

BIODIVERSITY RESEARCH: MAKING IT RELEVANT FOR LOCAL DEVELOPMENT¹

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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

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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. 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 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.

There is also the need to look at governance concerns given the linkage between local and global concerns. Examples of these are when the local area becomes a point of global concern (i.e., biodiversity hotspot) and where donor countries and institutions from the North have put in funds for major development projects. These linkages can help answer important biodiversity research questions (i.e., how can international cooperation be made more effective in meeting poverty-cum-environment needs). On a more practical level, linkages with international agencies open opportunities for increased funds generation as well as the transfer of information and technology. Linkages with development programs and their donor agencies are also important in that they wield influence and power concomitant to the size of funds they bring in. In many cases, research is asked to direct its funds and efforts towards more urgent livelihood needs. The presence of complementary development programs to which the research program can redirect such demands has been helpful.

In addition, South-North linkages could also initiate needed political support, particularly when bad governance allows wealth and power to be so abusive of people and environment as to render local and national efforts inutile. When biodiversity research lead into sensitive political issues, the participation of partners from credible and influential international institutions and countries of the North is important. The international partner could open the argument on the need to answer sensitive questions on biodiversity loss and the role of poverty and bad governance. The linkage also creates a transfer of credibility and influence to the local research and its researchers thereby also giving local researchers a measure of protection when the answers that come out threaten the powerful selfish interests. There is the challenge, however, of making sure that the process eventually leads to local empowerment rather than to deeper colonial mentality.

Linkages certainly create advantages. But they also come in with problems and issues. For one, a few linkages may not be enough, particularly when the scope of the research covers a landscape. One critical stakeholder left out in the process can cause serious difficulties later on. A critical mass of support linkages has to be developed. The complexity of the research program, however, increases

and there would be added burden on its budget and administration. The larger the number of stakeholder groups involved, the more difficult the participatory approach becomes. The delays that arise make one question how participatory a participatory approach should be. Political tensions also arise as various stakeholders also often do not relate well with each other and have their own ideas of the high importance they have to decision-making.

A possible solution would be to take a “progressive approach.” While a wide contact with stakeholders at various levels is made at the outset, the intensity of follow-up with them and their eventual integration into the dynamics of decision-making within the research program will vary according to the relevance and timing of their roles and the capacity of the program to manage the linkages. For example, linkages will have to be immediately strengthened with the sectors of the poor that would be part of research design and implementation. Linkage activities with the Mayors, Governors and heads of national government agencies, after the initial entry protocols, can be intensified at a later stage when policy recommendations built from research outputs are being readied for presentation.

In the Biodiversity Research Programme for Mt. Malindang, a question that is being raised in hindsight is whether it would have been better for the program, management-wise, to have linked first with one or two of the local research institutions rather than target them all. The program, however, is of a short five-year duration and the perceived need to provide research for development opportunity to a critical mass of local institutions was predominant. Had the program been designed to be at least ten years, then it would have perhaps taken a design that builds linkage with local research institutions in stages.

The value of linkages as so far discussed is along getting a better understanding of the local situation and initiating proper entry protocols for the biodiversity research. These linkages have to develop through progressive engagement into genuine partnerships. Partnership in this context means having a clear, shared vision and commitment to work together over the long term. This should lead to a shared ownership of the research and consequently shared leadership.

Such partnerships should strive to put stakeholders on an equal footing and become part of the process to create empowerment and equity. By experience, research that brings in the participation of local stakeholders, various research institutions and South-North researchers together will have an initial stage of intense competition between themselves because of their particular mindsets and their particular interests and agenda. Equity and transparency becomes vital to maintain unity. A highly participatory and open process of proposal review and approval, with communities validating the research design, become important features.

Partnership also means that the researchers and the local stakeholders respect and recognize each others' strengths and relevant contribution. An example of this is the recognition of the value of indigenous and local knowledge systems and use of such systems to provide not only knowledge but also methodologies for accessing knowledge for the research program. Appropriate consent and agreements on fair and equitable sharing of the benefits of the research, however, must be in place for this to be considered part of genuine partnership.

Building partnership is also a case of building trust. Trust is critical if the research is to get truthful answers from local stakeholders. It is also the foundation for the successful teamwork of researchers particularly when they come from different institutions. Similarly, trust is necessary to build institutional cooperation between competitive stakeholder groups such as between local and national government

agencies, government and non-governmental partners, and South researchers with their Northern counterparts.

From the delivery of research outputs point of view, partnership with eventual users allows direct delivery of research results. The poor, when made partners in implementation do not have to wait for refereed publications that they cannot read anyway. Partnership with policy makers leads to less advocacy work as they, through their active participation in the research, will deem the output as the own. This manner of "seeing for themselves" critical issues and what needs to be done is important in that politicians in a developing country situation are highly distrustful of recommendations that come from the outside, especially if such recommendations tend to go against their interests and curtail their power.

From the governance point of view, multistakeholder partnerships that highlight empowerment, equity, transparency and building trust provide a good model and actual experience with good governance. The concept of good governance becomes real and valued. The research program then becomes the best advocacy tool for good governance in spheres even outside of research.

Capacity-building

Capacity-building is an integral and most important component of biodiversity research for local development given the importance of building genuine partnerships as part of such research. The best situation is to build partnerships among equals, even in relative if not absolute terms. The process of research for local development must in itself be capacity development at various levels and stages of the research program.

This capacity building should not just be of a technical nature but also of values. The researchers must genuinely feel for the poor and see the applied research targeted at meeting urgent needs of the poor to have as much prestige as that for academic purposes. The researchers must have in themselves the needed paradigm shift in thinking having resolved within themselves the question of "why the poor?" In the Biodiversity Research Programme for Mt. Malindang, this was facilitated when the Mindanao-based research participants themselves realized that they are themselves the "poor" relative to Manila-based researchers and have thus been given priority. For the poor, there should develop the confidence in themselves based on the realization that they have strengths and resources and that these are of value to others who seek partnerships with them. The paradigm shift here is that partnership in the research is not based on a joint recognition of the weaknesses of the poor, thus resulting in a client-patron relationship, but rather of the latent strengths that both can draw upon to solve problems.

One other important task of capacity-building is to make better researchers by making them better communicators. First of all, to be able to communicate on the question of why the research and be honest about it. Then to always know the value of the information being asked and how it will be useful for all, particularly to the ones from whom inputs are being taken from. The researcher must be seen not only as an information taker but also as an information giver and development facilitator. The researcher must know how to communicate not just through scientific journals but also through effective local forms of communication and media.

All of these capacity-building objectives cannot be accomplished from just classroom type trainings and workshops. These can only be developed through an iterative process of fieldwork and reflection, guided at first, but eventually through self-realization.

One of the important objectives of research for development is the development of a continual pool of researchers. This means that the research process is a continuous sharing of knowledge and experience, even cross-sharing in the case of multidisciplinary teams. This is to deal with the limited time availability of researchers and rapid turnovers given that researchers coming from universities from relatively poorer regions of the country have heavy teaching and administrative duties. This has also to do with the need for such research for development to be a long-term effort to equally match the long-term effort needed to even make a significant shift towards sustainable development in critical poverty areas.

There is advantage in working on capacity-building with institutions, government and non-government, already based in the area. The rationale for this is not just based on equity considerations but more of the greater access to them of local stakeholders in terms of sustaining the research efforts and their eventual participation in local policy-making and governance. Research for development, therefore, looks at establishing formal agreements not just with researchers but also with their institutions. Capacity-building partnerships, which includes building the infrastructure for research, are established with requisite institutional backing so that the scope of benefits go beyond individual researchers and would be sustained in the long term.

Capacity building, especially in a developing country context, also means confidence and credibility building. There should be effort at getting research outputs utilized and researchers, particularly non-scientist participants, and their institutions recognized at local, national, and global levels. Providing support for proper presentation of research results and of policy dialogues and advocacy using research results at various levels is important. In certain cases, endorsement of researchers and their excellent work by already credible members of the research team is helpful.

Other Key Considerations

There is need for considerable investments in time to make biodiversity research for local development truly relevant. The research support commitment should be for 10 years at least and at best for 15 years to match and provide knowledge support to an ideal development cycle. In agroforestry or forest plantation development projects, for example, the organization of project participants, the production of their products for livelihood, the marketing of these products, and the proper reinvestment of profits so that sustainability is achieved takes at least 15 years. Many of these projects have failed because donors often just provide a 5-year support and leave the participating communities when what they have planted are not even ready yet for harvest. The experience is that unlike infrastructure projects, biodiversity related livelihood projects for which knowledge support is critical, take a long time to be at a sustainable stage. Policy development has a similar time scale. In the Philippines, incorporation of community-based forest resource management into formal policy took more than a decade and may take another decade for refinements based on lessons learned beyond the pilot stage.

Biodiversity research for local development requires good preparatory phases. There should be at least a "grounding phase" where researchers using appropriate entry protocols establish positive linkages with key stakeholders. This phase also has potential for providing opportunities for "junior" researchers

to gain needed experience before proceeding to research topics of larger scope. In the Biodiversity Research Programme for Mt. Malindang, there was a first-generation research phase, the purpose of which was to better understand the landscape and to deepen linkages into partnerships. These phases has already taken three years out of a five-year program.

The challenge is how to convince donors who have to show results themselves to keep their own fund levels high to invest in a “reverse process” where the first three or more years are seemingly less useful preparatory processes. Traditionally, the approach has been to set the goals at the national and/or global levels, then conduct the research, produce quick outputs, then draw on the outputs to convince the stakeholders to accept recommendations. The hope is that the research results will awaken those that hold the power to make changes. But as a popular saying in the Philippines goes: “The hardest person to wake up is the one that pretends to be asleep”.

If biodiversity research for local development is to succeed, the process has to be reversed – the forces of change have to be awakened first. The seemingly less useful preparatory processes are actually the most important ones as they are the ones that put the *sustainable* in sustainable development. Goals are set at the local levels, the stakeholders convinced to support the process and provided requisite capacity building to be genuine partners, and then the search for answers commences. In the traditional approach the agenda is imposed from the top, an easy task for the holders of funds and power. In the alternative approach, the agenda is set from below, which is usually difficult with persons and institutions used to having their own set agenda for others to adopt.

If biodiversity research is to be relevant to local development then its methodologies must be adaptive to local practices. The research should be able to transcend fixed tools of the discipline and researchers should have the ability to innovate. Even such simple matters as being able to schedule the work according to the stakeholders’ schedule and not according to that of the researchers and broadening the qualifications of “researchers” to include non-scientists are important. The issue that has to be often resolved, however, is how to maintain scientific rigor yet open the research to the active participation of non-scientists and make use of modified methodologies that better integrates with local knowledge systems.

Adaptive research also implies that its management is also adaptive. The question here is whether government or university-based rules, traditionally non-community-based, could be adaptive enough and how could they be modified. Should bidding rules apply when community services are sought? Should employer-employee relationships be highlighted, as they usually are, in contracts signed between the agency in charge of research and its nongovernment organization partners who on the other hand wish to maintain their independence? Could “tokens of appreciation” for help provided by community members be in non-cash form and allowed under accounting procedures since cash compensation makes the activity more of employment rather than of participation? These are just some of the questions that have been raised in efforts related to biodiversity research for local development and they have to be properly answered.

Concluding Remark

Biodiversity research for local development is a new thing. Certain ideals have been set as discussed in this presentation. Some have become guidelines of proven utility. But a lot of more of these have to be tested in terms of practicality and effectiveness in meeting the objectives of local development itself.

For this reason, the best way to conclude this attempt to answer the question of how to make biodiversity research relevant for local development is to point out the following:

“Just as the struggle to reduce poverty and nurture good governance will take many years, requiring not only innovation but courage along the way, so would the kind of research we will have to pursue to serve these goals.”