

PROPOSAL FOR REVIEW

PROJECT TITLE:	KINGDOM OF BHUTAN: BHUTAN NATIONAL GREENHOUSE GAS PROJECT
GEF FOCAL AREA:	Climate Change
GEF ELIGIBILITY	Under financial mechanism of Convention, Convention Ratified August 25, 1995
TOTAL PROJECT COSTS:	\$296,600
GEF FINANCING	\$296,600
GOVERNMENT COUNTERPART FINANCING OF GEF COMPONENT:	In-kind (staff and institutional resources)
COFINANCING/PARALLEL FINANCING:	N/A
ASSOCIATED PROJECT:	N/A
GEF OPERATIONAL FOCAL POINT	Not available
GEF IMPLEMENTING AGENCY:	UNDP
EXECUTING AGENCY:	National Environment Commission, Royal Government of Bhutan
LOCAL COUNTERPART AGENCY:	National Environment Commission, Royal Government of Bhutan
ESTIMATED APPROVAL DATE:	June 1996
PROJECT DURATION	3 years
GEF PREPARATION COST	US\$ 10,500

KINGDOM OF BHUTAN: BHUTAN NATIONAL GREENHOUSE GAS PROJECT

CONTEXT

Country Description

1. The Kingdom of Bhutan covers an area of about 46,500 sq. km. A landlocked country, Bhutan is bordered in the north by the Tibetan region of China, and on the west, south and east by states of India. Bhutan stretches about 180 km from north to south and about 330 km from west to east. Rising from an elevation of about 150 meters above sea level in the area bordering India, it reaches over 7,500 meters in the Himalayan mountains bordering China. The annual rainfall varies from less than 500 mm per annum in areas above an elevation of 4,000 meters to a range of 3,000-5,000 mm in the southern border areas. Because of the wide range of altitudinal zones and unique micro-climatic conditions, Bhutan contains many diverse types of ecosystems ranging from tropical to subtropical forests in the southern lowlands to the sparse alpine vegetation in the northern part of the country bordering Tibet. These diverse ecosystems harbor a variety of animals and plants, some of which are found only in Bhutan. Access to many parts of Bhutan is difficult because of the rugged terrain and the limited infrastructure. These factors, combined with a relatively low population of some 600,000 people, result in Bhutan offering the last refuge for many plant and animal species.

Area (square kilometers)	46,500
Population	600,000
Population growth	3.1%
GNP per capita (US \$)	425
Land-use[#]	
Forest area	72.5%
Cultivated area	8.1%

[#]: Data from *Land Use Planning Project*, Ministry of Agriculture, Thimphu, Bhutan, 1995.

Environmental Commitments and Policy Framework

2. Environmental and conservation concept runs through all aspect for Bhutan's development strategy. While the Royal Government of Bhutan (RGOB) is strongly committed to environmental conservation, it also recognizes the need for economic development. Senior officials of the RGOB met in Paro, Bhutan at the Workshop on Environment and Sustainable Development in May 1990. The *Paro Resolution* adopted the workshop called for a "middle

path" of development to ensure sustainability. The Resolution also urged the development of a *National Environment Strategy* to "ensure the careful stewardship and sustained use of natural resources" in Bhutan. As a consequence, a major focus of the RGOB in recent years has been toward efforts to develop *National Environment Strategy* through the National Environment Commission. Expected to be finalized by this year, the strategy advocates the "middle path" of development advocated in the *Paro Resolution* and identifies three key cross-sectoral issues: effective natural resource management, integrated urban/ rural planning, and development planning which is sensitive to traditional Bhutanese values. The *National Environment Strategy* identifies three avenues for sustainable development: hydropower development, food production and industrial development. On finalization, the National Environment Strategy is to be incorporated into the Eighth Five Year Plan (1997-2002).

3. The RGOB ratified the United Nations Framework Convention on Climate Change (FCCC) on November 25, 1995. After the ratification of the FCCC, the RGOB designated the NEC as the focal point for climate change activities in Bhutan. While the commitment and the sensitivity of the RGOB with global environmental concerns in general and climate change in particular is reflected in the ratification of the FCCC, specific inclusion in the Eighth Five Year Plan and the *Paro Resolution*, limited capacity of the Government agencies has hindered the development of a national climate change strategy and projects in this area. Recognizing that socio-economic development must be consistent with the needs of the people and the carrying capacity of the fragile environment, The RGOB established the National Environment Committee in 1989 to monitor and regulate the environment sector. The Committee was upgraded into the *National Environment Commission* (NEC) in 1991. The NEC, serviced by a Secretariat, is a high-level, cross-sectoral body consisting of senior ministers and government officials under the Chairmanship of the Minister for Planning.

Membership of the <i>National Environment Commission</i>	
Minister, Planning Commission	Chairman
Minister, Home Affairs	Member
Minister, Trade and Industries	Member
Deputy Minister for Environment	Secretary and Member
Secretary, Ministry of Agriculture	Member
Joint Secretary, Forestry Services Division	Member

4. The mandate of the NEC include
- (a) to advise the RGOB on all matters pertaining to sustainable development;
 - (b) to formulate the National Environment Policy to guide the policy planning in Bhutan;
 - (c) to formulate guidelines for, and to institutionalize Environmental Impact Assessment;

- (d) to enhance the knowledge and understanding of environmental matters and sustainability in the Bhutanese society; and
- (e) coordinate cross-sectoral programmes, implementation of policies and legislation in the environment sector.

5. To implement its mandate effectively, the NEC works closely with the line ministries, the *Dzongkhag Yargay Tshogchungs* (District Development Committees) and *Gewog Yargay Tshogchungs* (Block Development Committees).

6. The Commission functions through the NEC Secretariat headed by a senior Deputy Minister of the Royal Government and has a current professional staff strength of eight. The responsibilities of the NEC include developing EIA guidelines, establishing environmental quality standards, vehicle emission control, developing the National Environment Protection Act, and matters pertaining to Agenda 21, FCCC and the Convention on Biological Diversity are also handled by this Division.

Related Activities

7. There are no multi- or bi-lateral sponsored activities with the specific objective of capacity building in the area of climate change in Bhutan. There are some activities (both, completed and ongoing) in related sectors which are likely to benefit climate change activities in addition to fulfilling their primary objectives.

8. Believing that implementation of sustainable development required global partnerships, the Government of The Netherlands forged partnerships with the Governments of Bhutan, Benin and Costa Rica. *Bilateral Sustainable Development Agreement* was signed with Bhutan in March 1994. With reciprocity, equity and participation as the guiding principles of the collaboration, there is ongoing effort to formulate and implement projects to further sustainable development. There is an ongoing discussion with the Dutch Government in the mini/micro hydro and forestry sectors to identify AIJ (Activities to be Implemented Jointly) Pilot Phase projects. A Dutch mission visited Bhutan in December 1995 and, with the help of the Division of Power, has identified the site for micro hydro facility; the commissioning is scheduled for the second half of 1997. Negotiations are continuing with Dutch agencies for a carbon sink AIJ project involving about 4000 ha.

9. Danish International Development Agency (DANIDA) is financing a *Land Use Planning Project* which began in 1992 and is located in the Land Use Planning Section in the Policy and Planning Division of the Ministry of Agriculture. Digitized maps have been prepared and GIS support is available for land use planning. The first phase of the project has completed the mapping of all forest area by crown density, cultivated cultivation areas, areas affected by shifting cultivation, and most of horticulture areas in Bhutan. DANIDA support for the project is expected to end in 1997.

10. Forestry Sector has been a focus of donor assistance in Bhutan. The World Bank has financed three Forestry Development Projects in which the focus has ranged from reforestation of degraded forest land to enhancing capability to prepare local forest management plans. Biodiversity and protected area management are the focus of the GEF financed *Bhutan Trust Fund for Environmental Conservation*. With the additional support from bi-lateral donors, the Trust Fund now totals over US\$ 17 million and is expected to provide sustainable financing for conservation activities which will include development of a national system for protected areas; developing and implementing management plans for protected areas; development of a natural resource database; providing institutional support to environment organizations and train natural resource professionals.

11. DANIDA supported the creation of National Environment Commission (NEC) Secretariat and continues to fund part of the institutional development of the NEC Secretariat. There is ongoing efforts to develop environmental impact assessment guidelines and to strengthen the outreach activities of the NEC Secretariat. A recently approved UNDP/Capacity 21 project will be providing support, inter alia, for the institutional strengthening of NEC.

PROJECT OBJECTIVES

12. This project will assist Bhutan in preparing national communications consistent with the requirements of the UNFCCC. The Convention provides a clear mandate for all of the activities planned in this project. Specifically:

- (a) Article 12 requires developing countries to prepare national communications, due three years after entry into force of the Convention. It is assumed for purposes of this project that this deadline will be extended in the case of Bhutan, for which the convention entered into force in August 1995.
- (b) Article 4.1 calls on all countries to formulate and implement programs to mitigation and adapt to climate change.

The proposed project will put into place the needed institutional mechanisms in Bhutan for an ongoing response to the requirements of the UNFCCC.

Immediate objectives

13. The enabling activities of this project will facilitate the implementation, in accordance with the Convention, of effective response measures by Bhutan. The immediate aim of the Bhutan National Greenhouse Project is to enable Bhutan to meet its reporting obligations under the UNFCCC, leading to its national communication as required under Article 12. In this regard, six specific objectives have been identified:

- (a) To enable the Royal Government of Bhutan (RGOB) to fulfill its reporting obligations with regard to the development of inventories of greenhouse gas (GHG) sources and sinks.
- (b) To enable RGOB to fulfill its reporting obligations with regard to the identification of options for mitigating climate change thereby enhancing national capacity to identify, analyze, and formulate viable GHG mitigation measures.
- (c) To enable RGOB to fulfill its reporting obligations with respect to its vulnerability to future climate change.
- (d) To enable RGOB to fulfill its reporting obligations with respect to options for adapting to climate change.
- (e) To enable Bhutan to prepare national plans for mitigation and adaptation for fulfilling its reporting requirements to the FCCC Secretariat.
- (f) To enable RGOB to fulfill its reporting obligation with respect to communicating information under Article 12 of the FCCC.

Development objectives

14. In addition to fulfilling its primary role, the project will benefit the RGOB's larger goal of promoting sustainable development. The project will enhance the ability of the RGOB to address concerns of the effect of climate change on its natural resources, in particular, forest and water resources. Regardless of the eventual climate change impact, it is important that the RGOB possess the necessary human and institutional resources to integrate appropriate responses to the risk of climate change to its development priorities. In parallel to fulfilling RGOB's obligation under FCCC, the development objectives of the RGOB will be furthered through:

- (a) promotion of greater understanding of the complementarity of climate change mitigation strategies and furtherment of national sustainable development objectives, particularly in the forestry sector and the development of hydropower potential;
- (b) strengthened cooperation and coordination among ministries and institutions as a result of implementing cross-cutting activities relevant to climate change. A climate change policy dialogue process will be initiated and strengthened to foster understanding of climate change issues and linkages among a wide stakeholder group; and

- (c) increased capacity to financially engage a concerned international community capable of financing climate change mitigation projects that complement national sustainable development objectives.

15. Concern over global climate changes is likely to result in enhanced availability of funding related to climate change mitigation. The RGOB has considerable interest in taking advantage of such opportunities, but has limited knowledge of how these may be exploited. Creating the ability to formulate climate change mitigation strategies will further the ability of the RGOB to pursue financing opportunities for mitigation measures that further national sustainable development objectives.

Problem to be addressed: the present situation

16. Under the FCCC, RGOB is obliged under Articles 4 and 12 (Communication of Information Related to Implementation) to prepare a National Communication. Due to limited capability and manpower within the NEC Secretariat, the focal point with regards to FCCC matters within the RGOB, assistance is required to prepare the National Communication. This project aims to enhance capability within NEC Secretariat and other relevant line ministries and agencies (see *Section B: Target beneficiaries*).

Expected end of project situation

17. Through the project the RGOB will have strengthened the capability to identify and quantify greenhouse gas sources and sinks, to assess vulnerability, mitigation and adaptations options and determine national response strategies. The project also expects to enhance the capacity of the RGOB to produce and systematically update the required information through planning and capacity building, including institutional strengthening and training. The project will strengthen several institutions and will put into place mechanism for inter-ministerial and inter-departmental cooperation for matters related to climate change. Other end-of-project situation will include:

- (a) enhanced capability to incorporate environmental concerns in socio-economic planning and programming;
- (b) creation of a system and facility for regular collection, updating, and maintaining data (and related data management system) related to climate change; and
- (c) long-term climate change strategy.

Target beneficiaries

18. The target beneficiaries, apart from the NEC Secretariat and the Planning Commission, include, but will not be restricted to, the Land Use Planning Section of the

Policy and Planning Division and Forestry Services Division of the Ministry of Agriculture, the Division of Power and the Division of Geology and Mines of the Ministry of Trade and Industry.

Project strategy

19. This project builds Bhutan knowledge and capacity related to implementing the UNFCCC by focusing on issues clearly perceived by the government as environmental and developmental priorities. The strategy revolves around the understanding and management of carbon stocks and sinks within Bhutan, and seeks to promote the incorporation of climate change concerns and objectives into the resource management sector. The project strategy will consist of the following major components:

Training

20. Since this is a capacity and institution building project, training activities are a significant component. The training component will take full advantage of ongoing GEF/UNDP and other initiatives in the region such as, ALGAS, CC:TRAIN, US CSP. Beyond general capacity building efforts associated with the production of Bhutan's national communication, the project will identify key national personnel who would benefit from specialized training in order to be capable of assembling, interpreting, and disseminating data relevant to GHG emissions and mitigation of climate change impacts. Training approaches that will be used include:

- (a) *In-Service Training:* In-service training will include participation of governmental and nongovernmental representatives in national as well as international workshops and seminars organized through this project or carried out under the auspices of other GEF/UNDP projects. Training topics will relate to climate change vulnerability and adaptation, GHG inventory completion, UNFCCC national communications contents and formats, and assessment of GHG mitigation options relevant to the Bhutan context.
- (b) *Technical Expert and Consultancy Training:* The project will provide technical experts to conduct studies, carry out analyses, and train national governmental and nongovernmental personnel on specific issues relevant to Bhutan that are not sufficiently covered through in-service training, or which require a more Bhutan-specific focus to be most useful. Consultants will particularly provide technical expertise in the area of forest GHG inventory assessment.

Institution Building

21. The project will pull together many governmental and non-governmental entities currently involved in resource and development planning in Bhutan. Several new institutional

frameworks will be put into place with the explicit goal of utilizing interdisciplinary knowledge bases to address climate change concerns in the short and long terms.

Technical Discourse

22. Linking this project to forest inventory and management issues is critical. The project will initiate a dialogue at multiple institutional levels to address climate change linkages to the natural resources sector. The project will sponsor national and cooperative seminars and workshops and incorporate climate change related informational requirements into ongoing research efforts.

Network Building

23. It is essential that project participants within Bhutan become tied in to the many climate change related ongoing processes. The project will establish close links with parallel ongoing regional UNDP/GEF projects. It will build on relevant elements of other UNDP/GEF projects such as in sub-Saharan Africa and the Maghreb states. It will work to take advantage of relevant Country Studies Programs being carried out by the U.S., GTZ, and other agencies. The project will provide direct Bhutan access to international information networks.

24. The specific ongoing efforts which are likely to be of relevance to this projects objectives are summarized below.

ALGAS (Asia Least-cost Greenhouse Abatement Strategy):

This UNDP/GEF project, being executed by the Asian Developing Bank, aims to assist 12 Asian countries in preparing inventories and abatement measures and strategies to implement them. Specific contribution from the *ALGAS project* would include the regional emission factors considered appropriate for use with the *IPCC Guideline* and software for GHG inventories. Inputs on mitigation strategy and other components identified by the Project Management Team will be also coordinated and the members of the Project Management Team will participate in the *ALGAS* workshops.

The US Country Studies Programme (US CSP):

The Project Management Team for Bhutan will draw upon the methodology developed as a part of the *US CSP* for evaluating the mitigation options. Relevant members of the Project Management Team will attend training workshops of the *US CSP*, as appropriate.

CC:TRAIN of UNITAR:

The training material developed through the project would be utilized to the fullest possible extent.

25. Through this project, an attempt will also be made to enable Bhutan to participate in the informal consultative mechanism being set up by the FCCC Secretariat and to ensure that results and outputs of this project will be shared among all involved in climate change activities.

26. In summary, the project strategy will assist Bhutan to fulfill its obligations under the Convention and to effectively participate in the global effort to limit GHG emissions and develop GHG sinks. The project will simultaneously contribute toward national environment and development priorities, while adhering to the specific objectives and criteria of the UNFCCC.

Institutional arrangements for project implementation

27. The project will be located within the National Environment Commission (NEC) Secretariat. The NEC is the focal point within the RGOB for all climate change related activities.

28. The overall coordination of the execution of the project will be managed through a Project Coordinator to be hired locally by the NEC Secretariat and supported by the project. The project, therefore, visualizes:

- (a) *The National Environment Commission (NEC) Secretariat* as the lead agency for the project implementation since it is the focal point for the FCCC;
- (b) *National Climate Change Committee*, an inter-ministerial committee to be constituted by NEC Secretariat in consultation with other line ministries and agencies. The Committee will provide advice to NEC Secretariat and the Project Management Team and will be the body charged with the technical oversight of project execution;
- (c) *Project Management Team* within NEC Secretariat will be responsible for fulfilling objectives of the project and would be responsible for the execution of the project. The Project Management Team will draw upon relevant expertise from other line ministries and agencies such as Forestry Services and the Land Use Project of the Ministry of Agriculture, the Central Statistical Organization, Division of Power of the Ministry of Trade and Industries, etc. The project activities will be coordinated by a full-time Project Coordinator. The NEC Secretariat would provide core support staff and office facilities to the Project Management Team. Additional project related staff that may be required from time to time (such as local consultants, interns, surveying staff, etc.) would also be arranged by the NEC Secretariat for the Project Management Team.

29. Additional technical support would be provided through access to regional experts or institutions from the region as and when the Project Management Team identifies the need. The following institutions could provide technical back-stopping:

- (a) National Physical Laboratory, New Delhi
- (b) Asian Institute of Technology (AIT) in Bangkok, Thailand
- (c) Korean Energy Economics Institute, Republic of Korea
- (d) Bangladesh Institute of Development studies, Bangladesh

Special considerations

30. The current greenhouse gas emissions in Bhutan is low due to hydro-based power sector (348 MW of the total installed capacity of 355 MW in Bhutan is hydro-based), the predominance of biofuels in the domestic sector, and only 8% of the total area under agriculture. It is likely that Bhutan may be a net sink of CO₂ due to 72.5% of the total area being under forest cover. Due to relatively low pressure on land, the major mitigation option in Bhutan may be further sequestering carbon through better forestry in relatively degraded land. The RGOB therefore would like an emphasis in the project activities in quantifying the carbon sinks in Bhutan.

OUTPUTS AND ACTIVITIES

31. The six operational objectives of the proposed project, the outputs and the associated activities are summarised below.

Objective 1 (Inventories):

To enable the Royal Government of Bhutan (RGOB) to fulfill its reporting obligations with regard to the development of inventories of greenhouse gas (GHG) sources and sinks.

Output 1.1:

Establishing a Project Management Team within the National Environment Commission (NEC) Secretariat.

Activity 1.1.1: Identify the human and technical requirement for RGOB to fulfil the FCCC commitments.

Activity 1.1.2: Constitute the Project Management Team within NEC Secretariat drawing appropriate expertise from relevant line ministries and government agencies.

Activity 1.1.3: Enhancing the capacity of the Project Management Team through appropriate training in inventory preparation, vulnerability assessment, analysis of mitigation and adaptation options.

Output 1.2:

Establish a system (including data collection and management system) for preparing inventories on an ongoing basis.

Activity 1.2.1: Identify the data requirements and assess at availability of the data for preparing inventories based on the *IPCC Guidelines for National Greenhouse Gas Inventories*.

Activity 1.2.2: Organize a workshop to develop a plan to fill the data gaps (emission factors and activity level data) and to prepare inventories of greenhouse gas sources and sinks.

Activity 1.2.3: With the local data, develop baseline GHG inventories. Undertake literature review and/or survey, as appropriate, to reduce data gaps. Coordinate with relevant regional efforts (eg. *ALGAS Project*). In the process, establish data collection and management system to acquire data to prepare inventories on a regular basis.

Activity 1.2.4: Finalize, and publish the GHG inventories.

Objective 2 (Mitigation):

To enable RGOB to fulfill its reporting obligations with regard to the identification of options for mitigating climate change thereby enhancing national capacity to identify, analyze, and formulate viable GHG mitigation measures.

Output 2.1:

Development of a (1) list of promising GHG abatement measures in the context the national GHG inventory, and national objectives and priorities; (2) methodology for assessment of GHG abatement measures.

Activity 2.1.1: Based on the inventory, identify the major GHG emission sectors and develop an initial list of potential measures as well as methodology for assessment of GHG abatement measures.

Activity 2.1.2: Examine the GHG abatement measures by sources and sectors of emissions in order to prepare promising measures in the local context.

Activity 2.1.3: Analyze the estimates of national sinks of CO₂ in the forestry sector and examine the possibility of further enhancing sinks of CO₂.

Activity 2.1.4: Prepare the first national greenhouse gas mitigation strategy for the National Communication.

Objective 3 (Vulnerability):

To enable RGOB to fulfill its reporting obligations with respect to its vulnerability to future climate change.

Output 3.1:

Procedures for assessing vulnerability to future climate change

Activity 3.1.1: Adapt *IPCC Technical Guidelines* for procedures appropriate for assessing vulnerability (with focus on the forestry and agricultural sectors and natural ecosystems).

Activity 3.1.2: Conduct training of national staff and technical experts

Output 3.2:

Comprehensive set of baseline data required as reference points for assessing vulnerability and adaptation options

Activity 3.2.1: Define the information requirements

Activity 3.2.2: Collect, evaluate and compile existing regional and national data

Activity 3.2.3: Identify data shortcomings

Output 3.3:

Comprehensive assessment of RGOB vulnerability to climate change

Activity 3.3.1: Conduct national vulnerability assessments

Objective 4 (Adaptation):

To enable RGOB to fulfil its reporting obligations with respect to options for adapting to climate change.

Output 4.1:

Procedures for identifying and evaluating adaptation options.

Activity 4.1.1: Adapt *IPCC Technical Guidelines* for procedures appropriate for identifying and evaluating adaptation options.

Activity 4.1.2: Identify data needs of adapted procedures and refine procedure if necessary based on data needs and availability.

Activity 4.1.3: Conduct workshop to receive feedback on developed procedures.

Output 4.2: National adaptations options to climate change.

Activity 4.2.1: Define range of options applicable to the Bhutanese context.

Activity 4.2.2: Evaluate and identify least cost national adaptations options.

Objective 5 (National Implementation Plan):

To enable Bhutan to prepare national plans for mitigation and adaptation for fulfilling its reporting requirements to the FCCC Secretariat.

Output 5.1:

National plan for mitigation and adaptation.

Activity 5.1.1: Based on analysis of mitigation options and strategies, prepare national plan for mitigation

Activity 5.1.2: Develop the national plan for adaptation based on the vulnerability assessment and adaptation options.

Objective 6 (National Communication):

To enable RGOB to fulfil its reporting obligation with respect to communicating information under Article 12 of the FCCC.

Output 6.1:

First National Communication to the FCCC.

Activity 6.1.1: Put together the final form of the national inventory, vulnerability assessment, mitigation strategy and adaptation options in the form of the National Communication to the FCCC Secretariat.

Sequencing of Activities

32. The project activities will be directed towards the elements of the National Communication and these would be carried out in sequence. The outline of the timetable for the activities is summarised in Annex I. There is little experience with climate change related

issues in Bhutan and a three year period is considered necessary in order to complete the activities proposed.

Guidelines and best practice for activities

33. As indicated in the project description, the enabling activities proposed will follow the best practice and established guidelines for the different components and activities of the project and these are summarised below.

Activity	Guideline
Inventory	OECD/IPCC method and software; for emission factors, attempt will be to use the regional values from the <i>ALGAS Project</i>
Vulnerability and Adaptation	<i>IPCC Technical Guidelines for Assessing Climate Change Impacts and Adaptations</i>
Mitigation	Guidelines from the <i>US Country Studies Programme</i> and those available from <i>ALGAS Project</i>

Rationale for GEF support

34. The project is consistent with the Operational Criteria prepared by the GEF Task Force on Climate Change in order to provide coordinated and timely assistance for countries to fulfill their commitments to the UNFCCC. This project responds to objectives by implementing an activity needed to enable Bhutan to prepare its first national communication to the Conference of the Parties. This will be accomplished primarily through the development of institutional capacity, training of personnel, information acquisition/dissemination, and dialogue/cooperation between government and non-government sectors. The direct benefit will be the establishment of a long-term capability to advance sustainable development by the incorporation of climate change criteria into national decision making processes.

35. In addition to the immediate output of preparing the national communication, the project will build technical capacity and establish an institutional framework to facilitate the implementation and further development of the identified follow-up activities.

36. It is clear that in the absence of GEF financial support, this project is not possible and a valuable opportunity to influence the integration of climate change considerations into Bhutan's national development will have been lost. The activities described in this project

brief are required as part of the UNFCCC and would not have been independently undertaken by Bhutan to address development goals.

Project sustainability

37. The project's emphasis on training and institutional development will ensure the sustainability of the project objectives beyond the period of GEF support. While the NEC Secretariat will be the lead agency for the project implementation, emphasis on a inter-sectoral and inter-ministerial project execution will lead to the involvement of manpower from a range of relevant Ministries and institutions named earlier. Strengthening institutional mechanism for inter-ministerial and inter-departmental cooperation for matters related to climate change are among the achievements at the end of the project.

38. This project, therefore, will create and/or enhance capacity within a wide range of institutions within Bhutan which will endure beyond the duration of the UNDP/GEF support.

Lessons learned from other projects and technical reviews

39. The lessons learned from review of other enabling activity highlight the need to ensure

- (a) an emphasis on training, and institutional strengthening to build capacity within the targeted country;
- (b) well-focussed and targeted activities which are channelled to meeting reporting obligations under the FCCC;
- (c) developing national (inter-sectoral and inter-ministerial) and regional networks of institutions and experts;
- (d) emphasis on facilitating national and regional cooperation and collaboration; and
- (e) provision for exchange of information at national and international level.

These lessons have guided the development of this project and have been incorporated appropriately.

INPUTS

Government

40. The in-kind contribution of the RGOB would be substantial. In addition to the office space and other infrastructural facilities, it is expected that total professional staff time 80 person months would be required for the activities proposed.

UNDP/GEF BUDGET

41. Total GEF costs have been estimated at \$296,000 (See Annex 2 attached). These costs reflect the lack of any previous work and experience in these areas in Bhutan, and the need therefore to build capacity to enable Bhutan to meet its obligation under the FCCC.

RISKS

42. By locating the project within the NEC Secretariat, the likelihood of sustainability of the efforts beyond the project duration has been maximized. Involvement of other line ministries and agencies (such as Land Use Planning Section, Division of Power, etc.) would further enhance the possibility. Through the project design attempt has been made to enhance and/or create local capacity with the potential for impact sustaining beyond the project period. While the project has associated risks common to all capacity enhancement projects, the participation of various line ministries, divisions and agencies would promote accountability and commitments to achieving the project objectives.

PROJECT REVIEW, MONITORING AND EVALUATION

43. The project will adhere to all UNDP guidelines and the emerging GEF guidelines for monitoring and evaluation of projects, including a formal tripartite (representatives of the Government, executing agency and the UNDP/GEF) review (TPR) at least once every 12 months. A progress report will be prepared every quarter for evaluation by the National Climate Change Committee. A project terminal report will be reviewed at the final tripartite review meeting and shall be prepared in draft form at least four months prior to the final tripartite meeting.

44. A post project evaluation will be undertaken by UNDP in collaboration with the relevant parties not later than one year after the termination of the project in order to evaluate its success and the extent to which the outputs of the project are being used as intended.

Work-plan for project activities (for a description of the activities, see section on *Project Description*).

[illegible]

Budget according to GEF activity norms

	Planning	Execution	Institutional strengthening	Training	Other activities	Technical support	Total
Inventories/ Stocktaking							
GHG inventory	5,000	20,000	10,000	10,000	6,000	10,000	61,000
Vulnerability assessment	2,000	15,000	8,000	10,000	2,000	5,000	42,000
IDENTIFICATION OF OPTIONS							
Mitigation	1,000	12,000	5,000	8,000		5,000	31,000
Adaptation	1,000	12,000	5,000	8,000		5,000	31,000
PREPARATION OF PLAN	3,000	10,000	5,000	5,000		5,000	28,000
PREPARATION OF NATIONAL COMMUNICATION	1,000	8,000	3,000	3,000		5,000	20,000
FIXED PROJECT COST							
Project management		40,000	10,000	10,000			60,000
Monitoring and evaluation						15,000	15,000
SUBTOTAL	13,000	117,000	46,000	54,000	8,000	50,000	288,000
Percentage of total cost	5%	40%	16%	19%	3%	17%	100%
Project Support Services							8,600
TOTAL							296,600

Note on column headings

Planning: refers to preparation for an activity to be *Executed* (column 3)

Institutional strengthening: includes cost of creating Project management team and necessary equipment

Training: refers to training of technical staff of the project

Other activities: include research (in this case, refers to modest amount set aside to support efforts at quantifying the carbon sequestering capability of forests in Bhutan)

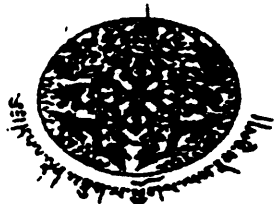
Technical support: refers to non in-country costs such as those of consultants(used for training, etc.).

Table: Dimensions of capability

Enabling activity commitment	Planning and execution	Capacity building			
		Institutional strengthening	Training	Research	Educ ation
<i>Inventories and stocktaking</i>					
▶ emission inventory					
- CO ₂ from energy sources	X	X	X	X	X
- CO ₂ from land use change	X	X	X	X	X
- CH ₄ from energy sources	X	X	X	X	X
- CH ₄ from other sources	X	X	X	X	X
- N ₂ O	X	X	X	X	X
- other sources and gases	X	X	X	X	X
▶ vulnerability assessment					
- agriculture	X	X	X	X	X
- forestry	X	X	X	X	X
- coastal zone	NA	NA	NA	NA	NA
- water resources	X	X	X	X	X
- health impacts	X	X	X	X	X
- natural ecosystems	X	X	X	X	X
- other impacts	X	X	X	X	X
<i>Identification of options to meet the objectives of the convention</i>					
▶ mitigation options					
- energy related					
• industry	X	X	X	X	X
• transport	X	X	X	X	X
• energy supply	X	X	X	X	X
• residential	X	X	X	X	X
- non-energy sources					
• agriculture	X	X	X	X	X
• forestry	X	X	X	X	X
• waste management	X	X	X	X	X
• other	X	X	X	X	X
- sink enhancement	X	X	X	X	X
▶ adaptation options (state I)	X	X	X	X	X
<i>Preparation of a plan to fulfill commitments</i>					
▶ national plan for mitigation	X	X	X	X	X
▶ national plan for adaptation	X	X	X	X	X
<i>Preparation of a national communication</i>					
▶ inventory	X	X	X	X	X
▶ mitigation options	X	X	X	X	X
▶ vulnerability and adaptation	X	X	X	X	X
▶ other relevant information	X	X	X	X	X

X: to be covered in the project; NA: not applicable

Letter of Country Endorsement
by Designated Operational Focal Point



དཔལ་ལྷན་འབྲེལ་གཞི་

National Environment Commission
Royal Government of Bhutan
THIMPHU/BHUTAN

Tele. No. : 23384/24323
Fax No. : 23385

NEC/COM/FCCC/3044.

30 January 1996

Subject: Endorsement Letter

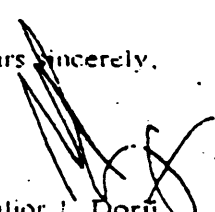
Your Excellency,

This is to inform you that the Royal Government of Bhutan fully endorses the project proposal on "Reporting Requirement" under enabling GEF fund. The National Environment Commission (NEC) has full confidence that this project will assist the NEC Secretariat in fulfilling its obligation under the FCCC Article no. 4 and 12, - Communication of Information Related to Implementation.

The NEC also feels that the project will create sufficient capability within the NEC Secretariat and other line ministries to fulfill the National Communication requirements under the FCCC.

Thanking you for your cooperation.

Yours sincerely,


Paljor J. Dorji
Deputy Minister

H.F. Resident Representative
United Nations Development Programme
Thimphu Bhutan

✓ Copy: The GEF Coordinator, Regional Bureau for Asia and the Pacific, UNDP, New York, USA, for kind information.

RECEIVED	
RBAP REGISTRY	
FEB 1 1996	
<input type="checkbox"/> ACTION	<input type="checkbox"/> INFORMATION
TO	
Ms. Nobile	
<input type="checkbox"/> ACTION	<input type="checkbox"/> INFORMATION
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TECHNICAL REVIEW

BHUTAN: NATIONAL GREEN HOUSE GAS PROJECT

OVERALL IMPRESSIONS:

1. The proposal addresses a necessary element of climate change activities for Bhutan, which is to prepare its national communications to the UN Framework Convention on Climate Change (UNFCCC). Bhutan is deserving of technical support for the development of indigenous capacity to collect data and information and conduct analysis for this purpose. This proposed project fills an important gap, as no other bilateral or multilateral support is being provided to Bhutan for any of the enabling activities at present.

APPROPRIATENESS OF THE PROJECT APPROACH:

2. The project approach is appropriately aimed at strengthening Bhutan's institutional capacity to prepare an emissions inventory, analyze mitigation projects, prepare vulnerability and adaptation plans, develop a national action plan and communicate it to the UN FCCC secretariat.

OBJECTIVES OF THE PROJECT:

3. The project objectives are valid and appropriately stated.

ACTIVITIES:

4. The list of activities for each section is comprehensive. The activities are clearly delineated, and those that are yet to be carried out by Bhutan are noted in a table. Since none of the activities have been carried out by Bhutan, under any other program, this project will serve as an important need.

5. It is heartening to note that the proposed project plans to make use of the guidance documents and other methodology-related material that has been prepared by the Intergovernmental Panel on Climate Change (IPCC) and US Country Studies Program (US CSP).

OMISSIONS IN BACKGROUND DISCUSSION:

6. The background includes a discussion of Bhutanese, bilateral and Global Environmental Fund (GEF) activities in the country. One item worth noting is that there are no future training workshops being planned by the US Country Studies Programme for inventory, mitigation and V&A activities.

The project will have to rely on its own resources or those that might be offered by GEF/UNFCCC for this purpose.

INSTITUTIONAL ARRANGEMENTS:

7. The proposal identifies the appropriate national and other Asian institutions that would be involved in the project.

FUNDING:

8. The amount of funding appears appropriate for an enabling activity of of this type.

INNOVATIVE FEATURES:

9. The proposal is similar to proposals for other enabling activities and no particularly innovative feature were noted in it.

DEVELOPMENT DIMENSIONS AND RATIONALE FOR GEF SUPPORT:

10. Bhutan's national environmental strategy will strive to effectively manage and develop its natural resources, and plan for an integrated rural/urban society. This climate change project is consistent with the strategy for environmentally-friendly development of Bhutan.

11. As noted in the project proposal, no other enabling activities are underway in Bhutan. The activities noted in the proposal are appropriate and necessary for Bhutan to prepare its national communications to the UN FCCC.

QUESTIONS AND CLARIFICATIONS:

12. None other than those noted above.

ADDITIONAL COMMENTS:

13. None.