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**The Farmer-Driven Landcare Movement:
An institutional innovation with implications
for extension and research**

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There is a sound basis for assuming that watershed degradation does not have to be an inevitable consequence of using sloping land for agriculture. Small holders can engage in farming and management of natural forest resources in both a productive and resource-conserving manner. Awareness of this has focused attention on evolving demand-driven, community-based approaches to watershed resource management, in which those who occupy the land actively participate in management and sustainable utilization of their local watershed resources for multiple purposes. A look at current prescriptions for more sustainable farming systems in Asian watersheds reveals an enormous variability in conditions, and consequently a high degree of technical uncertainty about the effectiveness of the solutions proposed. The problems are not solved by simple recipes. Often, the issues need to be tackled at a scale bigger than the individual household, cooperatively at the community level.

In Asia, much attention has been given to the role of local organizations in forest management and management of other common natural resources. This is exemplified by the progress in Joint Forest Management in India, Forest Users' Groups in Nepal, and Community-Based Forest Management in the Philippines (Poffenberger and McGean, 1996). But local organizations may also be a means to mobilize knowledge to solve problems in agriculture through improved land husbandry. Particularly in countries where decentralization of power and fiscal responsibility is occurring, and democracy is becoming institutionalized down to the village level, leadership skills in the farming population are maturing. These skills provide a basis for the evolution of organizations led by farmers that address practical ways of overcoming their problems in creating a more sustainable agriculture.

Among the organizational models for enhancing local initiative in attacking land degradation, one of particular interest is called 'Landcare'. Through this approach local communities organize to tackle their agricultural problems in partnership with public sector institutions. The distinguishing characteristics of Landcare groups are that they voluntary, self-governing, and focus on problem-solving resources within the community. Experience in the Philippines (250 groups) and Australia (4500 groups) suggests that such an approach may provide a means to more effectively share and generate technical information, spread the adoption of new practices, enhance research, and foster farm and watershed planning processes. These groups exhibit some similar characteristics to the farmer field schools made popular in integrated pest management. Landcare groups, however, are more formalized and aim at a broader range of land degradation and sustainability issues. Some distinguishing features of Landcare groups are:

- They develop their own agenda and tackle the range of sustainability issues considered important to the group.
They tend to be based on neighborhoods or small sub-watersheds.
The impetus for formation comes from the community, although explicit support from outside may be obtained.
The momentum and ownership of the group's program is with the community.

Farmer-driven approaches show promise of being more effective and less expensive than current transfer of technology approaches. In the southern Philippines, farmer organizations became the basis for a successful grassroots approach to finding new land care solutions, partnering with local government, pulling in outside technical and financial resources, and diffusing new information throughout the community (Garrity, 1999).

The Landcare movement in the Philippines began in Claveria, Mindanao, in 1996. There are now about village-based Landcare groups in Claveria and in other municipalities in northern, central, southern and eastern Mindanao, with a membership of over 5000 households. They have established more than 1500 conservation farms, and more than 400 community and household nurseries that produced hundreds of thousands of fruit and timber trees seedlings, all done entirely with local resources. The movement has attracted the attention of the national government. The national watershed management strategy has now been based on Landcare as a foundation upon which to build an effective community-based approach to sustainable agriculture and natural resources management (Figure 1). This has provided the opportunity to scale-up Landcare principles and experiences to other parts of the Philippines. The experience suggests that there is potential for enhancing this grassroots approach elsewhere in Southeast Asia.

There are signs that institutions like this could help transform extension systems. Extension agents move from role of teacher of individual farmers one-on-one, to that of being a facilitator to whole farmer groups (Campbell, 1994). Conservation farming based on contour buffer strips was one practice that was popularized through Landcare in the Philippines. Another has been nurseries for growing new species of fruit and timber trees to diversify the farm enterprise. But since the agenda of the groups are determined by their own members, we observe a wide range of issues taken up by difference groups, including dairy and beef farming, cut flower production, and problems in vegetable crop farming, among others. Landcare groups have also gained significant influence at the local political level. Local governments are actively and enthusiastically assisting the movement with budgetary allocations and solid political support. At the community level, Landcare has proven to be a powerful force for evolving initiatives that protect the whole watershed. The collaborative structure of Landcare is fostered through mutually supportive relationships among the farmers' organizations, local government, and technical support agencies in research and extension (Figure 1). The approach of farmer field schools for conservation farming is currently being experimented with as a method through which community groups may be initiated.

We are only beginning to exploit the opportunities that Landcare provides for enabling major innovations in the way on-farm participatory research is done. We see the prospect for research to be carried out through, and managed by, Landcare groups. This would multiply the amount of work, and the diversity of trials, that can be accomplished, ensuring more a robust understanding of the performance and recommendation domain of technical innovations. Currently we are conducting surveys through the Landcare groups to get a grassroots feedback on the priorities for research, from the farmers' perspective. In Australia, public sector research institutions such as CSIRO are adjusting to the new reality that through Landcare, farmers sit on, and may even dominate, the boards that decide on research project funding. This is having a galvanizing effect on focusing researchers on problems that farmers are concerned about.

We may summarize by listing four hypothesized functions of farmer-led knowledge-sharing landcare organizations:

- (1) Enhanced efficiency of extension or diffusion of improved practices (more cost-effective "conventional" extension functions)
- (2) Community-scale searching process for new solutions or adaptations, suited to the diverse and complex environments of smallholder farming (a unique aspect of landcare)

- (3) Enhanced research through engagement by large numbers of smallholders in formal and informal tests of new practices
- (4) Mobilization process at the community level to understand and address landscape-level environmental problems related to water quality, forest and biodiversity protection, soil conservation, and others

There are three significant concerns about the sustainability of the Landcare movement. One is that the Landcare concept is sufficiently popular that there is a definite risk of 'projectizing' the movement, ie attracting support projects that do not understand the concept, and provide funds in a top-down, target-driven mode that defeats the whole basis of a farmer-led movement. The second is the issue of how do such movements sustain themselves in the long run. Networking, and the stimulation from outside contacts, is widely considered to be crucial in the longterm success of such institutions. This can be provided through Landcare Federations, as has evolved locally in Claveria, and through provincial and national federations, which is currently being explored in the Philippines (Figure 2). Third, group leadership is a time-consuming and exhausting task, particularly when its done on a voluntary basis. Landcare is still very young in both the Philippines and Australia, but increasingly leadership 'burn-out' is discussed as a concern.

Our analysis indicates that the following needs to be done to further release the power of the Landcare concept. The public sector and non-government sector can assist in facilitating group formation and networking among groups, enabling them to grow, developing their managerial capabilities, and enhancing their ability to capture new information from the outside world. They can also provide leadership training to farmer leaders, helping ensure the sustainability of the organizations. Cost-sharing external assistance can also be provided. For this, the use of trust funds should be emphasized, where farmer groups can compete for small grants to implement their own local landcare projects. This has been remarkably successful in the Australian Landcare movement.

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Collaborative Structure of Landcare

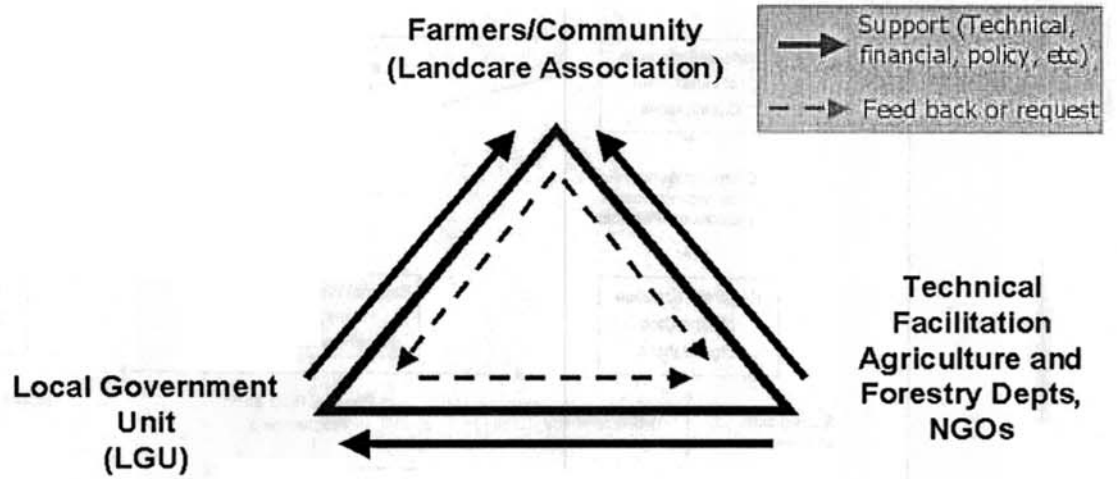


Figure 1. The Landcare approach involves grassroots farmer-led organizations, allied with local government units, and provided technical facilitation.

An Institutional Structure for Improved Watershed Resource Management based on public-private partnerships

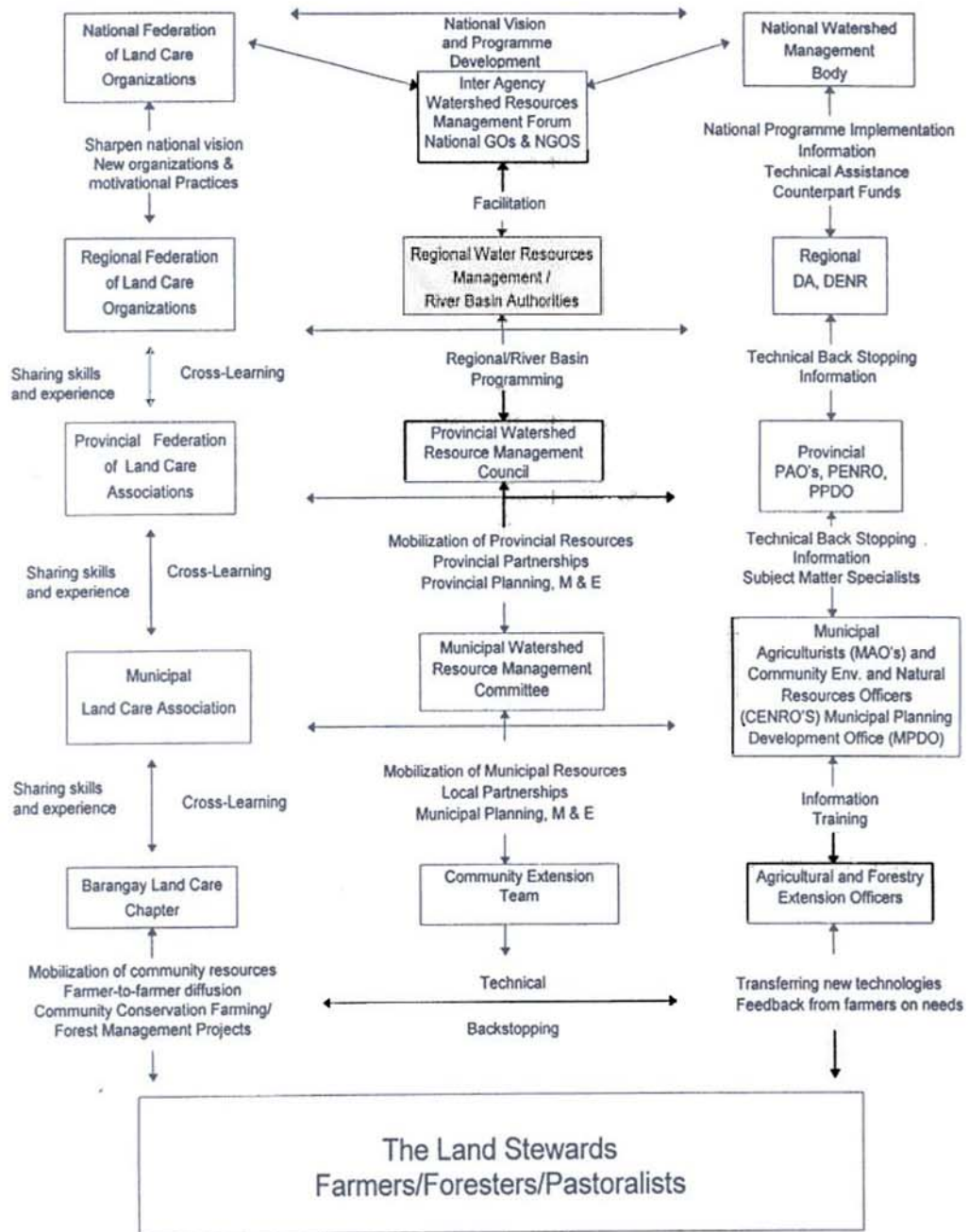



Figure 2. Proposed institutional structure for watershed resource management in the Philippines (from DENR. 1998. *The Philippines Strategy for Improved Watershed Resources Management*. Government of the Philippines, Quezon City. 101 p.)



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