

# Introduction

Upland watershed areas, primarily mountains and hills, cover over one-fifth of the earth and are home to over one-tenth of the world's people. This mosaic of environments is inhabited by diverse farming communities representing complex socioeconomic systems. In addition, the more than two billion people that live downstream from these areas are directly or indirectly affected by the management of upland watersheds.

In the developing countries of Asia, upland watershed areas are facing increasing population pressure and scarcity in available resources to support farming communities. As the degradation of resources in these fragile upland watershed areas lead to poverty, the upland watersheds' agro-eco-sociocultural systems become increasingly unsustainable, causing further impoverishment. These trends are reflected in growing food deficits and inequality and in further marginalisation of the poor in upland societies. Furthermore, energy shortages and physical and biological degradation of the upland landscapes are widespread. In the end, this leads to widespread outmigration of upland inhabitants to lowland urban areas.

Recent experiences sustainably managing upland watersheds in Asia have been mixed, but many examples of successful indigenous efforts do exist. The more successful efforts based on indigenous knowledge show potential scenarios of food security and improved quality of life for watershed inhabitants, along with ecological stability. These success stories highlight that while there are modern and indigenous technological options, the people living in the uplands must be equal partners in the management of their watershed resources. For this, one should look for successful institutional perspectives, innovations, and experiences which give centre stage to the stakeholders or, in other words, the farmers of the upland watersheds.

Shortages of trained manpower in participatory integrated watershed management are visible at various levels because most training, education, and extension services in agriculture and forestry, especially

in the Hindu Kush-Himalayan region, are modelled on institutions that give primary importance not to people's participation but to technology transfer.

The present trainers' resource kit on **Participatory Planning, Monitoring and Evaluation** has been designed to impart to professionals skills that can assist farmers to transform the current upland watershed scenario into a more sustainable one. The use of this resource kit is directed at upland watershed areas only. It introduces 'mountain perspective' thinking to enable local farming communities to become equal partners in the sustainable management of upland watershed resources. This resource kit will be useful in training facilitators of upland watershed management for farming communities and other land users.

Upland watersheds consist of all sloping and rainfed lands in which mountains are the most fragile and difficult to manage. Watershed management in mountain environments has become one of the most significant challenges of our time. Understanding mountain environments and organizing environmentally friendly, sustainable people-oriented development programmes is a complex and Herculean task as these areas have unique features known as mountain specificities. Mountain environments must be dealt with in the context of their own uniqueness.

Although mountainous upland watersheds cover only about 20 per cent of the earth's surface, most of the earth is affected by their environmental characteristics. Mountains act as geographic barriers to the moisture-bearing winds that result in rainfall. Also, many upper mountain regions contain large volumes of stored water in the form of ice which provides the necessary melt-flows into rivers during the hot, dry season. These mountain waters are vital to the needs of all living beings. Apart from being home to many mountain communities, mountain watersheds have other economically important functions such as forestry and non-timber forest products, agro-horticulture, mineral extraction, livestock rearing, tourism, and recreation.

The impact of human activities on mountain environments has been steadily increasing over the past

several hundred years, and particularly during the current century. Recent human interventions are causing serious disturbances to the mountain environment, largely due to an inadequate understanding of mountain specificities and mountain communities. Mountain environments and livelihoods are threatened by a growing imbalance between population and available productive land. In many places, the carrying capacity of the land has been exceeded, leading to an ever-increasing demand for new agricultural and forest land and for land-based products. Consequently, the forested upper slopes of these young mountain watersheds are being cleared for cultivation, grazing, fodder, fuelwood, and timber. Removal of vegetation on steep slopes in conjunction with intense monsoon rainfall triggers massive erosion and landslides, with resulting soil impoverishment and soil losses and a deteriorating biophysical environment. This leads to even more poverty in mountain communities as the natural resource bases of forest, soil, water, plant, and animal life, on which people depend for their survival, are being lost at an alarming rate. Measures to control this damage are required before the ecological balance is irreversibly injured.

The widespread human misery now occurring in mountain regions is not only true for the mountains but also affects the plains, socially and economically. The urgent need to ensure a sustainable habitat has attracted the attention of national and international institutions which are increasingly making mountain environments an area of concern. Managing mountain environments is a complex task because of specific characteristics that have not been systematically analysed. Notwithstanding its possible contributions, the concepts and methods of natural resource management for mountain environments remain in the rudimentary stages. Serious analytical and integrative contributions are needed to strengthen this vital area. Accordingly, natural resource management in mountain environments cannot be a fully prescriptive guide to human activities at present. The accumulation of knowledge from various mountain areas and their different resource strategies are necessary to provide the background to developing more comprehensive prescriptive tools in future. A major challenge for integrated mountain development or upland mountain watershed management is to ensure that the current needs and aspirations of hill communities are met, without compromising future generations' ability to meet their own needs. A comprehensive strategy for natural resource management in mountain environments might be based on a holistic and interdisciplinary understanding of both society and habitat within a dynamic framework.

Human societies in mountain environments have evolved with several peculiarities. As a result of their poor transportation and communication facilities, they

are relatively inaccessible and isolated. The natural mountain environment is also fragile, prone to rapid degradation in the face of intensive and improper use. Thus, soils in mountain watersheds are only marginally productive. Mountain people are generally excluded from mainstream decision-making with regard to national development policies and programmes. In all these ways, mountains have inherently limiting characteristics. On the other hand, mountains also possess incomparable assets due to their unique suitability for hydropower, tourism, horticulture, medicinal plants, and other high value crops, which afford them certain comparative advantages, or 'niches', over the plains. Mountains offer a wide range of attractive and unique opportunities and, despite their socioeconomic and cultural diversity, mountain communities have coped with their harsh environment by developing various mountain specific adaptation mechanisms. In themselves, these illustrate the remarkable assets of mountain people.

Against a background of isolated settlement in mountain watersheds, each area has evolved its own set of socioeconomic parameters. These are generally rooted in the specific environmental conditions of each mountain region, since environment significantly influences the socioeconomic organization a society will pursue. Environmental characteristics of mountain areas can be understood for the most part through mountain-specific features which lead to changes in altitude and variations in rainfall. Altitude and rainfall provide micro-conditions for a specific site's vegetational and agro-climatic characteristics. On a macro-scale, this provides the basis for the mountains' rich biodiversity. Specific climatic advantages of rainfall or climate provide uniquely conducive environments for developing temperate forests and medicinal plants of high commercial value. Such environments also have agro-climatic advantages for producing fruits and vegetables for sale to markets in the plains and are also a boon for developing a tourist industry. A comprehensive and minute understanding of these specific parameters, therefore, is an essential factor in planning for mountain watershed development and analysing mountain transformations.

## Need for Participatory Planning, Monitoring and Evaluation

Past neglect of mountain areas by policy-makers has led to a general lack of understanding of the natural and human processes affecting mountains. The few development interventions that were designed were often sectorally-based, addressing symptoms rather than causes, and they largely overlooked the opportunities for development that mountain watersheds provide. What is needed now is an integrated approach to sustainable development, in which local communi-



ties take the lead in reconciling their socioeconomic needs and aspirations with the requirements for increasing environmentally friendly biological productivity. Such development programmes must also be gender-sensitive and in harmony with cultural taboos and local systems. The promoters of development programmes should function as facilitators and catalysts of development processes.

A training programme has been designed to address these vital issues by introducing policy-makers and implementors to an integrated and participatory approach to developing upland watersheds. An initial planning meeting for a training workshop identified several crucial issues such as the understanding of concepts; principles and tools of participatory processes for development; becoming sensitised to how gender issues affect participation and development planning; and developing communication skills. The process continued with an extensive literature review, leading to the production of an annotated bibliography and the preparation of background papers on a variety of relevant topics. The workshop design process included the identification of specific mountain communities which were already involved in natural resource management. These served as useful sites for field-based training and provided valuable human resources enabling participants to see for themselves the degree of knowledge and skills naturally present in mountain communities.

## **The Resource Kit for Capacity-Building in Participatory Upland Watershed Planning, Monitoring and Evaluation**

The resource kit consists of three sections: a trainers' manual, background papers for trainers, and an annotated bibliography of material pertaining to watershed management, participatory processes, planning, monitoring and evaluation, gender, community organization, and so on. The trainers' manual and the background papers cover the same material and are designed to be used in conjunction with one another. In studying the manual and background papers, the reader should concentrate on the processes and principles presented in each session and consider their implications in his/her case. The resource kit does not simply present technologies that are to be transferred but also the principles to be applied.

### **The Trainers' Manual**

The trainers' manual provides nine sessions or lesson plans that can easily be adapted for use in training programmes at various levels. Session One provides a two-hour module designed to introduce trainees to

the subject and nature of the training they are about to receive as well as to each other.

The manual then proceeds to content-based material, with a general introduction to the concept of participatory development in Session Two. This module describes the meaning of participation and illustrates how participation leads to fundamental behavioural change and gender-sensitive programming.

Session Three covers participatory watershed development. The main objective of this session is to emphasise that participatory watershed development is process-based rather than target-oriented and to illustrate that sustainable upland watershed management requires that planning, monitoring, and evaluation be conducted in a participatory manner through the empowerment and involvement of local people. The session covers a variety of topics including farmers' and professionals' envisioning, farmers' empowerment and ownership, and integrating gender concerns; it also provides the assurance of quick benefits.

The *modus operandi* for participatory land suitability activities (PALSA) is the topic of Session Four. The main objective of PALSA is to achieve higher sustainable agricultural or horticultural productivity by choosing the best uses of particular areas of land and by protecting and conserving areas where long-term production is not possible. The session provides a background to issues of land suitability and land capability and introduces certain methods for collecting information, such as village-resource mapping and transect walks, as well as discussing how to evaluate the information collected.

The underlying principles of participatory monitoring and evaluation (PME) are covered in Session Five. The PME approach encourages, supports, and strengthens communities' existing abilities to identify their own needs and objectives and to monitor and evaluate in order to adjust these within the project time-frame. This session is designed to provide the necessary skills to facilitate communities to plan, implement, and evaluate development activities. The important step of developing indicators suited to communities' perceptions is covered in this module.

Session Six takes up the issue of how gender concerns can be mainstreamed in participatory planning, monitoring, and evaluation. This requires managers to be sensitised to the gender-analytical approach and to skills that should be developed among officials and communities to facilitate women's participation in planning, monitoring, and evaluation processes.

Sessions Seven and Eight introduce the tools and techniques of participatory rural appraisal (PRA) and of



appreciative planning and action (APA). These are related methodologies, with APA actually building on many of the principles of PRA. PRA provides methods for quickly understanding local situations, their problems, and the resources available to resolve them. The PRA approach recognises the knowledge, experience, and expertise rural people possess about their resource bases and how valuable their contribution is in designing plans and programmes suitable to local contexts. Similarly, APA rests on the concept that, with proper encouragement and awareness, rural communities can identify solutions to better their own welfare. APA processes focus on success to create a feeling of empowerment among local people. By making and carrying out commitments and taking action together as part of the planning process, communities can be mobilised to achieve their objectives.

The final session is designed to develop the practical communication skills needed to invite the participation of local communities, especially women's participation, in the planning process. This is in part based on making visible the communication gaps between front-line managers and stakeholders, among them the local communities themselves, and also on developing empathy in the managers, enabling them to communicate with people throughout the process of planning, implementation, monitoring and evaluation.

## Context Papers for Trainers

Complementing the session plans is a set of context or background papers covering each of the corresponding topics in greater depth. These papers provide crucial information enabling facilitators and trainers to supplement their own knowledge and understanding of the issues they are expected to introduce in the training sessions. The initial paper covers the concept of participatory development, beginning with an overview of how the concept of 'participation' has been understood since entering the vocabulary of development in the 1960s. Pointing out that participation requires fundamental changes in behaviour, participation in various situations is analysed and the principles of relationship involved in people's participation are explored. The major features of participation are presented along with the dynamics of participation in relationship to natural resource management. The importance of recognising and accounting for gender and equity issues is also touched upon. Examples are provided of various types of community-based development and collaborative decision-making.

Subsequent papers deal in similar depth with the variety of topics to be covered in each session. The session plans themselves were originally derived from these background papers, so there is a high degree of complementarity and correspondence in organization as well as the information included. For trainers interested in pursuing certain topics further, lists of additional reading materials are also provided. Many of the articles and books cited are also found in the annotated bibliography which comprises the third component of the resource kit.

## Bibliography on Participatory Approaches to Upland Watershed Management, Planning, Monitoring and Evaluation

This annotated bibliography includes selected materials covering the following topics relevant to the resource kit and the type of training programme it is designed to facilitate: participatory watershed management, monitoring and evaluation, participatory rural appraisal and other participatory approaches, planning, sustainability, gender, and community organization.

Material for the bibliography was compiled from the following institutions and resource collections: FAO/PWMTA Programme, ICIMOD, the Nepal Participatory Action Network (NEPAN), CARE International/ Nepal, IIDS, and New Era. The material was reviewed by the training team and suitable materials were annotated. The material is divided into the categories listed above, and is also coded with key words for easy access and possible conversion into a data base.

Much of the information provided and ideas presented in the background papers for trainers derive from the books and articles accessed during the initial literature review that was conducted in the early stages of planning and preparation for the trainers' training workshop. In this way, the three components of the resource kit - Session Plans, Background Papers, and Annotated Bibliography - are closely related. The bibliography includes the widest range of relevant material, the background papers organize the most important information into coherent and manageable presentations, and the session plans extract the essential ideas and suggest methods and an order for how they can best be presented and shared with others.