

A key characteristic of energy systems in mountain areas is that they remain heavily dependent on wood fuels, the supply of which is becoming critical due to the increasing rate of deforestation. These energy forms are not only used inefficiently, but they also involve significant tradeoffs in agricultural productivity due to the diversion of crop and animal wastes into cooking and heating devices. This results in environmental consequences such as loss of forests and woodlands, negative effects on health associated with indoor air pollution, as well as a range of social and economic impacts arising from fuel collection and use, many of which are experienced disproportionately by women and children.

There are, however, renewable energy technologies (RETs) available, within the HKH Region and beyond, which have enormous potential and linkages with synergy potentials to reduce the existing imbalance in energy supply and demand while decreasing socioeconomic and environmental stresses in the mountains. Programmes for adoption of these technologies have been initiated in the mountains but, unfortunately, only with limited success, insofar as they have not resulted in any significant increase in the use of renewable energy in spite of the existence of a great deal of potential.

Various studies have substantiated the comparative advantage of different RETs, particularly in mountain areas. They have also shown that experiences with these technologies have varied widely in terms of their adoption and success. Promotion of RETs was hampered by inadequate policies and appropriate matching of energy resources and technologies with the needs, to provide technical, organizational, and financial backstopping and lack of information and awareness could not be accomplished. In addition, the spatial characteristics of the mountains as well as socioeconomic and cultural factors have not been understood, leading to failures in RET intervention. It is also true that, in several instances, RET interventions have not only significantly improved energy supplies at household level but have also helped to support the economic productivity of the area.

It is now well recognized that this is not primarily due to the fact that saving energy with little negative impact on environment and health diminishes adverse environmental impacts and reduces life-cycle costs, but due to the lack of comprehensive national policies to promote the transfer and diffusion of efficient renewable energy technologies in mountain areas. These technologies may not become popular unless mechanisms for their transfer are available —



Rice Cooked in Solar Box Cooker at Women's Training Centre, Dhanuuli, Tamohun District. Ms. Barbara Ross, Peace Corps Volunteer

whether organizational and institutional or financial — are improved, impediments to their adoption removed, and pricing issues properly addressed.

Given the abundant renewable energy resources in the mountains and the various constraints faced by RETs, national policies promoting their development are needed. This will be instrumental in ensuring a minimum supply of energy to meet the basic needs and sufficient energy to support productive activities.

The Canadian Cooperation Office (CCO) in Kathmandu funded a study entitled 'Assessment of Implications of National Policies on the Use of Different Renewable Energy Technologies in Nepal and Selected Countries in the Hindu Kush-Himalayas'. The study had three components: a) National Policy Studies in China, Nepal, India, and Pakistan; b) Case Studies on Four RETs in Nepal; and c) a Regional Experts' Consultation. As part of the study, ICIMOD organized a 'Regional Experts' Consultation on Implications of National Policies'. The Consultation was held in Nagarkot from 3-4 July, 1997.

The objectives of the meeting were to assess the implications of national policies on RETs in the HKH Region, to identify factors that influence the adoption of RETs, and to recommend policies for the development of RETs in the mountains of Nepal.

Brief presentations were made by study coordinators from India, Nepal, and Pakistan based on the findings on the 'Implications of National Policies on RETs' in Technical Session 1. **Dr. Kamal Rijal** made a brief presentation on behalf of the Chinese delegate who was unable to attend the meeting. Findings of the detailed case studies carried out in Nepal on micro-hydropower, biogas technology, improved cooking stoves, and solar technologies were presented in Technical Session 2. Following these presentations, detailed discussions were held to formulate recommendations on policies for the development of RETs in the Mountains of Nepal. Based on these discussions, a framework for policy recommendations was prepared. Finally, in the Closing Session, a presentation of findings and policy recommendations was made by the coordinator, followed by the concluding remarks and a vote of thanks. A detailed programme of the meeting is presented in Annex 1.

Altogether 33 participants took part in the consultation. Among them, five were from India, one from Pakistan, and 18 from Nepal — representing manufacturers, planners, promoters and experts, two from the Canadian Cooperation Office, and seven professional staff members from ICIMOD. Among the participants invited, the Chinese delegates could not attend. Annex 2 provides a detailed list of participants. The list of studies commissioned by ICIMOD and papers presented are reproduced in Annex 3.