



## **Sectoral Integration of Biodiversity in Pakistan**

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## **1. Introduction**

Pakistan reported<sup>1</sup> that Pakistan has a long history of integration of biodiversity conservation and sustainable use into relevant sectoral and cross-sectoral plans, programmes and policies. The efforts started with the process of development of National Conservation Strategy in 1992 and gained prominence in 1999 with the initiation of process for the formulation of National Biodiversity Action Plan. The NCS, which has served as the de facto environmental policy of Pakistan, describes the environmental situation existing in Pakistan and recommends actions to be taken in 14 core areas, in order to redress the aggravating environmental degradation and to facilitate sustainable utilization of natural resources. The National Environmental Action Plan (NEAP), approved in February 2001, narrows the Government's policy focus on the environment to four core programs: clean air, clean water, waste management and ecosystem management. A comprehensive program has been launched to support implementation of NEAP. The national Environment Policy was approved in 2005.

Despite the continued efforts to arrest environmental degradation, the quality of environment in the country continues to deteriorate resulting in pollution, land degradation, deforestation, water depletion and loss of biodiversity. Furthermore, environmental challenges facing Pakistan have exacerbated over the years owing to a number of factors including high rate of population growth, increased urbanization and growing poverty. Pakistan has signed and ratified almost all the regional and international environmental agreements. However, there has been no serious effort to mainstream biodiversity concerns into the main sectors and cross cutting issues. The biodiversity and environment concerns are gradually finding acceptance in the policies, strategies and action plans of the country. A brief overview of the present situation is presented here.

## **2. Agriculture**

The country lacked a proper agriculture policy for over 62 years, and has now prepared a draft comprehensive 'National Agricultural Policy' with the consensus of various stakeholders. Main challenges to agriculture of Pakistan include ensuring food security for the growing population, high cost of agriculture inputs, water, seeds, fertilizers, and pesticides etc. Other challenges are alleviating rural poverty by increasing farmers' profitability and maintaining sector sustainability, complying with sanitary and phyto-sanitary requirements of new WTO regime, coping with water scarcity, agro-energy crises, environmental degradation and climatic change.

Overall objective of the draft 'Agricultural Policy of Pakistan' is to increase quantity and quality of agricultural production and promote farm profitability and competitiveness. The draft policy focuses on achieving sustainable food security through increasing productivity, encouraging entrepreneurial agriculture and introducing income diversification interventions at the farm level.

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<sup>1</sup> Pakistan (2009). Fourth National Report, Ministry of Environment, Islamabad, 2009, 97 pp.

### **3. Livestock**

Livestock is a very important component of Pakistan's agriculture sector and accounts for nearly 50 percent of the total value of agricultural production and a significant proportion of export earnings. The country does not have a livestock policy. However, FAO of the United Nations has initiated a project to assist the Federal Ministry of Food, Agriculture and Livestock (MINFAL) with the preparation of a "National Livestock Policy & Action Plan"

### **4. Fisheries**

Fishery plays an important role in the national economy. It is the most important economic activity in the villages and towns along the coast, and in most of the coastal villages and settlements it is the sole source livelihoods. The marine fisheries sector contributes about 57 percent in terms of fish production. Inland fisheries are common in rivers, canals and reservoirs. It is estimated that some 180,000 people are involved in inland fisheries for their livelihoods.

A fisheries and aquaculture development policy and strategy were formulated in Pakistan in the year 2006, and the environmental concerns were fully taken into account in aquaculture development. The policy also takes into account the need to rehabilitate marine aquatic environments damaged by pollution and environmental degradation; promote sustainable management of aquatic resources; and establish protected areas and fish sanctuaries for conservation of fish biodiversity. The policy also supports fisheries conservation in all coastal area management and planning processes through a mechanism for cross-sectoral integration and participatory decision making.

### **5. Forestry and Plantations**

The total forest area, including range lands, is 10.5 million ha, of which 1.4 million ha are productive forests. However, the contribution of the forestry sector to the national economy is less than one percent due to ban on forest harvesting. Wood for fuel is produced in the state-owned forest plantations, and private farmlands. The trees and bushes growing on degraded lands are a source of free fuel wood collection for the poor. A study on Household Energy Strategy revealed that the country's consumption of fuel wood is high, with about 79% of all the households using fuel wood for cooking (82%), space heating (7.3%), and water heating (9.8%). Fuel wood is also used in the commercial sector by bakeries, restaurants, in ovens, brick kilns, for tobacco curing, in ceramic products manufacturing, and food processing, etc.

The country lacks a comprehensive forest policy; however, a policy draft has been prepared and awaiting approval of the cabinet. The National Environment Policy calls for sustainable management of natural forests of Pakistan and increased tree cover for safeguarding economic growth and food security in the country. The specific policy recommendations are:

- Finalize the National Forestry Policy.
- Carryout intensive institutional and legal reforms both at the federal and provincial levels to promote good forest governance.

- Promote social forestry and integrated watershed management.
- Promote farm forestry and irrigated plantations.
- Eliminate all sorts of import duties on timber products while taking into account the environmental sensitivities of the neighboring Afghanistan.
- Develop and sustainably manage the riparian forests along with irrigated plantation and tree plantation on farm-lands.
- Develop and implement a strategy and an action plan for protection and rehabilitation of mangrove forests with the participation of communities.
- Preserve unique forests eco-systems and the cultural heritage of people of Pakistan. Provide alternative sources of energy, like piped natural gas, LPG, solar energy and micro-hydel power stations, to the local inhabitants to reduce the pressure on natural forests, and to substitute firewood in the upland ecosystems.
- Strengthen the existing forestry research and training institutions with adequate infrastructure and technical manpower development.
- Promote sustainable management of rangelands and pastures through preparation and implementation of integrated range management plans.

## **6. Education**

The Curriculum Wing of the Ministry of Education and Ministry of Environment under the auspices of NEAP Support Programme designed a project to address the issue of 'lack of environmental awareness and education' in Pakistan. This is regarded as one of the key contributing factors in the rapid environmental degradation that results in poverty. The project will contribute to sustainable development in Pakistan through attitudinal and behavioral changes in students towards environmental conservation.

The overall objective of the project is to develop appropriate Environmental Education (EE) concepts for grades one through 10 for incorporation in the formal education system throughout Pakistan. The key achievements of the project are:

- Curriculum for Environmental Studies developed and disseminated for 9th and 10th grades.
- Environmental Concepts for integration in to the curriculum/ textbooks for grades 1 to 12 in consultation with provinces, developed and ready for dissemination.
- Orientation of textbook authors/ publishers/ subject specialists in Punjab and NWFP provinces.
- Model Textbooks on Environmental Studies for grades 8th and 10th developed.

## **7. Tourism**

Tourism in Pakistan is not a large scale sector, and it plays a moderate role in development of the country.

Since 1971, the year in which tourist statistics were first compiled, tourist arrivals have ranged between 122,000 and 494,000. Compared to the volume of international tourism, domestic tourism in Pakistan is fairly large. During 1995, the number of domestic tourists was estimated at 42.8 million. While the economic role of tourism in Pakistan may not be significant, its role in degrading the environment has been found to be very significant, mainly because tourism in Pakistan is concentrated in only a few areas with a high degree of seasonality.

The tourism industry is now considered as an opportunity for conservation and preservation of the environment rather than a threat. The country's first Tourism Master Plan was prepared under the auspices of the United Nations in 1967. It recognized environmental considerations in general terms for tourism development and nature conservation was not given much attention.

In order to check environmental degradation in mountainous areas of Pakistan, two basic mountaineering rules and regulations were framed in 1983 in an effort to control pollution. These are: (a) the expeditions are responsible for leaving camping sites clean of all garbage; and (b) the expeditions and their porters are responsible for damage to the forest or the animals in the areas the expedition has gone to. Since 1988, every international expedition has been required to contribute US \$200 for clean-up operations in the mountainous areas. Since 1991, the expeditions are required to make a cash deposit of US\$ 1,000 to ensure that the expedition observes environmental instructions. Despite these regulations, the pollution in the high altitude areas has increased in recent years. Recently, the government has constituted a committee to revise the 1990 National Tourism.

## **8. Conservation and Sustainable Development**

The National Conservation Strategy (NCS) approved in 1992 had three broad objectives: (a) conservation of natural resources, (b) sustainable development and, (c) improved efficiency in the use and management of these resources. The NCS identified fourteen core areas for priority implementation, which led to the design of 68 programs that included various sectors and partners of the society. A review of the NCS in 2002 revealed that awareness raising and institution building were the primary achievements of the Pakistan's National Conservation Strategy (NCS) more so than improvements to the environment and natural resources. Furthermore the NCS resulted in strengthened civil society institutions and their influence.

With the launching of the NCS, a need was felt to have provincial conservation strategies as a means to implement the sustainable development agenda at the provincial level. The North West Frontier Province (NWFP) decided to take the lead on this issue and was soon followed by the government of Baluchistan. NWFP subsequently recognized that their strategy should be devolved further into district strategies as well (initially in Abbottabad and Chitral). At the same time the government in the Gilgit-Baltistan Area also embarked upon developing a strategy there. A recent study has indicated that the

initiation of the strategy development process created some lasting impacts. The most significant has been the introduction of a tradition of multi-stakeholder public consultations on sustainable development.

Awareness has increased and most stakeholders are pleased with the attitudinal changes gradually taking place. However, sound implementation mechanisms are not in place and consequently the conservation strategies are not achieving the desired results.

## **9. Cross Cutting Issues**

The cross cutting issues are adequately addressed by the National Environment Policy of Pakistan and its objectives and policy recommendations are: Population and Environment: To address the population-environment nexuses effectively, the government shall:

- Integrate environmental considerations into population policies and related projects and programs.
- Encourage behavioral change communication to promote environmental friendly consumption patterns.
- Increase public awareness of the problems of unchecked population growth and benefits of small population demand on natural resources.
- Channelize the migration to the intermediate/smaller agri-based towns through provision of necessary infrastructure and support facilities.
- Upgrade living environment in rural settlements in order to generate reverse migration.
- Develop city master plans to ensure development of cities in a planned manner.
- Ensure equitable access to land and other environmental resources.

Gender and Environment: It will be ensured that all environment related policies, projects and programs are gender sensitive and promote empowerment of women. To this end, the government shall:

- Compile statistics of gender-disaggregated environmental goods and services.
- Ensure effective participation of women in all phases of environmental projects and programs.
- Mainstream gender in all relevant policies and plans.
- Launch targeted interventions to address the environmental issues which impact more adversely women such as indoor air pollution and lack of access to water supply sources.
- Include "gender and environment" in the curricula of education and training programs on environment.

Environment and Local Governance: Effective environmental management at the local level with active participation of all key stakeholders shall be ensured. For this purpose, the government shall:

- Establish nationwide district environment offices and district environment committees.
- Develop and implement district and tehsil level environmental management plans.
- Build capacities of elected district government representatives and local government officials for effective management and participation in environmental governance.
- Devolve necessary powers to local governments to ensure effective environmental management.
- Establish district sustainable development funds.

### **10. Multilateral Environmental Agreements**

The NEP recommends that government shall continue to play a proactive role to ensure protection of regional and global environment and cooperate with the international community in promotion of sustainable development. In this context, the government shall:

- Effectively participate in regional and international forums to foster cooperation for protection of environment and natural resources.
- Ensure effective implementation of all bilateral, regional and international multilateral agreements, protocols and conventions to which Pakistan is a party, in line with national policies and priorities.
- Develop and implement national strategies and action plans for all multilateral environmental agreements, Johannesburg Plan of Implementation, Millennium Development Goals and Water, Energy, Health, Agriculture, and Biodiversity (WEHAB) framework.

The Ministry of Environment is the focal Ministry for three of the four biodiversity-related conventions - CITES, Convention on Migratory Species, Ramsar and the Rio conventions. The Ministry of science and technology is the focal the World Heritage Convention. The country actively participates in the processes of these conventions and makes sure that biodiversity concerns given full consideration.

### **11. Millennium Development Goals**

Pakistan has adopted the following targets and indicators for tracking progress towards progress on goal 10 'Ensure environmental sustainability'.

Target. Integrate the principles of sustainable development into country policies and programmes and reverse the loss of environmental resources.

Indicator	Definitions	1990	2015
Forest cover including state owned and private forest and farmlands	Forest cover including state-owned and private forest and farmlands, as percentage of the total land area	4.8%	6%

Land area protected for the conservation of wildlife	Land area protected as percentage of total land area	9.1%	12%
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