

Chapter 2

Opening Session

Dr. T. S. Papola, Head of the Mountain Enterprise and Infrastructure Division (MEI), formally welcomed the participants. In his welcome address, Dr. Papola noted that the importance given to the energy programme in the division arose with the realisation of the role of energy in increasing the incomes of mountain populations. He also spoke about the integrated approach being pursued by ICIMOD, with its identification of linkages between energy, environment, and the economy, as a sectoral approach to energy development had not been found suitable for mountain areas.

Mr. Egbert Pelinck, Director General of ICIMOD, in his opening address, pointed out the complexities of decision-making in relation to energy demand and supply, particularly in the Hindu Kush-Himalayan Region, due to poor and unreliable information. This had also hampered the development of potential renewable energy sources. Even when such development took place, it was usually from the perspective of meeting the energy needs of the urban and plains' areas. Consequently, the specificities of mountain conditions were inadequately reflected in national energy strategies, policies, plans, and programmes. And, when there was a strategy, energy was usually treated as a 'welfare package' and as a constraint to economic development. Rarely was due attention given to the sustainability of its use or its potential for generating incomes.

In light of these circumstances, Mr. Pelinck stressed the importance of making a programme on integrated energy development a part of ICIMOD's major mandate of poverty alleviation and environmental conservation. He said the energy programme was primarily guided by an overall mountain perspective for sustainable development formulated by ICIMOD for the HKH Region. First of all, the programme addressed how energy use in mountain areas could be adapted to overcome the major constraints of development such as inaccessibility and fragility. And, secondly, how the comparative advantages that mountains provided could be used for sustainable development, based on the biological, ecological, and cultural diversity of the region. For energy, these applied particularly to the mountain specificities of verticality; abundant hydropower potential and sunshine; and, in many places, a sustainable supply of biomass.

Mr. Pelinck raised a number of issues he hoped the meeting would address in depth. He emphasised the importance of energy, particularly fuel, in meeting cooking and space heating requirements in mountain areas. At the same time, he said it was necessary to find ways of reducing the drudgery in collecting fuelwood and other biomass and of making more efficient use of existing resources. Efforts in this direction would benefit women and children particularly. He pointed out that the economic considerations of providing and developing an energy supply infrastructure should be given due recognition so as to increase the productivity of mountain areas and also to sell energy as a commodity to other parts of the region.

The second important issue concerned the types of energy that were suitable from the point of view of the sociocultural characteristics of mountain communities as well of mountain specificities. In this regard, Mr. Pelinck suggested that the primary focus should be to exploit energy resources that were renewable. The mountains were fortunate in possessing these types of energy but lacked appropriate policies, technologies, institutions, and finances to exploit these resources efficiently. He emphasised the need for the right perspective in the quality and quantity of energy services required and energy resources available, as this dictated a choice of energy mix that maximised social and economic benefits in both the short- and long-term. Focussed attention would have to be paid to both the potentially harmful and positive effects on the environment, taking into account the global imperative to reduce CO₂ emissions and local imperatives to maintain sound health at the household level, besides the retention of adequate vegetative cover and the prevention of soil erosion and landslides.

Mr. Pelinck also pointed out the need to identify appropriate policies and institutional mechanisms that could ensure the development and management of the right type or mix of renewable energy resources at the household, village, and district levels. He pointed out the strong link between the institutional mechanism and the choice and scale of technology and suggested that it was essential to incorporate local views on appropriateness, need, and management before embarking on selection of a particular energy mix.

According to Mr. Pelinck, the meeting would not only be instrumental in understanding the emerging trends in energy use, policies, and programmes in the HKH Region, but would also generate ideas on the type of activities ICIMOD should engage in developing an energy sector with greater relevance to integrated mountain development within the scope of its mandatory functions of a) applied research, b) documentation, c) training, and d) advisory services.

Mr. Pelinck said,

"I am sure you will bear in mind that energy is not only a critical factor in integrated mountain development but also the basis

of all life and endeavor. Ourselves and our total environment are made up of some kind of energy; without energy, nothing exists. Every spark of energy is precious because it feeds the flame that sustains life."

In conclusion, Mr. Pelinck reminded participants that the meeting was not an end in itself but rather the start of a programme on energy. He described it as a key to the well-being of the approximately 130 million inhabitants of the Hindu Kush-Himalayas and therefore of interest to ICIMOD. He expressed his belief that the results of the work of experts on energy use would not only have an impact beyond domestic and small industrial uses but also on life in these remote and marginalised areas.

Mr. Pelinck's opening address was followed by a presentation by Dr. Kamal Rijal, energy specialist from the MEI Division of ICIMOD, on the background and objectives of and the expectations from the meeting. Dr. Rijal gave a brief account of the energy programme of ICIMOD, categorising the energy sector activities before and after the implementation of the Regional Collaborative Programme (1995-1998). He highlighted the work on rural energy which began with the state-of-the art reviews in five countries and culminated in the International Workshop on District Energy Planning and Management for Integrated Mountain Development in May 1986 and the publication of a book on 'Rural Energy Planning for the Indian Himalaya'. As a follow-up to the workshop, an occasional paper 'Decentralised Energy Planning and Management for the Hindu Kush Himalaya' was published in the same year. In the same workshop, experts supported the idea of energy-centred development planning efforts at the district level which resulted in a 23-month project on 'Strengthening Rural Energy Planning and Management in the HKH' in January 1987, financially supported by the European Economic Community (EEC). The purpose of the project was to develop methods of rural energy planning and management in mountain regions; to disseminate these methods among district-level officials; and to train trainers from selected institutions within the HKH.

During the early part of 1991, ICIMOD organised a seminar on 'Rural Energy and Related Technologies' in Nepal. This was a collaborative effort of ICIMOD, ADB/N, WECS, and HMG/Nepal. In the meantime, a comprehensive study on mini- and micro-hydro plants in Nepal was initiated that resulted in the publication of an Occasional Paper by ICIMOD.

Dr. Rijal said, following the realisation of the comparative advantage of hydropower development, the mini- and micro-hydropower regional training programme was implemented during 1993 and 1994 with financial support from the Norwegian Agency for Development Cooperation (NORAD). A consultative meeting of international experts was held to review the status, achievements, policies, issues, and problems and to work out a course of

action for the future. The exercise of information collection and analysis, followed by the experts' meeting, was a useful undertaking that brought together the scattered information and experiences in the field.

While the programme on mini- and micro-hydropower technology was continuing, a new programme on solar energy had recently begun.

The main activities on mini- and micro-hydropower in 1995 included the organisation of a seminar and training programme with documentation of the same. During 1996, the main activities involved networking, building up a database, and collecting information about training needs, prevalent practices, and training materials. Five information manuals on survey and layout, installation, manufacture, operation and management, and repairs were being prepared.

A programme on 'Solar Energy in Mountain Development' commenced in mid-1996. Under this thematic programme, a modest beginning had been made in the form of an initiative to establish a network on Passive Solar Building Technologies (PSBTs), with the aim of understanding the prospects of and constraints to solar energy development in mountain areas. Institutions that could play a leading role in networking had been identified in China, India, Nepal, and Pakistan. These institutions would prepare a list of institutions involved in the field of solar energy development, organise a national seminar in each country to understand the state-of-the-art of PSBTs, and recommend appropriate policies for the development of the same by identifying areas for further study.

Dr. Rijal said that the knowledge generated on the energy sector during the 80s within ICIMOD and beyond had brought about a shift in the energy development paradigm in mountain areas and also shaped ICIMOD's energy programme. This had resulted in the need for an integrated approach to energy development for the mountains as interventions in this respect had mostly been of a sectoral nature with little recognition being given to the linkages between environment, energy, and other infrastructural services and economic activities.

With this brief review of the activities of ICIMOD's energy sector, Dr. Rijal pointed out that the meeting was a follow-up to the studies on energy-use patterns in the four countries of the HKH Region. He summed up the objectives and expected outputs of the meeting as follow.

The objectives of the meeting were as given below.

- To review energy-use patterns in urban and rural areas of the Hindu Kush-Himalayan (HKH) Region based on the studies completed in China, India, Nepal, and Pakistan

- To identify relevant issues and key areas for further studies in selected areas of the HKH
- To initiate studies on energy use patterns in Bangladesh and Myanmar
- To identify parameters for promoting energy policies and programmes suitable for the HKH

The expected outputs of the meeting were as given below.

- Improved knowledge of energy supply and demand patterns in the Hindu Kush-Himalayan Region of China, India, Nepal, and Pakistan
- Better understanding of sustainable/unsustainable trends of energy use in the HKH
- Identification of key issues and areas for further study in the energy sector of the HKH
- Development of a methodological framework for the analysis of energy supply and demand suitable for mountain areas
- Initiation of studies on Energy-use Patterns in Rural/Urban Areas of the HKH in Bangladesh and Myanmar