

**Formal Environmental Education**  
**“The Use of Communication**  
**Strategies in the Integration of Environmental Education**  
**into the School Curriculum”**

**TEACHER TRAINING ON**  
**ENVIRONMENTAL EDUCATION**  
**“POLILLO ISLAND BIODIVERSITY”**

**Institute of Biological Sciences**  
**College of Arts and Sciences**  
**UP Los Banos, College, Laguna**  
**September 10-13, 2002**  
**CAS Gallery 2, UP Los Baños**  
**College, Laguna**

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North of England Zoological Society Chester Zoo

Fauna & Flora International, UK

Polillo Ecology Stewardship Program

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## **I. BACKGROUND AND RATIONALE**

### **A. The Importance of Conservation in the Philippines**

The Philippines is one of the world's 17 megadiversity countries but it is also one of the 25 hotspots. It has caught global attention, one of the highest priority countries in the world for conservation concern because of the following key reasons:

- The enormous biological diversity both in animal and plant species, distinct within every island of the archipelago, which bridges two major biogeographical regions separated by the Wallace line which is further refined by Merrill's.
- The extraordinarily high percent of uniqueness or 'endemicity' among these species: on the average, about 67% of the species among the major groups of plants and animals in the Philippines occur nowhere else in the world. Due to the archipelagic nature of the country, such endemism does not rest on a national level but also exhibit distinct island and site-specific nature leading the recognition of 13 biogeographical regions for the plant group and five major faunal regions and several sub-regions for the vertebrates.
- The high rate of deforestation and other forms of habitat destruction, and the serious inadequacies in the existing environmental protection measures and the protected areas network. Habitat loss due to factors mentioned above pose as the greatest threat to biodiversity.
- The apparent minimal awareness of the local people on the rich biodiversity of the country, the importance of environmental protection and the intricate relationship of every living organism in the maintenance of a sustainable and balanced ecosystem.

With all of these conditions, every Filipino should lend a hand to help in the protection and conservation of the Philippine biodiversity, most importantly by protecting their remaining but highly threatened habitats. The Philippines is presently likened to a house on fire. The latest analysis on the trends of Philippine biodiversity tells us that our remaining forests will be reduced to only 6.6% over the next ten years in the absence of effective conservation strategies. The forests can only be saved from complete destruction with well coordinated efforts or programs for protection. However, awareness is key to changing attitudes, raising values and prompting commitment from every Filipino towards protecting his countries' rich resources and be committed to protecting and conserving it. This can only be possible if every Filipino is well informed, fully equipped with the basic understanding of the country's rich treasures and the importance of keeping it to last over the coming generations.

This is the reason why education plays a key role in successful conservation efforts. Among all others, it is the local stakeholders who should be the most informed in any ecosystem, whether in the forests, or in the aquatic ecosystems. It is in these areas that biodiversity find their home, co-exist with them so that they can hopefully be the prime protectors of it.

## **B. Why the Polillo Islands is a Global Conservation Hotspot (from Gonzales and Dans, 1999)**

There are four major islands and 23 small islets that comprise Polillo. The major islands include the largest main island of Polillo ( 761 sq. km), followed by Patnanungan, Jomalig and Palasan. The islands and islets found off the east coast of Luzon Island are at 14° 50' N latitude and 122° 05' E longitude. Polillo exhibits some rugged terrain of hilly and low mountain ridges forming a central spine across the island having Mt. Malulod which only about 350 meters above sea level as the highest peak. Much of the slopes reach only about 100 meters high, and some about 200 meters, criss-crossed by several river systems. Patnanungan Island exhibit the same condition as Polillo but Palasan and Jomalig are both relatively flat. This terrain is probably the reason why lowland dipterocarp forests are found only in Polillo and Patnanungan.

McGregor described the island to be widely covered with lush forest growth. Faunal inventories were largely concentrated on the island of Polillo, particularly by McGregor (1910) and Manuel (1957) on birds and Taylor (1922) on amphibians and reptiles. Forests around the localities of Burdeos, Anibawan and Polillo were surveyed, and found to have new species, most of which were Polillo endemic.

In the 1960's Manuel was able to describe the island's increasing deforestation and forest loss to expanding agriculture. The 1995 faunal surveys conducted in Polillo revealed that all the known island endemic taxa were still found to survive in a few patches of intact lowland rainforests. These forests are part of the Polillo watershed reserve which is the only known remnant patch of old growth lowland forest on the islands and estimated to have a cover of less than 200 hectares. In Palasan and Jomalig, no original forests remain while only a few patches of degraded forests are still found on Patnanungan island.

These remaining forests are watersheds that provide valuable source of water, timber, medicine and food and serve as an important stronghold for many threatened and endemic species which still occur in Polillo. Those found by the team of Gonzalez et.al. include the Kalangay or Philippine cockatoo *Cacatua haematuropygia*, Luzon Bleeding-heart *Gallinula luzonica*, Philippine forest kingfisher *Ceyx melanurus*, Philippine brown deer *Cervus mariannus*, Philippine warty pig *Sus philippensis*, Layagan or Philippine sailfin lizard *Hydrosaurus pustulatus* and the Butaan or Gray's monitor lizard *Varanus olivaceus*.

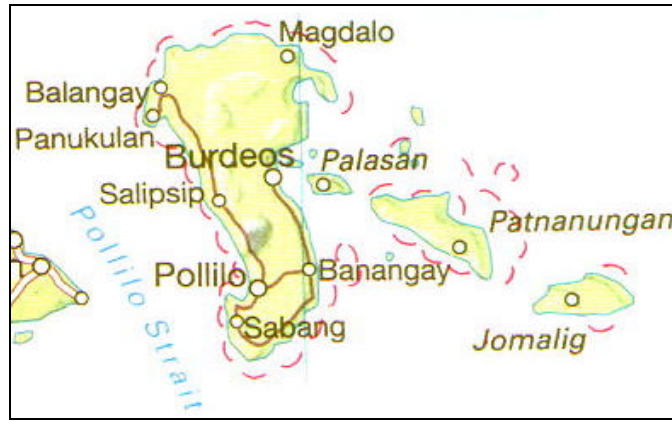


Figure 1. Map of the Polillo Islands, Quezon province, Philippines, showing the four major islands of Polillo, Patnanungan, Jomalig and Palasan (from the report of Gonzalez and Dans, 1999).

More than 200 species of birds have been recorded in the islands of which seven subspecies are found only in Polillo. These endemic birds include the Polillo Tarictic hornbill *Penelopides manillae subnigra*, Polillo White-browed shama *Copsychus luzoniensis parvimaculatus*, Polillo Blue-naped parrot *Tanygnathus lucionensis hybridus*, Polillo Azure-backed parrot *Tanygnathus sumatranus freeri*, Polillo Trogon *Harpactes ardens minor*, Polillo flameback *Chrysocolaptes lucidus grandis* and Polillo Crested goshawk *Accipiter trivirgatus castroi* (Dickinson *et al.* 1991; Kemp, 1994).

The Green narrow-disked gecko *Psuedogekko smaragdinus*, Polillo Calotes *Calotes marmoratus sanchezi*, and the Polillo forest frog *Platymantis polilloensis* are the three endemic herpetofauna, which are found only on the island.

### C. Polillo Ecology Stewardship Project

The conceptualization of this project came about as a result of the 1995 faunal inventory of the Polillo Islands due to the urgent concern to protect the islands threatened biodiversity. Hence, the Polillo Ecology Stewardship Project (PESP) was established to help address the needs for the protection of these endemic wildlife and their forest habitats through the initiative of JC Gonzales and Andy Dans with full support of Fauna and Flora International through Mr. William Oliver. The project's aim was to provide tangible conservation activities with well defined duties and expected outputs and recognize biologically important areas in Polillo, while employing local people to do pertinent monitoring and documentation activities. Supported through an "Adopt-an-island" scheme that allows various institutions or conservation groups to collaborate in the production of funds, the

project initially appointed one ecology steward for Polillo, and provided the necessary field equipment, materials, compensation and a vehicle to facilitate his effective protection and monitoring of wildlife and their habitats (For details, see the PESP Island Report by Gonzalez and Dans, 1999).

Conservation on Polillo is imperative and it is the mandate of the project steward to facilitate the conduct of every conservation strategy. In the midst of all its accomplishments, the PESP identified major concerns which should serve as the entry point for action.

***1. Incorporation of conservation education initiatives in both primary & secondary school levels:***

There is a need to incorporate conservation biology and environmental awareness on both primary and secondary levels of education in order to promote environmental protection amongst local residents of Polillo at an early age. It is important to enrich the teachers with relevant and updated information. The limit of the student's knowledge learned from them depend on what the teachers know. Their attitudes too must be exemplary and should therefore exude a picture of a self-motivated commitment. Teaching strategies should also be of great interest and interactive to raise the pupil's interest and verve. To best address this issue, existing programs for environmental education have been conducted by UPLB in various provinces, particularly Mindoro, Quezon and Laguna – through a “teachers’ training workshop”. The PESP is considering of including such an activity as part of the conservation education programs – and help increase local awareness among the different schools on Polillo Island.

***2. Use of indigenous knowledge on hunting for wildlife conservation and tourism:***

What the local people know may be as important as what the scientists know and exchange of information is important in good management. Indigenous knowledge on the sustainable use of natural resources is essential for effective conservation.

***3. Showing local people what unique wildlife they have on Polillo Island.***

A significant localized effort to educate the public about the importance of protecting Polillo's last old growth forests was largely implemented through the allotment of funds to put up several large signboards particularly around the major entrances (frequented by locals) or trails/route used as access to the watershed area. Considering the relatively moderate (to slightly higher) degree of literacy of Polillo's population (at the primary and possibly secondary levels) compared with other island communities, these signboards informs the general public about the restrictions of use of forest resources in the core old growth forest block within the watershed area (now limited to about 200 has.), and designating this site for strict protection for future generations to enjoy.

#### ***4. Creating a unified conservation program for the entire island of Polillo.***

The “bantay dagat” program, is a prototype for local conservation initiatives. Eventually, it aims to establish Polillo as a Protected Area. The strong locally-based unified environment program between member LGUs can easily emphasize on important conservation measures to address the management of the P.A. at this level rather than from a centralized Manila-based program.

#### ***5. Prepare a safety net of regulations and action plans before issues become evident.***

Safety nets for unexpected local catastrophes, reckless resource usage, introduction of exotic species and maximum capacity should be foreseen and prepared for by the local residents as well as those in the government.

### **D. The Importance of Environmental Education on Polillo**

If there is to be any hope for the biodiversity conservation in this country, it is imperative that all of its people should capture the urgency and need of it and therefore develop the right attitude for protecting the environment. Local communities in a given area should be aware of its forest resources and the wildlife to be protected. People should be motivated and empowered to be involved in the conservation effort. Unless the people of Polillo are aware of the importance of their island’s biodiversity they cannot be expected to support conservation efforts and implement the natural resource management required to protect and preserve the island’s remaining natural heritage.

Generally, there are three areas which must be addressed as identified in research and consultations that should be addressed by any conservationist:

- Lack of awareness that there are important , minimally studied forest patches in Polillo.
- Lack of awareness that these forests provide a habitat for many animals and plants that are unique and which exist nowhere else in the world and are all in serious danger of extinction.
- Lack of awareness and understanding of the terminology involved in biological conservation, including the terms endangered, extinct, biodiversity and endemic.



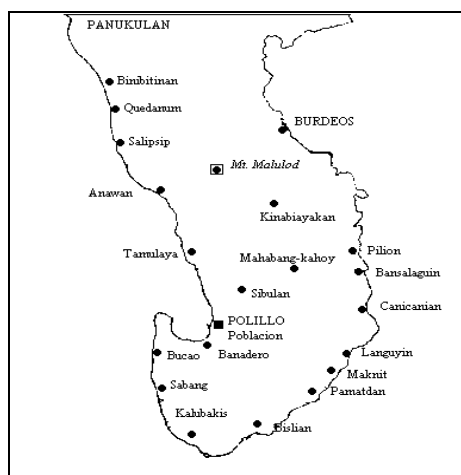


Figure 2. Map of Polillo Island (in part) showing the different barangays (villages) and sitios of the municipality of Polillo, Quezon Province.

## II. PROJECT OVERVIEW

### The CAS-FEED Environmental Education Programme

The Formal Environmental Education Program (FEED) aims to empower the people by opening their minds and hearts to environmental issues and concerns. It has targeted primarily the teachers from areas identified with priority environmental concerns such as biodiversity. The lectures discuss generic topics that serve as a review and update for the teachers, but examples and data presented for discussion are tailored according to the specific needs and available information for the community. The project believes in the capability of the teachers to influence people especially the children to love, respect and protect their environment. Through effective transfer of information and evident actions taken, it is expected that there will be a multiplier effect for attitude change not only among pupils but also the community. The teacher training for the Polillo Group of Islands is the latest in the series of trainings conducted over nine years that it has been running. For this particular training, it will serve as the venue for increasing knowledge and awareness on Polillo biodiversity, especially for the young minds of Polillo.

This education programme is a multifaceted approach that targets education at a wide variety of stakeholder groups: from the small pupils to teachers up to the Local Government. The way it was designed, the program fits right into two of the five entry points for conservation of the proposed PESP :

#### *1. Incorporation of conservation education initiatives in both primary & secondary school levels:*

## ***2. Showing local people what unique wildlife they have on Polillo Island\_***

The teachers, and the school-aged children are most important target groups of this island wide programme, but it does not cancel out the local people. The education of school children is, of course vital as an investment in the future of the state of the environment on Polillo. There is however a more immediate need given the direct involvement of children in natural resource use. Many children in rural areas work on family farms and therefore knowledge of the importance of the forest and the species within it, is crucial to shaping and determining current and future agricultural practices and approaches. Such information is informally transmitted to the parents who cannot avoid to see changes in attitudes and listen to children's conversations.

The key to successful environmental education in the classroom is the well-informed and motivated teacher. The motto of the teachers Department of Education, Culture and Sports (DECS) in the Philippines is 'Be proud, you're a teacher – the future depends on you' is not an overstatement. It recognizes that teachers play a vital role not only in opening the opportunities of future generations but also in the protection of the immediate and future state of the environment of Polillo, and elsewhere.

The Polillo environmental education programme, would bring together a wide variety of individuals and institutions on a unique collaboration on Polillo. Experts in the fields of environmental sciences and education from The University of the Philippines, Los Baños, believe on the importance of education as the key to effective conservation in this country, including Polillo .

### **IV. GENERAL OBJECTIVES OF THE PROGRAM**

1. Enhance the teacher's awareness of environmental issues and concerns with emphasis on those prevailing in the locality.
2. Strengthen the teacher's basic knowledge of scientific concepts and principles to understand environmental concepts and issues.
3. Strengthen the teacher's basic knowledge on the application of varied group oriented communication strategies as part of the teaching -learning process.
4. Enhance the teacher's capability in educating their students to become not only environmentally aware but also environmentally concerned as well.
5. Encourage teachers to organize or participate in environmentally-oriented projects in their school and community.

#### **Specific Objectives for the Polillo Training**

The overall vision of the UPLB Team as they worked on environmental education in Polillo is:

**The long term conservation of the native and endemic species and habitats of Polillo province enhanced by formal environmental education strategies, local networking and overall island cooperation.**

This objective can only be successful in close partnership with the PESP team, the local government and the whole family of DECS that operate in Polillo.

The aims of the education programme within this overall vision are to:

- Help people become aware of the value of the natural resources and the ecological processes which maintain them.
- Show people what threatens the well-being of their environment and how they can contribute to its improve management and finally.
- Motivate people to do what they can to improve environmental management.
- Enable people to channel their new awareness and attitude toward appropriate environmental action.

For the teachers the specific aims of the training programme, are:

- To raise the knowledge and awareness of the teachers who work daily in classrooms with their pupils to be effective channels of information and commitment to protect their rich biodiversity and remaining forest environment.
- To impart teaching skills to facilitate the delivery of accurate and up to date information about the environment on Polillo

The Polillo Environmental Education Teacher Training team delivered a 4-day environmental education training program. The training will take place in an appropriate venue in Polillo, preferably a place that has room for training, lodging and meals. The overall theme of the training will be environmental education although the emphasis will be on the delivery of information about the terrestrial forest ecology and the surrounding marine environment of Polillo given the urgency of the need of conservation and the lack of awareness and understanding in this field. The training will focus on two areas:

- Raising the awareness and knowledge of the teaching group in the basic environmental issues and situation, specific to Polillo, focusing on biodiversity conservation issues.
- Demonstrating teaching and communication strategies which teachers can use in the classroom to deliver the environmental information

The FEED-CAS Team believe in a cross-curricular approach to the delivery of environmental education. The concepts and strategies shall be integrated into existing curricula at all levels teachers themselves who attend the training will therefore be experts in a selection of curriculum areas and teaching strategies that will be appropriate to any subject areas, focusing on teaching technique rather than subject content.

It is preferred that representatives of three or four from each school should attend, one from English and Filipino (Language teachers), one for Science and on values. Trainees of 45 to 60 persons coming from twelve to fifteen schools can be manageable.

### **Outputs**

- The production of environmental education training materials, tailor-made for Polillo, which teachers will take to school to be used as professional development materials.
- A cohort of environmentally aware teachers practised in delivering stimulating and accurate information about the environment specific to Polillo.
- Well-informed and motivated young people who are aware of their rich natural resources and are willing to work for its conservation, in Polillo.

### **III. THE CAS FORMAL ENVIRONMENTAL EDUCATION TEAM (CAS-FEED)**

Project Leader: **Dr. Zenaida N. Sierra**  
Environmental Biology Division  
Institute of Biological Sciences (IBS), CAS, UPLB

Co-Project Leader: **Prof. Leticia E. Afuang**  
Animal Biology Division  
IBS, CAS, UPLB

Team Members: **Dr. Rita P. Laude**  
Genetics and Molecular Biology Division,  
IBS, CAS, UPLB

**Prof. Ma. Theresa T. Payongayong**  
Philosophy Division  
Department of Humanities, CAS, UPLB

**Prof. Arlyn V. Pinpin**  
Philosophy Division  
Department of Humanities, CAS, UPLB

**Prof. Nerissa K. Torreta**  
Plant Biology Division  
IBS, CAS, UPLB

### **V. SCHEDULE OF ACTIVITIES/PROGRAMME**

September 9, 2002  
Arrival & Registration of Participants

#### **Day 1 September 10, 2002**

9:00 - 10:30 am      Opening Program

National Anthem  
Prof. Ma. Theresa Payongayong

Invocation

Prof. Leticia E. Afuang

Welcome Address  
Dean Corazon B. Lamug

The Teacher Training in Perspective  
Dr. Rita Laude

Introduction of Participants  
Prof. Leticia E. Afuang

Inspirational Message  
Dr. Azucena O. Romulo  
Dept. of Education

Workshop Guidelines and Expected Output  
Dr. Zenaida N. Sierra

State of the Environment: Polillo Island Biodiversity  
Mr. Vicente Yngente

10:30-10:45	Break
10:45-11.15	Workshop 1: Group Dynamics Dr. Zenaida N. Sierra
12:00 - 1:00	LUNCH BREAK
1:00 - 2:00	Power of Communication Prof. Gene F. Navera
2:00 - 3:00	The Environment: Basic Ecological Concepts Dr. Zenaida N. Sierra
3:00 - 3:15	BREAK
3:15 - 5:00	Workshop 2: Communication Strategies Prof. Ma. Theresa T. Payongayong & Prof. Nerissa K. Torretta
5:00 - 7:00	Break Dinner
7:00 - 8:30	Workshop 3: Review of Learning Competencies and Identification of Entry Points for Integration

Dr. Rita P. Laude & Dr. Zenaida N. Sierra

**Day 2**

**September 1, 2002**

8:00 - 9:00	Aquatic Ecosystem Prof. Nerissa K. Torreta
9:00 - 10:15	Forest Ecosystem Dr. Nestor Baguinon
10:15 - 10:30	BREAK
10:30 - 12:00	Wildlife Biodiversity Ms. Mimi Ledesma
12:00 - 1:00	LUNCH BREAK
1:00 - 2:15	Biodiversity Conservation Prof. Leticia E. Afuang
2:15 - 3:15	Philippine Agricultural Practices Dr. Simplicio Medina
3:15 - 3:30	BREAK
3:30 - 5:30	Workshop 4: Communication Strategies Prof. Leticia E. Afuang & Dr. Zenaida N. Sierra
5:30 - 7:00	BREAK
7:00 - 8:30	Workshop 5: ESLC/PSSLC Dr. Rita P. Laude & Prof. Leticia E. Afuang

**Day 3**

**September 12, 2002**

8:00 -9:00	Environmental Ethics Prof. Ma. Theresa T. Payongayong
9:00 -10:00	Waste Management Ms. Marisa J. Sobremisana
10:00 -10:15	BREAK
10:15 - 12:00	Workshop 6: Communication Strategies

Prof. Ma. Theresa Payongayong  
Prof. Nerissa Torreta

12:00 - 1:00	LUNCH BREAK
1:00 - 4:00	Field Trip to Raptors, MNH, IRRI
5:00 - 6:30	DINNER
6:30 - 7:30	Workshop 7: Environmental Action Plan & Community Building Dr. Zenaida N. Sierra & Prof. Leticia E. Afuang

**Day 4**

**September 13, 2002**

8:00 - 9:30	Teaching Demonstration in Science Ms. Cynthia O. Cajano Tiyani National High School
9:30 - 10:30	Teaching Demonstration in English Ms. Mira Mijares Los Baños Central School
10:30 - 10:45	BREAK
10:45 - 12:00	Final Preparation of Workshop Outputs
12:00 - 1:00	LUNCH
1:30 - 3:30	Presentation of Output: EAP, Community Plan
3:30 - 4:00	Evaluation and Planning for Monitoring
4:00 - 5:00	Closing Program

**VI. THE TEACHER TRAINING UNDERTAKINGS**

**A. Opening Program**

**Welcome Address**

**By Dr. Corazon Lamug, Dean – College of Arts and Sciences**



Dr. Lamug's message was a warm welcome and an earnest anticipation for an enjoyable and fruitful week for the participants. She congratulated them for being residents of the rich and diverse island of Polillo, and making them the fortunate participants for the training. She also commended the FEED Team members for being able to spare time for the special training despite the load of work that they have to accomplish in their offices. Finally, she wished everyone the best experience through the weeks' activities and challenged them to be good learners so that they can be more effective teachers when they return to their communities.

### **The Teacher Training Program in Perspective**

**By Dr. Rita P. Laude**

The teacher's training program on environmental education was conceived with the dictum that education is the key to solving environmental problems. As early as the late seventies, the Environmental Science Education Program was created with the aim of incorporating creative and innovative strategies into high school and elementary levels in various subjects. In 1993 the module "Teacher Training on The Use of Communication Strategies in the Integration of Environmental Education into the Curriculum" was developed by a group from several institutes of the Colleges of Arts and Sciences as part of the Southern Tagalog Studies Program. From then on, a series of trainings has been conducted almost every year, making this latest training 11<sup>th</sup> in the series. Beneficiaries of the trainings included schools from Laguna, Batangas, Rizal, Mindoro, Cebu and Samar. Dr. Laude underscored the importance of understanding the concepts of environmental science and inculcating them in the young minds of the children who are the heirs of these natural treasures. The teachers are the best channels and instrument in guiding the children to protect, nurture and love the environment.

### **Recognition of Guests and Participants**

The training was well attended by sixty (60) participants and guests teachers coming all the way from Polillo Group of Islands in the province of Quezon. It was held at the CAS Gallery 2, UPLB, College, Laguna on September 10-13, 2002. Fifty one teacher participants completed the four-day training wherein three (3) are college instructors, twenty (20) high school teachers, 25 elementary school teachers and three (3) elementary head teachers. The school heads and principals attended only the first day of the training. The participants came from ten (10) different elementary schools, eight (8) high schools and one (1) college located in six municipalities of Quezon, namely: Polillo (29) , Panukulan (8), Jomalig (5), Patnanungan (7), Sabang (7), and Burdeos (4) ( ( Annex 2 ).

The special guests from the Department of Education were Dr. Azucena O. Romulo, School Division Superintendent for Quezon.

## **Summary of the Inspirational Message of the School Division Superintendent - Region IV**

By Dr. Azucena O. Romulo

Dr. Romulo started with her message by sharing some lines from a song entitled “Nasa Atin ang Panahon”. The lines pertain to the preparation of a better tomorrow and a prosperous world for our children, for time and hope is in our hands. She shared those lines because she wanted the participants to be always reminded of the great responsibility in their hands to prepare the children.

Dr. Romulo expressed her sincerest and wholehearted gratitude for choosing the teachers of Polillo Island be a part of this training concerning the environment. She herself did not realize the richness and wealth of Polillo Island in terms of its biodiversity and other natural resources before it was featured in one of the television networks. Thus, the invitation from UP Los Baños did not come as a surprise. She was so grateful with the UPLB team for their warmth and hospitality. She expressed her appreciation in behalf of the Department of Education, with a big “THANKS”

She continued with words of challenge for the teachers of Polillo. “The rich natural resources bestowed upon the island of Polillo support and sustain the locals. As teachers, it is their role to inculcate in the students the deep sense of responsibility to care and nurture the environment, and most of all to protect it. It is indeed, a challenge to make a difference in the life of the children especially in Polillo”.

### **Guidelines and Expected Output of the Training Course**

Dr. Zenaida Sierra emphasized the importance of technical strength and effective communication in imparting to the children environmental concerns. She mentioned that there will be different communication and group-oriented strategies that will be used during along aside with specific lectures on environmental issues and concerns. Part of the training includes preparation of action plans which are eventually implemented in their communities and schools.

Expected accomplishments at the end of the training course:

1. New and additional knowledge learned
2. Vision and/or plan for the local communities as they would like to see in the next five or ten years

### 3. Environmental Action Plan Project Proposal

Follow-up activities after the training course (for monitoring) include the following:

1. Implementation of action plans and knowledge learned
  - Echo seminar
  - Integration/infusion of environmental issues and concern in classroom lessons
  - Environmental Action Project
2. Submission of report on project implementation and impacts of project activities on students and community.
3. Sharing of experiences
4. Monitoring of Project Activities by trainers (field visitation)
  - a. Classroom observation
  - b. Visitation of Environmental Action Plans
  - c. Teacher's semestral report

### **State of the Environment: Polillo Island Biodiversity**

By Mr. Vicente Yngente

Mr. Vicente Yngente became a Polillo Island Biodiversity Steward since 1998. Mr. Yngente informed the group that before becoming a steward, he was formerly a hunter. He explained that his former job made it difficult for him at first to encourage people to protect the wildlife or stop the locals from hunting and other illegal activities in the area. Nevertheless, he was not disheartened to continue with his new job as he discovered the uniqueness of the island. He mentioned a variety of birds and other wildlife endemic to Polillo Island such as the Polillo Island Tarictic Hornbill (*Penelopides manillae subnigra*), Siloy o Polillo White-browed shama (*Copsychus luzoniensis parvimaculatus*), bats, "butaan", frogs (Polillo Forest Frog) among others. The birds are tame and their number has been increasing. A place called Pinaglubayan according to him, is the best place in the island for bird watching. Another is the Minasawa Birds Island, where birds and bats are survived complementarily. The birds use the island as a roosting place or sanctuary at night and look for food at daytime, while the bats hunt for food during the night and roost during the day. The recent studies and efforts to protect Polillo have raised global concern and many people are now getting interested in visiting and knowing more about Polillo Island. Campaign for wildlife conservation is also getting stronger and people are getting the message. He encouraged his fellow Polillians to actively participate in protecting and conserving their biodiversity. The teachers, he believed will be of great help because they are the best instrument in instilling to the children the love for their environment.

## **B. The Training Proper**

### **1. Lectures**

The lectures consisted mainly of basic concepts, principles, issues and concerns on the environment. Biodiversity and specific environmental issues concerning Polillo were among the important and interesting topics taken-up. Teaching demonstrations in English and in Science were also included to familiarize the teachers with the entry points and innovative strategies used to integrate environmental topics.

Prof. Gene Navera discussed the topic on the Power of Communication. The importance of communication in everyday life was pointed out. He said that it is impossible for man not to communicate. He also mentioned ways by which communication can be effective in order to maximize its potential in achieving its goals.

Dr. Z. Sierra introduced the participants to ecological and environmental subjects. She discussed the basic concepts and principles dealing with the proper functioning of the ecosystem. She emphasized the presence of interdependence of the various components of the environment. Likewise, she stressed that all the biotic relationships among living organisms such as mutualism, parasitism, commensalisms etc. are symbiotic --- whether the relationship benefits both or only one of the organism. She also reminded the group that man is part of the environment; hence he should be wise in using his resources.

The different types of ecosystem specifically the aquatic and the forest ecosystem were discussed in detail. Prof. Torreta tackled the general knowledge concerning the marine and fresh water environment. She then focused on the faunal diversity found in the Philippine waters. Some slides of interesting flora and fauna were also shown to support the discussion. On the other hand, Dr. N. Baguion presented the forest ecosystem. He discussed the general characteristics of a tropical rainforest by its distinct layers and the trees dominating each layer. Examples of trees endemic to the Philippines were also given.

The lecture on wildlife biodiversity by Ms. Mimi Ledesma was one of the most interesting topics for the participants. Ms. Ledesma showed colorful pictures of wildlife, mostly endemic to Polillo Island. Shown were rare and endangered species of birds, bats, frogs and other kinds of reptiles and mammals. For most of the participants, this was the first time that they became aware and informed with the richness and uniqueness of the wildlife found in the Island of Polillo.

Prof. Leticia Afuang continued to enrich the knowledge and awareness of the participants with her topic on biodiversity in general. She pointed out the values and importance of biodiversity. Research data were also shown on how biodiversity is exploited and lost at an alarming rate. Prof. Afuang informed the group that, while the Philippines is proud to be a “megadiversity”, or one of the world’s 17 areas with the highest biodiversity, it is also distressing to be considered as one of the 25 of the world’s “hot spot” which means that the biodiversity of the area is seriously under alarming threat. All the major international conservation agencies and data centers all agree that the Philippines is one of the two or three highest countries in the world for conservation concern and action. And the degrees of threat and numbers of endemic taxa in the Philippines is also much higher than even in these other highest priority countries. In addition, the Polillo Island are the most distinct subcentre of endemism within the Southern Luzon Faunal Subregion – itself one of the world’s 10 conservation priority areas in terms of both degrees of threat and numbers of threatened endemic species represented.

The topic on the Philippine Agricultural Practices was provided by Dr. S. Medina highlighting the issues and concerns as well as the possible remedies. Emphasized in his lecture is the contribution of farming activities such as the use of hazardous and toxic pesticides and excessive fertilizers in threatening biodiversity and pollution of the environment. He also mentioned the highly controversial issue on the use of genetically modified organisms (GMOs) worldwide. Nevertheless, he did not fail to point out environment-friendly agricultural practices that may be followed to avoid destructive effects to the environment.

Though Environmental Ethics seems to be relatively something new for the participants, Prof. M.T. Payongayong’s thorough explanation of the different worldviews regarding the environment, has made it clear that it has existed as early as the existence of man. The views provided the rationalization and the guiding principles by which man has acted towards his environment. Moreover, the lecture made the participants realize the importance of caring for the environment.

Waste management is a growing concern in which everyone needs to get involved. Ms. M. Sobremisana reiterated during her lecture the negative environmental effects of indiscriminately dumping and burning waste. She suggested several options and combinations by which every individual can contribute in reducing his waste. According to her, the Integrated Solid Waste Management system is one of the most efficient if properly implemented and well supported.

## **2. Teaching Demonstration**

Experiences in integrating environmental conservation in Science were demonstrated by Ms. C. Cajano. According to her, she initially encountered some problems and difficulties in integrating environmental concerns in teaching Science. This did not stop

her, however, in finding innovative means of including the topic in doing her teaching job. Part of her teaching demonstration was showing pictures of natural and man-made environment wherein she asked the students to identify which picture is natural or man-made. In relation to the activity already mentioned, a video was shown to further enhance the student's environmental awareness. Another exercise was performed by dividing the class into several groups. Each group was given a box containing materials and the instructions on what the group is going to do. The instruction was to role play a certain environmental situation e.g. causes of: forest denudation, wildlife extinction, soil erosion, eutrophication, and marine ecosystem destruction. At the end of the activity, each group was asked to list down all the causes they can think of. As a finale, the teacher again showed a picture of a grim future if no action to save the environment is taken.

Another teaching demonstration in English was given by Ms. M. Mijares. It was not in a form of actual classroom situation but instead a lecture was delivered and supported with examples. Ms. Mijares was able to share her experiences with the participants by preparing a sample lesson plan. In English, she pointed out that integration can be done by choosing stories or issues on environment. She suggested the use of communication strategies that can easily be followed or done by the students ( Please see attached sample lesson plan and a selection in Annex 1 ).

### **3. Workshops**

#### **3.1 *Communication Strategies***

The workshops served as the "hands on" part of the training. They were designed for the teacher trainees to fully grasp and understand the tools, techniques and strategies that can be used during actual classes. The participants were requested to take part in all the activities to experience which of the communication strategies are most enjoyable and effective for a specific subject matter. Then, the communication strategies used were assessed according to its applicability, ease by which the students will be able to perform and possible problems that may be encountered. Also included was the integration in the curriculum activity in which the participants were instructed to identify entry points where environmental topics can be incorporated.

The first workshop session was a *group dynamics* facilitated by Dr. Z. Sierra. The objective was to assess and increase the ability of the participants to analyze and interpret a particular environmental condition. There were six cases from which each group was assigned to analyze and the following were entitled:

1. Pounding of rice
2. The boy scouts and the old woman
3. The swing
4. The fishes

5. Farm Work
6. The candle

All of the groups were able to give their own interpretation and critical analyses. Dr. Z. Sierra stated that in fact, there is no right or wrong interpretation but there can be the best analysis. However, what counts is the ability to give interpretations for a certain environmental situation as correct as possible. This activity also measured the level of environmental awareness of the participants.

Another exercise was the *information relay* which the group also enjoyed. The participants were divided into three groups. Then a message given by the facilitator was passed among the group members through whispering until it reaches the last person. The last person was asked to write the received message.

The result showed that the message has become distorted when it reaches the last person. Some words were added or omitted from the actual message. This exercise teaches that as a medium of information, one should really be careful in receiving and at the same time passing the message.

There were several communication strategies introduced during the workshop. Each has its own strength as a tool to integrate environmental issues and concerns into the teaching of various subjects. The observed weaknesses or possible problems associated with them were also discussed. Any modifications on the chosen communication strategy to be applied in order to be more effective were also recommended.

The *Paint Me a Portrait* is one of the most popular strategies used. The participants were divided into six groups. Then the facilitators instructed them to portray first, the World Trade Bombing and secondly, the Mt. Pinatubo Eruption. A group member was asked to explain the role played by each of the characters. For each case, group winner/s was declared.

This strategy brings out the innate creativity and discovers the level of knowledge and awareness of the members on environmental issues and concerns. It also increases the knowledge and awareness of other members and observers. According to the participants, this strategy is effective in achieving its objective. It is enjoyable and it can also encourage everybody to participate. Because it is a group effort, it can possibly encourage shy students to cooperate and do their act.

In the *Back Writing*, the participants were asked to form a big circle. A clean sheet of paper was attached at the back of each participant wherein the next person can write his suggestion regarding a particular environmental concern such as sanitation. What ever is written at their back will also be read by them. They will be encouraged to keep and follow the advice.

This exercise also increases the student's awareness and influences them to think of something worthy to contribute in the cleanliness of the environment. Immediate

environmental concern they particularly observed in the community will be brought out. Some suggestions on certain modification were mentioned by the facilitators such as writing a particular unsanitary habit observed in the student. However, the teachers were warned that they should inform the students not to take the comments seriously given that it is only a classroom exercise.

The aim of the **Rank Order** strategy is to train the students to make value judgements in accordance with their conviction regarding a given environmental issue. It also develops the ability of the members to work harmoniously within the group. During the exercise, the participants were instructed to rank who is the most contributor to environmental degradation. After some discussions among the group, the given choices were ranked according to their perception and were asked to explain. In this exercise, there is no correct or wrong answer because it depends on the existing condition of a certain place as observed by the people. The important issue here is for students to be able to rationalize their ranking.

From the point of view of the participants, the strategy is also an effective means of expressing the opinion of others especially for those who joined. Nevertheless, the observers can still be encouraged to participate by asking for their opinions. The participants also commented that in this exercise, only the fast learners and active students tend to participate. However, according to them, others can be encouraged to participate as long as there is a careful selection of topics.

The **Pick Your Choice** is almost similar to the rank order in terms of its objective. It uses the ability of the students to make value judgement and make a decision. There are four given choices to make regarding an environmental issue:

#### **Agree, Disagree, No Opinion and I Don't Care.**

The sentences used during the exercise were the following:

- 1) GMA is a good president.
- 2) The nuclear power plant in Bataan will solve our problem on power.

The participants' commented that: 1) it can also be used in all levels depending on the topic 2) it is enjoyable and lively 3) there is also no correct or wrong answer depending on how the students were able to justify their answers.

As the title of the strategy implies, the **Strings Attached** uses a string to indicate the interdependency/interrelationship of things. There are many topics which can be used for this strategy such as the importance of water, food chain, survival, ecological relationship, cause and effect of pollution and others.

The participants' reactions regarding the strategy were the following;

1. It is interesting
2. It is simple and straightforward to show the interrelationship of things (cause and effect)



3. It is an easy way to understand, remember and learn about environmental issues.

The only possible problem seen is classroom management which can be easily remedied.

In order to illustrate the topic on adaptation with the objective of survival, the *Creating A New Species* strategy would be appropriate. In this case, the participants formed into groups were asked to draw an animal species with the following characteristic:

- Legs: either very tall or short
- Teeth: either flat or sharp
- Skin: either covered with fur or scales
- Feet: either webbed or clawed

The size, the color, the number of teeth, legs and feet are left to the imagination of the participants.

The challenge from this activity is to remain standing after the facilitator introduced environmental changes. These changes affect the chances of survival of the species. There were three sets of changes such that one can always have a second or third chance of survival.

Changes can be:

First set:

- 1) All the prey of the new animal die from a disease, thus resulting in the death of all predators with sharp teeth.
- 2) Overgrazing – the level of the grass is going down, only animals with short legs will survive.
- 3) Overgrazing resulted in finding new vegetation. New species should have claws to climb trees to find new source or food.

Surviving species: with flat teeth, short legs and sharp claws.

Second set:

- 1) Predators invaded the habitat of the new species. The new species should possess features that will enable it to escape the predators.
- 2) The new species and the predators compete for shelter. The new species should have a body covering that will enable it to survive even with little shelter.
- 3) There is also a competition for food hence, only the animal with sharp teeth will survive.

Surviving species: with long legs, fur and sharp teeth

Third set:

- 1) The environment warms because of global warming.
- 2) Since the environment is warming, flooding is a problem.
- 3) Flooding results in habitat destruction. The new species travel far to find a new habitat.

Surviving species: with scales, longlegs and webbed feet.

The participants from Polillo were very creative and thus able to draw three surviving species named: *Fishmantis taluongingsis*, *Bisabasis polillianesis*, *Repmalnes burdeninses*.

The activity is observed to be an excellent way to develop the creativity of the students. It is a good exercise to increase the ability of the students to follow instructions. It also fosters cooperation among the group members as they try to contribute ideas on how the species should look like. However, it has also the tendency to limit the participation only to students who are very good in drawing. Others tend to be on-lookers only. It was also pointed out that observing and analyzing the output of others is also a learning process.

The ***Sound Scaping*** allows the participants to interpret the song they have listened to by drawing a picture. In this workshop, the song entitled “Nasa atin ang panahon” was chosen. Then each group was asked to explain their drawing.

Again, soundscaping brings-out the creativity and ingenuity of the participants. Although some similarities were found since there was only one song interpreted, there were still several expressions in the drawings. The trainees also found this strategy as a way of reflecting the values and tradition of the community towards their environment.

### **3.2 Community Building and Environmental Action Plan**

Community building is a workshop that challenges participants to envision their desire for the condition of their communities in the future. This was accomplished through an imaginary travel through Polillo Island, describing the present condition of the community and then writing down the possible changes and improvements that they would like to see within a given period (vision). The difference between the present condition and the vision then serves as the challenge for the participants to identify specific activities that they can undertake to achieve their vision.

The Environmental Action Plan (EAP) is the connecting link between the present condition and the vision. It is a specific way towards the achievement of the vision. The participants are grouped into geographical zones that ensure closer interactions among the group members.

The EAP is also one of the concrete documents in which the participants will be monitored and evaluated by the trainers. The teacher trainees are expected to implement the EAP in their respective schools and communities.

The EAP's presented are listed below ( Annex 4 for details):

Zone/School	Project Title
1. Bordeos District	Bordeos River Conservation
2. Patnanungan District ( Patnanungan Elem.& High Sch.)	Save Patnanungan Marine Life & Wildlife Ecosystem
3. Jomalig District (Talisoy Nat'l. H.S., Jomalig Central Elem. Sch.)	Jomalig Sagip Dagat
4. Panukulan District (Panukulan Central Elem. Sch. & San Juan Nat'l. H.S.)	Panukulan Forest Steward
5. Polillo 1: Sibulan & Polillo Communities (Southern Luzon Polytechnic College, Sibulan Elem. Sch., Polillo Nat'l. H.S. and Polillo Elem. Sch.)	Polillo Water System Rehabilitation
6. Polillo 2: Bislian-Sabang Communities (Sabang Elem. & H.S. Sch., Bislian Elem. Sch.)	Bislian-Sabang Folk Ways Modification
7. Polillo 3: Taluong Community (Taluong Elementary and High School	Save Life, Safe Environment

### ***Comments and Suggestions for the Environmental Action Plan***

After each presentation, Dr. Z. Sierra, Prof. Torreta and Prof. Afuang made some comments and suggestions for the improvement of the EAP. Dr. Sierra congratulated the group for their excellent output and the active participation of everyone. Special awards were given to the Best Presentation (Polillo 1), Best EAP Workability and Specificity (Panukulan Steward) and the Best Presentor (Ms. Leonora Mopera).

The teachers showed they have a grasp of the environmental situation of their area and proposed certain actions to meet the problems. Some of their best points were as follows:

- Some districts were able to provide sufficient and good background presentation even if there were little supporting materials available.

- Most of the activities specified were realistic and doable.
- There were activities mentioned that encourage sectoral/community participation.
- Some districts were able to provide specific activities.
- There were good and unique visual presentations.
- The plans were addressing specific environmental problems in the area.
- Some groups have identified the need to involve other sectors ( LGU, civic and religious organizations) of the community.

Some improvements needed in the proposals are as follows:

- Make activities fun and interesting to motivate more participation
- As teachers, encourage activities that can easily be done in the school, then reach out to the community.
- More specific and concrete plans to be identified.
- Necessity for information dissemination

The EAP of each of the participating district are attached in Annex 4.

#### **4. Field Trip**

The participants were toured to the Makiling Botanical Gardens to enjoy and experience being with nature. They hiked through the forest until they reached the Philippine Raptors to have actual sight of the Philippine eagle and other birds indigenous to the Philippines under captive breeding. The next destination was at the Museum of Natural History where they observed the diversity of life forms in the Philippines..

They also went to the International Rice Research Institute to view the exhibit displayed at the Rice World. They were oriented with the different rice varieties being cultivated in the rice growing countries.

#### **5. Exhibit**

The UPLB team also exhibited some collection of photos and posters on biodiversity mostly endemic to the Philippines. Some of the selections were photos of wildlife endemic to the Polillo Group of Island. The exhibit was very informative and it has promoted awareness on the uniqueness of the Philippine biodiversity and the Polillo Island.

#### **6. Closing Programme**

A short closing programme was prepared by the trainees. It was the chance for the trainees to show their special talents and entertain the organizers. A special number, interpreting a song entitled “Nagtitiwala ” by the two talented daughters of Prof. L. Afuang touched the audience.

Dr. Asuncion K. Raymundo, Director, IBS , was also invited to give a message to the participants.

### **Summary of the Message by Dr. Asuncion K. Raymundo**

Dr. Raymundo expressed her happiness for the eagerness and enthusiasm of the trainees. She hoped that the participants have enjoyed their stay in UPLB and learned what they have expected from the training. Dr. Raymundo also encouraged the participants to apply what they have learned when they go back to their respective schools and communities. She reiterated that as teachers, they will have a major role in imbibing in the children of Polillo the respect and love for the environment. Now that they are more equipped after the training, it will be good if multiplier effect works. Let the others she said, learned what we have learned from the training.

She also commended the effort of the CAS-UPLB team on Environmental Education for a job well-done. She also encouraged the organizers to continue with their effort.

## **VII. PHOTO DOCUMENTATION**

*(N.B. captions of photos in final report - scanned copies as yet unavailable – as follows):*

1. The participants, guest and FEEDStaff posing for a group picture on the first day of the training.
2. Another smaller group picture of participants with the coordinators
3. School principals posing with Prof. L. Afunag, co-project leader, and Dr. A. Romulo, school division superintendent.
4. Participants crowding Prof. Afuang during the registration day
5. Dr. Corazun Lamug welcoming the trainees to UPLB
6. Dr. Rita P. Laude providing the project perspective
7. Dr. Azucena O. Romulo delivering her message and challenging the trainees
8. Polillo Warden Mr. Vicente Yngente sharing his knowledge on biodiversity with his townmates
9. Dr. Z. N. Sierra giving the training guidelines and expected output
10. Prof. G. Navera discussing the Power of Communication

11. Dr. Sierra lecturing on the “Environment”
12. Prof. Torreta focusing on “Aquatic Ecosystem”
13. Ms. Mimi Ledesma showing the Polillo Biodiversity during her lecture.
14. Dr. Baguinon discussing the “Forest Ecosystem”
15. Prof. Afuang in action challenging participants on Wildlife Conservation
16. Dr. S. Medina giving a lecture on Philippine Agricultural Practices
17. Prof. T. Payongayong discussing the topic on “Environmental Ethics”.
18. Ms. M. Soremisana lecturing on “Waste Management”.
19. The participants’ brainstorming with their groupmates about an environmental situation
20. Participants portraying a situation during the Paint Me A Portrait exercise
21. The trainees in action during the Back writing activity
22. Prof. L. Afuang facilitating the Strings Attached Strategy
23. Dr. Z.N. Sierra providing instructions at the workshop for Identification of Entry Points for Integration
24. Participants doing the group dynamics during the teaching demonstration exercise
25. Participants attentively listening to the lecture series. At the background is the photo exhibit on biodiversity.
26. One of the after dinner workshops with Prof. L. Afuang facilitating the discussion on the EAP.
27. Each of the groups are busy preparing their EAP.
28. The Closing Program prepared by the participants
29. A special interpretative dance number by the talented daughters of Prof. L. Afuang.
30. Members of the Jomalig District showing their special talents.
31. The Jomalig District proudly wearing their T-shirt printed with the Polillo Forest Frog
32. The Panukulan District posing with their drawing of the EAP at the background.



## VIII. ANNEXES

### Annex 1

#### A Sample Lesson Plan in English V Using Communication Strategies in the Integration of Environmental Education

OBJECTIVES	EDUCATIONAL STRATEGIES	EVALUATION	REMARKS
<p>I. 1. Spell words with a double consonants.</p> <p>2. Produce /z/ and /s/ sounds effectively.</p> <p>3. Identify adjectives used in sentences.</p> <p>IX. Use adjectives correctly.</p> <p>X. Demonstrate through creative expressions the various environmental problems and catastrophies.</p> <p>XI. Be aware of the causes of these environmental disasters through brief verbal</p>	<p><b>III.A. Opening Activity</b> Song/Poem</p> <p><b>B. Spelling</b> (Words with double consonants)</p> <p>occasion    arrange across      commit tomorrow    attain usually      suffer assign        differ</p> <p><b>C. Review</b> Read these sentences. Underline the nouns. 1. Man is not the center of creation. 2. We depend on plants for food. 3. Trees are very useful to man.</p> <p>Presentation of the Language Lesson</p>	<p>Underline the adjectives in the following sentences.</p> <p>1. Long time ago, there were overflowing stream of clean water that ran down the deep oceans.</p> <p>2. The sea was teeming with small and big fishes.</p> <p>3. There was pure atmosphere and rich vegetation.</p> <p>4. Plenty of animals roam around the verdant forest.</p> <p>5. There were beautiful flowers and tall, green trees standing strong.</p>	<p>---- out of reached mastery learning level</p>



<p>explanation after the activity.</p> <p>7. See how the different effects of forest denudation are interrelated to one another i.e. each one is caused by each other.</p> <p>8. Realize that all the effects of forest denudation will actually fall on man himself.</p> <p>Values: Forest Conservation</p> <p>II. Subject Matter</p> <p>A. Spelling : words with double consonants</p> <p>B. Speaking : Adjectives</p> <p>C. Pronunciation Drill:</p> <p>D. /z/ and /s/ sounds</p> <p>E. Reading: Trees</p> <p>Skill: Cause-effect relationship</p>	<p><b>1.Motivation</b></p> <p>Have you gone tree planting? Why do you go tree planting?</p> <p><b>2. Presentation</b></p> <p>Read the paragraph. Identify the nouns.</p> <p>One nice, warm Saturday, Francis joined his with classmates in tree planting. He put on his old clothes and his big, brown hat. It was a warm, sunny day. Francis sat under a big tree to rest. After an hour, he got his small bolo and started to plant ten, healthy,young trees.</p> <p>3. Discussion about the paragraph read.</p> <p>4. Comparison and Abstraction</p> <p>What word/s describe the noun Saturday, clothes, hat, day, tree, bolo, trees?</p> <p>Read this sentences. Encircle the nouns used and underline the adjectives.</p> <p>1. Tall trees stood in the mountain with pride.</p> <p>2. Flock of beautiful birds flew swifly in the fresh clean air.</p> <p>3. Illegal loggers cut down even the young trees.</p> <p>The underline words are called adjectives.</p>	<p>Read the sentences carefully. Underline the cause <u>once</u> and the effect <u>twice</u>.</p> <ol style="list-style-type: none"> <li>1. When forest is burned, the animals that live there lose their homes.</li> <li>2. Because of greed and unwise use of our forest resources, few tree regulate the flow of water.</li> <li>3. When heavy rains and strong typhoons come, flash floods and erosion occur.</li> <li>4. Homes and farms are destroyed when flash floods and erosion occur.</li> <li>5. If we are not going to take care of our environment, especially our forest, there will be no enough food to feed</li> </ol>	
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	<p><b>5. Practice exercises</b> Choose an adjective in column A that will best describe any noun in column B. Use it in a sentence.</p> <table border="0" style="margin-left: 40px;"> <tr> <td style="padding-right: 20px;">A</td> <td>B</td> </tr> <tr> <td>dirty</td> <td>water</td> </tr> <tr> <td>industrious</td> <td>surrounding</td> </tr> <tr> <td>young</td> <td>children</td> </tr> <tr> <td>clean</td> <td>trees</td> </tr> </table> <p><b>6. Generalization</b> What are adjectives?</p> <p>7. More practice</p> <p>Underline the adjectives in the following sentences.</p> <ol style="list-style-type: none"> <li>1. Trees give fresh air.</li> <li>2. It's nice to feel the cold morning breeze.</li> </ol> <p><b>Reading Lesson</b></p> <p>A. Pronunciation Lesson /z/ and /s/ sounds</p> <p>B. Vocabulary Development</p> <ol style="list-style-type: none"> <li>a. Find a word that fits in the following sentences: <ol style="list-style-type: none"> <li>1. Trees ___ water through their roots.</li> <li>2. Forest trees ___ the flow of water.</li> <li>3. The roots of the tree hold the soil to prevent _____.</li> </ol> </li> </ol>	A	B	dirty	water	industrious	surrounding	young	children	clean	trees	<p>the world and enough land to house families.</p> <p><b>Assignment</b></p> <p>Write a short paragraph about:</p> <p>What can I do for the Environment.</p> <p>Use adjectives in writing your paragraph.</p>	
A	B												
dirty	water												
industrious	surrounding												
young	children												
clean	trees												

	<p>4. Illegal logging is ____.</p> <p>5. Illegal loggers cut down tree ____.</p> <p>6. ____ is the excessive cutting down of trees.</p> <p>excessively erosion rampant regulate deforestation absorb</p> <p>b. What word can you associate with erosion?</p> <p><b>Skill Development</b> Determine the cause-effect relationship e.g. When the forest are burned, the animals that lived there lose their homes.</p> <p><b>Application</b> What can we do to help prevent and conserve our forest resources?</p>		
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## TREES ---- WHAT HAS MAN DONE TO YOU !

Trees are one of the most important things on earth. Trees give us food, clothing and shelter. Medicine also comes from some trees and plants.

Trees absorb water through its roots and send out water vapor through the leaves thus making the air around us much cooler.

Forest trees regulate the flow of water and keep our rivers and streams supplied with ground water all year round. They also prevent excess water from forming into floods which destroy homes and farms. The roots of trees hold the soil to prevent erosion.

But what happened to our forest now? Many of our forests have been burned by *kaingineros*. When the forests are burned, the animals that live there, lose their homes. Illegal logging is also rampant. Illegal loggers cut down trees excessively without replacing them with new ones. Because of greed and unwise use of our forest resources, few trees regulate the flow of water. Few trees prevent excess water from forming into floods. Few trees hold the soil to prevent erosion. When heavy rains and strong typhoons come, flash floods and erosion occur. Homes and farms are destroyed. Animals and people die. What will happen to the next generation of mankind. Will there be enough food to feed the world and enough land to house families that are increasing at an alarming rate? Who is to blame? Is it I, you or all of us?

## Annex 2

### Teacher Training on Environmental Education Polillo Island Biodiversity 10-13 September 2002

#### Participant and Guest Directory

NAME	SCHOOL/ADDRESS	POSITION	MAILING ADDRESS
AGUSTIN, Arcy M.	Polillo NHS Polillo, Quezon	Teacher 1	Polillo NHS
ALGOZO, Rosalinda	Burdeos Central Sch. Burdeos, Quezon	MT -1	Burdeos, Quezon
ALMIRAÑEZ, Nenita M.	Sibulan Elem. Sch.	ES Principal 1	34 Mabini St., Polillo, Quezon
AÑONUEVO Carmelita M.	Patnanungan Elem. Scholl	Teacher II	Poblacion, Patnanungan, Quezon
AVENILLA, Lucita R.	Burdeos Central Sch.	EG Teacher III	Poblacion, Burdeos, Quezon
AVELLANO, Julianita V.	Libo NHS Panukulan	Teacher III - TIC	Libo, Panukulan, Quezon
AVENILLA, Luz P.	Bislian Elem. Sch.	EGT	Brgy. Bislian, Polillo, Quezon
AYUMA, Elmer R.	Patnanungan NHS Polillo, Quezon	Teacher I	Poblacion, Patnanungan, Quezon
AZARIAS, Bienvenida S.	Taluong NHS, Polillo, Quezon	SST	Brgy. Taluong, Polillo, Quezon
BENAVENTE, Levelie B.	San Juan NHS Panukulan, Quezon	SST- I	San Juan NHS Panukulan, Quezon
BLANCO, Ethel B.	Polillo NHS Polillo, Quezon	SST- I	Polillo NHS Polillo, Quezon
BUELA, Jesusa N.	SLPC Polillo Campus Polillo, Quezon	Instructor I	202 Joel Subd., Iyam, Lucena City
CORONACION, Mila C.	Libo NHS Panukulan, Quezon	SST- II	Libo NHS Panukulan, Quezon
CALLEJO, INES D.	Patnanungan NHS Patnanungan, Quezon	SST-I	Poblacion, Patnanungan, Quezon
CULATA, Zenaida T.	Sabang NHS	SST- I	Sabang, Polillo, Quezon
DAMASO, Dorena I.	Sabang Elem. Sch.	ES Head Teacher-I	Sabang, Polillo, Quezon
DELGADO, Belen E.	Patnanungan Elem. Sch.	Teacher -I	Brgy. Poblacion, Patnanungan, Quezon
EBIO, Rhodora E.	Panukulan Elem. Sch.	EG Teacher-I	Poblacion, Panukulan, Quezon
IGLIANE, Darwin P.	Jomalig Central ES	EG Teacher-I	Brgy. San Isidro, Atimonan, Quezon
JURADO, Geraldine M.	Bislian Elem. Sch.	EG Teacher-I	Bislian, Polillo, Quezon
LAPUZ, Mary Grace T.	Sibulan Elem. Sch.	EG Teacher-I	Hernandez St., Polillo, Quezon
LAZADO, Jesus V.	Jomalig Central ES Jomalig, Quezon	Principal/Dist. OIC	Jomalig Central ES Jomalig, Quezon

LEON, Marites P. de	SLPC, Polillo Campus Polillo, Quezon	Instructor I	SLPC, Polillo Campus Polillo, Quezon
MACARAEG, Reynita U.	Polillo Elem. Sch.	MT II	61 Bonifacio St., Polillo, Quezon
MACARAIG, Noel S.	Taluong NHS Polillo, Quezon	Teacher I	Taluong NHS Polillo, Quezon
MALUBAY, Lorelie c.	Sabang Elem. Sch.	Teacher I	Brgy. Sabang, Polillo, Quezon
MANIPOL, Mercedita P.	Panukulan Elem. Sch.	EG Teacher I	246 Stall #9, Sta. Teresita St., Sampaloc, Manila
MANUEL, Rafaela M.	Taluong Elem. Sch.	Teacher 1	Brgy. Taluong, Polillo, Quezon
MARTINEZ, Amparo D.	Bislian Elem. Sch. Polillo, Quezon	Teacher-I	Bislian, Polillo, Quezon
MELENDREZ, Nerita A.	Patnanungan NHS Polillo, Quezon	SS Principal	Patnanungan, Quezon
MITRA, Estelita S.	San Juan NHS Panukulan, Quezon	Teacher-in-Charge	San Juan NHS Panukulan, Quezon
MOPERA, Leonora I.	Taluong Elem. Sch.	TIC	Blk. 1, Lot 3, Malubay Subd., Polillo, Quezon
ORAJAY, Benedict E.	Talisoy NHS Jomalig, Quezon	SST- I	Levy's Apt., Banahaw II subd., Lucban, Quezon
ORIGENES, Juanita R.	Patnanungan NHS Patnanungan, Quezon	Teacher-I	Patnanungan NHS Patnanungan, Quezon
PARALE, Jesson r.	Sabang NHS	SST-I	#20 P. Burgos St., Polillo, Quezon
PAROAN, Edsel P.	SLPC Polillo Campus Polillo, Quezon	Instructor I	A Mabini St.(Kastilyo Rd) Lucban, Quezon
PEÑAMANTE, Maria Christy P.	Taluong Elem. Sch.	Teacher-I	Brgy Anawan, Polillo, Quezon
PUCHERO, Efren E.	Polillo Elem. Sch.	EG Teacher- I	#25 Hernandez St., Polillo, Quezon
RAMALLOSA, VIDELFINA A.	Polillo Central ES	District Supervisor	Real, Quezon
REGIDOR, Pablito S.	Judith NHS Burdeos, Quezon	SS Teacher-I	Judith NHS Burdeos, Quezon
REGODON, Ligaya C.	Patnanungan Elem. Sch.	Elem. Head Teacher-III (OIC)	Macopa St., Calmar Homes, Lucena City
ROMULO Azucena O	DepED, Quezon	Divison School Superintendent	DepEd- Region IV, Lucena City, Quezon
RUTAQUIO, Myrna P.	Libo NHS Panukulan, Quezon	Teacher-I	Libo, Panukulan, Quezon
RUIZ, Consolacion R.	Bislian Elem. Sch.	Head Teacher	Malubay, Subd, Polillo, Quezon
SALVOSA, Pedro M.	Polillo Central ES	NFE/Boy Scout Coord.	11 Bonifacio St., Polillo, Quezon
SALVOZA, Lydia P.	Polillo NHS Polillo, Quezon	SS Principal	Polillo NHS Polillo, Quezon
SANTOS, Nympha P.	Polillo NHS Polillo, Quezon	SST- I	Polillo NHS Polillo, Quezon

SOLLEZA, Ladel L	San Juan NHS Panukulan, Quezon	SST-I	San Juan NHS Panukulan, Quezon
SOLTURA, Felicidad Eden C.	Taluong NHS	SST-2 -TIC	Brgy. Taluong, Polillo, Quezon
SOLTURA, Norminda C.	Sabang Elem. Sch. Polillo, Quezon	Teacher-I	Brgy. Sabang, Polillo, Quezon
STA. ANA, Rozel T.	Sabang Elem. Sch.	EGT-I	Brgy. Sabang, Polillo, Quezon
SUAVERDEZ, Janet N.	Sabang NHS Polillo, Quezon	SST -I	San Juan NHS Panukulan, Quezon
SUBIGCA, Aldin A.	Taluong, Elem. Sch.	Teacher- I	Brgy. Taluong, Polillo, Quezon
TALINTO, Mayola D.	Jomalig Central ES Jomalig, Quezon	EGT- I	Jomalig Central ES Jomalig, Quezon
TORRE, Ilyn P.	Panukulan Elem. Sch.	EGT	Brgy. Bato, Panukulan, Quezon
TORRES, Lina I.	Taluong NHS	SST – I	Brgy. Taluong, Polillo, Quezon
TREDENTE, Rolando A.	Talisoy NHS, Jomalig, Quezon	SST	Brgy. Talisoy, Jomalig, Quezon
VERZO, Renante A.	Burdeos Elem. Sch.	Teacher II	Villaseñor St., Burdeos, Quezon
VILLANUEVA, Jenera Albino	Sibulan, Elem. Sch.	EGT – I	Fatima St., Brgy. Sibulan, Polillo, Quezon
VILLAVERDE, Ma. Regina E.	Sibulan Elem. Sch.	Teacher – I	Brgy. Sibulan, Polillo, Quezon
ZOLETA, Alejandro P.	Talisoy NHS	SST – I	Talisoy NHS, Jomalig, Quezon

### Annex 3

#### FACILITATOR DIRECTORY

Name	Organization	Position	Address
<b>TEAM MEMBERS</b>			
<b>AFUANG</b> , Leticia E.	UPLB	Asst. Professor/ Co-Project Leader	Animal Biology Division, Institute of Biological Sciences (IBS), CAS, UPLB, 4030 College, Laguna E-mail: <a href="mailto:dlea@philwebinc.com">dlea@philwebinc.com</a> <a href="mailto:leafuang@hotmail.com">leafuang@hotmail.com</a>
<b>LAUDE</b> , Rita P. PhD	UPLB	Professor	Genetics & Molecular Biology Division, IBS,CAS, UPLB, 4030 College, Laguna
<b>PAYONGAYONG</b> , Ma. Theresa	UPLB	Asst. Professor	Philosophy Division, Department of Humanities, CAS, UPLB, 4030 College, Laguna <a href="mailto:Mttp@mudspring.uplb.edu.ph">Mttp@mudspring.uplb.edu.ph</a>
<b>PINPIN</b> , Arlyn V.	UPLB	Asst. Professor	Philosophy Division, Department of Humanities, CAS, UPLB 4030 College, Laguna <a href="mailto:avp@mudspring.uplb.edu.ph">avp@mudspring.uplb.edu.ph</a>
<b>SIERRA</b> , Zenaida N. PhD	UPLB	Professor/ Project Leader	Environmental Biology Division, IBS, UPLB, 4030 College, Laguna Tel. (049)5362397



<b>TORRETA, Nerissa K.</b>	UPLB	Asst. Professor	Plant Biology Division, IBS, CAS, UPLB, 4030 College, Laguna <a href="mailto:nkt@mudspring.uplb.edu.ph">nkt@mudspring.uplb.edu.ph</a>
<b>GUEST LECTURERS</b>			
<b>BAGUINON, Nestor</b>	UPLB	Assoc. Prof.	Institute of Forest Biology, CFNR, UPLB, 4030 College, Laguna
<b>LEDESMA, Mimi</b>	UPLB	URA	IBS, CAS, UPLB, College, Laguna
<b>MEDINA, Simplicio</b>	UPLB,	Asst. Prof.	FSSRI, UPLB, 4030, College, Laguna
<b>NAVERA, Gene</b>	UPLB	Asst. Prof.	Communication Arts Division, Department of Humanities, CAS, UPLB, College, Laguna
<b>SOBREMISANA, Marisa J.</b>	UPLB	URA	SESAM, UPLB, College, Laguna
<b>YNGENTE, Vicente</b>	Polillo Ecology Stewardship Program	Polillo Steward	Polillo, Quezon

## ANNEX 4

### ENVIRONMENTAL ACTION PLANS

**NAME/ADDRESS OF SCHOOL:** Southern Luzon Polytechnic College  
Sibulan Elementary School  
Polillo National High School  
Polillo Elementary School

**PROJECT TITLE:** Polillo Water System Rehabilitation  
**NATURE OF THE PROJECT:** Water Rehabilitation and Protection

#### **SIGNIFICANCE OF THE EAP:**

This plan attempts to rehabilitate the severe water system problem of the Polillo's water reservoir and its immediate surrounding ( watershed). This project also aims to increase people's awareness and concern in the preservation and protection of endangered biodiversity.

#### **GOALS AND OBJECTIVES:**

1. Maintain proper sanitation;
2. Conserve forest biodiversity;
3. Develop environmental awareness among the people.

**PROJECT SITE:** Brgy. Sibulan, Polillo

#### **HIGHLIGHTS OF THE EAP:**

<b>Activity</b>	<b>Time Frame</b>
1. Contact proper authorities in designing echo-training	Sept., 2002
2. Holding of Echo Seminar	Oct., 2002
3. Information Dissemination	Oct., 2002
4. Community Services (NGO's, Students)	Oct., 2002 (Scouting month)
5. Logo and Poster Making (Elem.) Oratorical Contest (Secondary) Symposium (College)	Nov., 2002
6. Inspection and Cleaning of Reservoir	Dec., 2002
7. Tree Planting	Dec., 2002
8. Submission of recommendation through resolution to the Sangguniang Bayan of Polillo	Jan., 2003
9.Environmental Awareness Campaign through posting and	Jan., 2003

- distribution of leaflets  
10. Monitoring  
11. Evaluation

Jan.-Mar, 2003  
April, 2003

### **IMPACT OF EAP**

- Produce more reliable, healthy and safe drinking water for Polillians
- Ensure revitalization of biodiversity

### **POSSIBLE PROBLEMS:**

1. Weather condition
2. Indifference of people
3. Lack of concern and cooperation
4. Insufficient funds

### **ACTIONS TO BE TAKEN:**

1. Information dissemination
2. Consultation among civic groups
3. Fund raising
4. Inspection of the reservoir
5. Monitoring
6. Annual Evaluation

### **EAP PROJECT TEAM:**

Project Leader:	Pedro Salvoza	Efren Puchero
Co-project Leader:	Engr. Edsel Paraon	Ethel Blanco
Team Members:	Jenera Villanueva	Nympha Santos
	Regina Villanueva	Arcy Agustin
	Mary Grace Lapuz	Rizza de Leon
	Reynita Macaraeg	Jesusa Buela

### **IMPLEMENTING GROUP:**

Sangguniang Barangay Members  
Polillo Teaching Force  
Barangay Officials  
Sangguniang Kabataan  
Pupil/Students

### **FUNDING GROUP:**

Municipal Government

Polillo Association of Municipal Employees (PAME)  
NGO's

**Name/Address of School:** Sabang Elementary School  
Sabang National High School  
Bislian Elementary School  
Polillo District

Project Title: Bislian-Sabang Folk Ways Modification

I. Nature of the Project:

The changing of the common negative Environmental Practices for the conservation of the Natural Resources.

II. Significance of the EAP:

This project will lead to the citizen's increased awareness about the destructive effects of the malpractices and hopefully modify/change those ways for the conservation of the natural resources.

III. Goals and Objectives:

1. To modify common environmental malpractices;
2. To avoid more environmental destruction;
3. To establish unity and cooperation among the schools, local government and the whole community.

IV. EAP Project Team

Project Leader:	Jesson R. Parale	
Co-Project Leader:	Janet N. Suaverdez	
Implementing Group:	Luz Avenilla	Geraldine Jurado
	Amparo Martinez	Lorelie Malubay
	Norminda Soltura	Zenaida Culata
	Faculty	Rozel Sta. Ana
	Barangay Officials	
	Sangguniang Kabataan (SK)	
	Students/Pupils	
Advisory:	School Heads	
Funding Group :	PTCA, LGU, Sangguniang Barangay	

V. Project Site: Barangay Sabang and Bislian, Polillo, Quezon

VI. Highlights:

Activities	Time Frame
1. Coordinate with the Barangay Officials	Sept., 2002
2. Conduct Echo-Seminar	Oct., 2002
3. Dissemination of information to the pupils/students	Oct., 2002
4. House to house dissemination of information and campaign	Oct.– Nov., 2002
5. Search for “Ms. Kalikasan”	Jan. – Feb., 2003
6. Monitoring of Activities	From time to time

VII. Impact of EAP:

This will improve the attitudes of the citizen from an anthropocentric principle to the environmentally aware and concerned citizen that will result to a more cooperative and a unified community when it comes to environmental conservation and protection.

VIII. Problems:

1. Indifference of some members of the community
2. Negligence of some person in authority
3. Inadequate funds for the project

IX. Actions to be Taken:

1. Comprehensive and intensive information dissemination and campaign
2. Close monitoring
3. Rendering income generating project

Prepared by:

Jesson Parale  
Janet N. Suaverdez  
Geraldine Jurado  
Lorelie Malubay  
Amparo Martinez  
Rozel Sta. Ana

Norminda Soltura  
Zenaida Culata  
Luz Avenilla

Endorsed by:

Mrs. C. Ruiz  
(Head Teacher)  
Polillo District

**Name/Address of School:** Taluong Elementary and High Schools  
Brgy. Taluong , Polillo, Quezon

Project Title: Save Life, Save Environment

I. Nature of the Project: Cleanliness of the Community

II. Significance of the EAP:

This plan will help to increase and maintain awareness and discipline through clean and green environment with the participation and cooperation of the constituents.

III. Goals and Objectives:

1. To have an attractive, clean and green environment;
2. To maintain good and healthy condition of all individuals;
3. To enhance the importance of cleanliness.

IV. EAP Project Team

Project Leader: Leonora T. Mopera

Co-Project Leader: Lina I. Torres

Implementing Group: Bienvenida S. Azarias

Rafaela M. Manuel

Aldin A. Subigca

Ma. Cristy P. Peñamante

Noel S. Macaraig

Taluong Elementary and High School Teaching Force

Barangay Officials

Sangguniang Kabataan

Pupils/Students

Advisory: School Heads

Funding Group: Sangguniang Barangay Officials

Selected Charitable Donors

V. Project Site: Barangay Taluon Polillo, Quezon

VI. Highlights:

Activities	Time Frame
1. Communicate with proper authorities for an echo-seminar and integrate the proposed plan for the community.	October, 2002
2. Enhance the active participation of the elementary and high school teaching staff in implementing the project plan.	October, 2002
3. Holding of Echo-seminar through the school program	October, 2002
4. Community participation on the implementation and monitoring	October, 2002

VII. Impact of EAP:

This will improve the awareness of the constituents to the present condition/problems in the community and appreciate the importance of cleanliness on individual's health, social and economic development of Barangay Taluong.

VIII. Problems:

1. Financial Support
2. Lack of cooperation among the constituents
3. Ningas-cogon attitude

IX. Actions to be Taken:

1. Implementation of the project
2. Coordination of officers through the supervision of the teachers
3. Solicitation of Funds
4. Giving of an award to the most cooperative and cleanest area.

Prepared by:

Leonora T. Mopera  
Lina I. Torres  
Bienvenida S. Azarias  
Rafaela M. Manuel  
Aldin A. Subigca  
Ma. Cristy P. Peñamante  
Noel S. Macaraig

Endorsed by:

Videlfina A. Ramallosa  
District Supervisor  
Polillo, Quezon

**Name/Address of School:** Patnanungan Elementary School  
Patnanungan High School  
Patnanungan, Quezon

Project Title: Save Patnanungan Marine Life and Wildlife Ecosystem

I. Nature of the Project: Patnanungan Marine Life Recovery and Wildlife Conservation

II. Significance of the EAP:

This project will help awaken the awareness of the Local Government Officials and the People of Patnanungan to act and be responsible on the existing environmental problems in the community.

III. Goals and Objectives:

1. Pursue recovery and conservation of marine and wildlife.
2. Enhance appreciation and realization of the responsibility of each one to take care of the environment.
3. Strengthen unity and cooperation among the LGU officials and the people of Patnanungan.

IV. EAP Project Team

Project Leader: Ligaya C. Regodon  
Co-Project Leader: Elmer R. Ayuma  
Implementing Group: Joan Origenes  
Carmelita Añonuevo  
Ines Callejo  
Belen Delgado  
Patnanungan Teacher's Force  
SK Members  
Pupils/Students

Advisory: School Heads  
Funding Group; LGU, NO, PTCA

V. Project Site: Patnanungan, Quezon

VI. Highlights:

Activities	Time Frame
1. Develop a training design for an Echo-seminar and coordinate with LGU.	September, 2002
2. Conduct of Echo-Seminar	October, 2002
3. Recycling contest for the pupils/students	October, 2002
4. Tree Planting	November, 2002
5. Information Drive	November, 2002
6. Implementation and Monitoring	December, 2002

VII. Impact of EAP:

This will produce aware and responsible local government officials and citizenry. This will also result to a peaceful, clean and green Patnanungan.

VIII. Problems:

1. Cooperation of LGU Officials
2. Source of Funds



3. "I don't Care Attitude of the people.
4. Mañana Habit

X. Actions to be Taken:

1. Fund raising (look for benefactors/sponsors for the activity)
2. Give environmental seminars to the different sectors of the community.
3. Organization of officers of "Save Patnanungan Marine and Wildlife Movement"

Prepared by:

Ligaya C. Regodon  
Elmer R. Ayuma  
Joan Origenes  
Carmelita Añonuevo  
Ines Callejo  
Belen Delgado

**Name/Address of School:** Talisoy Antional High School  
Jomalig Central Elementary School  
Jomalig, District

Project Title: Jomalig Sagip Dagat

I. Nature of the Project: Preservation of Endangered Species and Coral Reefs in Jomalig Island

II. Significance of the EAP:

The significant contribution of this plan is to increase awareness and enhance knowledge and information of the constituents of the island on the alarming conditions of some of the endangered species in the island particularly the sea turtles, dugong and others, including coral reefs of Jomalig. This will also help in the replenishment of Jomalig's marine ecosystem.

III. Goals and Objectives:

1. To preserve and protect marine life
2. To develop love and awareness to the environment.
3. To develop team work and cooperation among the LGU and the local people.

IV. EAP Project Team

Project Leader: Rolando A. Tredente  
Co-Project Leader: Mayola D. Talinto

Implementing Group: Benedict E. Orajay  
Alejandro Zoleta  
Darwin Iglane  
Jomalig Teaching Force  
Barangay Officials  
Sangguniang Kabataan  
Pupils/Students

Advisory: School Principal  
Funding Group: Municipal Government, LGU's, PTCA

V. Project Site: Jomalig Central Elementary School and Jomalig Coral Reef

VI. Highlights:

Activities	Time Frame
1. Establish a Memorandum of Agreement (MOA) with the concerned authorities to hold echo-seminar and design training program for the community.	Sept., 2002
2. Conduct Echo-seminar	Sept., 2002
3. Information dissemination to students/pupils of the community.	Sept., 2002
4. Encourage to organize clubs and holding of logo and poster making contest.	Oct., 2002
5. Encourage participation in the implementation and monitoring	Jan., 2003

VII. Impact of EAP:

This will produce knowledgeable, concerned, responsible and nature loving citizenry that will help protect the marine ecosystem. Endangered species and coral reefs will thus be preserved.

VIII. Problems:

1. Lack of cooperation
2. Financial support/problems
3. Poverty
4. Mañana habit
5. Bahala na Habit

IX. Actions to be Taken:

1. Information dissemination

2. Organization of officers through the supervision of the teachers
3. Giving of an award to the most cooperative
4. Solicitation of funds

Prepared by:

Rolando A. Tredente  
 Mayola D. Talinto  
 Benedict E. Orajay  
 Alejandro Zoleta  
 Darwin Igliane

**Name/Address of School:** Panukulan Central School  
 San Juan National High School,  
 Panukulan, Quezon

Project Title: Panukulan Forest Steward

I. Nature of the Project: Hookbay to Lipata Reforestation and Conservation

II. Significance of the EAP:

This study will increase the awareness of the ill effects of deforestation. It will also motivate the people of Panukulan to unify in achieving its goal in the restoration of the forest.

III. Goals and Objectives:

1. To create values towards nurturing our forest ecosystem.
2. To conserve the hidden treasures and wonders of nature.
3. To have unity into common goal.

IV. EAP Project Team

Project Leader: Levelie Benavente  
 Co-Project Leader: Mila Coronacion  
 Implementing Group:  
 Advisory: School Heads  
 Funding Group: Municipal Government,  
 PTCA, SAPAKAP, LMP, ISO

V. Project Site:

VI. Highlights:

Activities	Time Frame
1. Establish linkage with proper authorities for the preparation and holding of echo-seminar and implementation of the plan	Oct., 2002
2. Integration of environmental issues in English, Filipino, Science and other subject areas for the whole School year.	Oct.2002-April, 2003
3. Hold a competition in Essay Writing, Poster Making, and Bb. Kalikasan Contest with Environmental Conservation as a theme.	Nov., 2002
4. Conduct massive campaign for the active participation of the community.	Nov., 2002
5. Information Dissemination to leaders of the different organization in the community	Dec., 2002

#### VII. Impact of EAP:

This will enhance the level of awareness, increase in the appreciation of the environment and invigorate the spirit of “Brotherhood” among the people.

#### VIII. Problems:

1. Unwillingness of people to participate;
2. Lack of financial support;
3. Lack of support from parents;
4. Lack of accountability among subordinates;
5. Lack of commitment of people involved in the project;

#### IX. Actions to be Taken:

1. Educate the students about the importance of the program.
2. Organize groups among the students and recipients of the community.
3. Award prizes for the winner of the competition.
4. Teacher will lead the execution of the program being the role models.

Prepared by:

Mila Coronacion  
Levelie Benavente  
Ilyn Torre  
Mercedita Manipol  
Rhodora Ebio  
Ladel Solleza

Endoresed by:

Estelita Mitra  
TIC-SJNHS  
  
Julianita Avellano  
TIC-LNHS

Myrna Rotaquio

Bayani Evasco  
OIC Principal (Elementary)

**Name/Address of School:** Burdeos Central School  
Judith National High School  
Burdeos District , Burdeos, Quezon

**Project Title:** Burdeos River Protection and Conservation

I. Nature of the Project: Protection and Conservation of Burdeos River for the restoration of potable water supply.

II. Significance of the EAP:

This project will increase the awareness of the Burdeans in the protection and conservation of the Burdeos river. It will also strengthen the ability of the people to care, protect and treasure their gift from God.

III. Goals and Objectives:

1. To save the Burdeos river
2. Protect the water source of Burdeos
3. Restore the denuded mountain and forests.
4. Maintain the cleanliness of the river.
5. Eradicate and control sources of water pollution.
6. Practice proper waste disposal.
7. Preserve mangroves and other trees in the coastal area.

IV. EAP Project Team

Project Leader: Renante Verzo  
Co-Project Leader: Pablito Regidor  
Implementing Group: Lucita Avenilla  
Rosalinda Algozo  
Burdeos Teaching Force  
Municipal Officials  
Barangay Officials  
Pupils/students  
Science Club  
DENR  
Advisory Group: School Heads and Municipal Mayor  
Funding Group: Municipal Government, PTCA and NGOs

V. Project Site: Burdeos River

VI. Highlights:

Activities	Time Frame
1. Coordinate with proper authorities in the preparation of the echo-seminar and training design for the community.	Oct., 2002
2. Holding of the echo-seminar	Oct., 2002
3. Information dissemination to the pupils students and the community	Oct., 2002
4. Cleaning of the river banks/coastal areas	Quarterly from Nov., 2002 -2007
5. Tree planting along river banks and around the water sources	Dec., 2002
6. Poster making contest	Feb., 2002
7. Implementation of proper waste disposal	throughout the year
8. Monitoring of all activities	throughout the year

VII. Impact of EAP:

The Burdeans will become concerned citizens toward their environment. This will also make them responsible and nature- loving people. The progress and development of Burdeos will be realized thru the cooperation of the people on this undertaking.

VIII. Problems:

1. *Ningas Cogon* attitude of the people involved in the project implementation.
2. Financial support
3. Lack of cooperation by the community

IX. Actions to be Taken:

1. Meeting with community(information campaign
2. Reorganization of the Purok system through the supervision of the teachers in coordination with the Barangay officials.
3. Recognition of the model Purok during program.
4. Look for sponsors or funding for the proposed project/plan.

Prepared by:

Renante Verzo  
Pablito Regidor  
Lucita Avenilla  
Rosalinda Algozo

Endorsed by:

Dr. Yolanda C. Ayuma  
ESP II – District OIC  
Burdeos District



## ANNEX 5

### EVALUATION OF THE TRAINING WORKSHOP

DATE: 10-13 September, 2002  
 CAS Gallery 2, UPLB, College, Laguna

Rating  
 5 - Very Good  
 4 – Good  
 3 - Fair  
 2 - Poor  
 1 - Very Poor

	Very Good	%	Good	%	Fair	%	Poor	%	No Answer	%	Total	
											Freq	Percent
1. Value of the training workshop to your job	35	92.10	3	7.90	0	0	0	0	0	0	38	100
2. Usefulness of the subject matter/content	30	78.95	8	21.05	0	0	0	0	0	0	38	100
3. Effectiveness of the training methods used	32	84.21	6	15.79	0	0	0	0	0	0	38	100
4. Usefulness of visual aids used	30	78.95	7	18.42	0	0	0	0	1	2.63	38	100
5. Speaker(s) ability to transfer knowledge	33	86.84	5	13.16	0	0	0	0	0	0	38	100
6. Atmosphere for active participation	27	71.05	10	26.32	1	2.63	0	0	0	0	38	100
7. Value of the handouts to your job	29	76.32	8	21.05	1	2.63	0	0	0	0	38	100
8. Opportunity to reinforcement of learning	29	76.32	9	23.68	0	0	0	0	0	0	38	100
9. Motivation to learn more	32	84.21	6	15.79	0	0	0	0	0	0	38	100
10. Training-workshop facilities and/or accommodation	24	63.16	11	28.94	3	7.90	0	0	0	0	38	100



11. Duration of the training workshop

	Too long	Just right	Too short	Total
Frequency	2	36	0	38
Percent	5.26	94.74	0	100

12. Which topic/s is/are most appropriate to your needs? (with multiple answers)

Topics	Frequency	Percentage
1. Power of Communication	8	21.05
2. The Environment	7	18.42
3. Aquatic Ecosystem	14	36.84
4. Forest Ecosystem	10	26.32
5. Wildlife Biodiversity	11	28.94
6. Biodiversity Conservation	12	31.58
7. Philippine Agricultural Practices	7	18.42
8. Environmental Ethics	11	28.94
9. Waste Management	9	23.68
10. Communication Strategies	11	28.94
11. Workshop – Integration in the Curriculum	8	21.05
12. Environmental Action Plan (EAP)	6	15.79
13. Community Building	7	18.42
14. Field Trip	5	13.16

All topics – 1, No Answer – 6, n = 38

13. Were the following topics clear to you?

Topics	Very Good	%	Good	%	Fair	%	Poor	%	No Answer	%	Total
1. Power of Communication	8	21.05	26	68.42	4	10.53	0	0	0	0	100.00
2. The Environment	22	57.90	15	39.47	1	2.63	0	0	0	0	100.00
3. Aquatic Ecosystem	28	73.68	8	21.05	2	5.26	0	0	0	0	100.00
4. Forest Ecosystem	22	57.89	13	34.21	3	7.89	0	0	0	0	100.00
5. Wildlife Biodiversity	26	68.42	10	26.32	2	5.26	0	0	0	0	100.00
6. Biodiversity Conservation	31	81.58	5	13.16	2	5.26	0	0	0	0	100.00
7. Philippine Agricultural Practices	5	13.16	27	71.05	6	15.79	0	0	0	0	100.00
8. Environmental Ethics	33	86.84	4	10.53	1	2.63	0	0	0	0	100.00
9. Waste Management	16	42.11	19	50.00	3	7.89	0	0	0	0	100.00
10. Communication Strategies	30	78.95	7	18.42	1	2.63	0	0	0	0	100.00
11. Workshop – Integration in the Curriculum	23	60.53	13	34.21	2	5.26	0	0	0	0	100.00
12. Environmental Action Plan (EAP)	23	60.53	12	31.58	2	5.26	0	0	1	2.63	100.00
13. Community Building	17	44.74	15	39.47	4	10.53	0	0	2	5.26	100.00
14. Field Trip	29	76.32	9	23.68	0	0	0	0	0	0	100.00

14. Were the following topics given sufficient time?

Topics	Too Long		Too short		Just Right		No Answer		Total	
	Freq	Percent	Freq	Percent	Freq	Percent	Freq	Percent	Freq	Percent
1. Power of Communication	1	2.63	4	10.53	33	86.84	0	0	38	100.00
2. The Environment	0	0	2	5.26	36	94.74	0	0	38	100.00
3. Aquatic Ecosystem	0	0	2	5.26	36	94.74	0	0	38	100.00
4. Forest Ecosystem	0	0	5	13.16	32	84.21	1	2.63	38	100.00
5. Wildlife Biodiversity	0	0	4	10.53	33	86.84	1	2.63	38	100.00
6. Biodiversity Conservation	0	0	4	10.53	33	86.84	1	2.63	38	100.00
7. Philippine Agricultural Practices	3	7.89	10	26.32	25	65.79	0	0	38	100.00
8. Environmental Ethics	0	0	4	10.53	34	89.47	0	0	38	100.00
9. Waste Management	0	0	3	7.89	35	92.11	0	0	38	100.00
10. Communication Strategies	0	0	3	7.89	35	92.11	0	0	38	100.00
11. Workshop – Integration in the Curriculum	0	0	6	15.79	32	84.21	0	0	38	100.00
12. Environmental Action Plan (EAP)	3	7.89	6	15.79	29	76.32	0	0	38	100.00
13. Community Building	0	0	6	15.79	31	81.58	1	2.63	38	100.00
14. Field Trip	0	0	18	47.37	20	52.63	0	0	38	100.00

15. List down additional topics or issues you would like to include in future workshops.

TOPIC/S
Global warming
Capture breeding of endangered animal species
Agricultural practices that will help the farmers specific to a Municipality
Actual activities in the forest, seas, rivers, oceans
Some aquatic practices that may help the economic development of the community without affecting the coral reefs

16. What did you like most about the training?

- Communication strategies
- Dedication of trainors in disseminating information on environment
- Environment, atmosphere and place
- Field trip
- Friendly and energetic trainors as well as their kindness and willingness to share their talents and knowledge
- Interesting and important topics; the materials are very interesting/informative
- Almost all
- All/Everything
- Sharing and discussion
- Workshop – integration in the curriculum
- The general objective of the training but the topic on agricultural practices is a little bit not relevant to the objective of the training
- Accommodation

17. What did you dislike about the training workshop?

- None
- Accommodation in the Forestry Alumni Guest House where the caretaker is not accommodating, bedding are lacking and the CR is untidy
- Time allotment for the activity
- Agricultural Practices
- Long communication strategies
- Flooded comfort room at the venue

18. Were your expectations on the training workshop addressed?

- Yes

- Learned and enjoyed more than expected

19. How would you rate this training as a whole?

- Excellent except accommodation
- Very good
- Perfect 10
- Congratulations for job well done
- Keep up the good work, Continue!
- Very Satisfactory
- Rating of 8, 9.95
- Rating of 96%, 97 %, 98%, 99%,

20. Give your suggestions for further improvement of the training?

- Not happy with accommodation so better next time with more privacy; we should have a key in the quarters to be sure our things are safe
- More participants and time
- None, keep it up and thank you for sharing with us your knowledge and effort about biodiversity
- Training should be conducted in the place of the trainees to make the government officials to be aware of it also
- Aside from theories, give some practical techniques on how to develop agricultural and environmental systems
- More materials for each topic
- Information dissemination must be clearly carried out: When, Where and Theme
- More time, more workshops
- Monitoring of the participants
- Follow-up or another training
- Improve the demonstration teaching
- Organize the program very well
- Conduct more similar trainings
- More time for the training
- Use microphone properly so that participants will understand the speaker

