



**Capacity Development Assessment of
Training and Educational Institutes in the
Area of Environment-Climate Change-Poverty
Mainstreaming**

REPORT

Joint Support Program on Capacity Development for
Mainstreaming Environment, Climate Change and Poverty
Concerns in Policies, Plans and Programs

Bhutan

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Assignment coordinated and supervised by:

National Environment Commission Secretariat
Royal Government of Bhutan

Principal implementing agency of JSP:

Gross National Happiness Commission Secretariat
Royal Government of Bhutan

Preface

Environment-climate change-poverty mainstreaming is a vast subject which offers a multitude of avenues for enhancing our knowledge, outlook, and skills to operationalize the principles and objectives of Gross National Happiness – our overarching development philosophy. Given that the relevance of the subject cuts across several sectors and disciplines, it is vital that we develop a critical mass of people, both employed and employable, with knowledge, skills and motivation to apply various concepts, approaches and tools that meaningfully integrate environmental, climate change and poverty issues in our development policies, programs and plans. For this to occur, it is vital that the capacity of our training and educational institutes be developed in the subject of environment-climate change-poverty mainstreaming as they are the most immediate and sustainable sources of trained human resources for our job markets.



Photo Insert of
Secretary,
NECS

It is, therefore, gratifying that we have carried out this capacity development assessment. We would like to acknowledge the consulting inputs of Mr. Ugen P. Norbu, Norbu Samyul Consulting, and the contributions of the various faculty members that he met and interacted with during the course of the assessment. Also, our thanks go to the Joint Support Program on Capacity Development for Mainstreaming Environment, Climate Change and Poverty Concerns in Policies, Plans and Programs for financing the assessment.

It is encouraging to note that our various training and educational institutes present a horde of opportunities to infuse a wide range of training topics related to environment-climate change-poverty mainstreaming. This report offers recommendations to capacitate our training and educational institutes by building upon and enhancing what already exists in terms of faculty members, curricula, institutional partnerships, physical facilities, and so on. We earnestly hope the findings and recommendations of this report will be useful for all the parties involved and that most, if not all of them, will be implemented.

Tashi Delek!

Ugyen Tshewang, PhD
Secretary
National Environment Commission Secretariat

Foreword

We are a new democracy; having had our first parliamentary elections only in March 2008. In the new political scenario, challenges to environmental conservation are expected to become immense over the years as a result of popular demand for economic development and the physical means, such as roads and electricity, to pursue economic development. However, we must remind ourselves that the choice before us is not about ‘environmental conservation’ or ‘economic development’; we need to pursue both. Economic development is vital to us so that we can create productive livelihoods, employment and alleviate poverty which is affecting nearly a quarter of our population. But surely, this has to take place within the limits of the sustainability of our delicate mountain ecosystems and natural landscapes and with the consideration of the climate change impacts that we are vulnerable to.

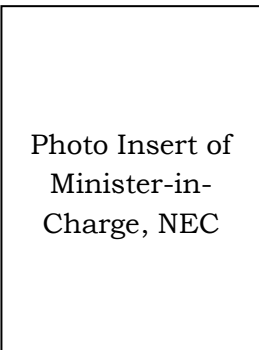


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Charge, NEC

We need to think ‘outside the box’ and implement innovative approaches and tools to carefully integrate environment and poverty issues to achieve environmentally sustainable and pro-poor development. Environment-climate change-poverty mainstreaming encompasses a wide range of approaches and tools for pursuing environmental conservation (including climate change adaptation/ mitigation) and poverty alleviation in mutually-reinforcing ways.

I would like to commend the National Environment Commission Secretariat for having undertaken a capacity development assessment of in-country training service providers in the area of environment-climate change-poverty mainstreaming. I consider this a very important process as we need to create a pool of trained human resources with the knowledge of this concept, which has a very close bearing to our home-grown development philosophy of Gross National Happiness, and the skills for concomitant approaches and tools. In creating capacity for training and education in environment-climate change-poverty mainstreaming, we will also be contributing to the government’s policy objective of creating a GNH-infused learning environment.

I wish everybody involved in the Joint Support Program on Capacity Development for Mainstreaming Environment, Climate Change and Poverty Concerns in Policies, Plans and Programs all the success in their endeavors.

Lyonpo Pema Gyamtsho, PhD
Minister-in-Charge
National Environment Commission

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Executive Summary

Environment, climate change and poverty are innately linked. These linkages are significantly accentuated in the Bhutanese context. The majority of Bhutanese live in the rural areas, where the local communities live in close interaction with their natural environment and eke out a living from crop agriculture, livestock rearing and use of a wide range of forest products. It is also in the rural areas where the bulk of the country's poor live – in fact an astounding 98.1 percent live in the villages according to the Poverty Analysis Report 2007. The Tenth Five Year Plan (2008-2013) sets out to bring down the population living below the national poverty line from 23.2 percent (2007 baseline) to at least 15 percent by the end of the plan period. It stresses the need to use our environmental resources as a development asset for economic growth and poverty reduction but within the limits of sustainability. Furthermore, it recognizes environment as a cross-cutting development theme, implying that environmental management is not to be pursued in a compartmentalized manner but in a cross-sectoral fashion.

The Joint Support Program on Capacity Development for Mainstreaming Environment, Climate Change and Poverty Concerns in Policies, Plans and Programs – JSP as it is known in abbreviated form – has been conceived with the objective of strengthening national- and local-level capacity for facilitating, formulating, and implementing development policies, plans and programs in which environment, climate change and poverty (ECP) concerns are mainstreamed. A major foresight of the JSP is that for ECP mainstreaming to take place sustainably it will be crucial to develop the capacity of in-country training service providers to design and conduct courses at various levels that provide knowledge, skills and motivation for mainstreaming environment, climate change and poverty issues. It is in the foregoing context that a capacity development assessment of various educational and training institutes in the area of ECP mainstreaming was carried out. This Report provides an overview of the existing capacity situation and discusses various proposed capacity development actions for strengthening capacity for in-country training in the area of ECP mainstreaming.

The capacity development assessment covered nine institutes, namely the College of Natural Resources, College of Science and Technology, Gaeddu College of Business Studies, Institute for Management studies, Paro College of Education, Royal Institute of Management, Royal Thimphu College, Sherubtse College, and Ugyen Wangchuck Institute for Conservation and Environment. However, the scope of the proposed capacity development actions extends to two more institutes – Jigme Namgyal Polytechnic and Samtse College of Education – as well. This is because these two institutes offer similar opportunities for ECP mainstreaming as College of Science and Technology and Paro College of Education respectively.

At the systemic level, existing capacities include a conducive education sector policy for ECP mainstreaming training, particularly the Tertiary Education Policy of the Kingdom of Bhutan, 2010, which fully recognizes the need to transform the tertiary education system to embody and reflect the values and principles of Gross National Happiness.

Furthermore, the pervasive presence of profound interactions between environment, economy and culture enhances the demonstrative value of the country for ECP mainstreaming training.

Institutional capacities exist in the form of favorable programmatic structures of the environmental institutes to infuse ECP mainstreaming training, good institutional partnerships with overseas institutes, existence of courses and modules that offer substantial scope to embed ECP mainstreaming elements, very good training infrastructure and facilities, and good location of the institutes in relation to their training/ educational programs. Individual level capacity is mainly manifested in the existence of teams of well-qualified faculty members with long teaching experience and training in pedagogy in almost all the institutes.

Systemic capacity constraints include market uncertainties for training courses customized for ECP mainstreaming especially if similar courses are offered by a number of institutes, lack of recognition of short training courses in career advancement, and lack of mechanism for coordination between in-country training institutes.

Capacity constraints at the institutional level include inadequate coverage of and focus on ECP mainstreaming in existing curricula and modules, lack of teaching and knowledge resources for ECP mainstreaming training, insufficient number of Bhutanese faculty members for teaching ECP mainstreaming subjects, intermittent staff turnover, and lack of institutional partnerships with reputed overseas institutes in the area of ECP mainstreaming. Furthermore, a few institutes currently lack recognized accreditation/ certification system. At the individual level, existing faculty members have very limited specialization training in subjects related to ECP mainstreaming.

In response to the identified capacity constraints, the following areas of capacity development have been proposed:

- ☛ Development of coordination mechanism to foster inter-institutional collaboration and synergy for training in the area of ECP mainstreaming;
- ☛ Advocacy of ECP mainstreaming in the context of the policy for GNH-infused learning;
- ☛ Review and enhancement of existing curricula/ modules to build in or enhance ECP mainstreaming elements;
- ☛ Development of new courses, such as those been envisioned by institutes such as the College of Natural Resources and College of Science and Technology, with special attention to ECP mainstreaming topics;
- ☛ Development of teaching aids/ materials and knowledge for ECP mainstreaming training depending upon the design of revised/ newly developed curricula and modules;

- ☛ Development and conduct of customized short training courses addressing specific ECP mainstreaming topics on a pilot basis with the dual objectives of providing hands-on training experience to faculty members and of developing knowledge and skills on specific ECP mainstreaming approaches and tools among certain target groups;
- ☛ Development of partnerships with overseas institutes with expertise in ECP mainstreaming;
- ☛ Development of knowledge and skills of the faculty members in the various institutes, through an in-country training workshop on ECP mainstreaming in the short-term for orientation and general understanding about the subject followed by specialization courses (short-term intensive courses and Postgraduate diploma or Masters degree courses) in the medium-term for advanced knowledge and skills in ECP mainstreaming topics.

1. Background, Rationale and Process Framework

1.1 Environment-Climate Change-Poverty Mainstreaming: The Concept and Context

The nexus between environment, climate change and poverty (ECP) is innate. A healthy and productive environment is extremely necessary for human well-being and alleviation of poverty and to cushion the impacts of climate change to which the poor are particularly vulnerable. At the same time, environmental management cannot be successfully pursued where communities are impoverished and lack sustainable livelihood opportunities. The ECP mainstreaming concept is based on the premise that poverty reduction, environmental management and climate change adaptation/ mitigation objectives can be more effectively achieved if they are pursued in mutually-reinforcing ways and with informed consideration of their linkages in the decision-making and implementation processes.

ECP mainstreaming can be defined as:

“An iterative process of integrating environment-climate change-poverty linkages in policy-making, planning and development management processes at national, sector, sub-national, and local levels using a multi-year, multi-stakeholder approach”.
(Adapted from UNDP-UNEP Poverty-Environment Initiative, 2009)

The ECP linkages are significantly accentuated in Bhutan. In the rural areas, where majority of the Bhutanese poor live, the local communities live in intimate interaction with their natural environment and eke out a living from crop agriculture, livestock rearing and use of a wide range of forest goods and services. Changes and extremities in climates can severely disrupt this interaction and affect local well-being and livelihoods. They can also set back major economic sectors such as hydropower production and physically impact the development support system such as roads and telecommunication network.

Bhutan has been lauded for its positive state of environment and overall economic growth. However, despite steady improvement on the Human Development Index scale and an impressive growth rate in Gross Domestic Product, there is still a relatively high level of poverty in the country. Going by the Poverty Analysis Report 2007, an estimated 23.2 per cent of the country’s population live below the national poverty line. Poverty in the country is mainly a rural phenomenon, with 98.1 per cent of the poor living in the villages.

The Tenth Five-Year Plan (July 2008-June 2013) sets out to bring down the population living below the national poverty line to 15 per cent or less by the end of the plan period. It stresses that we need to use our environmental resources as a development asset for economic growth and poverty reduction but within the limits of environmental sustainability. It also recognizes environment as a cross-cutting development theme, implying that

environmental management is not to be pursued in a compartmentalized manner but in a cross-sectoral fashion.

The aforesaid policy context of the Tenth Five Year, in combination with our overarching development philosophy of Gross National Happiness (GNH) and commitment to the Millennium Development Goals, makes ECP mainstreaming considerably relevant in our country's development pursuits. While its linkage to the GNH pillars of environmental sustainability and equitable socio-economic development is conspicuous, it also has bearing on the GNH pillar of good governance as ECP mainstreaming should bring about well-designed policies and plans developed through participatory processes at various levels of the governance set-up.

1.2 Background of the Assignment

This assignment has been undertaken under the aegis of the Joint Support Program on Capacity Development for Mainstreaming Environment, Climate Change and Poverty Concerns in Policies, Plans and Programs, hereafter refer to as the JSP. The JSP is funded by the Government of Denmark, UNDP and UNEP, and managed by the Gross National Happiness Commission Secretariat in coordination with other relevant government agencies, namely the National Environment Commission Secretariat and the Department of Local Governance, Ministry of Home and Cultural Affairs. The JSP has been conceived with the development objective of: "sustainable development planning and implementation undertaken at national and local levels contributing to alleviation of climate change impacts, conservation, protection and sustainable use of natural resources, and poverty reduction."

The Program lays out two immediate objectives:

- ☞ Strengthened national level capacity that facilitates national and local level five-year planning and implementation by mainstreaming environment, climate change and poverty concerns in policies, plans and programs;
- ☞ Strengthened local level capacity to formulate and implement five-year development plans and annual plans in which environment, climate change and poverty concerns are mainstreamed.

A major foresight of the JSP is that for ECP mainstreaming to take place sustainably it will be crucial to develop the capacity of in-country training service providers to design and conduct courses at various levels that provide knowledge and skills on concepts, approaches and tools relevant to ECP mainstreaming. This foresight led to the formulation of JSP's output 1.3 which is stated as: "staff and modules for ECP mainstreaming trainings at all levels in relevant educational and training institutes."

It is in relation to the above-stated output that a capacity development assessment of various educational and training institutes in the area of ECP

mainstreaming was carried out by Mr. Ugen P. Norbu of Norbu Samyul Consulting with the guidance and coordination of the National Environment Commission Secretariat. The assessment took place on an intermittent basis between April-July 2011.

1.3 Scope of the Work

1.3.1 Capacity Development Context

What exactly is capacity development? The conventional perspective of capacity development is generally limited to trainings and enhancing the capability to use knowledge and skills for new approaches, methods and technologies. More contemporary views suggest that capacity development embodies a much broader meaning. It is, today, understood as the process whereby individuals, organizations and the society as a whole strengthen, create, adapt, and maintain capabilities to perform better over time and effectively pursue their development goals.

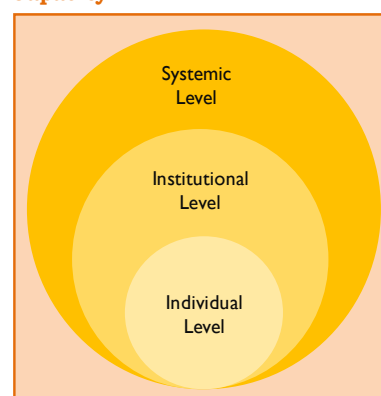
There are three key levels where capacity development can take place (UNDP, 2009). These levels are integrated as they influence each other:

Enabling environment: is the broad socio-political system within which individuals and organizations have to function and deliver. It includes policies, laws, rules, governance structures, power relations, social norms, and awareness that govern public engagement. It sets the overall scope for capacity development and is also referred to as systemic level capacity.

Organizational level capacity: pertains to internal arrangements, procedures and frameworks that allow an organization to operate and deliver its mandate. It is here that the benefits of the enabling environment come into play and groups of individuals work together.

Individual level capacity: relates to knowledge, skills, attitude and motivation that allow individuals to perform effectively. These are developed generally through training and education but also through experiential learning of doing and observing.

Figure 1: Integrated Levels of Capacity



Based on this comprehensive context of three-tiered, inter-related capacity levels, this capacity development assessment examined capacity issues and identified capacity development needs at the systemic, institutional and individual levels for trainings in ECP mainstreaming at selected educational and training institutes.

1.3.2 Selected Institutes

This capacity development assessment covered a selected number of educational and training institutes commensurate to the resources available for the assessment and based on their relevance for ECP mainstreaming training. These institutes were:

- 👉 College of Natural Resources, Lobesa (CNR)
- 👉 College of Science and Technology, Rinchending (CST)
- 👉 Gaeddu College of Business Studies (GCBS)
- 👉 Institute for Management Studies, Olakha, Thimphu (IMS)
- 👉 Paro College of Education (PCoE)
- 👉 Royal Institute of Management, Semtokha (IMS)
- 👉 Royal Thimphu College, Ngabiphu, Thimphu (RTC)
- 👉 Sherubtse College, Kanglung (SC)
- 👉 Ugyen Wangchuck Institute for Conservation and Environment, Bumthang (UWICE)

1.4 Methodological Framework

1.4.1 Focus Group Discussion

Focused group discussion: A focused discussion was held with a group of faculty members at each institute. At the outset, a presentation was made on the concept and context of ECP mainstreaming to set the scene for the group discussion, which focused on possibilities for trainings/ courses in ECP mainstreaming subjects, coverage of ECP topics in current syllabi, future plans and the interest of the institute in ECP mainstreaming training.

1.4.2 SWOT Analysis

Following the focused group discussion, a SWOT analysis was conducted as a group. A SWOT analysis is a strategic tool to identify the internal and external factors that may help or impede an organization or a project to achieve certain objectives. The **strengths** and **weaknesses** are internal to the organization while **opportunities** and **threats** are factors presented by the external environment in which the organization has to function. The SWOT analysis was used as a basis to identify capacity development needs in response to the weaknesses and threats bearing in mind the strengths and opportunities related to the institute within the context of ECP mainstreaming trainings. Capacity development needs identified from the ‘weaknesses’ corresponded largely to institutional and

individual capacity issues whereas those identified from the ‘threats’ corresponded to systemic capacity issues.

1.4.3 Desk Review of Documentary Materials

Supplementary to focused group discussions and SWOT analyses, desk review of existing documentary materials, specifically course curricula, profiles of the institutes and literature on topics related to ECP mainstreaming and capacity development, was carried out to acquire additional information and insights to consolidate the results of the assessment.

2. Institutional Overviews and Avenues for ECP Mainstreaming Training

2.1 College of Natural Resources

2.1.1 Brief Overview

Formerly known as the Natural Resources Training Institute, the College of Natural Resources (CNR) became functional in 1992. With financial and technical assistance from the Swiss Agency for Development and Cooperation and Helvetas, a Swiss private organization for development cooperation, the CNR was set up as a training institution under the aegis of the Ministry of Agriculture and Forests (MoAF) for diploma courses in agriculture, animal husbandry and forestry. In July 2004, it was delinked from the MoAF and inducted as a member institute of the Royal University of Bhutan (RUB). Since 2011, the college has also started offering degree courses in agriculture, animal husbandry and forestry for in-service staff of MoAF.

2.1.2 Avenues for ECP Mainstreaming Training

The CNR primarily caters to the needs of the MoAF for trained personnel in agriculture, animal husbandry and forestry with background in extension and rural development. CNR graduates have a widespread presence in the rural areas as agriculture, livestock or forestry extension agents at the dzongkhag and gewog levels. CNR courses, which prepare the students to work with rural communities in the field of renewable natural resources (RNR) management, present significant opportunities to address ECP mainstreaming training needs. Outlined below are the key avenues for ECP mainstreaming training at CNR:

- ☞ Ongoing diploma and in-service Bachelors degree courses in the fields of agriculture, animal husbandry and forestry. These courses offer several modules which present scope for infusing ECP mainstreaming or enhancing focus on ECP issues (for detailed pointers see Annexure 3);
- ☞ A proposed Environmental Science degree program, which CNR envisages in the near future (no specific timeframe was mentioned at the time of the discussion with CNR). The proposed program exists in vision but no tangible preparatory work as such has been undertaken so far;
- ☞ Customized short training programs/ workshops focusing on specific ECP mainstreaming approaches and tools relevant to the RNR sector. The CNR has in the past conducted a few customized training workshops (although not in the subject of ECP mainstreaming) and has expressed interest in conducting customized training workshops related to ECP mainstreaming during college vacations.

2.2 College of Science and Technology

2.2.1 Brief Overview

The College of Science and Technology (CST) has a long history of existence. It first began as Don Bosco Technical School in 1965, becoming Bhutan's first technical education institute. It was later renamed Kharbandi Technical School in the 1970s and Royal Bhutan Institute of Technology in the early 2000. The CST is the only tertiary institute in the country that offers undergraduate degree courses in the field of engineering. There are currently four undergraduate degree courses, each four years in duration. These are in civil engineering, electrical engineering, electronics and communication engineering, and information technology. In recent years, the CST has introduced undergraduate degree course in civil engineering for in-service personnel with diploma in civil engineering. This course is for three years and includes bridge courses to cover certain modules that are not covered in the diploma course.

2.2.2 Avenues for ECP Mainstreaming Training

The CST is the principal source of trained engineers with Bachelors degree. The quality and content of the training and education these engineers receive have immense bearing on infrastructure development, especially roads. Lack of road connectivity is often mentioned as a major impediment to poverty reduction in the rural areas but at the same time poorly-designed and constructed roads are acknowledged as major causes of environmental degradation in Bhutan. The country's rugged and fragile terrain and heavy seasonal rainfall conditions make road construction very challenging from the standpoint of environment (including climate change). The integration of environmental management and climate change adaptation measures in road construction requires to be addressed right at the source of training and professional education. It is in this context that the civil engineering degree course, which includes highway/ road engineering module, is of considerable significance. Apart from the civil engineering degree course, the CST presents two other avenues for ECP mainstreaming training:

- A proposed Environmental Engineering degree course. The college has had internal discussions to introduce such a course but this has hitherto not progressed into any tangible preparatory work. The college faculty expressed interest in developing the course if technical and financial assistance is forthcoming;
- Customized training programs/ workshops focusing on integration of ECP concerns in engineering projects. In collaboration with central government agencies, the CST organizes customized training programs. A recent example of customized training is the training course on farm road development in collaboration with the Department of Agriculture, Ministry of Agriculture and Forests.

2.3 Gaeddu College of Business Studies

2.3.1 Brief Overview

The Gaeddu College of Business Studies (GCBS) is one of the most recent tertiary education institutes in the country. Opened formally in July 2008 under the aegis of the RUB system, the GCBS was established on what was previously the complex of the Tala Hydroelectric Project Authority. It offers undergraduate degree courses in business administration and commerce. The commerce course was previously offered at Sherubtse College, Kanglung, but was transferred to GCBS with its establishment. Along with the Royal Thimphu College, which is a private college, GCBS is the only institute for undergraduate degree in business administration and commerce in the country.

2.3.2 Avenues for ECP Mainstreaming Training

The Bachelors degree courses in business administration (BBA) and commerce (B.Com) offer certain modules where some ECP mainstreaming topics could be infused or the focus on environment and poverty reduction could be enhanced. Some relevant ECP mainstreaming topics for BBA and B.Com courses include Environmental and Social Auditing, Environmental Fiscal Reform, Corporate Environmental Responsibility, and Corporate Social Responsibility (for detailed pointers see Annexure 3).

2.4 Institute for Management Studies

2.4.1 Brief Overview

Operationally launched in 2009, the IMS is a private management training institute established with the aim to cater to the growing need for management training and organizational development in the government institutions as well as in the private sector. Besides regular diploma and certificate courses in financial management, human resources management and entrepreneurship, it specializes in custom-built, short training courses and has offered more than 90 such courses since it became operational. The institute also provides consulting and research services.

2.4.2 Avenues for ECP Mainstreaming Training

As a management training institute, the IMS specializes in training courses that enhances planning and management knowledge and skills. In the past, the IMS has conducted training courses in Results-based Management (RBM) and Project Cycle Management (PCM). In the context of ECP mainstreaming, the potential of the IMS is to provide RBM and PCM training with special emphasis on integrating ECP issues in the planning and management processes. This is especially relevant given the increasing emphasis on use of RBM approach for

development planning and management. The RGoB partially applied the RBM approach for the Tenth Five-Year Plan and is expected to go for full-fledged application of the RBM approach in the Eleventh Five-Year Plan.

2.5 Paro College of Education

2.5.1 Brief Overview

The Paro College of Education (PCoE) began as a teaching training centre for pre-school care in 1975. Over the years it evolved and expanded, becoming the National Institute of Education in 2000 and Paro College of Education in 2003 with induction into the RUB system. Along with Samtse College of Education, the PCoE is the only institute offering higher learning programs in the field of teaching and education. The college offers a Bachelors degree course in education and a part-time Masters degree course in education leadership and management. It also offers a Postgraduate diploma course and a distance-learning course in Dzongkha education.

2.5.2 Avenues for ECP Mainstreaming Training

There are two avenues to infuse ECP mainstreaming topic in the courses at PCoE. One is the Environmental Education module, which has been recently developed to be offered as an elective in the Bachelors of Education (B.Ed) degree course from the next academic year onward. A resource pack for the Environmental Education module has been developed by a group of faculty members with facilitation from the Royal Society for the Protection of Nature. However, this resource pack is presently devoid of ECP mainstreaming topics. The other avenue is the ongoing Environmental Studies module which is imparted as a compulsory subject in the diploma course in Dzongkha education.

2.6 Royal Institute for Management

2.6.1 Brief Overview

The Royal Institute of Management (RIM) is a government management training institute with the mandate to “impart, promote and improve professional knowledge and skills in public administration and management in both public as well as private sector in the nation”. This mandate translates in RIM’s mission to produce professionally and socially responsible managers and leaders. Thus, the institute has the responsibility to train managers and leaders with holistic human values to address economic, social and environmental challenges including those emanating from climate change. The RIM was established in 1986, initially providing secretarial and office management courses. In 1990 it was incorporated under the Royal Charter as an autonomous institute. The Institute currently offers courses for postgraduate diploma in public administration, financial management, and national legal

studies, and for diploma in financial management, information management system, and national laws. The RIM has rolled out a couple of Masters degree programs in August 2011; one in public administration and the other in management. It also has plans to start a Masters degree course in business administration in 2012 and a Masters degree course in supply chain management in 2013. Furthermore, it is involved in conducting short, client-based training programs and carrying out consulting and research primarily in the field of management and organizational development for public, corporate, private, civil society organizations, and local governments.

2.6.2 Avenues for ECP Mainstreaming Training

The Postgraduate diploma course in Public Administration (PGDPA) includes a module on 'Development Theory and Practice'. This module currently covers sessions on Millennium Development Goals, GNH and poverty and, consequently, presents opportunities to infuse ECP mainstreaming elements which would enhance these sessions. The PGDPA also consists of a module on 'Managing Development Project'. This module focuses on the application of Logical Framework Analysis (LFA) and Results-based Management as key tools for planning and managing development projects/ programs. With some adaptation, this module could accommodate learning sessions to integrate ECP issues in the LFA and RBM processes. The Masters degree programs in Public Administration and Management, which commenced in August 2011, are expected to have upgraded versions of the PGDPA modules on 'Development Theory and Practice' and 'Managing Development Project'. It is given to understand that the Masters degree courses are being conducted in collaboration with the University of Canberra, with the RIM faculty specifically handling the GNH modules. In addition, the planning and prioritization training for the local governments at the dzongkhag and gewog levels cover cross-cutting issues including environment and disaster risks due to climate change.

2.7 Royal Thimphu College

2.7.1 Brief Overview

The Royal Thimphu College, on the outskirts of Thimphu city, is the country's only private degree college. It became operational in 2009. It offers Bachelors degree courses in business administration, commerce, computer application, and Bachelors of Arts degree courses in English and Economics (both with the combination program of environmental studies). All the courses follow curricula accredited by the RUB.

2.7.2 Avenues for ECP Mainstreaming Training

The BBA and B.Com courses at RTC follow RUB-accredited curricula which are similar to the ones offered by GCBS. Therefore, the RTC present the same

avenues as GCBS as far as BBA and B.Com courses are concerned. The curriculum for the Environmental Studies program is also accredited by the RUB and similar to the one currently offered at Sherubtse College, Kanglung. Several modules of the Environmental Studies program present opportunities to infuse ECP mainstreaming topics or enhance the focus on ECP issues (for detailed pointers see Annexure 3).

2.8 Sherubtse College

2.8.1 Brief Overview

Sherubtse College was first founded as a school by His Majesty the Third King Jigme Dorji Wangchuck in 1966. The first batch of students enrolled in 1968 with Late Father William Mackey at the helm as the principal. The school got upgraded to a junior college, with pre-university courses, in 1976 and to a degree college in 1983 with affiliation to the Delhi University system. In 2003, with the creation of the RUB system, Sherubtse College became a constituent institute of this in-country higher learning system. The College is the country's largest tertiary institute with a student population of around 1,000 and a faculty of around 100 staff. The College offers degree courses in science and arts, including environmental studies.

2.8.2 Avenues for ECP Mainstreaming Training

Sherubtse College first started the Environmental Studies program as a subsidiary program in 1995. The program was upgraded to a combination program in 2007 and is currently offered in combination with Economics or English. The combination program also has population studies modules. A proposal has been developed for a full-fledged program for Bachelors degree in Environmental Science to replace the ongoing Environmental Studies program. The new program will retain most of the environmental studies modules but remove the population studies modules (which will be addressed through a separate program). The population studies modules will be replaced by environmental science modules (largely chemistry-centric subjects). The environmental studies modules present considerable scope to infuse ECP mainstreaming topics or enhance the focus on ECP issues (for detailed pointers see Annexure 3).

2.9 Ugyen Wangchuck Institute for Conservation and Environment

2.9.1 Brief Overview

UWICE was established in 2004 as a research and training institute in the field of forestry and environmental studies. It aims to become a regional center of excellence in conservation research and training. Currently, the institute offers a one-year certificate course in environment, forestry and conservation to

students with higher secondary school certificate (10+2). It also offers tailored, short professional courses in a wide variety of fields related to conservation and environment and opportunities to undergraduate students from the CNR and Sherubtse College to undertake research projects in relation to their degree studies.

2.9.2 Avenues for ECP Mainstreaming Training

The functions of UWICE are favorably structured to provide training in subjects that combine socio-economic development and environmental conservation. Relevant to ECP mainstreaming, the UWICE has earlier conducted customized training courses in Environmental Auditing (EA) and Environmental Impact Assessment (EIA) and there is expressed interest to conduct similar courses provided funds become available. Avenues, therefore, exist for such courses but some content enhancement will be required to place greater emphasis on the linkages between ECP issues and how EA and EIA can address the ECP issues and their linkages.

3. Capacity Situation for ECP Mainstreaming Training

3.1 Capacity Assets

3.1.1 Systemic Capacity

Education sector policy conducive for ECP mainstreaming: The current policy thrust of the education sector to create a GNH-infused learning environment provides a sturdy platform to introduce or enhance ECP mainstreaming subjects in the various educational and training courses. The Tertiary Education Policy of the Kingdom of Bhutan, 2010, fully recognizes that for GNH to flourish as our guiding development philosophy in generations to come it is essential that our tertiary education system be transformed to embody and reflect GNH values and principles. The RUB is developing a module for GNH education, which will be taught as a course across all RUB- affiliated institutes as a part of students' personal development studies. Given that ECP mainstreaming resonates the GNH values and provides a vehicle to operationalize them in an integrated manner, training and education for ECP mainstreaming fits in very well within the existing education policy environment.

Positive state of the environment and GNH philosophy: Bhutan's relatively positive state of environment and its distinctive development philosophy of GNH, combined with the existence of profound interactions between environment, economy and culture, can be unique selling points for the country to attract international faculty and students and develop its institutes into regional/ international hubs of learning in the area of ECP mainstreaming.

3.1.2 Institutional Capacity

Environmental institutes are programmatically well-structured for ECP mainstreaming: The CNR has an inter-disciplinary set-up and approach for their training programs. The college is also being structured to become a Center for Rural Development Studies and a Center for Environment and Climate Studies. The UWICE is structured to foster integrated research and training with special attention to human and policy dimensions of natural resources management. The institute works in four key domains, namely sustainable forestry, conservation biology, water resources management, and socio-economic and policy sciences.

Good institutional partnerships with overseas educational/ training institutes: Many of the institutes have well-established institutional partnerships with educational institutes outside the country. The various inter-institutional partnerships include: CNR with Khoan Kaen University (Thailand) and BOKU University (Austria); IMS with Enterprise and Development

Consultants (Laos), Sripatum University (Thailand), Indian School of Executive Coaching, Siva Sivani Institute of Management (India), and People First (Nepal); RIM with the University of Canberra; RTC with Wheaton College of Massachusetts (United States); and UWICE with the Earth Institute, Columbia University, and University of Montana. Some of these partner institutes, e.g. the Earth Institute, have strong programs in the fields of environment and sustainable development and may be able to offer valuable academic support in developing programs with focus on ECP mainstreaming subjects.

Existing courses/ modules offer the scope to embed ECP mainstreaming elements: Several ongoing courses/ modules present sound avenues for infusing ECP mainstreaming topics or already have ECP mainstreaming elements although limited in focus. There is, therefore, little need to develop ECP mainstreaming as a separate additional module for ongoing courses. Instead, ongoing courses/ modules can be adapted to embed, or enhance focus on, ECP mainstreaming elements.

Very good infrastructure and facilities for training: Almost all institutes have very good infrastructure and facilities for training and education. In some institutes, construction of new buildings and facilities are ongoing to accommodate additional students and academic activities in the future.

Good location of the institutes: Many of the institutes are very well-located for the kind of training courses they offer. For example, the CNR has proximity to a wide range of agro-ecological zones, thus enabling it to demonstrate various farming systems and natural resource management scenarios and the issues therein. The CST, being located in the geologically unstable Himalayan foothills, provides a high level of visibility to geologic and climatic hazards associated with construction projects. The GCBS is located in the southwestern region, which is the industrial and corporate hub of the country, thus having good visibility of, and accessibility to, the corporate sector for business and commerce studies. The UWICE is located close to Wangchuck Centennial Park and Thrumshingla National Park, which are excellent locales to demonstrate conservation management systems and issues.

3.1.3 Individual Capacity

Highly qualified faculty members and good pedagogic experience: There exist teams of well-qualified faculty members in the various institutes, with education from reputed overseas universities and training institutes. Almost all the institutes have faculty members with long teaching experience and training in pedagogy. Exception in this case is the UWICE, which is made up of faculty members who previously held research and other technical responsibilities with no formal training in teaching.

3.2 Capacity Constraints

3.2.1 Systemic Capacity

Market uncertainties and risks: Several institutes expressed uncertainties regarding market for training courses customized for ECP mainstreaming, especially if similar courses are offered by a number of institutes. In the case of in-service training courses, this risk is exacerbated by the fact that prospective training participants, especially belonging to the government agencies, would prefer ex-country training because of the inherent monetary and overseas travel perks.

Lack of recognition of short training courses in career advancement: At the present, short training courses are not taken into account in staff promotion. Without career advancement advantage, such courses when offered in-country are perceived as a disincentive as the participants then become ineligible for another training, including overseas training, for at least six months.

Limited coordination between training/ educational institutes: A subject as vast as ECP mainstreaming, which involves numerous topics across social, technical, economic and policy studies, cannot be taught by a single institute on its own. It requires coordination and collaboration between the various institutes to draw upon the strengths of each other and develop synergy. The current level of coordination and collaboration between the institutes is limited.

3.2.2 Institutional Capacity

Coverage of, or focus on, ECP mainstreaming is limited in existing curricula/modules: While it has been mentioned that existing curricula/modules offer sound avenues for ECP infusing mainstreaming topics or already have ECP mainstreaming elements, ECP mainstreaming is a new subject entailing innovative approaches and tools. As a result, the coverage of and focus on ECP mainstreaming are limited or subdued in our training/ educational courses and modules.

Lack of teaching and knowledge resources on ECP mainstreaming: As ECP mainstreaming topics do not feature explicitly in existing curricula and modules, resources for teaching (e.g. trainers' handbook, thematic posters, and students' guidance notes) and developing knowledge (e.g. library books and on-line materials) on ECP mainstreaming are virtually non-existent in the various institutes.

Inadequate number of Bhutanese faculty members in some institutes: Review of the lists of faculty members of the various institutes reveals that some institutes have only a small number of Bhutanese faculty members. At RTC, there are only 10 Bhutanese faculty members and, at GCBS, only 14. These institutes depend heavily on expatriate faculty members, which make up two-

third of their faculty members. At UWICE, there are a total of 13 faculty members (all Bhutanese, no expats) which is highly inadequate when compared to the wide range of subjects that the institute envisages to cover. Similarly, the CNR's existing 29 faculty members will be far from sufficient if its plans to expand its courses and establish the Centers for Rural Development Studies, and Environment and Climate Studies are to be successfully implemented. Even Sherubtse College, which has the largest number of faculty members of all institutes in the country, currently has only two Bhutanese faculty members in the department of environmental studies with an additional faculty member to join from the next academic session.

Intermittent staff turnover: Various institutes have suffered from staff turnover due to better remuneration and career opportunities elsewhere. A number of well-trained faculty members in government training institutes have left for jobs in the private sector in the recent years. In the case of expatriate faculty members, the risk of staff turnover is particularly high because of lenient contractual rules (they can leave their job with a month's notice) and existence of a more lucrative market in the education sector outside Bhutan.

Lack of partnerships with reputed overseas institutes in the area of ECP mainstreaming: As ECP mainstreaming was not a primary theme of training/ education in the various institutes, no partnership has been developed with overseas institutes specifically for it. Having said that, it needs to be mentioned that some existing partner institutes have strong engagements in environmental management and sustainable development studies and, therefore, can be very valuable collaborators in developing ECP mainstreaming training in Bhutan.

A few institutes lack recognized accreditation/ certification system: This issue particularly pertains to the IMS and UWICE, both of which are currently not affiliated to any recognized accreditation or certification system. This may deter prospective training participants as training from such institutes may carry little recognition in future career development pursuits.

3.2.3 Individual Capacity

Very limited specialization in subjects related to ECP mainstreaming: ECP mainstreaming is a new subject although certain elements of it are present in some of the existing course modules. Given that ECP mainstreaming cuts across various subjects and disciplines, it requires broad-based knowledge and skills that integrate environmental management, social sciences, economics, and policy and planning. The faculty members at various institutes expressed lack of broad-based knowledge required for development of curriculum and training in ECP mainstreaming. It was also inferred that most of the faculty members were stuck with outdated knowledge and concepts as they have had no opportunity to upgrade their knowledge and skills especially in the field of environmental management over a long period of time.

4. Capacity Development Responses for ECP Mainstreaming Training

4.1 Key Areas of Capacity Development

4.1.1 Systemic Capacity Development

Development of coordination mechanism to foster inter-institutional collaboration and synergy for ECP mainstreaming: As already mentioned in the foregoing section, ECP mainstreaming entails broad-based knowledge and skills that no single institute would be able to meet on its own. Training in ECP mainstreaming will, therefore, require coordination and collaboration between the various institutes to draw upon collective expertise and experience. This need is further exacerbated by the fact that there is very limited in-country training expertise in subjects related to ECP mainstreaming.

Advocacy of ECP mainstreaming in the context of the policy for GNH-infused learning environment: While ECP mainstreaming is implicitly linked to the GNH philosophy, this aspect is not self-explicatory. Consequently, ECP mainstreaming may be perceived as a supplementary effort rather than a complementary one. Therefore, there is the need to elucidate the relevance and significance of training and education in ECP mainstreaming to the government policy on creating GNH-infused learning environment.

4.1.2 Institutional Capacity Development

Review and enhancement of existing curricula/ modules to build in ECP mainstreaming elements: This is one of the most important capacity development interventions that need to take place to institutionalize ECP mainstreaming training. The following ongoing courses lend themselves well to review and enhancement with reference to ECP mainstreaming:

- ☛ Environmental Studies undergraduate degree program offered in combination with Economics and English at RTC (also offered by Sherubtse College but to be discontinued there after the introduction of Bachelors degree course on Environmental Science);
- ☛ the new Bachelors degree course in Environmental Science (proposed by Sherubtse College to replace the current Environmental Studies program);
- ☛ BBA and B. Com degree courses at GCBS and RTC;
- ☛ Diploma and in-service Bachelors degree courses in various RNR disciplines at CNR;

- ☛ Bachelors degree course in Civil Engineering at CST and diploma course in Civil Engineering at Jigme Namgyal Polytechnic;
- ☛ Postgraduate diploma course in Public Administration at RIM, specifically the modules pertaining to development theory and practice and managing development projects;
- ☛ Environment Education module offered as an elective under the B.Ed courses at the Colleges of Education at Paro and Samtse.

Annexure 3 discusses the pointers for infusion or enhancement of ECP mainstreaming elements in the aforesaid courses.

Development of new courses with special attention to ECP mainstreaming

topics: This particularly refers to the proposed Bachelors degree course in Environmental Science at CNR and the proposed Bachelors degree course in Environmental Engineering at CST. As mentioned earlier, these courses currently exist in vision and the course details are yet to be developed. Both CNR and CST have expressed interest in developing these courses, with special attention to infusion of relevant ECP mainstreaming topics.

Development of teaching aid/ materials and knowledge resources to aid the ECP mainstreaming training:

Following revision/ development of course curricula/ modules, teaching and knowledge resources to aid the teaching of these curricula/ modules will need to be developed. Teaching resources could include trainers’ handbook, guidance notes and case study handouts for students, lesson books, thematic posters for classroom display, and multimedia materials. Knowledge resources could include library books, periodicals, and also web pages (on respective institutes’ websites) with uploaded publications and links related to ECP mainstreaming.

Development of customized short training courses addressing specific ECP mainstreaming topics:

Some training institutes expressed interest in conducting customized short training courses on specific ECP mainstreaming topics. Such training courses will not only enhance knowledge and skills in specific areas of ECP mainstreaming but also provide the training institutes with hands-on training experience and enhance their capacity for organizing and conducting similar training in ECP mainstreaming. Preparation for such training courses would involve development of the modules and training resources and training of the trainers. The following topics have been proposed for customized short training courses:

- ☛ *Strategic Environmental Assessment, Cost-Benefit Analysis and Benefit-sharing Mechanism for ECP Mainstreaming in the RNR Sector.* A series of training workshops has been proposed by the CNR to be conducted during the periods when the regular students are on vacation. A provisional outline for this training program has been developed as a sample and is attached as Annexure 4.

- ☛ *Results-based Management with focus on ECP Mainstreaming.* Training on this topic has been proposed by the IMS. Earlier, the IMS has conducted RBM training but for generic application. Such training can be adapted to focus on integration of ECP issues.
- ☛ *Participatory Approaches and Tools for Environmental Impact Assessment.* Training on this topic has been proposed by the UWICE. The UWICE has previously conducted a training of EIA for the Dzongkhag Environmental Officers. The content of this training can be enhanced by combining elements of participatory approaches and tools to the EIA process, which will facilitate more proactive engagement of local communities in identifying potential adverse environmental impacts (as well as related social impacts) and planning mitigation measures.

Development of partnerships with overseas institutes with expertise in ECP mainstreaming: Given the scant in-country training experience in ECP mainstreaming, dearth of faculty members with specialization in the subject, and the vastness of the subject itself, partnerships with overseas institutes will be useful for the advancement of ECP mainstreaming training programs. There are a number of international institutes that specialize in ECP mainstreaming. To name a few: Australian National University, Griffith University (Australia), International Institute for Environment and Development, and the World Resources Institute. These partnerships, among other things, will need to build in mentoring arrangements so that there is transfer of knowledge and skills for training (and research) in ECP mainstreaming between the faculty members of the collaborating institutes.

Affiliation to accreditation/ certification system: This specifically pertains to IMS and UWICE, which currently have no affiliation to any accreditation or certification system. Although this particular recommendation has no direct relation to capacity development for training in ECP mainstreaming, it is mentioned here as it may have bearing on the credibility of training courses, including those related to ECP mainstreaming, offered by the concerned institutes.

4.1.3 Individual Capacity Development

Sensitization on ECP Mainstreaming Concept, Approaches and Tools: A four-five day in-country training workshop is recommended for all relevant faculty members from various institutes. It is suggested that this training workshop be developed and organized by the ECP mainstreaming Help Desk in collaboration with international trainer(s) with expertise in ECP mainstreaming. Such a training workshop would need to aim at developing in-depth understanding of the concept and relevance of ECP mainstreaming among the trainers, demonstrating to them the various approaches and tools available for ECP mainstreaming, facilitating them to analyze and understand the various challenges, risks and opportunities for ECP mainstreaming in their work environments and the possible responses to them, and stimulating in them the

ideas to infuse ECP mainstreaming elements in their teaching practices and processes.

Specialization in specific ECP mainstreaming topics: Based on the curricula and modules that shape up after the integration or enhancement of ECP mainstreaming topics, it is recommended that at least the core faculty members dealing with the ECP mainstreaming subjects in the various institutes pursue specialization training in specific ECP mainstreaming subjects most relevant to their respective institutes' academic programs.

Mentoring programs: Mentoring is hardly used in Bhutan as a form of capacity development. Tie-ups between Bhutanese faculty members and international ECP mainstreaming experts whereby the latter can mentor/ coach the former are recommended. Mentoring arrangements will apparently need to be linked with the inter-institutional partnership arrangements discussed in the section on institutional capacity development. Mentoring can also be promoted between Bhutanese faculty members (with advanced training in ECP mainstreaming) and their colleagues who have limited or no training in ECP mainstreaming.

4.2 Proposed Capacity Development Actions and Indicative Costs

Note: The proposed capacity development actions and indicative costs are not to be associated with JSP alone but to be viewed in more general terms. The indicative costs are tentative figures, provided to give a rough indication of the financial implications of the proposed capacity development actions, and therefore are not to be taken as 'established' figures. It is also to be noted that although Jigme Namgyal Polytechnic and Samtse College of Education were not assessed, the proposed capacity development actions will also be relevant to these institutes as they offer similar ECP mainstreaming training opportunities as CST and Paro College of Education respectively.

4.2.1 Short-term Actions (to be achieved in 1-2 years)

Action 1: Conduct an in-country training workshop on ECP mainstreaming for faculty members of various institutes to create in-depth understanding of the concept and relevance of ECP mainstreaming among the trainers, demonstrating to them the various approaches and tools available for ECP mainstreaming, facilitating them to analyze and understand the various challenges, risks and opportunities for ECP mainstreaming in their work environments and the possible responses to them, and stimulating in them the ideas to infuse ECP mainstreaming elements in their teaching practices and processes. Such a workshop will create better preparedness among the faculty members of the various institutes to perceptively and ardently participate in processes to infuse ECP mainstreaming topics in their courses/ modules.

It is recommended that an international trainer with background in ECP mainstreaming be hired to design the training workshop, develop training

materials and conduct the workshop with support from the ECP mainstreaming Help Desk.

Given that such a workshop should involve a high level of participant interactions and focused exercises, it is recommended that the number of participants be kept to not more than 20. However, if the number of participants is expected to exceed 20, it is suggested that a series of two workshops be organized to accommodate additional participants.

Indicative Cost:

The proposed capacity development action is expected to cost a sum of USD 21,500 based on the following cost breakdown:

International trainer's consulting fees for 3 weeks=	USD 8,500
International trainer's travel cost=	USD 1,500
Production of training materials=	USD 2,000
Participants' costs=	USD 7,000
Honorarium for national resource persons=	USD 2,500

The above estimate is for one training workshop. If an additional training workshop is required to accommodate additional participants, the overall cost is expected to increase to about USD 34,000.

Action 2: Develop course curricula/ modules to infuse, or enhance focus on, ECP mainstreaming topics, involving two parallel but coordinated processes: one for the review and revision of existing course curricula/ modules and the other for the development of course curricula/ modules for the proposed new courses. This action is expected to be the most important capacity development intervention as it will influence the subsequent capacity development interventions, especially the type and contents of training aids/ materials to be developed, the type of specialization training to be undertaken by the faculty members, and the design of the coordination mechanism between various training institutes in the area of ECP mainstreaming. The curricula/ modules developed for infusion or enhancement of ECP mainstreaming elements are expected to evolve over time as training experience and knowledge in ECP mainstreaming grow.

It is recommended that an international curriculum development expert with training experience in ECP mainstreaming be hired. A national counterpart consultant will also be desirable especially to support the international expert in aligning the process to the Bhutanese context.

Indicative Cost:

The proposed capacity development action is expected to cost a sum of USD 35,000 based on the following cost breakdown:

International consultant's fees for 8 weeks=	USD 20,000
International consultant's travel cost=	USD 1,500
National counterpart consultant's fees for 8 weeks=	USD 8,500
Consultation meetings with various institutes=	USD 5,000

Action 3: Develop training aids/ materials and knowledge resources for ECP mainstreaming training. This will need to take place once the course curricula/ modules have been revised/ developed. A first set of training aids/ materials and knowledge resources could be developed in the short-term, but these will need to expand and improve continuously with accumulation of training experience and knowledge in ECP mainstreaming over time.

Indicative Cost:

Financial support @ USD 5,000 each to 11 institutes (i.e. the 9 institutes which were assessed for capacity development + Jigme Namgyal Polytechnic and Samtse College of Education). The total amount is estimated at USD 55,000.

Action 4: Develop and conduct on a pilot basis a series of customized, client-based training programs on ECP mainstreaming topics. Through such training programs, the organizing institutes are expected to gain hands-on training experience in ECP mainstreaming whilst the participants acquire specific ECP mainstreaming knowledge and skills relevant to their fields of work. On a pilot basis, customized training programs are proposed on the following topics: (1) Strategic Environmental Assessment, Cost-Benefit Analysis and Benefit-sharing Mechanism for ECP Mainstreaming in the RNR sector (proposed organizing institute: CNR); (2) RBM with focus on ECP mainstreaming (proposed organizing institute(s): IMS and/or RIM); and (3) Participatory Approaches and Tools for EIA (proposed organizing institute: UWICE).

Indicative Costs:

The costs for the customized training will involve development and production of trainers' handbook and participants' resource pack, participants' travel and subsistence, honorarium for resource persons, training of trainers' workshop, transportation, and documentation.

As a sample, the cost estimate is provided in the provisional outline for the training workshop on Strategic Environmental Assessment, Cost-Benefit Analysis and Benefit-sharing Mechanism for ECP Mainstreaming in the RNR sector (Annexure 4). Based on the estimated cost of USD 30,000 for this training workshop, the pilot series of the three proposed customized training workshops is expected to cost USD 90,000.

Action 5: Develop and disseminate advocacy materials on ECP mainstreaming to elucidate ECP mainstreaming training in the context of the education sector policy for GNH-infused learning and facilitate its assimilation within such existing policy and future education strategies.

Indicative Cost:

This will basically involve a cost of USD 1,500 to engage a consultant to develop advocacy materials (powerpoint presentation, written materials) which highlights the relevance and role of ECP mainstreaming training with reference to the policy of GNH-infused learning.

4.2.2 Medium-term Actions (to be achieved in 3-5 years)

Action 6: Train faculty members for specialization in ECP mainstreaming topics. After the course curricula/ modules for ECP mainstreaming training are in place, training needs of the faculty members from various institutes for specialization in ECP mainstreaming topics related to their respective courses will have to be determined. Based on the identified training needs, the concerned faculty members will need to be trained for specialization in ECP mainstreaming topics. Specialization can take place either through short, intensive training courses (3-6 months in duration) or long-term studies (Postgraduate diploma/ Masters degree).

Indicative Cost:

Short-term specialization for 2 faculty members/ institute= USD 330,000
Long-term specialization for 1 faculty member/institute= USD 400,000

Action 7: Develop and operationalize a coordination mechanism for i-country institutes for ECP mainstreaming training, so that there is coherence and synergy in programs designed for ECP mainstreaming training by the various in-country institutes. Such a mechanism will also need to build in cross-institutional arrangements to promote mentoring between Bhutanese faculty members (with advanced training and experience in ECP mainstreaming) and their colleagues who have limited training or experience in ECP mainstreaming.

Indicative Cost:

Cost to engage a consultant to develop the mechanism= USD 6,000

Action 8: Establish institutional partnerships with overseas institutes with expertise in ECP mainstreaming. After the various institutes have established their core areas of ECP mainstreaming training, it would be valuable to develop and establish institutional partnerships with overseas institutes that possess expertise in the field of ECP mainstreaming.

Indicative Cost:

A lump sum amount of USD 22,000 @ USD 2,000 per institute is estimated to support internal meeting and communication costs involved in developing institutional partnerships.

4.2.3 Long-term Action (to be achieved over 5-10 years)

Action 9: Establish at least one Bhutanese institute as a regional/international hub for ECP mainstreaming training. This is recommended in keeping with the country's distinctive GNH development philosophy, positive state of environment, and profound linkages between environment, economy and culture, and the aspiration of several institutes to become a regional/international centre of excellence in training and education. It is anticipated that the various short-term and medium-term actions will be important exercises in laying down a strong platform for long-term actions leading to at least one Bhutanese institute becoming a regional/ international hub for ECP mainstreaming training.

Indicative Cost:

It is not practicable to project a cost, even an indicative one, for this action at this point in time because of its long-term nature and inherent vast possibilities.

A simplified Results Framework of the proposed capacity development action is provided in Annexure 5.

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Acronyms

BBA	Bachelors in Business Administraion
B.Com.	Bachelors in Commerce
BOKU	Universität für Bodenkultur Wien
CNR	College of Natural Resources (Lobesa)
CST	College of Science and Technology (Rinchending)
DANIDA	Danish International Development Agency
ECP	Environment-Climate Change-Poverty
EFRC	Environment-friendly Road Construction
EIA	Environmental Impact Assessment
EVS	Environmental Studies
GCBS	Gaeddu College of Business Studies
GNH	Gross National Happiness
IMS	Institute for Management Studies
JSP	Joint Support Program on Capacity Development for Mainstreaming Environment, Climate Change and Poverty Concerns in Policies, Plans and Programs
PCoE	Paro College of Education
PGDPA	Postgraduate Diploma in Public Administration
RBM	Results-based Management
RIM	Royal Institute for Management
RTC	Royal Thimphu College
SC	Sherubtse College (Kanglung)
SWOT	Strengths, Weaknesses, Opportunities, Threats
UNDP	United Nations Development Program
UNEP	United Nations Environment Program
UWICE	Ugyen Wangchuck Institute for Conservation and Environment

Annexure 1: List of People Consulted

College of Natural Resources, Lobesa

Mr. Dorji Wangchuk, Director
Mr. Ugyen Dorji, Faculty of Forestry
Mr. Yonten Dorji, Faculty of Forestry
Mr. Yeshey Khandu, Faculty of Forestry
Mr. Bhagat Suberi, Faculty of Forestry
Mr. Om Katel, Faculty of Forestry
Mr. Benjamin Sinclair, Faculty of Forestry
Mr. Kinga Tshering, Faculty of Animal Husbandry
Mr. Tandin Gyelsthen, Faculty of Extension and Communication

College of Science and Technology, Rinchending

Mr. Nidup Dorji, Director
Mr. Om Kafley, Dean of Academic Affairs
Dr. Cheki Dorji, Faculty of Civil Engineering
Mr. Sangay Passang, Faculty of Civil Engineering
Mr. Roshan Chhetri, Faculty of Electrical Engineering
Mr. Tshering, Faculty of Information Technology
Mr. Bharat Kumar, Faculty of Science and Humanities
Mr. Basant Pradhan, Faculty of Science and Humanities

Gaeddu College of Business Studies

Mr. Lhato Jamba, Director
Mr. Tandin Chopel, Dean of Academic Affairs
Mr. Tshewang Norbu, Dean of Student Affairs
Mr. Karma Dukpa, Lecturer
Ms. Tshering Pemo, BBA Program Leader
Ms. Tshering Lhamo, Lecturer
Mr. Ugyen Lhendup, Lecturer
Dr. Kamal M Alaskar, Lecturer
Mr. T Antony Alphonse Ligori, Lecturer
Mr. KM Antony, Lecturer
Mr. N Mahesh Kumar, Lecturer
Mr. Istvan Hernadi, Lecturer

Institute for Management Studies

Mr. Tenzin Lekphell, Chief Executive Officer
Dr. Tandin Dorji, Lead Trainer
Mr. Ugyen Pelgen, Lead Trainer
Mr. Rohit Gajmer, IT Officer/ Trainer

Ms. Dema Lhamo, Public Relations Officer/ Trainer

Paro College of Education

Ms. Ugyen Tshomo, Department of English
Mr. Karma Jigyel, Department of Mathematics
Mr. Ngawang Phuntsho, Department of Professional Studies
Mr. Dorji Wangchuk, Primary Program Leader
Mr. Karma Chewang, Officiating Dean of Research
Mr. Kunzang Lhendup, Chief Librarian
Mr. Thinley Wangchuk, Department of Information Technology

Royal Institute of Management

Mr. Karma Tshering, Director
Mr. Jit Tshering, Senior Lecturer
Mr. Karma P. Loday, Senior Lecturer
Ms. Sonam Choki, Lecturer
Mr. Chonga Zangpo, Lecturer

Royal Thimphu College

Dr. Douglas Schofield, Senior Advisor and Professor of Business
Mr. Sanjeev Mehta, Professor of Economics
Mr. GP Sharma, Senior Lecturer, Environmental Studies

Sherubtse College, Kanglung

Dr. Sonam Wangmo, Dean of Academic Affairs
Mr. Tshering Gyeltshen, Senior Lecturer, Environmental Studies
Mr. Tenzin Wangchuk, Lecturer, Environmental Studies
Mr. Khumukcham Raju Kumar Singh, Lecturer, Environmental Studies
Mr. Jigme Nidup, Lecturer, Geography
Ms. Phub Gyem, Lecturer, Chemistry

Ugyen Wangchuck Institute for Conservation and Environment

Mr. Nawang Norbu, Director
Mr. Sangay, Socio-economic Sciences Department
Mr. Thinley Wangdi, Sustainable Forestry Department

JSP-Program Management Group

Mr. Wangchuk Namgay, GNHCS
Mr. Karma Jamtsho, GNHCS
Mr. Karma Tshering, NECS
Mr. Tek B. Chhetri, Liaison Office of Denmark
Mr. Tashi Dorji, UNDP Bhutan Country Office

Annexure 2: SWOT Synopses of the Institutes

College of Natural Resources, Lobesa

Strengths

- The training programs at CNR are inter-disciplinary. The college offers diploma courses addressing three key sectors of rural development, namely agriculture, animal husbandry and forestry. The sector-specific modules are complemented by common modules which include subjects such as communication and extension, soil science, environmental science, and farm economics.
- At two hours' driving distance, the CNR is not too far from Thimphu. More importantly, the college has proximity to a wide range of agro-ecological zones. The college itself is located in dry sub-tropical agro-ecological zone. Barring alpine and wet sub-tropical agro-ecological zones, all other agro-ecological zones in the country are reachable within two-three hours.
- The CNR has a team of highly qualified faculty members. Of the existing 29 faculty members, three have doctorate, 14 have Masters degree, seven Bachelors degree, three Postgraduate diploma, and two diploma.
- Majority of the faculty members have long teaching experience and pedagogic training. The first group of faculty members received training in teaching methodology at the International Training Centre of the International Labor Organization (ILO), Turin, Italy. The senior faculty members have conducted crash courses in training approaches and methodologies for the faculty members who later joined CNR. In addition, the CNR has engaged the training services of the Paro College of Education and Samtse College of Education for development of teaching skills of the new faculty members.
- The CNR has partnership with overseas educational institutions, namely Khon Kaen University (KKU) in Thailand and BOKU (Universität für Bodenkultur Wien) – the University of Natural Resources and Life Sciences in Vienna. These partnership have been beneficial to the CNR in respect of human resources development, development of learning and information communication technology resources, and visiting faculty support.
- The CNR is being structured to become a Centre for Rural Development Studies (CRDS) and a Centre for Environment and Climate Studies (CECS). This would provide a favorable institutional set-up for training and research in ECP mainstreaming. Although a dean is yet to be appointed, the CRDS has taken off and two seminars on 'Poverty and Sustainable Agriculture' have been conducted. The CECS is yet to be established. A proposal for its establishment is being prepared for submission to, and approval of, the Council of the Royal University of Bhutan.
- Other strengths include: an extensive internet infrastructure made up of more than 50 work stations with 24-hour internet connection, including in staff residences;

and strong curriculum development experience as a result of in-house development of diploma courses and in-service degree courses.

Weaknesses

- The in-house faculty members have no specialization in subjects related to ECP mainstreaming. Whilst there is a strong faculty team with hard science background in agriculture, animal husbandry and forestry, this team is far from adequate when it comes to teaching subjects related to policy, social science and economics of environmental management. This weakness is being partially overcome through use of adjunct lecturers from other agencies and institutes.
- With the inception of in-service degree courses and plans for future expansion of courses at CNR, library resources have become inadequate. Library materials on ECP mainstreaming subjects are even more limited.
- Current curricula are not adequate in terms of covering ECP mainstreaming topics. An environment science degree program is on the cards but no proposal or curriculum has been developed so far.
- There is very limited support for human resources development of CNR in general. There does exist human resources development support from the Thai International Cooperation Agency but it is restricted to universities and training institutes in Thailand.

Opportunities

- The impending autonomy (from July 2011) could mean more flexibility in administration, resource mobilization and use, and staff management.
- The RUB is working on developing linkages with foreign institutes such as the Earth Institute and the School for International Training. This could present partnership opportunities for training and research on ECP mainstreaming-related topics. There is also interest from AGRIS-FAO to have CNR as a member, which could be beneficial for knowledge-sharing and research development.

Threats

- While autonomy could be advantageous in certain respects, the CNR is wary that this could also translate to reduced funding support from the government as reportedly fund allotment is to be based on student enrolment. For CNR, which has been enrolling around 150 students a year based on the requirement of the MoAF, this fund allotment criterion would put them at a disadvantage compared to other RUB-affiliated colleges which have larger student enrolment.
- Market for training within the country is limited due to demographic factor. This factor poses competition risks between the institutes and uncertainties of participation in training courses, especially those that are newly introduced and if similar courses are offered by various institutes.

- Unattractive remuneration and limited career advancement opportunities could lead to staff turnover, therefore impacting the capacity for training.

College of Science and Technology, Rinchending

Strengths

- As the only engineering degree college in the country, the CST attracts students with very good record of academic performance.
- Its proximity to the commercial hub of Phuentsholing and the industrial estate of Pasakha provides good training location to observe and demonstrate environmental issues related to urbanization and industrial development. Also, as a result of being located in the geologically unstable Himalayan foothills, there is a high level of visibility to geologic and climate-induced hazards associated with construction activities.
- There is strong partnership with government agencies, specially the Ministry of Works and Human Settlement, thereby enabling CST to draw resource persons from such agencies for teaching modules that lack in-house capacity. This has also led to government agencies to organize engineering-related training programs in collaboration with CST, for example MoAF's training program on farm roads design and construction.
- Collaboration also exists with the National Environment Commission Secretariat in the area of air and water quality monitoring and research.
- The CST has a very well established library with very good collection of books in various engineering subjects taught at the college.

Weaknesses

- There is a dearth of teaching resources on environmental aspects of engineering. A manual/ guideline on Environmental-friendly Road Construction was made available by the SNV/ADB Environmental-friendly Road Construction Project but it is not adequate and has not been updated since it was first produced in 2003/04.
- Coverage of ECP topics in current modules is very limited. The civil engineering course does have some modules related or relevant to environment such as engineering geology, environmental studies, and public health engineering. Although not directly discernible from the module, it was given to understand that EFRC was covered under the module for highway engineering. The climate change and poverty (or social) aspects appear to be virtually non-existent in the current degree courses.
- Less than 10 percent of the faculty members are full-fledged lecturers. The civil engineering faculty is comparatively short-staffed with only 10 staff, of which three are currently on study leave. The existing faculty members have no specific training

in the environmental and social aspects of engineering. Although a few faculty members were involved in a workshop on EFRC in 2003/04, it focused largely on informing the participants about the EFRC concept and guidelines, and involved little training.

Opportunities

- The growing construction industry provides a stable market for engineering education and training in Bhutan.
- The impending autonomy of RUB-affiliate institutes may provide greater flexibility in the functioning of the college such as in terms of mobilization and use of resources.

Threats

- Comparatively more attractive remuneration packages in science and technology institutes in India and other countries in the region may lead to staff turnover, thereby affecting the quality and continuity of the courses at CST.
- The impending autonomy also poses uncertainties with respect to financial resources and future career of faculty members.

Gaeddu College of Business Studies

Strengths

- The GCBS has the largest college campus in the country, sprawled over 289 acres. The campus encompasses extensive infrastructure and facilities for learning, boarding, and recreation for the students and staff.
- The College has created an early reputation of quality education. The first batch of graduates, which passed out from GCBS in 2010, secured 100 percent job placements and ranked among the toppers of the national civil service selection examination.
- A strong pool of visiting faculty has been mobilized from reputed institutes such as the Indian Institutes of Management (Ahmedabad, Bangalore, Indore, Kolkata, Lucknow), Delhi University, Institute of Chartered Accountants of India, and Welingkar Institute of Management Development and Research.
- Through club activities, the GCBS has been very active in environmental issues and has even led a few national-level environmental campaigns. There is therefore good institutional consciousness of environmental issues and participation in environmental activities.
- The college is well-located in respect of proximity to several public and private corporations in Phuentsholing and Gedu, thus providing greater visibility of, and accessibility, to the corporate sector for business and commerce studies.

Weaknesses

- There is a high level of dependence on expatriate faculty. Of the 40 in-house faculty members, 26 (i.e. 65 percent) are non-Bhutanese. Around half of the Bhutanese faculty members are of the level of assistant lecturer with limited teaching experience.
- Insufficient funding to maintain the vast campus and the extensive infrastructure and facilities therein.
- No institutional partnership with reputed business management training institutes and corporate houses to draw on institutional expertise for learning and research in the business and corporate sector.
- ECP mainstreaming is a new topic and therefore not well-covered in the current business and commerce courses. Certain environmental and social aspects are covered in some of the course modules but only to a limited extent.
- Existing faculty members lack specialization in the environmental and social aspects of business studies.
- Knowledge resources and teaching materials to support education and training in subjects related to ECP mainstreaming are virtually non-existent.

Opportunities

- The growth of corporate sector and the increasing demand for trained human resources in business management and commerce provide for a stable market for GCBS graduates.
- The impending autonomy of RUB-affiliate institutes may provide greater flexibility in the functioning of the college such as in terms of mobilization and use of resources.
- The rapid advancement of the corporate sector and management education in the neighboring countries, particularly India, presents vast opportunities for institutional partnerships.

Threats

- A lucrative market in South Asia for management education and Bhutan's lenient service conditions for expatriates pose risks of high staff turnover. The GCBS is perceived as a stepping stone or stopgap by many expatriate faculty members.
- The impending autonomy also poses uncertainties with respect to financial resources and future career of faculty members.

Institute for Management Studies

Strengths

- Has a good complement of in-house faculty, visiting national faculty and visiting international faculty enabling IMS to develop and conduct training programs effectively in an array of topics related to management and organizational development. Most of the faculty members (both in-house and external) have strong teaching/ training background.
- The IMS has considerable training experience in planning and project management, including results-based management and project cycle management, which are increasingly gaining credence in development management.
- All faculty members have received training in GNH concept and principles from the Centre for Bhutan Studies and, therefore, have a good GNH orientation. There is now the practice of infusing GNH elements in IMS training programs, wherever relevant and necessary.
- As a private institute, IMS has the institutional flexibility and expediency of developing and conducting client-based training programs. Also as a private institute, its training programs are subjected to quality control and assurance processes.
- Vast experience in community-based training programs, which require special communication and training approaches and skills.

Weaknesses

- No formal affiliation with recognized education, training or certification system.
- Existing in-house faculty lacks specialization in the area of environmental management and climate change studies.
- No training experience in ECP mainstreaming related topics and, therefore, no training resources exist for ECP mainstreaming.
- Knowledge resources (specifically library) very limited in terms of publications on ECP mainstreaming topics.
- Lack of budget for in-house human resources development and, therefore, learning opportunities to develop new knowledge and skills are limited.

Opportunities

- Increasing clientele as a result of the growing demand for training in management and organizational development and an increasingly competitive market for knowledgeable and skilled employees.

- Growing emphasis on in-country training and use of in-country training service providers.
- Government policy emphasis on private sector development.
- The distinctive Bhutanese GNH philosophy and the positive state of country's environment provide IMS the opportunity to develop into a GNH- and environment-centric management institute within the region.

Threats

- Exacerbated competition as a result of possible commercialization of RUB-affiliated and other institutes that have the comparative advantage of government support over private institutes.
- Limited interest in in-country training as a result of perks (monetary and travel opportunities) associated with overseas training and the RCSC restrictions on the number of training a government employee can undertake.
- Lack of recognition of short training in career advancement. Short training is generally perceived as a monetary incentive.

Paro College of Education

Strengths

- Modules for environmental studies exist for compulsory learning in the Dzongkha education courses. These can serve as a basis for building ECP mainstreaming topics in the education courses.
- Environmental education modules have been developed with the facilitation of the Royal Society for the Protection of Nature. A resource pack to aid teaching of these modules has been produced. Environmental education will be taught as an elective subject in the B.Ed. course.
- The PCoE is very advantageously located with the International Airport in Paro and Thimphu being at a comfortable one hour driving distance. This serves as a major attraction for visiting faculty/ resource persons.
- There exists strong curriculum development expertise within PCoE. For example, the modules for EE were developed by a team of PCoE faculty members.
- The current teacher-student ratio is very good at 1:13.5.

Weaknesses

- Lack trainers with specialization in environmental education and subject matter expertise for ECP mainstreaming input into curriculum development.

- The recently developed EE resource pack largely focuses on environmental science and to some extent on climate change. There are no specific contents that demonstrate the linkages between environment, climate change and poverty issues.
- Teaching resources related to ECP (e.g. equipment, books) are very limited.
- Lack of partnership/ collaboration with EE training institutes outside Bhutan.

Opportunities

- The education sector policy to create a GNH-infused learning environment is conducive to introducing and enhancing ECP mainstreaming topics at PCoE.
- The multiplier or cumulative effect is expected to be immense from ECP mainstreaming of teachers' training an education given that more than 200 teacher graduates pass out from PCoE alone every year.
- The positive state of local environment and proximity to rural landscapes where there are strong human-nature interactions present opportunities to provide tangible learning experiences related to ECP mainstreaming.

Threats

- As an optional subject, there are risks that EE may not find many takers especially when compared to electives such as Information Technology, which is generally very popular among students because of its immediate relevance and utility.

Royal Institute for Management

Strengths

- The RIM is well established with extensive infrastructure and facilities for training and conferencing. This, among other factors, has enabled the institute to serve as a venue for seminars and talks by eminent academicians and development practitioners.
- The autonomy of RIM allows it to make expeditious decisions and the flexibility to evolve to take on new functions. Although primarily a training institute, the RIM has integrated research and consulting functions over the years. This provides RIM the opportunity to link research outcomes with training programs.
- With the Hon'ble Minister of Labor and Human Resources as chair of the RIM Board, the RIM enjoys direct linkage with, and support from, the National Cabinet.
- The RIM has a strong in-house faculty, made up of 36 members with half of them possessing postgraduate degree qualification. In addition, three faculty members are currently pursuing doctorate studies.
- The RIM is the principal training partner of the Royal Civil Service Commission Ministry of Finance, Royal Audit Authority, Anti-Corruption Commission, Ministry of Home and Cultural Affairs, and the judiciary.

- Membership in a number of corporate and public sector company boards, reflecting RIM's value and role in corporate governance in Bhutan.
- The RIM is represented in a number of regional and international networks and for a pertaining to development management. Prominent memberships include the RIM Director's participation as the President of the Association of Management Development Institutions in South Asia and as the Governing Board Member of the SAARC Documentation Center.

Weaknesses

- The RIM's autonomy with respect to human resources development and financial management is limited. The staff are bound by the rules of the Royal Civil Service Commission and this, among other things, means that they can be transferred to government posts outside the RIM.
- ECP mainstreaming is a new subject for RIM, and there are currently no institutional linkages to develop training expertise and experience in the area of ECP mainstreaming.
- In general, RIM currently lacks institutional partnership with reputed training and management centers outside Bhutan.
- Funding resource is limited and the level of staff remuneration is low, thus causing intermittent staff turnover.

Opportunities

- The Joint Support Program on capacity development for ECP mainstreaming in itself opens up possibilities for RIM to engage in ECP mainstreaming and develop training capacity in the subject.
- Strong policy level support and recognition of RIM's role in GNH-based research and training.
- Expansion in public, private and corporate sectors as well as civil society organizations has created growth in training market for RIM.
- The positive state of environment and the distinctive Bhutanese philosophy of GNH are expected to contribute in attracting foreign students and faculty in the future.
- The upcoming Education City project creates opportunities for link-ups with other institutions for training, consulting and facility use in the future.
- The enactment of several new legislations and regulatory instruments creates new training opportunities and markets.

Threats

- Preference, especially among government employees, for overseas training due to perks associated with such training.
- Competition as result of a small market and growing number of training institutes.

- Comparative advantage of training institutes in other countries in the region due to demographic and economic factors and consequent stronger training markets.
- Increasing remuneration and better career opportunities for academicians and management faculty in other countries, especially India.
- No clear HRD policy directive with regards to training in ECP mainstreaming.

Royal Thimphu College

Strengths

- There is a strong faculty in the areas of economics, business and environment. Two-third of the faculty members are drawn from outside the country with strong teaching experience. There is a culture of cross-program faculty interactions, enabling faculty members to augment their knowledge and teaching practices.
- Good infrastructure and facilities, with modern teaching and recreational amenities. Further development of infrastructure and facilities is ongoing to increase student intake and accommodate additional programs in the future.
- International linkage and faculty experience, which comes especially from visiting students and faculty from Wheaton College for one semester each year. Through this arrangement, interactions with the visiting students and faculty occur and stimulate both the visitors and hosts to broaden their knowledge horizon.
- Proximity to the capital provides greater access and opportunities (when compared to other RUB colleges such as Sherubtse College and GCBS) to participate in public discourses and academic development and also to engage policy-makers and development thinkers in the college's knowledge-based affairs.
- The autonomy as a private college allows flexibility in how it functions administratively and intellectually. Also as a private college, the stake of credibility and performance is higher and more constant. To enhance and maintain credibility and performance, continuous assessment and improvement of courses/ modules/ approaches is embedded in the functioning of RTC.

Weaknesses

- As an institution, RTC is too new for experience in conducting short-term courses/ workshops (although individual experience exists). There is no experience in developing and conducting courses for in-service participants.
- Existing RTC syllabi do not sufficiently cover, or have focus on, ECP mainstreaming topics. This also means that teaching and knowledge resources ECP mainstreaming topics are lacking.
- Currently, there is an over-dependence on expatriate faculty with two-third of the faculty members coming from outside the country. This is viewed as an issue in the

context of developing in-house (Bhutanese) capacity for training in ECP mainstreaming.

Opportunities

- Ongoing discussions with other overseas institutes for visiting faculty and students may bring in research and training capability and new insights on ECP mainstreaming.
- The Education City concept is expected to benefit the RTC because of the location, autonomy and its international academic culture.
- As a result of the high level stake/ accountability associated with a private institute, there is an inherent positive attitude for change and this trait may be vital in attracting faculty and students from within Bhutan as well as from outside.
- Plan to introduce continuing education in the next 1-2 years would be an opportunity to target in-service trainees for ECP mainstreaming.

Threats

- Lack of data and codified knowledge on local ECP mainstreaming issues may hinder development of knowledge resources, based on native cases, to support training and education.
- Growing competition as a result of limited market.
- Lack of recognition of short training in career advancement, so low level of motivation for such training.

Sherubtse College, Kanglung

Strengths

- The college is very well established, being the country's first degree college. It is the country's largest tertiary education institute in terms of the range of courses offered and the number of faculty members and students.
- There is good infrastructure in place with spacious campus. The IT and library facilities are particularly well-established.
- Overall staffing situation is very good with many qualified and experienced lecturers. There are more than 100 faculty members, with about 65 percent being Bhutanese.
- Located in the countryside, the college provides the ideal environment for learning and presents opportunities to observe and learn about the interactions between rural communities and their natural environment and the issues therein.

- There exists collaboration with other institutes within Bhutan (UWICE, NEC- air quality monitoring, RDC Yusepang, Bhutan Telecom) and outside (Delhi University, Renaissance College Canada, National Universities' Consortium)
- The Environmental studies program at Sherubtse College existed since 1995, initially as a subsidiary program and then upgraded to a degree combination in 2007. The college also has an active environmental culture in the form of Singye Karm, the college's environment club, which has carried out numerous environmental field work and campaigns.
- There is already a plan afoot to build the capacity of environmental faculty at Sherubtse College. Two third-year EVS students are earmarked to undertake specialization in environment to become future assistant lecturers in the environmental faculty.

Weaknesses

- There is limited number of teachers with specialization in various topics of environment. Currently only three faculty members (including one expatriate lecturer) exist for the EVS program. After completing their Masters degree many years ago, the faculty members have not received any training to upgrade their knowledge about new environmental concepts and issues, and environmental management approaches and tools.
- The current EVS curriculum is more policy-based but lacks hard science. It also does not adequately cover new and emerging environmental management topics. There is no in-house expertise for development of new modules.
- Teaching and knowledge resources for environmental studies are very limited, and this constraint will become even more acute with the integration of ECP mainstreaming topics.
- The location of the college in terms of the distance from Thimphu is not attractive for prospective students and faculty members. This also makes it difficult for the college to engage public figures and development practitioners in the student programs.

Opportunities

- Sherubtse College, together with all other RUB-affiliated institutes, is due to become autonomous in July 2011. This could mean more flexibility in the mobilization and utilization of resources and in the development of human resources.
- Creation of additional environmental jobs (e.g. Dzongkhag Environmental Officers) in the civil service system means better job opportunities with qualification in environmental studies.

Threats

- Market uncertainty for EVS graduates. So far, student interest in EVS program has not been significant. There is the perception that career opportunities for EVS graduates are limited.
- Limited awareness about environmental careers in Bhutan and environmental studies programs.

Ugyen Wangchuck Institute for Conservation and Environment

Strengths

- Good infrastructure and facilities are in place for training and boarding. Training facilities include conferencing and communication amenities.
- The institute has a team of highly motivated staff with strong academic and experiential background in conservation science.
- There exist strong partnership arrangements with both national and international institutes. National partner institutes include CNR and Sherubtse College while international partnerships have been established with the Earth Institute, Columbia University, and the University of Montana.
- Institutional structure with focus on four key domains – sustainable forestry, conservation biology, water resources, and socioeconomics of natural resources management – is favorable for ECP mainstreaming training.
- Well-located in terms of proximity to protected areas. Wangchuck Centennial Park and Thrumshingla National Park are close by and present excellent locales for in-situ conservation research and training.
- The vision and future direction of the institute is clearly spelt out.

Weaknesses

- Existing staff are largely from research/ technical background and have limited experience and skills in pedagogy. They also have limited training and experience in dealing with the social sciences and economics of environmental management, which forms an integral part of ECP mainstreaming.
- In-house staff number of trained professionals is limited for offering a wide range of training courses and when compared to the vision and future plan of the institute.
- Teaching and knowledge resources (books, toolkits, multimedia) on topics related to ECP mainstreaming are limited.
- The institute currently lacks an accreditation system for its courses.

Opportunities

- There exists strong policy level support with the Honorable Prime Minister as the chair of the Board of Governors. Support also exists from eminent academics and researchers in the field of conservation.
- There is growing emphasis on environment and climate change, and more especially in Bhutan because of its GNH development philosophy.

Threats

- The existing civil service policy of zero-growth in human resources may not allow UWICE to increase the number of staff required for expanding and enhancing its programs.
- In absence of any accreditation to a university system, change in priorities at the policy level may influence the continuity of staff and programs at the institute.

Annexure 3: Pointers for Revision/ Enhancement of Existing Course Curricula/ Modules

Environmental studies as a combination program with BA English and BA Economics degree courses (SC, RTC)

This program is being offered as a three-year program for general degree and as a four-year program for honors degree. The program currently includes population studies as well. It is noted that a number of existing modules can meaningfully accommodate ECP mainstreaming topics. These modules include:

- *Natural Resources Management*: this module could include ECP mainstreaming topics such as community-based natural resources management, and integrated conservation and development;
- *Sustainable Development*: this module presents the opportunity to elucidate the concept and rationale of ECP mainstreaming and relate it to the principles of sustainable development, the Millennium Development Goals, and within the Bhutanese context to the objectives of GNH;
- *Air and Water Pollution*: this module could include climate change vulnerabilities and risks to economic growth and poverty reduction, and provide focus on the vulnerabilities of the poor to air and water pollution;
- *Waste and Waste Management*: this module could highlight the role of the poor in waste management and the opportunities to generate employment and reduce poverty through waste management enterprises development;
- *Environmental Planning and Impact Assessment*: this module could demonstrate the positive and adverse impacts that environmental management programs/ projects can have on poverty reduction and vice versa;
- *Environmental Policies and Laws*: this module could elucidate the contents of various international environmental conventions (particularly the three major United Nations environmental conventions – Convention on Biological Diversity, UN Framework Convention on Climate Change, and UN Convention to Combat Desertification) and national environmental policies and laws that highlight ECP linkages and advocates their mainstreaming;
- *Environmental Economics*: some key ECP mainstreaming topics that this module could cover include: cost-benefit analysis encompassing economic, ecological and social dimensions; benefit-sharing of common environmental resources; payment for ecosystem services; economic valuation of environmental goods and services; environmental livelihoods; and interactions between environment and key economic and social sectors in Bhutan (e.g. agriculture, hydropower, industries, tourism, health, and roads).
- *Environmental Management*: this module could among other things cover public environmental expenditure review (with particular reference to sectors that are

relevant to poverty reduction) as an instrument of the Environmental Management System along with environmental auditing.

Sherubtse College is planning to replace the ongoing Environmental Studies program with a full-fledged Environmental Science undergraduate degree course. A proposal has been developed for the new course and submitted to the government for mobilization of funds. The curriculum for the new course retains all the environmental modules taught in the ongoing EVS program, removes modules pertaining to population studies, English language and economics, and replaces them primarily with hard science environmental modules (mostly Chemistry related).

BBA degree course (GCBS, RTC)

The modules of this four-year course that provide opportunities to address ECP mainstreaming topics are discussed below:

- *Principles of Management*: the existing social responsibility and managerial ethics could be expanded to include environmental ethics and provide focus on poverty reduction as a part of social responsibility;
- *Bhutanese Legal Environment*: there is a need to include Bhutanese environmental laws within which businesses are to be planned and operated. For instance, the Environmental Assessment Act and supporting regulations for environmental clearance;
- *Taxation System in Bhutan*: this module could introduce environmental fiscal reform as a tool to rationalize taxation based on the environmental and social costs that certain businesses (e.g. mining) impose;
- *Organizational Behavior*: this module could include best environmental and social practices in business organizations;
- *Auditing*: environmental and social auditing could be introduced in this module;
- *Corporate Governance*: the focus on corporate social responsibility and corporate environmental responsibility could be enhanced with emphasis on creating pro-poor environmental and social benefits whilst reducing such costs;
- *Sustainable Tourism Development*: the module could highlight the potentials of the tourism sector to contribute to environmental conservation and poverty reduction and demonstrate tourism practices that have successfully integrated environmental conservation and poverty reduction.

B.Com. degree course (GCBS, RTC)

This is a three-year program with some modules similar to those of the BBA degree course. The modules where ECP mainstreaming topics could be covered include:

- *Business Organization and Management*: as in the case of the BBA degree course, this module could include best environmental and social practices in business

organizations. In addition, the topic on profit maximization versus social responsibility could be expanded to include environmental responsibility as well;

- *Business Law*: as in the case of the BBA degree course, this module will need to cover environmental laws and regulations within which businesses are to be planned and operated in Bhutan;
- *Business Ethics and Social Responsibility*: this module could be expanded to include corporate environmental responsibility;
- *Auditing*: as in the case of the BBA degree course, this module could cover environmental and social auditing as well;
- *Bhutanese Economic Policies and Performance*: this module could cover topics such as interface between economic, environmental and social policies in Bhutan, the role of environment in rural enterprises development, and economic growth versus poverty reduction.

Bachelors in Civil Engineering degree course (CST)

Road construction is hugely environmentally challenging in Bhutan due to the rugged mountain terrain, fragile geologic conditions and high seasonal rainfall. Since early 2000, there has been policy level emphasis to promote environment-friendly road construction (EFRC) approach and techniques. However, at the implementation level, EFRC has made limited progress for various reasons – a major one being the lack of EFRC-trained engineers in the country. In the series of ECP mainstreaming stakeholder workshops held in May/June 2010, road construction was recurrently cited by the participants as a key sector which requires ECP mainstreaming. Lack of road connectivity is often mentioned as a major impediment to poverty reduction in rural areas but at the same time poorly designed and constructed roads are acknowledged as major causes of environmental damage. There is an expressed need to integrate EFRC training in the civil engineering course to build up the national expertise to design and build roads applying approaches and techniques that minimize adverse environmental impacts.

Currently, the civil engineering course has only a few modules, which deals with environment or has environmental relevance, such as engineering geology, environmental studies, and public health engineering. Although not directly discernible from the module, it was given to understand by the CST faculty members that EFRC was covered under the module for highway engineering. Given that the highway engineering module itself was just made up of 18 credits (of the total 720 credits for the whole course), it is inferred that the coverage of EFRC in the module would be far from adequate. Therefore, there may be the need to expand the module on highway engineering to fully integrate EFRC or to develop a new module to specifically cover EFRC. A long-term and comprehensive option would be to review the full course and revamp it, integrating ECP elements wherever relevant.

Environmental Education as an elective subject in B.Ed. degree course (CoEs Paro and Samtse)

With facilitation from the Royal Society for the Protection of Nature (RSPN), the Colleges of Education at Paro and Samtse have developed modules for teaching Environmental Education as an elective subject in the B.Ed. degree course from the 2011/12 academic session onward. A resource pack has been produced to aid the teaching of these modules. What has been noted of the resource pack is that it lacks modules that explain and highlight ECP linkages. To address this gap, a supplementary handbook covering topics that demonstrate the ECP linkages and the usefulness of addressing ECP issues in an integrated manner was considered necessary.

Environmental Studies as a compulsory subject in PG Diploma in Dzongkha Education course (PCoE)

The Postgraduate diploma course in Dzongkha education at PCoE includes environmental studies as a compulsory subject. As in the case of environment education modules for B.Ed. course, the modules for this subject also have little focus on ECP linkages, especially the poverty aspect. A review and revision of the modules will be opportune given that they were developed some 3-4 years back and there is the need to infuse ECP linkages.

Diploma courses in agriculture, animal husbandry and forestry (CNR)

The diploma courses at CNR offer several modules where ECP mainstreaming topics can fit in and enhance the course contents. These include environmental science, farm economics and farming systems which are taught as common modules across all the three disciplines at CNR. In addition, sustainable forest resource use and social forestry, which are taught as modules specific to forestry discipline, provide considerable scope to cover ECP mainstreaming topics. There is also the option of developing a separate module on ECP mainstreaming as a common subject for all the three disciplines. This option would present a greater scope of covering ECP mainstreaming topics relevant to the RNR sector and, therefore, is expected to be more meaningful. Such a module could include topics such as community-based social and environmental assessments of farming systems, participatory environmental management plans at community level, pro-poor benefit sharing of environmental resources, and environmental conflicts management.

Postgraduate Diploma in Public Administration (RIM)

The PGDPA includes a module on 'Development Theory and Practice'. This module currently covers sessions on Millennium Development Goals, GNH and poverty and, consequently, presents opportunities to infuse ECP mainstreaming elements which would enhance these sessions. The PGDPA also consists of a module on 'Managing Development Project'. This module focuses on the application of Logical Framework Analysis (LFA) and Results-based Management as key tools for planning and managing development projects/ programs. With some moderate modification, this module could accommodate learning sessions to integrate ECP issues in the LFA and RBM processes.

Annexure 4: Provisional Outline for a Pilot Training Workshop (Sample)

BASIC DESCRIPTION

Proposed Training Title:

Strategic Environmental Assessment, Cost-Benefit Analysis and Benefit-sharing Mechanism for ECP Mainstreaming in the RNR Sector

Organizing Institute and Venue:

College of Natural Resources, Royal University of Bhutan, Lobesa

Target Participants:

Dzongkhag officials with responsibilities for planning, implementing, monitoring and evaluating RNR sector programs and plans

Number of Participants per Training Course:

25 participants

Training Course Duration and Schedule:

The course is estimated to consist of 33 hours of taught and practical modules spread over 5 days.

OBJECTIVES AND EXPECTED OUTCOMES

The key objectives of the proposed training program are to:

- (1) deepen the understanding of the participants on the relevance and importance of ECP mainstreaming in the RNR Sector
- (2) provide hands-on knowledge and skills in the application of two key ECP mainstreaming tools relevant to the RNR Sector

By the end of each training course, the participants are expected to have:

- (1) in-depth understanding of the ECP mainstreaming concept and its relevance and importance in the RNR sector;
- (2) hands-on knowledge and skills to:
 - carry out strategic environmental assessment of RNR policies and plans
 - carry out cost-benefit analysis using RNR case studies; and
 - formulate projects on pro-poor benefit-sharing of natural resources.

COURSE CONTENTS

Topics	Pedagogical Methods
Module 1: ECP Mainstreaming Concept and Practices (Duration: 5 hours)	
Concept and Context of ECP Mainstreaming	Presentation Open group discussion (Q&A) Focused group discussion: identifying entry points/ building blocks for ECP mainstreaming in the RNR sector
Identifying ECP Linkages in the RNR Sector	Group exercise: building the ECP linkage matrix and analyzing the linkages
ECP Mainstreaming in Practice	Case studies Focused group discussion: analyzing ECP mainstreaming practices
Module 2: Cost-benefit analysis and development of proposals for pro-poor benefit-sharing of natural resources (Duration: 15 hours)	
Introduction to the rationale and methodology of cost-benefit analysis	Presentation Open group discussion (Q&A)
Cost-benefit analysis in practice	Presentation of case studies Group exercise on cost-benefit analysis using RNR case studies
Introduction to the concept and rationale of pro-poor benefit-sharing of natural resources	Presentation Open group discussion (Q&A)
Pro-poor benefit sharing in practice	Presentation of case studies Focused group discussion: analyzing pro-poor benefit sharing in practice
Developing pro-poor benefit sharing proposals	Presentation on project formulation methodology Demonstration of project formulation components and processes Group exercise: situation description and analysis, stakeholder analysis, costs and benefits to the stakeholders, and formulation of pro-poor benefit sharing project proposals, and presentation of the proposals
Module 3: Applying Strategic Environmental Assessment to analyze ECP mainstreaming issues and identify sustainable alternatives (Duration: 15 hours)	
Introduction to SEA concept, approaches and tools	Presentation Open group discussion (Q&A)
Applying SEA tools to analyze ECP issues	Presentation and demonstration of the tools Case studies
Identifying sustainable alternatives	Group exercise and presentations

TRAINING RESOURCES AND BUDGET

The following resources and preparatory activities will be required to commence the proposed training workshops:

- (1) **Trainers' Handbook** for subject matter and pedagogical guidance to conduct the training workshops;
- (2) **Participants' Resource Pack** comprising of the background and rationale of the training workshops, explanatory notes on various topics, case studies, presentation materials, and other written/ illustrated materials that the participants can use during and after the training workshop;
- (3) After the Trainers' Handbook is ready, a **Training of Trainers' Workshop** for potential/ identified trainers will be desirable before the commencement of the first training workshop.

A total of USD 30,000 is estimated to cover the costs of the training workshops, including the development of training resources. The budget breakdown is given below:

Sl. No.	Cost Item	Amount (USD)
1	Trainers' Handbook and Participants' Resource Pack: technical assistance for planning and design	11,500
2	Trainers' Handbook and Participants' Resource Pack: printing	4,500
3	Participants' travel and subsistence	5,000
4	Honorarium for resource persons (for the whole series of 4 training courses)	4,000
5	Training workshop for trainers (one-off before the first training course)	1,200
6	General logistics and management, including transportation for short field trips	1,800
7	Preparation and production of reports on the training workshops, with synthesis of the processes and their outcomes (two reports: each covering three training courses conducted each year)	2,000
	Total	30,000

Note: This provisional outline is provided as a sample.

Annexure 5: Simplified Results Framework

Long-term Outcome	Sustainable development and maximization of GNH		
Medium-term Outcome	Increased integration of environment, climate change and poverty concerns in policies, plans and programs		
Intermediate Outcome	Increased availability of trained human resources with knowledge, motivation and skills for ECP mainstreaming		
Immediate Outcome	Enhanced in-country capacity for training in ECP mainstreaming		
Expected Outputs	Faculty with knowledge and skills for ECP mainstreaming training in place at various institutes	Curricula/modules and training aids for coverage of, and focus on, ECP mainstreaming in place and in use	Institutional partnerships and coordination mechanism for ECP mainstreaming training in place and operational
Proposed Capacity Development Responses	<ul style="list-style-type: none"> • In-country workshop for sensitization of faculty members on ECP mainstreaming concept, approaches and tools • Customized ECP mainstreaming training to provide hands-on knowledge and skills for planning and conducting ECP mainstreaming training • Short-term, intensive specialization training on specific ECP mainstreaming subjects • Long-term studies (PG diploma/ Masters degree) in ECP mainstreaming subjects • Mentoring built in institutional partnership/ coordination mechanisms 	<ul style="list-style-type: none"> • Review and enhancement of relevant courses/ modules • Development of curricula/ modules for proposed new courses, with special attention to ECP mainstreaming elements • Development of training aids/ materials and knowledge resources for ECP mainstreaming training 	<ul style="list-style-type: none"> • Development and operationalization of mechanism for coordination between in-country institutes • Establishment of institutional partnerships with overseas institutes with expertise in ECP mainstreaming
Inputs	Funding and technical assistance		
Assumptions	<ul style="list-style-type: none"> • Funds will be available from RGoB and donor partners to invest in the proposed capacity development responses • Royal University of Bhutan will be agreeable to the proposed capacity development responses, especially those concerning revision/ development of curricula and modules to infuse, or enhance focus on, ECP mainstreaming (it is in response to this uncertainty that development of advocacy materials to elucidate the relevance and value of ECP mainstreaming training in the context of GNH-infused learning policy has been proposed among the capacity development actions). 		