

**COUNTRY:** Federal Islamic Republic of the Comoros

**Project Title:** *The Comoros: Enabling Activities for the Preparation of Initial National Communication related to the United Framework Convention on Climate Change*

**GEF Focal Area:** Climate Change.

**Country Eligibility:** Ratified UNFCCC on 31 October 1994.

**GEF Financing:** US\$350,000

**Government Counterpart Funding:** US\$ 50,000 (in-kind)

**GEF Implementing Agency:** UNEP

**Executing Agencies:** Ministry of Agricultural Production, Marine Resources and the Environment (MAPMRE)

**Collaboration Agencies:** National Coordination Committee for Sustainable Development (NCCSD)

**Estimated Starting Date:** April 1998

**Project Duration:** 2 years

## Background

1. The Comoros Islands are an archipelago of four islands: Grande-Comore (Ngazidja), Anjouan (N'dzouani), Moheli (Moili) and Mayotte (Maore sous administration Francaise). It is located at the entrance of the Mozambique Channel (between the east African coast and the north-western coast of Madagascar), on the oil tanker route between the Arab Gulf and the Western nations. The four islands cover a total land area of 2,236 km<sup>2</sup>, with a coastline of 285 km.

2. The country has a population of 500,000 (annual growth rate is estimated at 3.7%), and the majority (75%) is in rural areas. Population density is high and varies considerably from island to island and from the coast to the interior: 115 inhabitants/km<sup>2</sup> in Moili, 446 inhabitants/km<sup>2</sup> in N'dzouani, and 269 inhabitants/km<sup>2</sup> in Ngazidja. The problems linked to this high population density, given the small size of the country and its limited potential, are compounded by the lack of modern infrastructures, an embryonic secondary sector and serious degradation of the natural environment. The gross national product (GNP) in 1992-94 was estimated to be US\$249 million, equivalent of US\$510 per head.

3. The islands are volcanic in origin and their highest peak, Mt Kartala (2,440 m), is still active (the last activity was recorded in 1991). The general topography of the rest of the country includes: deserts of lava field and volcanic peaks (about 600 m) in the Ngazidja (Grand Comore) region; volcanic massif with steep hills (about 1,500 m) in the island of N'dzouani; wide and fertile valleys with a ridge reaching 580 m); and a thick forest cover in the island of Mahore. The coastal zones are characterized by numerous inlets and coral reefs.

4. The climate of the Comoros is humid tropical and highly influenced by the marine environment and topography. The mean coastal temperatures are about 28°C in March and 23°C in August. The monsoon season lasts from August to April. Cyclones and tidal waves are frequent during the summer months. The rainfall is highest during January (averaging about 420 mm) and is reduced to about 85 mm in October (the driest month).

5. The rich volcanic soils on the island foster the growth of profuse vegetation. Beyond the coastal zones, where mangroves predominate, there are coconut palms, mangoes, and bananas. There is also a forest zone with many varieties of tropical hardwood. There are also wide varieties of fauna. Comorian waters harbour the coclacanth, a rare primitive fish, whose fossil remains dating back to about 400 million years. As of 1987, the main endangered species were the sparrow hawk and scops owls found in N'dzouani (Anjouan).

## Socio-economic development

6. The economy of the Comoros is not very developed. It is largely supported by agriculture, which contributed about 40% of GDP in 1994 with about 77% of the labour force. Among the major crops are: manioc, coconut, bananas, sweet potatoes, rice, corn, and copra. Others include sugarcane, sisal, pepper, spices, coffee, and various perfume plants such as ylang-ylang, abelmosk, jasmine and citronella. Most farmers use primitive farming techniques, leading to poor yields. Also, the best lands are reserved for export crops such as vanilla of which the country is the world's second largest producer. Almost all the meat is imported, as is most of the rice consumed on the islands.

7. Tourism is growing steadily in the country, but is hampered by poor infrastructure (especially the hotel industry). The principal tourists attractions are the beaches, underwater fishing and mountain scenery.

8. There is high unemployment, limited transport system, and shortage of natural resources. Export earnings are insufficient to cover the cost of imports and are dependent on fluctuating prices of the principal export commodities and hence the economy is largely supported by foreign aid.

9. There is also high level of poverty and poor health care (infant mortality rate of 120 per 1000 and a life expectancy of 54 years) and a low literacy level (15% in 1990; school attendance at: primary, 62%; secondary, 32%). There are no research institutes or institutions of higher learning in the country.

10. In 1993, the major contributors to the GDP were: agriculture, fishing and forestry: 40%; industry, manufacturing and construction: 12.3%; and commerce: 5%.

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

11. Although Moili has large tracts of uncultivated fertile land, parts of N'dzouani are so densely populated that farmers have been forced to extend cultivation to the higher slopes, leading to deforestation and soil erosion. Population growth has also increased the demand for fuelwood and threatens the remaining forest areas. Forest and woodland areas have been on the decline since the early 1960s. Soil erosion is additionally aggravated by lack of terracing.

### **Energy sources**

12. The UN industrial statistics shows that energy production by public utilities in 1991 was 16 million kWh. Electrical energy is derived principally from oil-fired thermal generating stations. All the petroleum products consumed in the country are imported. Imports of fuel and energy comprised 10.2% of the total import in 1993.

13. Wood is also the main source of energy in the residential and industrial sectors.

### **Transport**

14. Transport infrastructure in the country is also under-developed. The total length of roads estimated in 1991 was 900 km of which 650 km were paved. Goods from Europe come into the Comoros via Madagascar. Port facilities exist at Mutsamudu and Moroni but with limited capacity. Road and sea transport is complemented by an international airport at Moroni.

### **Industry**

15. There are various small-scale industries, mostly for the processing of the islands' agricultural products. A few perfume distilleries, sawmills, a soap factory, a printing plant and a soft-drink factory account for the greater part of the country's industry.

### **Institutional framework for environmental management**

16. The Comoros has a ministry responsible for the environment: the Ministry of Agricultural Production, Marine Resources and the Environment (MAPMRE), within which the Directorate-General for the Environment is responsible for environmental management. Since 1993, the Directorate-General for the Environment, with support from UNDP, UNESCO and IUCN, has developed an environmental policy and an Environmental Action Plan (EAP). The National Environmental Policy (NEP) is the cornerstone of the Environmental Action Plan, the main principle of which is the integration of the environmental dimension into the social and economic development policy of the Comoros. This

principle is developed through two objectives: (a) to ensure the sound and sustainable management of resources; (b) to set or strengthen sectoral policies. The implementation of the objectives set out in the National Environmental Policy is translated into an Environmental Action Plan, which has defined the actions, priority programmes and means of implementation.

17. The Government plans to establish a National Coordination Committee for Sustainable Development (NCCSD), which will be under the Ministry of the Environment. The NCCSD will be responsible for, *inter alia*, monitoring the implementation of the Environment Action Plan and advising on development projects that may have a major impact on the environment. The Committee will be chaired by the Director-General for the Environment and it will include the representatives of: the Directorate-General for the Environment; the Directorate of National Meteorology; the Directorate of Transport; the Directorate of Tourism; the Directorate of Planning; the Directorate of Public Works and Urban Development; the Directorate of Energy; the National Centre for Documentation and Scientific Research; the Directorate-General for Fisheries; and the Directorate-General for Agriculture.

#### **Environmental legislation and current environmental issues**

18. As far as regulation is concerned, a framework law on the environment was adopted in 1994. The law covers, *inter alia*, pollution, impact studies, protection of the terrestrial and marine environment and protected areas.

19. Some of the major environmental issues identified in the country are:

- (a) soil degradation and erosion resulting from crop cultivation on slopes without terracing;
- (b) high rate of deforestation arising from high dependence of fuelwood in both commercial and non-commercial energy sectors;
- (c) high growth rate of urban centres with associated urban resources (water supply, wastes and energy) and pollution management problems;
- (d) the destruction of natural rare species (e.g., tortoise) by fishermen;
- (e) the destruction of the coral reefs;
- (f) sea-level rise and the impacts on the coastal ecosystems;
- (g) coastal erosion leading to loss of beaches with potential for the development of tourism.

#### **Ratification of international environmental conventions**

20. The government of the Comoros has been very committed to the international concerns on environmental protection and sustainable development. Thus, the country has signed or ratified the following international conventions and treaties:

- \* United Nations Framework Convention on Climate Change (UNFCCC) (ratified: 31/10/1994);
- \* Convention on International Trade in Endangered Species of Wild Fauna and Flora (1973) - (accession: 23/11/94).

- \* United Nations Convention on the Law of the Sea (1982) - (signed: 6/12/84 and ratified: 21/6/94).
- \* Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal (acceded: 31/10/1994)
- \* Vienna Convention for the Protection of the Ozone Layer (1985) - (acceded: 31/10/1994) and its Montreal Protocol on Substances that Deplete the Ozone Layer (1987) - (acceded: 31/10/1994) and the London Amendment to the Montreal Protocol (1990) - (acceded: 31/10/1994).
- \* Convention for the Protection, Management and Development of the Marine and Coastal Environment of the Eastern African Region (1985) - (signed and ratified).
- \* Convention on Biological Diversity (1992) - (ratified: 29/9/1994).
- \* United Nations Convention to Combat Desertification (1994) - (signed: 14/10/94).

### **Project objectives**

21. Article 12.5 of the UNFCCC requires Parties to prepare national communications within three years of ratifying the Convention or of the availability of funds. As a least-developed country, the Comoros may make its initial national communication at its discretion. However, the Government of the Comoros, being fully committed to the implementation of the UNFCCC, intends to prepare and submit its initial national communication within two years of the approval of this proposal.

22. Thus, the main objective of this proposal is to enable the country to fulfil its commitments and obligations as required by Articles 4.1 and 12.1 of the UNFCCC, especially 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. Through the process, it is expected that the country would be able to build up its scientific and technical capacity so that it can sustain all activities related to the national communication and the implementation of the UNFCCC. This will be achieved by training of project team and strengthening the capacity of appropriate national institutions. This national communication will highlight priority areas for sustainable development.

23. At present the Comoros has not participated in any enabling activities initiated by any donor country or UN agencies conducive to its implementation of the UNFCCC. Thus this proposal is the first of its kind in the country.

### **Project Description**

24. 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***

25. Based on the existing scientific and technical expertise, a Project Management Team (PMT) and a National Study Team (NST) will be established under the auspices of the Directorate-General for the Environment of the Ministry of Agricultural Production, Marine Resources and the Environment

(MAPMRE) in close consultation with other relevant governmental departments and private sector, including NGOs. The NCCSD (see para. 17) will provide policy and technical guidance to the PMT.

26. The NST will comprise four working groups: GHG Inventory, Mitigation Options, Vulnerability/Impacts Assessment and Adaptation, and National Communication. Each working group will be composed of a number of experts from public and private sectors, including relevant NGOs. The NST will be coordinated by a Project Coordinator, who will be designated by the MAPMRE to coordinate the day-to-day project activities. The Project Coordinator and the leader of each working group, will form the PMT, which will be supported by a secretary. The PMT will have adequate and appropriate computer and telecommunication facilities, including Internet.

27. The capacity of the PMT and NST will be enhanced through appropriate training.

**Major outputs:**

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

- (a) Establishment of the PMT and NST which are fully committed to the successful implementation of the project.
- (b) Capacity building for the PMT and NST.

**Activity 2: GHG inventory**

29. So far the Comoros has not undertaken any inventory on the sources and sinks of GHG. Thus, there is an urgent need to build up the national capacity to undertake this activity. Indeed, over half of the proposed budget for GHG inventory will be spent on capacity building, which includes institutional strengthening, training and education.

30. Following the new COP2 guidelines, the GHG inventory (sources and sinks) 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.

31. As the first step, all existing data (if any) will be critically reviewed and the data gaps will be identified. The GHG inventory will be based on the latest version of *IPCC Guidelines* and using the 1994 data, taking into consideration of Decision 10/CP2 of COP2 with regard to the appropriate use of emission factors. Lessons will be learned from existing literature on the appropriate use of emission factors.

32. This activity will be undertaken by the GHG Inventory Group, which will draw from the available expertise especially from the previous and ongoing studies. The capacity for this group to undertake this task will be strengthened and enhanced where necessary.

33. This activity will be coordinated with the regional efforts whenever and wherever, such as CC:TRAIN (Phase II), and UNDP/UNEP's "*National Communications Support Programme*".

34. A data collection and management system will be set up so that both the data and the GHG inventories can be updated regularly and efficiently.

35. At mid-term and at the end of the GHG inventory, a workshop will be held to review and present their results to national policy and decision makers.

**Major outputs:**

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

- (a) A comprehensive and critically reviewed 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) Capacity building and strengthening of the inventory study team.
- (g) Workshops reports.

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

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

38. As part of a capacity building process, appropriate computer models will be acquired and used to assess various mitigation options.

39. The proposed activity will be undertaken by the Mitigation Options Group, drawing from available expertise from both the 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 UNEP/UCCEE's "*Economics of GHG Limitations - Phase I: Methodological Framework for Climate Change Mitigation Assessment*".

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

**Major outputs:**

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

- (a) Identification and assessment of mitigation options.

- (b) Recommendations on reducing the emissions from various sources and the enhancement of sinks.
- (c) Preparation of the comprehensive national mitigation strategy for the national communication.
- (d) Workshops reports.

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

42. 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 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, forestry, water resources, human health, biodiversity, and other aspects such as socio-economics) using the 1994 data. All existing data (if any) will first be critically reviewed and data gaps identified.

43. Of particular concern to the Comoros is the vulnerability of coastal areas to climate change: temperature and sea level rise; growth in the dynamics of swells and currents; change in rainfall patterns; change in the frequency and strength of cyclones; status and fragility of coral reefs; identification and study of subsidence zones; and analysis of volcanic and seismic risks for the archipelago.

44. A Vulnerability and Adaptation Assessment Group, drawing from the available expertise of both public and private sectors, will be formed within the NST to undertake this task. This group will include expertise from both the public and private sectors, including NGOs. The capacity for this group and relevant institutions to undertake the task will be strengthened and enhanced where necessary.

45. Lessons will be learned from the methodology as developed by UNEP's "*Country Case Studies on Climate Change Impacts and Adaptation Assessments (Phase I)*". In view of the lack of data in this area, it is likely that some original research may be needed.

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

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

***Major outputs:***

48. 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/impact assessment for various sectors based on established procedures.
- (c) Identification of advantages and disadvantages of the methodology used in the study.

- (d) Strengthening of existing monitoring systems for climate change vulnerability and impacts assessment if necessary.
- (e) Policy options for adequate monitoring systems and response strategies for climate change impacts on terrestrial and marine ecosystems.
- (f) Workshops reports.

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

49. 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, which includes proper planning and appropriate capacity building, can be developed and formulated so as to minimize the impacts of climate change on the environment and the economy.

50. 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.

51. The capacity for the Vulnerability Assessment and Adaptation Group to undertake this task will be strengthened and enhanced where necessary.

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

***Major outputs:***

53. 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) Appropriate capacity building for implementing adaptation measures and response strategies.
- (d) Workshops reports.

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

54. 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 for proper policy and decision making in the planning process.

***Major output:***

55. 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***

56. 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.

57. 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 Comoros 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 all levels in all villages/districts of the country. To this end, both public and private media (television radio and newspapers) will be used to assist in creating public awareness. CC:INFO/Web will also be used as a tool to enhance national and international information flow, so that experience and lessons can be learned from existing studies of other countries. Materials produced by the IUC/UNEP and UNITAR CC:TRAIN, especially the French version, will be used where appropriate. However, there may be a need to translate some other relevant materials into French for further public information and outreach.

58. Indeed, the Government of the Comoros regards the implementation of Article 6 of the UNFCCC (*EDUCATION, TRAINING AND PUBLIC AWARENESS*) to be an important area in fulfilling the objectives of the UNFCCC.

***Major outputs***

59. 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 all villages/districts of the country.

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

60. 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 (e.g., meteorological and air quality data, especially those with longer time series or historical 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 initial national communication***

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

62. This task will be coordinated by the National Communication Group. It will involve all members of the PMT and NST, each of which will prepare their respective sections/chapters for the initial national communication.

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

**Major output:**

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

**Institutional framework, project implementation and coordination**

65. As shown in the project management and coordination structure (Figure 1), this project will be executed by the Ministry of Agricultural Production, Marine Resources and the Environment (MAPMRE) through the Directorate-General for the Environment.

66. The National Coordination Committee for Sustainable Development (NCCSD) will be responsible for liaising with the project and providing advice on general policy measures. The structure of the NCCSD is given in para. 17. The NCCSD will ensure that the recommendations of the project are integrated into overall national development plans.

67. A full-time local Project Coordinator will be assigned to coordinate the day-to-day activities of the project (see para. 26). This project will seek to strengthen the existing institutional framework for project management where necessary.

68. As the GEF implementing agency for this project, UNEP, through its Atmosphere Unit and the Regional Office for Africa based in Nairobi, and 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.

**Proposed work schedule**

69. 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 in full consultation with the Director-General for the Environment and NCCSD 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**

70. 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. Lessons learned from past and ongoing projects, including UNEP's "Country Case Studies on Sources and Sinks of Greenhouse Gases", UNEP/UCCEE's "Economics of GHG Limitations - Phase I: Methodological Framework for Climate Change Mitigation Assessment", and UNEP's "Country Case Studies on Climate

*Change Impacts and Adaptation Assessments (Phase I)*", will be useful for the implementation of the project.

#### **Activity matrix**

71. As the Comoros has not undertaken any enabling activities for the implementation of the UNFCCC, information is needed in all areas, as shown in the standard activity matrix in Table 2.

#### **Training**

72. Training of PMT and NST members are an important element of the project. In addition, training for planners, policy and decision-makers in Activity 6 (see para. 53) will also be required.

73. 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.

74. Training materials from 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.

75. 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**

76. This project enjoys a very high level and a wide range of national support. It is fully endorsed and supported by the Ministry of Agriculture Production, Marine Resources and the Environment, the Director General of which is also the GEF Operational Focal Point (letter attached). It will be implemented under the National Coordination Committee for Sustainable Development (NCCSD), which will have broad representation from the relevant ministries and government agencies and NGOs (see paras. 17 and 66).

#### **Project financing and budget**

77. As the proposed activities are standard enabling activities as defined by the Operational Guidelines, so the incremental cost for undertaking these activities are considered full cost. The proposed budget, US\$350,000, which is at the ceiling of the cost norm, reflects the fact that nothing has been done for the mitigation of climate change including enabling activities in the Comoros (Table 3).

78. Due to the lack of resources in the country, without the GEF funding, the country will not be in a position to carry out the proposed activities, and hence to fulfil the requirements of the UNFCCC.

79. As a "small islands" country (Article 4.8 (a) and a country "with *low-lying coastal areas*" (Article 4.8 (b); "*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) and with very limited natural resources, the Comoros 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.

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

#### **Rationale for GEF support**

81. This is a standard enabling activities proposal which will assist the Comoros 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**

82. The Government of the Comoros is fully committed to the implementation of the UNFCCC, and hence the goals and objectives of this project. The project will also ensure that the Comoros will have the scientific, technical and institutional capacities in the implementation of 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**

83. **Issues:** In order to successfully implement the project, close coordination and consultation between the MAPMRE, the NCCSD, the PMT and NST is essential. The MAPMRE and the NCCSD will consult all relevant stakeholders, including NGOs and research organizations through appropriate venues (e.g. meetings and workshops).

84. **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 and irregular consultations among various stakeholders.
- (c) Lack of involvement of major policy and decision makers in the formulation of final strategy.

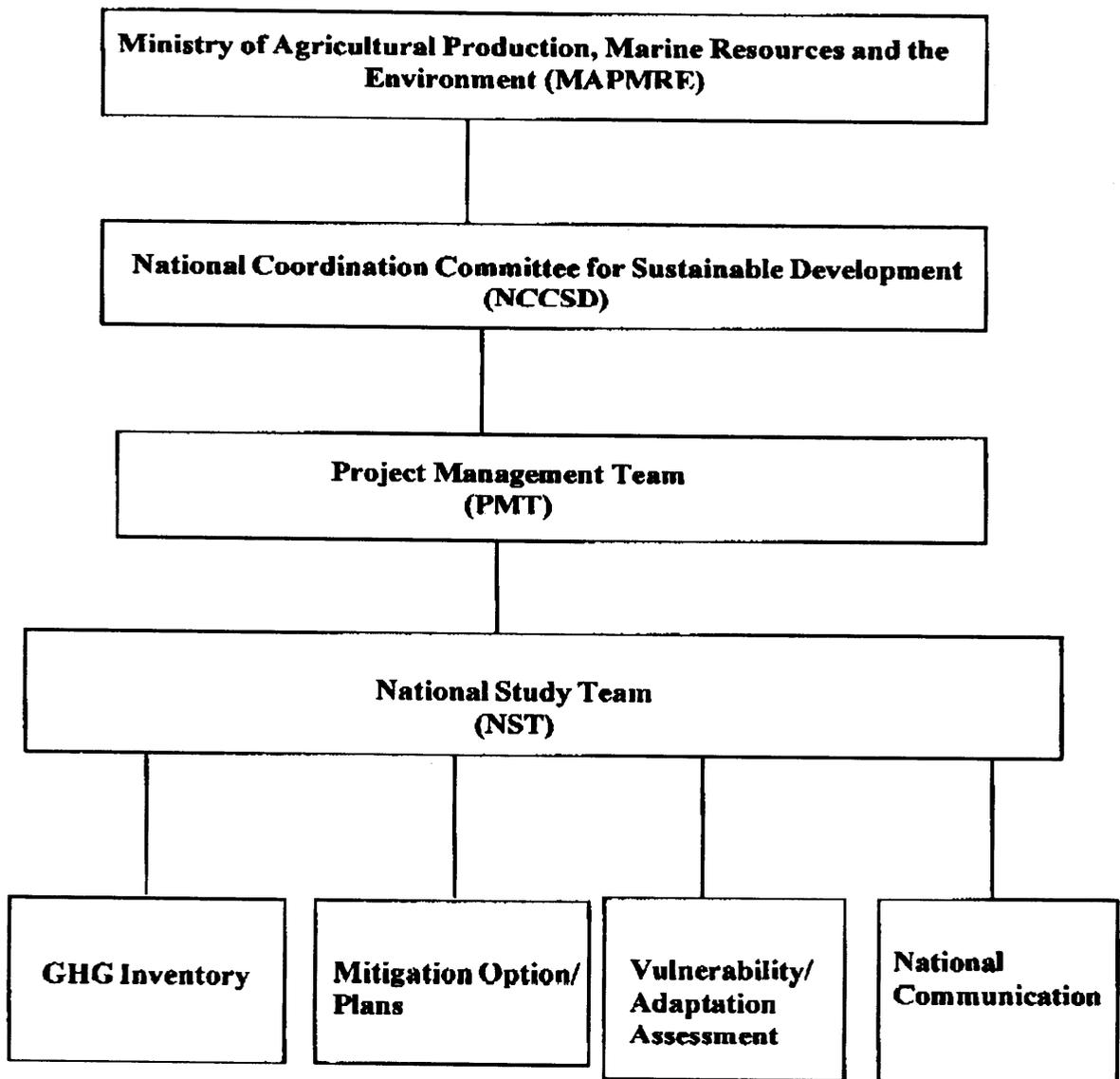
85. Necessary action will be undertaken to avoid all the risks mentioned above.

#### **Monitoring and evaluation**

86. The Project Coordinator will provide a monthly progress report to the Director General for the Environment of the MAPMRE, who will share it with the NCCSD and 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 MAPMRE 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 NCCSD for their quality and standard, comprehensiveness, and conformity to the proposed terms of reference and dates of completion.

87. The NCCSD 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 NCCSD will guide the Director-General for the Environment on reports and make recommendations to him. In turn, the Director-General for the Environment will provide quarterly progress reports and quarterly financial reports to UNEP based on UNEP's standard format.

88. UNEP will provide its established monitoring and evaluation procedures and guidelines to evaluate the progress of the project at mid-term and upon 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.

**Table 2: Enabling Activities Required for the Comoros Initial National Communication**

Enabling Activity Commitment	Planning and execution	Capacity Building		
		Data Gathering and Research*	Institutional Strengthening	Training & Education
<b>1. National Circumstances</b>	x	x	N/A	N/A
<b>2. Greenhouse Gas Inventory</b>	x	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
<b>3. General Description of Steps taken or envisaged to implement the Convention</b>				
(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.	x	x	x	x
(c) Policy Frameworks for Implementing Adaptation Measures and Response Strategies	x	x	x	x
(d) Building Capacity to integrate climate change concerns into planning	x	x	x	x
(e) Programs to address climate change and its adverse impacts, including abatement and sink enhancement.	x	x	x	x
<b>4. Other Information</b>				
(a) Material relevant for calculation of global emission trends	x	x	x	x
(b) Financial and Technological Needs and Constraints for	x	x	x	x
- Projects for Financing	x	x	x	x
- National Communications	x	x	x	x
- Vulnerability Assessment and Adaptation	x	x	x	x
<b>5. Compilation and Production of the Initial National Communication</b>	x	x	x	x

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

**Table 3: Budget for the Comoros 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\$)	
2. Greenhouse Gas Inventory	30,000	15,000	25,000	7,000	77,000	
3. General Description of Steps	54,000	30,000	40,000	11,000	135,000	
(a) Programs related to sustainable development, research, public awareness, etc.	3,000	2,000	4,000	1,000	10,000	
(b) Policy Options for Monitoring Systems and Response Strategies for Impacts	21,000	10,000	12,000	2,000	45,000	
(c) Policy Frameworks for Implementing Adaptation Measures and Response Strategies	13,000	6,000	9,000	2,000	30,000	
(d) Building Capacity to integrate Climate concerns into Planning	2,000	3,000	4,000	1,000	10,000	
(e) Programs to address climate change, adverse impacts, including abatement, sink enhancement	15,500	10,000	13,000	1,500	40,000	
4. Other Information	4,600	2,000	2,800	600	10,000	
(a) Material relevant for Global Emission Trends	2,300	1,000	1,400	300	5,000	
(b) Financial, Technological Needs and Constraints	2,300	1,000	1,400	300	5,000	
5. Completion and Production of Initial National Communication					20,000	
Project Management					70,000	
Monitoring/Evaluation					12,000	
Total					324,000	
% of Total	41%	21%	30%	8%		
UNEP Coordination (8%)					26,000	
					350,000	

**REPUBLIQUE FEDERALE ISLAMIQUE  
DES COMORES**

Moroni, le 2 Février 1998

**MINISTERE DE LA PRODUCTION AGRICOLE,  
DES RESSOURCES MARINES ET DE  
L'ENVIRONNEMENT****DIRECTION GENERALE DE L'ENVIRONNEMENT**

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**B.P.41 - Moroni****Fax : (269) 73.68.49/73.63.57****Monsieur PAK SUM LOW  
Senior Programme officer  
GEF Coordination office****P.O. Box 47074 Nairobi - Kenya****n° 98-006 /MPARME/DGE**

**Objet :            Activités de développement des capacités pour la préparation d'une  
communication nationale initiale sur les Changements Climatiques.**

Monsieur,

Le Ministère chargé de l'environnement a étudié, analysé et révisé le document de projet que j'ai l'honneur de vous transmettre ci-joint. Le Ministère approuve toute la matrice d'activités contenue dans ce document. Cette proposition de projet constitue une priorité absolue pour la République Fédérale Islamique des Comores. En effet, l'annonce probable de changements climatiques comme une remontée des températures et du niveau marin pourrait avoir sur les Comores dont environ 80 % des infrastructures et des populations sont situées sur la frange côtière, des conséquences dramatiques.

Déjà, la plupart des villes et villages côtiers sont envahis par la mer et des routes coupées. De plus, la météorologie nationale note sur ces dernières années, une diminution des pluies, leur décalage dans la saison et une augmentation des températures moyennes annuelles de 0,5 à 1 degré celsius. Cette situation mérite une attention particulière de la part des partenaires du développement durable afin d'aider les Comores à développer ses connaissances et suivre un certain nombre de paramètres et en particulier sur les sujets suivants :

- (i) vulnérabilité des espaces côtiers aujourd'hui et dans le cas de changements climatiques :  
température, hausse du niveau de la mer, changement du régime des pluies, changement de la fréquence et de la puissance des cyclones, etc ...
- (ii) état et fragilité des récifs coralliens aux changements : hausse du niveau de la mer, accroissement de la dynamique des houles et des courants etc. ...
- (iii) repérage et étude des zones de subsidence
- (iv) analyse sur les risques volcaniques et sismiques pour l'archipel.
- (v) évaluation des impacts socio-économiques des changements climatiques ;  
élaboration de politique et mesures ainsi qu'une stratégie d'adaptation en cas de changements climatiques.

Face à des difficultés environnementales d'une telle ampleur, l'assistance de la communauté internationale est nécessaire pour assurer l'avenir, si non la survie de l'Archipel des Comores. Dans ce contexte, je sollicite de votre haute bienveillance le financement nécessaire à la mise en oeuvre de ce projet. La mise en oeuvre de ce projet permettrait par ailleurs à la République Fédérale Islamique des Comores de s'acquitter de ses obligations au titre, notamment de l'article 4, paragraphe 1 de la Convention Cadre des Nations Unies sur les Changement Climatiques.

Je vous remercie de votre collaboration et vous prie d'agréer, Monsieur, l'assurance de ma meilleure considération.

**Le Directeur Général de l'Environnement  
et point focal opérationnel  
du FEM aux Comores**



**YOUSOUF HAMADI**

Translation from French

ISLAMIC FEDERAL REPUBLIC OF THE COMOROS

MINISTRY OF AGRICULTURAL PRODUCTION, MARINE RESOURCES  
AND THE ENVIRONMENT

DIRECTORATE GENERAL FOR THE ENVIRONMENT

B.P. 41 Moroni

Fax: (269) 73.68.49/73.63.57

No.98-006/MPARME/DGE

Moroni, 2 February 1998

Subject: Enabling activities for the preparation of an initial national  
communication on climate change

Sir,

The Ministry responsible for the environment has studied, analysed and revised the project document, which I have the honour to transmit to you hereto. The Ministry has approved the whole range of activities in the document. This project proposal is an absolute priority for the Islamic Federal Republic of the Comoros. Indeed the probable manifestation of climate change as a rise in temperatures and sea level could have tragic consequences for the Comoros, where about 80 per cent of infrastructure and population are located on the coastal strip.

Already most coastal towns and villages are infiltrated by the sea and roads cut. Moreover, in recent years, the national meteorological service has noted a reduction in rainfall, a shift in the rainy season and an increase in average temperatures of between 0.5 and 1° C. This situation deserves the special attention of the partners in sustainable development so as to assist the Comoros in developing its know-how and to monitor a number of parameters, particularly in the following areas:

- (i) Vulnerability of coastal areas today and in the event of climate change: temperature, sealevel rise, change in rainfall patterns, change in the frequency and strength of cyclones, etc.;
- (ii) Status and fragility of coral reefs in the face of changes: sealevel risc, growth in the dynamics of swells and currents;
- (iii) Identification and study of subsidence zones;
- (iv) Analysis of volcanic and seismic risks for the archipelago;
- (v) Evaluation of the socio-economic impacts of climate change: formulation of policies and measures, as well as an adaptation strategy in case of climate change.

In the face of environmental problems of such a scale, assistance from the international community is necessary to ensure the future, if not the

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survival of the Comoros archipelago. In this context, I would kindly request you to provide the funding necessary for the implementation of this project. The implementation of the project will also enable the Islamic Federal Republic of the Comoros to discharge its obligation under, inter alia, Article 4, paragraph 1, of the United Nations Framework Convention on Climate Change.

Yours sincerely,  
(Signed) YOUSOUF HAMADI  
Director-General for Environment  
and GEF operational focal point  
in the Comoros

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