

3.1 Policies

Agricultural Development Policy: To provide a long-term focus and framework within which to prioritise policy actions and public investment, HMG formulated a twenty-year Agriculture Perspective Plan (APP) in 1995. The APP sets out a long-term strategy for improving the agriculture sector and accelerating the growth rate to about 5 per cent per annum (APROSC, and JMA, 1995).

The APP aims to: (i) accelerate the growth rate through increased factor productivity; (ii) reduce poverty through accelerated growth and the creation of increased employment opportunities; (iii) transform the existing subsistence-based agriculture to a commercial one through crop diversification; (iv) expand opportunities for an overall economic transformation by providing the preconditions for agricultural development; and (v) identify implementation strategies and provide clear guidelines for preparing periodic plans and future programmes. These objectives are now translated in a more detailed medium-term strategy and investment plan, which has been incorporated in the Ninth Plan and the annual budget from 1997/98.

The APP's implementation strategy involves; (i) expansion of year-round irrigation schemes with increased farmer participation; (ii) rapid growth of fertiliser distribution through private sector participation; (iii) streamlining agriculture research and extension in accordance with APP priorities; and (iv) institutional strengthening for construction and maintenance of rural infrastructure (rural roads and electrification) (APROSC, and JMA, 1995).

The APP has also adopted a strategy to improve wildlife habitat and preserve species diversity, introduce integrated pest management (IPM) programmes, and integrated plant nutrition system (IPNS) to improve soil fertility.

The Ninth Plan considers agriculture as a lead sector for poverty alleviation and seeks the assistance of other sectors for sustainable agriculture production. The Plan aims to minimise environmental impacts by linking the agriculture sector with natural resource management, and promoting women's involvement and leadership. The Plan further emphasises the expansion of IPMs.

Poverty Alleviation Policy: The reduction of poverty and the commercialisation of subsistence agriculture are two key aims of the APP. The Ninth Five Year Plan, starting in 1997/98, aims at poverty alleviation and has a target to reduce the proportion of those living below the poverty line from 45 to 32 per cent. To meet this target, the Ninth Plan has the single objective of poverty alleviation and has adopted a strategy to integrate the agriculture and forestry sectors for sustainable economic growth.

Hydro-power and Irrigation Policies: These policies have accorded high priority for environmental conservation. In order to attain the objectives of rendering assistance in the conservation of environment by supplying clean energy, the *Hydro-power Development Policy, 1992* proposes to extend the use of electricity for minimum utilisation of fuelwood, and conservation of forest and environment. The new draft policy also recognises the importance of environment and natural resource conservation during water resource development.

Similarly, the *Irrigation Policy, 1993* (revised in 1997) emphasizes the need for minimizing environmental impacts during the construction and operational stages of irrigation

projects and proposes to design and implement irrigation projects and programmes based on recommendation of the Environmental Impact Assessment (EIA) and Initial Environmental Examination (IEE) reports for sustainable irrigation development.

Forestry Policy: The *Forest Policy, 1991* promotes the conservation, management and sustainable use of forest products through people's participation. The long-term objectives are to meet people's basic needs for fuelwood, timber, fodder and other forest products on sustained yield basis; to protect land against degradation; and to conserve the ecosystems and genetic resources. The Ninth Plan re-emphasizes not to destroy the forests while implementing development activities. The Plan further emphasizes the need for biodiversity conservation, and use of NTFPs to alleviate poverty.

The guiding principles for forest management are to promote participatory and ecosystem-based management, sustainable forest development and poverty alleviation, and to establish a national forestry fund. The Plan also recognises the role of the private sector and need for women's involvement in forest management. The Plan emphasises the need for scientific management of community and private forests, national and leasehold forests, expansion of community participation in managing the national parks, reserves and conservation areas, and soil conservation and watershed management. Equal emphasis has been given for the conservation of plants including medicinal plants, and sustainable use of NTFPs.

Similar attention has been given for the development of participatory environmental impact assessment systems, and the promotion of women led non-governmental organisations in conserving natural resources.

Community forestry programmes have proved to be a successful policy initiative for addressing land degradation problems and involving the local beneficiaries in the mainstream of natural resource conservation, particularly the forests, soil, water, and biodiversity resources. Policies are directed for ensuring proper land use planning, implementing integrated package programmes which include vegetative, agronomic, and water management measures, as well as establishing linkages between stakeholders and networking the agriculture, forestry, livestock and water resources. Soil and water conservation has been one of the key programmes since the last three decades in order to increase soil fertility and agriculture production (Box 3.1).

Box 3.1

Soil Conservation Programmes

Soil conservation programmes have been grouped in five areas. They are:

- **Land use planning:** development and implementation of watershed and sub-watershed management plans, providing technical services for land use development
- **Land productivity conservation:** on-farm conservation, grass plantation, fodder/fuelwood/fruit tree plantation, agro-forestry, and greenbelt/shelterbelt development
- **Natural hazards prevention:** gully and landslide treatment, torrent control, stream-bank protection, degraded land rehabilitation through bio-engineering treatments
- **Infrastructure protection:** slope stabilisation, roadside erosion control, trail improvement, canal protection and water source conservation
- **Community soil conservation:** demonstration plots, extension education, training, study tours, local level workshops, and exhibitions

There is a clear policy shift in forest management from state to people management. The concept of private forests nationalisation introduced in 1957 was ineffective for forest management and HMG introduced the user group committee approach in the late 1970s, which was expanded in the *Forest Act, 1993*. This Act was amended in 1998 with a view to providing users additional opportunities for investing 25 per cent of the income generated from the community forests for the management of such forests. Similarly, the conservation area, user group and buffer zone management concepts were introduced in the *National Parks and Wildlife Conservation Act, 1973* in order to empower the local people in the management of protected areas. This Act also provides the opportunity to invest 30 to 50 per cent of the total income generated in the protected areas for the conservation of biodiversity and the promotion of community development. This has promoted the expansion of community-based biodiversity conservation and contributed in uplifting the socio-economic conditions of the local people as well as in meeting the basic requirements for forest products. These initiatives will contribute to addressing major conservation issues which have emerged from population growth, deforestation and habitat loss, poverty and subsistence economy, man-wildlife interaction, unplanned tourism development, poaching and illegal trade in wildlife products.

Nepal's lowland protected areas are adjacent to the international border with India. Wildlife species have no political boundary and often move through trans-border forests. However, habitat fragmentation has made their free and easy movement difficult. In order to tackle this issue, HMG has initiated to establish protected areas for the transboundary conservation of wildlife having large habitats in collaboration with its partners such as WWF Nepal.

Other policy instruments include the National Conservation Strategy 1987, and Nepal Environmental Policy and Action Plan, 1993, which have also been effective in thrashing out issues on sustainable agriculture and forestry. These instruments have contributed to policy reform over the time period. Similarly, the land tax policy favours changing land use from annual crops to perennial crops such as fruit trees.

The user group concept has also been mooted in soil conservation and watershed management activities. These activities have been instrumental in rehabilitating degraded hill slopes, torrent/stream-bank control by bio-engineering technologies, and run-off harvesting dams, particularly in the Siwaliks and foothills (Box 3.2 and 3.3).

Box 3.2

Torrent and Stream Control Through Bio-Engineering Techniques

Streams originating from the Siwaliks are, in general, dry, except in the monsoon season, and carry significant quantities of sand, stone, and aggregate during the rainy season. Studies indicate sedimentation of about 50 – 100 cm sand and aggregates in the fertile farmland, making them unproductive and requiring more fertilisers in the Terai. Realising this, people, particularly of Siraha, Saptari and Udayapur districts, with the technical assistance of the respective District Soil Conservation Offices have reclaimed over 60 km of seasonal streams by using local materials such as stone, sand, bamboo and other plants. This low cost bio-engineering treatment has been very effective in controlling torrent and regulating stream, providing seasonal employment and minimising downstream sedimentation. The benefit in regulating the torrent has encouraged the local inhabitants in reclaiming their unproductive uplands through plantation of firewood, fodder and fruit trees. People have also raised vegetables as an income generation activity.

Box 3.3

Catchment Pond

Water scarcity is a pronounced problem in the foothills of Siwaliks during the dry season. This problem can be minimised by constructing series of run-off harvesting dams (catchment pond) in the *Bhabar* area in order to control torrent/stream, provide irrigation water, increase moisture and maintain greenery, recharge ground water, and also raise fish. The ponds can be constructed by utilising local materials such as stone, aggregate, sand and indigenous plants. This multi-purpose and multi-beneficial pond has been very effective in increasing farm production through moisture retention and in minimising land degradation in the foothills of Siwaliks in Siraha and Saptari district.

Source: R. Bogati, Department of Soil Conservation