

PROPOSAL FOR REVIEW

Project Title:	Lao: PDR National Greenhouse Gas Inventory Project
GEF Focal Area:	Climate Change
Country Eligibility:	Convention Ratified January 4, 1995
Total Project Costs:	US \$ 413,000
GEF Financing:	US \$ 313,000
Country Contribution:	US \$ 100,000
GEF Implementing Agency:	UNDP
Executing Agency:	United Nations Office of Project Services
Estimated Approval Date:	January 1996
Project Duration:	2 years
GEF Preparation Costs:	US \$ 10,000
Government Endorsement:	Received 19 July, 1995

1. COUNTRY AND SECTOR BACKGROUND

With an estimated annual per capita income of US 290, Lao PDR ranks among the poorest and the least developed countries of the world. Its economy is virtually undiversified and depends largely on the natural resource base. Although the economy is expected to diversify and grow in the coming years as a result of *New Economic Mechanism* reforms initiated in 1985 to reorient the country toward a market oriented economy, judicious use of the country's natural resources and policies to encourage such use of the natural resources will remain key to future development of Lao PDR. The need for a national policy framework for sustainable use of natural resources has been enshrined in the constitution of Lao PDR: "All organizations and citizens must protect the environment and natural resources...".

The process of incorporating environmental concerns in social and economic development planning and implementation, however, is in the formative stages in Lao PDR. Some notable efforts in this direction include the adoption of Guidelines on Reducing Shifting Cultivation, the Tropical Forestry Action Plan and the formulation of the draft National Conservation Strategy. Another major step in this direction was the preparation of the *National Environmental Action Plan (NEAP)* with the assistance of the World Bank in November 1993. The NEAP presented an assessment of the major environmental issues and problems. The NEAP also analyzed the underlying reasons for the major concerns (especially rapid resource degradation) and recommended specific strategies to address the problems (eg - legislation to place large areas land under legal protection, developing comprehensive forestry law etc ...). A number of these measures have since been initiated.

A key environmental concern highlighted in the NEAP was the rapid resource degradation, particularly forest resources, in the country. Lao PDR is highly dependent on forest resources for its foreign exchange (about 55% in 1991), income (about 15% of its GDP in 1991) and energy needs (80% of the domestic energy consumption is wood fuel based) for a large share of its people. Despite the degradation of forest resources, about 47% (11.2 million ha) of the land remains under forest cover of crown density of more than 20%. About 70% of the country was covered by forests in 1940. The National Reconnaissance Survey indicated deforestation estimates of 470,000 ha between 1982 and 1989. In addition, it is estimated that over 300,000 ha of forest land is affected annually due to slash-and-burn agricultural practices with over half of this area being in the northern part of the country.

As a result of pressure on the forest resources, much of the attention of environmental policy in Lao PDR has focussed on evolving more effective ways of managing the forests. The issuance of the *Prime Minister's Decree No. 164* in October 1993, putting 2.825 million ha (about 12% of the total area of the country) under legal protection is an indication of the Government's commitment. The Government of Lao PDR has also recognized the importance of a comprehensive forestry law to make the regulation of forestry contracts enforceable. This is reflected in the *Prime Minister's Decree No. 169* of November 3, 1993 (The Forest Decree) on the management and use of forests and forest lands. The Government is committed to presenting a comprehensive land and forestry legislation to the National Assembly by September 30, 1997.

Incorporating environmental concerns in social and development planning is in a nascent stage in Lao PDR. Government agencies are devoting resources in trying to develop procedures to examine

the environmental effects of development activities. The *National Environmental Action Plan* has highlighted the need for greater efforts in this direction. Science Technology and Environment Organization (STENO) of the Prime Minister's office, Ministry of Industry and Handicrafts and the Ministry of Agriculture and Forestry are some of the Government agencies involved in the ongoing efforts to develop sectoral guidelines for environmental impact assessments.

Institutional Arrangements for the Environment Sector

Different aspects of environmental policy and management are the responsibilities of different agencies in the Lao PDR government. The coordinating role in environment related matters, including climate change, has been vested in the Science Technology and Environmental Organization (STENO). Line ministries such as the Ministry of Agriculture and Forestry (primarily the Department of Forestry within the ministry) and Ministry of Public Health also have responsibilities in the environmental sector. The specific roles of the different agencies is briefly described below.

Science Technology and Environmental Organization (STENO): With over 40 senior technical officers, STENO has been designated as the coordinating agency in the environment sector. STENO, directly responsible to the Prime Minister's Office, has the following operational units: the Departments of Cabinet, Environment, Intellectual Property, Metrology and Standardization, and Institute of Technology and Science Services Center. The responsibilities of some of the Departments within STENO of particular relevance to this proposal are summarized below.

The Department of Environment consists of two divisions: Policy and Programs Appraisal Division and the Regulations and Compliance Monitoring Division. The Policy and Programs Appraisal Division is responsible for preparing the national environmental policy framework using technical assistance and other inputs from line agencies. The current focus of the Policy and Programs Appraisal Division is:

- developing and operationalizing environmental assessment procedures to aid the decision making by the Committee for Planning and Cooperation (CPC);
- work together with the CPC during project appraisal;
- monitor compliance with the procedures identified during the appraisal process; and
- carry out regular policy impact reviews and evaluations.

The Regulation and Compliance Monitoring Division is responsible for collating and reviewing the legal and regulatory framework covering environmental planning and management. The Division is also responsible for reviewing the relevant environmental planning and management regulations for different sectors for consistency and compliance during the implementation stage. The Division works closely with the relevant line ministries. For instance, it works with the Department of Forestry and the Ministry of Justice for regulations relating to natural resources; with the Ministry of Industry and Handicrafts for mining related environmental regulations; etc.

For scientific and technical support, STENO can rely on the Institute for Science and Technology located within STENO. In addition, STENO works closely with the relevant line ministries and at a formal level this coordination is aided by the Inter Ministerial Working Group (IMWG) on the Environment. The IMWG has members from the relevant line ministries and agencies and the IMWG is designed to provide an effective coordination and cooperation between different ministries

and government departments. The IMWG is designed to provide an institutional arrangement for possible resolution of conflict arising out of resource use and environmental concerns.

The Institute of Science and Technology of STENO provides scientific and technical support to STENO.

Department of Forestry (DOF) of the Ministry of Agriculture and Forestry: The jurisdiction of the DOF extends to a whole range of issues in the forestry sector with direct relevance to the environment. The DOF is responsible for regulation of all forest management and use, including both, legal and illegal logging. DOF is also responsible for management of protected areas, watershed management and protection, limiting shifting cultivation. The Department of Forestry is also responsible for all support services to the forestry sector. These include planning and inventory of forest resources through forest reconnaissance, soil and land use mapping, nation-wide water quality testing and collection of rainfall and hydrology data nation-wide. Much of the data collected is of great relevance to the development of the national GHG inventory.

Ministry of Public Health (MPH): The jurisdiction of the MPH of relevance to the environment sector extends to ensuring improved living standards in both rural and urban areas. The MPH is responsible for water, air, and soil quality.

While no national non-governmental organization (NGO) currently exist in Lao PDR, some international NGOs are active in the country. In the environmental sector, the World Conservation Union (IUCN) is the most active of the international NGO in the Lao PDR. The IUCN is involved in the forestry sector activities and will be called upon to assist STENO in climate change activities. In addition, the academic community and the relevant academic institutions of the Lao PDR will be involved in the project (through the Support Network) to the greatest extent possible. Wide involvement of the NGO and the academic community will be ensured in the finalization of the project document.

Climate Change and Lao PDR

With the ratification of the United Nations Framework Convention on Climate Change (UNFCCC) on January 4, 1995, Lao PDR is committed to the obligations of the UNFCCC. Articles 4 and 12 of the UNFCCC obligate countries to prepare and report on:

- national inventory of anthropogenic emissions by sources and sinks of greenhouse gases (GHG), and
- steps taken or envisaged to implement the Convention.

The UNFCCC recommends and provides for (Article 4, Paragraph 3) the development of indigenous capacity within the countries to prepare the inventory of emissions, sinks and measures possible/ taken implement the UNFCCC.

While the commitment and the sensitivity of the Government of Lao PDR with global environmental concerns in general, and climate change in particular, is reflected in the ratification of the UNFCCC, limited capacity of the Government agencies has hindered the development of either a national climate change strategy or any project in this area. there is a relative lack of awareness of

issues related to climate change and Lao PDR's commitments under UNFCCC. This is possibly the reason for the absence of any official strategy document or approach paper on how the UNFCCC obligations would be fulfilled by the Government. Issues directly related to climate change do not appear in the *National Environmental Action Plan*. In addition, there is no Government, multi- or bi-lateral sponsored activity directly in the climate change area in Lao PDR.

It is expected that this project would increase awareness in Lao PDR of issues related to climate change and of the obligations under the UNFCCC. The project also aims to enhance the capacity of the relevant Government agencies, particularly the Science Technology and Environmental Organization (STENO), to analyze issues related to the global environment, formulate a climate change strategy for Lao PDR, and further develop STENO's capabilities as a national environmental planning and management agency.

Prior and ongoing assistance

There are no multi- or bi-lateral sponsored activities, specifically related to the area of climate change in the Lao PDR. Forestry and related upland farming, and agro-forestry systems have been major focus of donor assistance and are likely to benefit climate change related activities in the Lao PDR, in addition to fulfilling their primary objectives in the forestry sector. Capacity building in selected Government agencies for environment policy and management has also received the attention of some donors and these are summarized below insofar as they are likely to be interest to the activities proposed in this project.

Swedish International Development Authority (SIDA) has been, and continues to be, a key donor to the forestry sector of Lao PDR. Together with Asian Development Bank, Food and Agriculture Organization (FAO), International Development Association (IDA) and the United Nations Development Programme (UNDP), SIDA assisted the Government in preparing the Tropical Forestry Action Plan in 1991. SIDA is currently providing substantial financial (US\$ 18.5 million in the period 1992-95 under the *Lao-Swedish Forestry Programme*) and technical assistance to the Department of Forestry of the Ministry of Agriculture and Forestry for forest inventory and management planning, silviculture research and development, and training. SIDA is also supporting the IUCN (World Conservation Union) implemented project on conservation management and environmental protection. At the field level, SIDA plans to continue assistance for the implementation of management of protected areas and test community forest management models.

The World Bank financed *Forest Management and Conservation Project*, which is co-financed by FINNIDA (Finnish International Development Agency) and the Global Environment Facility in the biodiversity focal area (GEF project entitled *Wildlife and Protected Area Management*) hopes to further the SIDA efforts. The objectives of this five year, US\$ 20.3 million project include

- implementation of an appropriate institutional framework and formulation of the necessary regulatory framework for the forestry sector;
- implementation of national programme on (i) forest resource inventory and planning; (ii) sustainable forest management and protection; and (iii) establishment and management of protected areas;
- human resource development; and
- technical assistance.

The project would zone an estimated total forest area of 500,000 ha which are to be delineated into village, protection, conservation and production forests and placed under sustainable forest management and protection.

There are some efforts to enhance the capabilities for environmental planning in other sectors besides forestry. The focus of these activities has been on enabling STENO to fulfil its mandate of becoming the national environmental planning and management agency and implementing national strategies such as the *National Environmental Action Plan* (NEAP). The lack of manpower skills within STENO is a major constraint in designing and implementing plans to achieve its mandate such as that of implementing NEAP. The lack of adequate human capacity means that environmental planning and regulation activities are not carried out effectively and are residual rather than a central activity within STENO. The project funded by the World Bank not only hopes to further develop and define STENO's mandate and capabilities as a national environmental planning and management agency, it also hopes to develop the guidelines for different sectoral environmental impact assessment system. It is expected that the proposed project and the training activities that it envisages would complement the ongoing efforts of enhancing skills within STENO to develop it as the national environmental planning and policy agency.

2. PROJECT OBJECTIVES

The short-term objectives of the project are to fulfill Laos PDR's obligations under Articles 4 and 12 (Communication of Information Related to Implementation), paragraph 1 of the UNFCCC. In accordance with Article 4, paragraph 1, each Party shall communicate to the Conference of the Parties, through the Secretariat, the following elements of information:

- (a) A national inventory of anthropogenic emissions by sources and removal by sinks of all greenhouse gases not controlled by the Montreal Protocol, to the extent capacities permit, using comparable methodologies to be promoted and agreed upon by the Conference of the Parties;
- (b) A general description of steps taken or envisaged by the Party to implement the Convention.

The project will provide special emphasis under objective (a) to determining emissions and sinks from land-use change in the Lao PDR. In addition, the project will initiate the preparatory work under the UNFCCC and will lay the foundation for future activities under the Convention.

The objectives will be met through:

- Improving the institutional and technical capacity of Lao PDR to comply with the requirements of the UNFCCC by fulfilling the reporting requirements under Article 12 of the UNFCCC by March 1997;
- Facilitating the development of Lao national approaches to the UNFCCC and include these in the official first Lao PDR communication to the UNFCCC; and
- Strengthening the capacity of Lao PDR to develop and implement climate change projects that also advance long term development objectives and to generate donor and private sector funding support.

Long-term Project Objectives

On a long-term basis, the activities proposed by this project will further the fulfillment of another commitment under Article 4 (Commitments), Para 1:

"All Parties, taking into account their common but differentiated responsibilities and their specific national and regional development priorities, objectives and circumstances, shall:

- (f) Take climate change considerations into account, to the extent feasible, in their relevant social, economic and environmental policies and actions, and employ appropriate methods, for example impact assessments, formulated and determined nationally, with a view of minimizing adverse effect on the economy, on public health and on the quality of the environment, of projects and measures undertaken by them to mitigate or adapt to climate change;

3. PROJECT DESCRIPTION

Location

The proposed project will be located within the Science Technology and Environmental Organization (STENO) in the Prime Minister's Office of the Government of Lao PDR.

STENO has been designated as the coordinating agency for all matters relating to the environment. Hence, the location of the project at STENO is expected to facilitate the cooperation of the different line ministries and agencies in the effort of the project to enhance and/or create the relevant capacity to meet Lao PDR's commitments under the UNFCCC.

Specific Outputs and Activities

The objectives of the project are to create/enhance local capability to

- develop baseline inventory of anthropogenic emissions of GHG by different sectors and to regularly update this inventory,
- identify national sinks for GHG's, and
- develop national strategies, policies, plans and programs for reducing the GHG emissions.

Following consultations with the Government of the Lao PDR it was decided not to include a component in the project on adaptation/vulnerability assessment as part of this project as this was not considered appropriate at this point in time. However, the Government of the Lao PDR reserves the right to request GEF funding in the future for climate change activities related to adaptation and vulnerability assessment in order to complete its national communications to the Conference of Parties. The immediate operational objectives of the proposed project, the outputs and the activities associated with each individual output is summarized below.

Objective 1: Create and/or enhance the national capacity to prepare inventories of GHG emissions and sinks to meet the national commitments under Article 12 of the UNFCCC.

Output 1.1: Establishing a Technical Working Group within Science Technology and Environmental Organization (STENO) and enhancing capacity of the Technical Working Group for generating national GHG inventories and mitigation strategies for implementing the UNFCCC. The Technical Working Group will

Activity 1.1.1: Identify the human and technical requirement for Lao PDR to fulfil the UNFCCC commitments.

Activity 1.1.2: Constitute the following:

- (a) Technical Working Group within STENO linked with the Inter Ministerial Working Group, drawing appropriate expertise from relevant line ministries and government agencies as necessary.
- (b) local Support Network (both inside and outside STENO, including relevant Government line agencies, research and academic institutions and the non-government sector) to provide guidance to the Technical Working Group in STENO; and
- (c) National Climate Change Committee of local, regional and, if required, international experts.

Activity 1.1.3: Enhancing the capacity of the Technical Working Group and Support Network through training and participation in national and regional workshops. This activity would involve identifying and creating strong links to both national and international sources of information (such as the USCS, UNEP, IPCC, CC:Train, ALGAS, other bi-lateral programmes as well as ongoing national projects and programmes in order to undertake specific tasks of the project. Learn from experiences of similar kinds of projects elsewhere would be evaluated and taken into account as appropriate. One of the main goals of the project will be to find potential international partners to cooperate with. To the extent possible electronic networks (Internet and WorldWide Web) are used to save travel costs and enhance the geographical coverage of available information.

In particular, capacity will be enhanced through participation and close collaboration with other ongoing activities in the region such as:

- (a) UNDP/GEF *ALGAS* (Asia Least-cost Greenhouse gas Abatement Strategies) project for inclusion of the members of the Lao PDR Technical Working Group to participate in *ALGAS* workshops.
- (b) *CC:TRAIN* programme of the United Nations Institute for Training and Research (UNITAR) and the Climate Change Secretariat to arrange for the *CC:TRAIN* materials (*CC:TRAIN Workshop Package*, *CC:TRAIN Guide on Preparing National Implementation Strategies* and the *CC:TRAIN Operations Manual*); and
- (c) *US Country Studies Programme* to examine the possibility of members of the Technical Working Group to participate in the training workshops of the *US Country Studies Programme*.

This activity would involve (i) reviewing CC:Train and other relevant materials including translating them into Lao, (ii) reviewing national GHG inventory work undertaken by the ALGAS project and applying it to the Lao PDR (iii) adapting this material to the particular circumstances of Lao PDR and (iii) preparing manuals.

Output 1.2: Establish a system for preparing inventories on an ongoing basis to fulfil Lao PDR's reporting requirements under the UNFCCC. The creation of such a system will result in the setting up of a data collection and management system for preparing inventories on an ongoing

basis. As a part of this exercise, a draft manual for accounting for GHG emissions and sinks (also translated to Lao) will be prepared.

Activity 1.2.1: Identify the data requirements and assess at availability of the data (to identify data gaps) in the country for preparing inventories based on the *Intergovernmental Panel on Climate Change (IPCC) Guidelines for National Greenhouse Gas Inventories*.

Activity 1.2.2: Organize workshops (with the participation of GEF/UNDP, Ministry of Agriculture and Forests, Ministry of Industries and Handicrafts and other relevant local agencies in addition to the Technical Working Group, National Climate Change Committee and the Support Network) to develop a plan to fill the data gaps and to prepare a national GHG inventories.

Activity 1.2.3: With the local data, develop current and projected baseline GHG inventories (of both, emissions and sinks) following the *IPCC Guidelines* to the extent feasible. Undertake research work, literature review and surveys, as appropriate, to reduce data gaps. In the process, establish data collection and management system to acquire data to prepare inventories on a regular basis. Compile inventories on the basis of the plan outlined in Activity 1.2.2. A major emphasis of activity will be on collecting data on emissions due to land use change and on removal by sinks of green house gases.

Activity 1.2.4: Finalize the draft manual for preparing greenhouse inventories.

Activity 1.2.5: Finalise, publish and circulate the GHG inventories. Request comments and suggestions on the published inventories. Attempt to coordinate sharing of the results with *ALGAS Project*, *US Country Studies Programme*, and *CC:TRAIN*.

Objective 2: Prepare the first national GHG mitigation strategy and thus initiate the process of developing national capacity to identify, analyze, and formulate viable GHG abatement measures. Build and/or enhance capacity within the Government, academic and research institutions and other relevant institutions on the non-government sector to participate in the process and to undertake studies relating to GHG mitigation.

Output 2.1: Development of a (a) list of promising GHG abatement measures in the context of the Lao PDR's national objectives and priorities; (b) 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. The development of methodology and subsequent efforts should draw upon the ongoing work in the region by *ALGAS*, *US Country Studies Programme*, *CC:TRAIN*, etc.

Activity 2.1.2: Examine the GHG abatement measures by sources and sectors of emissions, to the extent possible, to prepare promising measures in the local context. This should be based on the potential for GHG abatement based on the baseline inventories developed, costs and other factors that the Technical Working Group, the National Climate Change Committee, the Support Network, and/or external expert(s) may consider relevant. Analyze the impact of the measures on the projected baseline inventories.

Activity 2.1.3: Discuss the outputs of Activity 2.1.2 in a workshop with national and international experts. Attempt to coordinate sharing of the results and receiving comments from *ALGAS Project*, *US Country Studies Programme*, and any other similar project/ forum.

Activity 2.1.4: Prepare the first national greenhouse gas mitigation strategy for the inclusion in the first communication of the Lao PDR to the UNFCCC. In addition, based on the work done in developing mitigation strategies, develop a briefing package for potential funders of climate change projects.

Objective 3: Prepare National Implementation Plan for the Lao PDR and the first national communication of the Lao PDR to the Climate Change Secretariat for fulfilling the communication requirement under Article 12 of the UNFCCC.

Output 3.1 National Implementation Plan using Outputs of the Project

Activity 3.1.1 National Workshop (with local participation and relevant international partners) to present the results of the project, together with the results or status of other ongoing national projects relevant to the issue, with the objective of formulating a National Implementation Plan for the Lao PDR to implement the UNFCCC.

Output 3.2 First National Communications for the Lao PDR

Activity 3.1.2: Put together and submit the first national communications to the Conference of Parties through the Climate Change Secretariat.

4. Rationale for GEF financing

Incorporating environmental concerns into development planning is in the nascent stages in the Lao PDR. While many of the environmental concerns (such as slash and burn agriculture which effects over 300,000 ha annually) in Lao PDR can be related to climate change, there is a need to sensitize the decision makers to incorporate such concerns in the planning process. Due to inadequate information of the risks of climate change and its causes this project would not take place without GEF support. A valuable opportunity to influence the integration of climate change considerations into national development goals would have been lost.

In addition, there are currently no other climate change "enabling" activities ongoing or planned for the Lao PDR at this point in time. This provides a strong rationale for GEF funding for this project to enable the Government of the Lao PDR to complete its first national communications to the COP. In accordance with Article 4, paragraph 1, each Party to the Convention is obliged to communicate to the COP a national inventory of anthropogenic emissions by sources and removal of sinks of all greenhouse gases and a description of steps taken or envisaged to implement the convention. The proposed project facilitates the implementation of the objectives of the UNFCCC and will lay the foundation for the future implementation of measures for GHG abatement in the Lao PDR.

As an enabling activity, GEF will meet the agreed full costs of the project.

Finally, the project is consistent with enabling activity and capacity building objectives listed in INC document (A/AC.237/90/Add3) prepared jointly by the interim Secretariat of the UNFCCC and the GEF Secretariat in order to facilitate coordinated and timely assistance to countries for

implementation of the project. It is also fully consistent with the Interim Guidance for programming of GEF resources for 1995 which emphasizes "enabling activities" as a priority in the short-term for GEF.

5. Sustainability and Participation

The project's emphasis on training, capacity building and institutional development coupled with the establishment of a functioning and active national network (National Climate Committee) is the primary mechanism that will promote the sustainability of the project objectives beyond the period of GEF support. In addition, the project's emphasis on long-term mitigation strategies that are compatible with long-term food security and poverty alleviation will help stimulate national long-term support for the services and activities of the project.

6. LESSONS LEARNED AND TECHNICAL REVIEW

There have been no climate change related activities in Lao PDR, to date. However, previous technical reviews of enabling projects for the UNFCCC have noted the importance of cooperation and networking of a broad range of experts. This has been specifically provided for in this project. Technical reviews of this proposal by STAP roster experts have noted the importance of providing for a clear and logical sequencing of activities and the need to carefully review the inventory work being undertaken by other related projects in the region before commencing with this project. These concerns have been incorporated into the revised project brief. The proposal was not modified, as suggested by the reviewer, to include as a project activity the identification of a future GHG reduction project as this activity would in future be undertaken under the PDF.

7. PROJECT FINANCING AND BUDGET

Estimates of the estimated project expenses for the major expenditure categories by each objective is summarized below. The estimates for the costs of achieving each objective are as follows:

COST BY EACH OBJECTIVE:	Total Cost:
<u>Objective 1: Capacity Building for GHG Inventories</u>	135,000
<u>Objective 2: GHG Mitigation Strategy</u>	85,000
<u>Objective 3: National Implementation Plan and First National Communications</u>	55,000
Project Document Preparation	10,000
Evaluation and Monitoring (2%)	5,700
Project Support Services and Executing Agency Support Costs (8%)	23,300
UNDP/GEF CONTRIBUTION:	313,000
Lao PDR Contribution:	100,000
TOTAL PROJECT COSTS:	413,000

8. INCREMENTAL COSTS

As an "enabling activity" under Article 12 of the UNFCCC, the agreed full costs of this project would be paid in full by the GEF. As the activities described in this proposal have not been undertaken by the Lao to address their development goals but are required on account of the United Nations Framework Convention on Climate Change (UNFCCC) the *baseline* does not involve any action or expenditure. Consequently, the incremental costs of the project are equal to the full costs.

9. ISSUES, ACTIONS AND RISKS

The project's emphasis on training, capacity building, and institutional development will ensure the sustainability of the project objectives beyond the period of GEF project. By locating the project within the Science Technology and Environment Organization (STENO), the likelihood of sustainability of the efforts beyond the project duration has been maximized. By relying on STENO and its affiliate organizations, effort has been made in the project design to significantly enhance capacity for climate change related issues.

10. INSTITUTIONAL ARRANGEMENTS FOR PROJECT DEVELOPMENT AND IMPLEMENTATION

The project will be located at Science Technology and Environment Organization (STENO). The overall coordination of the execution of the project will be managed by the United Nations Development Programme (UNDP) field office in Vientiane through a Project Coordinator. In addition, the proposal visualizes a Project Director at STENO to be responsible for ensuring effective functioning of the Technical Working Group. The project, therefore, visualizes that the:

- Science Technology and Environment Organization (STENO) will be the lead agency for the project implementation since it is responsible for the implementation of the UNFCCC;
- National Climate Committee (NCC), which will be constituted by STENO in consultation with other line ministries and agencies, will provide advice to STENO and will be the body charged with the technical oversight of project execution;
- Technical Working Group (TWG) within STENO which will be responsible for fulfilling the countries commitments under Article 12 of the UNFCCC. While the Technical Working Group would be responsible for the execution of the project, the National Climate Committee would be the body charged with the technical oversight and guidance to the Technical Working Group; and
- Support Network comprising of individuals, NGO's, research institutions, and national and international experts for technical support, as required, to the working group.
- Inter-Ministerial Working Group (IMWG) on the Environment will have an oversight role for the project.

The project will establish links with other projects being carried out by other GEF implementing agencies or by other multilateral and bilateral organizations as elaborated upon earlier in the documentation.

11. MONITORING AND EVALUATION

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 three months for evaluation by the National Climate Change Committee. The report would also be forwarded to the Support Network for review. A project terminal report will be reviewed at the final tripartite review meeting and shall be prepared in draft form at least 4 months prior to the final tripartite meeting.

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.

12. SCHEDULES/ DURATIONS

The key activities and their expected duration is summarized below in Annex 1. For more details on the activities, refer to Section 3 (*Project Description*). Annex 2 provides a capacity table matrix for the Lao PDR for climate change enabling activities.

13. LIST OF ANNEXES

ANNEX 1 - SCHEDULE OF ACTIVITIES

ANNEX 2 - CAPACITY BUILDING TABLE FOR CLIMATE CHANGE ENABLING ACTIVITIES FOR THE LAO PDR

ANNEX 3 - STAP TECHNICAL REVIEW

ANNEX 1 - Schedule of Activities

[illegible]

ANNEX 2
CAPACITY TABLE FOR CLIMATE CHANGE ENABLING ACTIVITIES IN LAO PDR

Enabling Activity	Planning	Instit Strength	Training	Research	Education
Background Information for National Communication					
Emission inventory					
- CO2 from energy sources	X	X	X	X	X
- CO2 from land use changes	X	X	X	X	X
- CH4	X	X	X	X	X
- N2O	X	X	X	X	X
- other sources and gases	X	X	X	X	X
Mitigation Options					
Energy related					
- industry	X	X	X	X	X
- transport	X	X	X	X	X
- residential	X	X	X	X	X
- energy supply	X	X	X	X	X
- other	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
Vulnerability Assessment					
- agricultural sector	0	0	0	0	0
- forestry	0	0	0	0	0
- coastal zone	0	0	0	0	0
- water resources	0	0	0	0	0
- health impacts	0	0	0	0	0
- natural ecosystems	0	0	0	0	0
- other impacts	0	0	0	0	0
adaptation options (stage 1)	0	0	0	0	0
National Plans					
- national plan (mitigation)	X	X	X	X	X
- national plan (adaptation)	0	0	0	0	0
- other elements?	X	X	X	X	X

Formulation of National Communication					
- inventory	X	X	X	X	X
- mitigation options	X	X	X	X	X
- vulnerability and adapt.					
- information on research and observation	X	X	X	X	X
- information on education	X	X	X	X	X
- other relevant information	X	X	X	X	X

Table

X	= Areas to be covered by the proposed project
'\$\$\$'	= Areas already covered by other projects or programs; Following acronyms are used: ADB = Asian Development Bank ALG = ALGAS Project CCT = CC:TRAIN GEF = Other Regional or Country Specific GEF "Enabling" Project GTZ = German Agency for Technical Cooperation OEC = OECD/IPCC Programme UNE = UNEP-GEF Country Case Studies UNR = UNEP-RISO Greenhouse Gas Abatement Costing Studies US = U.S. Country Studies Program
'X(\$\$\$)'	= Some preliminary activities have already been undertaken, but completing activities presented in the proposed project are needed to finalize the task
0	= Remaining ability gaps
'0(\$\$\$)'	= Some preliminary activities have already been undertaken, but completing activities not undertaken by the proposed project might be needed to finalize the task
NA	= Non-applicable or nonsensical entry (e.g coastal vulnerability assessment for land-locked country)

ANNEX 3

LAO PDR: NATIONAL GREENHOUSE INVENTORY PROJECT

1. OVERALL IMPRESSIONS

The project addresses the two key obligations of the Framework Convention on Climate Change, i.e., the development of an inventory of greenhouse gases (GHGs) and the description of steps taken or envisaged by Lao PDR to implement the convention, which every signatory is required to satisfy. The project will enhance the capacity of Lao PDR to prepare an inventory, develop an inventory of GHG emissions, and describe the steps to implement the convention's requirements.

The overall project proposal is sound and the proposers are cognizant of the various ongoing bilateral and multilateral activities. The proposal mentions the identification of a project idea as one output/activity. I would suggest broadening this to include the identification of many projects, which might become suitable candidates for a GHG reduction project.

2. APPROPRIATENESS OF THE PROJECT APPROACH

The general approach is appropriate and the project will lead to the preparation of an emissions inventory. The project should explicitly consider the determination of new GHG coefficients in order to modify the default ones provided by the IPCC. This has been a source of intense discussion between IPCC methods developers and practitioners in developing countries.

3. OBJECTIVES OF THE PROJECT

The objectives stated in the proposal are appropriate for a project focused on the development of an inventory.

4. ACTIVITIES

The activities stated in the proposal are appropriate for a project focused on the development of an inventory.

5. COUNTRIES

The proposal is for Lao PDR, so no other countries are involved.

6. OMISSIONS IN BACKGROUND DISCUSSIONS

The background sector should refer to the many inventories that have been completed under the bilateral and multilateral programs. The inventory work being conducted as part of CC:Train, ALGAS, US Country Studies and others should be carefully reviewed prior to the start of the project so that the inventory can learn from the experience from these studies.