Natural Resource Management Knowledge Bases:Regional Cooperation through the FARM Programme

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ABSTRACT

The FARM programme seeks to identify successful cases of sustainable agricutural resource management in the region. The Programme will identify and document successful technologies and development modalities in rainfed areas. The lessons form these successes (and failures) will be communicated to scientists and policy makers at the national and regional levels. Through meetings and technical networks with the ultimate objective of replicating successes in sustainable agriculture. The uniqueness of the FARM concept lies in this interaction between learning in the field and policy and scientific debate at the national and regional levels.

Within the region the Programme's activities will include support to relevant aspects of regional forums and technical networks (e.g., exchange of experience and information through technical network), dissemination in the region of scientific information including successful indigenous technologies as well as modern biotechnologies, encouragement of innovatory activities, support to in technologies, development modalities and policy linkages, establishment of databases on sustainable agriculture technologies, modalities and expertise, and linkages to key research, development and policy institutions, These regional activities will be designed to stimulate national activities such as the testing and dissemination of new technologies and development modalities in field sites.

Origins and purpose

The FARM Programme is a child of the Earth Summit -- the UNCED Conference attended be some 35,000 people and 106 heads of State in Rio de Janiero during 1992. The Agenda 21 action programme emerged from these rich consultations. As a follow up to UNCED, UNDP led an initiative to build on several ongoing regional projects in Asia and develop an Asian agricultural resource management programme. Formulation took place from mid-1992 to mid-1993. The Programme Document was endorsed by Governments and UNDP, FAO and UNIDO at the Launching Meeting in September 1993 in New Delhi, India. After becoming effectively operational in August 1994, when the full management team had been fielded, The Programme was "retuned" in mid-1995, to provide for stronger country ownership, greater integration, streamlined management, and more field level impact.

As a regional programme of 8 Asian countries (China, India, Indonesia, Nepal,

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Philippines, Thailand, Sri Lanka and Vietnam) FARM supports the implementation in Asia of Agenda 21-- the action programme which emerged from UNCED. The FARM Programme applies systems and participatory methods in pursuit of sustainable development, tackling the twin scourges of resource degradation and human deprivation which persist in rainfed Asia despite the great strides made in economic and social development on many fronts. The Programme has a duration of five years, and an annual UNDP budget of $ 2- 2.5 million.

Sustainability can be interpreted as both a system characteristic and a decision objective.

'The management and conservation of the natural resource base, and the orientation of technological and institutional change in such a manner as to ensure the attainment and continued satisfaction of human needs for present and future generation. Such sustainable development (in the agriculture, forestry and fisheries sectors) conserves land, water, plant and animal genetic resources, is environmentally non-degrading, technically appropriate, economically viable and socially acceptable.' (FAO 1989).

The FARM Programme was designed to address the problems of environmental degradation and poverty in marginal rainfed areas. The original design envisaged seven Sup-programmes related to key constraint areas of rainfed zone development. The relevance of these seven different areas varies. Clearly, the systems and participatory approaches and useful in most aspects of FARM; but the relevance of the "technology" Sub-programmes depends entirely upon local circumstances and local perceptions of farmers of critical production and sustainability constraints. For example, in Vietnam farmers have requested litchii fruit trees and not agroforestry; in Nepal farmers have requested assistance with animal diseases not IPM for crops; in Sri Lanka the Country Coordinating Committee is searching for relevant biotechnologies for testing in the field site. Thus, the Programme has recently been retuned to render it more responsive to individual site needs and, in general, to be more site and country-driven.

It is people who either build sustainable agriculture or degradate our resource heritage. FARM has a vision of sustainable agricultural communities in rainfed hills, plains and coastal areas of Asia, interacting with farmer-sensitive development professionals, scientists and organizations, both Government and NGO, leading the way into a sustainable future for our children and their children in the 21st Century. In the context of the implementation of Agenda 21, the FARM Mission Statement is stated in Box 1.

The development objective of FARM is specified in Box 2. In accordance with the

Box 1: FARM mission statement

FARM respects all farm women, men and children, as intelligent, knowledgeable and forward-looking resource managers. The Programme aims to enhance the human and institutional capacities to learn, understand, and respond to rapidly changing rural systems with the purpose of boosting productivity, eradicating human deprivation and eliminating resource degradation.

BOX 2 : FARM development objective
'to enhance capabilities of GOs and NGOs to build local capacity of (rainfed) resource-poor communities and farmers... for sustainable development'.

new paradigm outlined above, FARM targets rainfed communities and emphasizes innovative holistic and participatory approaches.

Cases of successful resource management abound, but tend to represent localized and individual solutions to growing resource pressure. The FARM Programme seeks to identify successful cases of sustainable agricultural resource management in the region. The programme will identify and document sccessful technologies and development modalities in rainfed areas. The lessons from these successes (and failures) will be communicated to scientists and policy makers at the national and regional levels, through meetings and technical networks with the ultimate objective of replicating successes in sustainable agriculture. The uniqueness of the FARM concept lies in the interaction between learning in the field and policy and scientific debate at the national and regional levels. Thus, the construction of natural resource knowledge bases and arrangements for the dissemination of such information ara given a high priority.

FARM in action

Since August 1994 when the programme became fully operational with the fielding of the last two remaining Coordinators of the FARM management team, national and regional Programme activities have been implemented in all eight countries, related to, inter alia, integrated field sites and consultative and training workshops.

Thirteen field sites are well establised in China (two sites), India (two sites), Indonesia (one site), the Philippines (one site), Nepal (two sites), Sri Lanka (one site), Thailand (two sites) and Vietnam (one site). In these fully operational sites participatory diagnoses and site planning activities have been conducted. The communities have organized themselves, indicated their priorities for sustainable agriculture interventions and farmers have received trainings in vaious subjects related to technical and social aspects of resource management. As a consequence, households have improved their capabilities to articulate their development preferences.

FARM's experience shows that this transition from user perspective to user participation is easier in pilot development activities than in action research activities. In the latter area of endeavour, professionals and scientists are reluctant to "let go" and give farmers significant influence and/or control (despite guidelines that farmer representatives should be full members of participatory diagnostic teams). In pilot development, however, farmer cooperation and contributions are of greater significance and FARM has had considerable success in supporting farmer group formation and relying on these farmer groups for managing interventions including the management of group savings and loan funds.

Where the common good is clearly best served by cooperation, harmonization and coordination are relatively easily achieved. This circumstance is not infrequently found in the

field, say, at district and village levels. Thus, GO officials and NGO workers are effectively working together in several field sites.

To ensure country ownership or the Programme, Country Coordinating Committees are operational in all countries. A Programme Steering Committee was held during May 1995.

From the inception of the Programme, a priority has been give to the dissemination of information within FARM and to a wider audience. Thus eight FARM Updates have been issued, twelve editions of Newsletters of various Sub-programmes, and several Field Documents and Reports. The value of email in reducing the need for meetings is recognized, and about one-third of the seventy persons comprising the FARM community, comprising Country Coordinating Committees, UNDP, FAO and UNIDO officers, and Programme staff, now have access to email. Although the entire Programme has been fully operational for less than eight months, some policy impacts have been recorded, especially in areas related to Pesticides, Agroforestry and Integrated Pest Management.

Resource mobilization activities have been initiated by FARM staff. Proposals have been submitted to different donors, and donors are being briefed on the opportunities for 'buy-ins' to the FARM Programme. In Thailand, the Country Coordinating Committee contributed to a UNDP/FARM dialogue among Government, NGOs and donors in Thailand on directions for sustainable agriculture.

Country Coordinating Committees, comprising the National Coordinators of each of the seven old Sub-programmes, an NGO representative and key resource persons, have been formally established in all countries. These Committees are a key element in the country-level governance of FARM and are charged with the oversight of FARM activities in the country, including ensuring appropriate focus and integration of the work, selection and monitoring of field sites, and effective linkage to national programmes (including identification of domestic resources for the local implementation of FARM).

Human resource development

The FARM Programme was involved in an impressive schedule of national training activities in 1995. Some forty seven activities were supported in the member countries; nineteen national and twenty eight site workshop and training sessions. The major emphases were on the establishment of national training teams, skilled in the various thrust areas of the Programme, identification and encouragement of farmer trainers, and the dissemination of information of successful technologies.

During 1995 twelve regional workshops hosted by member countries were supported by FARM on topics related to: farming systems, participatory monitoring and evaluation, agroforestry and agroforestry investment; woodfuel; environment-friendly pesticide formulations; technology transfer of biofertiliser; IPM training of trainers.

In this way, more than two hundred senior professionals in the region enriched their experience or became trainers in subject areas related to sustainable agricultural resource management.

Successful resource management

FARM has identified many such successes, sometimes called "centres of excellence", and is initiating systematic documentation of these. In general, the level of documentation and

understanding even by farm neighbours of these systems is limited.

Within the region the Programme's activities will include support to relevant aspects of regional forums and the exchange of experience and information through technical networks, dissemination in the region of scientific information, including successful indigenous technologies as well as modern biotechnologies, encouragement of innovatory activities, support to training in technologies, development modalities and policy linkages, establishment of databases on sustainable agricultural technologies, modalities and expertise, and linkages to key research, development and policy institutions. These regional activities are designed to stimulate national activities such as the testing and dissemination of new technologies and development modalities in field sites.

At this stage in its existence the FARM Programme is beginning to have access to considerable amounts of information. Special emphasis is now being placed on building an information sharing infrastructure to facilitate its exchange. Newsletters and field documents are produced. A start has been made on the development of a number of computerised databases which will be made accessible in part through internet. At present databases are under active development relating to:

Site Profiles

Sustainable Agricultural Technologies (in conjunction with the S.M.Swaminatham Institute, Madras, India)

Reference Database of Institutions active in the various fields of interest of the FARM Programme (in conjunction with the Bioinformatics Group, Department of Biotecnology, New Delhi, India)

Reference Database of existing databases (Bioinformatics Group)

Database of regional experts and institutions in the various fields of interest of the FARM Programme (FARM, Bangkok, Thailand)

Technologies will be described at the following levels: national, zone, site, farming system, and technology.

Integration among disciplines

The establishment of the Country Coordinating Committees, the Site Working Groups and the Regional Multi Disciplinary Support Facility encourage integration and cooperation between farmers, technicians and government officers. This represents one of the FARM Programme's innovative and participatory approaches to programme management.

Conclusions

The considerable pressure from increasing population and expanding commerce on agricultural resources in Asia is increasing. The complexity and inter-dependence between resourec sub-systems is now recognized, as well as the central role of the farm-households in resource management.

The challenge to the FARM Programme is now to ensure the active and continuing participation of all the stakeholders in site interventions and the identification of sustainable and replicable development actions. In this venture it is clear that natural resource knowledge

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