

# Chapter 14:

## Conclusions

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In developing societies, the relationship between development and the environmental and natural resource base has many influences. These include not only population growth and demographic change, but also expansion of urban markets, development of markets for new products, and changing roles of institutions and governments. For upland areas in relatively remote regions, continued dependence on the natural resource base presents a major challenge to the design of research and development projects promoting sustainable agriculture and natural resource management.

The mission of the SANREM-SEA project is to conduct research on the linkages between environment and development in the context of upland agriculture, and where appropriate, to formulate proposals for locally as well as nationally based initiatives for change. This volume has reported on the first five years of the project. In this conclusion we highlight some key lessons, both from the research and from the processes by which research was designed and implemented, and briefly recap the accomplishments of the project after five years.

*Process* is a critical aspect in the design and implementation, in developing countries, of natural resource management research oriented toward sustainable development. There is no prescribed model or “blueprint” for the design of such research. This is both because of the relative novelty of the idea of research that jointly addresses economic and environmental goals, and because of the high degree of heterogeneity in the geographical, cultural, political and economic circumstances of rural communities. The lack of a blueprint does not, however, imply that the design of the project was haphazard or lacking in structure. Rather, the project embraced a set of principles that stressed breadth, inclusion and completeness in the choice of activities and evaluation of outcomes—as discussed in Chapter 8. Adherence to these principles, when it worked well, provided a realistic perspective on the complex and intersecting

factors affecting resource management decisions by individuals and communities in the project site.

Of the four “cornerstones” or guiding principles adopted by the project, participation and inter-institutional collaboration played key roles in defining process. The challenge of promoting sustainable natural resource management in a developing economy cannot be met merely by adopting participatory data collection methods and setting up on-farm experiments. It requires outreach activities, with the meaningful engagement of institutional partners, which build local capacity and empower communities to analyze and resolve their own problems. In Lantapan, the project worked with NGOs, community groups, and local government. All groups of these types have comparative advantage over researchers in activities such as community organizing, outreach and even capacity-building. This did not mean, however, that a division of labor in which all outreach was assigned to non-research partners while control over research was retained by academic and research-based institutions would be the best means to proceed. The commitment to participation and inter-institutional collaboration—linking researchers and “action-oriented” local institutions—helped ensure that research was relevant, sensitive to local conditions, and oriented towards the solution of specific local problems. At the same time, the involvement of researchers in outreach-oriented partnerships created new opportunities by bringing science to bear on complex issues. The formal impact analysis of the project (Chapter 12) reveals influences at work in both directions.

Over and above locally based partnerships at the activity level, an important element of our experience is that the project itself, by displaying its long-term commitment through a strong and continuous on-site presence, became part of a web of local and national institutions dealing with resource management in Lantapan. This willingness to engage and work creatively with networks of village groups and local and national institutions helped reduce the project’s vulnerability to the vicissitudes of local politics and the electoral cycle.

Among the lessons that emerge from the project, two stand out above all others. The first is that while that *participation* is a term with multiple shades of meaning (Chapter 8), the probability of a project achieving lasting success depends heavily on the extent to which its objectives and methods are aligned with community interests and institutions. This lesson has been learned in a number of ways, both positive and negative, in the course of the activities reported in the chapters of the book. Research activities that made considered and deliberate commitments to participatory research, such as those documented in chapters 9 and 10, have resulted in the establishment of formal locally-based organizations

as well as strengthening existing ones. Their presence gives credibility to the claim that a project's influence may persist after its funding has ceased. Similarly, the remarkable convergence of interests between the project and the Lantapan municipal government, resulting in the creation of a municipal Natural Resource Management and Development Plan, indicates the kinds of opportunities that are created when project design is responsive to local political and institutional processes. To be sure, not all of the project's attempts at participatory engagement have been as successful as these, but there can be no doubt that long-term institutionalization of SANREM-sponsored ideas and approaches to development has profited both from early success and by learning from setbacks.

The second outstanding lesson is that it is not safe to assume that solutions to environmental degradation or unsustainable use of natural resources depend entirely, or even predominantly, on efforts to alter behavior of the residents of the affected area. So long as farmers and others are connected to a broader economy through markets for labor, credit and agricultural products, there is scope for market signals or economic policies to drive local resource allocation decisions. Admittedly, the farmers of Lantapan municipality are for the most part engaged in highly commercialized production, but even those who do not produce for the market are clearly strongly influenced by market prices. Two illustrations of particular relevance are those of Philippine corn and vegetable pricing policy, and the local labor market and wage effects of growth in the national and regional economies. As seen in Chapters 3 and 4, national policies that raised corn and vegetable prices have been major forces behind land expansion in Lantapan. Similarly, growth of non-agricultural labor demand could in the long run cause cultivated area to diminish—and perhaps influence adoption of soil and forest-conserving technologies as well. Thus market-related events beyond the control of the affected community can have major effects on incomes and on resource use decisions. We conclude from this that efforts to alter resource use patterns that do not acknowledge markets and the influence they play are unlikely to achieve lasting success, no matter how carefully they attend to the process of becoming embedded in local development institutions.

It might be observed that the two lessons just cited appear to embody a contradiction. On the one hand, we have made the case for *local* involvement as a precondition for the success of a project of this kind. On the other, we argue that project design must pay careful attention to policy constraints and market signals from *outside* the project site as (possibly dominant) influences over major resource use and environmental decisions. How are these consistent? The answer is that both are important, but in

different ways. Even if external stimuli dominate in farmers' land use decisions, there is substantial and increasing local administrative influence over land use zoning and taxes relating to resource use. Philippine decentralization since the early 1990s has shifted considerable and increasing power over resource use to local jurisdictions; this move has coincided with economic reforms that have greatly strengthened the power and reach of markets. Moreover, the acknowledgment of overlapping claims to ownership and control over land and forests in Philippine uplands has greatly increased the importance of village and cultural institutions as arbiters of actions affecting natural resources and the environment. This has occurred even as (in many respects) the *economic* importance of such resources has diminished with urbanization and the growth of non-agricultural, non-rural income and employment. One thing that is clear is that inconsistency between local approaches and the resource use incentives "received" from a broader economic and policy setting will most likely result in failure to move toward sustainable development. A project aiming to promote sustainable use of local environmental and natural resources must therefore be cognizant that the *primary* managers of resources are farmers and others whose actions are constrained by specific local cultural, economic and political institutions, but must not lose sight of the influence of external economic opportunities and policies on individual actions. Researchers can document, analyze and disseminate findings in which local processes, broader influences and technological and institutional opportunities are identified and their interactions made clear. Ultimately, though, responsibility for sustainable development of Southeast Asia's upland areas is shared between farmers, communities and community groups, and political jurisdictions from local all the way to national level.