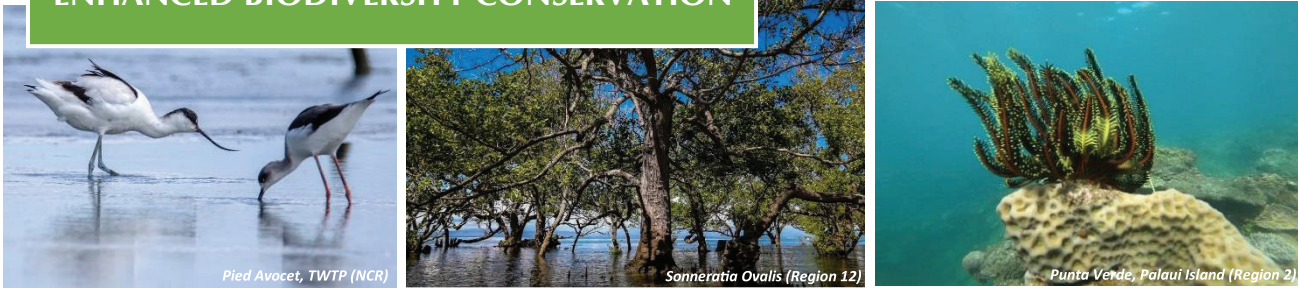


ENHANCED BIODIVERSITY CONSERVATION



Protected Areas, Caves and Wetlands Management

The passage of Republic Act No. 11038 or the “Expanded NIPAS Act of 2018” led to the legislation of additional 94 Protected Areas (PAs), making a total of 244 PAs covering about 7.76M hectares. Of the 244 PAs under the NIPAS—107 are legislated (4.38M has), 13 are proclaimed (1.11M has), and 124 are remaining initial components (2.27M has). To date, the 244 PAs make up the 15.40% (4.62 M has) of the Philippine land area and 1.42% (3.14M has) of territorial waters, contributing to the achievement of Aichi Biodiversity Target 11 by increasing the percentage of Protected Areas in the country. The Philippines is considered as a champion in ASEAN by achieving nearly its contribution to the Aichi Biodiversity Target 11.

Pursuant to Section 11 of the NIPAS Act, as amended, the Biodiversity Management Bureau has submitted the proposal on the creation of a Protected Area Management Office (PAMO) with permanent plantilla to be headed by a Protected Area Superintendent (PASU) for the administration, protection, conservation and management of protected areas.

The Protected Area Development and Management Program prescribes a comprehensive set of activities designed to ensure sustainable management of protected areas, as shown below.

- 1 • Creation of Protected Area Management Office (PAMO) to be headed by a PA Superintendent (PASu) and sufficient number of support staff
- 2 • Protected Area Management Boards (PAMB) Operationalization
- 3 • Preparation/Updating, Implementation, and Mainstreaming of PA Management Plans into local plans
- 4 • PA boundary Delineation and Demarcation
- 5 • Development of climate-resilient PA facilities and infrastructures
- 6 • Survey and Registration of PA occupants
- 7 • Biological and Socioeconomic Assessment and Monitoring
- 8 • Development of innovative funding sources/mechanism e.g. ecotourism, Special Use Agreement within PAs (SAPA), Integrated Protected Area Fund (IPAF), Payment for Ecosystem Services (PES), etc

(Source: <https://bmb.gov.ph/index.php/major-programs-paoemd/padm>)

Protected Area Suitability Assessment

Protected Area Suitability Assessment (PASA) was conducted in the 16 initial components of NIPAS. These protected areas possess various characteristics worthy of establishment as a regular component. Some of the PAs that were recommended to be renamed are Tanap Watershed Forest Reserve (TWFR) as Burgos Protected Landscape, Paoay Lake National Park (PLNP) as Paoay Lake Protected Landscape (PLPL) both in Region 1. Results of PASA showed that Mt. Tapulao in Region 3 contains high biodiversity of flora such as Yakal (*Shorea astylosa*), White Lauan (*Shorea contorta*) and Apitong (*Dipterocarpus grandiflorus*) which are threatened species and fauna as *Ploemys pallidus* and the newly discovered *Rhynchomys tapulao*.

Survey and Registration of Protected Area Occupants

This was one of the affected activities due to pandemic and LGU-specific travel restrictions, thus, resumed only in the second semester of the year in most regions. This year, a total of 226 barangays and 6 PAs were surveyed.

During the pandemic, in order to conduct and accomplish the target, the regions implemented alternative work mode in compliance with the guidelines set by the IATF. One-on-one and phone calls were used as methods to conduct interviews and virtual platforms such as, Zoom and Google Meet applications.

Biodiversity Monitoring System

A total of 242 biodiversity monitoring reports were generated. Some of the observations in biodiversity monitoring are the identification of the new recorded species (Grey streaked flycatcher) in Batanes Protected Landscape and Seascape (BPLS); *Rafflesia leonardi* in Aurora and *Rafflesia lagascae* and jade vine in Bataan, Nueva Ecija. There was a decrease to no sign of cuttings made in the monitoring areas, hence, exhibiting an improved vegetation cover and increased number of flora and fauna.



Figure 10.1 Biodiversity Monitoring System activity conducted in Samar Island Natural Park (left) and in Mahagnao Volcano Natural Park (middle, right) in the midst of the pandemic

Protected Area Management Board Operationalization

Protected Area Management Board (PAMB) meetings were held to discuss concerns and issues relative to the management of their protected areas. A total of 752 meetings were conducted with 1,548 resolutions reviewed and passed. PAMB Meetings were conducted through combination of virtual meeting and in-person hybrid.



Figure 10.2 Technical Working Group meeting with the stakeholders of Mati Protected Landscape held on 30 June 2020 (right) and PAMB meeting conducted on 21 October 2020 (left)

Updating/Preparation of Protected Area Management Plan

Per BMB Technical Bulletin No. 2016-08, “Clarifying the Protected Area Management Planning Process and Providing the Annotated Outline for Protected Area Management Plans (PAMPs)”, a total of 20 PAMPs were prepared/updated.

Ecotourism Management

Our PAs provide the natural resources-based for ecotourism in the country. For the given time period, 104 PAs were developed for ecotourism and 412 ecotourism facilities were maintained. As a result of promoting ecotourism in the country, an increase in the number of visitors in PAs were observed, as well as an increase in generated income utilized for the improvement of our PAs. However, due to the pandemic situation that the country experienced, ecotourism activities via number of visitors in our PAs and corresponding income were greatly affected as shown in Table 12.

Maintenance activities of ecotourism facilities included brushing/trimming/pruning within the pathway of view deck and regularly checking and maintaining the cleanliness of the view decks and ecolodge/visitor centers. In addition, the regions repaired signages; installed air-conditioning units, booth (Love luck) and wooden benches; and painted/repainted furniture and Protected Area Management Office (PAMO) to provide safety and satisfaction of the visitors.

Table 12. Number of PA visitors and income generated per year

YEAR	NO. OF VISITORS	INCOME GENERATED (PhP)
2016	1,839,691	74,194,215.13
2017	3,104,680	63,041,144.67
2018	3,965,060	112,301,004.65
2019	2,302,060	129,267,428.55
2020	426,373	24,828,252.46

The ecotourism facilities contributed greatly to the realization of improved access to sustainable financing mechanisms leading to improved capacity of PAs to raise revenues needed for PA management and for the inclusive economic development of host communities.

Management of Caves and Cave Resources

Pursuant to RA 9072 or “National Caves and Cave Resources Management Act” and the Updated National Wetlands Action Plan for the Philippines, the country’s ecosystems including wetlands and caves were also managed and protected. For CY 2020, out of the 3,199 caves identified, 1,241 caves were assessed of which 702 caves were classified and 225 caves have management plans.

The BMB conducted a series of consultations with the Filipino cave divers to review and discuss possible amendments to RA 9072.

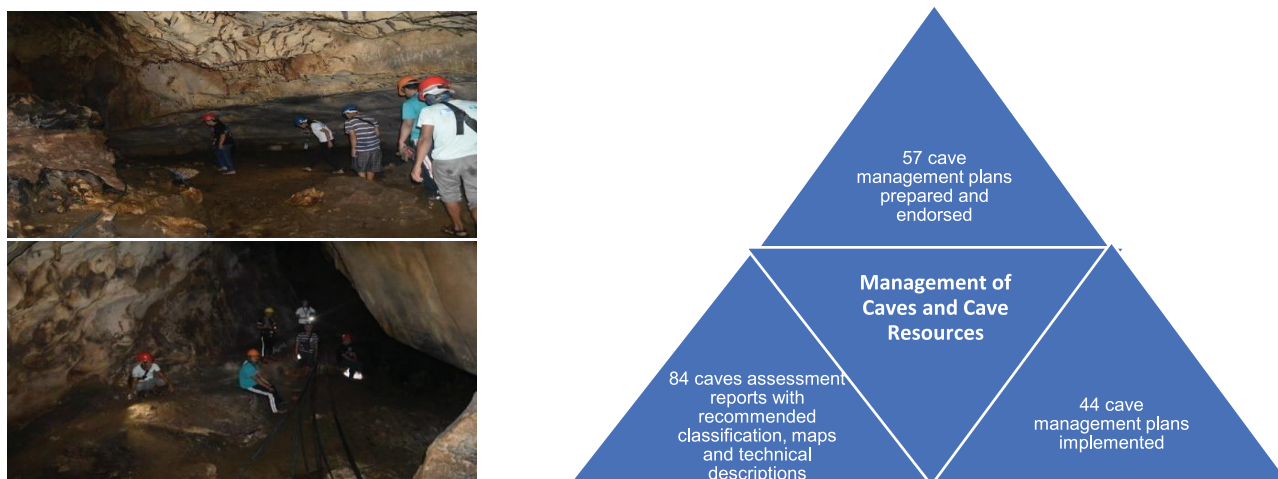


Figure 10.3 Regular monitoring inside the Pamitinan Cave headed by the Protected Area Superintendent (PASu), together with the technical Staff, Park Ranger, and Bantay Pamitinan

Inland Wetland Conservation

The Bureau reviewed a total of 19 wetland assessment reports, nine management plans and eight other wetland reports from the DENR Regional Offices.

To date, out of the 577 inland wetland sites identified, about 122 inland wetlands were assessed (40 within PAs) and 38 have wetland management plans (20 within PAs). Of these sites, the Philippines, being a Party to Ramsar Convention, has designated seven wetland areas of international importance.

Table 13. List of wetlands of International importance

NUMBER	NAME OF PHILIPPINE RAMSAR SITE	REGION	AREA (HA)	DESIGNATION DATE
1	Olango Island Wildlife Sanctuary	7	5,800	01 July 1992
2	Agusan Marsh Wildlife Sanctuary	13	14,836	12 November 1999
3	Naujan Lake National Park	MIMAROPA	14,568	12 November 1999
4	Tubbataha Reefs Natural Park	MIMAROPA	96,828	12 November 1999
5	Puerto Princesa Subterranean River National Park	MIMAROPA	22,202	30 June 2012
6	Las Piñas-Parañaque Critical Habitat and Ecotourism Area	NCR	175	15 March 2013
7	Negros Occidental Coastal Wetlands Conservation Area	6	89,607.80	20 October 2016

For lobbying of House Bill No. 3460 or the “Wetlands Conservation Act”, the House of Representatives Committee on Natural Resources conducted public hearing on HB 3460 last March 9, 2020 and it was attended by representatives from BMB, FMB, NEDA, DPWH, NCIP, CSO, and CAAP. Additionally, a special meeting was conducted last September 4, 2020 with the House of Representatives Committee on Natural Resources, Office of Congressman Mujiv Hataman, Congresswoman Amihilda Sangcopan and DENR Legislative Affairs. As of December 2020, five (5) legislators already supported the Bill. The three (3) additional legislators who co-authored the Bill include Hon. Victor B. Savellano, Deputy Speaker, 1st District Representative, Ilocos Sur; Hon. Leo Rafael M. Cueva, 2nd District Representative, Negros Occidental; and Hon. Lawrence H. Fortun, 1st District Representative, Agusan del Norte. Moreover, House Bill No. 7206 “An Act to Conserve, Protect and Sustainably Manage Peatlands and its Resources, and for Other Purposes” was filed in Congress last July 29, 2020 and its Senate Bill version was endorsed to the Office of Sen. Cynthia Villar last July 29, 2020. The Bill was authored by Congressman Strike Revilla and was co-authored by 25 legislators. The review of the said Bill is still ongoing.

(Source: BMB)

Wildlife Rescue Centers

In CY 2020, a total of 37 Wildlife Rescue Centers (WRCs) were maintained and managed. Trainings on wildlife handling and orientation on RA 9147 or “Wildlife Act” were conducted through virtual lectures and demonstrations.

Quarterly monitoring of WRCs was conducted to inspect and monitor the status of wildlife. Some of the activities are giving oral medication to sickly animals, feeding wildlife stocks and regular checkup by city veterinarian.



Figure 10.4 Wildlife Rescue Centers in Region 10

Processing and Issuance of Wildlife Permit Applications

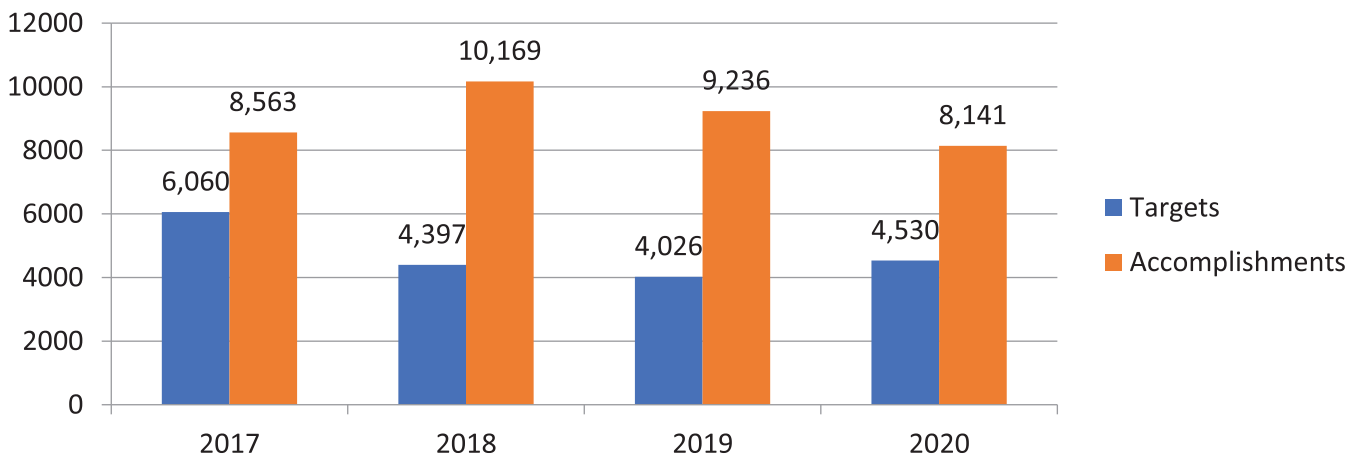


Figure 10.5 Wildlife Permits issued (CY 2017–2020)

In 2020, the total annual target for this activity is 4,530 with 8,141 wildlife permits issued compared to last year’s target of 4,026 with accomplishment of 9,236. The graph above shows the target vs. accomplishment on Wildlife Permits covering the period of 2017-2020. It can be noted that the highest accomplishment was in 2018 with 10,169 permits issued. The said permits are the following: Gratuitous Permits, Wildlife Farms Permits, Local Transport Permits, Import/Export Permits, as well as Clearance to Operate and Certificate of Wildlife Registrations. Further, the Biodiversity Management Bureau (BMB) alone was able to process and issue a total of 618 Convention on International Trade in Endangered Species of Wild Flora and Fauna (CITES) Permits (export, 330; re-export, 8; and import, 280) generating a total income of PhP1,104,422.85.

Monitoring of Compliance to Certificate of Wildlife Registration and Wildlife Farm Permit

In 2020, a total of 99 reports from 14 Regions were submitted to BMB to monitor the compliance of permittees with the terms and conditions stated in the Wildlife Farm Permits (WFP) and Certificate of Wildlife Registration (CWR). The non-compliant holders were instructed to abide with the terms and conditions of the issued permits, otherwise cancellation of the permit and confiscation of wildlife species shall be executed.

Population and Habitat Monitoring of Threatened Species

The BMB received and reviewed reports from the regional offices on the conservation and protection of threatened species and other wildlife. Among the highlights of the reports are the sightings of 30 individuals of eagles in the wild; rescue of seven (7) and release of three (3) rehabilitated eagles; identification of ten (10) additional flying fox roosting sites and institution of protection measures; and release of 144 adult marine turtles and 21,568 hatchlings.

New species discoveries in 2020 include a species of burrowing snake (*Levitonius mirus*), two (2) species of palms (*Pinanga gruezoii*, *Pinanga lepidota*), an orchid species (*Dilochia deleoniae*), and eight (8) other species of plants from family *Burmanniaceae*, *Goodeniaceae*, *Melastomataceae*, and *Rubiaceae*.

The DENR continuously implemented and monitored programs that focus on the conservation of threatened wildlife species, to wit:

Table 14. Population of Threatened Species

PRIORITY THREATENED SPECIES	POPULATION
Tamaraw	The estimated population range is between 417- 581 individuals (MIMAROPA) distributed as follows: - Mts. Iglit-Baco NP - 400-500 (480 - 2019 count) - Aruyan Malati - 3–15 - Mt. Calavite WS - 4–6 - Upper Amnay, Naujan - 10–60
Philippine Eagle	Population of Philippine Eagles in the wild are estimated to be about 400 pairs (CAR, R1, 2, 3, CALABARZON, 8, 9, 10, 11, 12, 13). Captive population comprised of rescued and rehabilitated Eagles are estimated to be 35 (32 in Philippine Eagle Center in Davao City; 1 in NAPWC; 2 in Wildlife Reserves Singapore)
Philippine Cockatoo	The wild population is estimated to number 650–1,120 individuals, roughly equivalent to 430-750 mature individuals (<i>P. Widmann in litt. 2016</i>) with approximate distribution as follows: - Palawan and its satellite islands - 580–850 - Sulu - 50–150 - Polillo group of islands, Bohol and Samar - 20
Philippine Crocodile	248 individuals (CAR, R2, 10, 12, 13)
Sulu Hornbill	At most 20 pairs in the main mountain range of Tawi-Tawi (R9)
Walden's Hornbill	Estimated population of 1,000–2,499 mostly in Central Panay Mountain Range (R6)

The DENR, through its Project, “Biodiversity Finance Initiative”, launched a crowdfunding campaign called “Together for Tamaraws” to support the rangers and wardens, collectively known as tamaraw frontliners, affected by the pandemic, so they can continue to protect the critically endangered tamaraws in Mts. Iglit-Baco Natural Park (MIBNP). Tamaraws, which are endemic to the island of Mindoro, have a population of about 600 and 480 of which can be found in MIBNP. Habitat loss, hunting and poaching are the main threats to the tamaraws. A total of 24 rangers and 35 wardens under the Tamaraw Conservation Program and MIBNP Protected Area Management Office regularly patrol the 2,600-hectare strict protection zone within the 106k-hectare Park. Majority of these tamaraw frontliners are indigenous peoples called Mangyan. Many of them are on contractual basis and their salaries are at times delayed. The Mangyan wardens also serve as porters and guides for park visitors. Due to the pandemic, tourism had to be halted and thus the Park had to be closed. As a result, a total of 33 tamaraw frontliners are facing huge income losses. This campaign targets to raise PhP1,194,000 in 3 months (July 15 – October 15) to ensure that the tamaraw frontliners can continue their duty to protect the tamaraws. Funds raised will provide field allowances for the furloughed frontliners for six months and will also cover six months’ worth of patrol assistance in the form of food packs for regular patrolling of the 59 tamaraw frontliners. As of December 31, the campaign has raised 139% of its target, both from 187 online and offline donors. 51% of these are local donors and 78% of the total amount donated came from local donations. Born out of this campaign was the Tamaraw Society, a loose group of 19 individuals and organizations that raised at least P20,000 each. It has committed to continue supporting tamaraw conservation beyond the campaign particularly through ranger capacity building and empowerment.

TOGETHER FOR TAMARAWS

Help the Tamaraw Conservation Frontliners by donating!

bitly/TogetherForTamaraws

Tamaraw Rangers and Wardens of Mounts Iglit-Baco Natural Park

BIOFIN THE BIODIVERSITY FINANCE INITIATIVE

UNDP

Kalibasib is the lone surviving tamaraw bred in captivity

Figure 10.6. Project Biodiversity Finance Initiative crowdfunding campaign for Tamaraws

Last August 20, 2020, ten (10) heads of captive-bred Luzon bleeding heart pigeons made their way back to the Philippines from Singapore. Produced by the initial two pairs of the species brought to Singapore in 2012 as part of the conservation-breeding efforts of the DENR, Atilon Zoo and the Jurong Bird Park (JBP), the progenies were released in the verdant forest of the Angat Watershed Forest Reserve last 15 September 2020, following a month-long quarantine and careful health assessment by BMB veterinarians.



Figure 10.7 Luzon-bleeding heart pigeon

A three-year old Philippine Eagle named “Makilala Hiraya” was rescued by the DENR and rehabilitated at the Philippine Eagle Center in Davao and was released to the wild on 28 July 2020 during the World Nature Conservation Day.



Figure 10.8 “Makilala Hiraya” rescued by DENR

Mobilization of Wildlife Enforcement Officers

In 2020, a total of 683 Wildlife Enforcement Officers (WEOs) were deputized/mobilized in both seaports and airports as well as other terminals around the country. WEOs were tasked to maintain the activities involving wildlife and monitor their trade, and to ensure that the “Wildlife Act” or RA 9147 is being implemented properly within their jurisdiction.

Wildlife Law Enforcement

Through vigorous enforcement of wildlife laws, continuous mobilization of Wildlife Traffic Monitoring Units (WTMUs), and Deputation and mobilization of Wildlife Enforcement Officers (WEOS), around 260 counts of various wildlife species and 27.36 kg of agarwood were confiscated and retrieved from Illegal Wildlife Trade in 2020 with an estimated cost of PhP5.4M. Confiscated specimens were turned over to the BMB-Wildlife Rescue Center and some were released back to their natural habitat after the issuance of court clearance. More so, of the 12 enforcement operations conducted in 2020, eight (8) cases were filed with wildlife crime against 25 violators of RA 9147.

Moreover, on 27 July 2020, a total of 91 confiscated CITES-listed wild animals were repatriated to Indonesia. These animals are the remaining live wildlife species out of the 450 animals seized in Mati, Davao Oriental, Davao City last 8 April 2019 through the joint enforcement operation by the Philippine Operations Group on Ivory and Illegal Wildlife Trade (POGI) of DENR, National Bureau of Investigation-Environmental Crime Division, Philippine National Police, Philippine Army and DENR Region 11.



Figure 10.9 Joint operation conducted in July 2020 by POGI and NBI Environmental Crime Division against two illegal traders in Tondo, Manila

Ways Forward

Intensification of the Enhanced Biodiversity Program thru the continuous implementation of NIPAS activities in partnership with different agencies and support from the different foreign-assisted projects. In line with this, the BMB intends to conduct the following key activities with corresponding outputs:

- ✚ Establishment of PA Academy – roster of resource persons for the Protected Area Academy and finalized Protected Area Academy Modules for PASus and Rangers;
- ✚ Conduct of Ecotourism Program Assessment – documentation of ecotourism best practices and the benefits it provides to local communities, and documentation of gaps, issues and concerns, including the proposed actions to address them;
- ✚ Conduct of Learning Event on PA Management Zoning – capacitated field staff to ensure establishment and accuracy of PA management zones;
- ✚ Conduct of Regional Consultation Hour on PA Policies and Programs – levelled-off with DENR field offices on the various issues and concerns on PA development and management involving the various PAs in the regions;
- ✚ Conduct of five (5) capacity buildings related to the conduct of assessment of caves, wetlands and urban biodiversity intended for BMB and field personnel as well as other partners in biodiversity conservation. As committed under Gender and Development (GAD), gender concerns will be incorporated in the skills trainings on caves;
- ✚ On strengthening partnerships with the members of the national committees on caves and wetlands, regular meetings will be conducted and there will be activities to be partnered with them including the conduct of international celebrations and capacity buildings;
- ✚ The Atlas of inland wetlands, first published in 2014 and 2016 (with classified caves), is targeted for updating to include information on the presence of invasive alien, endemic, or threatened species, disaster risk and hazard information, and wetlands connectivity (rivers, lakes and coastal areas), resource uses and management information such as protected areas, critical habitats;
- ✚ On urban biodiversity, target activities are on the partnership establishment, monitoring of activities in priority cities/green spaces and pilot-testing of urban forest bathing. Moreover, support activities on mainstreaming biodiversity across sectors primarily infrastructure and mining are also among the priorities;
- ✚ With existing foreign-assisted projects, more outputs are expected to be attained in terms of policy development, protected areas, caves, wetlands and other ecosystems protection and conservation, wildlife regulation and enforcement, capacity building, CEPA, access and benefit sharing, wildlife habitat protection and implementation of BDFE enterprises. As part of the commitment with various international commitments, BMB, with the support of other offices, will be implementing foreign-assisted projects such as Integrated Approach in Management of Major Biodiversity Corridors in the Philippines, also known as the BD Corridor Project. The BD Corridor Project will operationalize integrated management of biodiversity corridors to generate multiple benefits including effective conservation of globally threatened species and high conservation value forest, reduce deforestation and degradation and enhance local biodiversity-friendly livelihoods; Implementing the National Framework of the Access and Benefit Sharing of Genetic Resources and associated traditional knowledge in the Philippines, that aims to strengthen the implementation of the Nagoya Protocol (NP) in the Philippines by strengthening the national Access and Benefit Sharing (ABS) framework, building national and local capacities and developing critical experience in ABS agreements among others;
- ✚ In response to the threat of zoonosis, wildlife disease surveillance shall be undertaken more broadly in selected wildlife species and areas in Mindanao to establish baselines on diversity of viruses in natural reservoir;
- ✚ Continuing capability building (hands-on) of regional counterparts on wildlife care and management, and human-crocodile conflict management;
- ✚ Continuous technical assistance to other Regional Offices, LGUs, OGAs, GOs and other stakeholders on protected areas, caves, wetlands, urban biodiversity, wildlife, other commitments and other biodiversity-related proposals, programs, projects and activities will be done; and
- ✚ Lastly, despite the emerging threats of the new variants of COVID-19, BMB envisions to implement PPAs more efficiently and effectively in order to deliver the expected outputs and outcomes by maximizing the use of online platforms in meetings and other communications. Materials and references will also be made available as part of BMB Library operations to include soft copies of materials in webinars and events conducted. Close coordination with our counterparts at the site level is also a powerful way to monitor and address issues and concerns related to the Division. Active role in the Bureau's official social media accounts is also essential to reach more clients and stakeholders and promote upcoming events and activities of the Bureau.

(Source: BMB)