4. ENERGY SECTOR BARRIERS

As identified in various studies, the energy sector in the region faces numerous barriers (Codoni et. al. 1985; ICIMOD 1986; Ramani et.al 1995; Vinod Kumar et al. 1987; Munasinghe et al. 1992; Phillips et al. 1995; Goldemberg et al. 1988). These need to be removed to ensure a sustainable supply of energy for the growing concern for human development besides providing an impetus to the economic growth of the mountain region. The following are the major barriers in the energy sector which have led to the present patterns of unsustainable energy use in the mountains. However, the magnitude of the problem varies from country to country, while the general characteristics remain similar.

Policies, Planning and Programme Barriers

- Most of the development policies in the mountains failed to understand the role of energy in reducing human drudgery and presumed that the supply of energy was available as and when required.
- Conventional wisdom on electrification assumes it to be a welfare package and electricity prices are always subsidised.
- Supply expansion bias in planning energy investments and poor attention to demand management
- Mechanistic use of planning models that do not adequately consider energy efficiency and renewable energy technology options
- Absence of policies for decentralised energy systems and end-use appliances

- View of final energy as an end use rather than as a service
- Inability of planners to incorporate different scenarios for mountain areas
- Decision-making based on poor and often unreliable data, especially in the mountains
- Policies on import duties and foreign capital that ignore the importance of renewable energy

Technological Barriers

- No clear understanding of the technology transfer process
- Donors view technical assistance as a market promotion effort, while the HKH countries view it as an opportunity for 'window shopping'
- Lack of standardisation in components and parts, leading to weak local manufacture and servicing capabilities
- Limitation of technologies in meeting the essential user needs, such as cooking and space heating, at affordable prices
- Lack of data on local manufacturing capabilities for effective technology transfer arrangements
- Low R & D investment in renewable energy technologies

Cost, Financing and Investment Barriers

- Lack of cost-effectiveness and high cost of renewable energy systems as well as subsidies in the price of commercial fuels
- Lack of consumer awareness on the distinction between energy costs and life-cycle costs
- Application of the 'Least Cost' approach, without sufficient understanding of the implications for low-income groups and the poorest of the poor
- Bilateral and multilateral donor biases towards centralised energy supply financing instead of multiple decentralised energy projects
- Conservative lending practices of national and international financing agencies, accompanied by an aversion to risk in new energy markets
- Inability of vendors to acquire venture capital and financing for initial market creation

- Unpreparedness of financing institutions to cater to small-scale energy financing and also the inability of credit policies to address low-income groups.

Institutional Barriers

- Evolution of energy decision-making as a supply side activity, hence centralised planning institutions
- Lack of energy awareness among demand side agencies, especially rural and urban development bodies
- Marginalisation of specialised agencies for renewable energy development in energy decisions
- Alienation of the private sector and NGOs from energy decisions
- Domination of rural electrification by centralised public monopolies