

Welding Stakeholder Perspectives: Farmers, Scientists, and Policy-Makers

1. Stakeholder Analysis

In this chapter I will further explore the issue of *perspectives* which prevails among the different actors, or *stakeholders*, in the mountain research and development enterprise. Although one can use the mountain perspective metaphor, mountains *per se* do not have viewpoints—they are biophysical creations without cognitive energies—but the people who live in the mountains or propose to change or save the mountains through development have perspectives. In recent years, a useful exercise called *stakeholder analysis* has appeared to assist in resolving differences in understanding, perception, and equity between the different “actors” or stakeholders in development projects (Grimble and Quan 1993). The rationale behind stakeholder analysis is that each group has its own perception and diagnosis of the problem, based on their understanding of the issues, and each in turn believes their own position is true and justifiable. The key, therefore, is to make explicit these diverse positions and perceptions in order to bring the different actors to the negotiating table in an effort to resolve these differences. One criticism of stakeholder analysis is that it implies that the playing field between actors is level, but some groups obviously have more at stake than others (e.g., villagers who have to continue living in a watershed long after the scientists have gone). The spirit here is not to make the assumption that the long-term stakes are the same for outsiders (those who do not have to live by the consequences of a project) as insiders (those who do live by the consequences), but to use the stakeholder analysis method to help us understand the perceptual differences

between the actors. In fact, it may well be that the project facilitators—in conducting a stakeholder analysis for planning — would logically and ethically take a secondary role to the needs and wishes of the villagers.

In this chapter we will examine the assumptions and ways of looking at the mountains from five perspectives: farmers, researchers, policy-makers/planners, development practitioners, and donors. I should make it clear, however, that one cannot talk about these groups of actors without reference to the institutions which support them. Therefore, an understanding of the stakeholders' social worlds, which give meaning to their lives and motivate them in their work, is necessary to appreciate their behaviour (Thompson and Warburton 1985). Today, the institutional landscape of the HKH has almost become as varied as the natural landscape, with GOs, NGOs, international agencies, universities, development groups, private enterprise, and individuals vying for a place around the development table. Only by sorting out causes of behaviour and perception will we be able to come to terms with the different perspectives that exist in mountain development (Hatley and Thompson 1985). Otherwise, unless their agendas are matched with those of mountain communities, outside institutions are capable of becoming a part of the underdevelopment problem rather than a part of the solution.

A. Farmers

A methodology for linking scientists and farm communities will be outlined in the next chapter. Although farmer groups are extremely diverse, and their perspectives will vary according to their cultures and farming systems, some general comments about their behaviour can be attempted. Anyone who has spent much time with mountain farmers, for example, will quickly realise that their world is not made up of soils, plants, animals, and profits only. Farming in the mountains is a highly scripted performance, mediated in part by economics and biology, but equally by a culture that defines what is useful and useless, harmful and harmless, mundane and spiritual, doable and non-doable. Three important, but overlooked

aspects, of the farmer's perspective are: i) the farmer has to manage holistic, vertical systems in which there are complex trade-offs in the short-term and long-term decision-making processes; ii) the farmer's objective in living is not merely economic, agronomic, or cultural but a combination of all of these; and iii) the farmer is concerned with his/her immediate family and community and not necessarily with the same goals and needs of the national and international societies at large (e.g., as outlined in Agenda 21). In other words, the farmer's sense of place and, indeed, location within it is confined for the most part to his/her homeland, whether it be a valley, a watershed, or a larger region. Rarely, and only fleetingly, are farmers worried about the watershed (beyond their part), less so the nation, and not at all the whole ecoregion or the planet Earth. Also important is the fact that the farmer is normally the non-paying client of development projects, thereby meaning that the project will not necessarily address the farmer's goals (Agenda 21 goals are not necessarily farmer goals, although communities may share some environmental goals similar to those outlined at the Earth Summit). Reconciling the differences in the concerns of local people with those of global organisations is one of the challenges of sustainability research and development.

B. Researchers

This group represents a wide range of institutions from universities to international research centres to special commissions to study in depth a given mountain problem. Even organisations that do not have research mandates still engage in applied research. Normally, development-oriented researchers follow the academic/scientific procedures of enquiry and analysis (Ives and Messerli 1989). They probe into a topic in great detail, typically write a consultancy report for the agency paying for the study (rarely given to the community where the study was undertaken) or, for the more academically inclined, they publish a book or journal article. Generally, at the end of the work comes a series of recommendations on what should or should not be done by other, more ap-

plied, agencies. Normally, the results of the research are rarely returned to the people from whom the information was obtained, despite the enormous time and informational investments local people may have made in the research itself. A few dedicated researchers will become directly involved in implementation, but, for the most part, their life goals and objectives lie with their own peer group (professional society, university colleagues, or agency department) not with directly helping mountain people with their problems. It is not unusual for this group to work on problems of interest to themselves or their peer group without ever asking whether it is of relevance to the farmers or herders. Such 'extractive' basic researchers (i.e., those who return nothing to the people assisting in their research) are found in all disciplines, including both the social and biological sciences. Despite institutional constraints, basic research is crucial if we are to have any chance at all of basing decisions on empirical facts rather than on myths and wishes (Ives and Messerli 1989). And basic research could become more meaningful if an academic culture evolved which was more attuned to application and simple courtesy to mountain villagers.

C. Policy-makers and Planners

Although these two groups are not exactly the same, I have lumped them together since they typically represent government in determining the programmed, external influence on farmers. One major problem for even the most sincere and well-intended policy-maker or planner is the fact that he/she is embedded in a large bureaucracy which often has interests that conflict with local needs as well as with other branches of the same government. As I will point out in a subsequent section on time horizons, governments themselves are often responding to international initiatives and pressures for sustainable development, which is a long-term process. For example, the international push for biodiversity preservation has led to the establishment of national parks which, in turn, have usurped the ownership and traditional control of local communities over their own communal lands. In Ecu-

dor, recently, there was a conflict between the department titling landholdings and the department protecting the environment. The land office required farmers to clear up to half of the forest on their land before receiving titles, while the nature preservation office was attempting to save the forest. All too often, a great deal of inter-departmental jealousy and in-fighting over resources prevail. These rather normal government problems become even more magnified when the problems being addressed are on a trans-national scale, say in mountain ecosystems crossing the boundaries of several countries. Ives and Messerli (1989) have pointed out that trans-national institutions to implement action are a rarity—unlike research institutions—since research *per se* involves no commitment to implementation. Despite the problems with government agencies and their personnel (these are well known), it is still crucial that an all out effort be made to build capacities and involve these groups in the mountain development process. If not, over the long term, any development effort will be destined to fail or to be severely constrained if the formal government does not have a stake in its success.

D. Development Practitioners

These are the people who actually implement projects at the field level (Ives and Messerli 1989). Many foreign practitioners, whether from the private sector or contractors from universities, are in fact engaging in development consultancy activities primarily for commercial considerations. Today, this includes both foreign and local NGOs, of which there has been an explosion in numbers, although they have many of the same sets of motives as private consultancies.

Development Practitioners - File photo



These are the people who actually implement projects at the field level

In most cases, practitioners are appointed to implement projects designed by others and programmed in a formal project document. Outside of set, mid-project evaluation, which may suggest new directions, flexibility is at a minimum. Beneficial institutional change is unlikely and the project may collapse as soon as the expatriates withdraw, if not before. When the practitioners are from government agencies, additional career considerations come into play. There is typically an elaborate system of patron-client and cultural rules surrounding promotion and survival and, when a project runs against these rules (such as spending long periods in the field), then it is probably doomed to be killed by bureaucratic lethargy. Much of this is unfortunate since the project implementor is, along with the farmers, the most important link in a successful project.

E. The Donors

The donor community is characterised by both bureaucratic problems as well as important enlightenment. On the one hand, donors must pay attention to the desires of their constituencies in the home country. Most foreign aid, even if channelled through a specialised bank, has some kind of philosophical strings attached. Often, the ideas from the donor community can be more innovative than those promoted by planners and implementors in the field (because they are often trying to implement the last project from the donor, an idea which may now seem dated). For example, donors recently pushed *harmonisation* among agencies working on soil, water, and nutrient management and demanded new coordinated approaches to the problem instead of the same old-fashioned soil science perspective (Greenland et al. 1995). Donors have been the leaders in promoting biodiversity, gender, and sustainability projects. On the other hand, donors often push large schemes presupposing interdepartmental cooperation, even though such grandiose projects would never succeed in their own countries. Institutional appropriateness seems to disappear as a criterion for project implementation. There is a certain *fadism* operating; for example, the present push for multi-

purpose participatory watershed projects. Wherever the idea comes from, it soon gains strength and political support due to the donor funds and then has momentum of its own, even if the implementation strategy is not clearly thought through.

Projects must also be carefully geared to the appropriate scales and linked to the local region's variability over short distances in landscape and ethnoscape. Unfortunately, large-scale action appears to be favoured by the multilateral and large bilateral agencies which seem oblivious to the fact that "bigness" is unsuited to the mountain setting. The large-scale route does not allow step-wise experimentation and adjustment. Flexibility is inversely related to scale; the amount of external project funding is inversely related to clarity of project focus (Ives and Messerli 1989; Rhoades n.d.). The notion of start small, start slowly is looked upon unsympathetically by large-scale participatory projects, including watershed development and nature reserve protection. When a development proposal is approved and handed down, the national programme may not be capable or experienced enough to implement it. Ives and Messerli (1989) give the example of the forest sector in a Himalayan country. It has two roles, i) regulation of the timber industry from natural forests for commercial purposes and ii) protection of the forests from farmers. Then, a bilateral agency decides to fund a US\$ five million project in something called community forestry. If the country could start slowly and adapt to the idea then it might work. But suddenly there are many simultaneous demands and deadlines on ill-prepared institutions and personnel. Nothing, for example, is in place in the forestry department to deal with this strange, new idea just when they are learning to cope with the last donor idea. No one knows how to deal with the complex issues that such an approach implies, and so far foresters have been policemen, not colleagues, of the people. Even if they appreciate the project's goals, they still have to deal with layers and layers of rules and regulations which previously existed in the bureaucracy, and the required institutional linkages, which might help, are wrong or weak. The project may be carried out, the money spent, but impact will likely be dubious.

2. "Who Benefits and Who Pays for Sustainable Agriculture: Farmers or Society?"

A series of articles on improving soil fertility among small-scale farmers written by Ann-Marie Izac, Mike Swift, and their colleagues at the Tropical Soil Biology and Fertility Programme in Africa (Izac and Swift 1994; Swift et al. 1994) are directly relevant to the Himalayan situation. From their perspective, which is based largely on ecological economics, even if small-scale farmers are aware of the benefits that may occur in the longer term from changes in farm practices, such as those designed to limit erosion or increase soil organic matter, they may not give them high priority because the practice requires a time horizon not relevant to immediate household needs (Izac 1993). Changes that give an immediate and obvious return, such as the introduction of fertilizers along with an improved responsive crop variety for which a ready market exists, stand a much better chance of rapid adoption. Farmer interest in short- rather than long-term benefits is, of course, not unique to developing countries. Farmers in western Europe received heavy government subsidies for drainage and liming of soil before they would invest, and, in the USA, government support for erosion control measures was needed before they were widely adopted.

Many of the benefits promoted in watershed projects actually occur beyond the farmers' fields (reduction in siltation, flood control, improved biodiversity, reduced water pollution) at the level of the wider watershed, region, or nation (in the case of the Nepal Himalayas, the benefits are thought to accrue to India and Bangladesh). Another example is that of increased organic matter content in the soil which has limited immediate benefit to farmers (since the extra nitrogen can be often obtained more cheaply from fertilizers), but substantial ecological and economic benefits can occur over the long term to both the farmers' families and the community if organic matter receives attention.

Given that voluntary adoption by individual farmers may often be socially suboptimal, policy intervention is needed. Policies used in developed countries are difficult

to implement in developing countries (e.g., regulations are difficult to enforce, taxes and subsidies are costly to administrate, etc). Price policy (reducing prices for inputs, support for conservation crops), land reform, food for work, and direct community incentives have been attempted with mixed results (Izac and Swift 1994). Direct incentives, for example, may instill the belief in farmers that conservation is something someone else pays for and benefits others instead of themselves.

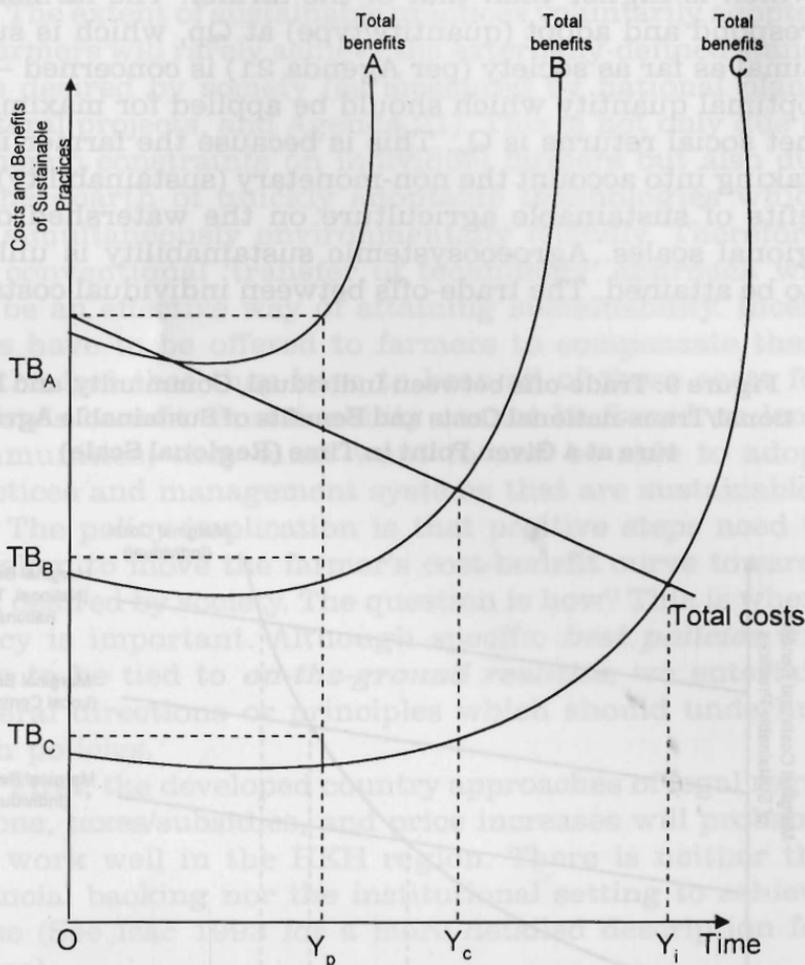
It is clear from Chapters 2 and 3 that most sustainable agricultural projects are trying to hit several moving targets at one time: poverty alleviation, income generation, environmentally-safe practices, improvement of natural resources, as well as equity in terms of gender and ethnic discrimination (Thompson and Warburton 1985). At some point in this complex discourse, we must answer the question, "who pays for the investments necessary to achieve the goals?" A corollary of this is the question: "are development projects so designed that individual households/farmers can voluntarily adopt those management practices which will address the other goals, especially those related to environmental protection?" If farmers are willing and capable of adopting these Agenda 21 type practices and systems, then all is well and the challenge is simply a matter of getting information to farmers (Izac 1993). If, however, farmers cannot afford to adopt the sustainable practices or are unwilling to pay for benefits that will mainly occur beyond the farm gate (e.g., biodiversity, downstream flood control, reduced greenhouse effects, cleaner water for the plains), then there is a "gap" between farmer and societal interests. Even if cognisant of the benefits of sustainable agriculture, most small farmers will not give them high priority, because they occur over time periods not attuned to their own planning horizons, which may involve immediate household food, cash flow problems, or bequeath value for future generations. Costs are real to the farmer in the short-run, while many of the benefits, either to the individual or society, occur over a much longer period of time.

It is often assumed that, in market economies, individuals usually use a relatively short *planning horizon* for decision-making. Indeed, one has to survive from one

year to the next to simply stay in business. This may be especially true for subsistence mountain families who are not sure from where the next meal may come. Therefore, even if they are aware of the benefit, they may not be able to afford adoption. The sustainable agricultural options which have the highest likelihood of being adopted are those with increased yields and decreased risks-to compensate for the yearly costs of implementation. This is summarised in Figure 8 (page 107), where costs of implementation are represented as a decreasing function of time (costs of reforestation or building organic materials will initially be high but will decrease through time). The corresponding total benefit curve, however, is an exponential function of time. In Scenario A, total benefits (TB_A) increase relatively rapidly over time, so that they become greater than total costs within the planning horizon of the farmer (Y_p). Adoption at this level is likely. In scenario C, total benefits (TB_B) increase relatively slowly and remain inferior to total costs over the farmer's planning horizon. Adoption is then unfeasible. This is borne out from evidence in the USA where farmers generally fail to act against farm yield losses caused by erosion (Izac 1993). The balancing of monetary and non-monetary, present and future, and individual costs and benefits over the duration of farmers' planning horizons constitutes the fundamental economic process of soil management on the farming system scale (see Huszar and Cochrane 1990 for an Indonesian case).

An issue closely related to the time horizon and adoption potential of farmers is that of societal versus individual benefits. Although evidence is not available for the HKH region, studies from developed countries show that monetary off-farm benefits of natural resource and sustainable agricultural practices far outweigh on-farm benefits (Izac 1993). It also bears repeating that project timelines (x number of years) for the accomplishment of goals tailored to that project (generally required by the donor to receive funding) may have little or nothing to do with the indigenous timelines (indeed, they may not even be "lines" but "cycles" or "spirals"). For the sake of argument, I have adopted in this section the language of market economics which contrasts 'individual' versus

Figure 8: Trade-off between Industrial Costs and Benefits of Sustainable Practices Over Time (Farming System Scale)



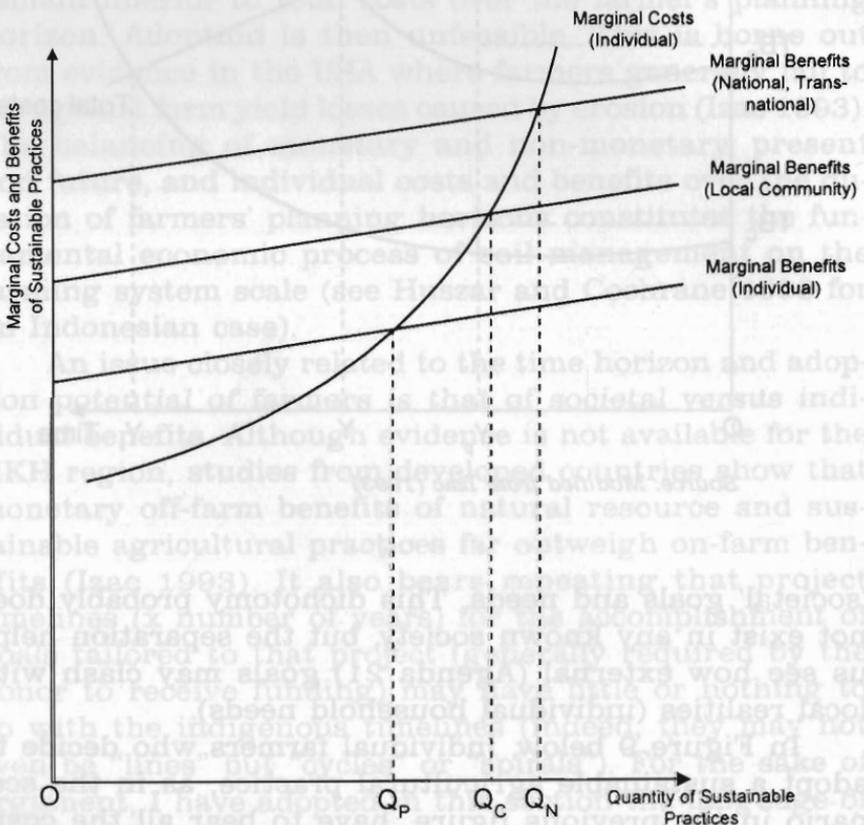
Source: Modified from Izac (1993)

'societal' goals and needs. This dichotomy probably does not exist in any known society, but the separation helps us see how external (Agenda 21) goals may clash with local realities (individual household needs).

In Figure 9 below, individual farmers who decide to adopt a sustainable agricultural practice, as in the scenario in the previous figure, have to bear all the costs

(monetary and non-monetary) of these practices. Therefore, at a given point in time, a farmer thus faces a marginal cost curve which is made up of all these costs, as shown in Figure 8. Society has a marginal benefit curve which is higher than that of the farmer. The farmer will respond and adopt (quantity/type) at Q_p , which is suboptimal as far as society (per Agenda 21) is concerned — the optimal quantity which should be applied for maximising net social returns is Q_c . This is because the farmer is not taking into account the non-monetary (sustainability) benefits of sustainable agriculture on the watershed or regional scales. Agroecosystemic sustainability is unlikely to be attained. The trade-offs between individual costs and

Figure 9: Trade-offs between Individual, Community, and National/Trans-national Costs and Benefits of Sustainable Agriculture at a Given Point in Time (Regional Scale)



Source: Modified from Izac (1993)

social benefits are a fundamental economic process on the scale of watershed and regional analyses.

3. Policy Implications: The Role of Group Action

The extent of sustainable practices voluntarily adopted by farmers will rarely achieve the externally-defined standards desired by society (as measured by national plans, bilateral projects, and Agenda 21). This is not only due to economic constraints on individual farmers but also due to the dearth of quickly adoptable technologies which are simultaneously environmentally friendly. Therefore, the conventional 'transfer of technology' approach will not be an effective way of attaining sustainability. Incentives have to be offered to farmers to compensate them for the fact that they have to bear all of these costs for society's benefit. Sustainability cannot be forced on local communities; they must want to and be able to adopt practices and management systems that are sustainable.

The policy implication is that positive steps need to be taken to move the farmer's cost-benefit curve towards that desired by society. The question is how? This is where policy is important. Although specific *best policies* will have to be tied to *on-the-ground realities*, we entertain general directions or principles which should underline such policies.

First, the developed country approaches of legal regulations, taxes/subsidies, and price increases will probably not work well in the HKH region. There is neither the financial backing nor the institutional setting to achieve these (See Izac 1993 for a more detailed description for Africa).

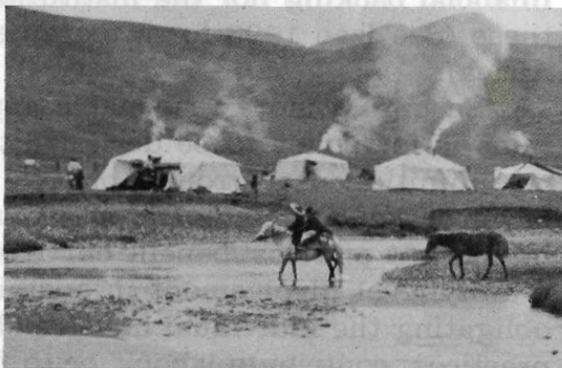
Second, a more reasonable approach for the mountains is for policy to be designed to support indigenous communities, user groups, or local cooperatives. In both of the earlier figures (8 and 9), I have added an intermediate benefit and cost/benefit curve which represents community-level involvement in sustainable agriculture. By obligating the individual household to implement certain practices, contribute labour, or to form economy of scale marketing or credit associations, the community or other user groups in fact can help the HKH ecoregion come

closer to the goals of Agenda 21. As stated in Chapter 2, and which will be outlined in more detail in the next chapter, support (fields, technical advice, inputs, infrastructure) can be made available to groups of farmers or village associations/organisations to implement sustainable practices. The practices can include soil management, community forestry, irrigation improvement, terracing, pasture management, and marketing associations. Such direct support, if coupled with appropriate land-use planning and legal access to common lands, has the potential to increase adoption on community, regional, and national scales.

In traditional community settings, land, labour, water, and forests have always been managed partly by individual households, partly by the community. Group action and decision-making is not something new in the mountains; it is an ancient survival mechanism. By using a community-based approach and farmer associations, farmers will be able to decrease their individual costs of production by pooling indigenous management skills and inputs (mainly labour), thereby achieving economies of scale. By placing development into the hands of local communities, there is also a better chance that the practices will be adapted to the environmental reality of the landscape.

It is crucial to realise that such community-based or user group approaches will not require an elaborate institutional infrastructure or start-up costs. When combined with the household-community assessment approach, recommended in Chapter 6, a matching of resources based on needs and assets with external support is achievable. Farming communities and households bring different assets to the table to solve their prob-

Nomads - D. Miller



Group action and decision-making is not something new in the mountains; it is an ancient survival mechanism.

lems, sometimes they are poor in some assets and wealthy in others. Applied field researchers and policy-makers need to be made aware and need to adjust their approaches/policies to meet the availability or lack of availability of these different assets. For example, and I will dwell more on this later, a community with degraded communal land (brought about say by nationalisation of lands) may not have the financial resources or the technical knowledge to restore the land, but they may have the labour, social capital, and indigenous knowledge to invest in its restoration. So, rather than a blanket approach, our approach to development can be fine-tuned to local realities.

In Chapter 3, I developed the argument that a major gap exists between small mountain farmers' interest in and ability to adopt most sustainable agriculture and natural resource management practices capable of addressing the concerns of the global environmental community, including attempts to respond to Agenda 21. To summarise, most mountain farm households are concerned—as are most humans—with their immediate goals and needs as well as protection of their immediate environment. If a technology or a new system is both sustainable and allows timely response to these goals or needs, no problems should prevent reconciling farmer interests and societal environmental goals. In this case, conventional agricultural extension services are potentially sufficient to do the job. However, as outlined earlier, the time and investment required of the individual household to implement most sustainable agricultural practices proposed