



**United Nations Development Programme**

GLOBAL ENVIRONMENT FACILITY



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GEF SECRETARIAT

*Mohamed*  
Dear Mr. El-Ashry,

I am pleased to enclose a copy of the UNDP project document for the climate change enabling activity project entitled "Lao People's Democratic Republic: National Greenhouse Gas Inventory" for your review and final clearance.

This project was approved by the GEF Council in the 25-27 October 1995 session. The project document takes into full consideration GEF Council comments regarding the institutional capacity of Lao P.D.R. to implement the project. The project strategy focusses on human and institutional strengthening, in particular of the Science, Technology and Environment Organization (STENO), the lead agency responsible for FCCC implementation, thus directly addressing the issue of Lao's capacity. Furthermore, the project, at completion, will also enhance the capability of other participating institutions in Lao P.D.R.

Moreover, the project provides for technical backstopping of Lao's capabilities by institutes of excellence within the region with considerable experience in this field. Tata Energy Research Institute (TERI) and the National Physical Laboratory, both located in New Delhi, India and the Asian Institute of Technology (AIT) in Bangkok, Thailand, have been identified to extend their support especially for inventory and mitigation analysis during the project implementation phase.

Mr. Jan Mattsson, the UN Resident Coordinator, in his letter of 19 December 1995 addressed the comments of the GEF Council as well as the issues raised in the letter from 4 members of the House of Representatives, USA. This letter which was copied to you, and is attached for ease of reference, reconfirms the central role of STENO, in ensuring Government of Laos' compliance with international treaty obligations and implementation of sustainable development activities in the country. Beyond the support being provided to STENO through

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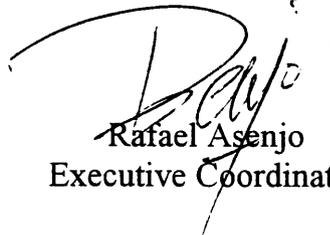
Mr. Mohamed El-Ashry  
Chief Executive Officer  
Global Environment Facility  
Room G6005  
1776 G Street  
Washington, D.C. 20433

the GEF project, the UN Resident Coordinator's letter also elaborates on the capacity building and institutional support being provided to STENO, through ADB, World Bank and other key bilaterals. UNDP is confident of Government's commitment to the project and has ensured that there is no overlap with any other activities being undertaken in Lao PDR.

As per paragraphs 29 and 30 of the GEF project cycle, we are submitting this project to you for circulation to the Executive Council for comments and subsequently for your final endorsement.

Thank you in advance for expediting the review and approval of this project.

Yours sincerely,



Rafael Asenjo  
Executive Coordinator

Enclosures:

1. Letter from Mr. J. Mattsson, Resident Coordinator, Lao P.D.R. to 4 members of House of Representatives, USA.
2. Project document: "Lao People's Democratic Republic: National Greenhouse Gas Inventory"



PRO 303/GEF

19 December 1995

Dear Representative Gilman,

It is my honor to refer to your 31 October letter to Mr. Mohamed T. El-Ashry, CEO and Chairman of the GEF Secretariat which has recently come to my attention. As the Resident Coordinator of the UN System in Laos and the Resident Representative of UNDP, I can assure you that concerns such as those you have expressed regarding the Lao Government's capacity to honor and implement the Framework Convention on Climate Change are taken very seriously by this office.

Over the last decade, UNDP and the donor community at large have invested significant resources to assist Laos to move towards a market driven, privatized economy. The principle focus of UNDP has been in efficient governance and administration (including establishing a commercial legal enabling environment for private sector expansion) and the decentralization of federal authority to state, district and village level actors. We believe that by reinforcing the capacity of the private sector and of governmental bodies and individuals at the local level, we help provide the government with the impetus to broaden the reforms begun in 1988 as quickly as possible while spreading the benefits to the neediest segments of the population.

You will be pleased to note as well that UNDP and other donors have given strong attention to the need to build up institutional capacity for environmental oversight of development activities in Laos. As this is the issue of concern raised in your letter, I will focus my remaining comments on this aspect specifically.

The Asian Development Bank, the World Bank, UNDP and key bi-lateral donors have provided support to establish and strengthen the institutional capacity of the Lao Science, Technology and Environment Organization (STENO) which was established only in 1993. STENO's principal function is to monitor environmental compliance across a broad swath of economic, social and other developmental activities. STENO's coverage includes the establishment and monitoring of air and water quality standards, the control of industrial emissions, screening all proposed public and private investments for environmental impact and the development of environmental regulations.

Representative Ben Gilman  
Chairman,  
International Relations Committee  
House of Representatives  
Washington, DC 20515  
USA

(the same letter had been sent to the attached list)



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STENO is also responsible for ensuring compliance with the country's international environmental treaty obligations. Indeed, one critical task of UNDP in Laos is to ensure that the government fully inures to its responsibilities as a member of the global community. UNDP invests significant human and financial resources to promote the signature, ratification and implementation of international environmental treaties and conventions. In light of your concerns, we are pleased to report that the Convention on Biological Diversity has been submitted by STENO to the Council of Ministers for Ratification. The government has also indicated its desire to join the Montreal Protocol.

Because of STENO's broad mandate and institutional inexperience, it is in need of significant additional assistance. Your letter correctly notes a concern with the government's capacity to enforce and implement the treaty obligations contained in the Framework Convention on Climate Change. While we are confident that the Government intends to be a reliable partner in this area, this will not be possible without technical support and financial assistance from GEF.

I should note that the submission of the climate change enabling project to GEF had always figured as a critical element of the Government/UNDP long term strategy to ratify and implement the Framework Convention on Climate Change in Laos. Without it, for example, STENO will not be able to develop a critical national data base on GHG emissions, sinks, land use patterns, energy demands and other areas of concern which this project specifically intends to address. Thus, your support of the Lao Climate Change enabling project can only ensure the outcome that we all share--the effective implementation of the Framework Convention on Climate Change worldwide.

I would be most pleased to provide you any additional background on this issue you may require. In the interim, please be assured of my highest regards and appreciation for the opportunity to provide this information to you.

Sincerely yours,



Jan Mattsson  
Resident Representative

- cc. - Mr. Mohamed T. El-Ashry, CEO and Chairman, The GEF Secretariat, Washington, DC 20433  
- Mr. Nay Htun, Assistant Administrator and Director, RBAP, UNDP, New York

Representative Ben Gilman  
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Representative Chris Smith  
Chairman,  
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## **BACKGROUND AND CONTEXT**

### **DESCRIPTION OF SUBSECTOR**

1. The Lao PDR (Population: 4.8 million, Area 236,800 square kilometers, GDP Per Capita: US\$335 (1994), growth rate 2.9%) ranks among the poorest and the least developed countries of the world. Its economy is virtually undiversified and depends largely on its natural resource base and in particular the forestry sector. There is no heavy industry or large scale manufacturing base in the Lao PDR and environmental damage from these sources is a minor concern in comparison to resource management concerns in the agriculture and forestry sectors. Although the economy is expected to diversify and grow in the coming years as a result of *New Economic Mechanism* (NEM) reforms initiated in 1985 to re-orient the country toward a market economy, the manufacturing and industrial sector is not expected to take-off extremely rapidly and the economy is likely to remain primarily based upon export of electricity (primarily hydro) and forest products. Agriculture and forestry account for 60% of GDP and occupy over 85% of the labor force. Timber products, hydropower, and coffee account for over 70% of the Lao PDR's foreign exchange earnings. 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...".

2. A key environmental concern highlighted in the NEAP was the rapid resource degradation of forest resources in the country. The 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 population. 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. Approximately on average 67,000 hectares of closed canopy forests have been lost every year. 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.

3. The problem of shifting cultivation lies in the expansion of area under slash and burn practices and declining periods of fallow. Because of increasing population pressures, average fallow periods have been reduced from 12 years to as little as 3 to 5 years. Although much of the land used in slash and burn reverts to forest after a few years, some remain unstocked. This reduces the total forest area.

4. The Government's strategy in the uplands is to develop sustainable agro-forestry systems. In the lowlands and plateaus, programs to increase productivity and sustainability of agriculture are seen as the way to help reduce shifting cultivation problems on lower slopes. While the number of upland research projects in recent years have contributed to identifying the environmental and sustainable problems associated with shifting cultivation, no solutions

that are technically sustainable, economically viable, and socially acceptable have yet been identified.

5. As a result of pressure on the forest resources, much of the attention of environmental policy in Lao PDR has focused 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.

6. However, despite these efforts, the process of incorporating environmental concerns into economic and social planning remains in a nascent stage in Lao PDR. Government agencies, and in particular STENO, are looking to devote resources towards 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.

7. The Lao PDR is richly endowed with hydropower resources and it contains the highest per capita availability of renewable freshwater in all of Asia. The combination of a large area of mountainous terrain (80% of the surface area can be classified as hilly and mountainous) with heavy rainfall provides for excellent hydro-electricity generating capacity. Current installed capacity is approximately 220MW, which includes the 150MW Nam Ngum facility which covers the Vientiane plain and 45MW for the Xeset plant in Saravan province, but this figure is expected to grow rapidly given the large demand for export of electricity to Thailand. At present, 80% of electricity generated is being exported. In addition, 15MW of electricity is produced through diesel powered generators, much of which is aging machinery. A 600MW lignite fired power plant (with potential to be expanded to 1,200MW) is in the planning stage (a feasibility study has just been completed) and it is anticipated that this plant would be built for further export of electricity to Thailand. The Lao PDR government has recently signed an agreement with the government of Thailand to export 1000 MW of electricity to Thailand by the year 2000. There is no indication at the present time that climate change concerns will play any role in determining how or under what conditions this electricity is generated. Electricity exports make up the second largest foreign exchange earner for the Lao PDR (after Forestry) accounting for approximately 25% of all export earning. Given increased pressure to sustainably manage forests in the Lao PDR and the potentially even larger foreign exchange earnings from increasing electricity generation capacity, it is certain that this sector will be significantly expanded over the years to come.

8. Total hydropower generation potential for the Lao PDR, estimated to be in the region of 12,000 - 13,000 MW, has barely been tapped. Yet only approximately 17% of the population (growing at 2.9% annually) in the Lao PDR currently has access to electricity and annual power consumption per capita is among the lowest in Asia (325kWh). Rural electrification is expected to proceed very slowly. While three distribution grids operate; (a) the Northern grid covering the Vientiane plain, (b) a Southern grid covering Saravane, Champassak, Sekong, and Attapeu and (c) small networks in Savannakhet and Thakhek which depend upon Thai supplies, just under 4 million people (most of the rural population) still do not have access to electricity. The expansion of the grid and increasing rural electrification is stated by the Government as being a top priority. The 1991 Public Investment Programme of the Government stated:

"Expansion of the distribution network for electricity in the Lao PDR is given high priority, because there is considerable latent demand for electricity. The unavailability of electricity is hampering other economic activities."

9. However, prospects for future power development in the Lao PDR are driven primarily by external demand (primarily in Thailand) and therefore prospects for the Government supporting wide scale rural electrification are limited in the short-term. Domestic electricity prices in the Lao PDR are controlled by the Government and remain very low.

10. The GDP of the Lao PDR has grown at over 8% per year over the last two years (1993 and 1994), mainly as a result of increased export earnings in the Forestry Sector, and it is expected to continue to grow at this rate through to the year 2000. As the economy continues to grow rapidly, pressures on the environment will increase and therefore there is a pressing need to more fully incorporate environmental concerns quickly (including climate change concerns) into the development planning process.

### ***Climate Change and Lao PDR***

11. The Lao PDR, having ratified the United Nations Framework Convention on Climate Change (UNFCCC) on January 5, 1995, 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.

12. 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 taken to implement the UNFCCC.

13. The main output of this project will be to enable the Government of the Lao PDR to meet these reporting obligations under the Framework Convention on Climate Change through

the development of an initial National Communications to the Conference of Parties. In addition, it is expected that the project will result in an enhanced capacity and increased awareness of climate change issues in general that will allow for their incorporation into the environmental and development planning process. The project also aims to enhance the capacity of the relevant Government agencies, particularly the Science, Technology, and Environment Organization (STENO), to analyze issues related to climate change, including formulating a climate change mitigation strategy for the Lao PDR, and further developing STENO's capabilities as a national environmental planning and management agency.

## **HOST COUNTRY STRATEGY**

14. While the commitment and sensitivity of the Government of Lao PDR to global environmental concerns 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. This will be the first project aimed specifically at climate change in the Lao PDR. There remains 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* and no Government, multi- or bi-lateral sponsored activity is directly in the climate change area in Lao PDR.

15. Notwithstanding this lack of full understanding on climate change issues, maximum and mean temperatures recorded for the entire country by the Department of Meteorology and Hydrology have already shown significant increases over the last 40 years. For example, minimum recorded temperature for the winter has been raised from 5 degrees centigrade (1945-55) to 11 degrees centigrade (1975-85).

## **PRIOR AND ONGOING ASSISTANCE**

16. As has already been mentioned, 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 enabling activities in the Lao PDR, in addition to fulfilling their primary objectives in the forestry sector. The data being collected in many of these projects will be highly useful as inputs that contribute to this project. Capacity building in selected Government agencies for environment policy and management has also received the attention of some donors and these are summarized below in so far as they are likely to be of relevance to the activities proposed in this project.

17. **Swedish International Development Authority (SIDA)** has been, and continues to be, a key donor to the forestry sector of Lao PDR. Together with the Asian Development Bank (ADB), Food and Agriculture Organization (FAO), International Development Association

(IDA) and the United Nations Development Programme (UNDP), SIDA has 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.

18. **The World Bank** financed *Forest Management and Conservation Project (IDA/GET/FINNIDA)*, which is co-financed by FINNIDA (Finnish International Development Agency) and the Global Environment Facility (GEF) in the biodiversity focal area (GEF project entitled *Wildlife and Protected Area Management*) aims 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.

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

20. Ongoing efforts aim to enhance the capabilities for environmental planning in other sectors besides forestry. The focus of these activities has been on enabling STENO to fulfill its mandate of becoming the national environmental planning and management agency and implementing national strategies such as the *National Environmental Action Plan* (NEAP). The recent formation of STENO and its relatively weak 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 (IDA/GET/FINNIDA) project aims to further develop and define STENO's mandate and capabilities as a national environmental planning and management agency, and develop the guidelines for different sectoral environmental impact assessment systems. The proposed project and the training activities that it envisages will complement the ongoing efforts of strengthening the capacity of STENO to develop as the national environmental planning and policy agency.

## INSTITUTIONAL FRAMEWORK FOR SUBSECTOR

21. 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 Environment Organization (STENO) which was re-constituted in 1993. Line ministries, departments, and agencies with responsibilities related to climate change are outlined in the following chart:

Ministry:	Department(s)/Divisions(s)	Area related to Climate Change Issues:
Science Technology and Environment Organization (STENO) - <i>Coordinating Agency for Environment Sector</i>	- Department of Environment (DOE) (including IRMC) - Department of Industrial Property, Standardization and Metrology (DIPSM)	- Overall Responsibility and Coordinating Role for Environment and Energy - Setting Environmental Standards (e.g. waste water)
Ministry of Agriculture and Forestry (MAF)	- Department of Forestry - Department of Agriculture and Extension - Department of Meteorology and Hydrology	- Forestry, Agriculture, Shifting Cultivation, biodiversity, Watershed, Management of Protected Areas, etc. - Hydrological data, Climatological data, etc.
Ministry of Industry and Handicrafts (MIH)	- Department of Industry - Department of Geology and Mines - Division of Environment - Hydropower Office	- Industrial pollution, Air pollution - Hydropower development
Ministry of Communications, Transport, Post and Construction	- Department of Transport Planning - Department of Housing and Urban Planning	- Vehicle emissions - Household waste and Municipal waste burning, methane emissions
Ministry of Public Health (MPH)	- Department of Preventive and Curative Medicine and Rehabilitation	- Hospital waste - Occupational health standards
Committee for Planning and Cooperation (CPC), National Statistics Center (NSC) <sup>1</sup>	- National Statistics Centre - Department of Strategic Planning - Department of Public Investment	- National socio-economic data - National development - Public Investment programming

<sup>1</sup> Committee for Planning and Cooperation (CPC) has been split into two bodies: State Planning Commission (SPC) and Aid Coordination and Monitoring under the Prime Minister's Office. The decision to this effect was taken during the recent Congress of the governing People's Revolutionary Party, but so far the CPC continues to function as usual.

The specific roles of the different agencies are briefly described below.

22. **Science Technology and Environmental Organization (STENO):** With over 40 senior technical officers, STENO has been designated as the coordinating agency in the environment sector and it has responsibility for both the Framework Convention on Climate Change and the Convention on Biodiversity. STENO will therefore be the Executing Agency for this project. STENO, directly responsible to the Prime Minister's Office, has three main departments (Department's of Environment, Cabinet, and Industrial Property, Standardization, and Metrology).

23. The Department of Environment is responsible for preparing the national environmental policy framework using technical assistance and other inputs from other line agencies. The current focus of STENO is on:

- developing and operationalizing environmental assessment procedures to aid the decision making by the Committee for Planning and Cooperation (CPC);
- working closely with the CPC during project appraisal;
- monitoring compliance with the procedures identified during the appraisal process; and
- carrying out regular policy impact reviews and evaluations.
- Coordination for environmental planning management among sectors.

24. The DOE is also responsible for collating and reviewing the legal and regulatory framework covering environmental planning and management. A project for establishing a national environmental legislative framework is currently being developed with assistance from the Norwegian Government. It is also responsible for reviewing the relevant environmental planning and management regulations for different sectors for consistency and compliance during the implementation stage. The Department works closely with other relevant line ministries. For instance, it works with the Department of Forestry and the Ministry of Justice for regulations relating to environmental impact assessment; with the Ministry of Industry and Handicrafts for mining related environmental regulations; etc. This project will further this cooperation and the role of STENO as environmental management agency, and strengthen its capacity.

25. For scientific and technical support, STENO can rely on its IRMC (Information Resources Mapping Center). The National Center of Documentation and of Scientific and Technical Information (CNDIST) has a mandate to collect information on science, technology, and environmental issues. In addition, STENO works closely with the relevant line ministries and the Inter Ministerial Working Group (IMWG) on the Environment of which it serves as a Secretariat. The IMWG has members from the relevant line ministries and agencies and it is designed to provide effective coordination and cooperation between different ministries and government departments. It is designed also to provide an institutional arrangement for possible resolution of conflict arising out of resource use and environmental concerns. However, it must be noted that at present the IMWG is still in a formative stage.

26. **Ministry of Agriculture and Forestry - Department of Forestry (DOF):** The Department of Forestry (DOF) is a key agency in the area of natural resource management for the Lao PDR. 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 management of forests, of protected areas, watersheds and also regulation of shifting cultivation. The department 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 and nation-wide water quality testing. Much of the data being collected (especially in the National Forest Inventory work which is ongoing) will be of great relevance to the development of the national GHG inventory for the Lao PDR and will enable this project to make use of existing surveys that have been/are being undertaken. The Department of Meteorology and Hydrology within MAF is responsible for collecting national data on temperature, rainfall, hydrology and similar activities. Much of the data collected will be of relevance to this project.

27. **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 and is responsible for environmental issues to the extent that they have an impact on public health.

28. **Ministry of Industry and Handicrafts:** The Ministry of Industry and Handicrafts is involved in environmental issues related to industrial development. In particular, this means ensuring that industrial activities (mining, hydropower, transport) adhere to environmental guidelines, including environmental impact assessment (EIA) and monitoring.

29. **Ministry of Education, Department of Higher Technical and Vocational Education** This Department has a role in developing training programs and developing curriculum related to environmental issues. It is envisaged that the Department of Higher Technical and Vocational Education could play a role in raising awareness of climate change issues through curriculum development.

30. **Ministry of Information and Culture** It is envisaged that the Ministry of Information and Culture could play a role in the project in raising awareness of climate change issues through publicity, media, radio programme etc.

31. **National Statistics Center (NSC), Committee for Planning and Cooperation (CPC)** The National Statistics Center (NSC) has overall responsibility for collection of national data for the Lao PDR and has extensive linkages with all provinces and municipalities. The data will be collected by the project team based in STENO in close collaboration with the National Statistics Center. This approach will mean that a national data set for climate change will be established within the Department of Environment of STENO where it will also be available to the National Statistics Center and multitude of projects can draw on this set as and when appropriate. This centralized approach, with STENO as the coordinating agency for environment, will hopefully avoid the problem experienced in the forestry sector where a

number of projects using GIS technologies have resource analysis components with different methodologies and levels of detail and there is limited sharing of information.

32. **IUCN (The World Conservation Union):** While no national NGO currently exists in the 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. IUCN has indicated its interest in being involved in training and other issues related to the institutional strengthening of STENO, including raising awareness of the linkages between climate change and Biodiversity conservation issues. Possible IUCN involvement in the project will be explored more fully once the project has started.

33. **Academic Community:** The academic community in the Lao PDR would be involved in the project through participation in seminars, workshops, and the Technical Working Group, when appropriate.

## **PROJECT JUSTIFICATION**

### **Rationale for GEF support**

34. Incorporating environmental concerns into development planning is in nascent stages in the Lao PDR and clearly significant further support is needed to ensure that environmental and development concerns are made compatible. While many of the environmental concerns (such as slash and burn agriculture which affects 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. Successful implementation of this project is expected to promote sustainable management of the Lao PDR's natural resource base and a more judicious use of its natural resources. This is fully consistent with the GEFs mandate of promoting sustainable environmental management practices, as outlined in the finalized GEF Operational Strategy (February 1996). Due to inadequate understanding of the issues concerning 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 will be lost without a project of this nature.

35. There are no other climate change "enabling activities" ongoing or planned for the Lao PDR at this point in time. 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.

36. As an "enabling activity" under Article 12 of the UNFCCC, the agreed full costs of this project will be paid by the GEF as the incremental costs of the project equals the full costs.

37. Finally, the project is consistent with the February 1996 GEF Operational Strategy which emphasizes the development of climate change enabling activities as a GEF priority in the initial period. It is also consistent with the GEF Operational Criteria for "enabling

activities" in that the project falls within the cost norms, is not duplicating any other ongoing or planned work, and it follows "best practice" and a logical sequencing of activities.

#### **PROBLEM TO BE ADDRESSED: THE PRESENT SITUATION**

38. As has been mentioned, no estimate of GHG emissions for the Lao PDR has yet been made. There is no data specifically related to a GHG inventory of sources and sinks that could assist the Government of the Lao PDR in incorporating and taking into account climate change concerns in the development planning process. The level of awareness of climate change issues in general is very low.

39. However, given the very small size of the industrial sector in the Lao PDR, and the fact that the major environmental problem that the country faces is related to natural resources management (esp. related to de-forestation, slash and burn agriculture, and hydropower development) it is clear that the main emphasis of the project will be on collecting data in the forestry and land-use sectors. There are several projects which are in the process of collecting detailed data for this purpose and a National Forest Inventory is anticipated to be fully completed in late 1997. This data will provide valuable inputs into the Lao PDR National GHG Inventory project.

40. The National Statistics Centre has no statistics related specifically to GHG emissions for the Lao PDR or any estimate of sinks, and it is not within their mandate to collect such data. In fact no organization currently has a mandate to collect, compile and analyze this data. In fact, the data that this project will have to collect will have to bring together existing data from number of different sources (Dept of Forestry, Min. of Industry and Handicrafts, Min. of Communications Transport & Post and other bi-lateral projects) and it will have to identify what are the gaps. In the process of doing so, and with the establishment of the Technical Working Groups (TWG) and the National Greenhouse Gas Inventory Committee (NGIC) as part of project implementation, awareness of climate change issues will be increased not only in STENO but also throughout much of the Government.

#### **EXPECTED END OF PROJECT SITUATION**

41. At the end of the project, it is expected that the Lao PDR will have considerably improved its capacity to comply with its obligations under the United Nations Framework Convention on Climate Change. In particular, it is expected that at the end of the project the following would have been accomplished :

- a National Implementation Plan will have been produced which will form the basis for the preparation of the first National Communications of the Government of Lao PDR to the Conference of Parties (COP) which will also be prepared as the end product of the project;
- there will be a significantly enhanced technical and policy-related capacity within line

Ministries and Department's of the Lao PDR (and in particular STENO) in understanding climate change related issues and in assessing least-cost GHG abatement measures;

- a permanent data collection mechanism will have been established in the Department of the Environment within STENO to collect and digest data necessary to periodically update the Lao PDR's national GHG inventory of sources and sinks;
- a permanent climate change policy dialogue process will have been created within the Governmental structure of the Lao PDR, the obvious manifestation of which will be through the continued regular meetings of the National Greenhouse Gas Inventory Committee (NGIC) once the project is over. By possibly linking of the NGIC to the already established Inter-Ministerial Working Group on the Environment (IMWG), the coordination on environment related issues will be reinforced and thus the sustainability of the project is significantly enhanced;
- the process of incorporating environmental concerns related to the development planning process will be significantly enhanced within the Government of the Lao PDR.

#### **TARGET BENEFICIARIES**

42. Beneficiaries of this project will be the people of the Lao PDR who could be directly affected by the build-up of greenhouse gases in the atmosphere. By raising awareness towards climate change issues and incorporating concerns into the development planning process the people of Lao PDR will benefit through a more sustainable approach to development and from a more judicious use of natural resources. Specific beneficiaries from the project will include the national staff within the Government of the Lao PDR who will receive training related to (i) increasing awareness of climate change issues, (ii) developing a national GHG inventory, and (iii) examining GHG mitigation options.

43. An additional beneficiary of the project will be the global community as the National Communications that will be produced by the Government of the Lao PDR will contribute towards reducing scientific uncertainty related to climate change issues.

#### **PROJECT STRATEGY AND INSTITUTIONAL ARRANGEMENTS**

44. The project's emphasis is on training, capacity building and institutional development. The National Greenhouse Gas Inventory Committee (NGIC) set up under the project, will review project progress on a regular basis and will continue to meet beyond the lifetime of the project to provide the institutional support for future initiatives towards GHG emission reduction. It is expected that the GHG inventories and mitigation options will continue to be updated on a periodic basis. The project is designed in such a way that it will form a basis and a foundation for future climate change related activities in the Lao PDR. The project will identify the most cost-effective GHG reduction interventions and enable prioritization to take

place for future climate change related activities. This will greatly assist in the identification, formulation, and calculation of "incremental costs" for future climate change projects in the Lao PDR.

45. The project is also designed to provide through institutional capacity building emphasis on installing local ownership, and increasing local decision making capacity, so that the Lao PDR will be able to develop its own national approaches and policies towards the FCCC, through initial training study tours, and a project initiation workshop. This emphasis is designed to overcome the low level of awareness of climate change issues that currently exists in the Lao PDR.

### **Location**

46. The project will be located in Science Technology and Environment Organization (STENO) which will be the Executing Agency for the Project. 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 capacity throughout the Government Sector to meet Lao PDR's commitments under the UNFCCC.

47. **STENO** will execute the project but the UNDP Country Office will be responsible for backstopping of an Institutional sub-contract to provide technical support to all project activities. The NPD at STENO and the Project Advisor supplied through the Institutional sub-contract would together be responsible for ensuring effective functioning of the Technical Working Group's and for arranging the establishment of the National Greenhouse Gas Inventory Committee. Ultimate responsibility for the technical outputs of the project will be established under the institutional sub-contract, managed by UNDP. It is anticipated that the project, therefore, will have the following structure:

- **Science, Technology and Environment Organization (STENO)** will be the lead agency for the project implementation as it is responsible for the implementation of the UNFCCC. STENO will provide to the project Office Space, a National Project Director, Secretarial support and other staff as necessary. A Project Advisor (PA) will also be based in STENO under terms of reference established under the Institutional sub-contract.
- **Institutional Sub-Contract: The UNDP Country Office, Lao PDR**, will backstop the Institutional Sub-Contract which will include the provision of a full-time or near full-time Project Advisor and additional consultants as appropriate. The terms of reference for the Institutional Sub-Contract will include responsibility for ensuring the technical quality of all project outputs.
- **National Greenhouse Gas Inventory Committee (NGIC)**, which will be constituted as a senior level body by STENO in consultation with other line ministries, with senior

officials and technical experts, will provide advice to STENO and will be the body charged with the technical oversight of project execution, as appropriate. Much of the early project activities will involve capacity building for climate change issues within the NGIC. It would be important to ensure the involvement of both the Committee for Planning and Cooperation (CPC) and the PMO (Prime Minister's Office) on the NGIC.

It is envisaged that the NGIC would meet once right at the start of the project and subsequently every 3 months (9 times during the lifetime of the project) to review progress that has been made. Progress reports (a total of 8) will be circulated by the Project Advisor and the National Project Director to members of the NGIC at least one week prior to the scheduled meeting of the NGIC. It is anticipated that the final meeting of the NGIC would take place immediately after the End of Project Workshop and would be to discuss final arrangements for the preparation of the first national communications of the Government of the Lao PDR to the Conference of Parties (COP).

- **Technical Working Group (TWG)** within STENO will be responsible for gathering and analyzing climate change data and fulfilling the countries commitments under Article 12 of the UNFCCC. It is envisaged that the IMWGE would form the basis for the constitution of the TWG. While the Technical Working Group would be responsible for the execution of the project, the National Climate Committee would be the body charged with providing local technical oversight to the Technical Working Group.

The Technical Working Group will be divided into two teams steered by the National Project Director. (i) the data collection team and (ii) the data analysis team; with the second team being established only after such time as the first team has been up and running for several months and has collected considerable data. It is estimated that each team would contain between 5-8 members, as appropriate. The exact number and constitution of each team would be determined at the start of the project. The two teams will work in close cooperation and share overlapping responsibilities such as the identification of major GHG emission sectors and the formation of the initial list of potential GHG abatement measures.

(i) **Data Collation Team** (Objective 2) - Responsible for collating information on climate change, estimating data gaps, preparing workplan, preparing draft manual for inventory preparation including translation into Lao, organizing and participating in seminars/awareness activities, linkages with other enabling activities, organizing and participating international workshops on climate change.

(ii) **Data Analysis Team** (Objective 3)- Responsible for preparing list of promising GHG abatement measures (including preliminary assessment of why they are promising), for developing a methodology for examining least cost GHG abatement measures, and for preparing draft and final GHG mitigation abatement strategy. The team is also responsible for organizing National GHG Mitigation Workshop.

The Technical Working Groups is expected to comprise of staff from the following Ministries/Departments:

- STENO (esp. IRMC)
- Ministry of Agriculture and Forestry (esp. Department of Forestry, Dept. of Meteorology and Hydrology)
- Ministry of Industry and Handicrafts (esp. Environment Division)
- Ministry of Communications, Transport, Post, and Construction (esp. Department of Transport)
- Ministry of Public Health
- CPC, National Statistics Center (NSC)
- others, as appropriate

Final composition of the Technical Working Groups will be determined once the project has started.

The Data Collation Team and the Data Analysis Team will work together under Objective 3 of the project when it comes to the preparation of the National Implementation Plan and the Initial National Communications to the Conference of Parties.

- **Project Advisory Network** comprising of GEF secretariat and GEF/UNDP staff, to review, as appropriate and if necessary, the draft GHG inventory and draft GHG mitigation strategy. Individual member(s) could participate in the three national project workshops, and in Post-Project Terminal Evaluation .

**An organogram outlining the project structure is provided in Annex 4.**

#### **SPECIAL CONSIDERATIONS**

48. Article 12(5) of the FCCC requires that non-annex I countries make their initial communications to the Conference of Parties within three years of entry of force of the Convention. For the Lao PDR this would mean that the first national communication be prepared by January 5, 1998 (ratification date was January 5, 1995). However, Article 12(5) also states that least developed countries may make the initial communication at their discretion and in the case of Lao PDR, therefore, additional time may be taken if necessary. Nevertheless, it will be the goal of this project to produce a national communications for the Lao PDR by August 1998 at the latest as an indication of the high level of commitment of the Government of the Lao PDR to its commitments under the FCCC.

49. 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 include it in its National Communications to the Conference of Parties if it so wishes. This would be consistent with the GEF Climate Change Task Force's Enabling Activities Operational Criteria which calls for "coverage without duplication" of enabling activities. As no activity related to vulnerability assessment/adaptation has yet been undertaken in the Lao PDR or is planned (as of June 1996) the inclusion of a vulnerability assessment/adaptation component at a later stage would be fully consistent with the February 1996 GEF Operational Criteria for Enabling Activities.

## COORDINATION ARRANGEMENTS

50. STENO will coordinate the roles of the various Ministries and Departments within the Technical Working Group and in the establishment of the National Greenhouse Gas Inventory Committee. The Project Advisor and the National Project Director will both be based at STENO as will additional members of the project team.

51. The National Greenhouse Gas Inventory Committee (NGIC) will be the main body to provide advice, steer, and monitor all project activities relating to technical outputs. It is envisaged that the NGIC would meet once initially at the start of the project and then every three months to review progress.

52. In carrying out its objectives, the Lao PDR National GHG Inventory Project will make best use of existing methods (e.g. OECD/IPCC inventory guidelines). These methods will be adapted (and procedures devised for their application) to conform to the particular environmental, socio-economic and cultural characteristics of the Lao PDR. The project will also emphasize the development of strong links with other regional activities/institutions that are active in the area of climate change in order to more effectively enhance capacity in a more cost-effective manner. Formal and informal linkages will be established through study tours, participation in workshops, and correspondence (including e-mail hook up), with the following:

- (a) *UNDP/GEF's ALGAS* (Asia Least-cost Greenhouse Gas Abatement Strategies, based in Manila and executed by the ADB): Draw upon the outputs of the regional workshops completed by ALGAS and provide study tours for Project Team members to participate in ALGAS country workshops, as appropriate.
- (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*) to be sent to the Lao PDR and for participation in particular of CC:Train in Project Initiation Workshop ; and
- (c) *US Country Studies Programme*, based in Washington D.C, to draw on the outputs and methodologies and lessons learnt through the programme and to participate in the remaining regional training workshops of the *US Country Studies Programme*, as appropriate.

53. In addition, the project will determine modalities for ensuring technical back stopping from reputed institutions identified in the region with experience in climate change related research. These could potentially include, *inter alia*, the **National Physical Laboratory (NPL)**, New Delhi, India (for inventory analysis), the **Tata Energy Research Institute (TERI)** in New Delhi, India (for mitigation analysis) and the **Asian Institute of Technology (AIT)** in Bangkok (for mitigation analysis), Thailand. The project will determine sub-contracting the component allocated in the budget for project advisor/international consultancies to any one or more institutions, the later then having the overall responsibility for providing the project advisor/advisors (separately for inventory and mitigation analysis, if appropriate) to ensure the quality of the technical outputs of the project.

#### **COUNTERPART SUPPORT CAPACITY**

54. The Government of the Lao PDR is fully supportive of the objectives of this project and gives high priority to its early implementation. It has already formally approved the UNDP/GEF project brief. The Government of the Lao PDR has agreed that the outputs of this project will be used for the preparation of its first National Communications to the Conference of Parties (COP). Specifically, the Government of the Lao PDR has agreed to the following:

- to provide the services of a **National Project Director (NPD)** based in STENO;
- to the establishment of a high-level **National Greenhouse Gas Inventory Committee (NGIC)**, with possible links to the Inter-Ministerial Working Group on the Environment (IMWGE), which will consist of Government Officials from the relevant Ministries, Departments, and Institutes;
- to the establishment of **Technical Working Groups (TWG)** drawing expertise from the relevant Government Ministries and Departments, as appropriate and with membership based upon the IMWGE as a foundation. The TWG could also include internal/external experts funded under the project, as appropriate;
- to provide secretarial and administrative support services to the project, based in STENO, as appropriate;
- to provide office accommodation, library, basic communication, and information facilities within STENO for the project Advisor and staff;
- to use the outputs of this project specifically for the preparation of its first National Communications to the Conference of Parties and to feed it into its development planning processes.

#### **DEVELOPMENT OBJECTIVE**

55. The project will further the objectives of national sustainable development and judicious

use of natural resources by increasing understanding of climate change related issues and incorporating them into the development planning process. The activities proposed in the project will include the identification and prioritization of greenhouse gas (GHG) mitigation options many of which are likely to be win/win options which have national development benefits and are also consistent with the commitment of the Lao PDR under the Article 4, Para 1 of the Climate Change Convention which states:

"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;"

## **IMMEDIATE OBJECTIVES, OUTPUTS, and ACTIVITIES**

56. The short-term objective of the project is to enable the Government of the Lao PDR to prepare its first national communications to the Conference of Parties under Article 12 of the Convention by producing the following outputs:

- (i) A national GHG inventory of sources and sinks for the Lao PDR;
- (ii) A GHG national mitigation strategy for the Lao PDR;
- (iii) A National Implementation Plan based upon (i) and (ii) above;
- (iv) The first National Communications of the Lao PDR to the Conference of the Parties of the FCCC based upon (i), (ii), and (iii) above;

### **Objective 1: Implementation Arrangements**

Establish and enhance the capacity of the Core Project Staff, the Technical Working Group (TWG) and the National Greenhouse Gas Inventory Committee (NGIC)

#### **Output 1.1**

The Core Project Staff, the Technical Working Group and the National Greenhouse Gas Inventory Committee has been established

Activity 1.1.1 Identify and confirm a National Project Director (NPD) within STENO

Activity 1.1.2 Identify and sub-contract an expert institution/project advisor (PA) to provide technical backstopping to the project and hire local consultant

and two administrative assistants, as appropriate.<sup>2</sup>

Activity 1.1.3 National Project Director to establish a National Greenhouse Gas Inventory Committee (NGIC) with assistance from Project Advisor, as appropriate.

Activity 1.1.4 National Project Director to establish the Technical Working Group, Team #1 (Data Collection Team) within STENO, with the assistance from Project Advisor.

Activity 1.1.5 National Project Director to establish the Technical Working Group, Team #2 (Data Analysis Team) within STENO, with the assistance from Project Advisor.

#### Output 1.2

Finalization of the institutional arrangements and a detailed work plan for the project

Activity 1.2.1 Organize a project initiation workshop in order to finalize the institutional arrangements and prepare a detailed work plan for the project. The training package developed under CC:TRAIN will be considered as a basis for the workshop, and beside the national stakeholders, representative(s) at least from UNDP/GEF, CC:TRAIN and/or ALGAS will be invited.

Activity 1.2.2 Based on the output of the workshop, prepare a draft workplan for the project.

Activity 1.2.3 Review and finalize the workplan.

#### Output 1.3

Enhanced capacity of the Core Project Staff, TWG teams and NGIC to implement the project.

Activity 1.3.1 Equip the Core Project Staff and TWG with adequate tools to implement the different activities (including the access to Internet facilities) and train the members of PMG and TWG to use the selected tools (mainly computers and related software)

Activity 1.3.2 Create strong links with other climate change enabling activities such as the USCS, UNEP, IPCC, CC:Train, ALGAS, other bi-lateral programmes

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UNDP will have ultimate responsibility for this activity and for finalizing the terms of reference for the Institutional Sub-Contract and for managing the Institutional Sub-Contract

as well as ongoing national projects and programmes (esp. those in the Forestry Sector in the Lao PDR) in order to undertake specific tasks of the project. This would begin with informal contacts being made with these initiatives and be followed by an analysis of experiences of similar kinds of projects elsewhere which would be evaluated and taken into account as appropriate. This should include study tours to the United States, Europe, Philippines (ALGAS), as appropriate. It would also include establishing electronic mail hook up to these other activities and linking into the climate change gopher/web sites (sites where all users of Internet can link into to obtain information and discuss issues on related topics)

- Activity 1.3.3 Organize climate change training and awareness seminars for the TWG, NGIC, Inter-Ministerial Working Group on the Environment (IMWGE) and other government and non-government organizations, as appropriate.
- Activity 1.3.4 Undertake literature reviews and translate the relevant documentation into Lao.
- Activity 1.3.5 Establish a library of climate change related information within STENO.

## **Objective 2: National GHG Inventory**

Build national capacity to prepare inventories of GHG emissions and sinks, and prepare the first national GHG inventory of Lao PDR in order to meet its commitments under Article 12 of the UNFCCC.

### **Output 2.1**

A draft manual in Lao and English for national GHG inventories

- Activity 2.1.1 Identify data and other requirements for preparation of a national GHG inventory for the Lao PDR based upon the Inter-Governmental Panel on Climate Change (IPCC) Guidelines for preparing National Inventories (copy with UNDP Country Office).
- Activity 2.1.2 Prepare a draft manual in Lao and English for a national GHG inventory based on the IPCC guidelines.
- Activity 2.1.3 Following its review by the National Greenhouse Gas Inventory Committee, finalize and translate the draft manual for preparing a national GHG inventory for the Lao PDR.

## Output 2.2

Data Collection and Management System within the Department of Environment of STENO.

- Activity 2.2.1      Undertake research work, literature review and surveys, as appropriate, to reduce data gaps. In the process, strengthen data collection and management system within the Department of Environment of STENO to acquire data to prepare inventories on a regular basis. This would include establishment of appropriate hardware facilities. TWG team #1 will work with STENO to compile inventories on the basis of the work plan outlined in Activity 1.2.2
- Activity 2.2.2      Prepare a draft GHG inventory using the collected data and following the IPCC guidelines.
- Activity 2.2.3:      Circulate the draft GHG inventory. Request comments and suggestions from members of the Project Advisory Network and others, as appropriate. In particular, attempt to coordinate sharing of the results with *ALGAS Project*, *US Country Studies Programme*, and *CC:TRAIN*.
- Activity 2.2.4      Finalize, publish, and re-circulate the GHG Inventories for the Lao PDR.

## **Objective 3: National GHG Mitigation Strategy**

Prepare the first national GHG mitigation strategy to initiate the process of developing national capacity to identify, analyze, and formulate viable GHG abatement measures. Build and enhance capacity within the Government, academic and research institutions and other relevant institutions to participate in the process and to undertake studies relating to GHG mitigation.

### Output 3.1:

A list of promising GHG abatement measures and a national GHG mitigation strategy taking into account the national development objectives and priorities of the Lao PDR.

- Activity 3.1.1      Based on the inventory prepared under Objective 2, identify major sectors emitting GHGs and develop an initial list of potential measures as well as a methodology for assessment of GHG abatement measures. The development of methodology and subsequent efforts should draw upon ongoing work in the region by ALGAS, US Country Studies Programme, Asian Institute of Technology, TERI, etc.
- Activity 3.1.2      Choose appropriate climate change mitigation analysis tools and procure software.

- Activity 3.1.3 Examine and assess potential GHG abatement measures by sources and sectors, to prepare, to the extent possible, promising measures in the local context. This assessment will be based on the baseline inventories being developed, costs and other factors that the Technical Working Group, the National Greenhouse Gas Inventory Committee (NGIC), PA, National Project Director (NPD), and/or external expert(s) may consider relevant.
- Activity 3.1.4 Prepare a draft **GHG Mitigation Strategy** based on the results of the mitigation analysis.
- Activity 3.1.5 Organize a **National GHG Mitigation Workshop** (after 16 months) to discuss the draft GHG mitigation strategy with national and international experts, to share the results and receive comments from *ALGAS Project*, *US Country Studies Programme*, and any other related ongoing projects deemed appropriate.
- Activity 3.1.6 Finalize the first **National GHG Mitigation Strategy** for the Lao PDR for inclusion in its first national communication to the COP of the UNFCCC.
- Activity 3.1.7 Prepare a briefing package for potential funders of climate change projects and to begin the process of seeking funding for the "incremental costs" of climate change activities in the Lao PDR.

#### **Objective 4: National Implementation Plan & First National Communication**

Prepare a National Implementation Plan and the first National Communication of the Lao PDR to the Conference of the Parties of the UNFCCC.

##### **Output 4.1**

###### **National Implementation Plan**

- Activity 4.1.1 Based on the outputs of this project, prepare a **National Implementation Plan** for Lao PDR setting up a detailed strategy on how it intends to meet its obligations under the FCCC.
- Activity 4.1.2 Publish, including a version translated into Lao, and circulate the National Implementation Plan.
- Activity 4.1.3 Organize a **End of Project Workshop** with wide 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, and with the objective of finalizing the National Implementation Plan which forms the basis for the first national communications of the Lao PDR to the COP.

Output 4.2

First National Communications of the Lao PDR to the Conference of Parties

Activity 4.2.1 Based on the outputs of the project, put together, obtain government endorsement, publish, circulate, and submit the first national communication to the Conference of Parties through the Climate Change Secretariat. (target date: June 1998)

**INPUTS**

UNDP:

Category:	Estimated Cost (US\$):
(a) Personnel Support (includes local consult. and Inst'l subcontract)	\$130,800
(b) Expert official travel and study tours	\$38,000
(c) Training	\$61,100
(d) Equipment	\$43,000
(e) Miscellaneous	\$24,800
(f) Mission Costs (M & E)	\$6,100
SUBTOTAL:	303,800
Project Support Services (3%)	\$9,200
<b>TOTAL:</b>	<b>\$313,000</b>

**RISKS**

57. The project's emphasis on training, capacity building, institutional strengthening, creating regional linkages, and the establishment of a permanent National Greenhouse Gas Inventory Committee (NGIC) which will continue to meet after the project is over and will help to ensure that climate change concerns are given high consideration.

58. The risks associated with the project i.e relative lack of capacity in Lao PDR are far outweighed by the potential benefits of the project in assisting with incorporating climate change concerns into the national environment and development policy framework and planning process. The project's emphasis on extensive initial training, capacity building, and institutional development are designed to ensure the sustainability of the project objectives. By locating the project within the STENO (the National Coordinating Agency for Environmental Issues), located within the Prime Minister's Office (PMO), the likelihood of sustainability of the efforts beyond the project duration has been maximized.

59. The establishment of a sub-contract managed by the UNDP Country Office, to provide technical backstopping through an experienced institution which will be responsible for the technical quality of project outputs, is designed to reduce risks associated with the capacity of STENO being insufficient. In addition, by linking the data collection activities undertaken in the project closely to the processes and experiences in data collection of the National Statistics Centre, possible risks associated with difficulties in collecting data are effectively minimized.

#### **PRIOR OBLIGATIONS AND PREREQUISITES**

60. **Prior Obligations:** None

61. **Prerequisites:**

- (i) The Government of the Lao PDR will approve the constitution of a National Greenhouse Gas Inventory Committee (NGIC) as the main body to guide, review and monitor the implementation of all project activities relating to technical outputs.
- (ii) The Government of the Lao PDR will make available to the project the services of a NPD, qualified national experts and consultants to make up the Technical Working Groups, and suitable senior-staff to constitute the National Greenhouse Gas Inventory Committee (NGIC);
- (iii) The Government of the Lao PDR agrees to make available to the project data and information necessary for the implementation of project activities and realization of objectives; and
- (iv) The Government of the Lao PDR agrees to make available to the project office space in STENO, provide basic office equipment (i.e - furniture) and communication services.

62. The project document will be signed by UNDP, and UNDP/GEF assistance will be provided to the project only after such time as the above pre-requisites have been or are likely to be fulfilled. When anticipated fulfillment of one or more of the pre-requisites fails to materialize, UNDP may at its discretion either suspend or terminate its assistance.

63. STENO will execute the project. The UNDP Country office will have responsibility for assisting with establishing the institutional arrangements under which the project will operate including establishment of NGIC, TWGs, and selection of Project Advisor/Institutional Sub-Contract for technical support to the project.

## **PROJECT REVIEW, REPORTING AND EVALUATION**

64. The project will adhere to all UNDP guidelines and the emerging GEF guidelines for monitoring and evaluation of projects.

65. A progress report will be prepared every three months for evaluation by the National Climate Change Committee by the National Project Director and the Project Advisor (working together). The Project Advisory network comprised of GEF/FCCC secretariat and UNDP staff will review, if necessary the draft inventory and draft mitigation strategy. A post project terminal 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. A project terminal report will be prepared by the Project Advisor and National Project Director for evaluation by the post project terminal evaluation.

## **LEGAL CONTEXT**

66. This project shall be the instrument referred to as such in Article 1 of the Standard Basic Assistance between the **Government of the Lao PDR** and the United Nations Development Programme (UNDP) signed by the parties on 10/10/88. The host country implementing agency shall, for the purpose of the Standard Basic Assistance Agreement, refer to the government cooperating agency described in that agreement.

67. The following type of revisions may be made to the project document with the signature of the UNDP Resident Representative only, provided he or she is assured that the other signatories of the project document have no objections to the proposed changes.

- a. Revisions in, or addition of, any of the annexes of the project document;
- b. Revisions which do not involve significant changes in the immediate objectives, outputs or activities of a project, but are caused by rearrangement of inputs agreed to or by cost increases due to inflation;
- c. Mandatory annual revisions which rephrase the delivery of agreed project inputs or increased expert or other costs due to inflation to take into account agency expenditure flexibility.

# BUDGETS

## UNDP CONTRIBUTION

Budget Code	Description	Tot m/m	\$	96' m/m	\$	97' m/m	\$	98' m/m	\$
11.00	<u>Int'l consultants</u>								
11.01	Int'l Consultants	6	36,000	1.5	9,000	3*	18,000	1.5	9,000
11.99	Sub-Total:	6	36,000	1.5	9,000	3	18,000	1.5	9,000
13.00	<u>Admin Support</u>								
13.01	Admin Support (2)	48	4,800	5	1,000	12	2,400	7	1,400
13.99	Sub-Total:	48	4,800	5	1,000	12	2,400	7	1,400
15.00	<u>Expert Official Travel and Study Tours</u>								
15.01	Expert Official Travel & Study Tours		38,000		11,000		16,000		11,000
15.99	Sub-Total:		38,000		11,000		16,000		11,000
16.00	<u>Mission Costs (M&amp;E)</u>								
16.03	Terminal Evaluation		6,100						6,100
16.99	Sub-Total:		6,100						6,100
17.00	<u>National Professionals</u>								
17.02	Local Consultancies	12	18,000	3	4,500	4	6,000	5	7,500
17.99	Sub-Total:	12	18,000	3	4,500	4	6,000	5	7,500
19.00	<b>COMPONENT TOTAL</b>		111,800		25,500		42,400		43,900
21.00	<u>International Subcontract</u>								
21.01	Inst'l sub-contract	24	72,000	4	12,000	12	36,000	8	24,000
21.99	Sub-Total:	24	72,000	4	12,000	12	36,000	8	24,000
29.00	<b>COMPONENT TOTAL</b>		72,000		12,000		36,000		24,000
30.00	<u>Training</u>								
33.01	In-Service Training		20,900		7,000		7,400		6,500
33.02	Workshops (3)		34,200		10,000		10,000		14,200
33.03	Language Training		6,000		3,000		3,000		
33.99	Sub-Total:		61,100		20,000		20,400		20,700
39.00	<b>COMPONENT TOTAL</b>		61,100		20,000		20,400		20,700
40.00	<u>Equipment</u>								
45.00	Local Procurement		8,000		4,000		3,000		1,000
47.00	Int'l Procurement		35,000		30,000		5,000		
47.99	Sub-Total:		43,000		34,000		8,000		1,000
49.00	<b>COMPONENT TOTAL</b>		43,000		34,000		8,000		1,000
50.00	<u>Miscellaneous</u>								
51.00	Printing, Translation		10,000		4,000		3,000		3,000
53.00	Sundry		14,800		3,500		7,800		3,500
54.00	Proj. Supp. Services (UNDP/FO - 3*)		9,200		2,900		3,400		2,900
59.00	<b>COMPONENT TOTAL</b>		34,000		10,400		14,200		9,400
99.00	<b>GRAND TOTAL</b>		313,000		97,900		116,100		99,000

## Budget according to GEF activity norms

	Output (Planning & Execution)	Instituti onal strengthe ning	Training	Technical & Admin. Support	Total
<u>Inventories / Stocktaking</u> GHG inventory	37,400	23,400	28,000	4,700	93,500
Vulnerability assessment	16,200	10,100	12,200	2,000	40,500
IDENTIFICATION OF OPTIONS Mitigation	20,400	12,750	15,300	2550	51,000
Adaptation	13,500	8,500	10,500	1,500	34,000
PREPARATION OF PLAN	10,000	6,250	7,500	1250	25,000
PREPARATION OF NATIONAL COMMUNICATION	12,000	7,500	9,000	1500	30,000
FIXED PROJECT COST Project management	10,000				10,000
Monitoring and evaluation	3,700			2,000	5,700
SUBTOTAL	123,200	68,500	82,500	15,500	289,700
Percentage of total cost	40%	21%	26%	5%	92%
Project Support Services 8%	23,300				23,300
TOTAL	146,500	68,500	82,500	15,500	313,000

**Annexes:**

**Annex 1 - Draft Schedule of Activities**

**Annex 2 - Capacity Table For Climate Change Enabling Activities in LAO PDR**

**Annex 3 - Draft Terms of Reference (Institutional Sub-Contract)**

**Annex 4 - Institutional Organogram**

ANNEX 1 - DRAFT Schedule of Activities (to be elaborated at start of project)

Months	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
Output 1.1: Establishing and training CPS, TWG, NGIC																									
Activity 1.1.1																									
Activity 1.1.2																									
Activity 1.1.3																									
Activity 1.1.4																									
Activity 1.1.5																									
Output 1.2: Detailed Work Plan for Project																									
Activity 1.2.1																									
Activity 1.2.2																									
Activity 1.2.3																									
Output 1.3: Capacity enhancement of CPS, TWG, NGIC																									
Activity 1.3.1																									
Activity 1.3.2																									
Activity 1.3.3																									
Activity 1.3.4																									
Activity 1.3.5																									
Output 2.1: Draft Manual for National GHG Inventory																									
Activity 2.1.1																									
Activity 2.1.2																									
Activity 2.1.3																									
Output 2.2: Data Collection and Management System, GHG Inventory																									
Activity 2.2.1																									
Activity 2.2.2																									
Activity 2.2.3																									
Activity 2.2.4																									

Output 3.1: Development of a National GHG Mitigation Strategy												
Activity 3.1.1												
Activity 3.1.2												
Activity 3.1.3												
Activity 3.1.4												
Activity 3.1.5												
Activity 3.1.6												
Activity 3.1.7												
4.1 Lao PDR National Implementation Plan												
Activity 4.1.1												
Activity 4.1.2												
Activity 4.1.3												
4.2: Lao PDR National Communication												
Activity 4.2.1												

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

LAO PDR CAPACITY TABLE

Enabling Activity	Planning	Instit Strength	Training	Research	Education
<b>Background Information for National Communication</b>					
<b>Emission inventory</b>					
- 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
<b>Mitigation Options</b>					
<b>Energy related</b>					
- 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
<b>Non-Energy Sources</b>					
- 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
<b>Vulnerability Assessment</b>					
- 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
<b>adaptation options (stage 1)</b>	0	0	0	0	0
<b>National Plans</b>					
- 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.	0	0	0	0	0
- 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

**Key to Table**

x=Activities undertaken in this project where no work has been undertaken to date  
0=Activities not covered by this project where no work has been undertaken to date

## ANNEX 3

### **Draft Terms of Reference (Institutional Sub-Contract) Includes Full-Time or Near Full-Time Project Advisor/Advisors (PA)**

At the start of the project, an Institutional sub-contract will be signed between the UNDP Country-Office, the Government of the Lao PDR, and the selected institution to provide technical training and backstopping to the Lao PDR National GHG Inventory Project and to be ultimately responsible for ensuring the technical quality of all project outputs. The Institutional sub-contract will include the provision of a full-time/or near full-time (to be determined) Project Advisor based for the most part in STENO and additional consultants, as appropriate. It is envisaged that the Project Advisor and consultants would work closely with the National Project Director in managing the project with overall responsibility for project management resting with the National Project Director and overall responsibility for the technical outputs of the project being covered under the terms of reference of the Institutional Sub-Contract.

The Institution selected under the institutional sub-contract will have extensive experience in working on climate change issues in the Asia-Pacific region and familiarity with the United Nations Framework Convention on Climate Change. In addition, the selected institution will be able to provide the project with a full-time or near full-time Project Advisor. It is envisaged that the Project Advisor for the project under the Institutional Sub-Contract should have a minimum of 8-10 years of work experience in areas related to energy, environment, climate change and public policy and an advanced University Level degree (at least Masters level; PhD preferable) or equivalent is required. Previous project management/team management experience would also be desirable. In addition, the Project Advisor should have recent experience in undertaking work related to climate change and GHG mitigation, preferably in the Asia-Pacific region. The PA must be associated closely with a climate change institution in the Asia-Pacific region. Fluency or at least a working knowledge of either Lao or French would also be desirable. Terms of Reference (TOR) for the Project Advisor will be finalized under the institutional sub-contract arrangements.

The terms of reference for the institutional sub-contract should also allow for the provision of short-term consultants.

The Institutional Sub-Contract will cover:

- Providing for technical backstopping and accounting for production of comparable and verifiable study outputs.
- Providing training to technical working groups on climate change related issues (include. data collection, data analysis, climate change modelling etc ...)
- Responsibility for creating/enhancing strong linkages to other climate change activities in the Asia-Pacific region;

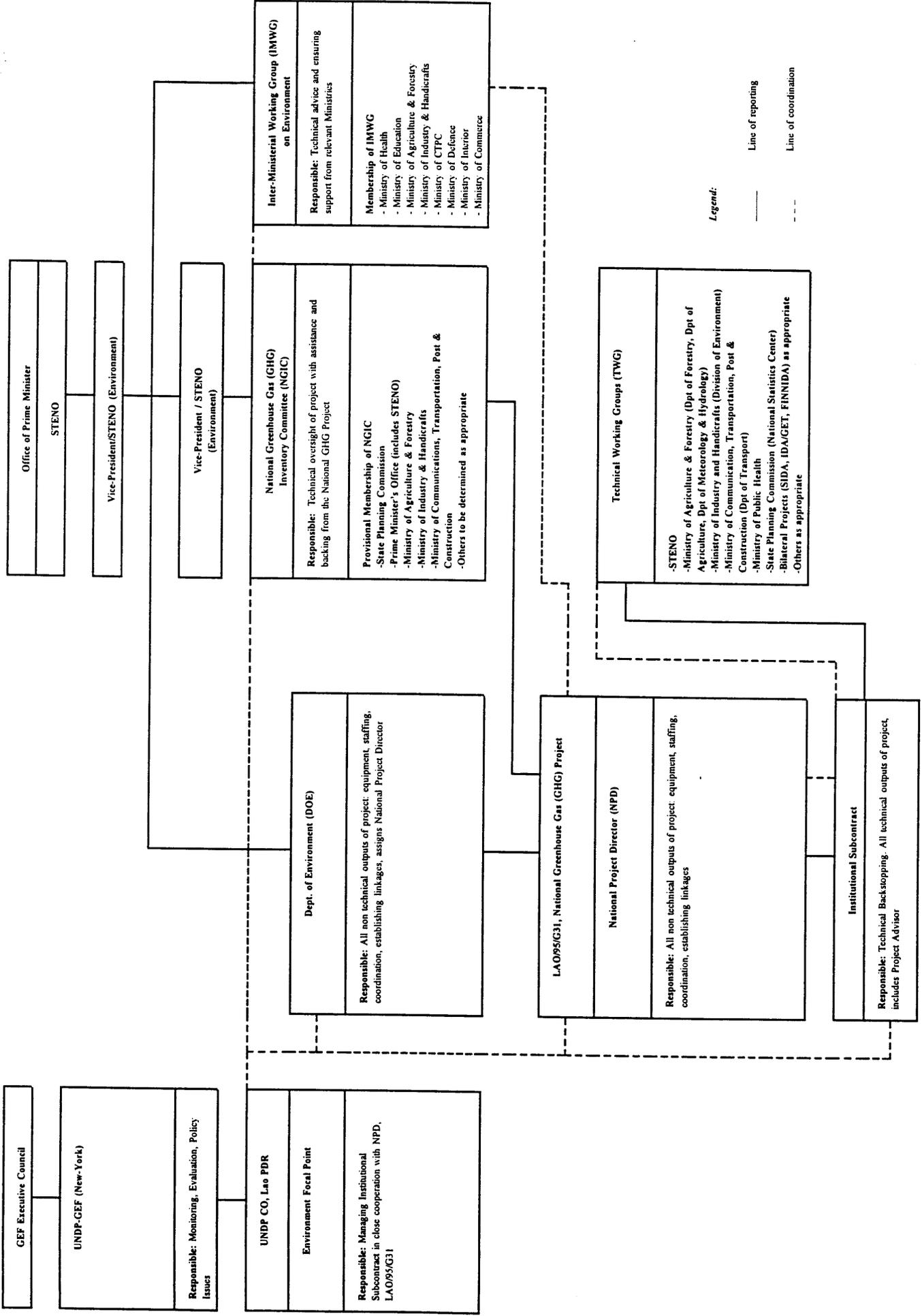
- Responsibility for preparation of project workplan;
- Responsibility for developing library of relevant climate change information in STENO;
- Responsibility for completion of draft manual for the Lao PDR for accounting for GHG emissions;
- Responsibility for completion of draft/final national GHG inventory;
- Responsibility for completion of draft/final national GHG mitigation plan;
- Responsibility for assisting National Project Director in preparing National Workshops and responsible for all technical aspects related to the workshops
- Responsibility for completion of National Implementation Plan/First National Communications to the FCCC for the Lao PDR;

**ANNEX 3 continued ...**

**Draft Terms of Reference (National Project Director) - STENO  
(FULL-TIME)**

**The National Project Director (NPD)**, a STENO staff member, will work closely with the Project Advisor (PA) and selected Institution in ensuring the timely implementation of all project activities and will have responsibility for management of all the non-technical aspects of the project including equipment procurement, coordination activities, training activities, etc. The National Project Director (NPD) will work closely with the Project Advisor/selected institution. The National Project Director (NPD) will be responsible for:

- Identifying and hiring (i) Administrative Assistants, (ii) Local Experts (for the Technical Working Groups - if necessary) as soon as possible following commencement of work by the Project Advisor.
- Procuring all equipment needs for the project.
- constituting membership of Technical Working Groups (TWGs) and National Greenhouse Gas Inventory Committee (NGIC) in conjunction with Project Advisor (PA)
- coordinating roles of respective Government Department's in the Project and ensuring full cooperation among different Department's and Ministries.
- arranging for all training activities (including English language training) undertaken as part of the project
- organizing study tours early on in the lifetime of the project for the Project team.
- enhancing capacity of Technical Working Group (TWG) through organizing local training programmes and seminars on climate change, ensuring that the appropriate arrangements are made, ensuring participation of widest possible audience, and actively participating in all training programmes and seminars. The goal would be to have at least one seminar/training programme carried out at least every 2-3 weeks.
- enhancing capacity of the Technical Working Group (TWG) through participation in regional workshops (e.g - ALGAS, USCS and other) and ensuring that appropriate arrangements are made.
- assist Project Advisor with preparation of Project Progress Reports (One report every 3 months)
- arranging meetings of the Inter-Ministerial Working Group on Environment/National Greenhouse Gas Inventory Committee (NGIC) at least once every three months to discuss issues and review progress of project based on Progress reports.
- participating in meetings of the UNFCCC Conference of Parties (COP) as part of the delegation of the Government of the Lao PDR
- assisting Project Advisor with organizing 3 National Workshops; Project Initiation Workshop (after 3 months), National GHG Mitigation Workshop (after 16 months), and End of Project Workshop (after 22 months)
- participating in the annual meeting of the UNFCCC Secretariat's CC:Forum as and when appropriate.



**Legend:**  
 ——— Line of reporting  
 - - - Line of coordination

