



# Mangyan - Tamaraw Driven Landscape Program

## Conservation and Enhancement of the Natural and Cultural Heritage of Mindoro Island – Philippines

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### Program's Activities Progress and achievement Report

September 2018 to August 2019 – Emmanuel Schütz / Program Manager

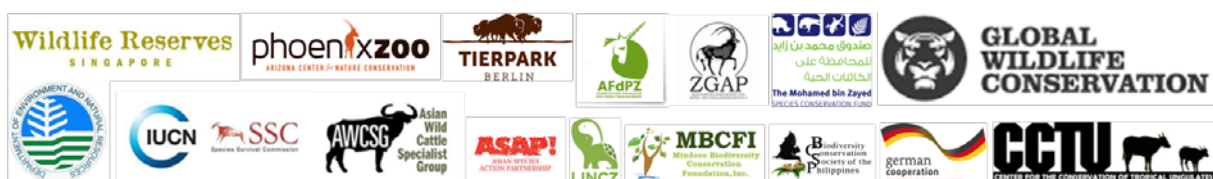
### Background

The **Mangyan – Tamaraw Driven Landscape Program (MTDLP)** was initiated in 2013 in order to help preserve the critically endangered tamaraw and its habitat while integrating and highlighting the indigenous communities sharing living space with the species. This socio-environmental program is developed by the **D'ABOVILLE Foundation** in partnership with international and national organizations and in collaboration with local stakeholders. Initially focused on **Mts Iglit-Baco Natural Park**, the program has broadened its scope of action in order to address all known remaining Tamaraw populations on Mindoro and support the development of an **island-wide Tamaraw conservation strategy**.

The Program is structured around three main components:

- Component 1:** Support the Protected Area Management Office of MIBNP and related stakeholders to finalize and implement the **Protected Area General Management Plan** of the Park
- Component 2:** Support the local stakeholders and international community to design and implement the **Tamaraw Conservation and Management Action Plan** across Mindoro
- Component 3:** Provide **science-based data** through **ecological research and social-science approach** to ensure consistency of previous components

This report presents the main activities and achievements carried out between September 2018 and August 2019.



## General updates and progress of the program

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The period of 2018 - 2019 has seen us focus on two major sets of activities : (a) **Protected Area General Management Planning Workshops** and (b) **Tamaraw Population and Habitat Viability Assessment Action Planning Workshop (PHVA-AP)**. These events paved the way for specific related activities and objectives' development. In addition, findings of the ongoing **research work** on Tamaraw and its natural habitat bring substantial further information for conservation and management approaches.

### Human Resources and collaboration

- ✓ **International Tamaraw Research Officer (TRO)**, Alvaro Gonzalez Monge, PhD completed his research work last April, 2019. The "Technical Report on Habitat Assessment and Tamaraw Distribution in Mts Iglit-Baco Natural Park" shall serve as a tool for DAF, its partners and local stakeholders, relevant to Tamaraw Conservation and Management.
- ✓ **Fernando Garcia Gil**, Spanish **wildlife ecologist** started his mission in June 2019. He will continue the work initiated by his predecessor, focusing on specific aspects: (a) development of alternative monitoring and census method in tamaraw sites across Mindoro, (b) impact of fire regime on natural vegetation succession and (c) experimentation to limit highly competitive grassland species and expansion of invasive plants.
- ✓ The two local **Field Technical Assistants (FTAs)**, young members of the resident Mangyan Tau-buid communities in MIBNP, are continuing their engagement with DAF. Their skills and experience were greatly increased in 2018 being part of the research team with TRO Alvaro.
- ✓ **Rodolfo Santos**, former Monitoring and Evaluation specialist of USAID B-WISER, is now working as a local consultant with DAF and its partners to address initial action of the PAGMP. Specifically he will coordinate the community based approach with the Tau-Buid Tribe and continue to supervise the use of SMART platform in the frame of the **Law Enforcement / Wildlife Crime Prevention** enhancement objective.

### Collaboration

- ✓ Ongoing collaboration with Christophe Bonenfant, **CNRS researcher at the Laboratory of Biometry and Evolution Biology (LBBE) of the University of Lyon 1, France**, is expanding in 2020. The research work undertaken aims to highlight facts regarding the population dynamic of the tamaraw in Mindoro. Several **peer reviewed articles** are already in draft for future publication.
- ✓ **Chester Zoo**, through their Field Program Coordinator for South-East Asia, Dr. Johanna Rode Margono providing 19 camera traps. The aim is to combine research work on tamaraw to collect information on the secretive and understudied Mindoro warty pig.

## **Program Monitoring and Evaluation – Field Visit**

In March 2019, DAF President, Mr. Hubert d'Aboville and German Ambassador in the Philippines Dr. Gordon Kricke, visited MIBNP for a 3 day hike, in order to inaugurate the Tamaraw Multipurpose Field Station building (“DAF KUBO”) that the German Cooperation funded through its Small Scale Project. It was also the chance to follow up progress in the field, meet DAF field team and discuss with DENR partners.

## **Challenges**

Completing both the Protected Area General Management Plan and the Tamaraw Conservation and Management Action Plan simultaneously, is an invaluable success and reward after many years of endeavor in Mindoro. Yet, it is also a challenge as it increases the scope of work and action, as well as responsibilities. Additional support and partnerships are crucial to allow DAF to meet its vision and to fulfill the expectation of our international and local partners.

In addition, it remains very challenging to work with Mangyan communities, especially the Tau-Buid whose living space encompasses the Iglit tamaraw population. They seem to offset the “too” rapid development of the DENR plans and fear of losing, by challenging local initiatives (rejection of projects re-claims on agreed non-hunting zones, wildlife trapping outside traditional hunting season and violation of agreement...). This must be added to the assumption that IP territories are currently suffering drastic depletion of natural resources and wildlife especially, which may affect lifestyle and food security.

Finally, the Program’s areas of intervention remains vulnerable to political issues in the country and restriction due to peace and order constraints.

## **Funding and partners**

We are grateful to our many partners for maintaining their confidence into our actions through funding continuation: **ZGAP, AFDPZ, Berlin Tierpark, MBZ, CCTU and GWC.**

Furthermore, we are proud to welcome new international partners to support specific items of the program: **Phoenix Zoo** and **Wildlife Reserve Singapore** for the research work and community collaboration, **National Geographic Society** for the monitoring and protection effort with community collaboration, **Prince Bernhard Nature Fund** for the community based approach to build up a consistent framework of collaboration and mutual goals..



*Family group of Tamaraw in Mts Iglit-Baco Natural Park (A. M. Gonzalez)*



## Progress of the specific objectives

### Component 1: Mts Iglit-Baco Natural Park

#### ❖ Support to Protected Area General Management Planning

Following the two successful Protected Area General Management Planning Workshops that were conducted in 2018, and side consultations with local stakeholders, a core team was created to finalize the production of the Plan. The process is co-supervised by Mike Appleton, GWC expert in Protected Area Management. DAF team has been very active in contributing to the production of the overall Plan.



The PAGMP for MIBNP shall be launched in last quarter 2019 by the Protected Area Management Office for MIBNP, after endorsement by concerned stakeholders and DENR.

*Zoning workshop (top) and thematic round table discussion (left) during PAGMP process (E.Schütz)*

#### ❖ Support to Tamaraw population monitoring and protection

In the frame of the **Program 4: Wildlife Crime Prevention and Law Enforcement** of the PAGMP, specific actions have been undertaken prior to the final PAGMP launching:

#### **Establishing the SMART tool platform**

Mts Iglit-Baco Natural Park was selected as a pilot site by the DENR to establish the SMART international platform system (Spatial Monitoring and Reporting Tool), thus extending the use of SMART from the FMB (Forest Management Bureau) to the BMB (Biodiversity Management Bureau) GWC through its Wildlife Crime Prevention Officer, James Slade assisted DAF and its local partners in Mindoro to set up the system in a two phase process. First journey was used to discuss the urgent needs and strategies to improve law enforcement.





It was followed by 3-week long training addressing office staff and field rangers. 12 cyber trackers are now deployed and 3 dedicated computers with SMART software operating at the TCP office and PAMO MIBNP.

Coordinators and rangers can now organize and monitor patrolling efforts, increasing effectiveness, resource management and personnel safety.

Capacity building will be continued to improve the data model, increase skills and expand the use of SMART in other sites.

*GWC Wildlife Crime Prevention Officer J. Slade providing SMART training to PAMO staff and TCP rangers in May 2019 (R. Santos).*

### **Strengthening patrols in rainy season with adequate equipment**

Thanks to the support of our partner GWC, DAF was able to purchase equipment to be donated to the TCP rangers. Focus was given to rain gears in order to improve and aid the rangers to perform their mission during the rainy season, a period when field work is harsh and data collected scarce.

This support fosters the creation of a ranger's roaming team, in the frame of the adaptive management and advance wildlife crime prevention techniques enhancement.



## **Component 2: Tamaraw Conservation and Management across Mindoro - Meta Population approach with all Tamaraw subpopulations**

### **❖ Support to Population Habitat and Viability Assessment and Action Planning Workshop**



22 years after the first one and after two years of discussions and meetings, a 4-day PHVA Action Planning Workshop took place in Mindoro in December 2018. The workshop was facilitated by the DENR BMB and the Conservation Planning Specialist Group (CPSG) of the IUCN SSC together with the Asian Wild Cattle Specialist Group (AWCSG), GWC, UNDP BIOFIN Ph, DENR Regional Office, as well as the help of local partners: MBCFi, CCI and WWF Ph.

*Thematic round table discussion (E. Schütz)*



Nearly 70 people attended the workshop, representing various local stakeholders from the DENR, LGUs, Provincial Government and representatives of the IP Tribes concerned by tamaraw presence. Closing day was blessed by inspirational words from Governor and Congresswoman of Occidental Mindoro. As an outcome of the event, a common vision statement was formulated:

“By 2050, Tamaraw are a source of national pride and a flagship for Mindoro's natural and cultural heritage. They thrive in well-managed habitats, in populations that co-exist with Indigenous Peoples, and are valued by local communities across Mindoro.”



*Closure picture of the PHVA Action Planning Workshop with all participants (courtesy of DENR TCP)*

Following months were kept busy with drafting and finalizing the **Tamaraw Conservation and Management Action Plan** document (TCMAP). The document lays out the future conservation strategy and efforts to be undertaken to ensure survival of the Tamaraw in the next 30 years.

Further meetings with DENR officials were successful in fostering interest to raise the document at the national level and eventually get the TCP become a permanent office with adequate budget and personnel. The DENR authorities already validated the creation of a **Tamaraw Conservation Coordination Council (TC3)** that will be responsible to guide and implement the Plan in collaboration with concerned local stakeholders.

#### ❖ **Feasibility and relevance of ex-situ intervention for strengthening tamaraw conservation across Mindoro**

Active population management has been one of the topics discussed at the many round tables held during the PHVA Action Planning Workshop. Indeed, the role of ex-situ intervention must be thoroughly considered as part of the strategy for the long term conservation of the tamaraw.

On that purpose, Mr. Jeff Holland, Director of Conservation at the Center of Conservation for Tropical Ungulates (CCTU) met with partners, local stakeholders and authorities to discuss the need to conduct a Feasibility Study in order to assess if translocation and/or conservation breeding are relevant options, feasible and worth developing in the future.



*Meeting with DENR officials in Metro Manila with IUCN AWCSG Dr. J Burton and CCTU J. Holland, MBCFi partner, Ms. G. Diamante together with DAF team*

A mixed international and local team will be conducting the Feasibility Study during the first quarter 2020 and produce a recommendation report that will serve for local decision makers.

### ❖ Upper Amnay Watershed Region Tamaraw Sub-population



This population was subject to a specific sub-group discussion during the PHVA-AP workshop in December 2018. Several representatives of the Mangyan Alangan Tribe, whose Ancestral Domain encompasses the whole population, participated in the discussion, adding important inputs that would be incorporated in the final TCMAP document.

*Tamaraw observed in Mt Gimparay, Oriental Mindoro during the fourth verification survey in September 2018 (Courtesy of MBCFi)*

This enthusiasm follows the series of survey conducted in the Upland Inner Mindoro Range in 2017 and 2018 that reveal the existence of the **second largest tamaraw population in Mindoro**, ignored so far. This finding is also the **re-discovery of the species in Oriental Mindoro**, stressing the necessity to have an **island-wide Mindoro approach**.

There is a need to conduct additional verification surveys in adjacent areas in the Municipality of Baco in Oriental Mindoro in order to assess the exact extent of this population.



Despite the concerns raised at the PHVA, little has moved concerning the ongoing construction of the cross-Mindoro Provinces road in term of factual information. It is urgent to evaluate its probable impact on the preserved mountainous areas it will cross in order to respond accordingly. This question must be raised to the Regional or National level.

DAF has produced a **Technical Report** on the series of verification surveys conducted since 2017 and is eager to foster its attention on this promising and ecologically prominent area.



### ❖ Aruyan-Malati Tamaraw sub-population

There is hope that the TCMAP will give a push to eventually proclaim the area as “Critical Habitat”. The process is hindered by a request to expand the Sablayan Penal and Prison Farm (SPPF under Department of Justice) due to increase of the inmate population. It is therefore question to reduce the extent of the proposed CH to its original focus, the tamaraw.



The construction of the **new ranger's base-camp** in Sitio Palbong was inaugurated in October 2018. It allows the assigned TCP rangers to increase control and patrol capacity of this Tamaraw site.

Deployment of new camera traps will resume in the last quarter 2019 under supervision of our new TCRO Fernando Garcia Gil.

*Inauguration of the new rangers' station in Sitio Palbong, Aruyan Malate area (E. Schütz)*

### ❖ Mt. Calavite Wildlife Sanctuary

TCP, in collaboration with PAMO of Mt Calavite Wildlife Sanctuary, conducted a verification survey in the upper part of the Protected Area in June 2019. They were assisted by DAF technical staff and MBCFI biologists. The team was successful in assessing the presence of 4 to 6 individuals in the south of Mt. Calavite with the sighting of 1 young male. The last sighting was 19 years ago and successive surveys were unsuccessful to provide factual evidence.

*Habitat type of Mt. Calavite area where tamaraw signs have been collected (MBCFI)*



This survey corroborates the persistence of the species in the area, a major result and hope for long term conservation perspectives. Besides, it clarifies the fact that there are currently four official sites in Mindoro where the tamaraw can be found.

Another verification survey in last quarter 2019 shall assess if the species is also present on the North side of Mt. Calavite summit.

### ❖ Other population – MIBNP

During the PHVA-AP workshop, persistence of Tamaraw around the Blue Mountain range, in the east of the Park was suggested by a Mangyan Tau-Buid member. Several fresh tracks, identified as tamaraw hoofmarks, were located north of the summit, further north of the last cattle rancher parcel.

Blue Mountain region was surveyed in 2014 by DAF and TCP but failed to provide evidence of tamaraw presence. DAF, TCP and PAMO MIBNP are planning to launch a **verification survey last quarter 2019**, allowing time to build confidence and collaboration with residing Buhid and Bangon communities who will be also important stakeholders and partners in the planned eviction of the cattle ranchers inside the PA and the ecological restoration of the area with tamaraw reintroduction as an ultimate goal.



### Component 3: Ecological research and social-science approach

#### ❖ Tamaraw / Habitat Ecological Research in the Core Zone of Monitoring

Two main biological subjects were addressed by the Intensive field work conducted by the field research team under supervision of TRO Alvaro:

- ✓ Habitat assessment through botanical quadrats, to measure habitat variability and diversity within the current tamaraw area of presence and surrounding areas;
- ✓ Tamaraw habitat use and distribution, through random transect to highlight tamaraw (and other resident mammal species) movement and habitat use patterns.



Substantial new information on local biodiversity of fauna and flora in this area of MIBNP has been emerging from this research work. This includes valuable data on new taxa present in the Park and the detrimental effect of invasive plant species. These data were of great importance to input and complete the related section of the PAGMP for MIBNP.

*Assessing plant diversity in burned and unburned grassland (E. Schütz)*

Positive collaboration with some of the local Taubuid Mangyan elders was significant for the success of the research, highlighting the undervalued ecological knowledge these communities have about their natural environment.

*Conducting vegetation quadrats in rainy season (A. M. Gonzalez)*



However, the area of investigation has been constantly facing constraints due to cultural practices of the resident communities undertaking hunting with traps at the border and even inside the non-hunting agreement. This has been a recurrent hindrance to the research activities and highlights challenges in working inside Mangyan's Ancestral Domain

The final technical report emphasizes all the results and findings will serve as a tool to inform future research work and decision making for local stakeholders.

#### ❖ Tamaraw population dynamic and population census



The official count result is 480 animals for 2019. However, the method used for the past 19 years is still subject to question due to several biases.

*Annual Tamaraw Population Count Operation 2019, experimenting double observer method, Magawang vantage point (E. Schütz)*

On that matter, the double observers' method was tested over 5 vantage points during the last tamaraw count operation in April. The method has already proven consistent for several other ungulate species. It aims to extract a probability of detection, which with time would allow estimating population abundance regardless of the type of habitat the census method is conducted. This method will be enhanced and developed in order to propose relevant alternatives in the future.

Besides, initial analysis of the 19 years count data seems to indicate that the tamaraw growth rate has begun to decline, while the population shows strong spatial structuring pattern, both signs suggesting density dependence effect.

Future fieldwork will develop the above research topics in order to address some of the main objectives of the Protected Area General Management Plan and Tamaraw Conservation and Management Action Plan:

- Restore quality of the natural habitats within the count area and beyond in Mangyan Lands;
- Expand Tamaraw distribution beyond the Core Zone of the Monitoring across IP territories in MIBNP.

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## Conclusion – Additional remarks

The Program is now clearly involved with all the tamaraw sites and concerned authorities. DAF team has been deeply associated in the coordination, drafting and finalization of both the **Protected Area General Management Plan for Mts Iglit-Baco Natural Park** and the **Tamaraw Conservation and Management Action Plan**. The will of the DENR to raise the species as a national concern is very positive and stimulating. Most efforts will be now turned toward the implementation of both Plans and support of local authorities in that purpose.

Most of all, this is the chance to pursue and concretize the original vision and advocacy of the D'ABOVILLE Foundation: uniting fate of local communities and biodiversity through a holistic landscape approach.

This will require strengthening coordination and collaboration with partners and expanding resources in order to achieve these broad goals. Additional sources of funding are therefore crucial.



*Bio-cultural Landscape of the Inner Mindoro Island, MIBNP (E. Schütz)*



## Program Rational, Vision and Structure

### General statement, vision and goal of the Program:

**Key interrelated environmental questions** the program intends to address:

- ➡ How to stop the **continuous shrinkage of the Tamaraw distribution, wildlife depletion and biodiversity lost** in general?
- ➡ How to ensure **food independence and self determination of the residing indigenous communities** sharing their living space with tamaraw?

### **Goal of the Mangyan-Tamaraw Driven Landscape Program**

To Create / Preserve / Restore the Environmental Conditions in order to:

- ① **Expand the Tamaraw population** across Mindoro and **ensure long term conservation** of the species and the habitats it can be found
- ② **Enhance the wellbeing of the residing Mangyan indigenous communities** where they live

### Responses and strategy of intervention

