Replicating Models of Institutional Innovation for Devolved, Participatory Watershed Management[1]

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ABSTRACT

Watershed management is one the focal issues in the debate about sustainable development. Research and development institutions have been looking for workable approaches and models that will show how this can be accomplished considering the alarming conditions of Philippines' watershed.

Considering that man is the prime user of natural resources, contemporary innovations on watershed management focuses on the involvement of community people towards the protection and conservation of these resources. So that, involving community people in resource management has been the trend in many parts of the country today. Hence, the emergence of various participatory approaches in watershed management.

Participatory watershed management saw the light with the Philippine Local Government Code (LGC) as it evokes sweeping changes in local governance through decentralization and devolution. The LGC 1991 provides the legal framework for local governments to initiate institutional innovations towards this end.

While more and more LGUs are getting proactive in responding to issues besetting environment and resource degradation, still a majority number of them remain complacent about their devolved responsibilities in NRM. This led us to search for ways of understanding the methodological and policy hurdles impinging successful watershed management.

Our experience started with working to help the Local Government of Lantapan in developing their Natural Resource Management Plan, which received national recognition as a key institutional element in the Philippines' National Watershed Strategy (DENR 1998). From this experience, we began to scale-out to municipalities around the Mt. Kitanglad Range, now reckoned with the Protected Area Management Plan. The municipalities developed their own institutional innovations to run the planning activities, and now, the implementation of the plan. This has resulted into more LGU financial investment for the environment and NRM sector, towards making this a major development program.

The LGUs also identified some of the factors that would sustain these developments at the institutional level. They are: local financial investments, their local technical capability, matured political culture and proactive national mandate. These however, need an explicit support, perhaps, through policies, such that local NRM plans will not become hostage of traditional politics or of political differences.

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1. RATIONALE

The last few decades of the 20th century is chiefly characterized by the streaming of new and innovative approaches to protect and conserve remaining watershed resources. The millennium ended with an urgent need for feasible models on sustainable environmental management because soil, water and forest resources in the Philippines have now reached a critical stage.

The plight of the Philippines Watersheds

Before the Spanish colonial period, the Philippine's forest resources are among the world's most diverse and biologically richest tropical forests with over 90% forest cover of its total land area. Today however, latest estimates place the country's remaining forests at 5.6 million hectares from 20 million hectares in 1900s. This forest cover is roughly 18.6% of the country's total land area, which is far below the country's ideal forest cover. For the Philippines to be ecologically sound and be able to sustain its ecosystems, its ideal forest cover should be 54% of its land area *(The State of the Philippine Forest).*

Deforestation is the main reason for the dramatic loss of Philippine forests during the latter half of this century. Trees were cut to cater building of ships for the Galleon trade, churches, fortresses and large houses of Spanish families. Large parcels of land were cleared to give way for the inquilinato and hacienda systems to produce commercial crops. The Philippines became the supplier of tropical hardwood products rich countries like USA and Japan could not produce in 1970s *(The State of the Philippine Environment).* This marked the onset of the logging boom where highly mechanized and large-scale logging characterized clearing of forests. The ravage of forest resources was legally set through upon the government's declaration that lands equal to or more than 18% slope is state forestlands that is basically, much of the uplands. Powerful logging concessionaires were issued Timber License Agreements including those who do not possess concepts of reforestation and responsibility. Sustainable measures to protect the environment were not popularly promoted then because it was thought that such would only impede economic development.

With an estimated average annual deforestation rate of 550 000 hectares, the country is enveloped with inevitable environmental crisis. This continual abuse and misuse of resources led to its current dismal state. Population explosion and abject poverty further exacerbate environmental problems. Landlessness and unemployment forced lowlanders to migrate and make a living in the uplands. This resulted to clearing of forestal areas to give way for intensive agricultural production where more often than not, destructive and unsustainable farming practices are employed.

As a result, most upland watersheds in the country today have become marginally productive, as the topsoil has been continuously eroding due to unsustainable farming practices. Soil depletion is intensified with the promotion of commercial crops requires intense use of chemicals. Result of which is the continued poverty of upland dwellers and degradation of watershed resources, which affect lowland environment as well. Ecological disasters such as downstream flooding, siltation in major rivers and dams, climate abnormalities, erratic water supplies and power shortages are frequently experienced lately.

The Conventional Approach

This prompted the government, with support of various sectors, to look for practical ways to control resource degradation if not totally end the problem. They introduced and implemented a number of programs and projects aimed at arresting resource depletion and environmental degradation. Different approaches have been tested towards successful upland watershed management.

However, while majority of the community people are aware of the existing problems, only few fully the understand its underlying effect to the lifescape and landscape. They are not able to discern the real issues and concerns behind these that need immediate attention and action.

In most cases, community people were just fed with externally driven projects and programs implemented on a piece-meal basis. National initiatives try to resolves resource degradation through traditional top-down approach where community people become passive recipients of their projects and programs. With government as the protector and manager of the resources, community people do not have any option but to accept these programs and projects without understanding the immense problems being addressed and how it would affect them.

Understandably, this brought about low impact to explicate the problem. Their effort yielded insufficient results because they could not get people to actively participate in natural resources management (NRM), evidently with degradation problems still surfacing on a larger scale.

Local Governance and Natural Resources Management

As the Philippine government downsizes bureaucracies due to devolution, crucial changes are being undertaken by major sectors in the country today, affecting the structures, management and functions of public and private institutions that essentially includes environmental and natural resources agencies. Functions previously designated to central government are transferred to the provincial, city and municipal levels.

The Local Government Code (LGC) of 1991 provides legal framework with which local governments can manage watershed resources and maintain ecological balance within their dominion. They are encouraged to initiate innovations, mitigate and adopt adequate measures to control environmental degradation. Hence, local governments can now implement environmental activities as long as these are within the provision of LGC and in consonance with the national programs' thrusts and policies.

With devolution underway, participatory demand-driven approaches to watershed management is gaining increasing attention in response to the growing realization that local institutions and organizations and the community people play vital role in managing resources effectively. This approach is basically local-driven that integrates community people in resource conservation and managemnet. Local governments and community people are encouraged to design and decide what they should do to resolve the problem. This motivates them to participate and cooperate knowing the benefits they can accrue from protecting and conserving these resources.

However, within the decade of the LGC implementation, the number of LGUs responding proactively to their devolved functions is yet below par. It is realized that there are

methodological and policy hurdles impinging successful watershed management. Most of these occur at both national and local levels. As we begin to recognize the roles of local institutions, particularly, LGUs in watershed management, it is important to understand the factors affecting them and how policies can support these institutions in the pursuit of sustainable watershed management.

2. GOAL AND OBJECTIVES

Goal

The goal of this workplan is to provide tools for decision-makers and stakeholders to better integrate environmental knowledge with technical and institutional innovations to enhance the management of natural resources at the local government level.

Objectives

1. Scale-up the Lantapan model to other municipalities surrounding MKRNP in Bukidnon. This means directly assisting and coaching LGUs in developing their own NRM plans.
2. Analyze, evaluate, assess and compare the performance of the NRM model in these different municipalities and develop these into modules that serve as decision-support to LGUs in pursuing local NRM planning and implementation.
3. Identify the sustainability factors of local NRM.
4. Communicate significant results of the workplan through the production of popular print media results print media such as the quarterly NRM Notes that we've started to produce, paper presentations in related conferences and self-sponsored workshops or forum.

3. EXPECTED OUTPUTS

- **NRM plans of Libona, Baungon, Manolo Fortich, Impasugong and Malaybalay City.** The NRM Plans of these municipalities will serve as the template of sustainable development in these areas. It will place the LGUs in a better bargaining position with respect to the kinds of development activities that may threaten environmental integrity.
- **Research reports and policy brief.** The reports will highlight the significant findings of the study with respect to sustainability factors for local NRM. This will be dovetailed by a policy brief drawn from an analysis of the sustainability factors needing policy support.
- **NRM communication tools.** This includes quarterly edition of NRM Notes that highlights local NRM planning and implementation process as implemented in Bukidnon. Caselets on local NRM's Basic Steps and a Policy Brief will also be developed. Research reports on process and impact analysis will be developed into modules. These will be packaged as system tools for local governments and stakeholders in implementing devolved and participatory watershed management.

4. RESEARCH HIGHLIGHTS

Methodology

- **Technical Facilitation.** The scaling-up of Lantapan's local NRM experience to municipalities surrounding the MKRNP is one major highlight of this workplan, with potential application to other municipal sites in the Philippines. Broadly, the method applied in this particular activity is *Technical Facilitation*. By technical facilitation, coaching sessions with the Natural Resources Management Councils' (NRMC) of different municipalities are provided to help local governments develop their own NRM plans. The planning process that was used in Lantapan served as the template. However, there are modifications and innovations made along the process to suit specific conditions of local governments. This forms part of the adaptive research of the Lantapan NRM methods to other municipalities.

- **Process and Impact Analysis.** The performance of these municipalities are analyzed, evaluated and compared in municipalities where they have similar or differing biophysical, socio-economic, political and institutional conditions. For the descriptive analysis, comparative analysis and impact assessment, surveys were conducted using structured questionnaire forms that serve as the research' primary data but secondary data are also utilized as reference. These were distributed to respondents from different municipalities using random sampling. Interviews were also conducted, both formal and informal, with key informants. Self-Assessment Workshops are likewise conducted to all NRMCs, which provide the council members to self-grade their performance as a planner and as a planning team. They as well rate the local government in terms of the support provided to the council during the planning process. To further ascertain the factors that affect local NRM, surveys are conducted in municipalities where NRM program are underway. The results have been collated and the data are now being analyzed. Results of which will be fine-tuned and enhanced by assessing the impacts of planning process as well as its implementation. This way, we will be able to present existing best-bet NRM practices in the country. These will be packaged into modules that will serve as support systems for local governments and community people to further improve the processes of NRM planning and implementation. Likewise, these learning's and experiences will be communicated nationally and regionally in the Southeast Asia.

- **Policy Analysis.** Research reports of processes and impact analysis will be utilized for this activity. Holding a Policy Forum by middle of this year will concretize initial result of the research. Local government officials, particularly those coming from the municipalities around Mt. Kitanglad will be the participants. Representatives from NGAs, GOs, and NGOs will also be invited. Output of this research will be developed into a Policy Brief. It will be one of NRM communication tools that will be packaged for local governments and stakeholders for a successful watershed management.

5. DISCUSSION OF ACCOMPLISHMENTS

Analysis of Lantapan NRM experience. This activity involved surveys, interviews and workshops conducted with the council members and other concerned individuals to assess and analyze Lantapan's planning process. Results revealed that they were satisfied with the outcomes of their participation in the NRM planning process and their contributions to the development of NRMDP. Activities herein resulted to the development of various frameworks that are primarily used in replicating the process to other sites (please see attached diagrams).

Technical Planning Facilitation. The Lantapan NRM experience has already been scaled-up to other four neighboring municipalities around Mt. Kitanglad. These are Manolo Fortich, Baungon, Libona and Impasugong. By now, the local government of Manolo Fortich has established its new organizational structure for Environmental Protection and Natural Resources Office (EPNRO) whose prime function is to supervise its environment and NRM programs as embodied in the NRMDP (please see attached Manolo Fortich EPNRO in the following page). Considering its limited human and financial resources, the local government opted to utilize personnel from line agencies such as MAO, MPDO, BENRO and the Philippine National Police. The MAO duly provided a corner of their office to accommodate the EPNRO. Just recently, the local government held its first NRM Congress to present the NRMDP. It was well attended by representatives from all organizations and community people from all barangays. The activity highlighted the public declaration of all organizations to support NRM program.

Baungon on the other hand is still on the process of setting-up its Project Management Office (PMO). The NRMDP in Libona has just been adopted in the Sangguniang Bayan and establishing its PMO will be the council's next priority. While Impasugong's first NRMDP draft is currently being reproduced for editing and revisions of the council. The plan will be consulted and verified at different levels and development councils in the municipality. The next area we will be facilitating is Malaybalay City. NRM orientation has already been conducted at the local level with the Chief Executive, city legislators and key representatives from line agencies. A number of municipalities have already shown interest to initiate their own template of environmental development. However, due to our limited resources, we cannot accommodate all invitations. But these gaps will be bridged with NRM system tools we are starting to develop to help these local governments in their environmental undertakings.

Preventive Systems Approach (PSA). PSA is an evolving model for protected area management from scaling-up of the Lantapan experience in local NRM to the municipalities surrounding MKRNP, consequent to the linkage with the Integrated Protected Area Systems through the Protected Area Management Board. The PSA aims to unify the efforts of different management regimes encompassing the three land belts – from the protected area to the buffer zone down to the privately held agricultural areas in an integrated ecosystem. Its management objectives extend beyond the boundaries of the natural systems to the managed ecosystems, and that enjoins larger communities and institutions' participation with the objectives of those living within. We hypothesized that when local governments are effective in implementing their NRM programs at their level, pressures in the protected area will be greatly reduced. Therefore, municipal-led natural resource management planning and implementation is a preventive approach to protected area management – hence, the PSA.

Impact assessment on the effect of PSA in MKRNP is already underway. Rapid Rural Appraisal methods have been largely employed, particularly, informal interviews with key informants. An initial interview with the Protected Area Superintendent revealed that there is now a significant decrease in the number of cases filed against violators in the MKRNP. It was noted that this was partly due to high awareness and commitment of local government leaders to implement local NRM programs and enforce local environmental laws as a result of the commitment developed through NRM planning process. Local Chief Executives have now become more expressive in their quest for effective environmental programs and are amenable that environmental undertakings are noble and doable. The working paper on PSA that has been the basis in various presentations with focus on the comprehensive protected area and watershed management initiatives has been enhanced and developed into a technical report. This will be packaged into a booklet for wider dissemination.

The Municipal Level NRM Planning as Alternate to the "Watershed Cluster Approach". This municipal-level NRM planning approach as adopted by the northern municipalities of Bukidnon has been identified as an alternate approach of the "Cluster Approach" to watershed planning. In areas where traditional leadership and funds constrained local governments in pursuing a Watershed Cluster Approach to planning, the individual municipalities can make a good start by initiating a municipal-level planning process. The local government of Libona was privileged to present the planning and implementation process reckoned from Mt Kitanglad of the northern municipalities during the Bukidnon Watershed Management Forum late last year together with the other two watershed clusters namely the Mt. Kalatungan and Maridugao River Watersheds.

A research aspect has been identified in this regard and that is to look into the cost-efficiency and effectiveness of devolved and participatory NRM planning and implementation with focus on the two approaches used in these Watershed Clusters.

Analysis on Factors Affecting Local NRM. While a complex web of factors may have affected the implementation of natural resources management programs, an understanding of the interplay of these factors is important. Initial analysis has identified socio-political, technical, human and financial resources as key dimensions that affected the success of local NRM. To understand the composite web of their relationships, specific elements are identified under these dimensions and were categorized as *enhancing, resisting and intervening*. The enhancing factors include: the LGC that provides the legal mandate to local governments for NRM, the availability of community-based NRM models and the presence of external support and service providers. The resisting factors may have restricted local governments to achieve the protracted change in the environment and natural resources management. These include lack of technical capabilities, lack of proactive technical assistance from NGAs, lack of effective consensus-building tools, lack of clear financial support, traditional political culture and some unintended effects of protective rules. Intervening factors may also have significant effects on local NRM that include local political climate, local environmental conditions and the leaders' personal interests and concerns. Initial analysis however revealed, that among the eleven factors presented, four of them have significantly affected local NRM. These are: local financial investment, local technical capability, political culture, and national mandate.

The interplay of these factors is critical and it is important to understand them and the elements behind in order to arrive at a confluence and harness their potential towards an improved implementation of local NRM. The factors may also have implications to a myriad of policy innovations that provide a promise for effective local NRM by local government in terms of budget allocations, institutional mechanisms, incentives and transfer of payments. In-depth analysis of this will be discussed in the research report.

Information and Dissemination. To date, two editions of NRM Notes released quarterly have already been produced and one NRM caselet jointly published by ICRAf and ARD-GOLD. The NRM notes is a technical paper that comes in a newsletter format. The first quarter edition for this year will soon come out this April. This is made to popularize the strategies, approaches and lessons learned from various municipalities where NRM planning processes are going on. These are circulated to local governments in Bukidnon and other NGAs and NGOs. On the other hand, the NRM Caselet features the Lantapan experience and other local government experiences around the country, particularly those assisted by the ARD-GOLD.

6. PRELIMINARY CONCLUSIONS AND RECOMMENDATIONS

Devolution in the Philippines prompted local governments and community people to work together on watershed management as a basic unit of integrated and sustainable development. With more and more local governments engage in NRM program, there is now a better understanding on the benefits on devolved and participatory watershed management processes, not just during the planning phase but during the implementation stage as well.

Social capital enhancement has been recognized as a prerequisite of improving the natural capital in respective municipalities. The benefits of tapping local skills and indigenous knowledge available in the municipality are now creating major impacts since people's involvement and participation is now more pronounced than ever. The local governments now acknowledge the relevance of research-based decision-making, hence the need for a local research unit that would provide improved information and decision-support tools for environmental programs.

The multi-sectoral and team approach in planning provided a strong basis for a participatory implementation as well using public-private partnerships. A significant lesson learned in this program is that implementation of NRM programs may not have to be a major expenditure activity. The local government and community people can realize sustainable watershed management if provided an enabling environment with necessary social support.

With local governments and the community at the center table, a new sense of project ownership and accountability builds up a greater percentage of success. Effective local governance is about balancing the desired template of development with available human and capital assets based on local needs and problems not determine by outsiders. The approach for better watershed management respects local knowledge and capabilities - "of the people, by the people and for the people."

Hence, the main core of devolved and participatory watershed management is basically giving the local governments and community peoples their niches that they can call their own. The envisioned improved agricultural production and environmental resilience is never bleak, but a greater challenge for local governments and community people to partake.

The challenge remains on placing environmental management at the mainstream of development as a basic social service. Our experience provides the window for other LGUs to best combine environmental knowledge with sound decision-making and therefore, provide the necessary financial and human investments for watershed management.