

Chapter Four

EMERGING ISSUES

Agriculture and forestry issues are inter-linked and impact directly not only on the Nepali environment but also on the lives of majority of the people.

Forest resources have declined sharply due to growing population and its demand for forest products. Rapid forest depletion has resulted in several environmental consequences such as increased landslides, soil erosion, floods, depletion of soil fertility, migration of people, and diminishing crop yields. The main causes for the diminishing forest coverage and quality, including decline in farm production are as follows:

- ?? Excessive use of fuel wood. The total fuel consumption of fuelwood makes up to 78 per cent of the total energy demand.
- ?? Intense pressure from livestock grazing in the forestlands. The grazing area has remained constant at 1.7 million ha since 1984, while the livestock population has increased by almost 15 per cent in 1998. The increased number of cattle, therefore, access forestlands for fodder.
- ?? There has been an increase in cultivated land from 38.5 per cent to 49 per cent during 1963-1979 most of which is in the Terai region.
- ?? The major national demand of timber and fuel wood is met from the Terai forests. A decline of the forest structure has been observed with a diminishing stock decreasing from 522 million m³ in 1985 to 387.5 million m³ in 1999.
- ?? Several species of plants, birds and mammals, including endemic species, are under threat, some of them are included in the CITES Appendices, and IUCN Red List.
- ?? Due to heavy loss of forest, an increase in the occurrence of landslides, soil erosion and floods have further deteriorated the forest structure and affected the fertile croplands.
- ?? Studies have shown about 60-80 per cent of the annual soil loss from cultivated areas during the pre-monsoon season when the vegetative cover is at a minimum and the fields are ploughed for planting.
- ?? Loss of nutrients has resulted in stagnant crop production
- ?? Rapid growth of human and livestock populations has accelerated soil loss.
- ?? Imbalance application of chemical fertilizers and other agro-chemicals on farmlands is cause for declining soil fertility, which has resulted in change of soil structure and acidification.

In order to address these issues, and promote sustainable agriculture and forestry activities, time has come to implement and expand activities which are as follows:

- ?? More accurate classification of forests for improvement and management.
- ?? Expansion of forest management through community participation in additional area.
- ?? Declaration of Siwalik forests as protected area and management through ecosystem approach.
- ?? Expansion of plantation activities with local participation.
- ?? Encouragement of private sector, NGOs and CBOs in the management and sustainable use of all types of forests.
- ?? Creation of public awareness and advocacy for the forest conservation.

- ?? Enhancement of forest research for the efficient utilisation of forest resources.
- ?? Promotion of technology development and transfer for better and efficient fuel usage and conservation as well as the promotion of alternative resources to meet energy demands in rural areas.
- ?? Promotion of *in situ* and *ex situ* conservation of biodiversity including agrobiodiversity.
- ?? Formulation and implementation of policy on sustainable use of land according to its carrying capacity.
- ?? Promotion on synergistic combination of organic and inorganic fertilizers through intensive extension and training of farmers, including promotion of IPM and IPNS.
- ?? Efficient management of watersheds using integrated soil fertility management systems, agro-forestry and horticulture.
- ?? Expansion of income generation activities with programmes that focus on rehabilitating degraded lands.
- ?? Establishment of a common forum for all organizations studying different aspects of land degradation.
- ?? Conducting longer-term studies to gauge the impact of different dimensions of land degradation in different ecological regions.

Resource degradation and environmental pollution is pronounced in agriculture and forest ecosystems. Unless proven management prescriptions are expanded and replicated in different ecological zones, the resource degradation will likely continue. Expansion of agricultural land in sloping areas, encroachment upon forests should be minimised with people's participation, and land use should be regulated through integrated environment management (IEM) approach. The IEM approach should focus promoting ecosystem-based participatory management of natural resources, particularly forests, soil, water and biodiversity. This will help the government in meeting national and international commitments for the management and conservation of environment and natural resources. The IEM approach should also focus on promoting non-regulatory measures to empower local people for natural resource conservation.