National Capacity Self-Assessment for Global Environment Management


# NEPAL

## Cross-cutting Analysis Report

Government of Nepal

Ministry of Environment, Science and Technology

UNDP

GLOBAL ENVIRONMENT FACILITY

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NATIONAL CAPACITY SELF-ASSESSMENT FOR
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# Abbreviations

| | |
|---|---|
| CBO | Community Based Organization |
| CDM | Clean Development Mechanism |
| DDC | District Development Committee |
| EIA | Environmental Impact Assessment |
| EPA | Environment Protection Act |
| EPC | Environment Protection Council |
| EPR | Environment Protection Regulations |
| GEF | Global Environment Facility |
| GIS | Geographic Information System |
| ICIMOD | International Centre for Integrated Mountain Development |
| MEA | Multilateral Environment Agreement |
| MOEST | Ministry of Environment, Science and Technology |
| MOFSC | Ministry of Forest and Soil Conservation |
| NCSA | National Capacity Needs Self-Assessment |
| NGO | Nongovernment Organization |
| SALT | Slopping Agricultural Land Technology |
| CBD | United Nations Convention on Biological Diversity |
| UNCCD | United Nations Convention to Combat Desertification |
| UNDP | United Nations Development Program |
| UNFCCC | United Nations Framework Convention on Climate Change |
| VDC | Village Development Committee |

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# Chapter I

# Introduction

## 1.1 The three Rio Conventions and their Objectives

### *1.1.1 Convention on Biological Diversity*

The Convention on Biological Diversity (CBD) is the first global agreement on the conservation and sustainable use of biological diversity and also one of the most broadly subscribed international environmental treaties in the world. A total of 190 parties have so far signed the Convention since the opening of it for signature at the Earth Summit in Rio de Janeiro in 1992. Nepal signed the CBD during the Earth Summit on 12 June 1992, ratified it on 23 November 1993, and became a Party to the Convention on 21 February 1994. The Environment Division in the Ministry of Forests and Soil Conservation serves as the national focal point to the Convention.

The CBD has three main goals: (i) the conservation of biodiversity, (ii) sustainable use of its components, and (iii) equitable sharing of the benefits arising from the utilization of genetic resources. The other important issues raised by the CBD include: access to genetic resources and benefit sharing, impact assessment, benefit sharing of research and technology transfer, and financial resources and mechanisms to achieve conservation goals. The Convention has suggested an ecosystem approach in the management of forest and biodiversity and includes provisions on cross-sectoral integration, technology transfer and cooperation, compliance, cooperation and reporting.

### *1.1.2 United Nations Convention to Combat Desertification*

The Convention, which was adopted in 1994, is the result of realization by the global community for joint action to combat desertification. Nepal participated in the preparatory processes of the Convention, signed it on 12 October 1995, and ratified on 10 September 1996. The Convention entered into force in the country from 13January 1997. The Ministry of Environment, Science and Technology is the National Focal Point to the Convention.

The main objective of UNCCD (as stated in Article 2) is to combat desertification and mitigate the effects of drought in countries experiencing serious drought and/or desertification through effective action at all levels in an integrated way. The primary focus of the Convention is to identify the factors contributing to desertification and the practical measures necessary to combat desertification and mitigate the effects of drought. Article 8 of the convention has highlighted the need for coordination of activities with other relevant international agreements, particularly the UNFCC and the CBD, in order to derive maximum benefit and avoiding duplication of efforts.

### *1.1.3 United Nations Framework Convention on Climate Change*

The United Nations Framework Convention on Climate Change (UNFCCC), which was adopted in 1992 and entered into force at the global level on 21 March 1994, sets an overall framework for intergovernmental efforts to tackle the challenge posed by climate change. The Convention has already been ratified by 192 countries. Nepal ratified the Convention in May 1994. The Convention entered into force in the country from 31 July 1994. The Ministry of Environment, Science and Technology is the National Focal Point to the Convention.

The Kyoto Protocol, adopted at the third Conference of the Parties to the UNFCCC on 11 December 1997, is another international treaty closely related to the UNFCCC, which aims at stabilizing the emissions of the green house gases. Unlike the UNFCCC, the Kyoto Protocol has legally binding provisions for reducing emissions of green house gases by developed countries. Nepal acceded to the Protocol in September 2005. The Protocol has entered into force in the country since December 2005.

The ultimate goal of the UNFCCC, as stated in its Article 2, is to stabilize greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system. Such a level to be achieved within a time-frame sufficient to allow ecosystems to adapt naturally to climate change, to ensure that food production is not threatened and to enable economic development to proceed in a sustainable development. Work under the Convention has been focusing on activities relating to both mitigation and adaptation to climate change.

## 1.2 The National Capacity Needs Self-Assessment Initiative and Cross-cutting Analysis

The National Capacity Needs Self Assessment for Global Environmental Management project, developed by the Global Environment Facility (GEF) in collaboration with the United Nations Development Program and the United Nations Environment Program, aims at assisting countries to develop their capacity to manage the environment. The project has been financially supporting the countries to undertake self assessment capacity building needs, with emphasis on cross-convention synergies in capacity building activities under the three major international environmental conventions developed and negotiated in Rio de Janeiro, Brazil in 1992 (namely the Convention on Biological Diversity, United Nations Convention to Combat Desertification, and the United Nations Framework Convention on Climate Change).

In Nepal, the NCSA project is being implemented by the Ministry of Environment, Science and Technology with financial support from the GEF and UNDP. The cross-cutting analysis is the third major activity under the NCSA project following the preparation of thematic stocktaking and thematic profile reports.

The overall objective of this component of the NCSA project is to identify and briefly assess cross-cutting capacity issues for facilitating the understanding about cross cutting areas and synergy issues, relevant to the CBD, UNCCD, and UNFCCC under the national framework of implementing the three Conventions. The specific objectives are:

(i) To identify the main capacity issues and associated constraints in cross-cutting areas under the three Conventions for synergy and inter-Convention cooperation.

(ii) To prioritize the cross-cutting capacity development needs to effectively address the identified cross-cutting capacity issues and constraints.

## 1.3 Rationale for the Cross-cutting Analysis

Biodiversity, climate change and land degradation are complex and inter-related environmental phenomena that extrinsically interact, both spatially as well as temporally. For example, climate, soil productivity, and disturbance regime are some of the important factors determining biodiversity in a given site. Any change in either of these environmental parameters will have direct effect on biodiversity of the site. Similarly, forest ecosystems which often sustain high biodiversity and help abate land degradation play a significant role in the global carbon cycle and their proper management can make a significant contribution to reducing the buildup of greenhouse gases in the atmosphere.

The complexity and integrated characteristics of the issues related to biodiversity, climate change, and land degradation requires an integrated response, which in turn demands for synergized and integrated multidisciplinary knowledge. Moreover, many national environmental policies and actions under the CBD, UNFCCC and UNCCD overlap, and contradict or conflict thereby making implementation difficult and wastage of scarce resources. This necessitates coordination and collaboration between agencies and efforts and initiatives of relevant agencies. In other words, specific cross-cutting areas emerge for attention in national implementation of capacity building under the three Rio conventions.

The analysis of cross-cutting issues has become even more important because of the current word wide concerns over the issue of climate change that might have already caused or likely cause extinction of many species that are already vulnerable. The livelihoods of many indigenous and local communities will particularly be adversely affected if climate change and land degradation lead to loses in biodiversity.

The need for an analysis of cross-cutting issues across the thematic areas has also been highlighted by CBD Conference of the Parties (Decision V/4) and is a subject of discussion by the Subsidiary Body for Scientific and Technological Advice of the UNFCCC since its sixteenth session. One of the major reasons behind promoting "cross-cutting area" and "synergy" by the Conventions relates to avoiding duplication of efforts so as to raise cost-effectiveness.

The cross-cutting analysis is especially relevant for Nepal where the national economic growth has historically been dependent on its natural resource base, particularly agriculture and forest. The high level of dependence on natural resources and ineffective management has led to a general decline in quality of many environmental resources including land, forest, and water over the years. Industrial activities, unplanned urbanization, and rapidly increasing vehicular emissions have contributed to degradation of urban environments. Inadequate information, financial and human resources coupled with political instability have hampered the government's attempts to successfully address the issues. As a result, the overall environmental conditions in both rural

and urban areas are deteriorating in Nepal and, if left unaddressed, will potentially impede the country's development prospects (World Bank, 2007).

The cross-cutting analysis of the national capacity building for environmental management is expected to be an important basis for Nepal to effectively address the country's environmental issues through collaboration with her international partners.

*Chapter II*

# Methodology

This report is primarily based on the analysis of the information contained in the thematic profile reports on biodiversity, climate change, and land degradation prepared by separate Thematic Working Groups, extensive review of relevant literature, and consultations. A thorough discussion on the draft report was held in a meeting of the Joint Working Group organized in Dhulikhel, Kavrepalanchok during 27-28 June 2008.

The process included the following major steps.

- Review of relevant literature and the thematic assessment reports on biodiversity, land degradation and climate change.
- In-depth analysis of thematic and cross-cutting issues listed in the thematic profile reports.
- Identification of those issues and capacity constraints that is common to the CBD, UNFCCC, and UNCCD.
- Drafting the cross-cutting report providing information on cross-cutting capacity issues, constraints, and priority capacity building needs in cross-cutting areas.
- Discussing the findings with relevant officials and experts.
- Revising and finalizing the assessment report.

# Chapter III

# Cross-cutting Capacity Issues and Constraints

A cross-cutting issue, as defined by the NCSA initiative, is a technical or development problem that is important in relation to all the three Rio Conventions. A cross-cutting capacity constraint is a specific problem, which if addressed effectively, would yield benefits for the implementation efforts of all the three conventions (GEF, 2001). This chapter lists and briefly describes the main cross-cutting capacity issues and associated constraints related to the implementation of the CBD, UNCCD, UNFCCC and other MEAs in Nepal. Further explanations of the issues and constraints can be found in the respective Stocktaking and Thematic Assessment reports.

## 3.1 Land Use Planning and Implementation

Land use planning is a major cross-cutting environmental issue in Nepal because in the absence of land use planning and its implementation more and more forest and agricultural lands are being lost to expanding settlements and urbanization thereby contributing to land degradation, biodiversity loss, and climate change. Moreover, inappropriate land use and cropping system have contributed to increased soil erosion and land degradation, particularly in the hills and mountains.

Lack of a comprehensive land use policy, plan and their implementation are the major constraints associated with the issue. Although a preliminary draft of the national land use policy and strategy was prepared by the government in 2005, it has not yet been finalized and approved due mainly to: (i) absence of political will to prepare and implement such a policy, (ii) poor inter-agency coordination/cooperation, (iii) lack of sound scientific basis (based primarily on old secondary data/information), and (iv) non-participatory approach adopted in its formulation. A new project "Strengthening Land Administration Services" being implemented by the Ministry of Land Reform and Management with technical assistance from the Asian Development Bank since June 2008 is expected to prepare a framework for a comprehensive national land use policy.

## 3.2 Integration/Harmonization of Environmental Laws

Nepal has a fairly comprehensive set of environmental policies and legislations, which cover a broad range of sectors and issues related to all the three Conventions. Some of the existing laws relevant for environmental management are, however, inconsistent, overlapping or contradictory, and constricted by sectoral biases. For example, provisions in the Forest Act (1993) and several other environment-related Acts contradict with the Local Self-Governance Act (1999). There are also some legislative ambiguities. For example, in many instances the EPA and EPR are unclear about the role of MOEST in relation to other sectoral agencies. These ambiguities have sometimes created confusion over the statutory responsibilities of government ministries and departments and also have hampered effective enforcement and compliance of environmental laws.

Lack of the requirement and mechanism for interagency coordination during the formulation of policies

and legislations is the major direct cause of the problem, which stems out primarily from the work division regulations of the government. The Ministry of Law, Justice and Parliamentary Affairs, which is supposed to review all the legislations before they are submitted to the parliament for approval, has not been fully able to identify the legislative inconsistencies, contradictions and ambiguities.

### 3.3 Forest and Watershed Management

Forests are both a sink and a source of carbon dioxide. Moreover, forests are usually the storehouse of biodiversity, help regulate hydrological cycle and contribute to soil conservation. Forest and watershed management are therefore directly related to biodiversity, land degradation and climate change. In Nepal, forests are also crucially important for meeting livelihood requirements of a vast majority of the people.

The valuable forest resources of the country faced severe deforestation and degradation problems during the last few decades. For example, the forest area in the country decreased by 24 percent during 1979-1994 (LRMP, 1986; DOFRS/FRISP, 1999). Forest area encroachment due to high demand for agricultural land and overexploitation of forest resources are considered as the two major direct causes of forest loss and degradation. Moreover, the loss and degradation of forests is a political and economic problem, directly associated with the poverty and people's livelihoods.

While there have been some positive changes in forest condition under community management in the hills, overall the country's forest resources are undergoing continuous loss and degradation, particularly in the Tarai (the narrow strip of flat, fertile land in the southern part of the country) and inner-Tarai regions. This has led to loss of biodiversity, increased landslides and soil erosion. Moreover, the continuous loss and degradation of forests is speculated to be contributing to the climate change through increased emission of carbon dioxide to the atmosphere.

The following are the major capacity constraints related to the issue.

(i) Inadequate funds, technology and human resources

Inadequate funds, technology and human resources are the main reasons behind inadequate implementation and enforcement of forest policies, plans and legislations. There is a general problem of under-funding forest, watershed and protected area management programs/projects, which has hampered meeting development and maintenance objectives. Moreover, there is a little resource available for scientific research and monitoring. Some district forest offices and protected areas also are severely under-staffed.

(ii) Overdependence of the people on forests for meeting the livelihoods requirements.

(iii) Pressure on forestland for construction of public infrastructures such as roads, power projects, and shelter for politically displaced and disaster-affected people has been increased in recent years.

(iv) Lack of political consensus on dealing with the issue of widespread encroachment of forest areas, particularly in the Tarai and inner-Tarai. This has not only made administrative efforts to control deforestation ineffective but also encouraged further encroachment of forestland for cultivation and settlement.

(v) Park-people conflict, which is wide-spread in and around the protected areas, particularly in the Tarai. The conflict mainly relates to crop and livestock depredation by wild animals.

## 3.4 Wetlands Management

There are many different types of wetlands in Nepal, including river systems, lakes, swamps, ponds, reservoirs, glacial lakes, and paddy fields. These wetland ecosystems have global, regional, and local values in terms of maintaining hydrologic cycles, biogeochemical cycles, and biodiversity. For example, the wetlands harbor about 25 percent of the country's biodiversity including 172 species of major wetland plants and 193 species of wetland-dependent birds (IUCN, 1996). Eight of the country's wetlands have been designated as Ramsar sites.

Despite their high conservation and use values that extend across the three Conventions and thematic areas, wetlands have generally remained a neglected resource in Nepal until recently. Many of the important wetlands of the country have been subjected to growing degradation due to drainage, agricultural runoff, overharvesting of resources, intrusion and rapid expansion of invasive alien species, and pollution.

The following are the major capacity constraints related to the sustainable management of wetlands.

(i) Inadequate information, funds, technology and human resources for scientific management of wetlands.

(ii) Lack of legal instrument and institutional arrangement

The government has formulated the National Wetlands Policy in 2003 with the objective of conservation and sustainable use of wetlands but its implementation has, so far, remained poor due mainly to lack of wetland-specific legislation and institutional arrangement for the management of wetlands located outside protected areas. Currently, the wetlands are governed by several (in some cases, conflicting) legislations, including Local Self-Governance Act, Forest Act, Water Resources Act, and unclear administrative jurisdictions and responsibilities.

## 3.5 Agricultural Practices

Agriculture is one of the main land uses in Nepal that is directly related to the livelihoods of a vast majority of the country's population. A vast majority of the economically active population lives in rural areas and practices subsistence agriculture. Non-adoption of proper soil and water conservation measures, improper crop rotation, inappropriate use of agrochemicals, and extension of cultivation onto marginal lands have contributed to land degradation, biodiversity loss, and emission of greenhouse gases.

The following are the major capacity constraints related to the issue.

(i) High rate of population growth and limited alternative livelihood opportunities

Nepal had estimated population of around 8.5 million in 1953, which grew to 15 million in 1980, 20 million in 1995, and estimated 26.4 million in 2007. The current population growth rate is around 2.27 per year (CBS, 2007). The substantial increase in population density over the years has substantially increased pressure on agricultural land and other natural resources. As there is a general

lack of employment opportunities in other sectors, many Nepalese derive their livelihood solely from the primary production of foods, fodder, and wood, and keeping animals. This has led to considerable pressure on cultivable lands, causing deforestation, pasture depletion, and encroachment of marginal lands and steep slopes.

(ii) There is inadequate information on area, level and severity of the environmental problems. For example, information on severity and area affected by various forms of land degradation is limited, highly variable, and sketchy.

(iii) Ineffectiveness of the agriculture extension services to raise awareness among farmers about the possible negative effects of their agricultural practices.

(iv) Except for limited high-cost construction projects, there is no any system for evaluation of land for its potential use. Consequently, the use of land for agriculture is based on the farmer's ad-hoc decision.

(v) Inadequate attention to include environmental perspectives in agriculture development planning.

(vi) No research to investigate impacts of land degradation, agro- biodiversity loss and climate change in agricultural production system and food security.

### 3.6 Assessment and Monitoring

All the three Conventions have given emphasis on assessment of the resources, construction and maintenance of monitoring systems, and strengthening the indicator systems, methodologies and techniques for conservation of biodiversity, and mitigation of climate change and land degradation impacts. These requirements have, however, not fully met in Nepal due mainly to the following constraints.

(i) Inadequate research funds, monitoring programs, equipment and facilities

The government and universities research programs are severely constrained by lack or inadequacy of research funds, equipment, and logistics. As a result, there is no regular program to monitor changes in environmental condition. Lack of or inadequate basic facilities for field monitoring, sound methodologies for monitoring of various resources, scientific instruments, data processing facilities, inter-departmental information exchange and sharing platforms are other constraints. Inadequate research management capacity has hindered the research findings to be applied.

(ii) Inadequacy of competent research professionals

Nepal has quite a rich base of skilled field researchers who are familiar with their area, and have excellent field skills in biological and social research. However, to conduct broad scale and in-depth analysis of environmental issues (e.g. changes in ecosystems), familiarity with remote sensing and GIS technologies and other quantitative methods is essential: and this component is in general significantly lacking in the country. "Brain draining" of human resources due to prolonged political instability coupled with lack of incentives has also contributed to the problem.

(iii) Inadequate manpower and resources in the MOEST, MOFSC and its departments to conduct impact assessments of development projects.

(iv) Inadequate access to and development of technology

In each of the three Rio Conventions, there are provisions for transfer of technology by developed countries to developing countries. But, after so many years of adoption of the Conventions, no breakthrough has been observed in technology transfer/acquisition. One of the reasons behind is that the developing countries like Nepal are not well-prepared or have not yet fully studied or defined what technologies they need to acquire from developed countries. Lack of collaborative attitude among the government policy makers and academia is one of the major reasons behind the poor achievement in technology development.

## 3.7 Inter-agency Cooperation and Coordination

A number of agencies and institutions are involved in the management of environment in Nepal, but cooperation and complement among them is very poor. The following are the major constraints.

(i) There is no any particular agency in the country with the responsibility of monitoring the implementation and enforcement of various environmental policies, plans, and legislations. The Environment Protection Council (EPC), which is supposed to take this responsibility, has not been able to fulfill its responsibilities effectively, due mainly to the following reasons.

(a) Lack of legally defined/assigned roles and responsibilities. The EPA, which provided the legal basis for continuation of the EPC, is silent on this matter.

(b) Weak Secretariat: the MOEST, which is also the EPC secretariat, is severely constrained by inadequacy of its capacity required for overall coordination, and monitoring of relevant activities of other agencies.

(ii) There is a general lack of cooperative attitude among the relevant agencies, particularly the government agencies, in formulation and implementation of environment-related policies, plans and programs. Every ministry or department always wants to expand its own scope of functions or domain of authority, instead of offering mutual support and attaches importance only to those policies, plans and programs constituted under its own leadership.

## 3.8 Database Management and Data Sharing

Several data needs, including data on land use, vegetation types, coverage and condition of forests, soil type and condition, agricultural intensification and use of agro-chemicals, livelihood activities etc., are common to the two or more Conventions. It is therefore desirable to design and manage an integrated and comprehensive database covering different dimensions of the environment and share the data among relevant agencies. This has not yet happened in Nepal due to the following constraints.

(i) Lack of a national database development, management and data sharing plan

Lack of a comprehensive plan for database development, management and utilization of environmental data has remained a serious impediment in achieving an integrated planning and policy making.

Currently, some government and non-government offices have their own database of variable sizes and types, which are hardly available for others.

(ii) Variation in formats of data and technical norms from agencies to agencies and even from research team to research team have posed a serious obstacle for data sharing and information exchange.

(iii) Inadequate data management capacity

Construction and management of a national database on a complex theme like environment that encompasses several disciplines, requires a high level of technical knowledge on relevant software, database as well as on the subject matter, which is currently lacking in the country.

(iv) Absence of a data/information sharing platform

Although several organizations have their own database on different thematic areas, the data are usually not accessible by others. Only a few data (e.g. ICIMOD's GIS Portal) are available in the internet. As creation and maintenance of a database calls for a large sum of investment and involves ownership of the material and intellectual property rights, generally the owner of the database is not willing to put its own databases on the Internet for sharing. As a result, channels for data/information sharing between institutions do not exist. Similar is the situation with regard to cross-country data/information sharing.

(v) Lack of or inadequate indicators

## 3.9 Development and Transfer of Environmentally Sound Technologies

There have been some initiatives towards development and transfer of environment-friendly technology in Nepal, especially in the field of energy efficient stoves, terrace improvement, water harvesting, bioengineering, ground water extraction and shallow tubwell, cable cars, biogas, micro-hydropower and other conservation technologies such as SALT. There are, however, still several gaps and constraints that are common to all the three Conventions (although the technologies themselves can be different). Some of the major gaps and capacity constraints are as follows.

(i) Inadequate attention to the assessment of indigenous land management and conservation technologies and their improvement.

There are many indigenous land management and conservation technologies in Nepal but they are poorly documented and their efficiency and improvement potentiality are not well assessed.

(ii) Inadequate attention to the assessment of already adapted technologies and their improvement.

(iii) Lack of a national CDM strategy that can facilitate transfer of environmentally sound technologies.

(iv) Poor dissemination of technologies (e.g. SALT technology is found to be effective to control soil erosion, but its adoption is still not widespread).

(v) Inadequate financial, material and human resources with relevant agencies to develop and transfer technology

## 3.10 Education, Awareness, and Participation

Raising public awareness is one of the key points in pushing forward sustainable development of the country and to guide rational public activities. This is why all the three Rio Conventions stress the need for environmental education and awareness. The cross-cutting nature of environmental education and awareness has been reinforced by the thematic assessments, each of which recurrently reflects capacity development needs for environmental education.

Nepal has made some progress in environmental education and awareness in recent years. For example, there is an increased awareness and media support for environmental conservation. Public information programs are aired regularly from television and radio stations. A number of feature articles and news related to environment are regularly published in local newspapers. Public awareness is also being promoted in various celebrations such as the Biodiversity Day, Environment Day, and Wetland Day etc. Environment is being increasingly incorporated in academic curricula at all levels. Separate graduate and under graduate courses on biodiversity, forestry, wildlife, and environmental science have been introduced by universities. Increased access to the Internet resources, particularly by younger generation, is in rise in urban areas. There are, however, still several constraints, which can be summarized as follows.

(i) The terms like "biodiversity", "climate change", "Clean Development Mechanism" etc. are generally unfamiliar among the general public

Although, the understanding of the concepts has substantially increased in recent years, it is mostly limited to urban areas and particularly in younger masses. A vast majority of the rural population, particularly in remote rural areas, is still unaware of the concept and rationale for biodiversity conservation, climate change mitigation, and opportunities offered by CDM. In some cases, the concepts are understood and interpreted differently by the experts and the local people.

(ii) Inadequate attention to update/upgrade university curricula.

(iii) Inadequate participation of the public in decision-making

Although, a large number of government policy decisions are directly related to the vital interests of the people, opportunities and channels to incorporate their concerns and voices in the policy process usually do not exist. There has been a rising trend of public participation in environmental management assessment in recent years (e.g. in Mid-Marsyandi hydropower project, Basantapur-Chainpur road project etc.) but this is happening mostly at random and inadequately. So far, there is no clear mechanism for public participation in decision-making.

## 3.11 Local Environmental Governance and Management

Nepal's sustainable development strategy has given emphasis on decentralization and local governance. The Local Self Governance Act (1999) requires the devolution of environmental management responsibilities to the local governments (i.e. DDCs, VDCs, and municipalities). This has not usually happened in practice nor has there been any effort to build the technical capacity of these bodies. Another issue not addressed

by current legislations is the question of who should be responsible for environmental management in the proposed federal system of national governance. The following are some of the specific constraints.

(i) Lack of strategy to activate local bodies for environmental management

Environmental conservation is usually not a priority of local bodies and, as a result, there is no any initiative in this area by them. The local bodies' role so far has been to passively respond to the policies, plans and strategies of the central government.

(ii) Financial difficulties

Priority of the local governments is on infrastructure development and other economic activities, where limited financial resources are used. This has resulted in lack of fund and inadequate attention to environmental issues.

(iii) Shortage of human resources

Because of poorer working condition and less opportunities in rural areas, individuals with higher educational qualifications, senior professionals and experts are mostly concentrated in Kathmandu and other large cities. This, coupled with lack of strategy to train and involve local people in environmental management, has created shortage of human resource in the countryside, especially in remote districts and areas.

(iv) Incomplete institutional framework at the local level

The government is planning to establish an Energy and Environment Section in thirty DDCs and Energy and Environment Unit in other forty-two DDCs, soon. This can be considered as a good initiative towards extending environmental services at the local level. However, the institutional vacuum still persists at the VDC and municipality level, which has left a gap in technical capacity of these agencies in matters related to the environment.

(v) Limited authority and management capacities of the local governments

The local governments do not have enough legal authority in matters related to the environment. For example, the Industrial Enterprises Act does not give any authority (other than site verification) to local bodies in the management of industrial pollution. Conflict in policies and laws (e.g. between Local Self Governance Act of 1997 and Forest Act of 1993) and poor coordination between local and central government agencies is another problem that has hampered environmental management in the field.

(vi) Local governments and CBOs lack initiatives in environmental conservation

As mentioned above, local governments are keen on economic development, quick success and instant benefits and lack initiative in environmental conservation. Environmental protection often has to follow the needs of economic development without any initiative.

## 3.12 International Negotiation and Reporting

Nepal is highly dependent on external sources of funding for implementing environmental conservation polices, plan and programs. Despite this fact, the country's capacity to analyze/identify opportunities and negotiate in international forums has generally remained poor. For example, the MOFSC has not been able to fully utilize the opportunities provided by the CBD COP-7 Decisions (decision no. 27.7 and 21.15) for implementation of the program work on mountain biodiversity. The following are the major constraints.

(i) Gap of knowledge in substantive issues among the officials who usually participate in international meetings.

(ii) Lack of or poor inter-agency cooperation in information sharing, consultation mechanism and practice.

(iii) Inadequate competency in English language.

## 3.13 Disaster Management

Management of natural disasters, particularly water-induced disasters that commonly occur in the country, is an important cross-cutting issue in Nepal. The country has very limited capacity in the management of natural disasters. The following are the major capacity constraints.

(i) Policy and legislative gaps: the current policy and legislations are oriented towards "rescue" and not towards prevention.

(ii) There is no effective early-warning system.

(iii) Lack of vulnerability assessment system.

The analysis reveals that the root cause for many of the cross-cutting environmental issues listed and discussed above relate to the deep-rooted culture and historical practice of non-cooperation and competitive attitude rather than collaboration and complement among the relevant agencies, particularly the government ministries and departments. The challenge, therefore, is to unlock distinctive competencies, encourage trust and reduce conflict among relevant agencies and individuals. Severe limitation of financial resource and prolonged political instability are other major factors that have contributed to the country's poor performance in the management of its environmental resources and mitigation of negative effects.

*Chapter IV*

# *Priority Needs for Cross-cutting Capacity Development*

The priority needs for cross-cutting capacity development were discussed and finalized in a joint meeting of the Thematic Working Groups on biodiversity, land degradation and climate change held in Dhulikhel, Kavrepalanchok district during 27-28 June 2008. The meeting was attended by representatives from government ministries, departments, NGOs, DDC Association, VDC Association, civil society, private sector, and UNDP. After presentation of and thorough discussion on the draft cross-cutting report, the participants discussed and selected the following criteria and assigned weightage for prioritization of the cross-cutting capacity development needs.

1. Severity of capacity gap (30%)
2. Achievability (25%)
3. Potential to contribute to national sustainable development goals (SDAN, MDGs, PRSP) (30%)
4. Inter-Conventions linkage (15%)

Based the selected criteria and weightage, the participants assigned specific values to the selected cross-cutting capacity needs. The findings are presented in Table 1.

***Table 1: Cross-cutting capacity development needs and their priority***

| Priority Level | Capacity Need | Functional Level |
|---|---|---|
| 1 | Increased investment in the management of forests, watersheds, wetlands, protected areas and agricultural systems. | Systemic/ Institutional |
| 2 | Formulation and implementation of comprehensive national land use policy and land use plan. Such a policy and plan should be based on land capability and comparative advantages of different geo-ecological regions. | Systemic/ Institutional |
| 3 | Establishment of system/programs/projects for regular monitoring of biodiversity, land use and climatic conditions. This requires increased fund allocation for research, enhancement of research capacity of relevant organizations (e.g. government research departments and universities) and individuals, upgrading of facilities, and design and implementation of rigorous, integrated research programs. Support from bilateral and multilateral international funding mechanisms is crucial for successful implementation of such programs/projects. | Institutional/ Individual |
| 4 | Further promotion of alternative renewable energy and training for its adoption to reduce overdependence on fuelwood. | Systemic/ Institutional |

| | | |
|---|---|---|
| 5 | Formulation and implementation of a national strategy for environmental education and awareness at different levels (i.e. national, regional, local). One of the approaches to increase environmental awareness at the local level could be to set up professional teams to carry out environmental publicity and education at the grassroots level (e.g. high schools, local user groups) for increasing awareness on environmental issues. NGOs could be mobilized for organizing such events. | Systemic/ Institutional |
| 6 | Involvement/activation of local governments (DDCs, VDCs, and municipalities) in environmental conservation activities. How this can be best done is a subject of research. | Systemic/ Institutional/ Individual |
| 7 | Integration/harmonization of environment-related policies and legislations, and filling up the legislative gaps. | Systemic |
| 8 | Establishment of an effective mechanism for mobilizing, guiding, and supporting public participation in environmental conservation and building up public participation systems such as mass information and complaints systems, public hearings, and systems for public participation in EIA. | Systemic/ Institutional |
| 9 | Establishment and/or strengthening of environment units in key ministries, departments and agencies and training of the personnel in environmental assessment and monitoring. | Systemic/ Institutional/ Individual |
| 10 | Initiation of the process for developing structure of environmental governance in the proposed federal republic system of national governance. | Systemic/ Institutional |
| 11 | Strengthening the national capacity for international negotiation and reporting | Institutional/ Individual |
| 12 | Enhancement of national coordination and inter-agency cooperation mechanism. One of the mechanisms for this could be to strengthen and activate the Environment Protection Council and its Secretariat. | Institutional |
| 13 | Formulation of a national plan for collection, management and utilization of environmental data. Such a plan should also include provisions for collection and dissemination of information on cleaner technology, environmental health, and climate change adaptation. | Systemic |
| 14 | Integration of environmental perspective in agriculture development planning | Systemic/ Institutional |
| 15 | Establishment of a system and mechanism for monitoring and evaluation of implementation of environmental policies, plans, projects, processes and systems. Such a system should also have a provision for social or public (i.e. local people, relevant scientists, media etc) monitoring. | Systemic/ Institutional |
| 16 | Support to relevant CBOs and NGOs with their capacity building | Institutional/ Individual |
| 17 | Enhancement of law enforcement and program implementation capacity of relevant government departments through trainings and increased logistical supports. | Institutional/ Individual |

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| 18 | Enhancement of the capacity of the MOEST, MOFSC and other relevant government agencies for effective implementation of the EPA, EPR, and other environmental policies. | Institutional/ Individual |
| 19 | Formulation and implementation of strategies for environmental financing; both at the national and local levels. | Systemic |
| 20 | Getting prepared for and acquiring necessary technology from developed countries as provisioned in the Conventions, wherever necessary. | Institutional/ Individual |
| 21 | Updating/upgrading of university curricula | Institutional |
| 22 | Formulation and implementation of strategy and plan for assessment, documentation, improvement and transfer of indigenous land management technologies. | Systemic/ Institutional |
| 23 | Creation and management of a central environmental database and information management system. This also includes establishment of a system for integration and coordination (e.g. cataloguing, networking) of all the existing databases on biodiversity, climate change and land degradation so as to make this information fully available for utilization and sharing. Based on the assessment of the existing databases, it is also necessary to identify gaps and study and establish new databases and information systems. | Institutional/ Individual |
| 24 | Promotion of alternative employment opportunities to reduce dependence on agriculture and forests for livelihoods. | Systemic/ Institutional |
| 25 | Promotion and further expansion of CDM opportunities. This requires: (i) formulation of a national CDM strategy for facilitating the transfer of technologies, (ii) enhancement of capacity of institutions involved in the development, assessment and transfer of environment-friendly technologies, (iii) creation of conducive environment for participation of private sector in the development and adoption of environment-friendly technology, both in the industrial sector and rural areas, and (iv) expediting transfer of tested technologies (such as SALT, improved cooking stoves, biogas, solar pans etc). | Systemic/ Institutional/ Individual |
| 26 | Strengthening the national capacity for disaster management (particularly water-induced disasters) | Institutional/ Individual |
| 27 | Setting up mechanisms for exchange and sharing of research findings. Communications between/among environment-related government and non-government agencies should be intensified with the objectives of exchanging views on setting-up of research projects, learning from others' strong points to offset one's weakness, sharing research findings, and reducing redundancies and wastage of scarce resources. | Systemic/ Institutional/ Individual |
| 28 | Identification (or elaboration) of indicators (type of indicators may differ across the Conventions). | Institutional/ Individual |
| 29 | Forging a consensus among the political parties on the approach to be taken to resolve the chronic problem of forest area encroachment, particularly in the *Tarai* and inner-*Tarai* regions. | Systemic |

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| 30 | Encouraging participation of local communities in the management of protected areas, strengthening and harmonizing park-people relations, helping local people alleviate poverty by introducing income-generating programs/projects, and/or setting up compensation funds to compensate local people economically for the losses they suffer from wild animals should be considered. | Systemic/ Institutional/ Individual |
| 31 | Compiling and publishing biodiversity, climate change, and land degradation-related books, journals, magazines, and other reading material to disseminate knowledge, especially among college and university students. | Institutional/ Individual |
| 32 | Development of national capacity in economic valuation of environmental goods and services | Individual |

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