

The Philippine Eagle Foundation, Inc.



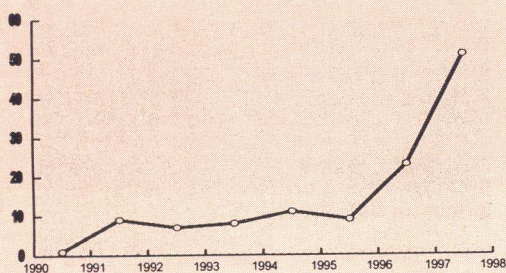
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Annual Report

Field Research Program

In an effort to improve information on the current distribution of the species in the island of Mindanao, the field research team visited 56 areas. These expeditions involved monitoring of known eagle areas, information campaign, community consultations, preliminary wildlife inventory, and community profiling. As a result of these efforts, eight (8) new breeding pairs were located increasing the number of known breeding birds from 11 pairs in 1996 to 19 pairs by the end of 1997. Consequently, the species' population accounting has also increased from 94 in 1996 to 111 as of December 1997 (see figure 1).

Figure 1. Philippine Eagle Sightings in Mindanao island



One of the eagle's habitat at Mt. Kitanglad, Bukidnon.

Species Survey and Habitat Inventories

The research team also conducted preliminary wildlife assessment on selected eagle areas. The biological data gathered from these activities will be used to develop appropriate management strategies to strengthen the PEF's *in situ* conservation initiatives. The information will also be provided to the Department of Environment and Natural Resources in aid of its protection campaign as well as to help in the development of local area management plans.

Since the Philippine Eagle Foundation was organized in 1987, it has primarily been concentrated on direct action programs meant to address threats to eagle populations and their habitat. Because of limitations associated with manpower, logistics and funds, fieldwork has been focused on attempting to locate eagle populations in Mindanao island, assessing the status of areas where they occur and developing countermeasures where populations are at risk. While these programs were largely successful in mitigating adverse impacts of human related activities in the uplands, the development of research within the PEF lagged seriously behind all other programs.

Recognizing the need to build sound information on which to base conservation action and management decisions, we have made a conscious effort at improving our research capability with the help of friends like the Peregrine Fund, the MacArthur Foundation, the Oxbow Power Corporation, and the local academic community. This effort, which has been going on for

the past three years, was given a tremendous boost with the recruitment of committed young biologists into the field research program. Overall performance is expected to improve further in the coming years with the Board's recent decision to recruit a science director to lead the Foundation's research program. Commitment and support for its implementation were obtained from the Peregrine Fund, the Marco Polo - Davao and Standard Chartered Bank. We are currently searching for a qualified candidate for the position of science director.

The limitations of the field research program notwithstanding, the team made significant headway in accomplishing its task. In 1997, we focused on monitoring wild populations in locating nest sites and habitats and undertaking biological inventories. We hope to use this information as basis for undertaking effective conservation action.



Field specialist observing a Philippine eagle's nest in Dalwagan, Bukidnon.

Retrieval Operations



A PEF staff handles a Philippine eagle retrieved from Tarragona, Davao Oriental.

Two Philippine eagles were retrieved in different areas of Mindanao. One bird was confiscated from Sultan Kudarat suffering from a broken leg and a dislocated left wing as a result of gunshot wounds. The eagle was kept by the captor for three days and was fed with bananas before it was retrieved. Immediate fluid therapy was administered to rehabilitate the weak bird. The eagle died an hour after it was admitted at the Philippine Eagle Center (PEC).

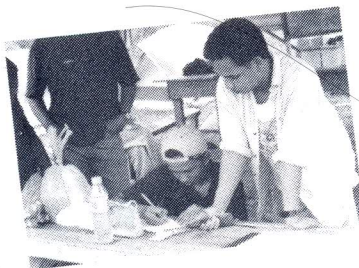
A juvenile Philippine eagle was also retrieved with the help of Mayor Enriquez in Tarragona, Davao Oriental. The eaglet was severely malnourished and dehydrated when the field research team came to the

rescue. It died eventually after eleven days despite intensive care and medication at the PEC. Post-mortem analysis showed that: a) the brain membrane at right parietal region had haematoma (possibly the skull was hit by hard object); b) the organs were afflicted with aspergillosis; and c) its lungs were blackened and hardened.

Efforts to prevent continued persecution of the eagles through hunting or capture involve education campaigns in the uplands and networking with local government units and the media. We are also working on a system to facilitate rapid response by our team whenever captive or injured birds are reported.



The research team identifies the bird catch during wildlife inventory at Arakan, Cotabato.



Student Volunteer taking morphological measurements of a rice field rat caught during the preliminary wildlife inventory conducted at Arakan, Cotabato.



Research team demonstrating proper setting of mist nets to volunteer students.

Community Assessment and Profiling

A total of 12 Barangays within the five (5) Provinces of Mindanao were covered for community profiling and assessment. Eleven (11) of these areas are known Philippine eagle habitats. These areas are typically inhabited by marginal-income families. Incidences of poverty and illiteracy are unusually high compared to other areas in the country.

Data gathered showed high relative abundance of natural

resources within the study areas. All upland communities surveyed in this study are engaged in subsistence farming. This is supplemented by use of forest resources, albeit on an unsustainable manner. Unfortunately benefits from forest use typically do not accrue to the communities but rather to intermediaries who finance illegal logging operations and market farm produce which are obtained at very low farm gate prices. These problems are further

compounded by lack of tenurial security and social issues such as ancestral domain claims among indigenous cultural communities. Basic social services are generally absent.

This study was undertaken with support from the MacArthur Foundation to assist PEF efforts at facilitating the development of local area management plans among grassroots communities in the uplands.

COMMUNITY-BASED

We work with marginal-income families in the uplands by helping them achieve human development goals. Central to this effort is the alleviation of human poverty in the uplands through the provision of appropriate sources of livelihood. The program adopts a participatory approach to local area planning as well as project development and management. Our goal is to build local capability of partner-communities in addressing issues impacting them and institute enabling mechanisms for effective and equitable use and management of local natural resources. This strategy has proven effective in our effort to protect and restore Philippine eagle habitats.

Recognizing that the needs of local people are inextricably linked with that of wildlife, we have invested considerable efforts and resources in advancing the interests of marginal-income families in the uplands. These include assistance in pursuing ancestral domain claims, primary health care and adult education. Significant progress has also been made on motivating and encouraging interest of partner-communities in agro-forestry programs and the development of systematic planning for the protection and management of watershed areas in cooperation with government agencies and other institutions. More importantly, use of traditional local knowledge proved rewarding in developing local community enterprises.



Cooperative members accomplishing loan application form.



Participants of Basic Ecological Awareness (BEA) in Salasang, Arakan, Cotabato.

INITIATIVES PROGRAM

Bukidnon in Nature Development

BIND was a one-year project funded by the New Zealand government to improve the economic welfare and forest conservation efforts of seven buffer communities in the Mt. Kitanglad Range Natural Park.

BIND followed through a feasibility study (funded by the PEF) on the establishment of abaca farms using traditional practices. This is based on the premise derived from

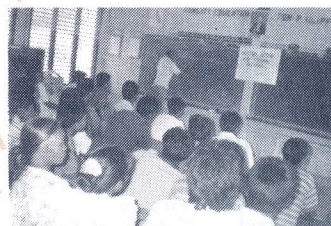
the local Higaonon's knowledge that "abaca thrives best under a canopy and surrounded by shrubs, herbs, rootcrops, banana, coffee, and grasses. That means, one needs trees and all the other components of the forest for abaca to survive; and, in the same manner, the people needs abaca and the forest to sustain life."

The investment helped stimulate economic activity further among

partner-communities (see table 1). It also provided us with an opportunity to conduct more organizational strengthening to boost local capability further. Our immediate goal here is equip local partners as they phase into mainstream activities of the Integrated Protected Areas System project of the DENR.



CDO facilitates a community monthly meeting in Luan-luan, Paradise, Cabanglasan, Bukidnon.



Senior Community Development Officer (CDO), Mr. Estrada, conducts training on Cooperative Management in Bolunay, Impasug-ong, Bukidnon.

Table 1. BIND contributions to abaca production provided to local community organizations in Kitanglad.

Community Organization	No. Beneficiaries	Amount
Dalwangan Compact Farmers Association (DACOFA)	8	PhP 21,050.00
Imbayao Farmers Organization (IFO)	7	22,500.00
Kapitan Anghel Farmers Organization (KAFO)	7	16,500.00
Block II Integrated Farmers Association (BIFA)	2	5,500.00
Sagayon-Nalunhaw Farmers Association (SANAFSA)	7	25,950.00
Mapawa Tribal Council Organization (MATRICO)	16	32,500.00
Kibuda Tribal Council Organization (KITRICO)	15	<u>33,000.00</u>
TOTAL	62	PhP157,000.00

Sustainable Agriculture and Forestry for Environmental Rehabilitation

The Royal Netherlands Government funded SAFER project, a three-year grant for the management of wildlife habitats in partnership with eight strategic upland communities in Bukidnon and North Cotabato. The project aims to build local capacity for effective natural resources management by developing suitable enterprises to spur social and economic development among local partners. Additionally, this will be complemented by assistance in facilitating ancestral domain claims, resolution of tenurial issues, primary health care, and, the empowerment of women in the communities.

Started in June, 1996, the project gained momentum in 1997 with the following major activities:

1. the conduct of basic ecological awareness workshops and organizational capability-building training;
2. formal establishment of four (4) new people's organization and forging partnership with another four (4) existing community organizations;
3. establishment and development of tree nurseries;
4. release of about PhP 750,000.00 livelihood loans covering 346 beneficiaries, 112 of which are women; and
5. institutionalization of a sustainable credit scheme



Land prepared by a project participant in Imbayao, Malaybalay, Bukidnon.



Pest and disease monitoring

Table 2. Distribution of enterprise funds to local partner-organizations for SAFER project.

Community	Community Organization	No. of member/beneficiaries			Loan amount (PhP)	Purpose of loan
		M	F	Total		
Salasang, Arakan, North Cotabato	Salasang Integrated Wildlife Conservation Farmers Association (SIWCOFA)	10	08	18	100,000.00	agricultural crop production and marketing
Ganatan, Arakan, North Cotabato	Kapunungan sa mga Mag-uuma sa Ganatan (KAMAGA)	08	07	15	100,000.00	cooperative marketing
Luanluan, Paradise, Cabanglasan, Bukidnon	Luanluan Farmers Association (LFA)	20	16	36	43,205.00	draught animals and agricultural crop production
Freedom, Cabanglasan, Bukidnon	Man-umino Range Farmers Association (MARFA)	20	09	29	99,400.00	agricultural crop production cooperative marketing, draught animal and agricultural crop production
Kalabugao, Impasug-ong, Bukidnon	Gagmay'ng Mag-uuma sa Parokya sa Kalabugao (GAMAPAKA) Multi-Purpose Cooperative	43	16	59	100,000.00	agricultural crop production abaca marketing
Bulonay, Impasug-ong, Bukidnon	Bulonay Multi-Purpose Cooperative (BMPC)	64	18	82	80,000.00	draught animals, agricultural crop production
Can-ayan, Malaybalay, Bukidnon	Upper Tagoloan Tribal Farmers Association (UTTRIFA)	38	14	52	131,140.00	cooperative marketing
Halapitan, San Fernando, Bukidnon	Kapunungan sa Pagpalambo ug Pagpanalipod sa Kinaiyahan (KPPSK)	31	24	55	100,000.00	
TOTAL		234	112	346	753,745.00	

Refinement of the NGO/PO management plan for the Pulangi watershed



Trucking facility as part of
improving marketing aspect
of the CBI Program

This 6-month project supported through an action grant of P100,000.00 from the Foundation for the Philippine Environment (FPE), is a refinement of the initial Pulangi Watershed Management Plan of NGO/POs completed in January 1997 based on remarks and evaluation that:

- Seven months are not enough to come up with a viable management plan;

- The data gathered are mostly from the NGOs and POs and lacked comprehensiveness from which an effective management plan should be based;

- Reflecting on the capability level of the NGOs-POs, the plans/proposals in themselves are so broad-based and generalized, thus lacking depth, specificity, and cohesiveness as well as the practical implementing mechanisms;

- The Task Force has evidently no teeth at all in the overall implementation and no definite sustaining activities; and

- There is a need for FPE to level-off and interact with the Task Force.

The refinement process was implemented by:

- gathering additional data on Pulangi Watershed with particular emphasis on information from reports of and consultations with the local government units (LGUs), DENR, DA and past as well as current livelihood and watershed development projects;

- the conduct of a capability-building training for the Pulangi NGO/PO Task Force regarding the management planning and sustained coordination; and
- a leveling-off with FPE.

By December 1997, the Pulangi Watershed Community-Based Resource Management Plan (PWCBRMP) for NGOs/POs was completed. This plan is based on the analysis that the Pulangi watershed assumes a more profound geographic, economic, cultural and environmental significance in north-central Mindanao. Despite some sectoral and operational bickering, program conflicts and overlaps, government, NGO/POs and IPs agreed on the need

for protection and management of the Pulangi Watershed. It was difficult to balance conflicting interests of the various parties involved in the plan. But there were some common ground from which to launch collective action.

In order to effectively set the directions for an effective community-based resource management for the Pulangi watershed, NGO/PO Task Force has recommended the following:

1. range perspective of interventions;
2. an aggressive integrated production, processing and marketing level-led livelihood program;
3. development of strong and capable organizations with committed NGO support;
4. a consistent platform for environmental advocacy;
5. development of an effective credit scheme;
6. work to develop a harmonious working relationship with partner NGO/POs, government and other multi-sectoral organizations;
7. establishment of protected forest corridors.

The resulting three-year plan targets 12 priority barangays of 5 towns, 5 major mountain ranges which are of equally critical and ecological significance as these feed the Pulangi River.



Fruit and forest trees
propagation in Taocanga,
Manay, Davao Oriental

Table 3. Status of Community-Based Initiative's projects

Name of Project	Communit/ies	Funding Agency	Date Started	Accomplishments	Status
North Davao Upland Work Improvement for Sustainable Environment (NDU WISE)	Andap, New Bataan, Davao del Norte	- Philippine-Australian Community Assistance Project (PACAP)	March, 1997	- partnership with PEF and Andap Multi-Purpose Cooperative established - capability building trainings - livelihood loans provided to cooperative members	- collection of loan repayments - further institutional strengthening
Sustainable Agriculture and Forestry for Environmental Rehabilitation (SAFER)	- Bulonay, Impasug-ong, Bukidnon - Kalabugao, Impasug-ong, Bukidnon - Can-ayan, Malaybalay, Bukidnon - Freedom, Cabanglasan, Bukidnon - Paradise, Cabanglasan, Bukidnon - Halapitan, San Fernando, Bukidnon - Salasang, Arakan, North Cotabato - Ganatan, Arakan, North Cotabato	- The Royal Netherlands Embassy	June 1996	- formation of registered SEC community organizations with bank accounts - partnership with established CDA-registered organizations - provided livelihood loans to 300 beneficiaries amounting to PhP 800,000 for agricultural production and marketing	- collection of loan repayments - further institutional strengthening - documentation of IP ancestral domain claims
Bukidnon in Nature Development (BIND)	- Mt. Kitanglad range (Dalwangan, Kapitan Angel and Imbayao, Malaybalay; Songco, Kibuda and Kaatuan, Lantapan, Bukidnon)	- New Zealand Government	January, 1997	- establishment of 10 hectares abaca farms - loans provision amounting to PhP 157,000.00 to 62 beneficiaries	- monitoring and evaluation - collections of loan repayments - phasing-out
NGO/PO Network Building for the Pulangi Watershed	- Pulangi watershed, Bukidnon	Foundation for the Philippine Environment (FPE)	June, 1996	- management plan for the Pulangi watershed of NGO/POs - Formation of the Pulangi NGO-PO Task Force	- awaiting approval of funding from FPE for implementation of management plan

North Davao Work Improvement for Sustainable Environment-Andap New Bataan (PACAP)

The project, funded by the Australian Agency for International Development, enabled the community members to increase through the dividends and patronage of their cooperative centralized marketing program. The funds for which are part of the livelihood loan. Andap Multi-Purpose Cooperative's purchase of a processing machine for peanut butter, ginger ale and cocoa production and efficient drying of coffee beans helped improve viability of the community organization. The machine directly benefits the women of the community who requested for it. AMPC was also able to increase their variety store's stocks and bought about 300 sq.m. of land with a small house for storage of agri-inputs and working place for processing. Agro-forestry production, which is also a project component, involves purchase of seeds and planting of coffee, forest species and fruit trees.

CAPTIVE BREEDING PROGRAM

The primary objective of the captive breeding program is to develop a viable gene pool and propagate the target species *ex situ*. Our goal is to release offsprings back to the wild to help complement wild populations. Our greatest problem continues to be limited and sporadic production largely associated with the lack of suitable breeding eagles. Most eagles at the Philippine Eagle Center are confiscated birds obtained in various states of injury or malnutrition. Some of the birds we have are believed to be too old for breeding. Additionally, chance events such as the occurrence of disease and,

recently, the suspect envenomation of the female eagle Dawan are beginning to make management of the captive population even more difficult.

Deforestation continues to threaten the species long term persistence. In Mindanao alone, it is estimated that the total forest cover have declined from 25% in 1987 to 21% in 1997. Despite claims by desktop biologists that there are enough wild populations out there, our experience suggest that deforestation trends imperil the already dwindling Philippine Eagle populations. For species recovery efforts to succeed, we must simultaneously

attempt to address threats which impact wild populations while ensuring that viable numbers exist in captivity. At the very least, a healthy captive stock provides a safety net for the long term persistence of the species. To boost eagle numbers in the medium term, an investment must be made to restock the captive gene pool now. We are confident that once we have sufficient numbers of properly reared birds in captivity, we can make significant progress in breeding them. The DENR's support for this initiative will be a critical element for the future of the species.

Natural Pairing

We've successfully paired the eagles Tsai (male) and Princess Maasim (female) at the Philippine Eagle Center (PEC). The pair exhibited effective bonding throughout courtship, nesting and mating during the 1997 breeding season. It is just a matter of time before this pair produces their young. Because of Dawan's untimely demise, we are attempting to pair Jag (♂) with the female Ka Brian (♀).

Continuing Development of Imprint Surrogate Relationships

Work on birds already imprinted on humans was aggressively pursued in 1997. The eagles Pag-asa and Pagkakaisa, both males, appear to have bonded well with their keeper and accept him as a surrogate. Both birds were motivated to voluntarily copulate on their surrogate's protective leather jacket. While no viable semen was produced from these birds last year, they will undoubtedly prove invaluable to the program in the future.

The keeper staff are also continuing to develop bonding relationships with the female eagles Marikit, Girlie and Luyag. Observations suggest that behavioral responses in terms of pseudo-mate acceptance appear better when working with young eagles than older and mature birds like Girlie and Luyag.

Despite production problems outlined above, we were able to stimulate breeding which resulted in the production of three during the 1997 breeding season. The first two eggs laid by the eagles Dawan and Brian were found to be infertile. The third egg was produced by the female eagle Pitha through cooperative artificial insemination. The egg was fertile but, regrettably, the embryo died at the early stage of incubation due to bacterial infection.

Dawan, a female eagle naturally-paired with Jag, was found dead inside the cage on 13 October 1997 at 1641 hours after a keeper heard sounds of struggle inside their enclosure. Efforts to resuscitate her proved futile. Post-mortem examination could not identify the cause of death although extensive hemorrhage in the body cavity was noted. Moreover, further laboratory tests for possible microbial infections were found negative. A puncture wound found in her pelvis led us to suspect envenomation as the probable cause of death. Reptile experts consulted on the matter opined that the findings are consistent with snake bites but, given the lack of information on snakes in this region, could not make a conclusive assessment.

Three serpent eagles (*Spilornis cheela holospilus*), a Philippine hawk-eagle (*Spizaetus philippensis*) and a gray-headed fishing eagle (*Ichthyophaga ichthyaeus*) were donated to the PEC. These raptors underwent a thorough physical and clinical examination and are now under quarantine. Admission protocols require strict isolation and management of new animals coming into the facility to prevent introduction of diseases into the animal collection.

Edison Dayos
carefully
turning
the egg of
Pitha
during the
incubation



Foodstock Facility

In order to maintain high quality sources of food for our eagles and other captive animals, a colony of food-animals such as guinea pigs, rabbits, goats, native chickens, and quails are raised at the PEC. Enclosures for these animals were expanded and improved last year to meet projected demands of the wild animal collection at the facility in the future.



Mario Entrolizo displays the juvenile white breasted sea eagle trained for Falconry.

Additional Infrastructure

The PEF received a PhP 1 million grant from Senator Ramon B. Magsaysay, Jr. These funds were used to build:

two (2) units imprint cages;
one (1) unit flight aviary;
one(1)unit examination facility;
one (1) unit wild boar cage;
and repair of two (2) units quarantine cages.

The construction of these units will help improve our capability to meet management and education goals of the Foundation.

Falconry Training

The captive breeding staff went through basic falconry techniques training with Dr. Jim Grier. The purpose of the training was to improve raptor handling skills, improve understanding of raptor behavior and to enhance staff confidence in managing birds of prey. A white breasted sea eagle (*Haliaeetus leucogaster*) and two Brahminy kites (*Haliastur indus*) were used and trained for the exercise.



Dr. Roberto Puentespina performing necropsy on Dawan's body.