

**Country:** Islamic Republic of Pakistan

**Project Title:** *Pakistan: Enabling Activity for the Preparation of the Initial National Communication Related to the UN Framework Convention on Climate Change.*

**GEF Focal Area:** Climate Change

**Country Eligibility:** Ratified UNFCCC on 1 June 1994

**GEF Financing:** ~~US\$299,000~~ 274,300

**Government Counterpart Financing:** US\$50,000

**GEF Implementation Agency:** UNEP

**Executing Agency:** Ministry of Environment, Local Government and Rural Development.

**Estimated Starting Date:** July 1998

**Project Duration:** 24 months

## **Background**

1. The Islamic Republic of Pakistan is bounded to the west, north-west and north by Iran, and Afghanistan, to the north-east by the People's Republic of China, to the east and south-east by India, Jammu and Kashmir, and to the south by the Arabian Sea. It has a total coastline of 814 km, an area of 796,000 km<sup>2</sup>, and a population of about 140.5 million (1995), which is expected to increase to 284.8 million by 2025. Pakistan is the eighth most populous country in the world. The huge population is sustained by, and critically dependent on, the waters of the Indus River and its tributaries.

2. One third of the country (mostly in the north, west and south-west) is occupied by mountain ranges (Hindu Kush, Himalayas and Karakorum). The south-east is dominated by the Indus plains. The mountain slopes are very steep, with narrow valleys and are continuously undergoing various types of natural erosion.

3. The country is characterized by a continental type of climate which is arid and semi arid. There are two distinct seasons: summer and winter. Although the country falls within the monsoon region, it is arid except for the southern ranges of the Himalayas and the sub-mountainous tract where the annual rainfall varies between 760 mm and 1270 mm. The minimum and maximum mean annual temperatures are 16 and 31°C respectively. Precipitation is generally inadequate to support productive rain-fed agriculture.

4. Pakistan is blessed with a variety of landscapes and bioclimates. It has a unique combination of deserts, arid and semi arid areas, alluvial plains, low and high hills, and some of the highest mountains in the world. These physiographic features have made it a land of many contrasts. The diversity in climate and soils is reflected in highly variable distribution of flora and fauna.

## **Socio-economic development**

5. Pakistan has since independence in 1947 evolved from an initially agrarian economy to one with significant industrial sector. Although the economy has never been robust, the country has lived above the extremes of poverty found elsewhere in South Asia.

6. In recent years, the government placed emphasis on the development of three strategic sectors: agriculture, energy and population planning. Prudent fiscal management led to a budget deficit reduction from 9% of GDP in 1992/93 to 5% in the 1995/96 fiscal year. Despite this, the GDP growth rate in the 1990s (5%) was still lower than that of the 1980s (7%). Also, the GDP growth rate still stagnated at 3% in the manufacturing sector.

## **Agriculture, land use and forestry**

7. Agriculture presently contributes 25% to Pakistan's national income and provides employment to 50% of the labour force. About 60% of the country's exports are directly or indirectly based on agriculture.

8. The main crops grown include wheat, rice, sugar cane and cotton. Wheat, which is the country's main staple food, reached a record level of 17 Mt in 1994/95. Rice is mainly produced for export, although also a major staple food in some areas. Future increases in agricultural production may, however, be based entirely on increased productivity through better irrigation practices and soil fertility management rather than on the expansion of the

area under cultivation.

9. Pakistan's land use may be broadly categorized as: arable (26%), meadows and pastures (6%), forests and woodland (4%), and arid/semi arid regions (64%). The diversity of life-forms has been greatly altered in Pakistan by human activities. These activities have caused destructions ranging from pollution to biological invasion from the introduction of exotic species in the region, and leading to decreased/loss of biodiversity.

10. The forests of Pakistan reflect great physiographic, climatic and edaphic contrasts in the country. Due to deforestation, only 4.224 million ha, or about 4.8% of the total land area of the country, are estimated to be under forest and other natural vegetation cover. Natural forests are primarily found in the northern mountains.

### **Mining and industry**

11. Of the estimated 20 types of minerals identified in Pakistan at the time of independence, only coal (sub-bituminous and non-coking), rock salt, chromite, gypsum and limestone were mined. Fireclay, silica sand, celecite, ochres and iron are now commercially mined. There are also commercial deposits of copper, manganese, bauxite and phosphates. Natural gas, found mainly in the Sui and other locations in the Indus Plain, is mined for energy and fertilizer.

12. Rapid industrialization (at more than 10% per year) began in the 1950s, decreased in the 1970s, but was revived in the 1980s. The contribution of manufacturing to the total GDP reached a peak of 20% in 1984/85 fiscal year. In the past few years, it has fluctuated between 17% and 18%. The sector engages in the production of consumer goods for domestic market, and only textiles are exported on substantial scale.

### **Energy supply and demand**

13. Pakistan was estimated to consume about 36.5 millions toe (tonnes of oil equivalent) of energy in 1994/95, about 75% of which was consumed by commercial. Petroleum, natural gas, hydro and coal contribute 46%, 32%, 17% and 4%, respectively, to the commercial energy consumption in Pakistan.

14. Energy shortage is a major constraint to Pakistan's economic development. This is most acute in electricity generation. Of the total installed capacity of 11 GW in 1996, hydro stations provided 43%, while oil and gas fired stations provided the rest, except for the 137 MW from the nuclear power station near Karachi. Increased generation are to be boosted through the expansion of existing hydro stations at Tarbela and Mangla, and the construction of a large hydro station at Kalabagh in Punjab with a capacity of 3.6 GW.

### **National institutional framework**

15. The government of Pakistan being conscious of the potential of climate change, has been fully involved in the deliberations leading to the adoption of Agenda 21 and the United Nations Framework Convention on Climate Change (UNFCCC). There is a sustained will to develop a national response strategy and Plan of Action to address the potential adverse impacts of climate change. In this regard, the Ministry of Environment, Local Government and Rural Development (MELGRD), has been designated the national agency responsible for climate change issues in Pakistan.

## Environmental legislation

16. Pakistan has a number of environmental legislation which dates back to the Pakistan Penal Code of 1861 and the Canal and Drainage Act of 1873. More recent legislation include the Motor Vehicles Ordinance of 1965 (and Rules of 1969); the Islamabad (Preservation of Landscape) Ordinance of 1968; The Sindh Wildlife Protection Ordinance of 1972; The NWFP Management of Protected Forests Rules of 1975; the NWFP Salinity Control and Reclamation Act of 1988; and the Environmental Protection Act of 1997, which replaced the Environmental Protection Ordinance of 1983.

## Past and ongoing projects related to climate change

17. Pakistan has been involved in a number of projects related to climate change, as follows:

- (a) *Climate Change in Asia: Pakistan -- A Regional Study on Global Environment Issue* funded by ADB and implemented by the Environment and Urban Affairs Division (EUAD). The project started in June 1992 and ended in August 1993, and a report was published by ADB in July 1994. Its scope includes GHG emission inventory based on the 1990-1991 data and provided mitigation options for energy and industrial, building, transportation, agricultural, forestry and land use sectors. In addition, it also assessed the impacts on agriculture, monsoon and water resources, coastal zones, forestry, human health, industry and energy, infrastructure and communications. Policy options to cope with climate change for agriculture, water resources, coastal protection, forestry, human health and natural disasters were discussed. However, it is noted that the study was conducted by foreign (Climate Institute, Washington, DC/CSIRO, Australia/ICF, Washington, DC) and local consultants (Enterprise and Development Consulting Ltd), with no institutional strengthening and training.
- (b) *Asia Least-Cost Greenhouse Gas Abatement Strategy (ALGAS)*: Pakistan is one of the 12 participating countries in this UNDP/GEF/ADB project, which started in 1994. The project, implemented by Ministry of Environment, Local Government and Rural Development (formerly the Ministry of Environment, Urban Affairs, Forestry and Wildlife) and executed by Hagler Bailly Pakistan (a consulting company), included GHG inventory based on 1989-90 data (this component was sponsored by GT7) and the identification of GHG mitigation options and the development of least-cost abatement strategies. However, this study was largely undertaken by local and international consultants. A draft final report was issued in November 1997 by Hagler Bailly Pakistan.
- (c) *Country Case Studies on Climate Change Impacts/Adaptations Assessment Phase I*: Pakistan is one of four countries participating in this UNEP/GEF project to support the development of national impact and adaptation assessment based on the application of the draft "UNEP Handbook on Methods for Climate Change Impact Assessment and Adaptation Strategies". This national assessment, which is being coordinated by the MELGRD, focuses on the development of a regional climate change scenario, a socio-economic baseline and in-depth impact assessments and adaptation options for agriculture (wheat, rice and maize crops), forestry and water resources (Upper and Lower Indus Basin), and their socio-economics implications. This study, which started in September 1996, was completed in February 1998. However, there are still many gaps in the study which will be filled in this project (see para. 38).

## **Ratification of international environmental conventions**

18. The Government of Pakistan ratified the UNFCCC on 1 June 1994. Other conventions signed/ratified/acceded include:

- \* Convention on International Trade in Endangered Species of Wild Fauna and Flora (20 April 1976);
- \* Convention Concerning the Protection of the World Cultural and Natural Heritage (23 July 1976);
- \* Convention on Wetlands of International Importance Especially as Waterfowl Habitat (23 July 1976);
- \* Convention on the Conservation of Migratory Species of Wild Animals (12 January 1987);
- \* Vienna Convention on the Protection of the Ozone Layer (18 December 1992)
- \* Montreal Protocol on Substances that Deplete the Ozone Layer (18 December 1992) and its London Amendment (18 December 1992) and Copenhagen Amendment (17 February 1995);
- \* Basel Convention on Control of Transboundary Movements of Hazardous Wastes and their Disposal (5 May 1992);
- \* Convention on Biological Diversity (26 July 1994);
- \* UN Convention to Combat Desertification in those Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa (signed on 15 October 1994 but not ratified).

## **Project objectives**

19. Article 12.5 of the UNFCCC requires non-Annex 1 Parties (except those least-developed countries) to make their initial national communications "*within three years of the entry into force of the Convention for that Party, or of the availability of financial resources...*". The Government of Pakistan is fully committed to the implementation of the UNFCCC, and hence, it intends to prepare and submit its initial national communication 12 months after the approval of the requested funding for this project. This national communication will highlight priority areas for sustainable development.

20. As Pakistan has undertaken some enabling activities relevant to the implementation of the UNFCCC (see para. 17), and hence the main objective of this proposal is to enable the country to harmonize, update and refine the previous results, fill in gaps, further enhance its scientific and technical capacity, especially within the government sector, so that the country can fulfil its commitments and obligations as required by Articles 4.1 and 12.1 of the UNFCCC, including the preparation and the reporting of its initial national communication as required by Article 12.1 (a), (b) and (c) of the Convention based on the recommended COP2 guidelines and format for non-Annex 1 Parties.

## **Project description**

21. This proposal follows the "*GEF Operational Guidelines for Expedited Financing of Initial Communication from Non-Annex 1 Parties (February 1997)*". It consists of nine clearly defined activities, each of which is briefly described as follows:

**Activity 1: Establishment of the Project Management and National Study Teams**

22. Under the auspices of the MELGRD in consultation with other relevant ministries, a Project Steering Committee (PSC) will be established to provide guidance and to oversee the implementation of the project. The PSC will be chaired by the Director General (Environment) of MELGRD. The membership of the PSC will be constituted from the available national experts and existing institutions, including NGOs. It is expected that the members of the Project Steering Committee set up for the *Country Case Studies on Climate Change Impacts and Adaptation Assessment* (see para. 17(c)) can also effectively serve the PSC of this project.

23. A National Study Team (NST), which will comprise four sub-groups: GHG Inventory, Mitigation Options, Vulnerability/Impact Assessment and Adaptation, and National Communication, will also be established. Each sub-group of the NST will comprise experts from the public and private sector institutions.

24. The MELGRD will designate a Senior Officer as Project Coordinator to supervise the implementation of the project. However, a full-time Project Manager will be appointed to manage the day to day activities. A Senior Technical Adviser will also be appointed to provide overall technical advice on the preparation of the draft and the final version of the initial national communication. The Project Coordinator, the Project Manager, the Senior Technical Adviser and the group leaders of the NST will form the Project Management Team (PMT), which will be supported by a Secretary. The PMT will have adequate and appropriate computer and telecommunication facilities, including Internet.

**Major output:**

25. The major output of this proposed activity will be the establishment of the PMT and NST which are fully committed to the successful implementation of the project.

**Activity 2: GHG inventory**

26. Following the new COP2 guidelines, the GHG inventory will mainly focus on CO<sub>2</sub>, CH<sub>4</sub> and N<sub>2</sub>O in (a) all energy sources; (b) industrial processes; (c) agricultural processes; (d) land use change and forestry; and (e) other sources, while data for other GHG may be collected where available.

27. Earlier work (see paras. 17 a and 17 b) has produced the GHG inventories for the years 1989-90 and 1990-91 based on the *IPCC Guidelines for National GHG Inventories*. The results obtained from these projects were largely limited and their reports noted the lack of detailed and sufficient data as a major constraint to obtaining reliable GHG emission estimates. Hence, considerable gaps still exist in the country's inventory database. In most cases, IPCC default emission factors were used, and this has caused great uncertainties in the earlier results. Indeed, it has been recommended by the **ALGAS Pakistan National Report (Draft final report, November 1997)** that there is a need to build the **"institutional capacity"** to improve the quality of the completed GHG inventory, **"in terms of human and financial resource allocation, and the provision of technical expertise to carry out studies in developing local emission factors for fuel combustion by end-uses, processes and technology"**.

28. As the first step, all existing data will be critically reviewed and the data ga

identified. An updated inventory based on the latest version of *IPCC Guidelines* and using the data for the year 1994 will be undertaken, taking into consideration of Decision 10/CP.2 of COP.2 with regard to the appropriate use of emission factors. In particular, local emission factors will be developed and used where appropriate so as to improve the reliability of the emission data. This activity will be undertaken by the GHG Inventory Group, which will include members from public and private sectors. The capacity for this group to undertake this task will be strengthened and enhanced where necessary. Existing local expertise will be used where possible.

29. Despite the previous studies, so far an effective data collection and management system has yet to be set up so that both the data and the GHG inventory can be updated regularly and efficiently. This will be rectified in this project.

30. This activity will be coordinated with the regional efforts whenever and wherever possible, such as the CC:TRAIN and the UNDP-UNEP National Communications Support Programme.

31. At the end of the GHG inventory, a workshop will be held to review and present the results to national policy and decision makers.

***Major outputs:***

32. The major outputs of this proposed activity will be:

- (a) A critically reviewed and comprehensive GHG inventory based on the 1994 data, so that it can be used as a basis for the selection of mitigation options.
- (b) Identification of shortcomings and gaps of the IPCC Guidelines in relation to the local conditions.
- (c) A description of any original research needed to develop and/or apply new emission factors for specific activities.
- (d) Recommendations on areas of targeted research to improve future inventories and to suggest revisions to the existing IPCC GHG inventory methodology.
- (e) A database system for regular and efficient updating and management of the inventory.
- (f) Strengthening of the inventory study team.
- (g) Workshop report.

***Activity 3: Programs to address climate change and its adverse impacts, including abatement and sink enhancement***

33. Based on the results of the updated GHG inventory, this project will identify, analyze, assess and update a range of potential mitigation options so that a national strategy and plan for viable measures to abate the increase in GHG emissions and to enhance removals by sinks can be developed and formulated.

34. Earlier study has generally identified a number of options for reducing the high energy consumption in Pakistan. These include: energy conservation measures (eg. efficiency improvements); improvements in the supply of electricity by reducing transmission losses; investments in lower carbon or no carbon emitting sources (natural gas, nuclear, hydro and other renewable); increased use of biogas digesters. These measures together with carbon sequestration efforts such as reforestation and afforestation programmes and methane recovery have been used to illustrate the potential GHG emission mitigation options in Pakistan. **However, these options and programmes need to be further assessed, analyzed, compared and elaborated based on the updated GHG inventory data, with appropriate costing, so that the most cost-effective options and programmes will be chosen and implemented.**

35. The proposed activity will be undertaken by the Mitigation Options Group, which will include members from public and private sectors. The capacity for this group to undertake the task will be strengthened and enhanced where necessary. Useful lessons will be learned from the ALGAS study and UNEP/UCCEF's "*Economics of GHG Limitations - Phase I: Methodological Framework for Climate Change Mitigation Assessment*". Existing local expertise will be used where possible.

36. A workshop will be conducted for key stakeholders and policy and decision makers to review the options and strategies at the end of the study.

**Major outputs:**

37. The major outputs of the proposed activity will be:

- (a) Identification and assessment of mitigation options.
- (b) Recommendations on reducing the number and intensity of emissions from various sources and the enhancement of sinks.
- (c) Preparation of the comprehensive national mitigation strategy for the national communication.
- (d) Workshop report.

**Activity 4: Policy options for monitoring systems and response strategies for impacts**

38. This project will identify and develop policy options for adequate monitoring systems and response strategies for climate change impacts assessment. However, these policy options will be based on the quantitative analysis of data collected from existing monitoring systems for vulnerability and impacts assessment, using the *UNEP Handbook on Methods for Climate Change Impact Assessment and Adaptation Strategies*, which is based on *IPCC Technical Guidelines*. Existing monitoring systems will be strengthened where necessary. Thus, a comprehensive vulnerability and impacts assessment will be undertaken on terrestrial and marine ecosystems (these include agriculture, coastal zone, water resources, human health, natural ecosystems, and other aspects such as socio-economics) using the 1994 data.

39. All existing data will first be critically reviewed and data gaps identified. Earlier work (see paras. 17 a and 17 c) will be updated and extended where necessary. **For example, particular attention will be paid to the following areas: coastal zone, human health and**



**biodiversity where no work or very little work has been done so far. In addition, further work on the following areas is also regarded as essential:**

- (a) *Hydrology:* For improved use of water resources and flood proofing, a review of the hydrological models that are basis for water sector investment are a priority.
- (b) *Floods, Droughts and Agriculture:* The determination of specific flood proofing and drought control measures for vulnerable areas and critical infrastructure requires identifying changes in cropping patterns and if necessary the changes in the various farming systems.
- (c) *Review of Infrastructure:* For the forecasting of climate change and the development of field drainage plans to minimize its impacts, a review of the design of the critical specification of existing dams, other irrigation and communication infrastructure is necessary.
- (d) *Re-Run of Crop Models:* For adaptation of farming system and cereal crops to heat stress, a comprehensive re-run of the CERES crop model is needed to understand the implication of heat stress on the yield of the main crops in each of the main agro-ecological zones.
- (e) *Energy Efficiency:* For improving energy efficiency, a range of conservation opportunities have been identified and prioritized according to cost-effectiveness. However, these potential options are yet to be evaluated for technical feasibility and economic attractiveness.
- (f) *Forest Management and Education:* Forestry sector must evaluate (i) methods for creating economic incentives for responsible stewardship of forests by integrating forest management with other objectives such as agriculture; and (ii) education and training programmes to teach the local population the methods and benefits of integrated forest management.
- (g) *Effects of Sea Level Rise and Monsoon Variations:* Improved understanding of how accelerated sea level rise and stronger monsoon storms could affect urban and coastal resources, including all human settlements and human activities along the coast, are yet to be established. In order to improve the current understanding of these issues, the Coastal Environmental Management Plan (CEMP) sponsored by the Economic and Social Commission for Asia and Pacific (ESCAP) will be supplemented by a comprehensive identification of all existing coastal resources in Pakistan. These will be evaluated to establish the resources which are most sensitive to climate change. It may be noted that the CEMP was developed based on the 1990 data under a business as usual scenario. It was a useful socio-economic study but not a substitute of vulnerability analysis. The present study will upgrade the CEMP and make it responsive to climate change.

40. This activity will be undertaken by the Vulnerability/Impacts Assessment and Adaptation Group, which will include members from public and private sectors. The capacity for this group to undertake the task will be strengthened and enhanced where necessary. In particular, lessons will be learned from the methodology as developed by the UNEP/GEF project: "*Country Case Studies on Climate Change Impacts and Adaptation Assessments (Phase I)*" (see para. 17 c), and existing local expertise will be used where available.

41. Based on this study, policy options will be identified and developed for the response strategies.

42. A workshop will be held for various stakeholders as well as policy and decision makers to review and publicize the results at the end of the study.

**Major outputs:**

43. The major outputs of the proposed activity will be:

- (a) Important baseline data required for the assessment of climate change vulnerability/impacts and adaptation options.
- (b) A comprehensive vulnerability/assessment for various sectors based on established procedures.
- (c) Policy options for adequate monitoring systems and response strategies for climate change impacts on terrestrial and marine ecosystems.
- (d) Workshop report.

**Activity 5: Policy frameworks for implementing adaptation measures and response strategies**

44. Based on the results of the vulnerability and impacts assessment for various sectors, this project will identify, analyze and assess a range of potential adaptation (stage 1) options so that a national strategy for the viable measures can be developed and formulated so as to minimize the impacts of climate change on the economy. Earlier work (paras. 17 a and 17 c) will be updated and extended where necessary.

45. Based on this study, policy frameworks will be developed for implementing adaptation measures and response strategies in the context of coastal zone management, disaster preparedness, agriculture, fisheries, and forestry, with a view to integrating climate change impact information, as appropriate, into planning and decision-making processes.

46. This activity will also be undertaken by the Vulnerability/Impact Assessment and Adaptation Group (see para. 40), the capacity of which to undertake this task will be strengthened and enhanced where necessary.

47. A workshop will be organized for key stakeholders and policy-makers to review the adaptation options and strategies and the policy frameworks for their implementation at the end of the study.

**Major outputs:**

48. The major outputs of the proposed activity will be:

- (a) Identification and assessment of adaptation (stage 1) options.
- (b) Policy frameworks for implementing adaptation measures and response strategies.

(c) Workshop report.

**Activity 6. Building capacity to integrate climate change concerns into planning**

49. In the context of undertaking national communication, there is a need to build or strengthen the national capacity to integrate climate change concerns into medium and long-term planning. This may include education and training on climate change for national development planners, as well as for policy and decision-makers from all relevant ministries and government agencies.

For example, appropriate techniques such as integrated assessment may be introduced to these people so that it can be learned and used as a useful tool for proper policy and decision making in the planning process. This activity will be planned by the PMT.

**Major output:**

50. Enhanced capacity of the national development planners and policy and decision-makers to integrate climate change concerns into planning.

**Activity 7: Programs related to sustainable development, research, public awareness, etc**

51. This project will identify and develop programmes in climate change which are related to sustainable development, research and systematic observation, education and public awareness, training, etc.

52. For example, Activities 2 to 6 will contain elements in research and systematic observation, education and training. In addition, the successful implementation of the UNFCCC in Pakistan relies also on wide public participation. Thus, it is proposed to develop a cost-effective public awareness programme so that campaigns can be undertaken throughout the project cycle when and where possible and that these campaigns can reach the maximum possible number of villages/districts in the country. This is by no means an easy task with the country's huge population. However, this must be achieved if national consensus is to be built on climate change mitigation and response strategies. To this end, both public and private media (television radio and newspapers) will be used to assist in creating public awareness.

53. CC:INFO/Web will also be used as a tool to enhance national and international information flow. A CC Web site has already been established in coordination with the CC:INFO/Web initiative. Materials produced by the IUC/UNEP and UNITAR CC:TRAIN will be used where appropriate.

54. Indeed, the Government of Pakistan regards the implementation of Article 6 of the UNFCCC (*EDUCATION, TRAINING AND PUBLIC AWARENESS*) to be one of the top priority areas in fulfilling the objectives of the UNFCCC, and hence a modest amount of US\$20,000 has been budgeted in this project to undertake these activities.

**Major outputs**

55. The major outputs of this proposed activity will include:

- (a) Information packages, video aids, relevant publications and demonstrable community driven project.
- (b) Enhanced public awareness at all levels and in maximum possible number of

villages/districts in the country.

***Activity 8: Provision of other information***

56. This project will also provide any other information relevant to the achievement of the objective of the UNFCCC. It will identify the technical and financial needs associated with proposed projects and response measures under Article 4. If feasible, it will also provide material or data relevant for calculation of global GHG emission trend. In addition, it may describe the financial and technological needs and constraints associated with the communication of information. In particular, and following the evolving recommendations of the Conference of the Parties through its subsidiary bodies, the description may cover needs and constraints associated with the further improvement of national communications, including reduction of the margin of uncertainty in emission and removal variables through appropriate institutional and capacity-building.

***Activity 9: Preparation of national communication***

57. Based on the outputs of Activities 2 to 8 as described above, the initial national communication will be prepared and submitted to the COP through the UNFCCC Secretariat.

58. This task will be coordinated by the National Communication Group under the guidance of the Senior Technical Adviser. It will involve all members of the PMT and NST, each of which will prepare the relevant sections/chapters for the initial national communication.

59. The draft national communication will be reviewed by PSC. Based on this review, a revised version will be produced. A workshop will then be organized for key stakeholders and policy and decision makers to review this revised draft national communication before it is finalized and submitted to the UNFCCC Secretariat.

***Major output:***

60. The major output of this proposed activity will be the Initial National Communication to be submitted to the COP through the UNFCCC Secretariat.

***Institutional framework, project implementation and coordination***

61. As shown in the project management and coordination structure (Figure 1), this project will be executed by the MELGRD and guided by the PSC. It will be supported by various relevant ministries, agencies, research institutions and NGOs, including the Forestry Department, Pakistan Forest Institute (Peshawar), Pakistan Agricultural Research Council, Agriculture Universities, Meteorological Department, Water and Power Development Authority and Sustainable Development Policy Institute.

62. A full-time local Project Manager, who will be reported to the Project Coordinator designated by MELGRD, will be appointed to manage the day-to-day activities of the project (see para. 24). A Senior Technical Advisor will also be appointed to provide overall technical advice on the preparation of the draft and the final version of the initial national communication (see para. 24). This project will seek to strengthen the existing institutional framework for project management where necessary.

63. As the GEF implementing agency for this project, UNEP, through its Atmosphere Unit and

the Regional Office for Asia and the Pacific (ROAP) based in Bangkok, with the support of the UNEP Collaborating Centre on Energy and Environment (UCCEE) based in Denmark, will play a technical support and advisory role so as to ensure that the project is successfully implemented.

64. It is expected that after the successful completion of this project, the MELGRD will have enhanced capacity enabling it to continue to deal with UNFCCC matters on a permanent and sustainable basis.

#### **Proposed work schedule**

65. The proposed timetable for commencement and completion of all activities described above is given in Table 1. The detailed work plans for each activity will be developed by the Project Coordinator/Project manager in full consultation with the MELGRD and the PSC soon after the approval of the project, with the guidance and assistance of UNEP, which will be consulted throughout the period of the project implementation.

#### **Appropriate sequencing**

66. The above project activities will be undertaken in appropriate sequence based on good practice. Established guidelines will be followed, while established tools and methodologies will be used.

#### **Activity matrix**

67. The activity matrix which indicates the areas needed to be covered by this proposal are shown in Table 2. The proposed activities have been thoroughly discussed with UNEP after all past and ongoing activities related to climate change have been critically reviewed and assessed by UNEP. It has been ensured that there will be no duplication of effort for this project with the past and ongoing activities.

#### **Training**

68. The past and ongoing activities have been rather weak in term of capacity building, especially within the government sector, despite the fact that capacity building has been recognized as important. Thus, it is expected that comprehensive training for the PMT and NST in various aspects of Activities 2 to 9 will be necessary. In addition, training for planners, policy and decision-makers in Activity 6 (see para. 49) will also be required.

69. All training activities, including national workshops and participation of regional and international workshops organized or to be organized by UNEP, UNDP or other international agencies for their ongoing enabling activities programmes, will be coordinated by the PMT. In particular, the country will participate in the regional workshops organized by the *UNDP-UNEP National Communications Support Programme*.

70. Training materials from the past and ongoing activities may be obtained from various regional and international sources, such as IPCC, UNITAR (CC:TRAIN), etc. Lessons can also be learned from other ongoing enabling activities programmes in the region implemented by UNEP and UNDP.

71. UNEP, with its extensive experience in training in enabling activities, will be consulted on all aspects of training, such as the workshop agenda, the trainers, etc. Technical assistance will

be provided where necessary.

### **National level support**

72. This project enjoys a very high level and a wide range of national support. The project proposal has been critically reviewed by the MELGRD and fully endorsed by Mr. Sikandar Hayat Jamali of the MELGRD, who is the GEF Operational Focal Point (letter attached). The project will be implemented under the guidance of PSC, which has broad representation from the relevant ministries and government agencies and NGOs (see para. 22).

73. The UNEP Regional Office in Bangkok will play an active and significant role in the implementation of the project on behalf of UNEP.

### **Project financing and budget**

88. As the proposed activities are standard enabling activities as defined by the Operational Guidelines, so the incremental cost for undertaking these activities are also full cost. The requested GEF funding of US\$299,000 reflects the current real needs and concerns of the country, especially capacity building within the government sector, in order to fulfilling its commitments for the preparation of its initial national communication (see Table 3).

89. This budget has been carefully and realistically estimated by the MELGRD with close consultation with UNEP after taking all past and ongoing climate change activities into consideration. It has been ensured that there will be no duplicative effort.

90. As a country "*with low-lying coastal areas*" (Article 4.8 b), "*with ...forested areas...*" (Article 4.8 c), "*with areas prone to national disasters*" (Article 4.8 d), "*with areas with fragile ecosystems, including mountainous ecosystems*" (Article 4.8 g), "*whose economies are highly dependent on income generated from the production, processing and export, and/or on consumption of fossil fuels and associated energy products.*" (Article 4.8 h), Pakistan, with its large population and complex ecosystems, deserves special consideration under Article 4, paragraph 8 of the Convention, including necessary actions related to funding, insurance and the transfer of technology, to meet its specific needs and concerns arising from the adverse effects of climate change and/or the impact of the implementation of response measures.

91. The contribution of the Government of Pakistan, which will amount to US\$50,000 over the period of the project, will include salaries for technicians and other supporting staff, vehicles for field trips and their maintenance, office rentals, library and information facilities, insurance, and others.

### **Rationale for GEF support**

92. This is a standard enabling activities proposal which will assist Pakistan to fulfil its reporting requirements under the UNFCCC. As GEF is the international entity entrusted to operate the financial mechanism for the UNFCCC on an interim basis, the proposed activities are eligible for GEF funding.

### **Sustainability and participation**

93. The Government of Pakistan is fully committed to the implementation of the UNFCCC, and hence the goals and objectives of this project. The strengthening of scientific, technical and

institutional capacities in various aspects of the proposed activities, as well as the leading role taken by the MELGRD to execute the project would enable the country to fulfil its obligations and commitments to the UNFCCC on a sustainable basis. Indeed, the whole project management structure is designed in such a way that full participation by local experts in all aspects of activities are ensured, so that further activities in the future are sustainable.

### **Issues and risks**

94. **Issues:** In order to successfully implement the project, close coordination and consultation between the MELGRD, the PSC, the PMT and NST is essential. The MELGRD and PSC will consult all relevant stakeholders, including NGOs and research organizations through appropriate venues (e.g. meetings and workshops). In addition, there is a need to raise public awareness on the various aspects of the climate change through the established mechanisms for such activities.

95. **Risks:** The potential risks which may mask the objectives and goals of the project are:

- (a) Longer time period than expected for the collection and analysis of the data and the preparation of the national communication.
- (b) Inadequate consultations among various stakeholders.
- (c) Lack of involvement of major policy and decision makers in the formulation of final strategy.
- (d) Lack of public participation.

96. Necessary action will be undertaken to avoid all the risks mentioned above.

### **Monitoring and evaluation**

97. The Project Manager/Project Coordinator will provide a monthly progress report to the PSC and MELGRD, which will share it UNEP. If possible, these reports may be compiled into an electronic newsletters that will be distributed to all participating institutions. These reports will enable the MELGRD and its supporting institutions to evaluate the implementation of the project on an ongoing basis and identify difficulties and shortcomings at an early stage. They will be reviewed by the PSC for their quality and standard, comprehensiveness, and conformity to the proposed terms of reference and dates of completion.

98. The PSC will meet on a quarterly basis to review project implementation and provide scientific, technical, policy and strategic guidance. The minutes of these meetings will be shared with all participating institutions. The PSC will guide the MELGRD on reports and make recommendation to the MELGRD, which, in turn, will provide quarterly progress reports and quarterly financial reports to UNEP based on UNEP's standard format.

99. UNEP will provide its established monitoring and evaluation guidelines and assessment procedures, which will be applied to evaluate the progress of the project during mid-term and after its completion.

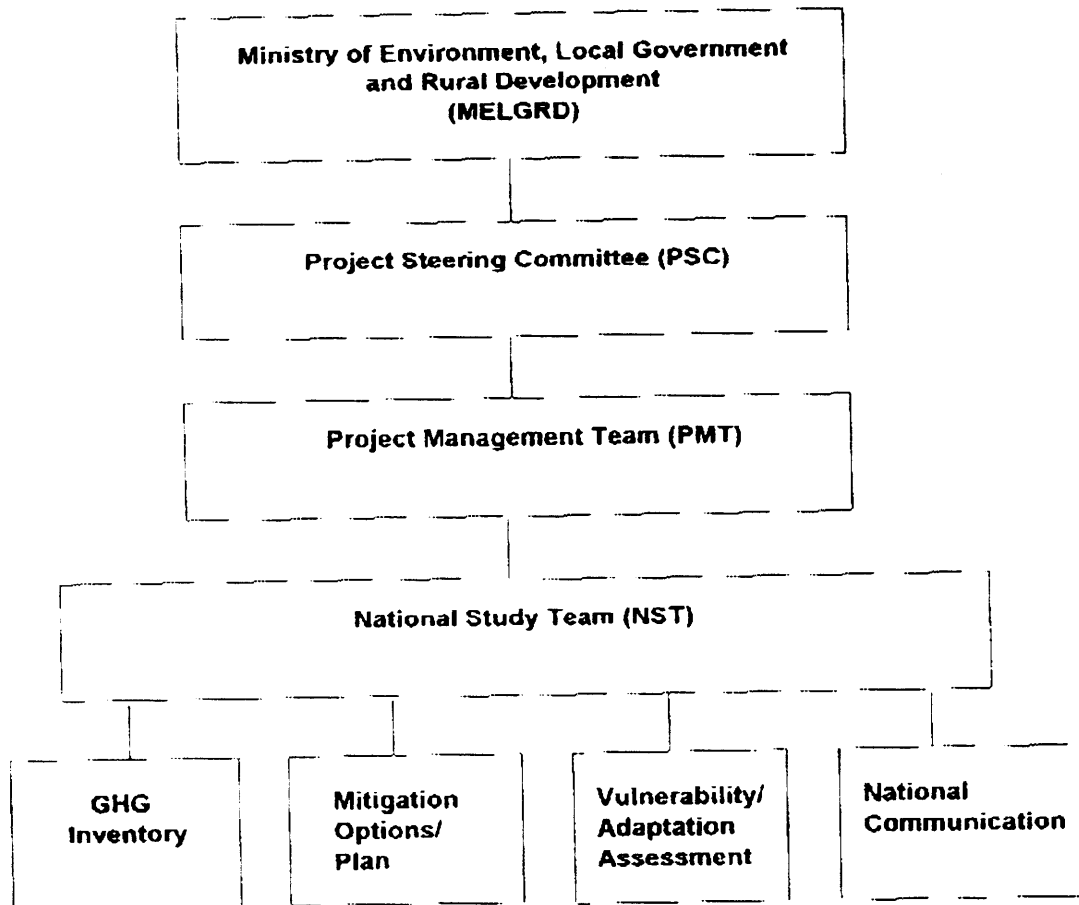


Figure 1: Project management structure



**Table 1. Proposed work schedule**

ACTIVITY	1	2	3	4	5	6	7	8	9	PM	M&E	
T I M E  I N M O N T H S	1	■					■					
	2	■	■		■	■	■	■	■			
	3		■		■	■	■	■	■		■	
	4		■	■	■	■	■	■	■		■	
	5		■	■	■	■	■	■	■		■	
	6		■	■	■	■	■	■	■		■	■
	7		■	■	■	■	■	■	■		■	
	8		■	■	■	■	■	■	■		■	
	9		■	■	■	■	■	■	■		■	■
	10		■	■	■	■	■	■	■		■	
	11		■	■	■	■	■	■	■		■	
	12		■	■	■	■	■	■	■		■	■
	13			■	■	■	■	■	■		■	
	14			■	■	■	■	■	■		■	
	15			■	■	■	■	■	■	■	■	■
	16			■	■	■	■	■	■	■	■	
	17				■	■	■	■	■	■	■	
	18				■	■	■	■	■	■	■	■
	19							■		■	■	
	20							■		■	■	
	21							■		■	■	■
	22							■		■	■	
	23							■		■	■	
	24							■		■	■	■

**NB: Some activities are expected to run concurrently as indicated.**

**PM is Project Management.**

**M&E is Evaluation and Monitoring.**

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\*\*RECEIVE STOP\*\*

**Table 2: Enabling Activities required for Initial National Communications (Pakistan)**

Enabling Activity	Commitment	Planning and execution	Capacity Building		
			Data Gathering and Research*	Institutional Strengthening	Training & Education
<u>1. National Circumstances</u>		x	x	N/A	N/A
<u>2. Greenhouse Gas Inventory</u>		GTZ/ADB (x)	GTZ/ADB (x)	x	x
1. -All Energy Sources		" (x)	" (x)	x	x
2. -Industrial Processes		" (x)	" (x)	x	x
3. -Agricultural Processes		" (x)	" (x)	x	x
4. -Land use Change & Forestry		" (x)	" (x)	x	x
5. -Other Sources		" (x)	" (x)	x	x
<u>3. General Description of Steps taken or envisaged to implement the Convention</u>					
(a) Program related to sustainable development, research, public awareness, etc.		x	x	x	x
(b) Policy options for monitoring systems and response strategies for impacts.	UNEP/GEF	(x)	UNEP/GEF (x)	UNEP/GEF (x)	UNEP/GEF (x)
(c) Policy frameworks for implementing adaptation measures and response strategies	UNEP/GEF	(x)	UNEP/GEF (x)	UNEP/GEF (x)	UNEP/GEF (x)
(d) Building capacity to integrate climate change concerns into planning		x	N/A	x	x
(e) Programs to address climate change and its adverse impacts, including abatement and sink enhancement.	ALGAS	(x)	ALGAS (x)	x	x
<u>4. Other Information</u>					
(a) Material relevant for global emission trends		x	x	x	x
(b) Financial and technological needs and constraints for					
- Projects for Financing		x	x	x	x
- National Communications		x	x	x	x
- Vulnerability Assessment and Adaptation		x	x	x	x
<u>5. Compilation and Production of the Initial National Communication</u>		x	N/A	N/A	N/A

\* In the context of communication-related enabling activities.

Table 4: Budget for Pakistan Enabling Activities Project

Enabling Activity Commitment	Planning and execution (US\$)	Capacity Building				Total Cost (US\$)
		Data Gathering and Research (US\$)	Institutional Strengthening (US\$)	Training and Education (US\$)	Technical & Admin. Support (US\$)	
<b>2. Greenhouse Gas Inventories</b>	20,000	13,000	11,000	2,000	46,000	
<b>3. General Description of Steps</b>	50,000	33,000	35,000	7,000	125,000	
(a) Programs related to sustainable development, research, public awareness, etc.	4,000	6,000	8,500	500	19,000	
(b) Policy Options for Monitoring Systems and Response Strategies for Impacts.	18,000	12,000	10,000	2,000	42,000	
(c) Policy Frameworks for Implementing Adaptation Measures and Response Strategies.	12,000	7,000	7,000	2,000	28,000	
(d) Building Capacity to integrate Climate concerns into Planning	4,000	0	3,000	500	7,500	
(e) Programs to address climate change, adverse impacts, including abatement, sink enhancement	12,000	8,000	6,500	2,000	28,500	
<b>4. Other Information</b>	2000	1000	1500	500	5000	
(a) Material relevant for Global Emission Trends	1,000	500	750	250	2,500	
(b) Financial, Technological Needs and Constraints	1,000	500	750	250	2,500	
<b>5. Compilation and Production of Initial National Communication</b>					20,000	
Project Management					50,000	
Monitoring/Evaluation					8,000	
<b>Total</b>					254,000	
% of Total	45%	20%	28%	7%		
UNEP Coordination (8%)					20,300	
<b>Total</b>					274,300	

FAX 1

98/3209

Gram : ENVIRONMENT  
TEL. : (92-51-9224579-80)  
Fax No : (92-51-9202211)



SECRETARY

D.O. No.1(54)/97-Tech-II  
GOVERNMENT OF PAKISTAN  
MINISTRY OF ENVIRONMENT, LOCAL GOVERNMENT  
AND RURAL DEVELOPMENT

Islamabad, November 26, 1998

My dear *Ahmed Djoghlaif*,

Thank you for your letter dated 27th October, 1998 regarding budget estimate for the preparation of Pakistan National Communication to the United Nations Framework Convention on Climate Change.

2. While we were hoping that the UNEP will be able to procure US\$ 299,000 as requested by us, we agree to its downward revision to US\$ 274,300 (as also subsequently confirmed vide UNEP's Fax of 19 November 1998). We understand that this will now be the final budget and will be approved by GEF, as such.

3. Mr. Mehboob Elahi, Director General (Env) has been nominated to be the focal point for the implementation of this Enabling Activity in Pakistan. His name may be communicated to the relevant offices in UNEP/GEF.

4. On behalf of the GEF Operation Focal Point in Pakistan, I have the pleasure to endorse the proposed budget in its present form and look forward to its expeditious approval by the UNEP/GEF.

With regards,

Yours sincerely,

(Muhammad Zubair Kidwai)

Mr. Ahmed Djoghlaif,  
Executive Coordinator,  
United Nations Environment Programme,  
GEF Coordination Office,  
P.O. Box 30552,  
Nairobi, Kenya (Fax 254 2 624041).

<b>U N E P</b>	
GEF COORD. OFFICE	
<b>RECEIVED</b>	
ACTION	DATE
NO <input type="checkbox"/>	27 NOV 1998
WHAT	WHO
WHEN COMPLETED	RS/AD
CIRCULATE	NO <input type="checkbox"/> YES <input type="checkbox"/>

FAX 3

Tele: 9224579  
Fax : 9202211



<b>U N E P</b>	
GEF COORD. OFFICE	
<b>RECEIVED</b>	
ACTION NO <input type="checkbox"/>	REQUIRED YES <input type="checkbox"/>
20 MAY 1998	
No. 1(54)/97-Tech-II	
<b>GOVERNMENT OF PAKISTAN</b>	
<i>Ministry of Environment, Local Government and Rural Development</i>	
WHAT	
WHO	
WHEN COMPLETED	
CIRCULATE	NO <input type="checkbox"/> YES <input type="checkbox"/>
FILE IN	Islamabad, 19 May 1998

98/1481

Secretary

Subject: **PAKISTAN ENABLING ACTIVITIES FOR THE PREPARATION OF INITIAL NATIONAL COMMUNICATIONS**

Dear Mr. Djoghlaif,

As the GEF Operational Focal Point in Pakistan, I have carefully reviewed the final version of the proposal entitled "Pakistan: Enabling Activities for the Preparation of Initial National Communications related to the UN Framework Convention on Climate Change", which has been prepared by your Office in close collaboration with our Ministry of Environment, Local Government and Rural Development. I am very pleased to endorse it in its present form, including its proposed budget.

2. With a population of 140.5 million (1995) -- the eighth most populous country in the world, Pakistan deserves special attention for further assistance in climate change enabling activities, particularly in the area of capacity building within the government sector, despite the fact that we have had some earlier studies, all of which were undertaken by private consultants.

I look forward to the proposal's expeditious approval.

With best regards,

Yours sincerely,

*Sikandar Hayat Jamali*  
(SIKANDAR HAYAT JAMALI)

H.E. Mr. Ahmed Djoghlaif,  
Executive Coordinator  
GEF Coordination Office,  
UNEP (Fax No. 2542 623162)