MOUNTAIN FARMING SYSTEMS

Discussion Paper Series

Options for Sustainable Mountain Agriculture

**Pakhribas Agricultural Centre
and
International Centre for Integrated Mountain Development (ICIMOD)**

MFS Series No. 36

1994

**International Centre for Integrated Mountain Development
Pakhribas Agricultural Centre**

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The Pakhribas Agricultural Centre research command area covers eleven hill districts of eastern Nepal. It is largely financed by the ODA (U.K.). Pakhribas Agricultural Centre has upwards of sixty graduate researchers working in both the natural sciences (forestry, field crops, horticulture, seed production, soils, pest control, livestock production, veterinary investigations) and social sciences (socioeconomics, gender and poverty, extension methodology, adaption and adoption of technology). Support is provided by one hundred and fifty technical staff, working at the centre and at various locations throughout the Mechi and Koshi Hills. Training and Information units assist in disseminating the technology recommendations emanating from the research.

June 1994

**International Centre for Integrated Mountain Development (ICIMOD)
Pakhribas Agricultural Centre**

PREFACE

The Mountain Farming Systems' (MFS) Division of ICIMOD has been engaged in work on Strategies for Sustainable Mountain Agriculture in the Hindu Kush-Himalayan (HKH) Region with the support of various donor agencies, including the Ford Foundation, since 1988. The main objective of this long-term programme is to develop a fuller understanding of the constraints and potentials prevailing in the mountains and to promote the sustainable development of agriculture in the region.

The past work of MFS under Phase-I (1988-1990) examined the available evidence of the unsustainability of mountain agriculture. The emerging trends of negative changes in mountain agriculture were found to be strongly related to the biophysical and socioeconomic setting of the mountain habitat and its people throughout the mountain areas of the region.

Realising the need for closer and in-depth study on these changes, MFS started systematic investigation of unsustainability processes, trying to understand their possible causes and factors, including also identification and documentation of potential options that could contribute to making mountain agriculture more sustainable. This was undertaken in the Phase-II (1991-1992) Programme supported by the Ford Foundation.

This present discussion paper entitled, "Options for Sustainable Mountain Agriculture", is an outcome of the above programme. This paper has documented approximately 35 options related to farming, based on the work of Pakhribas Agricultural Research Centre (PAC) of Nepal. Many of the traditional options will be suitable even in the future under changing circumstances (e.g., demographic pressure, technological innovations, and market integration). Others are modern and modified (a combination of modern and traditional). Most of the options have been well tested in the eastern hills and mountain regions of Nepal at altitudes ranging from 500-2,000masl. It is believed that several of these options may be replicated elsewhere where the biophysical and socioeconomic conditions of the hills and mountain areas are similar.

The documented options have also been examined with the help of the mountain perspective framework developed by ICIMOD. The status of convergence between the attributes of options and the operational implications of mountain conditions, such as remoteness, fragility, diversity, and marginality, strongly indicate that the options are likely to be successful in contributing to sustainable mountain agriculture in the HKH Region.

The main aim of this paper is to demonstrate to policy-makers, planners, and those who are involved in agricultural R & D that there are many options for sustainable mountain agriculture and that these need to be systematically assessed and integrated by the present agricultural development systems in the ICIMOD member countries.

S.P. Chand, agronomist from Pakhribas, and Sugandha Shrestha, of the Mountain Farming Systems' Division of ICIMOD, merit special mention for their work on this paper. I would also like to thank Pakhribas Agricultural Centre and the many members of its staff who contributed to collating these options.

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