

Introduction

Land, water and vegetation, the basic resources of the life support system in the south east Asian region are under intense pressure due to natural factors and human induced accelerating factors. Rapidly increasing population density, excessive number of livestock, overexploitation of watershed resources, environmentally unsound infrastructural development, turning into development disasters and inadequate management practices, are disturbing, damaging and degrading the highly sensitive fragile and precariously balanced watershed ecosystems in Asia. Most of the people living in these fragile marginal areas are poorest of the poor and are totally dependant on the use of local natural resources for their sustenance and survival. Increasing poverty of the people forces them to encroach on to very vulnerable marginal lands for cultivation, deforestation, overgrazing and overexploitation of the resources further aggravating watershed degradation, soil erosion and deterioration of the wholesome natural environment. Mountain top soils erode, silting and polluting the streams and rivers and causing the river beds to rise. This increases the incidences of flash floods in the lower valleys and plains with consequent damage to fertile farms, irrigation systems, dams, hydro-electric power systems, roads and bridges, severe loss of socio-economic development and tragic loss of life and property with increasing intensities and frequencies year after year.

In recent times it is being realised increasingly that serious degradation of upland watersheds creates biophysical, socio-economic and environmental problems not only for those living within the watersheds but also for those living in the valleys and plains below.

Concern for these problems led to the establishment of Regional co-operative Participatory Watershed Management Training in Asia (PWMTA) Programme, (GCP/RAS/161/NET) for human resource development for ten countries of Asia: Afghanistan, Bangladesh, Bhutan, China, India, Myanmar, Nepal, Pakistan, Srilanka and Thailand.

PWMTA is funded by the Government of Netherlands and executed by FAO (UN). The development objectives of the PWMTA programme is to contribute to human resources development (HRD) for people's participation in sustainable natural resources management in the Himalayan and other tropical watersheds in participating countries by enhancing skills, knowledge and awareness of the problems of watershed degradation as well as by enhancing national capabilities to plan, implement, evaluate and monitor watershed rehabilitation programs for the benefit of affected populations through their own participation in watershed management.

In line with the recommendation of the Regional Expert Consultation cum Advisory Committee Meeting (REC-ACM) of the PWMTA program and to achieve its objective, ICIMOD joined in partnership to implement the activities. Three following major activities were to be carried out.

Firstly, Training Manual Development on "Farmer-Led Integrated Watershed Management" and conducting of Regional Training, which has been already completed successfully (April 7-13, 1997).

Secondly, Training Manual Development on "Participatory Watershed Planning, Monitoring and Evaluation and conducting of Regional Training, which has also been already completed successfully (September 12-19, 1997).

Finally, Trainer's Resource Book development on "Modern Concepts, Knowledge, Practices and New Skills in PIWM" and the Regional Training was completed successfully in April 3-10, 1998. During the training the draft of the resource book was widely circulated among the participants, resource persons and interested

people and was tested discussed and deliberated upon extensively. Eight working groups were also formed to study the modules thoroughly to provide comments and suggestions for further improvements. Very useful comments and suggestions were received. These valuable comments and suggestions have been incorporated in this final version of the resource book. We are extremely pleased to announce that this resource book is a product of participatory process of preachers and practitioners.

This resource book contains three modules namely: Recent Concepts and Approaches; Appropriate technologies and practices and New methods, skills and tools in PIWM and a total of twenty one sub modules covering a very wide range of important and useful subjects.

It is hoped and believed that after the successful completion of these major activities the following two main immediate objectives of PWMTA programme have been fulfilled.

Firstly, the development of human resources (HRD) in order to improve national capabilities for participatory watershed management, and

Secondly, exchange of technology and sharing of national indigenous experiences in participatory watershed management have been achieved and these will further improve, strengthen and help attain the short term and long term objectives and goals of participatory integrated watershed management (PIWM) to deliver the socioeconomic and environmental benefits to the people of the region on a sustainable basis.

It has been now realised that although increasing efforts and resources in terms of money, manpower, policy, institutions awareness and priority are being invested in watershed management by regional governments, international funding agencies, NGO's, INGO's and the people, watershed management is at widely different stages of development throughout the participating countries of the region.

Watershed management principles, concepts, approaches, practices, skills and the knowledge required for watershed management have experienced a vast change during past few years. This has resulted in change of definitions and objectives, purposes of watershed management itself, due to lessons learnt from past successes and failures as well as due to widening of the knowledge base and integration of participatory natural resource management and socioeconomic and environmental parameters, with close involvement of people, professionals and related institutions.

Recent watershed programmes and projects have not been that successful and many have failed. Very little have been learned from past experiences of the successful ones. The success stories could not be replicated widely and failures have occurred again and again. A lot of ground has been covered recently in developing new ideas, practices and significant progress made in PIWM. Considerable efforts have been made in preparing this manual to incorporate these recent concepts, knowledge, practices and skills in participatory integrated watershed management (PIWM), and this manual has now been placed before the experienced professionals and practitioners of (PIWM) for testing, comments, suggestions and further improvements. These will help in updating and improving the manual and to make it more useful and practical for wider dissemination within the Asian Region and other parts of the world.

This resource book cannot include all the recent concepts, knowledge, practices and skills related to a very complex, varied and multi faceted subject as PIWM. The focus of the manual has been on most important components of PIWM, their practical application, and the experiences gained and lessons learnt under actual field conditions, as well as on implementation and operations under actual real world situations. Simple, affordable, socially acceptable and environmentally friendly methods and tools based on indigenous knowledge and technology which can meet the needs of the people and could be self sustaining have been given due consideration in this resource book.