

# **CROSS-CUTTING AREAS, RELATED CAPACITY DEVELOPMENT NEEDS AND PRIORITIES**

**AN OVERVIEW FROM THE BHUTAN NCSA PROJECT**

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## **Cross-cutting Areas for Capacity Development**

There are several areas that cut across the themes of biodiversity, climate change and land degradation. These cross-cutting areas present opportunities for coordination and collaboration between different sectors and agencies and for an integrated approach to address environmental management issues and capacity development needs more comprehensively and with greater synergy. The Bhutan NCSA Project has identified the following cross-cutting areas based on the views of the NCSA thematic working groups at the inter-working group meeting held at Paro in July 2005, additional information analysis and expert opinions from key people in the environment field:

- Environmental Impact Assessment
- Strategic Environmental Assessment
- Harmonization of Environmental Management Laws
- Public Awareness and Education for Environmental Management
- Forest Fire Management
- Strategic Planning for Environmental Management
- Integrated Environmental Information Management System
- Sustainable Financing Mechanism
- Local Environmental Governance

### **Environmental Impact Assessment**

The need to introduce and implement procedures for assessment and management of environmental impacts of projects which are likely to have significant adverse impacts with a view to avoid or minimize such impacts is emphasized in the CBD and UNFCCC. Although the UNCCD does not specifically mention the need for environmental impact assessment (EIA), it is apparent that EIA will be a valuable tool to combat land degradation and its effects. EIA, or environmental assessment (EA) as is known in Bhutan, is a relatively recent concept and became a legal requirement with the enactment of the Environmental Assessment Act 2000. Specific procedural requirements are set in the Regulation for the Environmental Clearance of Projects 2002. The EA is an overarching process, involving all the three areas of global environmental management – biodiversity, climate change and land degradation – and cutting across various sectors and agencies. Therefore, the need for capacity development in the area of EA comes out recurrently in all the three thematic assessments.

The Annex 2 of the Regulation for the Environmental Clearance of Projects 2002 designates a number of agencies as competent authorities to screen, issue or deny environmental clearance for the projects/ activities listed in that Annex. The existing list of competent authorities includes: Department of Industry, Department of Trade, and Department of Geology and Mines under the Ministry of Trade and Industry; National Authority for Construction Standards and Quality Control and City Corporations under the Ministry of Works and Human Settlement; and Department of Forestry and Department of Agriculture under the Ministry of Agriculture. Although designated as competent authorities, almost all of these agencies do not have the expertise and manpower to effectively take on the responsibilities of a competent authority. As a matter of fact, many of the designated competent authorities have reportedly not yet carried out any environmental assessment and clearance responsibility. The EA process is therefore to a large extent centrally-driven by the NECS because of virtually non-existent EA capacity within line ministries/ departments. Also, because of limited capacity EA has been so far more focused on the industrial sector and on large and medium infrastructure projects.

Even as NECS endeavors to institutionalize EA in the mainstream functions of key line ministries and their departments, it has initiated the process of devolving EA responsibility for

small-scale local projects with potentially no significant adverse environmental impacts to the dzongkhag level in keeping with the decentralization policy. Each Dzongkhag Administration has now formed a Dzongkhag Environmental Committee (DEC) and the NECS is providing EA related training to these committees. The DEC's are chaired by the Dzongdag and made up of existing dzongkhag officials such as the Dzongkhag Planning Officer, Dzongkhag Agriculture Officer, Dzongkhag Forestry Officer, Dzongkhag Engineer, and Dzongkhag Land Records Officer.

## **Strategic Environmental Assessment**

The CBD stresses the need for integration of, as far as possible and as appropriate, the conservation and sustainable use of biological diversity into relevant sectoral or cross-sectoral plans, programmes and policies. Similarly, the UNFCCC states the need for integration of climate change considerations in social, economic and environmental policies and actions. As in the case of EIA, the UNCCD does not specifically mention the need for strategic environmental assessment (SEA), but it is apparent that SEA will be a valuable tool to ensure that land degradation considerations are taken into account when formulating, revising, modifying or implementing development policies, programmes and plans.

The Environmental Assessment Act 2000 stipulates that environmental concerns are fully taken into account when formulating, renewing, modifying and implementing any policy, plan or programme and provides for Strategic Environmental Assessment. To aid the implementation of the Environmental Assessment Act 2000, the Regulation on Strategic Environmental Assessment 2002 has been promulgated to guide implementation of basic procedural requirements pertaining to SEA. The Regulation requires that all policies, programmes and plans, including Five-Year Plans, carry an environmental statement or incorporate such a statement by reference.

While SEA is a legal requirement, institutional mechanisms for enforcing it is presently non-existent. There have been consultations between the NECS and the Department of Planning (previously Planning Commission) to institute SEA within the Department of Planning (DoP) and integrate SEA in the five-year development planning process. However, the DoP has been hesitant to assume SEA responsibility in absence of implementation guidelines, staff and training.

## **Harmonization of Environmental Laws**

Some of the existing laws relevant for environmental management are inconsistent, overlapping or contradictory, and constricted by sectoral biases. The NECS is attempting to formulate an umbrella legislation for environmental management that will reconcile existing differences between various laws and address a comprehensive range of environmental management needs to serve as the apex environmental law. However, the process has met with very little success so far because of resistance from various sectors with the concern that such a law may only further complicate the existing situation and compromise sector-specific needs. Having said that, there is general consensus that, even if there is no need for an umbrella environmental legislation, existing environmental laws need to be reviewed and rationalized in the context of the overall national objectives and with the premise that they will be more effective and useful if they are mutually-reinforcing and practicable. The Land Act 1979 is currently under review and revisions to it will be presented at the oncoming session of the National Assembly. Depending on the revisions in the Land Act 1979, it is expected that changes will also occur in the Forest and Nature Conservation Act 1995 as several legal provisions are inter-related. There is also the need to reconcile Forest and Nature Conservation Act 1995 and Mines and Mineral Management Act 1995, for instance on the issue of the power and authority to regulate quarrying activities. According to the Forest and

Nature Conservation Act 1995, the Ministry of Agriculture is vested with the power to issue rules and regulations related to collection of forest produce which includes boulders, stone, sand, gravel, rocks, peat, and surface soil, and the Department of Forestry is the licensing and controlling authority for collection of such produce. On the other hand, according to the Mines and Mineral Management Act 1995, the Ministry of Trade and Industry has the power to issue rules and regulations for mining activities, which includes quarrying of rocks and stones, and the Department of Geology and Mines has the authority to license and control such activities.

## **Environmental Education and Awareness**

All the three Rio Conventions stress the need for environmental education and awareness. The cross-cutting nature of environmental education is reinforced by the thematic assessments, each of which recurrently reflects capacity development needs for environmental education. Environmental education and awareness programmes are being conducted by various institutions such as the Royal Society for the Protection of Nature, National Environment Commission Secretariat, Department of Forestry and National Biodiversity Center. There is the need for coordination between these and other relevant agencies to integrate biodiversity conservation, climate change and land degradation topics in environmental education and awareness programmes wherever appropriate. This will not only mean better use of limited resources (manpower, money, material and time) but also help demonstrate the linkages between the three themes. The other aspect is that while environmental education programmes by various agencies have been going on for a long time, there seems to be little impact on the ground particularly in terms of reducing litter and environmental pollution. There is a need to review past and ongoing environmental education programmes and evaluate their impacts.

## **Forest Fire Management**

The issue of forest fire is relevant to all the three thematic areas. It impacts biodiversity, contributes to climate change and causes land degradation. Forest and Nature Conservation Act 1995 prohibits setting of forest on fires and imposes fines and penalties including imprisonment. In spite of such stringent legislation, forest fires persist as a major environmental problem. Records maintained by the Department of Forestry reveal that from 1992/93 to 2003/04, 803 incidents of forest fires have occurred, affecting more than 125,000 hectares of forest land. While forest fires are a recurrent and widespread phenomenon in the country, there is a lot to be done to improve forest fire management. To start with, there is no national forest fire management strategy. Then, there is no mechanism for coordination and collaboration between various agencies that have responsibility for forest fire management or are involved in forest fire fighting. Equipment for forest fighting and communication are also severely lacking. Training on forest fire management is needed for forestry staff but also for local communities and armed personnel.

## **Strategic Planning for Environmental Management**

All the Rio Conventions require formulation and updating of national plans and programmes related to the three respective thematic areas. The CBD requires a national biodiversity action plan, UNFCCC requires a national adaptation programme for action, and UNCCD a national action programme to combat land degradation. Use of strategic planning tools, e.g. root cause analysis, objective-oriented planning, logical framework and prioritization/ ranking matrix, can be very valuable for the preparation of the national plans and programmes associated with the three Rio Conventions and related instruments. In some cases, the use of such tools is obligatory or highly recommended. Furthermore, such tools can be effectively applied in

enhancing the design of strategies and projects for environmental management and subsequent monitoring and evaluation.

## Integrated Environmental Information Management System

Several data needs will be common to two or all the three themes. The following table shows examples of such data needs:

<b>Table 1: Examples of Data Needs Common to the Thematic Areas</b>			
<b>Data Needs</b>	<b>Biodiversity</b>	<b>Climate Change</b>	<b>Land Degradation</b>
Land use type	X	X	X
Vegetation type	X	X	X
Forests (type, condition, density)	X	X	X
Soil type	X	X	X
Agriculture type	X	X	X
Fertilizer and pesticide use	X	X	X
Population and human settlements	X	X	X
Livelihood activities	X	X	X
Meteorological data	X	X	X

It is therefore desirable to design and maintain an integrated environmental information management system which addresses common as well as specific data and information needs. This would entail developing an integrated environmental database customized for application at dzongkhag, regional (RNRRCs, RTIOs), sectoral (MTI, MoA, MoIC) and national (NECS) levels and installation of the database at the various levels, followed by training of data producers, managers and users. Using this integrated database, a national environmental information portal can be created on NECS's website for public consumption.

## Sustainable Financing Mechanism

Although environmental sustainability is a cornerstone of the country's development philosophy, much of the capital funding for environmental management comes from international donor agencies. For instance, in the Eighth Five Year Plan period (1997-2002), nearly 80 percent of the budget of NECS came from external donor agencies such as DANIDA and UNDP. Similarly, the environmental management programme in the MTI is largely a result of DANIDA-funded Environment Sector Programme Support (ESPS) and all of the operational protected areas are dependent on external donor funding. External funding assistance can be unpredictable and are time-bound and conditional, thereby affecting the continuity of environmental management programmes and activities and inhibiting the flexibility of financial resource use to respond to changing circumstances. While there are signs that external donor support is helping some of the sectors consolidate their environmental management programme, there is a need to plan and install mechanisms to ensure that financial resources are available to sustain environmental management even after external funding ceases. In order to address sustainable environmental financing need, the Bhutan Trust Fund for Environmental Conservation (BTF) was created in 1992 with grants from the GEF, UNDP, WWF and a number of foreign governments. However, BTF's focus of funding is in the area of biodiversity conservation and protected area management. Given the expanding environmental management needs, there is a need to broaden BTF's funding

portfolio and modalities and concomitantly mobilize additional funding to implement the expanded portfolio and modalities.

There is also the need to explore and elicit public investment in environmental management. For instance, funding for nature conservation and community development in protected areas from tourism which thrive on natural attractions or funding for land management in upstream areas from downstream industries which are vulnerable to floods and landslides. The possibility of Private-Public Partnership for Environmental Financing needs to be explored and nurtured.

## **Local Environmental Governance**

Administrative and political decentralization was initiated by His Majesty King Jigme Singye Wangchuck in 1981 with the formation of Dzongkhag Yargye Tshogchungs, now known as Dzongkhag Yargye Tshogdus, to promote people's participation in the decision-making process. The decentralization process received further impetus with the creation of Geog Yargye Tshigchungs in 1991 to promote local socio-economic development strategies and initiatives by empowering the people to make decisions on their plans and programmes and enabling them to adopt approaches and practices that suits local needs. In 2002, the DYT and GYT Chathrim were revised and re-enacted to enhance the powers and functions of the local community bodies to plan, decide and implement development programmes and activities, including those concerning environmental management, at the local level.

Corresponding with the growing emphasis on decentralization and local governance, a number of initiatives have been undertaken in the recent past to mobilize community participation and action in environmental management. These include the formulation of Micro Environmental Action Plans through local community awareness building and participation, integrated conservation and development projects in protected areas and their buffer zones, and various community-based environmental projects through the UNDP/GEF Small Grants Programme.

While the thrust on decentralization presents the opportunity to pursue environmental management based on a participatory approach in a departure from the conventional state-driven approach, lack of local capacity in terms of knowledge, skills and experience remains a major impediment. The national review undertaken in the run-up to the World Summit on Sustainable Development highlights lack of local capacity as one of the greatest barriers to the implementation of Agenda 21. A concerted effort to develop local capacity for environmentally sustainable development is one of the highest priorities for the country in the coming decade. It is therefore vital to build on past initiatives and lessons learnt and consolidate local environmental governance through continuous and vigorous capacity development.

## **Capacity Development Needs for Cross-Cutting Areas**

### **Systemic Level**

#### **Related to Harmonization of Existing Environmental Management Laws**

There is the need to harmonize different laws concerning environmental management. This can either be achieved on a case-by-case basis or through the enactment of an umbrella legislation for environmental management such as the National Environmental Protection Act. However, the latter seems to be less practicable in view of the lukewarm response from various sectors and agencies due to concerns that it may further complicate the situation.

## **Related to Environmental Education and Awareness**

The NECS has drafted a strategy for what they call “Environmental Education for Sustainability” to serve as a guiding framework for implementation of environmental education programmes. However, the strategy has yet to become operational. There is a need to review and finalize the strategy and propagate it for implementation.

## **Related to Forest Fire Management**

A National Forest Fire Management Strategy needs to be developed and implemented. It is understood that a forest fire management strategy has been prepared for the eastern dzongkhags. There is a need to take this step further and develop a more comprehensive strategy covering the entire country. The strategy will among other things need to identify the vulnerability of different dzongkhags, causes and effects of forests fires, measures to prevent or reduce forest fires, and outline coordination mechanisms between different agencies.

## **Related to Sustainable Financing Mechanism**

### *Public-Private Partnership Strategy for Environmental Financing*

There is the need to develop and operationalize a public-partnership strategy outlining various viable mechanisms of mobilizing domestic funds from private sector for environmental management.

## **Institutional Level**

### **Related to Environment Impact Assessment**

#### *Establishment of Environment Units in Key Ministries and Agencies*

Although the Environmental Assessment Act 2000 requires the establishment of environmental units in all key ministries and agencies, particularly those that have been designated as competent authority for environmental clearance of activities listed in Annex 2 of the Regulation for the Environmental Clearance of Projects 2002, none of them excepting MTI and MWHS have an Environmental Unit. The MoA has assigned the DoF as the focal agency for matters related to environmental assessment and clearance but it is a provisional arrangement. Therefore there is a need to institute an Environment Unit at MoA. Other ministries that need to establish environment unit include the Ministry of Information and Communication and the Ministry of Health.

#### *Establishment of Dzongkhag Environment Units*

It was felt that the Dzongkhag Environmental Committees will have extreme difficulty in carrying out environmental assessment and clearance functions in view of the fact that these committees were made of existing dzongkhag sectoral officials who have full-time responsibilities in their respective professional areas. The creation of Dzongkhag Environment Units with at least one trained full-time EA personnel to start with was felt critical for the proper functioning of the environmental assessment and clearance process at the dzongkhag level.

## **Related to Strategic Environmental Assessment**

### *Creation of a Strategic Environmental Assessment Unit in the Department of Planning*

There is the need to establish a SEA Unit within the Department of Planning (DoP) to carry out the mandate of ensuring that environmental concerns are integrated in the planning and formulation of five-year plans at the central, dzongkhag and geog levels. Such a Unit should have the capability to provide advisory service and technical support to the sectoral agencies, Dzongkhag Administration and GYTs in matters concerning the implementation of SEA process in the formulation of their development plans, including preparation of environmental statements as per the requirements of the Regulation for Strategic Environmental Assessment 2002.

### *Development of SEA Guidelines*

In conformity with Section 11 of the Regulation for Strategic Environmental Assessment 2002, there is a need to develop guidelines on SEA, outlining tools and procedures for employment at various stages of the formulation of five-year plans at the central, dzongkhag and geog levels.

## **Related to Environmental Education and Awareness**

### *Inter-institutional Coordination and Collaboration Mechanism*

Inter-institutional coordination and collaboration mechanism for environmental education and awareness needs to be developed. The mechanism will need to be determined in the Environmental Education and Awareness Strategy. However, for various reasons if the strategy does not materialize sooner, stand-alone guidelines can be developed for inter-institutional coordination and collaboration for environmental education and awareness through a consultative and consensus-building approach.

### *Monitoring and Evaluation*

There is the need to review past and ongoing education programmes and evaluate their impacts across different segments of the society, e.g. school children, shopkeepers, village folks, monks, and office-goers. The evaluation should also highlight lessons and provide recommendations to improve environmental education programmes.

### *Integration of Environmental Education in Educational Institutions and Programmes*

While there is some level of integration of environmental education in the school education system in the form of environmental science subject up to primary level, environmental education needs to be extended to other levels of school education system. Furthermore, there is the need to integrate environmental education in monastic education and non-formal education (adult literacy) programmes.

## **Related to Forest Fire Management**

### *Guidelines on Forest Fire Management Techniques*

Guidelines will need to be developed on various techniques for prevention and control of forest fires in different terrain and forest conditions and on approaches for community mobilization and coordination of logistics during forest fire incidents.

### *Forest fire fighting and communication equipment*

There is the need to equip every dzongkhag and geog that is vulnerable to forest fires with a full set of forest fire fighting tools and communication equipment required at the minimum to effectively combat forest fires.

### **Related to Integrated Environmental Information Management System**

An integrated environmental database will need to be developed, customizing it for application at dzongkhag, regional (RNRRCs, RTIOs), sectoral (MTI, MoA, MWHS, MoIC) and national (NECS) levels. The database will then have to be installed in the offices of the relevant agencies. Using this integrated database, a national environmental information portal can be created on NECS's website for public consumption.

### **Related to Sustainable Financing Mechanism**

Depending on the ability to mobilize additional funds, BTF needs to expand its grant-making portfolio beyond biodiversity conservation and protected area management and cover other areas of environmental management, particularly those which are under-funded.

### **Related to Local Environmental Governance**

The DYT and GYT Chathrims 2002 contain a number of environmental management provisions. However, the DYT and GYT are not able to implement these provisions. It is felt that guidelines to implement the provisions, accompanied by training, will be useful for the DYT and GYT members.

## **Individual Level**

### **Related to Environmental Impact Assessment**

Personnel in the environmental units in the line ministries and agencies, and in the Dzongkhag Administrations will need specialization training in environmental assessment, clearance and monitoring.

### **Related to Strategic Environmental Assessment**

The staff at the SEA Unit within the Department of Planning will need to have training in SEA concept, approaches and tools. This need can be addressed either by training relevant DoP officials that are assigned SEA responsibility or by seconding trained SEA specialists to the DOP from NECS.

### **Related to Environmental Education and Awareness**

Personnel with environmental education and communication skills are required in NECS, RSPN, NBC and City Corporations.

### **Related to Forest Fire Management**

Forestry staff, local communities and armed personnel will need training on various techniques for prevention and control of forest fires in different terrain and forest conditions and on approaches for community mobilization and coordination of logistics during forest fire incidents.

### **Related to Strategic Planning Skills for Environmental Management**

Personnel, especially those who have the responsibility for preparing plans and programmes, from various environmental management institutions, will need training in strategic planning tools and techniques such as problem and root cause analysis, objective-oriented planning and logical framework development. This can be ideally done by organizing a series of two or three short training workshops with resource persons from a reputed international/regional institute, complemented by national resource persons.

### **Related to Integrated Environmental Information Management System**

Data producers, managers and users will need to be trained in the application and functions of the integrated environmental database. The training will need to cover various aspects of data management such as collection, collation, analysis and dissemination.

### **Related to Local Environmental Governance**

Training of all DYT and GYT members on the guidelines for implementation of environmental management provisions incorporated in the DYT and GYT Chathrim 2002. Such training should be, if possible, combined with local governance capacity development programmes implemented by the Department of Local Governance.

## **Prioritization**

An inter-working group meeting was held at Paro, Bhutan, in July 2005, involving some 30 officials from various government sectors, non-governmental organization, private sector and UNDP. At the workshop, the participants discussed and selected prioritization criteria, prioritized capacity development needs based on the agreed criteria, and identified implementation time-frame for each capacity development need.

Prioritization of the capacity development needs was based on the following agreed criteria and weightage:

- Severity of capacity gap (30%)
- Relevance to Convention obligation (25%)
- Achievability (20%)
- Potential to contribute to Bhutan 2020 Vision and Millennium Development Goals (15%)
- Linkages with other thematic areas (10%)

Capacity development priorities for the cross-cutting areas were identified in the following order:

1. Establishment of environmental units in MoA, MoIC and MoH, and in Dzongkhag Administrations
2. Training of personnel in the environmental units in line ministries and agencies and in Dzongkhag Administrations in environmental assessment, clearance and monitoring
3. Harmonization of environmental laws and associated regulations (NEPA or any other mechanism)
4. Forest fire fighting and communication equipment
5. National Forest Fire Management Strategy

6. Development of guidelines on forest fire management techniques
7. Training on forest fire prevention and control for forestry staff, local communities and armed personnel
8. Guidelines to implement environmental management provisions incorporated in the DYT and GYT Chathrimis 2002
9. Training of DYT and GYT members on guidelines for implementation of environmental management provisions incorporated in the DYT and GYT Chathrimis 2002
10. Training on strategic planning tools and techniques for staff with planning responsibility in various environmental management agencies
11. Creation of integrated environmental information management system and installation at dzongkhag, regional and central levels
12. Training of relevant staff in the application and functions of the integrated environmental information system
13. Creation of SEA Unit under Department of Planning
14. Development of SEA guidelines
15. Training of DoP officials in SEA concept, approaches and tools
16. Public-Private Partnership Strategy for environmental financing
17. Inter-institutional coordination and collaboration mechanism for environmental education and awareness
18. Integration of environmental education in educational institutes and programmes
19. Strategy for environmental education and awareness
20. Monitoring and evaluation of environmental education programmes
21. Training of staff of NECS, RSPN, NBC and City Corporation in environmental education and communication
22. Expansion of BTF funding portfolio to cover additional areas of environmental management especially in the brown sector

Subsequently, the timeframe for implementation of the above prioritized capacity development needs was defined within the context of five years and was distinguished as short-term (for activities to be undertaken in the first year), medium-term (for activities to be undertaken by the second or third year), and long-term (for activities to be undertaken by the fourth or fifth year). The table below shows the timeframe for implementation:

Sl. No.	Capacity Development Need	Short-term	Medium-term	Long-term
1.	Establishment of environmental units in MoA, MoIC and MoH, and in Dzongkhag Administrations		X	
2.	Training of personnel in the environmental units in line ministries and agencies and in Dzongkhag Administrations in environmental assessment, clearance and monitoring		X	
3.	Harmonization of environmental laws and associated regulations (NEPA or any other mechanism)			X
4.	Forest fire fighting and communication equipment		X	

Sl. No.	Capacity Development Need	Short-term	Medium-term	Long-term
5.	National Forest Fire Management Strategy		X	
6.	Development of guidelines on forest fire management techniques	X		
7.	Training on forest fire prevention and control for forestry staff, local communities and armed personnel	X		
8.	Guidelines to implement environmental management provisions incorporated in the DYT and GYT Chathrim 2002	X		
9.	Training of DYT and GYT members on guidelines for implementation of environmental management provisions incorporated in the DYT and GYT Chathrim 2002		X	
10.	Training on strategic planning tools and techniques for staff with planning responsibility in various environmental management agencies		X	
11.	Creation of integrated environmental information management system and installation at dzongkhag, regional and central levels		X	
12.	Training of relevant staff in the application and functions of the integrated environmental information system		X	
13.	Creation of SEA Unit under Department of Planning		X	
14.	Development of SEA guidelines	X		
15.	Training of DoP officials in SEA concept, approaches and tools		X	
16.	Public-Private Partnership Strategy for environmental financing			X
17.	Inter-institutional coordination and collaboration mechanism for environmental education and awareness		X	
18.	Integration of environmental education in educational institutes and programmes		X	
19.	Monitoring and evaluation of environmental education programmes			X
20.	Strategy for environmental education and awareness	X		
21.	Training of staff of NECS, RSPN, NBC and City Corporation in environmental education and communication		X	
22.	Expansion of BTF funding portfolio to cover additional areas of environmental management especially in the brown sector			X