

Part one

Rural households and the environment

Our Changing Environment...

Land, water and forests etc. are the resources essential to maintain human life and well-being. The use of these resources must be balanced with conservation to support sustained national development, and to avoid environmental degradation and losses in agricultural productivity. The natural resource base provides many benefits to different groups of people in both urban and rural areas.

Yet we are experiencing a decline in the availability and condition of our natural resource base. The causes of environmental change and degradation are very complex, and stem from different levels - from global and national, to individual farms and households. Recent demographic pressures and unequal distribution of wealth and resources have changed the way that people use land, water and forests, and have contributed to a widespread deterioration in the condition and productivity of these resources. In Pakistan, population growth, migration, and resettlement are changing how people use land, and where they settle. Past economic development policies, international lending, and development assistance programs have contributed in many cases to environmental mismanagement. In addition, destructive land use practices of the past are resulting in present-day reduced productivity of croplands, forests, pastures, and fisheries, and in increased poverty and hunger.

There are also linkages between the macro and micro biophysical and socioeconomic environments. Macroeconomic factors including market structures and availability, terms of trade for natural commodities, and national debt and structural adjustment can impact rural households in terms of natural resources use. In addition, national policies concerning land tenure and land use can have significant impacts on farmers. Social and economic relations at the local level can be disrupted by imposed or non-adapted "modern" technologies for food production or for natural resource management. These and many other interacting geopolitical and economic factors contribute to environmental degradation and rural poverty.

...And Rural households

Households are the fundamental building blocks of social and economic development. Families, as rural households, are key to understanding environmental changes, as they are the immediate users and managers of rural ecosystems at the subsistence level. Rural households are those closest to the environment, and have the potential to play the primary role in conserving and protecting land, water, and forests. Farmers, are the direct and everyday users of land and water, and are those most in need of new

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technologies, information, and services that can increase their productivity and conserve scarce resources. It is essential that decision-makers recognize that community members are at the centre of the development process and that the improvement of their status and the extent to which they are free to make decisions affecting their lives.

As the building blocks of rural communities, the household is the nexus for the transfer of social and economic behaviour patterns, survival skills, and environmental values across generations. The household represents one of the major ways that human populations organize and adapt to meet goals and needs and communicate values in diverse environmental circumstances.

Rural people have extensive knowledge about their environments, and about the sustainable use of marginal areas. However, many of these people are being squeezed by a number of interacting processes. Economic and political factors, such as the privatization of common property resources, and inappropriate land use policies, can negatively impact rural people. Broad demographic changes, such as population growth, resettlement, migration, urbanization, and movements of Afghan refugees can also impact rural communities. These pressures frequently change the land-person ratio in an area, and place additional pressure on the resource base. People are sometimes forced into shorter-term land use practices that are not sustainable. Additionally, newcomers may bring with them land use practices from their area of origin that are not necessarily to the new environment in which they have resettled.

Rural households often face difficult trade-offs in decision-making about natural resources, as they seek to balance the conflicting demands of managing the surrounding environment with the economic survival of the family. To support households in facing difficult trade-offs, innovative new technologies and investment must be generated so as to relieve pressure on the natural resource base.

All consumers and producers, rural families have complex exchange patterns for different resources, such as labour and raw materials, from the surrounding environment. The family unit is, thus, the organizing unit for the exchange of one valuable resource, human labour, as family members assume different economic and productive roles within the household, the marketplace, and the community as a whole.

Overall, the main issues of concern to community members as household and farm managers in rural areas are the lack of access to and control over land, financial resources, cash income, technical training and appropriate technology. In addition, community members face several limitations and responsibilities, and excessive demand on their time and energy. Furthermore, community members lack opportunities for participation at all levels of the decision-making process. Therefore, to develop an operational framework for the integrated management of natural and human resources, these constraints need to be recognized and addressed through a systematic process. This guide provides a step-wise approach to involving communities in decision

making and properly managing their natural resources.

Rethinking Development in Sustainability Terms at the Household Level

There is a growing recognition that even well-planned development policies and programs sometimes have negative environmental impacts that are undetected until their impact is severe (Eckman 1993). There is also considerable interest on the part of development planners in fostering sustainable solutions to rural poverty and resource degradation problems. Consequently, the concept of sustainability has come to be regarded as both a goal in development assistance programs, and as an approach to development policies (Eckman 1993).

For rural households, sustainability has both environmental and socioeconomic elements, and one element cannot be sustainable without the other. Hunger and malnutrition are closely linked with both environmental unsustainability and inadequate socioeconomic development, and are not simply problems of inadequate agricultural productivity or supply. Improving the potential for environmental sustainability will likely have a positive impact on the socioeconomic sustainability of rural households.

Rural households in countries like Pakistan have the greatest potential to be the prime force for generating productivity and rural economic development. Improving the access of rural households to environmental information and to conservation-oriented technologies can enable them to better manage and care for the natural resources upon which they depend. Without environment focused social mobilisation and training programmes for the rural communities, we are underinvesting in the human capital. The sustainable use of natural resources requires a reorientation of prior development efforts, including a reorientation of conventional approaches to social mobilisation and training for rural communities.

Rethinking poverty alleviation and other development activities in sustainability terms also means linking the global and local use of natural resources. Where many households are using natural resources in an unsustainable way, the associated costs and problems can be exported to neighbouring villages, downstream dwellers, or to distant areas through airborne pollutants or through the movement of water. The challenge is to foster the sustainable use of natural resources in ways that can be economically viable to rural populations, and that limit the export of environmental problems to others.

Need for New Approaches and Tools

The rural household is an important income-earning and consuming decision-making unit, and it should be a focal point for efforts to conserve manage environment in a

better way. Rural households in countries like Pakistan have the greatest potential to be the prime force for generating agricultural productivity and environmental management.

Keeping in view the rapidly changing nature of both the environment and the rural household, it is clear that there is a need for new tools and more holistic approaches that view rural households accurately and enable community members to improve their productivity, deal effectively with environmental change, and improve their well-being. Attitudes toward the training of community members that use scarce natural resources will have to change.

The Role of Institutions in Promoting Sustainable Development

Institutions and community development organizations can play a major role in promoting sustainability and resource conservation strategies. In particular, proper education, training, and orientation as well as effective information dissemination pertaining to the environment and sustainable development constitute the critical foundation for the proper perception, attitude and behaviour of rural households towards nature and its significance to mankind for the attainment of the desirable national development goals.

Responsibility for programs affecting the well-being of individuals and families may cut across a number of government agencies and institutions, international organizations, and nongovernmental organizations (Weidemann 1976). Nongovernmental organizations have an important role to play in fostering environmental conservation activities that can be supported by rural people, as well as in fostering people's participation. Many NGOs have direct contact and outreach in isolated rural areas that sometimes surpasses that of national government institutions. A number of NGOs are interested in supporting successful environmental initiatives, and employ effective participatory methods. Methodologies and approaches to promote people's participation already exist through RSP's poverty alleviation and community forestry efforts through social forestry and other projects.

NGOs in Pakistan have solid experience in facilitating local participation in many sectors including environmental conservation and in working with community members's groups, particularly where they have strong community links in rural areas. This guide would benefit the knowledge base and applied methodologies of these programmes

In short, rural families are the key to the sustainable use the natural resources. Development planners and field workers should seek to reconcile the resources, needs, and realities of rural households with the requirements of national development strategies. The challenge for the trainers is to not only enable community members to use resources at their disposal in a sustainable manner, but also to transfer knowledge and skills that can increase their productivity and improve their well-being. Social

mobilisation has the potential to treat rural households in an ecosystem perspective, recognizing that households are both consumers and producers of renewable and nonrenewable natural resources.

Household Environment Vs Biophysical Environment

As Buboltz has noted, human ecology has an underlying base value, which is survival. This includes the survival of humans as well as other living species, and the maintenance and sustainability of the nonliving environment to support human life. Other fundamental values are improvement of the well-being of humans, and enhancement of the environment. From an ecological perspective, the quality of life of humans and the quality of the environment are interdependent. The well-being of individuals and families cannot be considered apart from the well-being of the whole ecosystem (Bubolz 1991).

The household environment consists of the totality of the physical, biological, social, economic, political, aesthetic, and structural surroundings of human beings and the context of their development. The well-being of individuals and families cannot be considered apart from the well-being of the whole ecosystem

Fundamental elements of the overall rural household can be divided into the following environments:

- Natural environment: nonrenewable, renewable, and environmental services;
- Man-made environment: generated via economic activities;
- Cultural environment: stock of human knowledge and skills, including cultural diversity, traditional ecological knowledge, environmental philosophy, ethics, religion, cosmology/phenology, and political institutions.

A key point is that these elements are closely interrelated at the household, community, national, and global levels. There are vital linkages and interdependencies between land use, fuelwood shortages or soil erosion, the maintenance of environmental stability for food and crop production, and rural development.

The household, or family, represents one of the major ways that human populations organize and adapt to meet goals and needs and realize values in diverse environmental circumstances, both locally and non-locally. Thus, it is a particularly critical level of a human ecosystem (Bubolz 1991) and our community development programmes are dealing at this critical level. Human systems do not merely react to environmental changes. Human systems are complex adaptive systems that can take action to change

their environments to serve human purposes. As such, rural households are both consumption and production units, and can significantly alter the physical environment that they inhabit for economic purposes. In this sense, households are interactive key elements in the larger ecosystem.

Most rural families are directly dependent upon their immediate environment, and their own skills in using it, for the daily necessities of life (Rocheleau 1985 in Dankelman and Davidson 1989). All household members are consumers of natural resources, and of raw materials collected from the surrounding environment. Community members, however, are the key players at the subsistence level, and are the largest body of consumers (Rodda 1991). In developing countries, households use a wide array of materials from the natural environment. Water, forest fruits, herbs, and wild game are materials are processed into other goods, such as wood for implements and tools, roots and bark for medicinal preparations, and gums and resins for waterproofing, fumigation, and industrial processing.

Finding Out Community members's Needs

Major questions that should be asked when involving community members in environmental or development activities include:

- What are community members's specific problems in gaining or retaining access to land or tree products?
- What specific time, financial and other factors constrain community members's participation?
- What measures ensure that community members benefit from development projects?
- What different social structures allow community members to participate as individuals or in community organisations?

Source: Hoskins 1979

Avoiding Environmental Unsustainability

Household resource conserve

The result of many developments in the field of environmental conservation has increased public interest in environmental issues, but also to reinforce certain basic environmental and cultural values. Of these, one central tenet of conservation is to avoid harm. Linking the avoidance of harm with sustainable development has been the subject of much interest in the last decade. Of growing concern has been increasingly unsustainable environmental and socioeconomic trends in both the developed and

developing nations. Considerable effort and investments have been made to monitor these trends and to initiate various conservation programs, so as to avert further environmental harm.

A number of development organizations have reoriented their programs around the broad goals of sustainable development, focussing on both socioeconomic and biophysical sustainability, and the necessity of avoiding unsustainable situations. Avoiding environmental unsustainability means enabling households to take positive action to preserve and protect the resources upon which they depend. Extensionists, social organisers, trainers and educators are important agents of change in the process of empowering rural community members, and enabling them to avoid environmentally unsustainable trends.

Including Environment in Training and Social Organisation

Social mobilisation and training are dynamic and adaptable tools of interaction and capacity building, and powerful means of bringing community members into the development process. The stepwise approach to involving communities in environmental decision given in this book is a tool for the social organisers working in the field of environment. Moreover, special training can revive and strengthen traditional skills and build upon their enormous fund of indigenous knowledge, transforming it into the capacity for action. Training can also help to eliminate the isolation of rural households and build confidence.

Presently there is a widespread lack of environment related tools for social mobilisation and training materials for home economics professionals who wish to incorporate environmental concerns into existing training modules. Of special concern is the lack of knowledge on how to incorporate environmental messages in the field workers interaction with the community and training materials relating to environmental concerns at the household level such as land and watershed degradation, use of fertilisers, afforestation, etc. Also needed are participatory methods and approaches that can empower the learner to identify and solve problems of natural resource constraints. This guide takes a step toward building a standard methodology that incorporates conservation oriented techniques appropriate for households in insecure environments. As a practical consideration, actual environmental problems and risks confronting the community, like sanitation, safe drinking water etc. must serve as the starting point of the environmental planning.

Reorienting development programmes

As discussed earlier the need is to:

- Reorient social organisation methodology to better focus on environmental problems of the communities;

- Develop and test innovative training approaches, tools, and materials that can support the reorientation according to specific environment related needs;
- Develop in-service training of the field workers and training-of-trainers to reorient the community development philosophies and skills of the existing staff.

This section focuses on some of the applied and practical aspects of programmes reorientation, and proposes some essential elements that will form the basis for a methodology to introduce environmental matter into conventional community development methodologies. Naturally, social mobilisation and training content will vary depending upon the emerging conditions and issues in each different community. However, the methodology will remain the same as mentioned in the stepwise approach mentioned in this guide. The rest of the material and planning should be need-based, and reflect the opportunities and constraints of rural households in each country.

Strengthening Staff Capacities

Staff training should generally focus on three fundamental areas: background information on the programme reorientation for integrating environmental concerns, subject matter training, and training in non-formal communications and methods, such as needs assessment and participatory methods. As a matter of practice, a staff training needs assessment should be conducted prior to developing a training programme. Field-based workshops should also be conducted to assess staff and farmer training needs prior to developing training programmes, social mobilisation methodologies and training materials. Strengthening the capabilities of extension staff to effectively teach household management and environmental conservation in a key element in introducing the reoriented curricula.

Training of Trainers

Changes in training modules etc is most effectively implemented when the community understands and supports it, when facilities are available for learning activities, when appropriate materials are at hand, and when staff are supportive of the change. But it is the teacher or trainer who is the key to implementation, for in the last analysis, the module is what the trainer makes of it. Trainers of trainers and their trainees will first need to be convinced of the need to change existing methodologies and modules, then be given the tools and training to train others.

Curricular Framework and Design

The planning and development of a curriculum in any field of study is perhaps one of the greatest tasks facing an educator, trainer or extensionist. As such, curriculum planning is usually not a hurried affair, but a careful, analytical exercise (Weidemann 1976). It is a process that must take into consideration the specific educational needs of the learner,

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changing environmental and socioeconomic conditions, and the cultural norms and values of the community. In the last analysis, the curriculum is what the trainer makes of it.

Rural settings will differ greatly from one region to another, and environmental endowments, conditions and farming practices also differ enormously from place to place. Consequently, while general steps can be outlined in this guide, it is the responsibility of the community development programmes and their field workers and trainers to develop the specific training and orientation framework and material that addresses the unique environmental and socioeconomic conditions and the particular natural resource constraints of rural household existing in the region. The steps provided in this document are broad guidelines that should be adapted as needed to the resources and constraints found in any given region and according to the programme.