

# SAMUT-SARI

The quarterly newsletter of the Philippines-Netherlands Biodiversity Research Programme for Development in Mindanao

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## BRP holds Operational Planning Workshop

**I**n preparation for the implementation of the master project, the BRP conducted an Operational Planning Workshop on 14-17 February 2003 in Oroquieta City, Misamis Occidental. Selected researchers from Mindanao institutions, representatives of the Netherlands embassy, local stakeholders and project implementers, and resource persons from the Philippine Working Group (PWG) participated in the workshop.

The four-day workshop centered on the following: (1) presentation of the framework and highlights of the master project; (2) team formation; (3) identification of support activities that will promote participation of various stakeholders in research activities; (4) site visits to the upland-coastal-riverine research sites; and (5) writeshop to further refine the proposed research methodologies and to add details in the proposed support activities.

The researchers were grouped according to their research concern. The terrestrial group visited three barangays in the upland areas of Mt. Malindang – Brgys. Mansawan, Gandawan, and Lake Duminagat.

The aquatic group had two-day site visits. On 15 February 2003, the group visited the coastal sites, which included the Misom Wetland Park and Punta Miray in Baliangao, Mamalad and Bonifacio in Calamba, and Catarman and Panalsalan in Plaridel. The following day, they visited Mansabay Bajo in Lopez Jaena, and Mobod and Poblacion in Oroquieta City. They also conducted interviews with the local barangay officials in the sites.



*Participants of the workshop.*



*Local stakeholders participate actively in the discussion.*

The site visits enabled the researchers to determine the appropriateness of their sampling design.

The workshop concluded with the presentation of each team's initial revision of their proposals after considering the comments of the Joint Programme Committee (JPC), and the decision to hold another workshop in March 2003 for the methodology refinement of specific projects of the Master Programme, focus on statistical sampling and design. ■

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## Response to the call for Letters of Intent

In December 2002, the BRP called for Letters of Intent (LOIs) from interested researchers from Mindanao institutions who wish to participate in the implementation of the Master Research Project. In response, the National Support Secretariat (NSS) received a total of 78 LOIs.

A Committee of Five, composed of Drs. Jose B. Arances, Proserpina Gomez-Roxas, Carmelita G. Hansel, Olga M. Nuñez, and Ms. Aurelia Luzviminda V. Gomez, was tasked to do expertise matching. The Committee conducted two meetings, on 3 and 17 January 2003 in Mindanao State University (MSU)-Iligan Institute of Technology (IIT) to identify researchers who will be implementing the master project. From the 78 researchers who submitted LOIs, 34

were selected based on the following criteria: (1) expertise/specialization; (2) time availability; (3) equity or institutional balance; (4) implications of official designation in the University to actual research implementation; (5) field experience; (6) ability to work with others in an intermultidisciplinary team; and (7) willingness to work in a participatory manner.

Selected researchers come from MSU-Marawi, MSU-Naawan, MSU-IIT, Central Mindanao University (CMU), Misamis University (MU), Northern Mindanao State Institute of Science and Technology (NORMISIST), University of Southeastern Philippines (USEP), University of the Philippines Mindanao, and Southern Philippines Agribusiness, Marine and Aquatic School of Technology (SPAMAST). ■

## BRP revitalizes PWG

The Philippine Working Group (PWG), the advisory body to the Joint Programme Committee (JPC) had its first meeting for the year on 22 January 2003 in Tomas Morato, Quezon City. The PWG consists of the following members: Dr. Perry M. Aliño (Marine Science), UP-Marine Science Institute (MSI); Dr. Vincent V. Hilomen (Marine Biology), UPLB; Dr. Perry S. Ong (Wildlife Studies), UP-Center for Integrated Studies (CIDS); Dr. Maripaz L. Perez (Policy Studies), Department of Science and Technology (DOST); Mr. Blas Tabaranza (Wildlife Studies), Birdlife International-Haribon Foundation; Dr. William Sm. Gruezo (Plant Systematics), UPLB-Institute of Biological Sciences (IBS); Prof. Lilia T. Habacon (Statistics), SEARCA; Dr. Daniel A. Lagunzad (Plant Ecology), UP-Institute of Biology; Dr. Levita A. Duhaylungsod (Anthropology), UPLB-Department of Agricultural Extension and Rural Studies (DAERS); Dr. Cynthia Rose B. Bautista (Social Sciences), UP College of Social

Sciences and Philosophy; and Mr. Carlo C. Custodio (Protected Areas Management), Department of Environment and Natural Resources (DENR)-Protected Areas and Wildlife Bureau (PAWB). Dr. Delfin J. Ganapin, Jr., Chair, JPC and PWG; Dr. Gil C. Saguiguit, Jr., JPC member; and Dr. Mariliza V. Ticsay, NSS Coordinator also attended the meeting.

The meeting was conducted to revitalize the PWG and define their roles, to update the members on the status and progress of the BRP, and to come up with suggestions on support activities for the completion of the master project.

The PWG identified activities for each

## BRP welcomes new Site Coordinator



Effective 10 February 2003, a new Site Coordinator for the BRP assumed office by the name of Mr. Iver T. Alabanzas.

Mr. Alabanzas' career started in 1979 as Development Projects Analyst in the City Planning and Development Office in Bago City. Right after his work in the said office, he assumed post in CARE-Philippines as Project Officer. Throughout his 10 years of service in CARE-Philippines, he has worked his way to the top as he reached the position of Area Manager. With this position, he gained extensive exposure in development work in Mindanao.

As the Site Coordinator for the BRP, he is tasked to have close coordination with the researchers and local stakeholders in the planning and implementation of the activities of the programme in the site. ■



L-R: Dr. Mariliza V. Ticsay, Dr. William Sm. Gruezo, Dr. Delfin J. Ganapin, Jr., Dr. Perry S. Ong, Dr. Gil C. Saguiguit, Jr., Dr. Maripaz L. Perez, and Mr. Blas Tabaranza.

support component of the BRP, namely: capability building, database management, information-education-communication (IEC), and networking. The identified support activities involve both the researchers and local stakeholders to ensure the sustainability of the programme activities. ■

## Institutional Profile:



## Southern Philippines Agribusiness, Marine and Aquatic School of Technology

### *VISION:*

*SPAMAST shall emerge as the center for advanced studies in fishery and marine sciences, agriculture, and agribusiness to sustain and accelerate the socio-economic development through modern and entrepreneurial undertakings.*

The Southern Philippines Agribusiness, Marine and Aquatic School of Technology (SPAMAST), established in 1982 by virtue of Batas Pambansa Bilang 148 as amended by Batas Pambansa Bilang 651, is one of the three state institutions of Higher Learning in Region XI. It is mandated to provide technological and vocational education in the fields of agriculture, fisheries, and the industries.

SPAMAST has three strategically located campuses. The main campus is located along the shore of Davao Gulf in Poblacion, Malita, Davao del Sur. The second campus is along the national highway in Barangay Buhangin, Malita, and the other one is in Digos, Davao del Sur. The school attracts students from different provinces, including Davao del Sur, North and South Cotabato, Bukidnon, Davao City, and other nearby provinces. To cater to the needs of the students, each campus is provided with laboratory, library and dormitory facilities.

SPAMAST is the only tertiary educational institution in Davao del

Sur, which offers academic programs in fishery and marine sciences. In April 1997, it became part of the Commission on Higher Education's (CHED's) Marine Science and Fisheries Network under the Mindanao Advance Education Project (MAEP).

SPAMAST aims to provide value-oriented and technically skilled manpower to the fast-growing industries. To attain such goal, SPAMAST does not only focus on giving quality instruction, but it also exposes its students into research and extension. Its academic and training programs are designed to motivate and develop its students to be highly competent, development-oriented, and globally competitive specifically in the fields of agro-industry, fisheries, and marine science.



*BRP researchers from SPAMAST: Dr. Della Grace G. Bacaltos and Mr. Pedro M. Avenido.*

SPAMAST offers Bachelor's degrees in Agribusiness, Fisheries, Marine Biodiversity, Agricultural Technology, and Cooperatives Development. It also offers Master's degrees in Fisheries and Marine Biodiversity, and non-academic courses in Agricultural Technology, Fishery Technology and Farm Mechanics. ■

## The BRP Coastal Project in a Glimpse

by Della Grace G. Bacaltos  
Director of Research, SPAMAST



### **Why was the project conducted?**

Most coastal communities of Northern Mt. Malindang in Misamis Occidental depend mainly on fishing for livelihood. Their high dependence on the coastal resources for food and income may have greatly contributed to resource depletion and habitat degradation. Now these fisherfolks are faced with problems on dwindling fish catch, lack of livelihood opportunities, and impoverished living conditions. The problems on resource depletion and habitat degradation have to be addressed to sustain their livelihood and the resource-base. Management interventions have to be well planned to provide long-term economic benefits for the coastal communities. Doing so requires baseline information, which could be derived through resource assessment.

As part of the first-generation research phase of the five-year Biodiversity Research Programme (BRP), this project assessed some coastal barangays in northern Mt. Malindang to determine the status of the coastal and marine biological resources in the area.

### **How was it done?**

Data were gathered in the coastal barangays of Tuburan (Aloran), Mobod (Oroquieta), Mansabay Bajo (Lopez Jaena), Panalsalan and along the Langaran River (Plaridel). A study on Institutional Arrangement was conducted in Barangay Misom in Baliangao to investigate the history of the establishment and current management scheme for the Baliangao Wetland Park, now known as the Baliangao Protected Landscape and Seascape.

Assessment of the seagrass beds, mangrove stands, coral communities, and some physico-chemical parameters in the research site was conducted twice in the one-year project duration. These were in the months of July and December to represent the wet and dry seasons. Assessment of fish catch was done in two ways: (1) a one-shot interview of fishermen while they were fishing in July and in December 2001; and (2) analysis of monthly fish catch records of fishermen from July 2001 to April 2002.

The researchers did not do the assessment process alone. Developing the capability and empowering the local community by making them research partners was an innovative feature of the project. The involvement and participation of representatives from various sectors such as the local government units (LGUs), nongovernment organizations (NGOs), government agencies (GAs), and people's organizations (POs) in community validation and consultation process highlight the participatory nature of this project.

### **What were the remarkable findings?**

Seagrass (*lusay*) and mangroves (*bakhaw*) may still be diverse in the coastal areas numbering to 11 and 20 species, respectively. These are not far behind the national records of 16 and 30, respectively. High fish yield was also observed in Panalsalan and Mobod. Siganids particularly were of the highest relative abundance. The predominance of seagrass beds in said sites may be contributory to said siganid abundance, and the high fish yield in these sites may be attributed to the effect of mangrove reforestation in the area.



Seventy-three percent of the coral reefs were in poor condition and only 2.4 percent were in very good condition. Parallel to this finding was the low reef fish stock of  $8.8 \pm 5.7$  mt/km<sup>2</sup>. Benchmark estimates for productive marine waters are more than 75 mt/km<sup>2</sup>. Furthermore, the volume of fish caught by fishermen, technically expressed as catch per unit effort (CPUE) was relatively low for all gear types in the four sites.

Heavy siltation was observed in Langaran River with very high levels of total suspended solids (TSS) especially during flood occurrences in December. The community pointed out that quarrying and farming activities in the upland areas may be the causes of siltation in the Langaran River and other river systems.

Some socioeconomic issues were also identified. These are as follows:

1. Aggregated fishing pressure in the sampling sites

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# *Biodiversity Research: Making it Relevant for Local Development\**

by Dr. Delfin J. Ganapin, Jr.\*\*

## Introduction

Biodiversity research for local development, particularly one that is interdisciplinary and multistakeholder, is relatively new to the Philippines. The argument for it and characterization of what it should be is thus derived partly from the failure of the traditional research approach, sometimes called “lessons learned”, to effectively provide relevant knowledge support to biodiversity conservation. On the other hand, biodiversity research for local development has recently been initiated in the country from which empirical data can be gathered on the character and process of such a research approach, and which ones work. The three-year experience of the “Biodiversity Research Programme for Development in Mindanao: Focus on Mt. Malindang”, in partnership with RAWOO in the preparation phase, and presently with support from the DGIS of the government of the Netherlands, provided this paper first hand observations and substantial implementation experience for analysis and reflection. Discussions with researchers and scientists, who have looked at research for development, though from different set of concerns other than biodiversity, added valuable insights.

## The Concern about Biodiversity Research

Many researchers in the field of biodiversity have pointed out that “we know very little of what we pretend to preserve”. This theme, however, until the recent past has referred to biological knowledge such as the lack of a complete inventory of flora and fauna, and, at a higher level, the lack of a good understanding of their ecological relationships. Biodiversity research, therefore, has so far been mostly on the biological side, resulting in conservation policy that protects species, with the more enlightened ones

directed at protecting ecosystems.

Recently, however, there has been a realization that this “knowing very little” refers not just to the biology of it but more importantly to the lack of a good understanding of the socio-cultural, economic, and political dynamics that cause loss of biodiversity on one hand, and its effective conservation on the other. This realization has come about from observations that laws and regulations on wildlife protection have been ineffective and have even caused conflicts. They have caused questions such as “which is more important, people or wildlife?” They have been perceived by biodiversity dependent communities as fencing them out to benefit the rich.

An example of the lack of a holistic understanding of the biodiversity conservation problem is the simplistic equation that poverty equals biodiversity loss. There seems to be nothing wrong with this formulation. When lowland farmers have no land and are poor, they would be forced to go into the uplands, clear the forest and convert the area into farms. But erosion depletes the land, causing the poor to clear more forest till this resource, which is also their source of nutrients, water, fuel, food and medicine, is no more. Erosion also causes siltation, destroying corals and other coastal ecosystems, eventually creating poverty for downstream fisherfolks. This vicious cycle of ever increasing poverty and environmental degradation has been textbook stuff and has been the rationale for moving from simply punitive regulations and into social forestry and community-based natural resources management programs.

In the recently held World Summit for Sustainable Development (WSSD), this “poverty and environment nexus” has

been questioned. As the WSSD was actually a long drawn out debate between South and North perspectives on sustainable development, the agreed text that eventually came out in a way reflects an alternative perspective worth looking into. The agreed text points at the “possible nexus between poverty and environment.” This WSSD consensus recognizes that there is a nexus between poverty and environment but that there may also be other more important causes of environmental degradation outside of poverty.

Examples come from many observations in a developing country such as the Philippines. In the Biodiversity Research Programme for Mt. Malindang, stakeholder consultations point at the political agenda of at least one local mayor as the cause of in-migration, and not the push of poverty. In many other Philippine communities, the illegal loggers, particularly when these are large-scale and mechanized, are not the poor but the rich and powerful. It has also been pointed out that development projects planned and implemented with the influence of the rich and powerful, and funded by similarly rich and influential donors, and thus having little of the local perspective and agenda of the poor, have caused serious environmental damage.

The reality is thus more complex than what we thought it was. Understanding the biology of biodiversity conservation is definitely not enough.

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*\*Paper presented at RAWOO's 25<sup>th</sup> Anniversary Conference: “Pro-Poor Growth and Governance,” 15 November 2002, Utrecht, The Netherlands.*

*\*\*Chair, BRP Joint Programme Committee, and Philippine Working Group.*

Nor is an understanding of the nexus of poverty and environment when only the poor is seen as the key subject. To complete our understanding of reality and the effectiveness of our solutions, we need to also look at wealth and power, especially their abuse, and how they have caused environmental degradation. The implication of this is that research for local development has to be directed at both pro-poor growth and good governance.

### Strengthening Linkages and Partnerships

Research that is directed at pro-poor growth will have to establish linkages with the poor at the very start of the design process. The purpose is to direct research to meet their needs in as much a direct way as can be made. Researchers who have been trained to meet “academic needs” usually ask the wrong questions and come up with objectives that have little relevance to the local situation.

In establishing such linkages, the poor should not be lumped as one general category but disaggregated into their natural groupings – upland farmers vis-à-vis lowland farmers, farmers among indigenous peoples, farm laborers vis-à-vis farmers with land, fisherfolks with boats and those without, vulnerable groups among women and youth, even the poor that belong to the informal sector. In this way, research questions that are developed are definite in their relevance and the roles that the poor can play in their implementation are made clear.

The value of establishing linkages at the earliest stage of research development is derived from the fact that needs of the poor are urgent and so is biodiversity conservation. Survival of both man and wildlife are reckoned in days and not in years. As much as the lengthy “data gathering – analysis – peer review – publication” cycle is shortened, then the more that the poor will be interested in being involved and the less loss of biodiversity. Thus, while a lengthy comprehensive landscape framework is still the

recommended approach, its implementation should have clear incremental activities. The scope of such activities should allow fast answers to urgent issues and within the capacity of the poor to participate in. The whole, however, should be in an integrative design wherein each activity eventually builds on each other.

The issue of methodology also comes in when active participation of the poor is sought. The challenge is how to simplify methodologies and even developing innovative approaches yet continuously maintaining scientific rigor. Thus, a biodiversity research programme for development would even have to include methodology development as part of its initial set of research topics for it to proceed properly.

Participatory approaches are critical for identification of stakeholders and their relevant roles. In addition, the research topic becomes more focused and starts at what the local people have. Outputs eventually result in improving on what the local people have rather than a system overhaul that may be clinically logical yet irrelevant and difficult to implement.

In the case of the Biodiversity Research Programme for Mt. Malindang, the researchers who wanted to be part of the programme had to conduct participatory rural appraisals before they could finalize their research designs. Once particular communities have been selected, the researchers had again to visit and consult their stakeholders to validate their research designs before finally proceeding with implementation.

In many cases, the establishment of linkages with these stakeholders is part of the needed entry protocols without which the research cannot proceed. Certain indigenous peoples consider particular areas as sacred and would only allow the implementation of even a non-exploitative activity as research, dependent on agreements on certain behavior or conduct of required rituals. Even without sacred sites, Philippine

law requires that activities within ancestral domains could only be implemented with voluntary prior informed consent of indigenous people domain holders.

The causes of poverty, however, must be analyzed from a more comprehensive perspective. A “landscape” approach from a spatial and conceptual framework identifies well the linkages of poverty as an end effect with its causes and the poor with its enemies and allies. Thus, from the point of governance, linkages with the local and national government agencies as well as nongovernment organizations involved in policy-making and implementation and in the delivery of development services become important. Just like the poor, these institutions and organizations of power, could be a source of relevant biodiversity research questions although more along the lines of how can needed services be better delivered to the poor so that they can manage their natural resources in a sustainable manner. At the same time, they can also be important “gatekeepers” to entry of researchers into the communities. In the Philippines, it is good practice and also required by law to inform local government units of the conduct of critical activities in their jurisdiction. At the national level, Philippine regulations require that a bioprospecting permit be acquired from the Department of Environment and Natural Resources (DENR) for any inventory collection to be done as part of the biodiversity research.

Linkages with local research institutions are important in that they may have already established a presence in the area. It confuses the local stakeholders when different groups of researchers vie for their attention and worse still, ask the same questions that were asked before. In the long run, local research institutions should be the ones to sustain research for development in the area. Local research institutions should be brought together to pool expertise and resources and create a critical mass of researchers to sustain research for local

*(continued on page 8)*

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## Researchers' visit to the terrestrial site on 15 February 2003



*The group's arrival in Barangay Mansawan.*



*The group pose for a picture in Barangay Mansawan.*



*The sacred Lake Duminagat.*



*Researchers, NSS staff, and local residents pose for a group picture in Lake Duminagat.*



*Barangay Gandawan.*



*The terrestrial group walked for almost seven and a half hours to see the upland sites.*

## Dr. Bacaltos wins Best Research Paper award

Dr. Della Grace G. Bacaltos, BRP researcher from Southern Philippines Agribusiness, Marine and Aquatic School of Technology (SPAMAST), won the Best Research Paper Award for her BRP coastal project titled, “*Participatory Biodiversity Assessment in the Coastal Areas of Northern Mt. Malindang*” in the Region XI Research and Development (R&D) Review sponsored by the Philippine Council for Aquatic and Marine Research and Development (PCAMRD), in cooperation with the Department of Science and Technology (DOST) – Region XI and the State Universities and Colleges (SUCs) in the region.

The R&D Review was held at Davao del Norte State College (DNSC), Panabo City, Davao del Norte on 6-7 January 2003. Fourteen completed studies/projects from DNSC, SPAMAST, Davao Oriental State College of Science and Technology (DOSCAST), and University of Southeastern Philippines (USEP) competed for the award. Dr. Cesario R. Pagdilao, PCAMRD Executive Director, Dr. Bleshe Querijero of DOST-PCAMRD, and Ms. Elsie Solidon of DOST-Region XI served as the evaluators for the Review. ■

*The BRP Coastal...from p.4*

- comes from fishers and gleaners from outside the coastal barangays on top of the resident fishermen and shellfish gleaners.
2. The community has expressed the need for other livelihood opportunities.
  3. The human-related threats to biodiversity conservation have been identified as blast fishing, commercial boats’ encroachment in municipal waters, fish poisoning with the use of derris root and cyanide, compressor fishing, and the use of fine-mesh nets.
  4. There is a lack of concerted effort and feedback mechanisms among the local stakeholders (i.e., LGUs, POs, GAs).

### ***What do we recommend?***

Based on the results of the study and experience of the researchers, the following are recommended:

1. Any biodiversity project should have a strong social component that would focus on understanding the socioeconomic dynamics in the community.
2. Because of the abundance of siganids in the sampling areas, an in-depth research on siganid biology, i.e., species diversity, migration patterns, reproductive biology, and genetic flow, should be conducted.
3. The delineation of municipal waters should be made clear-cut in order to control, if not eliminate the problem on the encroachment of commercial fishing vessels.
4. The Misamis Occidental Environment Office (MOEMO) should coordinate all efforts for coastal resource management (CRM). The unified fishery ordinance has to be adopted in all coastal barangays to address the trans-boundary nature of the coastal zone and to effect initially a network of Marine Protected Areas (MPAs) as a management tool. ■

**“Development cannot wait for research results.”**

*- Mr. Jan Cools  
First Secretary for Environment  
Netherlands Embassy*

*Biodiversity research...from p.6*

development. Linkages with them at the start of the research program should have this long-term view of the relationship.

These multistakeholder linkages create added value. These linkages are important in the preparation and development of the governance system of the research program, the role that local governance would have in it, and the processes it would undertake to promote good governance as part of the research process itself.

The importance of making these governance elements as part of the research concern is that sustainability and replicability of the research and implementation of its outputs will also depend on empowerment at levels beyond the community. Local communities are open and dependent on many decisions and influences coming from the local government units, national government agencies, and their partner nongovernment organizations. Thus, there is a need to deal with poverty beyond concerns for sustainable use of biodiversity. Governance at local and national levels is a critical concern as well.

*(to be continued)*

*SAMU'T-SARI* is the official publication of the BRP. Its name was derived from the Pilipino term for biodiversity which is “*samu’t-saring uri ng buhay.*” *Samu’t-sari* means variety.

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