LGU officials, indigenous communities and other local stakeholders, the technical working group and Protect Wildlife organized two teams to undertake on-site validation and community mapping of land uses in all 28 upland barangays within the local conservation area.

From early July to mid-August, the technical working group and Protect Wildlife facilitated sessions for more than 500 residents from 28 upland communities. Through this extensive validation and mapping exercise, the technical working group and Protect Wildlife led an orientation on laws and policies affecting land and resource uses, gathered primary data on the current land and resource uses, and community members identified opportunities and challenges related to conservation and development issues in Mount Busa.

Following analysis of findings, the technical working group identified critical issues that were impacting conservation initiatives in Mount Busa, including the lack of coordination among local institutions for the management of the local conservation area, encroachment of illegal settlers into forest lands, timber and wildlife poaching, selling of untitled public lands, overlapping tenure rights, limited economic opportunities for communities, improper waste disposal, and unfavorable peace and order conditions.

Results of the validation and mapping exercises in the different communities will be consolidated and harmonized to create a land use map of Mount Busa. In the next quarter, the technical working group and Protect Wildlife will facilitate additional workshops to generate consensus on zoning and land and resource use decisions that can address the identified challenges. Protect Wildlife expects the Mount Busa technical working group to finalize the local conservation area management plan next quarter and present it to the Sarangani provincial government for approval.

## **Organizational and Enterprise Development Interventions in Region 12**

Under the W-GDP Initiative in Region 12, Protect Wildlife is working with 11 upland people's organizations to support their biodiversity-friendly enterprises, ranging from production, consolidation, marketing and weaving of abaca fiber; coffee production and processing; and fisheries activities. Through all W-GDP Initiative activities, Protect Wildlife highlights the important roles women play in the agricultural value chain, their farmer associations and the community as a whole. All capacity building and technical and resource assistance is designed to strengthen partner organizations, and improve the capacities and skills of their leaders, with a goal to sustain the growth and development of these community enterprises where women play major roles.

### **Abaca Enterprises**

Abaca production, consolidation, marketing and weaving enterprises are located in the region's hilly and mountainous areas, which are ideal conditions for abaca. Given the organizations' dependence on abaca, and their awareness of the conditions it depends on, their members bring to the activity a strong understanding of the value of forest conservation to their livelihoods. Support for these organizations is dependent upon their needs relative to their role in the abaca value chain.

In partnership with Philippine Fiber Industry Development Authority and Conrado and Ladislawa Alcantara Foundation this quarter, Protect Wildlife delivered eight sessions under the Climate Smart



### **W-GDP Initiative-Supported Enterprises in Region 12**

Protect Wildlife is providing technical support to ten upland and one coastal people's organizations that are implementing a range of natural resources-dependent enterprises.

#### **Production, Consolidation and Marketing of Abaca Fiber**

1. Datal Basak Organic Farmers Association in Maasim, Sarangani
2. Holik Farmer Association in Maasim, Sarangani
3. Moto Ladal Farmers Association in Maasim, Sarangani
4. United Maligang Farmers Multipurpose Cooperative in Kiamba, Sarangani
5. Upper Valley Rural Improvement Club in Maitum, Sarangani
6. Knoon Highland Farmers Association in T'boli, South Cotabato

#### **T'nalak Weaving**

7. Cooperative of Women in Health and Development in Lake Sebu, South Cotabato
8. Lake Sebu Indigenous Women Weavers Association in Lake Sebu, South Cotabato

#### **Coffee Production and Processing**

9. Tupi Coffee Farmers Association in Tupi, South Cotabato
10. Matutum Coffee Growers Association in Polomolok, South Cotabato

#### **Fisheries**

11. Sapu Masla Fish Cage Operators Association in Malapatan, Sarangani

Farmers Field School on abaca production curriculum. Trainers addressed the following themes during the eight sessions: (1) Leadership and values; (2) Value adding and enterprise development; (3) Life cycle of aphids and other insect pests; (4) Weeds, weeding, composting and mulching; (5) Disease symptoms caused by virus, fungi and bacteria; (6) Role of biological agents on abaca diseases: pesticide management and impacts on the environment; (7) Disease eradication techniques; and (8) Life cycle, food web and food chain.

Through the training, 30 upland indigenous farmers from Holik, Datal Basak and Moto Ladal Farmers Associations completed the sessions, gaining skills in abaca cropping and cultural management, as well as conservation farming and agroforestry. Following completion of the remaining six sessions of the 24-session program, the field school graduates will mentor their fellow farmers in their respective communities.

In parallel to the technical capacity building, Protect Wildlife invested in four spindle stripping machines—two units for Datal Basak and one unit each for Holik and Moto Ladal—to match their abaca cultivation skills with inputs required for improved processing (see Manila section).

In addition to support on abaca cultivation and production, Protect Wildlife engaged members of Cooperative of Women for Health and Development, and Lake Sebu Indigenous Women Weavers Association, who are involved in production and marketing of T'boli trade crafts, such as t'nalak cloth. With these groups, the activity facilitated strategic planning and business planning workshops, and training on bookkeeping and basic financial management during the quarter.

### **Coffee Production**

From training and participation in study tours in coffee processing centers in Butuan City with Philippine Center for Postharvest Development and Mechanization in early 2020, farmer-members of Tupi Coffee Farmers Association, Knoon Highland Farmers Association, and Matutum Coffee Growers Association gained valuable exposure to best practices in postharvest handling and processing of Robusta

coffee. They learned to operate postharvest equipment, such as pulpers, hullers and solar dryers. In coordination with PhilMech and leadership of the three associations, Protect Wildlife launched procurement for postharvest equipment to upgrade the groups' processing capacity. In October 2020, the activity will deliver and provide hands-on operations and maintenance training on coffee depulpers, dryers, dehullers, grinders, roasting machines and moisture meters for each association. These investments will position these groups to improve the quality of their dried coffee beans and roasted ground beans, generating greater financial returns for their membership.

To complement these investments, Protect Wildlife, in partnership with the USDA Philippine Coffee Advancement and Farm Enterprise Project, will deliver training of trainers exercises on coffee production, farm management, and integrated pest management; and on coffee harvesting, postharvest handling and processing. These trainings were originally scheduled for this quarter, but were postponed due to the COVID-19 restrictions on work and travel in South Cotabato.

### Fisheries Enterprises

Sapu Masla Fish Cage Operators Association operates within the Sapu Masla Cove in Malungon, Sarangani, a multiple-use zone in the Sarangani Bay Protected Seascape. While the association began as an all-male fish cage operators group and mangrove seedling supplier, it now leads a federation of all coastal organizations within Sapu Masla, including a women-led youth association that is active in coastal cleanup activities and mangrove nursery operation.

In August 2020, Protect Wildlife supported a series of workshops on strategic planning, business planning, basic bookkeeping and leadership training for the association. The activity was co-funded by DENR-BMB, which also supports the association under its Biodiversity-Friendly Enterprises Program in Sarangani. Through these activities, Protect Wildlife integrated gender-related topics and proposed the participation of women, broadening the membership policy of the association to include women.

## OTHER REGION 12 ACTIVITIES

FOCAL AREAS	SA	ACTIVITIES	DATES
Sarangani Bay	SA 5	Series of online workshops designed and facilitated by Protect Wildlife on the development of criteria and schedule of fines for Sarangani Bay focusing on infractions regarding mangroves, corals and pollution in the bay. The management board has adopted the schedule of fines through a resolution.	July 16-August 6, 2020
	SA 2	Strategic planning, business planning and leadership, and basic recordkeeping Sapu Masla Fish Cage Operators Association.	August 11-19, 2020
	SA 2	Strategic planning and business planning workshop with officers and members of Kawas Boundary Fishermen and Farmers Association, with Conrado and Ladislawa Alcantara Foundation co-facilitating.	September 28-October 1, 2020
	SA 5	Enforcement training for 14 Bantay Dagat members of Maasim, with resource persons from DENR, DA-BFAR and Philippine National Police.	October 1-3, 2020
Mount Matutum	SA 1	Pre-test of flashcards and teacher guides for School in a Bag with select public school teachers in Region 12.	July 6-10, 2020
	SA 1	Series of Perya para sa Konserbasyon (Conservation Fair) independently implemented by the protected area office and partner LGUs in Mount Matutum communities reaching 105 individuals.	August 14 and October 21, 2020

FOCAL AREAS	SA	ACTIVITIES	DATES
	SA 1	Conduct of Online Cinema22m Film Festival on YouTube, with cumulative reach of 4,532 and 234 subscribers, and Facebook reach of additional 592 followers and 528 new likes for the Mount Matutum page.	July 13-September 27, 2020
Allah Valley	SA 2	Strategic planning workshops for two people's organizations in Lake Sebu under the W-GDP Initiative; 32 officers and members participated in the activity.	September 7-10, 2020
	SA 3	Technical working group discussion on the recommended management zoning of Allah Valley Protected Landscape in preparation for its presentation to the protected area management board.	September 10, 2020
Mount Busa	SA 2	On-site training on abaca tinagak-making and stripping machine operation and maintenance for indigenous abaca farmers in Maasim, Sarangani.	July 14-16, 2020
	SA 2	10th session of Climate Smart Farmers Field School on abaca in Datal Basak, Maasim, Sarangani. The field school is attended by 30 farmers from three abaca producing people's organizations.	July 10-August 28, 2020
South Cotabato	SA 2	Training of trainers on PES (Module 1) for staff of DENR Region 12 and LGUs of South Cotabato, with 24 participants.	August 3, 5 and 7, 2020
	SA 2	Online meeting between Protect Wildlife and South Cotabato PES technical team on the proposed province-wide PES ordinance.	August 4, 2020
	SA 2	Training on basic bookkeeping and financial management for six South Cotabato people's organizations under the W-GDP Initiative. The training was designed and delivered by FSSI and PICPA.	August 31-September 2, 2020
	SA 2	Training of trainers on PES (Module 2) focusing on tools and techniques for setting up PES mechanisms, with 20 participants from South Cotabato LGUs and DENR Region 12.	September 1-3, 2020
	SA 3	Online meeting among Protect Wildlife, DENR-BMB, BIOFIN and DENR Region 12 focal persons to discuss remaining data requirements for the completion of the South Cotabato BSAP matrix.	September 9, 2020
Region 12	SA 5	Training on environment and natural resources laws for employees of DENR Region 12. Protect Wildlife was requested to provide a resource speaker to discuss ENIPAS law and designation and deputation of WEOs.	August 18-19, 2020
	SA 5	Facilitated the passage of new policies designating flagship species for Glan ( <i>Thalassodendron ciliatum</i> seagrass), Kiamba (green humphead parrotfish) and Polomolok (civet cat), and the migrating raptor protection in Glan.	July-September 2020

## PLANS FOR NEXT QUARTER

### SA 1: Behavior Change Communication

#### Theory of Change Result: Improved community attitudes toward conservation

- Continue development of outreach job aids (marine turtle billboards, comic books, etc.) to relay conservation concepts and messages on proper reporting protocols for marine turtles, as well as fabrication and installation of the billboards.
- Deploy School in a Bag kits to seven public elementary schools in focal sites.
- Conduct endline KAP in Glan, Malapatan and Alabel in Sarangani.

### SA 2: Conservation Financing

#### Theory of Change Result: Existing and new funds established for investments supporting biodiversity conservation

- Continue to mentor and provide guidance to PES partners on next steps to agreement signing.

- Follow up with partner LGUs in Mount Matutum and General Santos City and provide necessary assistance related to the signing of PES agreement of their respective chief executives.
- Assist South Cotabato provincial government in finalizing the PES provincial ordinance.
- Complete training of trainers on PES for South Cotabato and DENR Region 12.
- Follow up submissions of livelihood and enterprise proposals for credit assistance with FSSI.

### **Theory of Change Result: Partners initiate and implement financing arrangements**

- Procure and turn over additional abaca spindle stripping machines and coffee processing equipment for assisted upland people's organizations in South Cotabato and Sarangani. Conduct training on proper operation, maintenance and repairs. Conduct workshop on the development of operation and maintenance policies of the machines.
- Continue and complete the remaining sessions of the Climate Smart Farmers Field School for abaca in three assisted upland farmers associations in Maasim, Sarangani.
- Conduct organizational strengthening and enterprise management training (i.e., Strategic and Business Planning and Financial Management) to assisted people's organizations under the W-GDP Initiative.
- Conduct training of trainers on coffee production, farm management, integrated pest and disease management, pruning and rejuvenation; and training of trainers on coffee harvesting, postharvest handling and processing, and sensory appreciation for Robusta and Arabica varieties, in partnership with USDA PhilCAFE Project.
- Continue collaboration with private sector partners in delivering support to assisted people's organizations.

### **SA 3: Conservation and Governance**

#### **Theory of Change Result: Increased capacity of relevant government agencies, protected area management boards and CSOs in integrated resource planning and management**

- Continue to assist DENR Region 12 and LGUs in the completion and finalization of local BSAP for South Cotabato.
- In close coordination with DENR Region 12 and South Cotabato provincial government, continue the conduct of coaching and mentoring of partners LGUs in the integration of community feedback and recommendation from the result of ICD trainings.
- Conduct closeout meetings with technical working groups on FLUP of South Cotabato LGUs and DENR Region 12 to develop action plan and turnover of FLUP-related data sets.
- Support Mount Busa Task Force, DENR Region 12, CENRO Kiamba, and LGUs of Maasim, Kiamba and Maitum in the completion of the draft local conservation area management plan for Mount Busa.
- Conduct Integrated Conservation and Development training for community members in Mount Busa.

### **Theory of Change Result: LGUs co-lead with DENR in conservation and enforcement efforts**

- Continue to support the establishment of Burias Marine Turtle Learning Center in Glan, Sarangani, in collaboration with CENRO Glan, local government of Glan and RD Foundation.
- Support the protected area office in planning for the delineation and demarcation of selected marine protected areas and installation of signages in Sarangani Bay.
- Follow up enactment of ordinances or adoption of flagship species by LGUs and protected area offices of Sarangani Bay and Mount Matutum.

### **Theory of Change: PAMB formulates improved policies for better protected area management**

- Assist the Mount Matutum management board in updating its PES policy.
- Support the development of an enforcement protocol for South Cotabato Enforcement Group.
- Facilitate the conduct of METT assessments in Sarangani Bay, Mount Matutum and Allah Valley.

### **Theory of Change Result: Professional development of WEOs, enforcement groups and LGU zoning officers is supported**

- In close coordination with the protected area office, support training activities of Sarangani Bay enforcers with support from local resource persons from DA-BFAR and DENR.
- Collaborate with CENRO Kiamba in the conduct of enforcement training for community WEOs for Mount Busa with support from local resource persons from DENR Region 12.

## **SA 4: Conservation Research**

### **Theory of Change: Capacity of partner colleges and universities to leverage funds, do research and curriculum development, and disseminate research results increased**

- Follow up on the approval of outcomes-based-education teaching tools and materials by Mindanao State University-General Santos City on marine biology, environmental sciences and related programs.
- Present to the Sarangani Bay protected area office, LGUs, Mount Busa Task Force and other stakeholders of the results of supported researches in Sarangani Bay, Mount Matutum and Mount Busa.
- Turn over herbarium cabinet and research equipment to Mindanao State University-General Santos City.

## **SA 5: Wildlife Law Enforcement**

### **Theory of Change Result: National and local law enforcement capacity improved**

- Conduct training on case handling for Sarangani Bay.



## REGION 3

In this section, Protect Wildlife presents activity highlights in Region 3 for the quarter covering July 1 to September 30, 2020, and previews the limited remaining activities scheduled for the next quarter—from October 1 to December 31, 2020—which are listed according to the SA Theory of Change results. Because the Region 3 office was closed on September 30, 2020, these activities shall be managed from Manila going forward.

### HIGHLIGHTS FOR THE QUARTER

This quarter, Protect Wildlife shares highlights from support to Region 3 partners and stakeholders, including a marine turtle assessment and training activity in Bataan and efforts to strengthen wildlife and environmental law enforcement in Aurora Memorial National Park. Region 3 activities related to the W-GDP Initiative are addressed in the Cover Story and Manila section of the report.

#### Marine Turtle Assessment and Training in Bataan

Bataan's 188-kilometer coastline is rich in marine natural resources and is home to threatened olive ridley turtles, green sea turtles and hawksbill turtles. Olive ridley turtles, in particular, regularly nest in Bataan beaches even when conditions are less than ideal, during the July to April nesting season each year. Based on tagging and DENR field reports, nests are primarily found in the municipalities of Morong and Bagac, with fewer noted nests also in Pilar, Mariveles and Abucay.

Based on these findings—and in response to the Supreme Court Mandamus of December 2018 regarding Manila Bay—Mariveles took initiative to mobilize its community to implement marine turtle conservation activities and to complete a more comprehensive assessment on the turtle nesting beach, near the entrance to Manila Bay. Building from the assessment, the local government established three satellite hatcheries in communities with high incidence of recorded marine turtle nests: Mountain View, Cabcaben and Townsite.

#### New Normal: Adaptive Management and Resilience in the Face of COVID-19

During the quarantine, authorities in Bataan established road checkpoints and a 9 PM to 5 AM curfew, while Mariveles LGU officials require a 14-day quarantine for overnight stays in the municipality.

The three-day training on marine turtle conservation was originally planned as a field-based activity, with presenters and resource persons staying overnight in Mariveles.

To ensure compliance with local government policies and restrictions highlighted above, as well as Protect Wildlife's own health and safety guidelines, the training was delivered in hybrid format with both in-person and remote presentations.

- The first two days of the training were delivered via remote video feed. Because of the poor internet signal in the three communities, participants gathered at the designated venue with stable internet for the first two days of the training, which featured lecture and group exercises. LGU officials set up a wide screen and sound system to accommodate the remote feed from lecturers that delivered content via video from outside of the region.
- On the final day of the training, the Protect Wildlife team secured a day pass from LGU officials. While overnight visitors were required to follow quarantine, individuals may transit through the LGU after presenting a negative COVID-19 test and confirming that they would depart prior to curfew hours. Once there, the Protect Wildlife team delivered practical training exercises on egg and turtle handling and rescue. The participants had the opportunity to meet and discuss their concerns and questions with the resource persons.



**Bataan participants** practice responding to a marine turtle stranding (top) and proper handling of marine turtle eggs (above) at the training hosted by Protect Wildlife.

In consultation with DENR Region 3 and Mariveles LGU, and Protect Wildlife’s eagerness to contribute to the national government’s Manila Bay program, the activity mobilized an assessment team to Mariveles in July to analyze the marine turtle nesting sites and community-managed hatcheries in Cabcaben and Townsite, and determine if the interventions practiced by the local DENR, LGU, communities and local volunteers were in accordance with practices prescribed in DENR’s Philippine Aquatic Wildlife Rescue Response Series. DENR Region 3 and Mariveles LGU also requested that Protect Wildlife lead a training on marine turtle conservation for officials involved in hatchery management. The activity designed the training program to help establish proper practices and protocols regarding marine wildlife handling and hatchery management.

### **Assessment Structure and Limitations**

Protect Wildlife’s assessment focused on four parameters: management bodies, policy related to marine turtle protection, training and source of knowledge, and basis for their practices in marine turtle conservation. The assessment team held focus group discussions with community members, with emphasis on the use and management of hatcheries, tagging of nesters, handling of eggs and releasing of hatchlings.

In preparing its recommendations to the DENR and LGU, Protect Wildlife sought to expand the local conception of marine turtle conservation activities beyond nesting beach management to also address other threats affecting marine turtles across their lifecycle. Marine turtles only spend a fraction of their whole life cycle on land—as eggs, hatchlings and females when they nest. Conservation of the other life stages, including post hatchling and lost years, developmental stage, breeding adults in mating habitats, foraging grounds, and migratory routes need to be considered as well.

The assessment report acknowledged that the reviewers were unable to fully address all threats facing the turtles due to limitations on the available information on the marine turtle population identity, movements or their migratory route. The overarching recommendation was to fill these information gaps by conducting additional research on nesting beach management and olive ridley turtle ecology

and applying them through a comprehensive conservation plan for the municipality or province that corresponds to guidelines outlined in the Marine Turtle Conservation Action Plan 2020-2030.

### **General Recommendations and Initial Training Activity**

The report did include limited findings based primarily on hatchery management and handling of marine turtles. Protect Wildlife found that a lack of knowledge and misinformation about marine turtles and hatchery management practices have contributed to local actions that are not consistent with the DENR manual. The activity recommended a training on hatchery management and marine turtle biology and management, to be followed by mentoring. The activity also recommended that local officials develop a reporting system with required data collection guidelines to ensure that the right information can be collected and applied to improve conservation decision-making in the LGU.

Protect Wildlife also recommended that the LGU enact a local ordinance to adopt DENR protocols; develop and distribute simple and clear guidelines on hatchery management; address targeted threats such as solid waste, light pollution and degradation of nesting beaches; and train wardens and local volunteers on proper protocols with improved data reporting and analysis.

To build on momentum from the assessment, the activity designed and delivered a marine turtle technical training for local stakeholders from August 25 to 27, 2020. The objectives of the training were to equip participants with principles and procedures on marine turtle conservation, demonstrate proper procedures in marine turtle research and nesting beach and hatchery management as prescribed by the marine turtle rescue response manual, and discuss local issues and concerns that affect marine turtle conservation in Mariveles.

Through the training, Protect Wildlife reached 32 participants from five Mariveles communities, PENRO Bataan, CENRO Bagac and the local government of Mariveles. Protect Wildlife and CENRO Bagac staff co-facilitated the training on site, while two resource speakers presented the assigned topics via video feed from outside the region. The lecture-based elements were balanced by a practical exercise, where the trainers demonstrated in person proper egg handling and transfer, release of hatchlings and rescue of marine turtles trapped in nets.

### **Actions Moving Forward**

Protect Wildlife concluded its support by leading a presentation on the assessment results to Mariveles local government and PENRO Bataan on September 25, 2020 (Annex A). The presentation addressed results of the marine turtle site assessment and recommended protocols for hatchery management and nesting beaches, and stranding. In the next quarter, Protect Wildlife will issue written recommendations for new local protocols for the Mariveles local government and CENRO Bagac.

### **Strengthening On-Site and Off-Site Environmental Law Enforcement in Region 3**

Aurora Memorial National Park and Mount Mingan are known habitats of the critically endangered Philippine eagle and other threatened wildlife. These diverse species are facing threats from poachers and habitat changes driven by illegal loggers, who supply the furniture and construction trade in the

## **New Normal: Adaptive Management and Resilience in the Face of COVID-19**

Provincial authorities in Aurora requires all those transiting through provincial control points to present proper identification, travel order or certificate of employment, and a negative test result from a rapid diagnostic test in order to gain entry to the province.

In view of travel and mass gathering restrictions, Protect Wildlife worked closely with DENR partner offices to ensure compliance with local guidelines. The activity team held several online meetings with their DENR counterparts to redesign the training program and to condense the traditional weeklong training to three days.

The onsite training program was also redesigned to be held in batches from August to September 2020, covering the LGUs of Maria Aurora in Aurora and Bongabon, Laur and Gabaldon in Nueva Ecija. This approach ensured more limited travel for local trainees, and set caps on the number of trainees to allow for social distancing.

Further, lectures on forestry, wildlife and protected area laws were provided by the DENR regional and CENRO staff with jurisdiction over the LGU, while the topics on arrests, searches and seizures, as well as the rules of procedure for environmental cases, were delivered via remote video feed by Protect Wildlife staff.

region. Currently, the Aurora Memorial National Park office and DENR field offices are unable to provide the number of trained personnel that would be required to properly monitor and conduct enforcement operations across the large area.

To help address this challenge, Protect Wildlife and DENR Region 3 launched support this quarter to deliver pre-requisite training for government officials and community members to secure deputation as enforcement officials, to strengthen enforcement protocols in the national park, and introduce DENR's environmental law enforcement management database to improve monitoring and oversight of local cases.

### **Wildlife Enforcement Officer Training and Deputation**

This quarter, Protect Wildlife launched efforts to train LGU staff, community officials, and selected indigenous people's representatives on wildlife and environmental law enforcement, and to support their deputation by DENR as wildlife enforcement officers or by their LGUs as forest guards.

With DENR Region 3, Protect Wildlife trained 18 community enforcers from Maria Aurora, Aurora; 13 municipal and community officials and representatives from Bongabon, Nueva Ecija; and 7 municipal and community officials and representatives from Laur, Nueva Ecija. All 38 individuals completed the training. To date, 18 community members from Maria Aurora have been certified by the protected area office as having undergone WEO training. Their names have also been submitted to the protected area management board for deputation by the DENR. The names of trainees from other LGUs covering Mount Mingan have also been submitted to the DENR for deputation.

### **Enforcement Protocol for Aurora Memorial Natural Park**

To strengthen enforcement coordination between the local government, communities and protected area officials, Protect Wildlife provided technical support to help Aurora Memorial National Park officials draft its enforcement

protocol. The protocol defines the roles and responsibilities of site-based national and local government agencies, including the DENR, Philippine National Police, Aurora provincial government, and the municipal and community LGUs that comprise the national park. The protocol defines the roles of agencies in the enforcement chain, from monitoring, case buildup, enforcement operations and case filing. The protocol was anchored on the framework of the Handbook on Law Enforcement for Protected Areas. On September 15, 2020, the Aurora Memorial National Park Law Enforcement Protocol was presented and approved by the protected area management board in a special meeting.

### ELEMIS for Region 3

Complementing the capacity building and protocol development efforts, Protect Wildlife collaborated this quarter with the DENR to introduce the Environmental Law Enforcement Management Information System (ELEMIS) to regional officials. ELEMIS is a database where the DENR’s active cases are recorded and managed. Through the management information system, DENR regional office staff can monitor cases filings, action points and their status in the enforcement chain.

On September 7 and 15, the DENR’s Knowledge and Information System Services (KISS) and policy and planning officials, with Protect Wildlife support, delivered workshops for 20 DENR regional staff to introduce ELEMIS and provide training on using the system. Following the introductory training, the Knowledge and Information System Services will deliver a follow on workshop to populate the system with the region’s data.

### OTHER REGION 3 ACTIVITIES

FOCAL AREAS	SA	ACTIVITIES	DATES
Aurora Memorial National Park	SA 2	Site visit of PhilMech’s team of engineers to SILAW to assess proposed location of solar tunnel dryer.	July 21, 2020
	SA 2	Consultations with Kalipunan ng Liping Pilipina and community officials of Villa Aurora on potential livelihood partnership on ube cultivation.	July 28, 2020
	SA 1	Pre-testing of School in a Bag materials with selected public school teachers from the target school recipient within Aurora Memorial National Park.	August 3-7, 2020
	SA 3	Workshop on METT for protected area management board and protected area office technical personnel of Aurora Memorial National Park.	September 10-11, 2020
		Special meeting of the protected area management board for the closeout report of Protect Wildlife. The management board passed a resolution expressing their gratitude to Protect Wildlife and USAID for the support and assistance.	September 15, 2020
Mount Mingan	SA 3	Teleconference with CENRO Dingalan and LGUs of San Luis and Dingalan for the finalization of the memorandum of understanding for the establishment of Mount Mingan as a critical habitat of the Philippine eagle.	July 9, 2020
	SA 1	Pre-testing of School in a Bag materials with selected public school teachers from target school recipient in Gabaldon, Nueva Ecija.	August 3-7, 2020
	SA 3	Signing of memorandum of understanding between PENRO Nueva Ecija and Bongabon LGU for the establishment of the critical habitat for the Philippine eagle.	August 25, 2020
	SA 3	Signing of memorandum of understanding between PENRO Nueva Ecija and Laur LGU for the establishment of the critical habitat in Mount Mingan.	September 3, 2020

FOCAL AREAS	SA	ACTIVITIES	DATES
Aurora	SA 3	Online meeting with DENR-BMB to discuss the revised matrices for the completion of the revised Aurora BSAP.	July 30, 2020
	SA 3	Online meeting with DENR-BMB, DENR Region 3, PENRO Aurora and BIOFIN for the presentation of the final matrix of Aurora BSAP targets. This was followed by a workshop for the finalization of the costings for plan implementation.	August 17 and 20, 2020
	SA 3	Presentation of the Aurora Bamboo Industry Development Roadmap to the Aurora Bamboo Development Council, which moved for the adoption of the plan, subject to the inclusion of sections on power supply requirement of the industry, identification of areas for commercial bamboo plantations, training of communities, and expansion of the council's membership.	September 9, 2020
Bataan Province	SA 3	Online meeting with DENR-FMB, DENR Region 3, PENRO Bataan and CENRO Bagac to present results of the stakeholders' workshop and assessment of NGP sites planted to coffee and cashew in Morong and Bagac. Also discussed proposed next steps to strengthen tenure security of communities and improve value chains of cacao, coffee and other high-value products in established sites.	August 4, 2020
	SA 2	Review of the draft PES ordinance of Bagac, Bataan.	August 2020
Region 3	SA 3	Online meeting with NGP Region 3 office and PENROs of Aurora, Bataan and Nueva Ecija to discuss the conduct of Drone Image Processing and Analysis Training in DENR Region 3.	July 17, 2020
	SA 3	Series of online training sessions on Drone Image Processing and Analysis	August 11, 18 and 25, 2020; September 1 and 8, 2020
	SA 4	Online seminar for Pampanga State Agricultural University officials and faculty members on the enhancement of seven syllabi of the Bachelor of Science in Agroforestry curriculum with entrepreneurship elements. The guidance resulted in the revision of the seven syllabi, which were subsequently submitted to Protect Wildlife in September for review.	August 14, 2020
	SA 1	Turnover of the Wild and Alive Facebook campaign template to DENR Region 3 staff.	September 2020
		Closing program for Protect Wildlife's engagement in Region 3. This was attended in person by 25 DENR regional officials, with virtual participation of the activity team from Manila. The DENR Regional Director conveyed his gratitude to Protect Wildlife and USAID for its assistance to Region 3.	September 18, 2020

## PLANS FOR NEXT QUARTER

### SA I: Behavior Change Communication

#### Theory of Change Result: Improved community attitudes toward conservation

- Complete the printing and installation of conservation materials and signages for Aurora Memorial National Park.
- Deploy School in a Bag kits to two public elementary schools in Aurora Memorial National Park and Mount Mingan.

## **SA 2: Conservation Financing**

### **Theory of Change Result: Existing and new funds established for investments supporting biodiversity conservation**

- Continue to mentor and provide guidance to Bagac and Mariveles LGUs on their PES initiatives.
- Complete training of DENR Region 3 and PENRO Bataan on PES (Module 3).

### **Theory of Change Result: Partners initiate and implement financing arrangements**

- Procure and turn over to SILAW the processing equipment and tools for its turmeric enterprise.
- Complete the fabrication, installation and turnover to SILAW of solar tunnel dryer. Facilitate the training by PhilMech of SILAW members on the operation and maintenance of the solar tunnel dryer.
- Conduct end-of-activity assessment of SILAW.

## **SA 3: Conservation and Governance**

### **Theory of Change Result: Increased capacity of relevant government agencies, protected area management boards and CSOs in integrated resource planning and management**

- Finalize the local BSAP for Aurora.
- Finalize and turn over to Aurora provincial government the Aurora Bamboo Industry Development Roadmap.

### **Theory of Change Result: LGUs co-lead with DENR in conservation and enforcement efforts**

- Finalize marine turtle assessment report and recommended local protocols and submit to the DENR, Mariveles LGU and other stakeholders.

### **Theory of Change: PAMB formulates improved policies for better protected area management**

- Provide feedback to Aurora Memorial National Park management board the results of the METT assessment.

### **Theory of Change Result: Professional development of WEOs, enforcement groups and LGU zoning officers is supported**

- Follow up the deputation of LGU enforcers and the certification of community enforcers for Aurora Memorial National Park and Mount Mingan.

#### **SA 4: Conservation Research**

**Theory of Change: Capacity of partner colleges and universities and CSO partners to leverage funds, do research and curriculum development, and disseminate research results increased**

- Support finalization by Pampanga State Agricultural University faculty of the seven entrepreneurship-enhanced syllabi under the Bachelor of Science in Agroforestry program.
- Follow up dean-level approval of the enhanced syllabi.

#### **SA 5: Wildlife Law Enforcement**

**Theory of Change Result: National and local law enforcement capacity improved**

- Facilitate follow-on mentoring on the use of ELEMIS in Region 3.
- Conduct end-of-activity assessments of the enforcement capacity of partners in Region 3.



# MANAGEMENT AND ADMINISTRATION

In addition to ongoing human resources management, procurement, finance and general operations responsibilities, Protect Wildlife's management and administration team focused efforts from July 1 to September 30, 2020 on closeout of its Palayan City, Tawi-Tawi and Zamboanga City offices; and managing the COVID-19 enhanced community quarantine and lockdown from August 4 to 18 in Metro Manila.

## CLOSEOUT ACTIVITIES

The Pasig City-based Senior Operations Manager and Finance Manager provided technical direction and remote oversight of closeout operations in Palayan City, Tawi-Tawi and Zamboanga City offices in close coordination with field site teams. Between August and September, Protect Wildlife completed the following core closeout activities:

- **Human Resources:** Provided written notice of activity closure to all staff in accordance with local labor law and established final work plans.
- **Finance:** Issued vendor notices and organized payment of remaining invoices; liquidated remaining cash advance balances; and closed petty cash accounts.
- **General Operations:** Terminated local registrations and permits and all service accounts.
- **Information Technology:** Protect Wildlife mobilized an IT STTA, Remil Santiago, to Zamboanga City to complete IT closeout, cleaning and restoring all computers and hard drives to their original factory settings. Mr. Santiago worked out of a hotel room to comply with Zamboanga City quarantine requirements, with Protect Wildlife staff delivering equipment to him on a daily basis for completion of IT closeout. In Palayan City, the activity arranged for all IT equipment to be shipped to the Pasig office, where they will be restored to their factory settings.
- **Inventory:** Executed final inventory audit and issued request for contracting officer approval of non-expendable property (NXP). Upon receipt of NXP approval, completed NXP and expendable property disposition to approved recipients, collecting required final property title and transfer forms. Select IT equipment shall be dispositioned in the upcoming quarter.

## COVID-19 Response

In response to the Government of the Philippines' placement of Mega Manila under Modified Enhanced Community Quarantine, Protect Wildlife closed the Pasig City office. From August 4 to 23, all Pasig City-based staff transitioned to telework, ensuring continuity of technical, finance and procurement services to field sites. After re-opening the office on Monday, August 24, the activity instituted a Monday-to-Thursday schedule, closing the office on Fridays for a small team to lead disinfection.

Protect Wildlife maintained its work schedule policies, which state that all staff members whose work can be performed remotely are authorized to telework. This includes those staff who permanently reside with a family member or friend who is part of a vulnerable group, rely on mass transit or have

other safety concerns. The following guidelines were issued for staff members regarding requirements for telework and reporting to the office:

- *Telework:* Employees must submit a detailed work plan for supervisor approval prior to opening of business on Mondays, and a progress report detailing work completed and next steps by close of business on Fridays. Supervisors must advise the Chief of Party, Deputy Chief of Party and Operations Manager of telework schedules at the start of each work week.
- *Report to the office:* Individuals who report for the first time since the most recent government-mandated or COVID-19 exposure-related quarantine must in writing to his/her supervisor affirm their intent to return to work and confirm that over the past 14 days, s/he has had no known contact with persons who are infected with COVID-19 or persons who have been exposed to a known COVID-19 case, or symptoms of COVID-19.

Protect Wildlife also issued new guidelines for staff who test positive for COVID-19. Staff members who test positive for COVID-19 are not permitted to report to the office until s/he no longer has COVID-19 symptoms and has tested negative using a RT-PCR (real-time polymerase chain reaction) swab test. Prior to returning to the office, the employee must confirm that over the past 14 days, s/he has had no known symptoms of COVID-19. S/he must submit to the Senior Operations Manager a scanned copy of his/her RT-PCR swab test to confirm that s/he has tested negative for the virus.

In the following sections—on Operations and Human Resources, and Procurement—Protect Wildlife presents highlights from the quarter, addressing both regular activities and COVID-19 response. Highlights are followed by activities planned for the October 1 to December 31, 2020 period.

## OPERATIONS AND HUMAN RESOURCES

Protect Wildlife presents an update on hiring and personnel management, and the team’s projected activities for Year 5, Quarter 1 operations activities.

The majority of changes to activity personnel this quarter were related to the closeout of Protect Wildlife’s Palayan City (Region 3), Tawi-Tawi and Zamboanga City offices, as illustrated in the table below.

**TABLE 4: LTTA TECHNICAL AND SUPPORT STAFF BY LOCATION (as of September 30, 2020)**

Staff Status	TOTAL	STAFF TYPE		LOCATION				
		Technical	Support	Manila	Palawan	Zamboanga City-Tawi-Tawi	GenSan	Region 3
Employed as of 7/1/2020	77	42	35	37	15	8	11	6
Ended Assignment / Resigned this Quarter	15	8	7		2	6	1	6
Hired / transferred duty station this Quarter	3	2	1	1			2	
<b>Total LTTA</b>	<b>65</b>	<b>36</b>	<b>29</b>	<b>38</b>	<b>13</b>	<b>2</b>	<b>12</b>	<b>0</b>

While the majority of the eight staff in Zamboanga City-Tawi-Tawi and six staff in Region 3 left the project, Protect Wildlife retained the following staff members to either oversee remaining activities at site, or transfer to a new office:

- *Rodolfo Saavedra, Zamboanga City Community Mobilization Specialist:* Mr. Saavedra will remain in Zamboanga City, working remotely through November 30, 2020 in order to oversee completion of remaining BCC, W-GDP Initiative, and delineation and demarcation activities.
- *Cedric Magaoay, Zamboanga City Operations Manager:* Mr. Magaoay will transfer to his home in Davao City, working remotely through October 23, where he will provide procurement and logistics support for remaining Zamboanga City activities.
- *Franklin Abejo, Zamboanga City Spatial Planning and GIS Specialist:* Mr. Abejo will transfer to the General Santos City office through November 30, 2020, where he will take on GIS and Spatial Planning tasks remaining. Protect Wildlife’s former GIS Specialist for Region 12 resigned in the previous quarter (April-June 2020).
- *Daine Rivera, Closeout Coordinator:* Mr. Rivera has been promoted to Closeout Coordinator and shall deploy to General Santos City in early October, where he will coordinate closeout preparations in the Region 12 site, and relieve Ms. Renalyn Garcia from her duties as Finance and Administration Officer following her resignation in late October 2020. Following his assignment in General Santos City, Mr. Rivera shall relocate to Manila, where he will support closeout activities from the Pasig office.

Outside of Zamboanga City-Tawi-Tawi and Region 3, Protect Wildlife onboarded a new Monitoring, Evaluation and Learning Associate, Kryzl Dacanay, in the Pasig Office; while Palawan Community Enterprise Development Associate Maryjune Calubag, Palawan Community Engagement Assistant Fatima Kaye Magbanua, and Region 12 Field Procurement and Logistics Officer Ryan Mansilla resigned.

### Short-Term Technical Assistance (STTA)

Protect Wildlife onboarded the following consultants to execute well-defined and time-bound STTA assignments (Table 5).

**TABLE 5: NEW STTA STAFF APPROVED IN YEAR 5, QUARTER I**

STTA PROVIDER	TITLE AND SCOPE OF WORK	APPROVED LOE	PERIOD OF PERFORMANCE
Demosthenes Redoble	<b>Engineering Services Advisor:</b> Responsible for engineering quality control and oversight of the National Wildlife Rescue and Research Center design procurement, award and execution. He will provide technical review and inputs on the draft RFP, procurement process and award decision for the A&E services subcontract; provide oversight and engineering quality control of the A&E service provider’s work and deliverables—including technical specifications, engineering drawings, bill of quantities, preliminary construction schedule, and A&E’s detailed construction cost estimate; and ensure the design is in compliance with Philippine environmental regulations and relevant permitting requirements.	35 days	August 26- November 30, 2020
Louie Nova	<b>Cacao Production and Processing Resource Person:</b> He shall design and deliver a training for 30 farmers of Salaan and Tolosa on sustainable cacao production, processing, and postharvest handling. Specifically, he will: Develop simplified training modules and hand-outs on cacao production and processing; Conduct two batches of	15 days	August 9- September 8, 2020

STTA PROVIDER	TITLE AND SCOPE OF WORK	APPROVED LOE	PERIOD OF PERFORMANCE
	a five-day Training of Trainers curriculum to selected farmer participants of Salaan and Tolosa; Arrange with JAS Venture Farm the use of farm facilities for the training; and Submit training and documentation report.		
Remil Santiago	<b>Information Technology (IT) Specialist:</b> Provide day-to-day IT support for Protect Wildlife staff. He will track and resolve IT tickets in close coordination with home office and staff, and under the direction of the IT and Database Manager. In addition to his day-to-day, ad hoc support, the IT Specialist—who is based in Davao City—will lead field office IT closeout for Protect Wildlife’s Zamboanga City (in late September 2020) and other offices as assigned.	60 days	September 7, 2020-February 28, 2021

## Plans for Next Quarter

Over the next quarter, the operations team will complete outstanding disposition of assets and limited remaining tasks related to the closeout of Zamboanga and Palayan Offices; complete the closeout process for the Region 12 and Palawan offices—overseeing disposition of Protect Wildlife assets and the demobilization of field staff at the end of the quarter; and initiate the closeout of the project’s main office in Pasig City. The operations team will also lead DAI’s annual Ethics and Safeguarding training for activity staff.

## PROCUREMENT

In Year 5, Quarter 1, the Protect Wildlife procurement team successfully competed and awarded 38 purchase orders and subcontracts valued at more than US\$95,000. In Table 6, we present all procurements valued at more than US\$3,000 that were awarded this quarter. This table is immediately followed by Table 7, which highlights the active research study procurements.

**TABLE 6: MAJOR PROCUREMENTS FOR YEAR 5, QUARTER 1**

DESCRIPTION	TOTAL (USD) <sup>8</sup>	DATE OF PURCHASE ORDER
PWRCC Campaign	3,328.18	25-Sep-20
Strengthening of the Coffee Production on Specialty Arabica and Fine Robusta Coffee for the three (3) People’s Organizations in T’boli, Tupi and Polomolok: Procurement of coffee equipment	9,270.70	19-Sep-20
Strengthening of the Coffee Production on Specialty Arabica and Fine Robusta Coffee for the three (3) People’s Organizations in T’boli, Tupi and Polomolok: Procurement of coffee equipment	8,263.90	18-Sep-20
Strengthening of the Coffee Production on Specialty Arabica and Fine Robusta Coffee for the three (3) People’s Organizations in T’boli, Tupi and Polomolok: Procurement of coffee equipment	5,701.65	2-Sep-20

<sup>8</sup> USD figures presented in this table are illustrative and based on the exchange rate, from PHP to USD, at the time of procurement execution.

DESCRIPTION	TOTAL (USD) <sup>8</sup>	DATE OF PURCHASE ORDER
Strengthening Abaca Production Livelihoods for Selected Abaca-Producing Peoples Organizations in Region 12: Procurement of 5 Units of Abaca Spindle Stripping Machines	13,686.80	21-Aug-20
Technical contractor to prepare structural plan, supervise, and provide labor and materials for the construction of one (1) unit floating seaweed dryer in Mampang, Zamboanga City	7,079.29	24-Jul-20
Enhancing Seaweed Production and Quality in Tawi-Tawi Using Laboratory-Generated Cultivars	4,070.48	7-Jul-20

**TABLE 7: BREAKDOWN OF PROCUREMENT FOR APPROVED RESEARCH ACTIVITIES**

TITLE OF RESEARCH STUDY	NAME OF AWARDEE	PERIOD OF PERFORMANCE	PROCUREMENTS TO DATE
Enhancing Seaweed Production and Quality in Tawi-Tawi Using Laboratory-Generated Cultivars	Mindanao State University-Tawi-Tawi College of Technology and Oceanography	April 2019 to March 2020	US\$6,101.33
Inventory and Scientific Validation of Folklore Claimed Medicinal Plants in Mount Matutum	Mindanao State University-General Santos City	December 2018 to November 2019	US\$316.77
Participatory Coastal Resources Assessment for the Establishment of Marine Protected Areas in the Eleven Islands of Zamboanga City	Zamboanga State College of Marine Sciences and Technology	July 2019 to October 2019	US\$1,467.82
Metabarcoding for Dermal and Gut Bacterial Communities of Hippocampus comes Including Sediment Sample from Surigao del Norte, Mindanao Philippines	Research Scholarship to Chinee Padasas	May 2019 to December 31, 2020	US\$643.32
Lower Montane Forest Fragments and Small Non-Flying Mammals in Southern Cordilleras, Philippines	Research Scholarship to Aris Reginaldo	April 29, 2019 to December 31, 2030	US\$2,995.88

## PLANS FOR NEXT QUARTER

Next quarter, Protect Wildlife plans to issue and award the following major procurements:

- **School in a Bag:** An environmental education outreach campaign developed in partnership with Smart Communications' School in a Bag initiative. School in a Bag is a portable, digital classroom designed for students in either public primary or secondary schools. The initiative focuses on reaching students in hard-to-reach areas, even those without access to electricity. Under the partnership, Protect Wildlife will sponsor 10 School in a Bag kits that will be matched by Smart with an additional 10 kits. Each kit includes equipment such as tablets, a laptop, DVD player, an LCD projector, Smart pocket Wi-Fi stick, and a solar power source for schools off-grid.
- **Wildlife Ambulance:** NWRRC requires a dedicated vehicle that can safely accommodate and transport rescued wildlife from apprehension sites to the Rescue Center or to transport rehabilitated wildlife to their releasing areas. A dedicated vehicle or wildlife ambulance will increase the chances of survival of wildlife taken during major interdictions that have to be transported to the Rescue Center.
- **Coffee Processing Equipment:** The W-GDP Initiative will provide opportunities for women to become producers/operators, processors, and traders to meet the standards and requirements

of the local market. The approach is two pronged: strengthening the selected groups' organizational management and at the same time assisting them in their enterprise to strengthen their capacities and skills in the agri-value chain. Protect Wildlife has formally partnered with people's organizations in the coffee municipalities in South Cotabato, within the protected areas of Allah Valley and Mount Matutum to provide support to their biodiversity-friendly enterprises.

- **NWRRC Engineering Design:** Protect Wildlife will award a contract for a topographical survey and for an A&E firm to deliver a Site Development Plan for the extension area of the current NWRRC.

# PAST AND PROJECTED EXPENDITURES

During the quarter, Protect Wildlife spent US\$1.4 million, bringing the cumulative expenditures to US\$19.2 million from inception to date. This brings the total expenditures to 85 percent of the CLIN 001 contract budget. Over the next quarter, Protect Wildlife projects an increased expenditure rate based on changes to COVID-19 restrictions that allow for greater movement of persons and goods, upcoming procurements and payments related to implementation of the W-GDP Initiative, and ongoing preparations to submit fee-bearing deliverables for USAID review and approval. The distribution of expenditures is detailed in Table 8 below.

**TABLE 8: SUMMARY OF EXPENDITURES THROUGH SEPTEMBER 30, 2020 AND PROJECTED EXPENDITURES THROUGH MARCH 2021**

COST ELEMENTS	Strategic Approaches	Contract Budget	Total Expenditure Y1 - Y4	Y5 Q1 EXPENDITURES				Total Y5Q1 Expenditure	Projections for Remaining POP	
				Jul-20	Aug-20	NICRA Adjustment	Sep-20		Y5 Q2 (10/1/2020 - 12/31/2020)	Y5 Q3 (1/1/2021 - 3/31/2021)
1.1	SA 1 - Behavior Change	\$4,949,661	\$3,919,306	\$97,418	\$97,539	-\$767	\$106,816	\$301,006	\$456,887	\$270,062
1.2	SA 2 - Conservation Financing from Public & Private Sectors	\$4,949,661	\$3,919,306	\$97,418	\$97,539	-\$767	\$106,816	\$301,006	\$456,887	\$270,062
1.3	SA 3 - Capacity Building & Technical Assistance at the National & Subnational Levels	\$4,049,722	\$3,206,705	\$79,706	\$79,805	-\$628	\$87,395	\$246,278	\$373,816	\$220,960
1.4	SA 4 - Science, Technology, Innovation and Partnerships	\$3,374,769	\$2,672,254	\$66,422	\$66,504	-\$523	\$72,829	\$205,231	\$311,514	\$184,133
1.5	SA 5 - Environmental Law Enforcement	\$5,174,645	\$4,097,457	\$101,846	\$101,973	-\$802	\$111,671	\$314,688	\$477,654	\$282,338
<b>Total</b>		<b>\$22,498,457</b>	<b>\$17,815,028</b>	<b>\$442,810</b>	<b>\$443,359</b>	<b>-\$3,488</b>	<b>\$485,528</b>	<b>\$1,368,210</b>	<b>\$2,076,758</b>	<b>\$1,227,555</b>

# ANNEX A

## **ENHANCEMENT OF MARINE TURTLE CONSERVATION IN MANILA BAY**



# ENHANCEMENT OF MARINE TURTLE CONSERVATION IN MANILA BAY

## ***Deliverable 2: Mariveles, Bataan site assessment and marine turtle training reports***

Submitted by:     **Arnel Yapinchay, STTA**  
                          **USAID Protect Wildlife Project**

### **SITE ASSESSMENT REPORT: MARINE TURTLE NESTING BEACH CONSERVATION PROGRAM IN MARIVELES, BATAAN**

#### **INTRODUCTION**

The province of Bataan with its 188 km coastline, part of which is located within Manila Bay, is rich in marine natural resources. Of the charismatic threatened species present in the Philippines, three of the five marine turtles in the country are present in Bataan, namely: olive ridley turtle (*Lepidochelys olivacea*), green turtle (*Chelonia mydas*), and hawksbill turtle (*Eretmochelys imbricata*). Due to their threatened status, all marine turtles are protected in the country under the Wildlife Resources Conservation and Protection Act or Republic Act (RA 9147) where all are classified as Endangered except for the hawksbill turtle which is Critically Endangered. All are listed in the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) in Appendix I.

The olive ridley turtle is one of the more common species encountered in the Philippines, ranking second to the green turtle with the highest number of recorded nesting incidents. Nesting occurs mostly in Manila Bay extending along the rest of the western Luzon coast. In Bataan, olive ridley turtles regularly nest in beaches even when conditions are less than ideal. This seasonally happens between July to April each year. Occasional nesting of green and hawksbill turtles has been reported in Bataan too.

Based on the tagging and field reports data of Department of Environment and Natural Resources-Biodiversity Management Bureau (DENR-BMB) from 1996 to 2014, majority of these nestings occur in the municipalities of Morong and Bagac, while fewer reports come from Pilar, Mariveles, and Abucay.

Most fishery interaction reports from Bataan involved hawksbill turtles (59 reports compared to olive ridley turtles with 48). Fishing nets, fish corral and beach seine have been cited as threats. Incidents of boat strikes have also been recorded.

In Mariveles, marine turtle nests have been documented as well as bycatch and stranding incidents. Twenty-seven nesting sites for olive ridley turtles have been identified in Mariveles, about half of which are located within Manila Bay. The total number of nesting incidents is not available but the total number of eggs from the hatcheries indicate this number to be around 14 nestings per year throughout the municipality. This is a rough estimate from incomplete record of eggs in three barangays provided by DENR-CENRO, Bagac. Marine Wildlife Watch of the Philippines (MWWP), which runs a database on marine wildlife species (extracted from online reports since 2009), provide information for only two olive ridley turtle nesting incidents in 2015, with no other species reported.

DENR field reports and tagging data from 2007 to 2014 reveal 50 reported incidents in Mariveles including nesting, stranding, and fishery interaction (Table 1).

*Table 1. Marine turtle number of reports per incident type in Mariveles, Bataan from 2007 to 2014 (extracted from DENR field reports and tagging database).*

<b>Description</b>	<b>Olive ridley</b>	<b>Hawksbill</b>	<b>Green</b>	<b>Unknown</b>
<b>Total reports</b>	<b>29</b>	<b>11</b>	<b>8</b>	<b>2</b>
<b>Encounter type</b>	Nesting (6), Fishery interaction (4), Stranding (1), Unknown (18)	Fishery interaction (2), Unknown (9)	Nesting (8)	Unknown (2)
<b>Location</b>	Batangas II (10), Pinag-apungan Townsite (8), Townsite (8), Maligaya (2), Biaan (1)	Ipag (8), Biaan (2), Unknown (1)	Batangas II (4), Unknown (4)	Batangas II (2)

It is likely that the olive ridley turtles utilize Bataan only for nesting due to the lack of documentation of males, feeding and mating indicating that these activities occur elsewhere.

Hawksbill turtles have been observed by fishers in Corregidor Island in Cavite fronting Mariveles. There are also more hawksbill turtles bycatch reported instead of nesting. It is assumed that the general area (around Corregidor and Mariveles) is a foraging habitat for this species where coral communities are still known to exist. Additionally, nesting green turtles in Mariveles are only reported from Barangay Batangas II.

Despite record keeping on nesting and other incidents, it seems that there is no dedicated research on olive ridley turtles that could provide information on its population identity, movement, and habitat use. There is also a lack of publications or reports about

olive ridley turtles in the Philippines, specifically in Bataan and Cavite where majority of the nesting occur.

While threats to marine turtle populations both in its terrestrial and marine habitat are increasing, conservation initiatives are not quick enough to respond to these challenges. Solutions for conservation of marine turtle populations need to keep up with the changing threats, not only in the nesting habitat, but throughout the marine turtle’s various life stages and different habitats used.

To enhance marine turtle conservation and to sustain the monitoring of the biodiversity indicators in the coastal areas of Manila Bay relevant to the Supreme Court mandamus on the clean-up and rehabilitation of Manila Bay, a comprehensive assessment on nesting beach was conducted by the local government in Mariveles. The result of this assessment led into establishment of three satellite hatcheries in barangays where there are high incidence reports of marine turtle nests along Manila Bay, specifically at Sitio Villa Carmen in Brgy. Mountain View; Brgy. Cabcaben; and Sitio Pinag-apugan in Brgy. Townsite in Mariveles.

Hatcheries are usually established as a last-resort protection measure in nesting beaches if the eggs cannot be protected from poaching or if environmental conditions will jeopardize the hatching success. For hatcheries to be successful, procedures and protocols are implemented based on the ecological and biological requirements of marine turtles employed to increase the hatching success.

## METHODS

The conservation program for marine turtles in Mariveles is focused on the nesting beach habitat which generally can be divided into these segments with the corresponding interventions presented in Table 2.

*Table 2. Marine turtle life stages that are usually encountered in a nesting beach habitat.*

<b>Biological process</b>	<b>Marine turtle life stage</b>	<b>Main interventions</b>	<b>Main principle promoted in the manual*</b>
<b>Nesting</b>	Adult female	Documentation Tagging	No disturbance
<b>Nest</b>	Eggs	Collection Hatchery ( <i>ex situ</i> )	<i>In situ</i> , high hatching success (above 80%)
<b>Emergence</b>	Hatchlings	Release	Immediate release
<b>Stranding</b>	Juvenile to adult	Documentation Necropsy	Necropsy, determine cause of death
<b>Bycatch</b>	Juvenile to adult	Documentation Release	Release if alive, turnover to DENR when dead

\* Marine Wildlife Watch of the Philippines. 2014. Philippine Aquatic Wildlife Rescue and Response Manual Series: Marine Turtles. Marine Wild Fauna Watch of the Philippines, Inc. 86 pages.

Mariveles was assessed based on the interventions practiced on site versus what are prescribed in the Philippine Aquatic Wildlife Rescue Response Series: Marine Turtle, which was produced by the DENR and MWWP through the support of the Deutsche Gesellschaft für Internationale Zusammenarbeit GmbH (GIZ) in 2014.

The questions asked during the unstructured face-to-face interviews were based on the various parameters, including: Policy related to marine turtle protection, training and source of knowledge, and the basis for their hatchery protocols (Table 3). These information were gathered for each management unit involved in marine turtle conservation.

*Table 3. Parameters matrix used in assessing nesting beach habitat management in Mariveles, Bataan.*

<b>Bataan Marine Turtle Management Agency</b>	<b>Policy basis</b>	<b>Training program attended</b>	<b>Basis of protocols</b>
DENR-CENRO			
LGU-MENRO			
Barangay			
Wardens/Local volunteers			

## **RESULTS AND DISCUSSION**

### *Conservation framework*

Conservation of marine turtles fall under the mandate of the DENR as stipulated in RA 9147. Conservation framework, targets, and activities all emanate from the DENR. The marine turtle conservation program falls under the Wildlife Division of the Biodiversity Management Bureau while coastal and marine habitat are under its Coastal and Marine Division. The marine turtle conservation program implemented is a remnant of the defunct Pawikan Conservation Project (PCP) program which existed from 1979 to 2002 and includes: 1) Research and investigation; 2) Resource management and protection; and 3) Information and education. Most of the activities under these programs are now absorbed under the different units of the BMB, although the core technical personnel are still involved, most of them now belong to other divisions within the bureau. The same program is usually employed at the regional and provincial offices of the DENR.

A Marine Turtle Conservation and Action Plan (MTCAP) was approved early this year by the DENR-BMB for implementation in 2020 to 2030. This CAP provides a conservation framework applicable to all marine turtle conservation sites in the Philippines with the vision: “All life stages of marine turtles and their habitats are managed and protected through reduction of overfishing, bycatch, and poaching of marine turtle eggs; establishment of marine turtle MPAs and MPA networks are effectively and sustainably managed and protected; and communities in important marine turtle habitats are actively participating in conservation activities and reaping

socio-economic benefits from healthy ecosystems, and from sustainable and integrated conservation and development programs”.

*Local management scheme*

The management scheme in the marine turtle nesting beach conservation was assessed in Mariveles using various parameters. The result is tabulated in Table 4.

*Table 4. Assessment results of the marine turtle nesting beach management in Mariveles, Bataan using various parameters.*

<b>Bataan Marine Turtle Management Agency</b>	<b>Policy basis</b>	<b>Training program provided by</b>	<b>Basis of protocols</b>
DENR-CENRO	National law (RA 9147)	DENR-BMB, BMB-CMD	BMB Training/Manual*
LGU-MENRO	National law, no local ordinance	DENR-CENRO	CENRO verbal instructions
Barangay	National law, no local ordinance	DENR-CENRO BMB-CMD	CENRO verbal instructions
Wardens/Local volunteers	National law	DENR-CENRO BMB-CMD Morong Pawikan Center	CENRO verbal instructions

\* Marine Wildlife Watch of the Philippines. 2014. Philippine Aquatic Wildlife Rescue and Response Manual Series: Marine Turtles. Marine Wild Fauna Watch of the Philippines, Inc. 86 pages.

Nesting beach monitoring is provided by community volunteers, usually those who have had some form of training or experience with marine turtles. They report directly to the barangay officials. Wardens are also present in the sites but their main task is with the Manila Bay rehabilitation program under the DENR and would help out with marine turtle activities when needed. There is normally no budget to pay or maintain any infrastructure or staff.

The BMB-Wildlife Resources Division’s training on marine turtle conservation is the main knowledge source for Mariveles through the local DENR offices. Since the start of the Manila Bay Clean-up, Rehabilitation and Preservation Program of the DENR, the BMB-Coastal and Marine Division has also been visiting the site to assess and provide information on marine turtles.

Another source of training and information is the Pawikan Conservation Center in Nagbalayong, Morong, Bataan, the closest hatchery facility to Mariveles. The program in Nagbalayong benefited from the training of the BMB during its beginnings. The initiatives in Nagbalayong are purely private, from a local fisher group. However, the

hatchery and some of the practices at the Pawikan Conservation Center is far from ideal and needs to be updated and improved.

### *Observed threats*

Local accounts indicate that decades ago, it was usual to have several nestings occurring in one night during the nesting season. This has now been reduced to only a handful of nestings per year. There is a perceived reduction in marine turtle nesting in Mariveles which locals attribute to water pollution - both solid waste (from Manila) and oil discharges from ship/boat traffic along their coast.

Consumption of juvenile and adult marine turtles have been reported decades ago, but locals claim that they no longer capture marine turtles for its meat. Collection of eggs used to be widespread when marine turtle nesting was still high. Locals claim that poaching of eggs does not occur anymore, but some claim that this still goes on.

Coastal development seems to be the biggest threat to nesting marine turtles in the area. It was described by the local government officials that most of the coastline of Mariveles is made up of rocky cliffs, and marine turtles use the pocket beaches to nest. However, Mariveles' beaches are already developed, occupied by residential houses (fishing communities) and various industries. This can be seen in the photo documentation of the nesting beaches in Brgy. Mountain View (Figs. 2 and 3), Brgy. Cabcaban (Fig. 4 and 5), and Brgy. Townsite (Figs. 6 and 7). There are also ports, reclamation, and breakwaters along the coast making the shoreline unusable for marine turtles (Figs. 8 and 9). The infrastructures have greatly reduced the available space for nesting. If the marine turtles manage to nest in these highly developed areas, they are unable to go further up the beach where the eggs become susceptible to high tide inundation. Therefore, the nesters are forced to nest in conditions that are not ideal. This is expected to have long-term negative effects on the nesting population in the area.

The high population density in the coastal area of Mariveles has negative implications on the nesting beach habitat. Boats that are parked on the shoreline occupy all the vacant spaces on the beach. Foot traffic over a nest have been reported to make the sand too compacted that the hatchlings are unable to emerge. Household pets and stray animals, such as dogs, have been reported to dig up nests and bark at nesters as they enter the beach.

Noise, prevalent in these developed areas disturbs nesting marine turtles. Disturbed nesters abort their activity and are assumed to move to another site where there is less disturbance. Noise come from various human activities such as transportation, videoke sessions, television and radio sets, among others.

Light pollution also comes with coastal development. Marine turtle prefers total darkness when nesting. Artificial lights come from house and street lighting, including from ports and industries. The lights attract hatchlings away from the sea. There are reports of hatchlings that have found their way to the street and inside homes. There is

also a possibility that hatchlings are attracted to lights at sea such those used in buoys, boats, and other sea markers.

Trash, mostly plastic solid waste and discarded fishing gear, have been observed littering the coastline (Fig. 10). The locals claim that most of these come from the capital, Metro Manila. Although part of the Manila Bay restoration program includes regular and frequent coastal cleanups, addressing the trash at source remains a challenge. Aside from obstructing the nesting beach, trash can also cause entanglement and ingestion, which could be both fatal to marine turtles.

Fishing gears used in the area include hook and line, crab pots, gillnets, and fish traps. These gears are known to accidentally entrap or entangle marine turtles leading to drowning if they are not freed immediately. However, the fishers in all three sites attest that marine turtles are not caught in their nets - belied by the records that the DENR has.

There are no tourism related marine turtle activities reported in Mariveles. Tourism, although present in some beach resorts dotting the coastline, is not a major industry in Mariveles. More tourism development could pose a threat to marine turtles as the activities in these facilities take place on nesting beaches.

Sea level rise is perceived by the locals who claim that the shore in Brgy. Mountain View was wider in the 1970s. As the water line moves inland, some of the residents have constructed breakwaters to protect their homes from flooding during high tide and strong waves. The locals attribute this to reclamation projects in Manila. Sea level rise reduces the beach area where marine turtles nest and eggs become susceptible to flooding - reducing hatching success or causing mortality.

*Practices employed for marine turtle nesting beach conservation in Mariveles*

Table 5 shows the Barangays involved in marine turtle nesting beach management.

*Table 5. Barangays in Mariveles, Bataan involved in marine turtle hatchery and in situ nesting beach management.*

<b>Site/Barangay</b>	<b>Hatchery</b>	<b>Management</b>
Sitio Pinag-apugan, Brgy. Townsite	Hatchery donated by warehouse company as part of their CSR at site	Barangay
Brgy. Cabcaban	No hatchery	Barangay
Sitio Villa Carmen, Brgy. Mt. View	No longer existing after becoming dilapidated a few years ago	Local community member
Sitio Talain, Brgy. Biaan – NOT VISITED DUE TO DISTANCE	With hatchery	Private resort

Marine turtle nesting observed along the coast by the community is reported to the volunteers. When nesting occurs in sites without volunteers, the local community reports them to the barangay or directly DENR. It is not a standard practice to record the size of the nester nor the exact location of the nest. Forms prescribed in the DENR manual are not used on site. Tagging of nesters is only done if tags are available in the presence of the DENR.

Strandings of marine turtles are also reported to the volunteers. There is normally no further investigation made when a dead turtle is reported and the animals are immediately buried without a necropsy. If alive and weak, the DENR is asked to take over with the option to rehabilitate the animal. However, there are no appropriate facilities to handle rehabilitation in the area. There have been no reports of bycatch in recent years but it is assumed that the animals are immediately released if caught alive by fishers. Records show that more juvenile hawksbill turtles are caught in the area.

Eggs collected are normally transferred to a hatchery or moved to another place perceived safe. It was reported that attempts were initially made to relocate and surrender the eggs to the hatchery in Morong, Bataan, but this proved unfeasible.

Only one hatchery was visited in Brgy. Townsite (Figs. 11 and 12) because the other one in Brgy. Biaan was too far to reach during the day trip. The hatchery in Brgy. Mt. View had already been decommissioned a few years ago. Although there is no hatchery in Brgy. Cabcaben, it was visited due to a recent nesting where the clutch was moved close to the volunteer's residence (Fig. 13).

It seems that the main consideration in transferring eggs is the convenience of monitoring them at a location close to where the volunteers reside. The eggs are typically moved even if it is not going to be affected by the rising tide. The clutch is usually dug up right after they have been laid, but it can also happen that the nests are only seen in the morning and are only transferred then, beyond the two hours prescribed time limit from laying. Time is an important factor because special care is needed when handling eggs that are more than two hours old when the delicate embryonic membranes and blood vessels of the eggs have developed. These are easily torn if the eggs are rotated which will result in death of the embryo.

Without a hatchery, the eggs are left *in situ* or moved in the same beach where it can easily be monitored. The nests are usually marked and covered with a mesh. It is possible that some nestings are not reported as there had been incidents where only the hatchlings are seen emerging along the shore.

The hatching success was not provided by the DENR-CENRO but emergence success instead. However, by definition, hatching success is the percentage of eggs laid that hatched (including dead and live un-emerged hatchlings), while emergence success only considers those hatchlings that successfully leave the nest. For discussion purposes, the CENRO data is used assuming that the hatching is equal to the emergence number. This shows that the hatching success for the hatcheries (for *ex situ*, *in situ* and moved *in situ* eggs) averages 73.33% among the three sites in the



DENR study (Appendix A). Natural nests will have a hatching success above 80%. Given that there are no strict protocols followed in their hatchery management, there is still a lot of room for improvement to increase hatching success in Mariveles.

Upon emergence, hatchlings are counted and collected for release either immediately or delayed until late afternoon. They are placed in a basin (with or without water) before the release. The hatchlings are typically released from the where the nest is located or brought closer to the water line.

The official protocols for marine turtle conservation, including marine turtle habitat protection and response to incidents, were initially provided in a Marine Turtle Resource Conservation Manual compiled in 1992 by the DENR-Pawikan Conservation Project. This was the main guide book used for training and information dissemination. Through the years, there had been several reiterations of the manual. The latest edition in 2014 provided major updates on the protocol and procedure. Entitled Philippine Aquatic Wildlife Rescue Response Series: Marine Turtle, this new manual was produced by DENR and Marine Wildlife Watch of the Philippines through the support of the Deutsche Gesellschaft für Internationale Zusammenarbeit GmbH (GIZ). This is used as the standard for marine turtle response since 2014, although only officially adopted in the DENR’s Technical Bulletin in June 2020 (Appendix B).

In the practices observed in Mariveles, there seems to be discrepancies between the ‘old’ information provided in the DENR training that has not adapted to the new and updated procedures found in the 2014 manual. For example, the use of hatcheries as the main intervention in nesting sites is still given priority, although the *in situ* method is the recommended intervention in the manual. It seems that protocols have been altered for convenience or by force of habit. ‘Old’ practices in Nagbalayong seem to have influenced procedures in Mariveles such as holding on to hatchlings and not releasing them for tourist, politicians, and other photo opportunities.

Some specific procedures observed in Mariveles versus what are prescribed in the DENR manual is presented in Table 6.

*Table 6. Marine turtle nesting beach management practices in Mariveles, Bataan.*

<b>Parameter</b>	<b>Management practices</b>	<b>Manual* prescription</b>
Tagging	Unavailable tags and applicator Only one tag attached Non-use of tagging forms Nesters assisted back to sea Nesters are not measured	Tag nesters Tag both left and right flipper Use tagging forms Nester allowed to go back to sea alone Record curved carapace length
Eggs relocation	Done soon after laying or in the morning Use of pail or box when moving	Moved within two hours from laying Eggs buried a 0.5m for olive ridley turtles

Parameter	Management practices	Manual* prescription
	Eggs are buried at half-arms-length	
Hatchery	Standard intervention No specifications Hatcher forms not used Nests are not labeled Use of sticks, bamboo, and net to mark and protect nest	Only for eggs affected by tide or erosion Specific dimensions and use of hatchery Nest are labeled Use local materials to mark and secure the nest
Hatchlings	Released soon after emergence or at dusk Released at nest or near water line	Immediate release (within an hour of emergence) Release 10m from waterline
Nest	Nest dug up after 1 <sup>st</sup> emergence	Nest dug up for assessment on the 4 <sup>th</sup> day after 1 <sup>st</sup> emergence

\* Marine Wildlife Watch of the Philippines. 2014. Philippine Aquatic Wildlife Rescue and Response Manual Series: Marine Turtles. Marine Wild Fauna Watch of the Philippines, Inc. 86 pages.

### *Information dissemination and signage on marine turtles*

There is some misinformation about marine turtles based on local knowledge. Some examples coming from discussions with locals are provided below:

- The pawikan is smart so they are able to avoid fishing gear
- The pawikan cries because it is emotionally in pain
- The hatchlings will die of heat and will be eaten by fish if released at noon time
- The hatchlings are temporarily blinded by sunlight
- The mother turtle waits for her offspring offshore

In terms of communicating marine turtle conservation, there were no signages or materials present in any of the sites visited. The main activity mentioned that promotes marine turtle conservation in Mariveles is the town's participation to the annual Pawikan Festival in Morong, Bataan every November.

### *Recording and transmission of marine turtle data*

Marine turtle incidents are recorded by the local volunteers or by the DENR-CENRO. Volunteer reports are recorded in a log book which may either be collected by the CENRO and the MENRO (Fig. 14). The CENRO compiles the incidents as field report which are sent as a Memorandum to the DENR-PENRO and Region IV Office. These are then compiled at the DENR-BMB national office where it becomes part of a national database. However, there are instances when these reports do not make it to the BMB. For Brgys. Cabcaban and Townsite, the reports are in the form of pictures are posted on an individual's or Barangay's Facebook site/page as a record of the incident.

Data management, which includes recording, encoding, storing information, transmission, and analysis, is an important part of marine turtle conservation. It provides easy to access baseline information used to monitor trends in nesting and habitat status. It provides information needed to improve the management of the nesting beaches. Data management is often neglected and important records remain unused or are lost. There are no analyses made from the records in Mariveles nor in Bataan because a comprehensive report has not been produced to date. This could be resolved by identifying the responsible agency - usually the DENR who has use for such a report in management.

## **CONCLUSION AND RECOMMENDATIONS**

Marine turtle conservation activities are important in habitats where they are easily accessible, such as nesting beaches. However, such efforts fail to address all the other threats affecting marine turtle in other life stages in their lifecycle. Nesting beach management is but one component in a marine conservation program. Marine turtles only spend a fraction of their whole life cycle on land – as eggs, hatchlings, and females when they nest. Conservation of the other life-stages, including post hatchling and lost years, developmental stage, breeding adults in mating habitats, foraging grounds, and migratory routes, need to be considered as well.

Hatchery and nesting beach monitoring should be complemented by threat reduction measures. It is recommended that a comprehensive conservation plan for the municipality, or better yet, the province of Bataan (or a geographical area such as Manila Bay) be developed in line with the Marine Turtle Conservation Action Plan 2020-2030.

The marine turtle population identity covered by the Municipality of Mariveles is unknown. There is also no knowledge on their movement and migratory route. Therefore, threats affecting marine turtles are not fully assessed and most likely would remain unaddressed. It is recommended that additional research on nesting beach management and the ecology of the olive ridley turtles and other species be conducted.

This project intends to improve nesting beach and hatchery management in Mariveles. Based on the assessment made, lack of knowledge and misinformation about marine turtles and hatchery management practices have produced actions not prescribed in the DENR manual. These need to be corrected through training and subsequent mentoring. A more stringent reporting system needs to be developed as well, especially among the management bodies to ensure that the information collected at the sites can be used to improve marine turtle conservation in Mariveles.

Further recommendations are:

1. Adopt the protocols in the DENR manual for marine turtle beach response in nesting, hatchling release, hatchery management, stranding, and bycatch incidents through the issuance of local ordinances.

2. Produce simpler and easy to follow guidelines for nesting beach and hatchery management that can be used at the community level.
3. Provide information materials and signages to the local communities regarding marine turtle conservation, what to do when there is a marine turtle incident, and who to contact.
4. Organize wardens and volunteers in terms of practicing standardized procedures, provide a venue for exchange of information, and improved data reporting and analysis.
5. Provide training based on prescribed procedures in the manual for those involved in handling marine turtle incidents, coastal resource management, coastal law enforcement, and interested private groups or individuals.
6. Develop a Municipal or Provincial marine turtle conservation framework based on the National Marine Turtle Conservation Action Plan 2020-2030 so that local activities are aligned with and contribute to the national goals.
7. Develop and conduct research on olive ridley turtles that could provide information on population identity, movement, habitat use, and threats.
8. Address specific threats in the coastal environment to marine turtles such as light pollution and degradation of the nesting beaches.
9. Address more general threats such as solid waste pollution, coastal development, overfishing and illegal fishing, reclamation, boat traffic - ensuring that marine turtles are considered in their regulation.
10. Provide funding and other incentives for communities to engage them in marine turtle conservation activities in Mariveles.
11. Contribute to addressing global issues contribution to biodiversity loss, including climate change and habitat degradation and adhere to the UN Sustainable Development Goals.

**APPENDIX A.** Marine turtle hatchery data for Mariveles, Bataan. Present situation of the satellite hatchery and statistics of marine turtle in Mariveles, Bataan, presented June 4, 2020 by CENRO Bagac.

SATTELITE HATCHERY So. Talain, Brgy. Bataan, Mariveles, Bataan	
Activities/Accomplishments	2015 - 2018
- No. of marine turtle tagged/released	5
- No. of eggs transplanted to the hatchery	1, 208
- No. of hatchlings released	620
- Emergence success	51.32 %
- Species	Olive Ridley

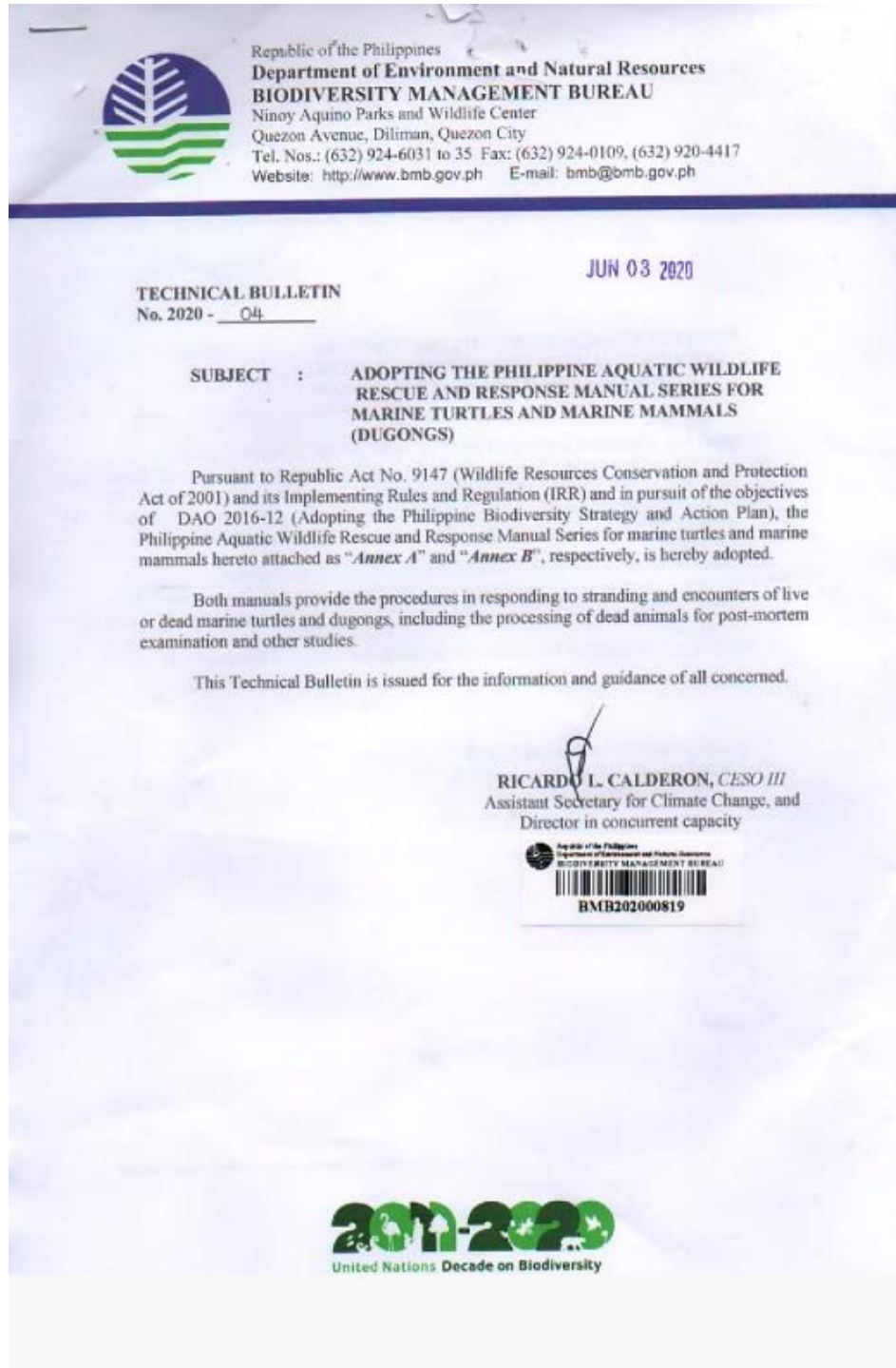
  

SATTELITE HATCHERY Villa Carmen, Brgy. Mt. View, Mariveles, Bataan	
Activities/Accomplishments	2011 - 2018
- No. of marine turtle tagged/released	Record was lost due to typhoon
- No. of eggs transplanted to the hatchery	3, 045
- No. of hatchlings released	2, 519
- Emergence success	82.72 %
- Species	Olive Ridley

SATTELITE HATCHERY So. Pinag-apugan, Brgy. Townsite, Mariveles, Bataan	
Activities/Accomplishments	2011 - 2019
- No. of marine turtle tagged/released	11
- No. of eggs transplanted to the hatchery	8,470
- No. of hatchlings released	6,191
- Emergence success	73.09 %
- Species	Olive Ridley

**APPENDIX B. DENR-BMB Technical Bulletin on the use of the Philippine Aquatic Wildlife Rescue Response Series: Marine Turtle. Download manual here:**  
<http://www.mwwphilippines.org/downloads/rm-marineturtles.pdf>



# FIGURES

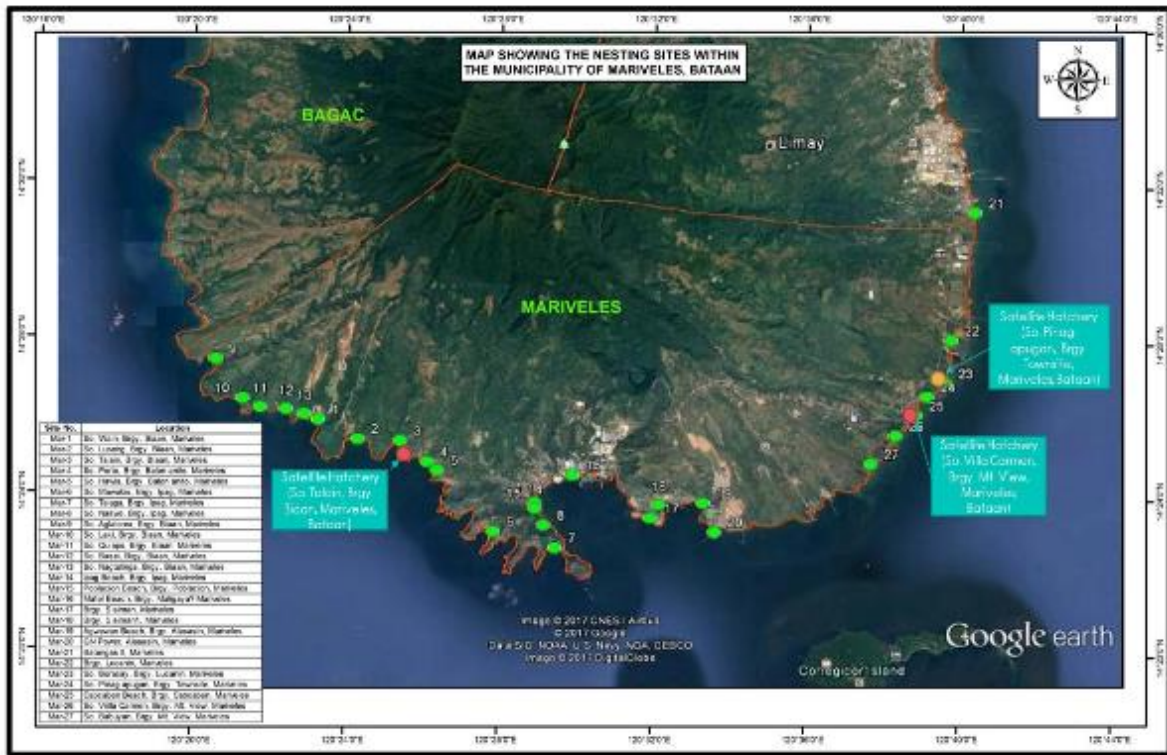


Figure 1. Map of Mariveles showing sites with marine turtle nesting incidents.

***Pictures of the nesting beaches***



Figure 2. Barangay Mountain View.





Figure 3. Barangay Mountain View.



Figure

4. Barangay Cabcaben.



Figure 5. Barangay Cabcaben.



Figure 6. Barangay Townsite.



Figure 7. Barangay Townsite.

***Trash and development***



Figure 8. Reclamation for a port development in Barangay Townsite.



Figure 9. Trash and debris in Barangay Townsite.



Figure 10. Trash and debris in Barangay Townsite.

***Hatchery and in situ nest (moved nest)***



Figure 11. Barangay Townsite hatchery.



Figure 12. Barangay Townsite hatchery.





Figure 13. *In situ* (moved) nest in Barangay Cabcaben.

***Record keeping***

Log Book of Eggs and Hatchlings from Barangay Townsite

(Date)	(No. of Eggs)	(No. of Hatchlings)	(Date)	(No. of Hatchlings)	(Date)	(No. of Hatchlings)	(Date)	(No. of Hatchlings)
10-15-2019	10	44						1st + 5th
10-21-2019	28	24						4th + 5th
11-2-2019	43	21						4th + 5th
11-16-2019	70	32						4th + 5th
12-16-2019	102							4th + 5th
1/16/2020		96	5/16/2020					4th + 5th
4/16/2020	117	62	5/16/2020					4th + 5th
8/16/2020	111							4th + 5th

(Date)	(No. of Eggs)	(No. of Hatchlings)	(Date)	(No. of Hatchlings)	(Date)	(No. of Hatchlings)
10/16/19	111	72				
11/16/19	112					
12/16/19	110					

Figure 14. Log book of eggs and hatchlings from Barangay Townsite.

## REFERENCE

Marine Wildlife Watch of the Philippines. 2014. Philippine Aquatic Wildlife Rescue and Response Manual Series: Marine Turtles. Marine Wild Fauna Watch of the Philippines, Inc. 86 pages.

# MARINE TURTLE TRAINING IN MARIVELES, BATAAN REPORT

## BACKGROUND

One of the recommendations after the site assessment in Mariveles, Bataan on July 23, 2020 was to provide a marine turtle technical training for local stakeholders. If the learnings from the training are applied, marine turtle conservation in Mariveles would be greatly improved. The training was co-designed and co-conducted with the Department of Environment and Natural Resources-Biodiversity Management Bureau (DENR-BMB) - Wildlife Resources Division.

It was decided that the training be conducted online due to the community quarantine travel restrictions in Bataan because of the COVID 19 pandemic. However, a third day practical training with field demonstration was done face-to-face with the resource speakers traveling only for a day in Mariveles. This created an opportunity for the participants to meet and discuss their concerns and questions with the resource speakers. Due to the limited internet signal in the three barangays, participants were gathered at the designated venue with stable internet, set-up wide screen, and sound system.

The objectives of the training were:

1. To equip participants with principles and procedures on marine turtle conservation in the Philippines;
2. To demonstrate proper procedures in marine turtle research and nesting beach and hatchery management as prescribed by the marine turtle rescue response manual; and
3. To discuss local issues and concerns that affects marine turtle conservation in Mariveles.

The training was conducted from August 25 to 27, 2020 at the Romalaine Seafood Restaurant and Leisure Park in partnership with the DENR-BMB that provided two technical resource persons. The training program can be found in Appendix A while the Activity Design can be found in Appendix B.

## TRAINING REPORT

A total of 32 participants attended the training with a breakdown in Table 1.

*Table 1. Breakdown of participants per agency and location for the marine turtle response training in Mariveles, Bataan from August 25 to 27, 2020.*

No	Name	Agency	Address
<b>Barangay Mount View</b>			
1	Cecilio Lungcay	Administration-Brgy	Mt. View
2	Melanie Batac	Clerk-Brgy	Mt. View
3	Jonathan Protacio	ER	Mt. View
4	Mark Roger Canizal		Mt. View
5	Elmer John Mitra		Mt. View
6	Roberto Retoto		Mt View
7	Dalton Zausa		Mt. View
8	Wenceslao Virtuoso	Bantay Pawikan	Villa Carmen, Mt. View
<b>Barangay Townsite</b>			
9	Allan Celindo	MFARMC	Townsite
10	Ramon Francisco	Brgy Kagawad	Townsite
11	Leonides Francisco	Brgy Kagawad	Townsite
12	Lerma Garcia	Samahan ng Mangingitang	Townsite
13	Danilo Malimban	Brgy Tanod	Townsite
<b>Barangay Cabcaben</b>			
14	Jeremy Roxas	Brgy Tanod	Cabcaben
15	Jerom Villacero	ERS	Cabcaben
<b>Barangay Biaa</b>			
16	Jaime Pollente	Brgy Deputy Tanod	Biaan
17	Jomel Delemos	Brgy Tanod	Biaan
18	Jerick Devis	Administration-Brgy	Biaan

19	Magnolia Tolentino	Clerk-Brgy	Biaan
<b>Barangay Ipag</b>			
20	Nino Sto. Nino		
21	Jun Perey		
<b>DENR Bataan</b>			
22	Frederick Barnachea	Forester-PENRO	Bataan
23	Maricel Langa	Forester-PENRO	Bataan
24	Jenny Cel Canta	Forester-CENRO	Bataan
25	Mark Manalastas	ER-DENR- CENRO	Bagac
<b>LGU Mariveles</b>			
26	Analyn Nogas	Mayor's Office	Acapulco, Camaya
27	Camille Veloria	Tourism Office	Camaya
28	George Roblee Imperial	MENRO-LGU	Mariveles
29	Akiza Sandicho	MENRO-LGU	Mariveles
30	Reshell Concepcion	MENRO-LGU	Camaya
31	Anthony Anit	MENRO-LGU	Mariveles
32	Felix de Leon	Administration-LGU	Mariveles
<b>Protect Wildlife Project/Resource speakers</b>			
33	Arnel Yaptinchay	MWWP	Laguna
34	Rizza Salinas	DENR-BMB	Quezon City
35	Renato Borja	DENR-BMB	Quezon City
36	Liezel dela Cruz	Protect Wildlife Project	Quezon City
37	Resanee Peteros	PWP	Pasig

The Protect Wildlife Project (PWP) team facilitated the training on site while two resource speakers presented the assigned topics from their homes. The training went on smoothly and as scheduled. Figures 1 to 10 provide a glimpse of what transpired during the training.

Presentations in Power Point and video supplementation can be accessed through this link: <https://drive.google.com/drive/folders/1L2DFCW5EbYI3dSghUjLf9fuZSzhnoajd>

Before closing, a feedback session was held where questions and concerns from the participants were tackled. Some of the discussion points are mentioned here:

- For the training, a more thorough practicum with each group or participant experiencing how to handle all the given scenarios for marine turtle response is requested.
- There are issues related to government officials confiscating a marine turtle (unverified species) and taking it home.
- As pointed out by the resource speakers, too much focus on hatcheries when a more comprehensive program is required.
- Conflict is evident among stakeholders regarding coastal development, especially those interested in coastal conservation against authorities giving permits for development, e.g. Foreshore Lease Applications and Miscellaneous Lease Applications. The LGU and DENR were questioned why some businesses were given permits to construct and reclaim on the nesting beaches.
- Development of tourism using marine turtles as an attraction is an interest among the stakeholders.
- Conflicts between private land owners and volunteers occur, specially that the former has control over the land and that they have the funds to maintain a hatchery.
- The need for incentives, such as allowances and equipment, for volunteers and community members to be more involved in marine turtle conservation.
- To prevent further degradation in coastal areas, participants were interested in legal remedies and management options such as sanctuaries, MPAs, critical habitat establishment.
- Request for support from PWP beyond the project to create a more comprehensive conservation program that would entail using a MOA to facilitate cooperation among stakeholders, e.g., PWP, PENRO, LGU.

- Incorporate marine turtle conservation in the coastal management plan.
- Solid waste is a problem throughout the coast that even fishers catch them in their nets which are unfortunately discarded on the beach when the nets are cleaned. A local ordinance is needed to address this issue.



## TRAINING PHOTO DOCUMENTATION

### *Practicum and field demonstration*



Figure 1. Participants digging up a mock marine turtle nest during the training in Mariveles, Bataan.



Figure 2. A dummy hawksbill turtle trapped in a fishing gear used in the practical exercises in Mariveles, Bataan.



Figure 3. Participants do a mock response to a marine turtle nesting report in Mariveles, Bataan.



Figure 4. Participants do a mock response to marine turtle release situation in Mariveles, Bataan.



Figure 5. Participants fill out data forms during a mock response to marine turtle reports in Mariveles, Bataan.



Figure 6. DENR-BMB resource person demonstrating proper handling of eggs in a marine turtle hatchery in Mariveles, Bataan.

***Classroom sessions and issuance of certificates***



Fig 7. Discussions on marine turtle conservation during the marine turtle training in Mariveles, Bataan.



Figure 8. Distribution of certificates to the participants after the marine turtle training in Mariveles, Bataan.



Figure 9. Participants share their experiences in marine turtle conservation during the training in Mariveles, Bataan.



Figure 10. Participants, trainers, and organizers to the marine turtle training in Mariveles, Bataan.

## APPENDIX A. Marine turtle training program for Mariveles, Bataan

**Dates:** August 25 to 27, 2020

**Venue:** Romalaine Seafood Restaurant and Leisure Park, Bataan Provincial Hwy, Mariveles, Bataan

### DAY 1, Aug 25 (ONLINE)

Activity/Topic	Time	Objective	Responsibility	Materials/Logistics
Registration/Setting in	8:00	<i>Documentation</i>	PW site coordinator	Registration forms
Briefing on online set up - TEST	8:30	<i>Familiarize participants with the online set up and to TEST set up</i>	PW site coordinator	Online setup
Opening	9:00	<i>Formally open the three-day activity</i>	PW site coordinator and speakers	May need PA system
Introduction of participants	9:15	<i>Get to know participants, organizers and speakers</i>	PW site coordinator or facilitator	May need PA system
Expectation check	9:30	<i>Assess expectation of participants</i>	PW facilitator	
Program rundown	9:50	<i>Inform participants on the program for the next 3 days</i>	PW facilitator	Program of activities
Topic 1: Introduction to Philippine marine biodiversity	10:00	<i>Participants will learn the importance of Philippine biodiversity and the need to conserve them</i>	AA Yaptinchay	PPT
BREAK	10:45		PW facilitator	Snacks
Topic 2: Introduction to marine turtles	11:00	<i>Introduce marine turtles including naming of body parts</i>	AA Yaptinchay	PPT



Topic 3: Different marine turtle species	11:30	<i>Learn how to differentiate species</i>	AA Yaptinchay	PPT
BREAK	12:00	<i>LUNCH</i>	PW facilitator	Food
Topic 4: Marine turtle biology	12:30	<i>Learn about the complex marine turtle life cycle</i>	AA Yaptinchay	PPT
Topic 5: Threats to marine turtles	13:30	<i>Learn what are causing marine turtle population decline</i>	Rizza Salinas	PPT
ICE BREAKER	13:55		PW facilitator	
Topic 6: Government initiatives and relevant laws	14:10	<i>Learn about Philippine protection policy and marine turtle initiatives</i>	Rizza Salinas	PPT
END/SNACKS	15:00		PW facilitator	

## DAY 2, Aug 26 (ONLINE)

Activity/Topic	Time	Objective	Responsibility	Materials/Logistics
Registration/ Settling in	8:30	<i>Documentation</i>	PW site coordinator	Registration forms
Review of DAY 1	8:45	<i>Recap of learnings from Day 1</i>	PW site coordinator	
Topic 7: Mariveles initiatives on marine turtles	9:00	<i>Local initiatives on marine turtle conservation</i>	Jenny Cel Canta	PPT
Topic 8: Handling of marine turtles and data collection	9:30	<i>Learn how to respond to marine turtle reports for data collection</i>	AA Yaptinchay	PPT

Activity/Topic	Time	Objective	Responsibility	Materials/Logistics
SNACK	10:15		PW site coordinator	Food
Topic 9: Stranding response	10:30	<i>Learn how to respond to stranding whether alive or dead</i>	Rizza Salinas	PPT
Topic 10: hatchery management	11:00	<i>Learn about establishing a hatchery if needed at all</i>	Rizza Salinas	PPT
BREAK	12:00	<i>LUNCH</i>	PW facilitator	Food
Topic 11: Data recording, reporting, analysis	13:00	<i>Learn about using the data recorded in conservation</i>	AA Yaptinchay	PPT
Day 3 Organization	14:00	<i>To prepare for the practicum the next day. Participants must be divided into 3 groups, materials required</i>	PW facilitator	
END/SNACKS	15:00		PW facilitator	

### DAY 3, AUG 27 (PRACTICUM; FACE TO FACE)

Activity/Topic	Time	Objective	Responsibility	Materials/Logistics
Arrival of training team from Manila	8:00			
Registration/Settling in	8:30	<i>Documentation</i>	PW site coordinator	Registration forms

Activity/Topic	Time	Objective	Responsibility	Materials/Logistics
Review of DAY 2 (on site)	8:45	<i>Recap of learnings from Day 1</i>	PW site coordinator	
Organization for practicum/ Maybe final demo	9:00	<i>Local initiatives on marine turtle conservation</i>	PW site coordinator	Need to fix practicum site
GROUP 1	9:30	<i>Practice how to respond to a nesting turtle for in situ hatching</i>	Training team (lead: AA Yaptinchay)	Ping pong balls (50) Stuffed pawikan c/o BMB Data sheets Measuring tape Mesh net Pegs Signage material
GROUP 2	9:30	<i>Practice how to respond to a nest for transfer to a hatchery</i>	Training team (lead: Renato Borja of BMB)	Ping pong balls (50) Data sheets Shovel Mesh net Pegs Signage material

Activity/Topic	Time	Objective	Responsibility	Materials/Logistics
GROUP 3	9:30	<i>Practice how to respond to a dead stranding</i>	Training team (lead: Rizza Salinas of BMB)	Stuffed pawikan (c/o BMB) Make shift stretcher Data sheets Measuring tape Dissecting set/vials/ethyl alcohol
BREAK	12:00	<i>LUNCH</i>	PW facilitator	Food
Group 1 presentation	13:00	<i>Participants relay their experience to share with others</i>	Training Team (lead: PW facilitator)	Projector Computer for each group if PPT
Group 2 presentation	13:10	<i>Participants relay their experience to share with others</i>	Training Team (lead: PW facilitator)	Projector Computer for each group if PPT
Group 3 presentation	13:20	<i>Participants relay their experience to share with others</i>	Training Team (lead: PW facilitator)	Projector Computer for each group if PPT
Final Question and Answer, clarifications, wrap up	13:30		AA Yaptinchay Rizza Salinas Renato Borja	Projector PPT
END/CLOSING/SNACKS	15:00		CI facilitator	

**APPENDIX B. Activity Design: Capacity building for Marine Turtle Conservation in Mariveles, Bataan**

<b>Title</b>	<b>Capacity building for Marine Turtle Conservation in Mariveles, Bataan</b>
<b>Date</b>	<b>August 25-27, 2020</b>
<b>Venue</b>	<b>Mariveles, Bataan</b>
<b>Strategic Approach</b>	<b>SA 3</b>
<b>Partners</b>	<b>DENR-BMB, DENR CENRO Bagac, MENRO Mariveles</b>

**I. Rationale**

The province of Bataan is rich in natural resources particularly the marine turtles. Out of the 5 species of marine turtle in the Philippines, three (3) were found to be nesting in the coasts of Bataan: Olive Ridley, Green Sea Turtle and Hawksbill, which is in the CITES (Convention on the International Trade of Endangered Species) list of critically endangered species of marine turtles.

There were several reports of nesting incidence in the municipality of Mariveles including mortality of marine turtles victimized by illegal fishing practices like dynamite fishing and other causes to include wastes in the coastal areas like plastics which were mistaken by marine turtles as jelly fishes or planktons.

To enhance marine turtle conservation and to sustain the monitoring of the biodiversity indicators in the coastal areas of Manila Bay relevant to the Supreme Court mandamus on the clean-up and rehabilitation of Manila Bay, a comprehensive assessment on nesting beach was conducted. The result led into establishment of three (3) satellite hatcheries in barangays where there are incidence reports of marine turtle nests along Manila Bay, specifically at Villa Carmen, Brgy. Mt. View; Brgy. Cabcaben and So. Pinag-apugan, Townsite, Mariveles, Bataan.

USAID, through Protect Wildlife Project, and the DENR, through the BMB, are partners in providing necessary technical guidance and opportunity to assess the condition of marine turtle hatcheries, assess current local capacities in managing these hatcheries, identify gaps and needs, rectify improper practices and provide re-tooling, and localize protocols based on national standards.

The initial step for this engagement is to assess the condition of established hatcheries in 3 barangays of Mariveles followed by a training to enhance proper

handling of eggs ensuring high percentage of hatching success, encourage participation and raise awareness of local communities on marine biodiversity conservation and support marine turtle conservation. Last 23 July 2020, a site assessment was conducted. This training will serve as a follow-up activity and the culmination of PW's engagement on Marine Turtle Conservation.

## **II. Objectives**

1. Enhance the capacity of local officials and volunteers to properly implement marine turtle conservation measures in their respective locality;
2. Learn proper practices and measures on handling marine turtle; and
3. Identify gaps in conservation and possible solutions in the local marine turtle conservation scene.

## **III. Expected Output**

1. Enhanced understanding of basic marine turtle biology and protocols in conservation as well as threats and proper marine turtle rescue; and
2. Recommendations on local protocols for improved management of hatcheries and nesting sites and conservation of turtles in Mariveles.

## **IV. Methodology**

The training will be on blended learning approach. The 2-day lectures and discussions will be synchronous using online meeting platform (Microsoft teams, Google Meet, or Zoom). Due to the limited internet signal on the 3 barangays, participants will gather at the designated venue with stable internet, set-up wide screen and sound system. The online sessions will be facilitated by the PW-R3 staff and DENR- CENRO Bagac.

The practical exercises are the only module that requires face-to-face. Thus, the last part of the blended training of Marine Turtle Conservation will consist of the actual demonstration of egg handling and transfer using ping pong balls, as well as proper release of hatchlings and rescue of trapped Marine Turtle.

## **V. Venue**

Mariveles, Bataan (*\*Romalaine Restaurant, Brgy. Alas-asin, Mariveles*)

*PW ensures that community quarantine guidelines and protocols of IATF and the local government will be observed. Participants are limited to only 15 to ensure physical distancing during the lecture and field demonstration.*

## **VI. Activity Date**

August 25-26, 2020: Online lectures  
August 27, 2020: Face-to-Face field demonstration

## **VII. Target Participants**

Agency/Organization	No. of participants
BLGU and Volunteers <i>a) Brgy Townsite (3)</i> <i>b) Brgy Mt. View (3)</i> <i>c) Brgy. Cabcaban (3)</i>	9
MENRO Mariveles	3
DENR-CENRO Bagac 1. Frederick V. Barnache 2. Jenny Cel M. Canta 3. Maricel Langa	3
DENR BMB	2
Protect Wildlife  AA Yaptinchay  Leizel De la Cruz  Resanee Peteros	3
<b>Total</b>	<b>20</b>

### VIII. Program

See Appendix A

### IX. Budgetary Requirement

DESCRIPTION	UNIT/ PAX	UNIT COST	TOTAL COST
Snacks (AM and PM) for 3 days	20	150.00	Php 9,000.00
Lunch for 3 days	20	300.00	18,000.00
Venue with sound system for 3 days	1	7,000	21,000.00
Office Supplies and Training Materials	1	5,000	5,000.00

Alcohol	2	200.00	400.00
Face Mask (Surgical) for 3 days	20	25.00	1,500.00
Face Shield	20	50.00	1,000.00
Van Rental for Participants (12) for 3 days	2	7,000.00	42,000.00
Van Rental for PW Staff ( <i>R3 Project Vehicle will be used for the WEO Training</i> ) for 3 days Manila-Mariveles- Manila	1	10,000.00	30,000.00
Van Rental for BMB Personnel for 1 day Manila-Mariveles-Manila	1	10,000.00	10,000.00
<b>TOTAL</b>			<b>137,900.00</b>

SA: Indicator and Expense Tagging SA 3