

INTRODUCTION

Watershed management in the Hindu Kush-Himalaya requires a different approach than that used in the West, where scientific interpretations of land use and land capability are applied to erosion-prone areas to benefit downstream users. Watersheds in the Hindu Kush-Himalaya Region are densely populated; all land capable of biomass production is used by local people to sustain their livelihoods. As the primary renewable resource users, local people are the *de facto* watershed managers. This paper argues that effective watershed management in the Region must be based on understanding, encouraging, and empowering land users to sustain upland productivity for their own long-term benefit, by carrying out positive land use practices built on their existing patterns of land use.

The primary objective of this study is to provide a conceptual framework for documenting, analysing and evaluating people's participation in watershed management activities in the Hindu Kush-Himalaya. Following an analysis of concepts in this Introduction, Chapter 2 examines present land use behavioural trends in upland areas of the Region. In Chapter 3, data from eighteen projects in Bangladesh, China, India, Nepal and Pakistan are analysed, including information collected by field visits and interviews with project personnel. Three matrices (See Appendix 1) have been developed to document and assess current participatory practices of watershed management and related resource management projects. Based on this initial analysis, Chapter 4 presents tentative conclusions in the form of hypotheses regarding promotion of people's participation to guide future studies and evaluations, and to identify promising policy and project strategies.

Watershed management projects start from the premise that current subsistence patterns must be changed because the present level of resource degradation caused by human activity in the Hindu Kush-Himalaya is too high, either to be self-sustaining or to reduce costs associated with downstream investments. While the principal objective of watershed

management projects is often stated in terms of reducing soil loss (primarily through control of water movement), a more careful assessment reveals this is really the means for reaching a more fundamental objective. The reason for trying to change environmentally destructive land use is the desire to improve or sustain productivity either within the area itself (upstream) or in its drainage (downstream). If there were no downstream investments; if future livelihoods were not perceived to be at risk; if current land use patterns were not deemed to be the source of the problem, the cost of watershed management could only be weighed against aesthetic values.

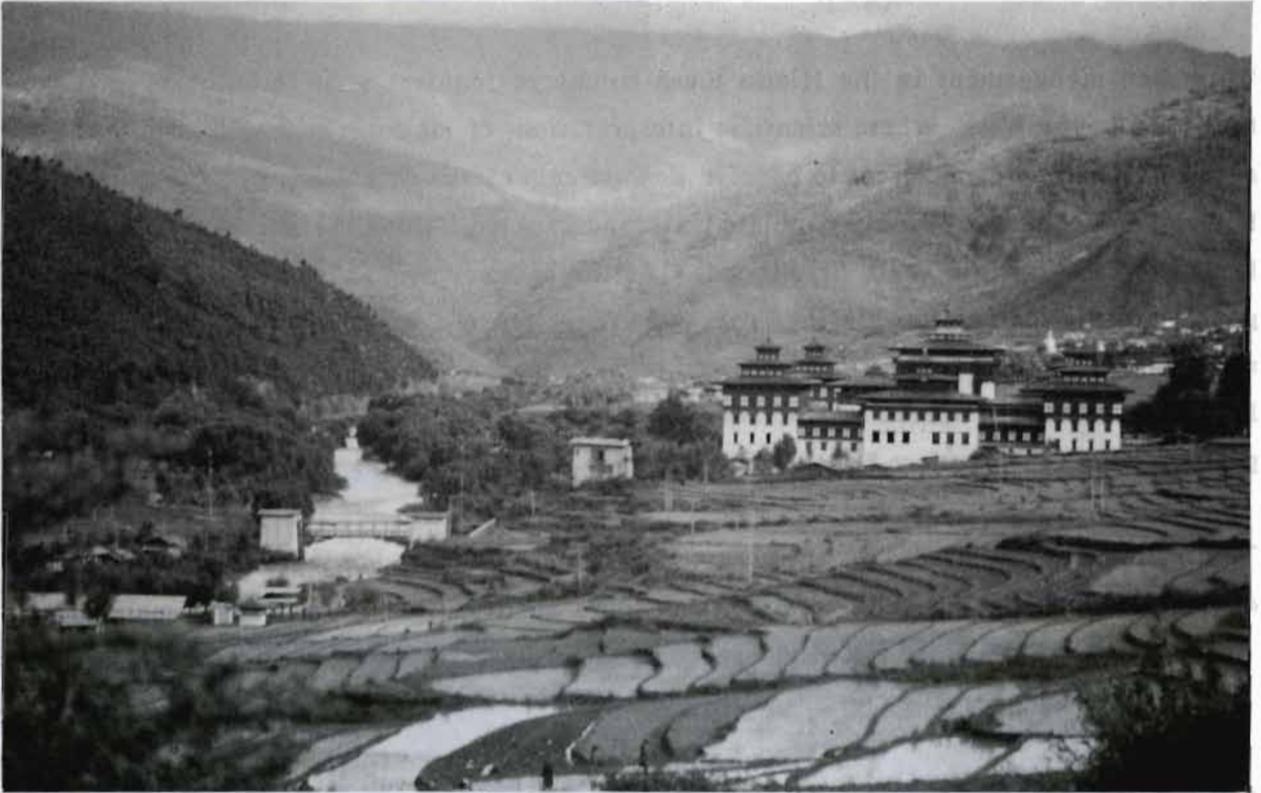


Plate 3. Sustainable resource productivity in Bhutan (Photo. David K Barker)

As Thomson and Warburton (1985) have argued, present understanding of the causal relations underlying the rationale for watershed management is based on considerable uncertainty. The degree of erosion and environmental destruction caused by local people's actions, and the degree to which this erosion and destruction are the cause of dam siltation, flooding, loss of soil productivity, and changes in water regimes, are the subject of much debate (Carson, 1985; Hamilton, 1985). It is not unlikely that aesthetic values play a more important role in watershed management than is acknowledged in scientific literature or among policy makers.

But even to the extent that the unstated goals of watershed management are lush forests and abundant wildlife for aesthetic reasons, the underlying rationale is nonetheless sustainable resource productivity. Thus, along with soil conservation measures, principally through water flow control, various technologies for sustaining productivity -- whether dams, agroforestry or improved agriculture and irrigation -- are usually part of the package.

Watershed management is the development and management of the watershed resources in such a manner as to achieve optimum production which can be sustained without causing deterioration in the resource base or disturbing the ecological balance. (Dewan and Sharma 1985: 15).

Since both the premises of watershed management projects and their objectives are primarily concerned with changing local land users' behaviour in the watershed areas, it is not surprising that the need for their cooperation and participation in project implementation is widely recognised (Bochet 1983; Botero 1985). Most watershed managers agree that encouraging people's participation is desirable. Even where the emphasis is conservationist, such as with biosphere reserves, national parks, and protected areas, the importance of local participation is frequently voiced (Begue 1984; Cowley and Lief 1984; Hales 1984; Johnstone 1983).

Watershed programmes attempt to encourage participation in their activities through various means, including incentives (Botero 1985). The results of the preliminary survey of watershed and related resource management projects conducted for this study show a lack of consensus regarding how, and when, people's participation should be sought, and what it really means. It is recognised that organising local participation for sustained development is problematic (Morales 1984), but insufficient attention has been given to understanding the local land users' perspective towards participation.

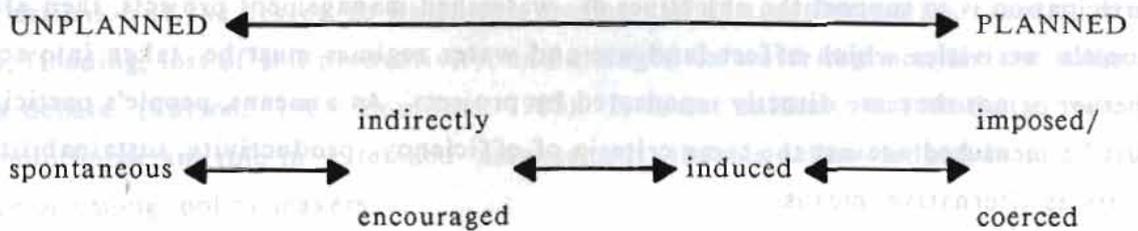
In watershed management projects, participation is sought as a means to achieve self-sustaining upland resource use, not usually as an end in itself. If the purpose of people's participation is to support the objectives of watershed management projects, then all local people's activities which affect land use and water regimes must be taken into account, whether or not they are directly sponsored by projects. As a means, people's participation must be measured against the same criteria of efficiency, productivity, sustainability, and equity as alternative means.

The fundamental premise of this study is that people's participation must be examined in terms of the reasons participation is sought. Many factors affect people's land use behaviour in the uplands of the Hindu Kush-Himalaya Region, regardless of whether specific projects for changing land use behaviour are undertaken. It will be argued that support for unsponsored activities may be one of the most efficient paths to achieving widespread, effective watershed management.

This paper defines "participation" as people's activities which contribute to the objectives of watershed management, including: sustained upland production, reduction in upland erosion, and reduction or prevention of an increase in downstream effects caused by human activities. This definition includes the whole spectrum of resource use behaviour -- along a continuum from "unplanned" to "planned" -- which supports conservation-oriented (or sustainable) upland use as understood by watershed project managers. (As watershed managers change their views on what behaviour is positive, this will necessarily change the content of participatory activities as well.)

Participation can be viewed as a continuum from "spontaneous" to "imposed", with varying degrees of indirect and direct incentives falling between these poles (Figure 1). For example, careful terracing of rice fields and semi-political movements such as *Chipko* in the U.P. Himalaya would be considered relatively spontaneous in comparison to government takeover of eroded private lands in the Punjab (India), imposed by the project. Free tree seedlings, subsidies, etc., are incentives which lie towards the middle of the continuum. In addition to local people's behaviour, project personnel participation in promoting positive land use behaviour must be taken into account (Figure 1).

Figure 1. Participation Continuum



Watershed management is based on the necessary attempt to combine a number of disparate perspectives and types of participation into a common endeavour. There are three sets of actors involved: the project staff, the funders (donors), and the various land users. The first task in understanding the types of participation is to disentangle the motivations which stem from these different perspectives.

All **project staff** carry out their duties as part of their job. It would be naive to assume that their primary motive is the specified objective of the watershed management project; more likely, maximising income, status, security, and fringe benefits is the driving motivation. To the extent that carrying out the specified activities enhance this objective, the actors may be motivated to achieve project goals. However, since the direct control of staff, field activities and budget is more rewarding in terms of status, security, and fringe benefits, than the indirect support of land users' own efforts, there is a built-in bias towards capital intensive, project-managed components over high effort, low capital, land user-managed components.

The project staff bias is exacerbated by **donor agency** biases towards short-term, quantifiable results (Blaikie 1985: 62). The importance of these biases in undermining efficient and sustainable results, based on what local users are willing to do, is often underestimated.

The **local land user** is also interested in maximising economic returns without endangering security. However, time horizons and levels of risk-taking are likely to differ significantly among local users. While larger landowners are more able to defer short returns than marginal farmers, studies have shown that even conservative farmers and herders are willing to change behaviours as a result of their perception of costs, benefits, and risks involved (Schroeder 1985).

If changes have been induced through heavy subsidies or incentives, the land user rightly perceives that someone else is willing to pay for this behaviour. He/she is then likely to attempt to perpetuate this relationship as long as possible. In other words, actions which require additional incentives to initiate tend to develop a dependency on those incentives. Unless changes sought by the watershed management project are based on local people's existing behaviour and their own perceptions of what is desired, the likelihood of adoption on a sustained basis is questionable.