

GLOBAL ENVIRONMENT FACILITY

Regional

**Building Capacity in the Maghreb to Respond to the Challenges and Opportunities
Created by National Response to the Framework Convention on Climate Change**

Project Document

*This Project Document has been edited to facilitate public dissemination.
The original is on file in the GEF Office at UNDP Headquarters in New York.*



ABBREVIATIONS

CO₂	Carbon dioxide
GHG	Greenhouse gas
GTZ	Gesellschaft fuer Technische Zusammenarbeit
INC	Intergovernmental Negotiating Committee (of the Framework Convention on Climate Change)
IPCC	Intergovernmental Panel on Climate Change
LPG	Liquid petroleum gas
m³	Cubic metres
NGO	Non-governmental organization
OPEC	Organization of Petroleum Exporting Countries
PSC	Project Steering Committee
toe	Tons of oil equivalent
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
USEPA	United States Environmental Protection Agency

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UNITED NATIONS DEVELOPMENT PROGRAMME

GLOBAL ENVIRONMENT FACILITY

Project of the Governments of Algeria, Libya, Morocco and Tunisia

Title: Building Capacity in the Maghreb to Respond to the Challenges and Opportunities Created by National Response to the Framework Convention on Climate Change

Number: RAB/94/G31

Duration: Three years

Project Site: The Maghreb (Algeria, Libya, Morocco and Tunisia)

UNDP Sector: Natural Resources

Subsector: Energy

Implementing Agency: Algeria: Ministry of Energy
Libya: Technical Centre for Environment Protection
Morocco: Office of the Under-Secretary of State for the Environment
Tunisia: Ministry of Environment

Executing Agency: Government of Morocco (on behalf of the Governments of Algeria, Libya and Tunisia)

UNDP Approval: September 1994

Estimated Starting Date: December 1994

Government Inputs: Algeria: Dinars 5,214,665 (US\$ 139,800)
Libya: Dinars 147,150 (US\$ 490,500)
Morocco: Dirhams 4,465,805 (US\$ 491,830)
Tunisia: Dinars 266,135 (US\$ 268,820)¹

GEF-UNDP Inputs: US\$ 2.5 million

¹ According to the United Nations official rates of exchange at the time of signature of this Project Document, US\$ 1.00 = 37.30 Algerian dinars; US\$ 1.00 = 0.30 Libyan dinars; US\$ 1.00 = 9.08 Moroccan dirhams; and US\$ 1.00 = 0.99 Tunisian dinars. The exchange rates at the time of drawing up the budgets are provided with each country budget. All government contributions will be made in kind.

Brief description

This project will provide technical assistance and build regional capacity in the Maghreb to assist in climate change mitigation and adaptation through the advancement of national and regional priorities in areas such as energy efficiency, fuel substitution, renewable energy development, and forest conservation and management. The project will also enhance the local and regional capacity to respond to the Framework Convention on Climate Change (FCCC) through the promotion of greenhouse gas (GHG) inventories, the establishment of policy dialogue, the evaluation of technological options, the investigation of climate change impacts, and the analysis of adaptation opportunities. Private sector funding will be sought for any project opportunities aimed at the mitigation of climate change that are identified and developed in the course of the project. The active participation of other Arab countries and organizations will also be sought, thereby setting the stage for the expansion of analogous activities in the region as a whole.

A. CONTEXT

1. Description of subsector

The Arab region

The Arab states,² taken together, possess among the most energy-intensive economies in the world, averaging 0.51 tons of oil equivalent (toe) per US\$ 1,000 (1990) of national income. By contrast, the world average is only 0.36 toe, while the average of the countries belonging to the Organization for Economic Cooperation and Development (OECD) is 0.26 toe per US\$ 1,000. This intensive use of energy translates into a high level of GHG emissions per unit of gross domestic product (GDP). Several factors account for this heavy reliance on energy, including:

- The abundance of oil and gas supplies in the region (close to 60 percent of world reserves of oil, and 22 percent of global natural gas reserves)
- Energy pricing systems that do not reflect the full economic cost of energy production
- Rapid industrialization in several Arab states and the parallel growth of the energy-intensive industrial sector
- Wastage during the energy production and transportation processes.

Despite this level of energy use, the Arab states play a very limited role in global GHG emissions because the average per capita energy consumption, currently 1 toe per capita per annum, remains low in comparison to developed countries. However, with a rapidly growing population, this is rising steadily, and the region is of significant interest from the standpoint of potential long-

² The region of the Arab states comprises twenty countries covering North Africa, the Eastern Mediterranean Region, and the Arab Peninsula: Algeria, Bahrain, Djibouti, Egypt, Iraq, Jordan, Kuwait, Lebanon, Libya, Mauritania, Morocco, Oman, Qatar, Saudi Arabia, Somalia, Sudan, Syria, Tunisia, the United Arab Emirates, and Yemen.

term GHG emissions. At the current regional population growth rate of 3 percent per year, the region's population will double to almost 500 million by the year 2020. Regional economic growth rates are also high, outpacing population growth rates. Energy consumption in the region has historically grown more quickly than the underlying economies due to industrialization, intensive electrification, and increased water desalination. Energy growth rates averaged 5 to 6 percent annually during the 1980s, and are expected to continue at similar rates for many years to come unless effective efficiency and conservation measures are undertaken. As a result of all these variables, total GHG emissions in the Arab region are expected to rise significantly over the next several decades. Currently, most Arab countries lack strategies and plans for promoting efficiency and limiting energy growth rates. At the regional level too, such plans are virtually absent.

The Maghreb

The Maghreb (comprised of Algeria, Libya, Morocco, and Tunisia, for the purposes of this document) is gradually integrating its economic and energy policies. Because of its richness in natural gas and the extensive regional gas pipe networks being built, gas will soon become the Maghreb countries' primary energy source. Despite commonalities within the region, however, energy and energy-related policies in the Maghreb are distinctly country-specific. Policies towards natural gas development and utilization differ considerably, as do institutions and approaches to energy policy. Although each country has pursued demonstration efforts in renewable energy, there has been little coordination among them. With the exception of some efforts funded through external assistance, countries have generally not taken advantage of opportunities to cooperate on policies and programmes that would not only promote energy and natural resource conservation, but also contribute to limiting the emissions of GHGs.

The Maghreb states average 0.4 toe per US\$ 1,000 GDP, which is somewhat less than the Arab states as a whole (0.51 toe), but more than the world average of 0.36 toe. The Maghreb plays a very small role in global emissions of carbon dioxide (CO₂), with total 1992 emissions being less than 130 million tons. This amounts to less than 1 percent of global emissions. On the regional scale, however, CO₂ emissions are expected to grow rapidly. Table 1 summarizes available data on CO₂, methane, and chlorofluorocarbon (CFC) emissions from Maghreb countries, and compares them with global figures.

Studies of climate change impacts, mitigation, and adaptation in the region have been scarce. At the same time, subjects such as efficiency in energy production and consumption, forest loss, and adaptation to the vagaries of yearly variations in climate, are topics of general interest and activity.

Table 1: GHG emissions from Maghreb countries
(in million metric tons)

	<i>CO₂</i>	<i>Methane</i>	<i>CFCs</i>
Algeria	46,492.50	970.00	1.31
Libya	37,841.79	290.00	not available
Morocco	22,120.00	310.00	1.31
Tunisia	13,923.20	89.67	0.44
Regional total	120,377.49	1,659.67	3.06
Global total	21,863,088.00	270,000.00	580.00

Source: *World Resources Report 1992-93*

Algeria

Primary energy intensity in Algeria was 0.46 toe per US\$ 1,000 in 1990, which is higher than the 0.4 toe per US\$ 1,000 average of the Maghreb countries. Algerian energy consumption has been characterized by an annual growth rate exceeding 5 percent; this contrasts with real GDP and population growth, both of which registered 2.9 percent per year during the same period. Thus the general trend is towards higher energy-intensity levels in the economy. Natural gas represents more than 90 percent of the energy used for electricity generation for domestic energy demand, and 28 percent of the final energy demand.

As an oil and gas producing country and a member of the Organization of Petroleum Exporting Countries (OPEC), Algeria's energy policies focus primarily on supply. One of the country's main policy objectives is the additional development of natural gas resources for export and domestic use. Algerian gas exporting capacity will double in the next three years as a result of the construction of a pipeline to Italy through Tunisia. An additional pipeline through Morocco to Spain is also expected to become operational by 1997.

Libya

With a consumption of 2.2 toe per capita per year, Libya's consumption is high by world standards. Yet the importance of energy exports in the national GDP, and the relatively low energy intensity of the energy production process, result in a primary energy intensity that is comparable to that of other Maghreb countries—0.35 toe per US\$ 1,000 GDP in 1990. Primary energy consumption in Libya has increased at a relatively modest rate of 3.6 percent per year, a trend that is in keeping with demographic growth.

Libya's energy economy is characterized by the importance of the transportation sector, which constitutes 46 percent of final energy demand. Total electricity consumption in Libya had reached 7,400 gigawatt/hour (GWH) by 1990, with total production exceeding 10,000 GWH. A considerable proportion of total electricity production is lost during production and distribution.

Morocco

Energy consumption per unit of GDP has been growing for the last decade. It now stands at 0.29 toe per US\$ 1,000 GDP. Energy demand continues to grow at 5 percent per year. Notwithstanding its location in a region rich with energy resources, Morocco depends heavily on imports of coal and oil. Drought has aggravated this dependence during the last several years and reduced hydroelectric production in the country. Imports have risen from 83 percent of total commercial energy consumption in 1980 to 92 percent in 1992. Drought is also affecting non-commercial energy demand; more than 1.3 million cubic metres (m³) of fuelwood are being extracted from Morocco's limited forest base every year. Morocco's energy bill is therefore draining both its reserves of foreign currency and its natural resource base.

Partially as a result of drought, shortages of electrical production capacity will remain a major problem for the next several years in Morocco. Such shortages will occur despite planned capacity increases due to entry into service of combined cycle plants that will be supplied by the gas pipeline that is to connect Algeria with Spain.

Tunisia

Tunisia's energy intensity was 0.34 toe per US\$ 1,000 of GDP in 1990, below the Maghreb average. Due to limited indigenous energy reserves and growth in energy consumption of 4 percent per year, the prospect of becoming a net energy importer seems a likelihood for Tunisia. The deficit has been delayed by recently discovered small reserves which have compensated for declining production in the country's main fields. Annual production is currently around 5 million toe. The current annual surplus available for export ranges from 0.5 to 1 million toe. The consumption of biomass energy, largely in the form of charcoal, has reached 6.2 million m³ per year according to official estimates, and constitutes a non-sustainable burden on the nation's forest resources.

2. Host country strategy

The Maghreb countries

Algeria and Tunisia have signed and ratified the Framework Convention on Climate Change (FCCC) of the United Nations, while Morocco and Libya have signed the convention and the ratification process is underway. This displays the commitment of the Maghreb countries to the global environment and sustainable development. However, efforts to limit GHG emissions will be undertaken in the region only to the extent that such efforts correspond to national development priorities and local environmental needs. The connection between national priorities in energy-related sectors and the limitation of GHG emissions has not been widely recognized by decision-makers in the Maghreb region. The implications of the entry into force of the FCCC, now projected

for early to mid-1994, are not as yet adequately understood in the Maghreb, and few activities specifically oriented to the problem of climate change have been undertaken.

Nevertheless, a number of policy and technical opportunities exist that correspond to both the economic and environmental priorities of the Maghreb countries, as well as the objectives of climate change mitigation. Many of these opportunities are common to several countries in the region. These opportunities include controlling demand for oil products, electricity, and biomass, through: energy pricing changes, technical assistance, and public awareness; encouraging the substitution of natural gas for petroleum and biomass, particularly gas that might otherwise have been flared or wasted; encouraging renewable energy resources; municipal and industrial waste management; and forest management. These countries have also expressed considerable overlapping interest in the need to monitor climate change impacts. Several countries have also emphasized the importance of exploring adaptation strategies that they can begin to pursue, particularly in the context of the ongoing climatic perturbations affecting the North African region.

Algeria

Algeria's primary environmental concerns are the over-exploitation of resources (forests and agricultural lands), industrial pollution, and urban solid waste disposal. Within the energy sector, Algeria's primary strategic goal has been to maximize the use of its natural gas and liquid petroleum gas (LPG) resources, and reduce losses in electricity production and transportation. Specific measures involving the reinjection of associated gases have also been undertaken, and the quantity of gas being flared has been reduced by 50 percent since 1970.

As a major oil and gas producer and OPEC member, Algeria's perspective on climate change and its mitigation is mixed, given the potential economic ramifications of long-term global reductions in fossil-fuel use. There are areas, however, in which Algerian energy policy and other natural resource objectives coincide with long-term policy issues concerning GHG emissions from the Maghreb region. Since the creation of a specialized agency in 1987, the Agence de promotion et de rationalisation de l'utilisation de l'énergie (APRUE), Algeria has demonstrated consistent interest in energy conservation issues, and undertaken certain limited efforts in renewable energy. Algeria has also made consistent efforts towards increasing the efficiency of production and transportation processes, and the substitution of natural gas and LPG (that might otherwise be flared) for biomass or petroleum.

Libya

Libya's primary environmental issues are water management for agricultural and drinking purposes, the desertification process, and urban waste disposal. Being an oil producer, Libya's energy policy is primarily supply-oriented. However, national plans aimed at energy conservation and the development of renewables are very encouraging.

No current initiatives are specifically motivated by climate change mitigation or adaptation concerns. During this project's field mission, however, Libyan representatives expressed an interest in studying climate change issues, particularly physical impacts, monitoring, and international cooperation on GHG inventories. Libyan representatives also expressed interest in collaborating with

and benefiting from the experience of their neighbours in the implementation of any measures that address climate change.

Morocco

Creation of an environmental ministerial department and the expansion of environmental programmes in the country illustrate the relatively high priority accorded to environmental issues in Morocco. Environmental priorities are identified as: water pollution; industrial, agricultural, and mining waste management; and the over-exploitation of forest resources. One project nearing completion is the establishment of an environmental monitoring centre. Among the centre's tasks will be pollution monitoring and the periodic publication of a national report on the state of the environment, with the aim of ultimately implementing a national environmental strategy. Climate change *per se* is not a primary environmental concern. Several relevant initiatives, however, have sought to begin an assessment of the potential impacts of climate change on the country's economy and natural resource base.

In 1980, Morocco initiated an aggressive energy policy based on expanded public awareness, appropriate legislation, financial incentives, and sectoral studies of potential energy-saving activities. Estimates indicate that 15 percent of total energy consumption could be avoided through the implementation of cost-effective measures in this sector.

Tunisia

Tunisian environmental priorities are the alleviation of local environmental degradation such as waste disposal, industrial pollution, desertification, deforestation, and land degradation. To preserve its independence in the area of energy, Tunisia has implemented an active energy conservation policy for ten years; it has also encouraged oil and gas exploration. Efforts have been made to reduce industrial energy consumption and to promote renewable technologies (such as solar water heaters and windmills). Few of these efforts have been evaluated, and it is hard to identify concrete results. It is clear that these efforts have only scratched the surface of what could be accomplished within the country.

Considerable effort has been spent on research and development of renewable energy technologies such as solar water heaters, windmills and generators, photovoltaics, and solar water desalination systems. Some of these efforts have led to production on a commercial scale.

Like the other Maghreb countries, climate change *per se* is not an immediate environmental priority, although climate change issues overlap considerably with areas that form part of the country's policy priorities.

3. Prior and ongoing assistance

The subregion

A variety of relevant external assistance projects are currently planned or underway in Africa, especially in the Maghreb region. Several pertain to the development of regional energy

infrastructure, including gas pipelines and electrical grid inter-ties; others concern general cooperation on energy and environmental matters. Some of the significant regional projects are listed below:

- A project similar to the present project was approved by the Global Environment Facility (GEF) in its fourth tranche. The project—Greenhouse Gas Abatement and Least-Cost Global Warming Mitigation in Sub-Saharan Africa (RAF/93/G31)—will cover four African countries (Ghana, Kenya, Mali, and Zimbabwe).
- A sand-dune stabilization and afforestation project in eight countries including Algeria, Libya, Morocco, and Tunisia (UNDP/RAB/89/034) has now been completed. The project was executed by the Food and Agriculture Organization of the United Nations (FAO). It focused on capacity building and the establishment of networks in the region.
- An ongoing project, financed by the Commission of the European Union, is aimed at the establishment of energy-efficiency standards for building design in Algeria, Morocco, and Tunisia. The project, coordinated by the Agence pour la maitrise de l'energie of Tunisia, is intended to strengthen national capacity to develop building standards that correspond to the climate of each country.
- Another FAO project aims to develop forestry resources for environmental protection and food security in arid and semi-arid zones (FAO/GCP/REM/052/JPN). This project targets eleven Arab countries including Algeria, Morocco, and Tunisia, and is headquartered in Syria. It is a capacity building and networking project.
- The Centre for Environment and Development in the Arab Region and Europe (CEDARE) was set up by the United Nations Development Programme (UNDP) and the Arab Fund for Economic and Social Development to foster technical assistance and capacity building on environmental matters in the Arab states and the Mediterranean basin. CEDARE is located in Cairo.

Several other regional projects have also been proposed to external funding agencies:

- As part of the Third UNDP Regional Programme, a regional Arab states energy project has been proposed, based on the results of the seminar on domestic energy policies hosted by UNDP in Cairo in 1992. The project will involve demand-side management, domestic pricing policies, provision of energy to rural and poor populations, energy efficiency, and regional cooperation on energy matters.
- An energy planning study for the Maghreb countries is under consideration for support by the Commission of the European Union. The project will be an expansion of another recent study under UNDP/World Bank auspices (RAB/89/019 and RAB/87/011), for which the coordinating entities were the Arab Maghreb Union's Commission of Energy Planning and Conservation (MCEPC) and the Agence pour la maitrise de l'energie of Tunisia.

National-level assistance

Most projects at the national level are funded by technical assistance and concessionary loans from bilateral and multilateral funding agencies, including UNDP, GEF, the World Bank, and the Gesellschaft fuer Technische Zusammenarbeit (GTZ). In addition, the Arab Fund is currently funding a number of infrastructure projects in the energy sector (especially those related to electricity), further details on which were not available at the time of writing this document. Some of these projects are listed below:

Libya

- Strengthening National Capabilities to Assess Climate and Climate Change (UNDP project/LIB/89/004). This small technical assistance and training project was executed by the World Meteorological Organization (WMO) through the Libyan meteorology office between 1990 and 1991.
- Development of National Strategies for Natural Resource Conservation and Protection. This ongoing project is supported by UNDP. Inputs include assisting the government in establishing links with global, regional, and subregional programmes, information sharing, and joint research, monitoring, and action programmes.

Morocco

- National Strategy Development for Environmental Protection and Sustainable Development (UNDP/MOR/90/001). The project is directed by the Under-Secretary of State for the Environment and the Department of Environment.
- National inventory of greenhouse gas emissions (country component of a GEF-UNEP project). Directed by the Under-Secretary of State for the Environment and the Department of Environment, the project's expected date of completion is September 1994.
- Power Plant Repowering. A GEF-World Bank project. Directed by the National Electricity Office, the project will repower three power stations in Morocco with efficient gas turbines.
- Demand-Side Management for Energy. A United States Agency for International Development (USAID) project focusing on energy audits and energy conservation measures in industrial plants and some hotels.

Proposed projects of potential relevance to this project are:

- Gas Development Plan, Phase II. A planned Energy Sector Management Assistance Programme (ESMAP) UNDP/World Bank project that will assist Morocco to increase natural gas use given the entry into service of a new gas pipeline from Algeria in 1995.

Tunisia

- A GHG emissions inventory study is being prepared in cooperation with GTZ. The institutions involved are: Agence nationale pour la protection de l'environnement and Agence pour la maitrise de l'energie.
- Solar water heating systems. An ongoing GEF/World Bank project that targets schools, hospitals, and other public institutions.
- Energy conservation and demonstration projects in industry and transport. A World Bank loan-based project. The project includes energy audits, elaboration of energy-saving action plans, training, capacity building, and photovoltaic lighting system dissemination in rural areas.
- Special Energy Programme. A GTZ-funded project implemented through the Agence pour la maitrise de l'energie with the objective of developing a rural energy supply system in the northwest province of the KEF by promoting the utilization of renewable sources of energy for basic energy needs, and developing energy-saving techniques and equipment in the use of fuelwood.

4. Institutional framework for subsector

The Maghreb

The institutional framework required for action in the area of climate change is very inadequate in the Maghreb. Important decision-makers have often not been involved in the FCCC ratification process, and governmental negotiating representation has frequently been inconsistent. Levels of knowledge regarding climate change vary widely. There are only a few individuals and institutions that have followed FCCC negotiations and activities, and who understand the issues. Even among this group, different interpretations can be found regarding the implications of the FCCC. A significant number of institutions have followed the FCCC process from a distance because of being periodically involved in national or international meetings on climate change issues. These institutions often have their own views of the implications of climate change and the FCCC. Finally, there is a limited number of individuals, often scientists, who interest themselves in the scientific and technical aspects of climate change, but who have had no opportunity to participate in the political or policy processes.

Although few agencies have as yet been charged with climate change responsibilities, there are many agencies with environmental and resource management responsibilities that are likely candidates for institutional evolution in the area of climate change. The effectiveness, resources, and influence of these institutions vary dramatically across the Maghreb. At the regional level there is relatively little coordination of policy and activity on energy and environmental issues. The Union du Maghreb Arabe (UMA) was founded in 1988 with the aim of promoting a regional perspective. The UMA has established several committees that could coordinate regional environmental activities among its member countries; the most important among these is a committee on energy and electricity.

Algeria

The Department of Environment in the Ministry of Scientific Research is the official body entrusted with Algerian policy-making on global environmental issues. The National Environment Agency is primarily charged with conventional pollution control. The Ministry of Foreign Affairs is the agency involved in the ongoing climate change negotiations process, such as the Intergovernmental Negotiating Committee (INC) of the FCCC. The Agency for Promotion and Rationalization of Energy Use (APRUE) was created in 1987 by the Ministry of Energy to promote the use of domestic energy sources and improve energy efficiency, while the Centre for the Development of Renewable Energy (CDER) is responsible for research in that area.

The Ministry of Agriculture is charged with executing natural resources policy through the agencies for forestry and nature protection, and has been involved occasionally in the INC process. The Institut polytechnique of Algiers, which includes a specialized air pollution laboratory, has capabilities that can be mobilized for this study.

Libya

The Ministry of Energy is responsible for energy policy in Libya. Although supply issues take precedence, energy conservation has recently increased in importance with the creation of the Bureau of Energy Planning and Information within the Ministry of Energy. In the renewables arena, Libya is developing solar technologies through the Centre for Solar Energy Studies.

The Technical Centre for Environmental Protection (TCEP) is charged with environmental policy and management. Additional capacity in this area is found in the National Committee for Scientific Research. The International Energy Foundation, a non-governmental organization (NGO) based in Tripoli, has experience in energy planning and training, and can contribute to the formulation of policy in the area of climate change mitigation.

Libya has been represented in the climate change negotiations by the Department of Meteorology, the Ministry of Energy, and the Ministry of Foreign Affairs. The TCEP has not so far been involved with climate change initiatives.

Morocco

The Under-Secretary of State, under the Ministry of the Interior, has acquired increasing influence in matters related to environmental policy, and is the focal point in Morocco for a GHG inventory conducted by the United Nations Environment Programme (UNEP) in many countries. The Ministry of Foreign Affairs and Cooperation has responsibility for negotiations on climate change and for activities called for by the FCCC.

Engineering colleges, NGOs, and research centres are quite active in environmental issues in Morocco. For example, the Royal Centre for Remote Sensing (CRTS), which engages in environmental programmes addressing deforestation, agricultural activities, and desertification, is participating in the GHG inventory coordinated by UNEP. Forest management, a primary concern

in Morocco, is under the control of the Ministry of Agriculture and Agricultural Reform. Energy policy is carried out by the Ministry of Energy and Mines (MEM), also a participating institution in UNEP's GHG inventory.

The Groupe d'études et de recherches sur les énergies renouvelables et l'environnement (GERERE), an NGO based in Rabat, has considerable experience and capacity in renewable energy and energy conservation. The Société Marocaine pour le droit de l'environnement (SOMADE) specializes in environmental legal issues.

Tunisia

Several agencies within Tunisia share responsibility for environmental policy-making and implementation. These include the Ministry of Environment, as well as specialized agencies such as the National Agency for Environmental Protection and the National Office for Preservation which address water and waste management issues.

Several agencies also share responsibility for the development and implementation of energy policy. The Ministry of Economy is responsible for overall policy and decision-making in the energy sector through the General Department of Energy. The Energy Conservation Agency (AME) was created in 1986 as part of the department in order to promote energy conservation and develop the use of renewables. The AME has been involved in the climate change negotiations. The National Institute for Scientific and Technical Research in the Ministry of Scientific Research is responsible for developing research and pilot projects on renewable energy, and has particular experience in desalinization and photovoltaics.

The Ministry of Agriculture regulates forestry policy and natural resources management, and is also concerned with biomass energy issues. In 1992, Tunisia established a national Climate Change Committee to follow up on the climate change negotiation process, formulate a common Tunisian position related to climate change, and analyze the implications of convention commitments for the country. The committee is directed by the Ministry of Environment. Other members include the Ministry of Economy, which is represented by the Energy Conservation Agency (AME), the National Agency for Environmental Protection, the Ministry of Agriculture, the Ministry of Foreign Affairs, and several other governmental agencies.

B. PROJECT JUSTIFICATION

The FCCC provides a clear mandate for many of the activities to be conducted under this project. For developing countries, the most relevant obligation is stated in Article 12 which calls for the preparation of national communications (due three years after the convention's entry into force). This will need considerable preparation in every country. These "communications" can include climate change projects for potential financing. Article 4.1 calls on all countries to formulate and implement programmes to mitigate and adapt to climate change. Article 4.8 draws special attention to the particular needs of countries liable to drought, desertification, and natural disasters, and Article 5 calls for the formation of cooperative networks.

From a local perspective, the common objective of increasing the economic and ecological efficiency of energy and natural resource use within the Maghreb region provides adequate justification for the pursuit of the activities outlined below. Dramatic but predictable increases in future energy use in the region will make it more difficult to control GHG emissions. Such increases, when addressed at a later stage, will also divert resources available to countries in the region away from other pressing priorities.

1. Problem to be addressed and the present situation

There is currently insufficient capability, particularly at the subregional level, to address many facets of the climate change issue. The aspects taken into account by this project are listed below.

Insufficient knowledge and expertise in the Maghreb countries to comply with FCCC provisions

All four Maghreb countries have signed the FCCC; two have ratified the convention. All of them are called upon to comply with the convention in terms of data collection, inventory, or the formulation of programmes to mitigate climate change. There is an urgent need to strengthen institutions in these countries to enhance their capability to undertake these activities.

Limited knowledge of the relationship between climate change mitigation strategies and national goals of sustainable development

National efforts aimed at sustainable development (through energy efficiency, fostering of renewable energy, curtailment of energy losses and waste, preservation of trees, and reforestation) are pursued by most Maghreb countries as part of their national energy and environmental initiatives. Such programmes can simultaneously contribute to the mitigation of global climate change, but knowledge of the links between these objectives is still missing among the countries of the Maghreb. A better understanding of the commonality of objectives could help mobilize support for overcoming several of the obstacles to the promotion of energy and resource conservation.

Insufficient capacity to take advantage of opportunities created by international concern over climate change in the form of financing for climate change mitigation projects that would simultaneously advance national environmental and development objectives

Concern over global climate change is likely to result in the enhanced availability of funding for projects related to climate change mitigation, and possibly even adaptation. Within the Maghreb region, there is very little knowledge of the means to take advantage of these financing opportunities. This is so despite extensive experience with pilot level and other demonstration projects that could potentially be expanded into sizable climate change mitigation proposals. Such proposals could simultaneously advance the achievement of current national priorities.

Lack of cooperation and coordination among Maghreb countries and institutions in data collection, information dissemination, and programme coordination in matters pertaining to climate change

Activities of relevance to climate change are generally not coordinated within the Maghreb region. This often leads to redundant or overlapping initiatives where regional or even bilateral

cooperation could be of significant financial and technical benefit to the achievement of each country's individual goals. Many activities in the energy policy, resource policy, and technology demonstration arenas would benefit from increased coordination.

2. Expected end-of-project situation

At the end of this three-year project, the Maghreb countries will have considerably improved their capacity to respond to the challenges and opportunities presented by their ratification of the FCCC. End-of-project outcomes will include:

- National greenhouse gas inventories (funded over and above this project) and national-level analysis of climate change mitigation options across sectors
- A regionally integrated perspective towards the FCCC and climate change mitigation activities, including the setting of regional priorities
- Trained governmental and non-governmental actors capable of interpreting and responding to the mandates of the FCCC, and able to evaluate alternative options and opportunities relating to participation in the convention
- National and regional working groups to assess a variety of technical and policy issues directly and indirectly related to the FCCC
- Sustainable Energy and Environment Information Centres in each country to promote: the efficient use of energy in the commercial and residential sectors, and national and regional understanding of the links between climate change and other environmental/economic issues
- A portfolio of climate change mitigation opportunities in the Maghreb states that will have been presented for potential financing to public and private sector organizations in the industrialized countries under the joint implementation provisions of the FCCC
- Local capacity to expand the climate change mitigation portfolio and develop state-of-the-art assessments of the carbon cycle implications of alternative projects
- A regional network, with operational print and electronic communications systems, to continue information exchange and policy development throughout the region.

3. Target beneficiaries

The project will assist the Maghreb countries to develop policies and projects that promote efficiency in energy production, transport, and consumption, as well as efficient biomass substitution and forest conservation and expansion. The target beneficiaries of the project are:

- The regional population as a whole, which is at risk of suffering the impacts of future climate change

- Firms and associations in the energy and forestry sectors, which will benefit most from the availability of new financial capital for climate change mitigation activities in these sectors.

4. Project strategy and institutional arrangements

Project strategy

The majority of GHG emissions in the Maghreb region emanate in part from land-use shifts, but mainly from the commercial energy sector, where the production and consumption of fossil fuels contribute greatly to emissions. Any strategy for decreasing or slowing the net growth of GHG emissions in the Maghreb region must include the improvement of the efficiency of energy use, and slow the growth of fossil-fuel consumption. The potential for energy efficiency in this region is significant because of the relatively high energy intensity of economic output. The Arab region is also endowed with abundant renewable energy resources, especially solar and wind resources, and municipal and agricultural combustible residues. This project will emphasize energy-efficiency and renewable-energy supply options for the industrial, utility, commercial, urban residential, and transport sectors.

The Arab region can be divided into three geographic subregions: the Maghreb (Algeria, Libya, Morocco, and Tunisia); the Mashreq (Djibouti, Egypt, Iraq, Jordan, Lebanon, Somalia, Sudan, Syria, and Yemen); and the Gulf States (Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and the United Arab Emirates). The factors underlying economic development, energy production and consumption, and GHG emissions in these subregions are distinct and often require different approaches and measures to realize improvement. The sheer size of the Arab region also necessitates the use of subregions for logistical purposes; this project focuses initially on the Maghreb subregion. The project is intended to serve as a model to other subregions of the Arab region and beyond to facilitate the initiation of similar activities in these regions.

The Maghreb presents favourable features from the standpoint of a regional effort to limit long-term GHG emissions. There has been demonstrated support for the FCCC, and preliminary efforts at regional integration in some topical areas have already been made, particularly in the energy sector. At the infrastructural level, cooperation is occurring through the interconnection of national electricity and gas pipeline networks. This will eventually lead to a regional energy and electricity market. At the policy level, Maghreb states have taken the first steps towards regional cooperation through the establishment of entities such as the Arab Maghreb Union's ministerial committee on energy and electricity.

The Maghreb presents many opportunities to implement sustainable energy and resource conservation programmes that fit the development priorities of the region's countries. These priorities include improving energy efficiency, increasing renewable energy utilization, increasing the use of natural gas as compared to oil, promoting forest and agricultural resource management policies, and improving the management of urban wastes. These programmes, many of which present favourable cost-benefit ratios, can contribute to global efforts to mitigate climate change.

The project represents an approach to the building of institutional and technical capacities within the Arab region that is adapted to the particular political perspective and technical circumstances of the Maghreb. It will build knowledge and capacity related to implementing the FCCC, while focusing on issues that are clearly perceived by these countries as national environmental and developmental priorities. Approaches that will be employed are listed below:

1. Experts in each country will be trained to acquire expertise and self-sufficiency in assembling, interpreting, and disseminating data relevant to GHG emissions, and the mitigation of climate change impacts.
2. Subregional training seminars, workshops, and studies will be sponsored on topics such as GHG data collection and inventory, prospective impacts of climate change, climate change adaptation opportunities, expanded but efficient development of natural gas resources, substitution of more efficient commercial fuels for non-sustainable biomass exploitation, forest and biomass resource management, renewable energy technologies such as rooftop solar heaters, and the reduction of GHG emissions from municipal solid waste. These topics contribute to climate change mitigation, but there is insufficient understanding in the region regarding technical options, cost-effectiveness, and the ways in which policy development in these sectors should be pursued.
3. Cooperation among Maghreb countries will be promoted in matters pertaining to the mitigation of climate change effects and the limitation of GHG emissions through the project coordinator and project staff, and through the design of project activities. Such cooperation will also be enhanced through the explicit inclusion of broader African and Arab regions in project workshops and conferences, through links with parallel ongoing activities such as those being carried out under Capacity 21, and through links with other regional organizations like the Centre for Environment and Development in the Arab Region and Europe (CEDARE). The project will thus establish regional cooperation techniques aimed at the initiation of project activities in countries outside the Maghreb subregion.
4. National and subregional projects to limit GHG emissions will be identified and defined. To build capacity in these countries, the project will help to package and present other promising projects in the formats required to secure financing from funding agencies. These projects will cover some of the activities referred to in number 2 above.
5. Energy and Environment Information Centres in the Maghreb region will be established to serve the purposes of this project in several ways. They will help mobilize public awareness and support for energy-efficiency and related environmental measures; they will introduce energy-efficient technologies to specialists and to the general public; and they will implement grassroots education efforts and assist consumers with energy consumption problems, demonstrate environmentally friendly technologies, and serve the main purpose of the project by limiting GHG emissions and enlisting specialist and public support for the effort.

The overall project strategy aims at assisting the Maghreb countries to fulfil their obligations under the FCCC and to effectively participate in the global effort to limit GHG emissions.

Institutional arrangements

The core institutional structure of the project is described below.

Project Steering Committee

The Project Steering Committee (PSC) will be charged with overseeing and advising project execution, and will have decision-making powers over all aspects of the project, including reports. The PSC will assist the Project Coordinator in the formulation of major project initiatives, and in the periodic review and evaluation of key project activities.

The PSC will include the Project Coordinator, the four National Coordinators, a UNDP-GEF representative, a representative of the Arab Maghreb Union, a representative of the executing agency (the Government of Morocco), and two NGO representatives from the region. Participation by government representatives (who are involved in economic and planning policy) in the PSC is encouraged to ensure that links are established between technical and policy matters. The Project Coordinator will chair the PSC.

The PSC will convene within three months of the initiation of the project, after the offices of the Project and National Coordinators have begun functioning. The Project Coordinator will prepare a detailed workplan and budget for review, comments, and endorsement by the first PSC meeting. All subsequent revisions of the workplan and detailed budgets will be approved by the PSC. The PSC will meet at least twice a year during the course of the project. On issues requiring urgent attention, the Chairman and the Project Coordinator will act on behalf of the committee after communicating to other members by fax or e-mail.

The overall responsibilities of the PSC will be to:

- Coordinate regional activities and ensure effective regional cooperation within the framework of the project
- Review and approve annual workplans prepared by the Project Coordinator
- Review and approve the annual reports prepared by the Project and National Coordinators on progress, achievements, and future plans
- Participate in the multipartite review meetings, and mid-term and final evaluations
- Periodically review the status of implementation and ensure that the agreed activities are being funded through government budget allocations
- Ensure that decisions and recommendations of the PSC are reached through consensus and included in the minutes of the meeting and the PSC report.

Project Coordinator

The Project Coordinator will be selected based on his or her technical expertise, knowledge of the region, and understanding and knowledge of regional languages and culture. The primary aim of the Project Coordinator's office is to ensure coordination in project execution on a regional level. The Project Coordinator's salary will be provided by the project, while the office space and administrative support (a full-time assistant and secretary) will be provided by Morocco as the host government. Based on the Government of Morocco's expressed interest in hosting the project, the country's geographical location, and the aggressive policies being implemented by Morocco to achieve energy efficiency and other objectives that match those of the project, it is expected that the choice of Morocco as project host (and location of the Project Coordinator's office) will significantly advance the goals of this project.

Responsibilities of the Project Coordinator will be to:

- Establish the office of the Regional Coordinator and prepare a detailed workplan for the project
- Prepare a detailed annual workplan to be submitted for review by the PSC at its first meeting
- Plan and organize meetings of the PSC and Technical Advisory Committee, and act as their non-voting chairman
- Coordinate with the National Coordinators to ensure that all activities are appropriately managed at the national level
- Organize seminars, workshops, and study tours in the region
- Manage the recruitment of consultants and the procurement of project equipment
- Approve the allocation of funds for consultants, travel, and workshops under the PSC's guidance in accordance with UNDP procedures
- Visit the participating countries at least twice a year
- Submit Project Performance Evaluation Reports, terminal reports, and technical and other *ad hoc* reports in accordance with UNDP reporting procedures
- Undertake any related activities considered necessary to facilitate satisfactory implementation of project activities.

National Coordinators

The coordination of activities at the national level will be the responsibility of the National Coordinators. These coordinators will be selected from current government officials in existing

government agencies that undertake work on climate change or related issues. Governments will commit at least 50 percent of the National Coordinators' time to project activities. When appropriate, and with the approval of the Project Coordinator, the National Coordinators' work can be assisted by local or international consultants.

The office of the National Coordinator in Morocco may be the same institution that will host the office of the Project Coordinator, although this is not necessarily called for under the project. Unless changed by participating governments, the following national agencies will assume responsibility for providing National Coordinators:

Algeria:	Ministry of Energy
Libya:	Technical Committee on Environmental Protection
Morocco:	Under-Secretary of State for the Environment
Tunisia:	Ministry of Environment.

Responsibilities of the National Coordinators will be to:

- Ensure that any agreed government inputs to the project are made available as and when required
- Ensure that the office of the National Coordinator is established, and that at least one specifically designated full-time professional is appointed in addition, with the necessary administrative support to deal with routine project matters
- Facilitate and assist in the selection and preparation of participants attending national and regional seminars/training workshops
- Provide the office of the Project Coordinator with data and information concerning national activities of the project in accordance with the requirements of workplans
- Undertake any related activities considered necessary to facilitate the satisfactory implementation of project activities.

Technical Advisory Committee

The Technical Advisory Committee (TAC) will meet more frequently than the Project Steering Committee, and have a wider membership. Members will include the Project and National Coordinators, representatives of other important government ministries, as well as representatives of the region's energy, forestry, scientific, and academic communities. Permanent membership will total approximately twenty, although additional individuals can be invited to attend, depending on the particular subject matter to be discussed. The TAC will provide a mechanism for the project's management to stay in touch with relevant constituencies that it might otherwise have little contact with, and will serve as an advisory body to the Project and National Coordinators. Most members of the TAC should be representatives of the national committees discussed below. Meetings of the TAC will be coordinated with workshops or other project activities to minimize additional travel and related costs.

Project Advisory Network

A Project Advisory Network (PAN) will be composed of national and international institutions involved in extensive climate change work. The Project Coordinator will take the initiative to establish this network and ensure that it operates in an appropriate capacity. The PAN will be a source of expertise and advice for the project. The network will not, however, be physically convened; communications will be through direct contacts among the Project Coordinator, National Coordinators, and members of the network, as appropriate. In addition to the GEF-UNDP's Climate Change Specialist, a preliminary list of PAN organizations includes:

- United Nations Environment Programme (UNEP)
- The World Bank
- Global Environment Facility
- UNEP Collaborating Centre on Energy and the Environment (Risø in Denmark)
- U.S. Environmental Protection Agency and Department of Energy
- Stockholm Environment Institute
- Gesellschaft fuer Technische Zusammenarbeit
- FCCC Secretariat
- Climate Network Africa
- Global Change System for Analysis, Research and Training (START) Network
- Intergovernmental Panel on Climate Change
- Ministry of Energy, Morocco
- Agence pour la maitrise de l'energie, Tunisia.

As the above institutions and organizations are at the cutting edge of thinking and development with respect to climate change issues, it is vital that the project quickly establish links with them. This will facilitate the transfer of experience, promote efficiency, and enhance the project's impact, thereby leading to the more effective use of overall resources. The Project Advisory Network will receive reports and workplans as these are issued by the project, and will also function as a resource for advice and guidance as needed.

Sustainable Energy and Environment Information Centres

As discussed later in this document, Sustainable Energy and Environment Information Centres will be established in each country. The centres will be staffed by capable professionals seconded by the participating governments, which will also provide appropriate premises. Equipment for the centres and staff training will be provided by this project. At the discretion of each government, the National Coordinator may also serve as manager for the centre in that country, provided that the individual devotes full time between these two functions.

Project execution

The project will be executed by the Government of Morocco. A Project Coordinator will be selected by UNDP in consultation with the governments concerned. Budgetary allocations have been provided for his or her services.

The National Coordinators in each country will build an informal network of key relevant sectors, including government ministries, academic institutions, NGOs, and representatives of the private sector. It is anticipated that this network will meet once every six to twelve months. The Project Coordinator will do the same at the subregional level and, to the extent possible, at the regional level. Through these informal networks, the Project Coordinator and the National Coordinators will ensure that the activities of the project are in keeping with the specific priorities of each country and of the subregion.

External consultants will be used to undertake short-term assignments, as designated by the Project Coordinator in consultation with the relevant National Coordinators. Preference will be given to consultants from the subregion or the Arab region as a whole, but experts from outside will be invited when necessary.

The project will therefore be executed and implemented using four key institutional actors:

Executing agency:	Government of Morocco
Policy-making body:	Project Steering Committee
Project coordination:	Project Coordinator
Country coordination:	National Coordinators.

5. Reasons for assistance from GEF-UNDP

The project will assist the Maghreb countries to fulfil their obligations under the FCCC and to respond to climate change concerns in general. This will be accomplished primarily through: regional cooperation, the sharing of information, institutional capacity building, and the training of local experts. The project's benefits will include the economic and environmental benefits associated with the more efficient use of energy and other natural resources, as well as the promotion of a development course for decision-makers on minimizing GHG emissions in the region. Indirect benefits will include the mitigation of climate change.

The preparation of national communications by developing countries to satisfy the requirements of the FCCC is to be fully financed by the financial mechanism for the convention. The GEF, in its capacity as the interim financial mechanism of the FCCC, will therefore finance this preparatory work for inventories and their analysis, as well as other enabling and capacity-building activities under this project.

As a multilateral agency, UNDP has consistently demonstrated its strong links and collaborative relations with the Maghreb governments in development programmes. It is therefore ideally suited to being the agency responsible for this project. In addition, UNDP's network of country representatives provides an excellent platform for coordinating this project and ensuring wide dissemination of the project's findings.

6. Special considerations

This project is designed to meet global as well as regional and national objectives. Several attributes of the project are specifically relevant to UNDP objectives. First, the project will promote

a significant global environmental benefit by including the Maghreb, and ultimately the Arab region as a whole, in global efforts to mitigate climate change. Second, the project will promote technical cooperation between developing countries by promoting national and regional coordination on energy policy and related climate change mitigation and adaptation issues. Third, the project will work with local and regional NGOs in project activities. NGO representation is provided for on the Project Steering Committee, Technical Advisory Committee, and National Committees. NGOs currently play little direct role in the topics to be covered by this project, and their involvement will form an important component of this project. Lastly, the project explicitly aims to involve the international private sector in long-term climate change mitigation activities within the Maghreb through the identification and development of investments that simultaneously advance private sector goals related to carbon offsets, and the energy and environmental goals of the countries and region involved.

7. Coordination arrangements

As mentioned before, a variety of projects and activities that relate to the purposes of this project are already underway in the Maghreb region. The most relevant of these activities involve GHG inventories currently underway or about to begin in several of the region's countries. Algeria and Libya do not currently have an inventory in process; it is hoped that they will be able to undertake their own inventory prior to the start of this project. This will be ascertained prior to the initiation of project activities.

Coordination between this project and ongoing activities will be the responsibility of the Project and National Coordinators, assisted at the beginning of the project by a comprehensive review of ongoing regional efforts. An important function of the Project Steering Committee will be to establish links with national programmes and steer them into subregional cooperation to enhance the goals of this project.

Through the Project Advisory Network, which is composed of key actors in climate change projects in the region, and representatives of regional and subregional agencies, the project will maintain close links with ongoing and planned initiatives. This will keep duplication to a minimum and ensure optimum use of the limited resources available for issues related to climate change. Particular attention will be paid to the activities of UNEP's Climate Unit, the Stockholm Environment Institute, the U.S. EPA, and projects coordinated jointly by the United Nations Institute for Training and Research (UNITAR) and the Interim Secretariat of the FCCC.

8. Counterpart support capacity

All the countries involved in this project clearly have the institutional capacity to undertake the work required under this project. Participating countries will provide significant levels of counterpart support, including the personnel and support facilities listed below:

- Support services (secretarial, administrative, and so on)
- Basic communication and office facilities
- Expertise in certain areas
- Library and information facilities
- Office accommodation.

C. DEVELOPMENT OBJECTIVES

The FCCC recognizes that climate change is a major threat to the world's environment and development, and that efforts to mitigate this change require the cooperation of all countries. A common development objective of the Arab States is to improve the long-term cost-effectiveness and competitiveness of their energy production and use, and the long-term management of their natural resource base. While being consistent with their national development strategies, this objective will also contribute to the goals of the FCCC.

D. IMMEDIATE OBJECTIVES, OUTPUTS AND ACTIVITIES

The aim of this project is to build and reinforce capacity within the Maghreb countries, and in the region as a whole, to advance regional interests related to climate change. This includes the capacity to respond to the FCCC, to more actively and effectively pursue energy and natural resource management activities related directly or indirectly to climate change mitigation and adaptation, and to take advantage of new opportunities related to the procurement of funding for projects related to climate change.

Four immediate objectives have been identified:

- To reinforce the technical and policy-making capacity at the national and regional levels to allow the Maghreb states to successfully respond to the terms of the FCCC
- To develop and document project opportunities at the national and regional levels that would simultaneously advance sustainable development objectives while mitigating climate change, to strengthen local capacity for developing such proposals in the future, and to solicit support for their funding and implementation
- To establish Sustainable Energy and Environment Information Centres that advance project activities at the institutional and grassroots levels
- To encourage the continuation of project activities after the conclusion of this three-year project, to link Maghreb project activities with other Arab regions, and to encourage the expansion of this project's activities into these additional regions.

IMMEDIATE OBJECTIVE 1

To reinforce the technical and policy-making capacity at the national and regional levels to allow the Maghreb states to successfully participate in and respond to the terms of the FCCC.

Achievement Indicator

An improved understanding of the terms of the FCCC, and a heightened awareness of the various technical options for advancing development and environmental priorities. The undertaking of country reviews of institutions, policies, and expertise related to climate change. The convening of national and regional workshops, seminars, and training courses. The establishment of a regional

network of individuals and institutions promoting information dissemination, research, and project cooperation in the area of climate change. Creation of a regional policy dialogue on climate change for the Maghreb that builds upon national efforts and activities.

Although all four Maghreb countries have signed the FCCC, their understanding of the treaty remains quite limited. This has contributed to the relatively low level of interest in the convention and in the ongoing work of the Intergovernmental Negotiating Committee (INC). Regional awareness of the technical options available to control the growth of GHG emissions is still low, and there is an inadequate understanding of the fact that many of these technical options can advance existing development and environmental priorities. The outputs and activities under this objective, building on other efforts being pursued by UNEP and Gesellschaft fuer Technische Zusammenarbeit (GTZ), will improve this situation during the course of the project.

Output 1.1

Synthesis reports on the institutions, policies, and expertise relating directly or indirectly to climate change in the Maghreb countries.

Activities for Output 1.1

1.1.1. Commission a project start-up report in each country.

Using materials already collected through the preparatory mission undertaken in October 1993, as well as information collected through the efforts of UNEP and other agencies, local consultants will be commissioned in each Maghreb country to complete a review of the institutions, policies, and expertise available in climate change and related sectors. The Project Coordinator will supervise this effort as one of his first tasks. A common outline will be provided by the Project Coordinator to guide work in each country. Coverage will include energy production, transmission, and consumption practices, as well as relevant land-use policies, regulations, and expertise. This review will be a primary resource for identifying capacity-building opportunities to be undertaken for Outputs 2 and 3 below, and opportunities to work with or build upon other efforts and initiatives. The review will be performed in coordination with the FCCC Interim Secretariat's Climate Convention Information Exchange Programme (CC:INFO), which seeks to establish a centralized global database on climate change activities and projects. Four-week consultancies in each country are likely to be needed for completion of this activity.

Responsible party: Local consultants.

1.1.2. Prepare a project-end report for each Maghreb country.

Six months prior to the conclusion of the project, country-specific reports will be prepared to update earlier reports that were completed at the beginning of the project. These reports and the changes they document in each country will be a valuable input for the project evaluation process to be undertaken in the last six months of the project. It is anticipated that the Project and National Coordinators will have much of the required information, and could

even undertake the updating process themselves. Alternatively, they will cooperate closely with local consultants commissioned to undertake the reports. It is anticipated that the consultancies would need to be only two weeks long.

Responsible party: National Coordinators with possible consultant support.

Output 1.2

Individuals and institutions within the Maghreb states who are familiar with: the FCCC, terms and opportunities presented by the convention, the technological opportunities available to advance the goal of limiting GHG emissions, and policy strategies that can be used to promote these goals.

Based on consultations with governments in the region, it was concluded that an overly deterministic approach to capacity and institution building for the FCCC would not be appropriate for this project. Although governments have expressed an interest in many subject areas related to climate change, climate change *per se* remains insufficiently understood and too low a governmental priority to make a formalized approach successful. A more flexible approach is favored whereby project managers will take advantage of specific opportunities to transfer technology, and undertake capacity and institution building in the governmental and non-governmental sectors of the four countries. The Project Coordinator, in consultation with National Coordinators, will have resources under this output to utilize local and international policy, as well as technical expertise to conduct studies and organize national and regional workshops, seminars, and training courses.

Activities for Output 1.2

- 1.2.1. Identify organizations with an interest or responsibility in the broad area of climate change, and their organizational needs.

Immediately after the project starts, the Project and National Coordinators will begin to identify the needs and interests of institutions that are in a position to advance the objectives of the FCCC. This process will be assisted by the reports compiled under Output 1.1 above. The identification of needs and opportunities will continue throughout the project.

Responsible party: Project and National Coordinators.

- 1.2.2. Fulfill identified needs through seminars and other kinds of training, technical or policy assistance, selective equipment purchase, travel assistance, and other means.

Based on the problems listed earlier in this document (in the section entitled "Problem to be addressed and the present situation"), it is assumed that there will be many opportunities to selectively intervene to build capacity and institutions related to climate change objectives throughout the course of this project. Implementation of this activity is anticipated to be among the most important responsibilities of the Project and National Coordinators. Although significant financial resources will be set aside for this activity, its success will

require careful screening and review of any opportunities that arise. The Project Steering Committee, in coordination with the Project Coordinator, will play a significant role in screening these opportunities to assure broader relevance to project objectives.

Listed below are activities aimed at strengthening an understanding of, and participation in, climate change issues. Some of these will be undertaken in the course of this project in cooperation with universities and related scientific institutions in the Maghreb.

Training in climate change issues and the FCCC

Initially this training will involve the National Coordinators and relevant members of their organizations in order to establish a common level of understanding conducive to success of this regional project. Topics for training would include the convention itself, climate change science, the relationship of energy and land-use issues to climate change, and other related topics. Training will involve supporting travel to participate in INC, Intergovernmental Panel on Climate Change (IPCC), and related meetings. Later in the project, training activities on the same topics could be carried out by the National Coordinators or their representatives, and target other governmental and non-governmental institutions.

The Project Coordinator will undertake the assembly of training materials, which is not expected to be difficult. The Training Programme to Promote the Implementation of the Convention (CC:TRAIN), conducted jointly by the FCCC and the United Nations Institute for Training and Research (UNITAR), should be a source of materials and expertise, even though it does not specifically target any Maghreb countries during its initial phase. Climate change training materials are also to be prepared as part of other GEF-UNDP projects, such as Building Capacity in Africa to Respond to the United Nations Convention on Climate Change. These materials, and expertise from the region, can be adapted for use in the Maghreb relatively easily.

Follow-up of GHG inventory

This project is not expected to directly support the undertaking of GHG inventories within the Maghreb. Several such studies are already underway, as listed earlier in this document under the section on "Prior and ongoing assistance." Algeria and Libya are the two countries with no immediate plans to conduct an inventory; it is hoped that through the sharing of reports and basic information, the Algerian and Libyan governments will undertake or support work on national GHG inventories at the start of this project.

Once inventories are completed, however, there is a risk that they may never be circulated among broader policy-making circles, and so fail to fulfill an important part of their purpose. This project can build upon the completed inventories by assisting in their evaluation, comparison, and dissemination within the Maghreb and the larger Arab region. Mechanisms available to accomplish this would include the presentation of inventory data through innovative means, or through the organization of regional workshops, to compare inventories and examine their implications.

National policy dialogue

Once national GHG inventories have been completed, the development of a policy dialogue at the national level is important to evaluate their implications and potential policy responses. Even though a dialogue is foreseen as part of some of the inventory activities, these dialogues would be short-lived under the existing inventory plans. This project offers the opportunity to extend the dialogue beyond the period of the inventory by making the National Coordinators responsible for maintaining an ongoing policy dialogue on climate change with relevant governmental and non-governmental actors.

Technical analysis related to GHG mitigation options

Several technical areas with GHG mitigation potential have been identified by the Maghreb governments as being of particular interest, often for reasons having little to do with climate change mitigation *per se*. Nevertheless, an increase in the understanding and capacity to implement activities in these areas will advance the objectives of the FCCC. Identified topics include the expanded utilization of natural gas reserves; the substitution of natural gas and related fuels such as LPG to fulfill energy needs, particularly in the transportation sector; the dissemination of solar heating; desalination; photovoltaic technologies; and more effective practices for the disposal of solid waste. The project will respond to these needs by providing technical expertise, training, and workshop opportunities on individual topics. Topics of interest to more than one Maghreb country will be given priority in order to promote subregional networks of organizations and individuals interested in the same topics. Assistance could occur within the context of the national policy dialogues previously discussed, or as independent activities.

Reviews of national and regional experience with relevant policies, technologies, and other pilot efforts

Throughout the Maghreb region, there have been numerous experiments and pilot projects with GHG implications related to energy policy and supply. These include projects related to energy efficiency, biogas production, solar thermal, photovoltaic, and other renewable technologies, and land management. Some of the more successful projects could form the basis of an effort to expand the pilot activity to a regional level. The less successful efforts should also be evaluated so as to avoid repeating the same mistakes in building future capacity and technological infrastructure in the region. This project can assist these efforts by documenting successes and failures and reviewing their implications for the objectives of this project, and for the FCCC as a whole. Based on the interest expressed by the region's governments, it might be worthwhile to select representative projects for additional profiling and publicity, potentially casting them as "pilot" efforts to facilitate the procurement of additional financing or support for their expansion.

Development of GHG emissions scenarios

The Maghreb states are likely to see rapidly increasing GHG emissions in the coming years. Successful participation in the present project will require projections of emissions through

the use of emissions scenarios, which could be constructed at the national or regional levels in the Maghreb. Emissions scenarios would provide a basis for countries to evaluate alternative infrastructural and development plans in terms of their resulting impacts on GHG emissions. This project can assist interested institutions to help build and assess appropriate scenarios. Assistance could include technical support in the use of scenario-building models, and support for internal policy dialogues that would contribute to the specification of appropriate scenarios. Assistance could occur within the context of the national policy dialogues previously discussed, or as an independent activity.

Assessment of GHG mitigation and adaptation costs

Evaluation of the cost-effectiveness of alternative climate change mitigation and adaptation options would enable the Maghreb countries to participate more effectively in the FCCC. Emissions-reduction cost curves, for example, can convey significant information on the potential of each technology or policy option. The process of developing these curves is also a valuable training process in its own right. Once again, project support for this work would depend upon the degree of organizational interest. Assistance could occur within the context of the national policy dialogues discussed previously, or as an independent activity.

Assessment of climate change impacts and adaptation opportunities

The Maghreb region has suffered during the last decade from climatic perturbations affecting rainfall levels, temperature regimes, and timing of the seasons. As a result, national governments have expressed considerable interest in climate change adaptation techniques. Regardless of whether these perturbations are related to the long-term climate change that is the focus of this project, activities to identify and mitigate the adverse social, economic, and ecological impacts associated with climatic change can respond to both sets of objectives. Assistance could occur within the context of the national policy dialogues previously discussed, or as an independent activity.

National GHG strategy development

Many countries are expected to undertake energy planning in response to the FCCC, as the convention encourages a holistic approach to the development of policies related to supply and demand, and the internalization of environmental externalities. To the extent that the Maghreb countries wish to utilize a least-cost planning approach to climate change mitigation and adaptation, this project can assist countries in looking at integrated resource planning, energy pricing reform, energy supply alternatives, and efficiency opportunities throughout the energy production, conversion, and transmission systems. Assistance can occur within the context of the national policy dialogues previously discussed, or as an independent activity.

Scoping paper on climate change impacts

Since the Maghreb countries are likely to be affected in a number of ways by climatic change, they have indicated their support for a greater focus on the impact of climate change

in their region. Realizing that this is an area requiring much research, which is beyond the scope of the present project, but at the same time recognizing the importance of the issue, the present project will provide for a preliminary scoping paper on the relationship between the impact of climate change and water resources in the region.

Responsible party: Project and National Coordinators, with support from local and international experts and consultants.

Output 1.3

A regional network related to climate change issues.

Building upon the activities for Output 1.2, links will be created between established networks composed of individuals and institutions with an interest in or responsibility for climate change and related topics within the Maghreb, and external events and expertise. These networks will assist in the dissemination and exchange of information, and will facilitate relevant research and project-oriented cooperation both during and after the period of the project. Establishment and maintenance of this network should be useful to many stakeholders for reasons that have little to do with climate change, and there should be considerable interest in successful execution of this output.

Activities for Output 1.3

1.3.1 Establish and maintain contacts between stakeholders in the region.

An important responsibility of the Project Coordinator, supported by National Coordinators, will be to link implementing institutions with other stakeholders including NGOs, government agencies, and the private sector in the Maghreb countries. This activity will specifically seek to involve regional, national, and local non-governmental entities that have been indigenously established and managed in developing and implementing environmental programmes such as those related to energy efficiency and renewable energy. Much of this involvement will occur naturally during implementation of other activities under this project. In addition, however, the Project Coordinator will manage preparation of a periodic newsletter in Arabic that will be distributed regionally in the Maghreb, as well as to key individuals and organizations in the larger Arab region. This newsletter will serve as a catalyst to facilitate the building and consolidation of networks. Once successfully established, the Project Coordinator will seek separate support for newsletter publication and dissemination so that it continues after termination of this project. Limited support in the form of equipment and other resources not provided under other activities are expected to be necessary both for the development of the network, and for the preparation and dissemination of the newsletter. Work on this activity will begin immediately upon initiation of the project. The basic network should be established during the first year of the project, so that the emphasis can shift to its maintenance and improvement during the subsequent period.

Responsible party: Project Coordinator and other concerned parties.

1.3.2 Establish and maintain contacts between the Maghreb network and other international activities and experts.

The wide range of international activities on the subject of climate change and the wealth of knowledge and expertise available can be accessed in a number of ways. First, training activities as part of this project will include opportunities for selected individuals to participate in international technical and policy meetings related to climate change. Other training activities will involve bringing international experts to the Maghreb to conduct studies or workshops. Third, large amounts of technical and other information is available through international computer information networks such as Econet and Green Net. In Africa, Climate Network Africa has created an electronic bulletin board and communications system associated with UNEP's GHG inventory country studies (in which Morocco is a participant). With respect to the FCCC, the planned expansion of the Interim Secretariat's project—Climate Convention Information Exchange Programme (CC:INFO)—will establish a computer database for information on climate change activities and funding opportunities around the world.

This project will establish the Maghreb's identity and presence in these networks, primarily through the Project Coordinator, who will work to facilitate access to these international networks by stakeholders in the Maghreb countries. This will lead to an increase over time in the number of individuals and organizations regularly participating in these networks. Success of this activity will depend on the establishment of a successful regional network as provided for in Activity 1.3.1. This activity will therefore follow the previous activity by approximately six months, and will continue beyond the twelve-month term of the latter.

Responsible party: Project and National Coordinators.

Output 1.4

Regional policy dialogue for the Maghreb.

Many activities relevant to climate change undertaken in the four Maghreb countries will occur at the national level. The GHG inventory projects being funded by different international agencies, for example, are exclusively national in their scope. Each country will also have activities underway relating to its own national policy dialogue. An important characteristic of this UNDP-GEF effort, however, is its regional nature. The project will specifically undertake to create a regional policy dialogue that builds upon efforts taking place at the national level, and will seek opportunities to give national activities a regional focus.

Activities for Output 1.4

1.4.1 Integrate regional participation with national activities.

The Project and National Coordinators will seek to include representation from other countries into as many of the ongoing national activities as possible. This will allow for the exchange of information on a much broader range of topics than could be achieved through

the regional workshops planned under Activity 1.4.2. The efforts of the Project and National Coordinators in this respect will take place largely within the context of the types of measures discussed in Activity 1.2.2 above. It is anticipated that initiation of work under this activity will be appropriate once the project is sufficiently established within the Maghreb itself, which will be approximately six months into the term of the project.

Responsible party: Project and National Coordinators.

1.4.2 Conduct regional workshops at the beginning, middle, and end of the project.

Implementing agencies and other governmental and non-governmental stakeholders will be brought together for an initial subregional workshop within the first six months of the project. This meeting will include about thirty people from the region. The first meeting will introduce and explain the project to key stakeholders in the region, and provide basic background information to establish a common understanding of issues related to climate change and the FCCC. Necessary background materials will be available through other activities being carried out under the project. The Project Coordinator will evaluate whether the results of these workshops could constitute regional declarations or formal positions on subjects relating to the project and climate change in general.

The regional workshops will be coordinated around major international events such as meetings of the INC, IPCC or FCCC. This will enhance the awareness of relevant issues for those attending the workshops, and also avoid a duplication of costs for the organization required for such gatherings. The agenda of these workshops will therefore include topics to be covered at the Conference of the Parties of the FCCC, or other related meetings. This will facilitate the active participation of regional delegates. The last workshop carried out under this activity will take place just before the Arab regional workshop discussed below.

Responsible party: Project Coordinator.

1.4.3. Regional dissemination of workshop results.

The regional workshops discussed under Activity 1.4.2, which aim to expand project activities in the Maghreb countries to the entire Arab region, will be an important precursor to Immediate Objective 4 discussed below. The Project Coordinator will therefore undertake to ensure the wide dissemination of the results of the regional workshops that are relevant to the Arab region as a whole. These results might include policy statements from the Maghreb nations relating to energy or land-use matters, or coordinated positions on subjects being discussed in other international fora such as the INC or FCCC. Special issues of the newsletter mentioned earlier might serve as an appropriate mechanism for the dissemination of this information.

Responsible party: Project and National Coordinators.

IMMEDIATE OBJECTIVE 2

To develop and document project opportunities at the national and regional levels that would simultaneously advance sustainable development objectives while mitigating climate change, strengthen local capacity for developing proposals in the future, and solicit support for the funding and implementation of projects.

Achievement Indicator

The various activities under this section will be developed and implemented in close cooperation with other organizations already involved in climate change activities, through the national efforts now being promoted by the Interim Secretariat of the FCCC. One achievement indicator will be the development and documentation of project opportunities at the national and regional levels for the promotion of sustainable development and the mitigation of climate change. Another indicator will be an enhanced local capacity for: the development of proposals, the solicitation of funds, the implementation of future projects, the preparation of project development manuals, and the undertaking of project workshops.

It will not be easy to move from policy analysis and the implementation of pilot projects to achieving significant reductions in the long-term growth of GHG emissions in the Maghreb. The role this project can play in furthering this transition is constrained by several variables including financial limitations. There are many potential examples, however, of energy sector and other projects that might assist in this transition. If properly documented, demonstrated, and proposed, such projects might be able to attract much larger amounts of funding than can be made available through this single project. Potential funding sources for relevant projects include the Global Environment Facility, bilateral donor agencies, wealthier member states of the Arab region, and the private sector in industrialized countries looking for joint implementation opportunities under the FCCC. This objective will assist in the identification and documentation of potential projects and in the solicitation of support for their future implementation.

Output 2.1

Materials to be used in the development and documentation of projects aimed at the mitigation of climate change, and in the search for potential project financing.

Activities for Output 2.1

2.1.1 Development of a manual for project proposals on climate change mitigation.

The manual will document ways in which climate change mitigation objectives can be integrated into project proposals that advance other development and economic objectives of the Maghreb countries. The manual will include project selection guidelines, project evaluation criteria, modelling and cost-benefit analysis techniques, environmental impact analysis procedures, and sample project documentation. It will document how the GHG benefits of potential projects can be quantified, and demonstrate potential linkages between GHG mitigation objectives and other development objectives. Development of the manual

will require external expertise, although it will be able to draw heavily on similar informational materials expected to be developed as part of GEF's project in Sub-Saharan Africa. In order to ensure the timeliness and relevance of the project manual, it will not be prepared until just before activities are undertaken to identify and develop projects. These activities are currently scheduled to occur in months 9 and 10 of the first year of the project.

Responsible party: International Consultant.

2.1.2 Prepare and maintain an assessment of project funding sources and conditions.

External consultancies will be used to document potential funding sources for project proposals developed under this objective. This will include a survey of existing projects being undertaken and the funding sources utilized, including source-specific constraints and prerequisites. A particular emphasis on private sector and carbon-offset funding will be maintained due to the potential importance of such funding in future project implementation. Initial work will build upon the project development manual, and will therefore occur immediately after completion of the manual. Once the report on funding sources and conditions is compiled, it will be updated regularly by the Project Coordinator through international networking. If funding conditions change significantly, additional consultancy assistance may be required.

Responsible party: International Consultant.

Output 2.2

National and regional project proposals intended to attract funding for projects that limit GHG emissions or otherwise respond to climate change.

Activities for Output 2.2

2.2.1 Prepare and distribute a request for project proposals.

The Project Coordinator will supervise the preparation and distribution in the Maghreb region of a Request for Proposals (RFP) associated with the mitigation of climate change. The RFP will utilize materials from the project development manual prepared under the previous output, and will indicate the kinds of projects that might be received most favourably by funding agencies, as suggested by the information gathered under Activity 2.1.2. This activity will immediately follow Activity 2.1.2.

Responsible party: Project and National Coordinators, with consultant support.

2.2.2 Conduct a regional project development workshop.

After issuance of the RFP under the previous activity, a regional workshop will be convened to provide additional guidance on promising project ideas and techniques that would warrant further efforts towards project development. It is expected that a five-day workshop will be

necessary to train people in the writing of project proposals, especially those related to climate change mitigation and adaptation. The workshop will assist project developers in accessing state-of-the-art information and technologies that are beneficial for GHG emissions reductions. Preliminary ideas brought to the workshop will be discussed to identify those projects most likely to generate financial support in the long term.

Responsible party: International Consultants in cooperation with the Project Coordinator.

2.2.3 Develop climate change mitigation proposals to submit to potential funders.

This activity will involve extensive analytical and procedural work to select, develop, and finalize project proposals suitable for private or public sector financing. The proposals will include cost-benefit analysis, as well as institutional, environmental, and implementation analysis. It is intended that a subset of the more advanced project concepts will be converted to final proposals soon after the time that half the project is complete. Additional proposals will be completed by the end of the project.

Responsible party: International Consultants working with governmental and non-governmental representatives of organizations interested in promoting a project for funding.

Output 2.3

A set of potential funders for climate change mitigation projects in the Maghreb states.

Funding for climate change mitigation activities in the coming years is expected to increase, particularly from the public sector. The Maghreb states are not expected to be likely recipients for this funding. As a result, project funding for these countries will require seeking out and convincing potential funders of the reliability and cost-effectiveness of project opportunities in the region.

Activities for Output 2.3

2.3.1 Prepare a funders' briefing package.

This activity will involve the preparation of a briefing package that includes guidelines for presentations to be delivered to potential funders for available project opportunities in the Maghreb states. Some of these projects could hold commercial potential (projects where the benefits could be shared), while others could be carbon-offset projects that call for joint implementation. The package will be based upon the project proposals being developed under Activity 2.2.3 above, and will therefore be created in the latter part of the project. Several versions of the briefing package and presentation might be required for different audiences that have different funding priorities.

Responsible party: International Consultant with National Coordinators/government counterparts.

2.3.2 Solicit funding for project implementation.

Presentations will be made to relevant audiences both regionally and internationally to identify potential funding sources. The presentations could be made by the Project Coordinator, regional representatives, or external consultants acting on behalf of the project. These solicitation activities will probably be most successful and cost-effective if they take advantage of opportunities to make presentations to larger groups, for example, at meetings of utility executives in the United States.

Responsible party: International Consultants with National Coordinators/government counterparts.

IMMEDIATE OBJECTIVE 3

Establishment of Sustainable Energy and Environment Information Centres to advance project activities at the institutional and grassroots levels.

Achievement Indicator

One indicator of project success will be the advancement of project activities at the institutional and grassroots levels through the establishment of Sustainable Energy and Environment Information Centres. The managers of these centres will have received *ex situ* training in existing centres in Europe and other Arab states to enhance cooperation among them. Assistance in problem solving and the dissemination of information on sustainable energy and environmental options and practices among select professionals and large-scale energy consumers will be another criterion for the success of the project. Students and the general public will also have been educated about energy and environmental issues through public awareness campaigns.

Studies on the successful limitation of GHG emissions and the sustainable use of energy have emphasized the important role played by information dissemination and technical assistance at the ground level to complement institutional, legislative, and regulatory efforts. In many developed countries, and in some developing countries, grassroots Energy Consumer Service Centres have helped energy consumers reduce their energy use through education, demonstration, training, and problem-solving assistance. This experience will be adapted from other regions to the Maghreb through the establishment of these Sustainable Energy and Environment Information Centres. The centres will also facilitate other outputs and activities of this project, and help to disseminate information about the broader projects with special attention to sustainable energy issues. They will serve as a venue for project activities such as workshops and seminars, as an important component of the climate change network to be developed at the regional level, and as a repository for information developed through the project.

Output 3.1

A review of the experience of Energy Consumer Service Centres in Europe and the Arab region, and a determination as to whether similar centres should be established in the Maghreb as part of this project.

Activities for Output 3.1

- 3.1.1 Collect documentation and other information regarding the functioning and performance of Energy Consumer Service Centres, and complete a feasibility study assessing the need for such centres and what their focus should be.

Information regarding the performance of similar centres in other countries is expected to be readily available. A short-term evaluative consultancy may be called for at the Project Coordinator's discretion to collect this information soon after the project begins.

Responsible party: National Coordinators with potential consultant support.

- 3.1.2 Determination by the Project and National Coordinators of whether Sustainable Energy and Environment Information Centres should be established as part of this project.

Based on a review of the information collected under the previous activity and through consultations with government and private sector agencies that would help implement the Sustainable Energy and Environment Information Centres, the Project and National Coordinators will decide whether to pursue the proposed concept of centres. Consultations would involve specification of the purpose and structure of the centres, inputs needed from Maghreb countries for their implementation, and provision for their continuation beyond the termination of this project if they were to prove successful.

Responsible party: Project and National Coordinators.

Output 3.2

Establishment of Sustainable Energy and Environment Information Centres.

Drawing on the experience of existing centres, the centres created under this project will concentrate on information and technologies of relevance to the Maghreb region. These include efficient lighting for the commercial and tourist sectors, solar water heating for residential applications, and photovoltaic systems for off-grid applications. Although initially located only in the capital cities, the centres would be expected to conduct outreach activities beyond city limits. The project's long-term goal would be to encourage the establishment of similar centres throughout the country and the Arab region.

Activities for Output 3.2

- 3.2.1 Individuals who will be responsible for management of the centres will visit existing centres to gain first-hand knowledge and experience in their functioning.

Prospective managers of the Sustainable Energy and Environment Information Centres will be sent for extensive training periods to similar centres in Europe and preferably in the Arab

states. It is envisioned that a total of eight weeks of exposure to the functioning of several existing centres would significantly assist managers to successfully establish the new centres in the Maghreb. It is anticipated that this training would occur prior to the end of the first year of the project so as to allow the centres to become operational by the middle of the second year of the project.

Responsible party: Managers of the Sustainable Energy and Environment Information Centres.

3.2.2 Selection of appropriate sites and equipment for centres.

Once a decision is reached to establish the centres, the Project and National Coordinators will identify an appropriate site in each country and finalize arrangements for the administration of the centres. Acquisition of the site will be the responsibility of the national focal point or another entity that is mutually agreed upon. Once the site is obtained and a manager is trained, project funds will be used to equip the centre with the needed technical equipment and materials, which would include computer and communications equipment, copiers, and presentation equipment. This equipment would be useful for many of the project activities discussed under the four Immediate Objectives, and is therefore considered a priority for much broader purposes than the mere establishment of the centres. Technical and demonstration displays and materials would be provided to the centres by product manufacturers. The centres' role would be to display and disseminate information, not to sell or encourage any particular commercial brand.

Responsible party: Managers of the Sustainable Energy and Environment Information Centres and National Coordinators.

3.2.3 Conduct specialized information seminars, workshops, and demonstrations.

Specialized activities will focus on energy and environmental options, and practices of relevance to climate change mitigation and adaptation. The audiences envisioned for these activities range from a highly select audience associated with a regional workshop being carried out as part of this project, technical audiences such as residential builders to learn about new passive heating and cooling techniques, and the public for more general workshops on energy and environmental topics. These seminars and related actions are expected to be underway by the time the project is halfway through completion.

Responsible party: Sustainable Energy and Environment Information Centre staff.

3.2.4 Assist energy consumers in solving specific energy-use problems.

Expert advice will be directed towards consumers with high levels of energy consumption, such as industrial concerns and hotels, to help them undertake energy audit activities aimed at reducing their use of energy. The centres will also serve as clearinghouses to link energy consulting expertise with entities needing such assistance. The anticipated schedule for this activity also involves the centres being operational by about month 18 of the project.

Responsible party: Sustainable Energy and Environment Information Centre staff.

3.2.5 Organize public awareness campaigns.

Public awareness campaigns will aim to inform the public of the causes of excessive energy use, energy losses, and the methods and technologies that can be adopted to reduce this consumption. Activities would cover publicity campaigns on modern, efficient lighting technologies, energy-efficient heating and cooling apparatus, and renewable energy technologies and applications. One example would be to arrange periodic visits by school children to the centres to enable them to become energy and environment conscious from an early age. It is considered important that these awareness campaigns be undertaken only after the centres are firmly established, which is likely to be towards the end of the second year of the project.

Responsible party: Manager of Sustainable Energy and Environment Information Centre.

3.2.6 Encourage the establishment of other Sustainable Energy and Environment Information Centres in the Maghreb and in the rest of the Arab region.

If the centres established through the project are successful, the Project and National Coordinators will seek to establish a self-sustaining replication process for similar centres in the Maghreb, and will provide assistance to encourage their creation in other parts of the Arab world through networks whereby information can be shared. This encouragement could take the form of assisting the relevant agencies to obtain technical assistance from other United Nations initiatives and bilateral funding arrangements.

Responsible party: Project and National Coordinators.

IMMEDIATE OBJECTIVE 4

To link Maghreb project activities with other regions, and encourage the initiation of similar activities in these regions through networking.

Achievement Indicator

Criteria to judge fulfillment of this objective will include the establishment of a regional network to limit GHG emissions, and greater coordination and cooperation among the different subregions in the expansion of project activities and technical assistance related to climate change and GHG abatement. The sharing of information with other Arab and African subregions should also be enhanced, with greater regional participation in project activities, seminars, and workshops.

This project is intended to establish a coordinated regional effort to limit GHG emissions through capacity building, networking, and technical assistance. The project is beginning with the Maghreb because this region was judged the most suitable among the Arab regions due to the degree of regional integration and cooperation that already exists. Although financial constraints limit the geographical extent of this project, the Project Coordinator will look for opportunities throughout the

project to coordinate with representatives of other subregions, especially the African and Arab subregions, with the aim of encouraging similar activities in these regions.

This project will also establish links with a regional GEF project on GHG abatement in Africa which is currently under approval, in order to ensure further coordination.

Output 4.1

Coordination between the Maghreb and neighbouring countries and regions in activities pertaining to climate change. Undertaking coordination early in the project will help to establish regional activities and also enrich project meetings with fresh ideas and experiences.

Responsible party: Project Coordinator.

Activities for Output 4.1

4.1.1 Network with relevant country representatives from other Arab states and invite their participation in seminars and workshops.

The Project Coordinator will be responsible for involving Arab focal points from outside the Maghreb in project activities. This will include basic information sharing about the project, inclusion in the distribution list for reports and newsletters, and invitations to participate in relevant meetings and workshops convened as part of the project. Regional participation will be invited for as many project activities as possible, including those not already characterized as broadly regional in nature. The Project Coordinator will also encourage regional participants to attend meetings using resources other than project funds.

Responsible party: Project Coordinator.

Output 4.2

Encouragement of similar initiatives in the Arab region and beyond.

Once the FCCC has been ratified by the majority of countries in the subregion, it would be desirable to initiate similar regional projects in those countries, either with national financing or through other regional funding mechanisms. The establishment of networks within the Maghreb region, between the Maghreb and other subregions, and between the Maghreb and other international networks, will be an important step in achieving this carry-over effect. The inclusion of regional representation in the project will also be a step in this direction.

Activities for Output 4.2

4.2.1 Incorporate a regional element, to the degree possible, into project proposals developed as part of this project.

Project proposals being prepared under Immediate Objective 2 will largely be oriented to the Maghreb, but their relevance to other Arab subregions, and their potential for expansion to these areas, will be an important consideration in their selection under Activity 2.2.3 for full development.

Responsible party: International Consultants and Regional Coordinator.

4.2.2 Arab regional conference.

Prior to the end of this project, an Arab regional conference will be convened to discuss the project's status and expected outcomes. This conference will be an excellent opportunity to formally announce the results of the regional initiatives being undertaken by the Project Coordinator, and to issue a declaration on the subject of climate change issues. This conference will be held in the middle of the third year of the project.

Responsible party: Project and National Coordinators.

E. INPUTS

1. Governments of the Maghreb countries

US\$ 267,200

Inputs in kind from each of the Governments of Algeria, Libya, Morocco, and Tunisia are listed below.

Personnel (national staff)

US\$ 199,000

One National Coordinator (at least half-time on the project)

Two accompanying staff (full-time assistant and full-time secretary)

One Energy and Information Centre Director

Two Energy and Information Centre staff (assistants)

One Energy and Information Centre Secretary

A Technical Advisory Committee, coordinated by the Project Coordinator, to undertake and support policy and technical analysis at the national and regional levels, relating to climate change mitigation options and priorities. The committee, which will meet on a regular basis, will consist of high-level representatives of the region's: energy, forestry, scientific, and academic communities; energy, natural resource, environment, foreign affairs and other relevant ministries (or their equivalent); relevant academic and research organizations; and NGOs. The ministries will provide the necessary backup support for the work of the committee.

Travel

US\$ 10,100

Office accommodation, facilities and supplies

US\$ 48,000

- A suitably equipped project office with adequate space to accommodate the National Coordinator and his staff, as well as any national and international experts that may be required. Specific supplementary equipment needs, consisting mainly of computers and communications equipment, will be supplied through the project.
- A suitably equipped Sustainable Energy and Environment Information Centre with adequate space for administrative, as well as display and educational, functions.
- Appropriate premises for the project office and the Sustainable Energy and Environment Information Centre listed above, with facilities such as an adequate and stable electricity supply, ventilation, and temperature/humidity control.
- Other equipment, including office equipment and other locally available equipment that is required but not supplied through the project.
- Miscellaneous services including, but not limited to:
 - (i) In-country travel and local transportation for all project staff;
 - (ii) Local telephone, cable, and mail, with all their ancillary requirements; and
 - (iii) Clearance for national and international travel by national and regional project staff, consultants, experts, and other related individuals.

Equipment

US\$ 10,100

Inputs specific to Morocco

US\$ 216,000

As the host government for the project, Morocco will provide in-kind support in addition to the items listed above.

Personnel

US\$ 181,000

- Support staff for Project Coordinator (full-time secretary).

Office space and facilities

US\$ 35,000

- Office space and facilities that meet the same specifications listed above for the Project Coordinator
- Miscellaneous office operating costs related to the office of the Project Coordinator.

Inputs specific to Libya

US\$ 180,000

As GEF funds are not available to countries with a gross national product (GNP) above US\$ 4,000 per capita, the Government of Libya will provide in-kind support which in other countries will be supplied through the project.

Training

US\$ 109,000

- Conducting a greenhouse gas inventory study to ensure that such data is available for Libya
- Studies and policy analysis conducted within Libya, either to support the National Committee, or as inputs for the regional analysis and meetings underway as part of the project
- Domestic and foreign travel of the Libyan National Coordinator, his or her staff, and others, for meetings and activities related to the overall project including, but not limited to, full participation in all Project Steering Committee meetings, technical regional meetings, and Arab regional meetings.

Travel

US\$ 30,000

Equipment

US\$ 41,000

- Computer and related equipment for the Libyan National Coordinator's Office
- Computer and presentation-related equipment for the Libyan Sustainable Energy and Environment Information Centre.

2. Global Environment Facility

UNDP-GEF will make a total cash contribution of US\$ 2.5 million for this three-year project, of which US\$ 131,200 will be spent on the Preparatory Assistance Phase.

Personnel

US\$ 754,500

- National experts and consultants
- International experts and consultants.

The national and international experts and consultants will carry out many of the activities and generate many of the project's outputs under the direction and coordination of the Project and National Coordinators.

Travel US\$ 275,500

- Travel for the Project and National Coordinators
- Travel for the Project Steering and Technical Advisory Committees.

Mission costs US\$ 82,000

- Backstopping for headquarters
- Mid-term external evaluation.

Training US\$ 754,500

- Immersion training as needed for the Project Coordinator, National Coordinators, and Sustainable Energy and Environment Information Centre Directors
- Country-level workshops (with regional participation as appropriate) to investigate specific issues and policies related to climate change
- Regional workshops, including technical workshops and workshops integrating and reporting on national-level activities
- Training in the writing of climate change mitigation project proposals for submittal to the public and private sectors
- Creation and maintenance of a regional network on the subject of climate change mitigation and related issues, including a newsletter and e-mail communications
- A public information campaign to support the goals of the Sustainable Energy and Environment Information Centres.

Equipment US\$ 378,500

- Expendable equipment pertaining to e-mail and other communications costs
- Computers and presentation equipment for the Project and National Coordinators, and the Sustainable Energy and Environment Information Centre
- Other equipment.

Justification

The equipment under this project will be procured by the executing agencies, or by the two other implementing agencies, according to UNDP and government rules and regulations. This equipment will be essential to the achievement of the project's objectives, and in particular to the

development and transfer of knowledge and skills to national counterparts. The equipment provided to national institutions will be of the kind difficult to acquire by the respective governments in the absence of hard currency and technical knowhow.

All the equipment used by the project will be operated by the project's national staff and personnel under the immediate supervision of the Project Coordinator, or the National Coordinators once they have been successfully trained. The recipient of the equipment will be the project's executing agency (the Government of Morocco) or the respective implementing agencies (the Governments of Algeria and Tunisia).

The Project Coordinator will determine the exact specification of the required equipment and will ensure that its acquisition will be made on the basis of: quality, including productivity and durability at the lowest possible price; cost, availability, and productivity of spare parts; cost of operation and maintenance; and appropriateness for regional and inter-regional linkages and communications (especially with respect to the procurement of computers and software). The final list of the equipment required will be determined by the executing agency after the appointment of the Project Coordinator.

Miscellaneous

US\$ 123,800

- Sundries
- Support costs for Morocco Country Office.

Justification for reimbursement to UNDP Country Offices for services related to GEF projects

Experience has indicated that UNDP Country Offices incur a significant workload in relation to the identification, formulation, processing, support, and monitoring of GEF projects. In line with UNDP's financial regulations, such support will be reimbursed and charged to the project budget. The Morocco Country Office therefore requests reimbursement for the following services provided during implementation of this project:

- Locally recruited administrative assistant based in UNDP Country Office to assist in the execution and management of the project on a daily basis (3 years—US\$ 55,000). This administrative assistant will also assist in the identification and development of other potential GEF projects as appropriate.
- Travel by UNDP programme staff at the Country Office to monitor the project within Morocco and, if necessary, in other participating countries (6 trips of 4 days each—US\$ 7,000).
- Sundries: communications and office supplies—US\$ 4,000.
- Contingencies: US\$ 2,580.

F. RISKS

1. Environmental risks

The potential environmental gains resulting from this project far outweigh any possible negative impacts. There are only minor environmental risks associated with this project, while the environmental benefits, particularly in the form of the limitation of GHG emissions, are considerable. Minor environmental risks are involved in forestation projects where the use of land for planting trees may interfere with other activities. Renewable energy sources can also create limited environmental interference such as noise and visual impacts. Encouraging the substitution of other fossil fuels by natural gas can sometimes lead to gas leaks and other safety hazards which can have significant energy impacts. However, such impacts can be avoided through appropriate engineering techniques and the adoption of safety measures in installation and use.

2. Risks of project failure

International funding

While sufficient funds are available for the project itself, additional funding will be required for Immediate Objective 4, which aims to expand activities to other Arab regions. If the Project Coordinator cannot secure these additional funds, this part of the project will not be possible. A clear timetable for fund-raising activities to be used by the Project Coordinator has been created under Immediate Objective 4 and the attached workplan, but there are no guarantees that funds will become available.

National commitment

If participating countries do not fulfil their commitments to provide the inputs listed in Section E, the project cannot be successful. While there is no way to compel governments to undertake their obligations, the Project Steering Committee should regularly review the extent to which national commitments are being met by the participating governments, as shown in Section E.

If governments do not ultimately choose to support the establishment of Sustainable Energy and Environment Information Centres as proposed in this project, alternative activities will have to be developed and undertaken. Although the establishment of the centres is expected to significantly promote the achievement of project objectives, their absence would not result in serious damage to the achievement of Objectives 1, 2 and 4. As mentioned before, alternatives to the Sustainable Energy and Environment Information Centres were discussed during the project development phase, and one of these alternatives would be developed and implemented in place of the centres.

Personnel/administrative performance

Performance of the Project Coordinator in coordinating and managing the project will be of utmost importance. Given the particular circumstances prevailing in the Maghreb, the project is structured to give the Project Coordinator an extraordinary amount of discretion in the identification and pursuit of specific actions under several of the most important activities. Identification and hiring

of the appropriate individual for the post of Project Coordinator cannot be handled as a mere detail in implementing the project.

The performance of the National Coordinators will also be very important, although individual shortcomings would not necessarily jeopardize the entire project. It will be the role of the Project Coordinator to identify problems and work with country governments to resolve them.

Risk of varying rates of programme development among the four countries

The four countries participating in this project have different levels of development, priorities, and awareness of the issues considered in the project. Consequently, there may be a danger that some of them will move faster than others and dominate subregional activities. One way to avoid this would be by emphasizing regular communications between the Project Coordinator and his or her national counterparts. This will be done through *ad hoc* communications, thematic workshops, and most important, through regular meetings of the Project Steering Committee.

Sustainability of the project

There is some risk that core activities started during the life of the project will not continue after formal termination of project assistance in the Maghreb and other Arab subregions. These activities would include the networks that will have been created, and even more important, the institutional capacities that will have been created or strengthened as a result of this project.

While this risk cannot be fully eliminated, some efforts have been made in project design to minimize it. The most notable among these is the selection of National Coordinators who already work within existing government agencies, have an office, and receive a salary from the same source. Similarly, as the activities in Section D indicate, an effort was made to connect specific thematic activities with existing national, subregional, or regional institutions. Finally, selection of the areas of focus was made in view of the priorities of the participating countries, as expressed by them.

G. PRIOR OBLIGATIONS AND PREREQUISITES

1. Prior obligations

The Government of Morocco will host the project, and in accepting this, will assign suitable personnel to the project as indicated in the budget for Morocco. The Government of Libya will agree to participate in the present project as outlined in the budget for Libya.

2. Prerequisites

- The Government of Morocco will propose at least three candidates for the post of Regional Coordinator. UNDP will select one of them upon review of the proposed candidates and in consultation with the other participating countries.
- Governments will allocate funds in national budgets as indicated in Section E on government inputs.

- Governments will designate suitably qualified individuals to serve as National Coordinators, and to serve as staff for the National Coordinator. Should such individuals not prove able to carry out project activities in the view of the Project Coordinator, the governments will designate suitably qualified replacements.
- Governments will create national committees to undertake national-level project activities as described in this document. The governments will assign suitably senior and qualified representatives of relevant government agencies and organizations to these committees, and will seek the participation of qualified academic and non-governmental organizations and individuals in the work of the committee. The governments, with expert and consultancy support through the project, will support and fund the work of the national committees, including periodic meetings.
- Governments will designate suitably qualified individuals to serve as Directors of the Sustainable Energy and Environment Information Centres, and to serve as staff for these centres. The governments will designate or procure suitable space for the centres.
- Governments agree to make data and information available to the project's staff and consultants as may be required for implementation of the project, and to provide access to any government agency or organization as requested for the purposes of project implementation.
- Governments will assure the free movement of: national and regional project staff, consultants, and other personnel; equipment; and information, as may be required for project implementation.

The Project Document will be signed by UNDP, and UNDP assistance to the project will only be provided subject to UNDP receiving satisfaction that the prerequisites listed above have been, or are likely to be, fulfilled. When anticipated fulfillment of one or more prerequisites fails to materialize, UNDP may, at its discretion, either suspend or terminate its assistance.

H. PROJECT REVIEW, REPORTING AND EVALUATION

Every six months, the National Coordinators will prepare informal progress reviews for the Project Coordinator. Based on these reports, the Project Coordinator will prepare an overall Project Progress Report for the Project Steering Committee (PSC). These Project Progress Reports will be sent to PSC members by mail or fax, and will be evaluated during the annual meetings of the PSC.

The project will be subject to formal tripartite review (joint review by representatives of the governments, executing agency, and UNDP-GEF) at least once every twelve months. The first such meeting will be held within the first twelve months of the start of full implementation. The Project Coordinator or Project Officer of the United Nations executing agency shall prepare and submit to each tripartite review meeting a Project Performance Evaluation Report (PPER). Additional PPERs may be requested, if necessary, during the project.

A project terminal report will be prepared for consideration at the final tripartite review meeting. It shall be prepared in draft sufficiently in advance to allow review and technical clearance by the executing agency at least four months prior to the terminal tripartite review. The project will also be subject to reviews and evaluations at the national and subregional levels.

I. LEGAL CONTEXT

The original Project Document shall be the instrument referred to as such in Article 1 of the Standard Basic Assistance Agreement between the Governments of Algeria, Libya, Morocco, Tunisia and the UNDP, signed by the parties on 20 July, 1977, 20 May, 1976, 13 May, 1982, and 25 April, 1978, respectively. The host country implementing agency shall, for the purpose of the Standard Basic Assistance Agreement, refer to the government cooperating agency described in that agreement.

The following types of revisions may be made to this Project Document with the signature of the UNDP Resident Representative only, provided he or she is assured that the other signatories to the Project Document have no objections to the proposed changes:

- Revisions in, or additions to, any of the annexes of the original Project Document
- Revisions which do not involve significant changes in the immediate objectives, outputs or activities of a project, but are caused by the rearrangement of inputs already agreed to or by cost increases due to inflation
- Mandatory annual revisions which rephase the delivery of agreed project inputs, or reflect increased expert or other costs due to inflation, or take into account agency expenditure flexibility.

J. BUDGETS

The project budgets covering the contributions of GEF-UNDP and the Governments of Algeria, Libya, Morocco, and Tunisia are attached.

Project Title: Building Capacity in the Maghreb to Respond to the Challenges and Opportunities Created by National Response to the Framework Convention on Climate Change

Project Number: RAB/94/G31

Code	Description	Total m/m	1994 \$	1994 m/m	1995 \$	1995 m/m	1996 \$	1996 m/m	1997 \$	1997 m/m	
10	Project Personnel										
11.5	International Consultants										
11.52	Pilot Experience Review	3.0	21,000	0.0	0	3.0	21,000	0.0	0	0.0	0
11.53	Mitigation Proposal Manual Development	1.5	10,500	0.0	0	1.5	10,500	0.0	0	0.0	0
11.54	Assessment of Funding Options	2.5	10,500	0.0	0	1.0	7,000	1.5	3,500	0.0	0
11.55	RFP Preparation	1.0	7,000	0.0	0	1.0	7,000	0.0	0	0.0	0
11.56	New Proposal Development	14.0	90,000	0.0	0	8.0	50,000	6.0	40,000	0.0	0
11.57	Briefing Package Devpt.	3.0	21,000	0.0	0	0.0	0	3.0	21,000	0.0	0
11.58	Private Sector Funding Solicitation	3.0	21,000	0.0	0	0.0	0	3.0	21,000	0.0	0
11.59	Review of Information Centers	2.0	14,000	2.0	0	0.0	14,000	0.0	0	0.0	0
11.60	Project Evaluation	4.0	28,000	0.0	0	2.0	14,000	2.0	14,000	0.0	0
11.61	PC Discretionary Consultancy Budget	14.0	98,000	3.0	21,000	5.0	35,000	3.0	21,000	3.0	21,000
11.97	Short-term Consultancies	20.0	140,000	1.0	7,000	10.0	70,000	9.0	63,000	0.0	0
11.99	Sub-Component Total	68.0	461,000	6.0	20,000	31.5	228,500	27.5	183,500	3.0	21,000
15	Travel										
15.01	Coordinator Regional Travel		30,000		6,000		10,000		10,000		4,000
15.02	International Consultant Travel		160,500		15,000		78,000		60,000		7,500
15.03	Project Steering Committee Travel		25,000		6,000		7,000		6,000		6,000
15.04	Technical Advisory Committee Travel		60,000		15,000		15,000		15,000		15,000
15.99	Sub-Component Total		275,500		42,000		110,000		91,000		32,500
16	Mission Costs										
16.02	On-going Headquarters Support		42,000		12,000		12,000		12,000		6,900
16.03	Mid-term project evaluation		20,000		0		20,000		0		0
16.03	Terminal evaluation		20,000		0		0		0		20,000
16.99	Sub-Component Total		82,000		12,000		32,000		12,000		26,000
17.5	National Consultants										
17.01	Regional Project Coordinator	36.0	129,500	0.0	0	12.0	41,000	12.0	43,000	12.0	45,500
17.51	Pilot Experience Review	3.0	12,000	2.0	8,000	0.0	0	0.0	0	1.0	4,000
17.52	New Proposal Development	8.0	32,000	0.0	0	2.0	8,000	6.0	24,000	0.0	0
17.53	Short-term Consultancies	30.0	120,000	10.0	40,000	10.0	40,000	6.0	24,000	4.0	16,000
17.99	Sub-Component Total	65.0	293,500	12.0	48,000	12.0	89,000	24.0	91,000	17.0	65,500
19	Component Total	207.0	1,112,000	36.0	130,000	48.0	459,500	72.0	377,500	51.0	145,000

PROJECT BUDGET COVERING GEF-UNDP CONTRIBUTION (continued)

Code	Description	Total m/m	1994 \$	1994 m/m	1994 \$	1995 m/m	1995 \$	1996 m/m	1996 \$	1997 m/m	1997 \$
30	Training										
32.01	Country Workshops/Training Courses										
32.02	Regional Workshops		50,000				5,000		20,000		10,000
32.03	Regional Workshop Travel/Per Diem		70,000				15,000		20,000		20,000
32.03	New Proposal Development		290,000				20,000		110,000		50,000
32.04	Public Information Campaign		44,500				0		20,000		10,000
32.05	Newsletter/Elect. Communications outreach		115,000				0		15,000		20,000
32.06	Study Tour Travel		25,000				5,000		7,000		6,000
33.01	PC Discretionary Training Budget		100,000				30,000		30,000		10,000
33.02	NC Discretionary Training Budget		30,000				5,000		10,000		5,000
39	Component Total		754,500				85,000		242,000		136,000
40	Equipment										
41.01	Expend. Equipment										
41.02	Project Networking, E-Mail/Transport etc.		50,000				20,000		10,000		10,000
41.03	Energy/Env't Centers: E-Mail/Transport, etc.		95,000				25,000		30,000		10,000
42.01	Project Coordinator Computer Equipment		15,000				0		3,000		3,000
42.02	National Coordinator Computer Equipment		15,000				15,000		0		0
42.03	Energy/Environment Center Equipment		28,500				28,500		0		0
42.09	Project Coordinator Discretionary Equipment		135,000				0		100,000		0
49	Component Total		40,000				10,000		15,000		5,000
50	Miscellaneous										
53	Sundry										
54	Country Office Support 3% [Morocco]		55,220				12,000		15,000		14,220
59	Component Total		68,580				9,765		26,235		9,270
			123,800				21,765		41,235		23,490
99	Grand Total	207.0	2,368,800	36.0	335,265	48.0	900,735	72.0	800,310	51.0	332,490

PROJECT BUDGET COVERING GOVERNMENT OF ALGERIA-A CONTRIBUTION (in Algerian dinars)

Project Title: Building Capacity in the Maghreb to Respond to the Challenges and Opportunities

Created by National Response to the Framework Convention on Climate Change

Project Number: RAB/94/G31

Exchange rate: US\$ 1 = Algerian dinars 19.79

Code Description	Total		1994		1995		1996		1997	
	m/m	Dinars	m/m	Dinars	m/m	Dinars	m/m	Dinars	m/m	Dinars
10 Project Personnel										
11.01 National Coordinator	18	494,750	4	110,824	6	164,257	6	164,257	2	55,412
11.02 National Coordinator Asst.	36	494,750	8	110,824	12	164,257	12	164,257	4	55,412
11.03 National Coordinator Secy.	36	296,850	8	67,286	12	98,950	12	98,950	4	31,664
11.04 Energy/Environment Center Director	18	494,750	0	0	2	53,433	12	330,493	4	110,824
11.05 Energy/Environment Center Asst.	36	494,750	0	0	4	53,433	24	330,493	8	110,824
11.06 Energy/Environment Center Secy.	18	138,530	0	0	2	13,853	12	93,013	4	31,664
11.07 National Committee Representation	54	1,484,250	10	273,102	20	550,162	20	550,162	4	110,824
12 Component Total	216	3,898,630	30	562,036	58	1,098,345	98	1,731,625	30	506,624
15 Travel										
15.01 National Personnel Travel (local)		197,900		39,580		79,160		79,160		0
15.99 Component Total		197,900		39,580		79,160		79,160		0
30.00 Training										
40.00 Equipment										
41.00 Expend. Equipment		197,900		59,370		59,370		59,370		19,790
42.00 Non-Expend. Equip.										
49.00 Component Total		197,900		59,370		59,370		59,370		19,790

PROJECT BUDGET COVERING GOVERNMENT OF ALGERIA CONTRIBUTION (continued)

Code Description	Total	1994		1995		1996		1997	
		m/m	Dinars	m/m	Dinars	m/m	Dinars	m/m	Dinars
43.00 Premises									
43.01 National Coordinator Office			247,375		55,412		81,139		29,685
43.02 Energy/Environment Center Space			296,850		0		197,900		65,307
49.00 Component Total			544,225		55,412		279,039		94,992
50.00 Miscellaneous									
50.01 Office supplies, local phone,			197,900		59,370		59,370		19,790
50.02 Energy/Env't Info. Centers: Utilities and			178,110		0		118,740		39,580
59.00 Component Total			376,010		59,370		178,110		59,370
99.00 Grand Total			5,214,665		775,768		2,327,304		680,776

PROJECT BUDGET COVERING GOVERNMENT OF LIBYA A CONTRIBUTION (in Libyan dinars)
 Project Title: Building Capacity in the Maghreb to Respond to the Challenges and Opportunities
 Created by National Response to the Framework Convention on Climate Change
 Project Number: RAB/94/G31

Exchange rate: US\$ 1 = Libyan dinars 0.30

Code Description	Total		1994		1995		1996		1997	
	m/m	Dinars	m/m	Dinars	m/m	Dinars	m/m	Dinars	m/m	Dinars
10 Project Personnel										
11.01 National Coordinator	18	7,500	4	1,680	6	2,490	6	2,490	2	840
11.02 National Coordinator Asst.	36	7,500	8	1,680	12	2,490	12	2,490	4	840
11.03 National Coordinator Secty.	36	4,500	8	1,020	12	1,500	12	1,500	4	480
11.04 Energy/Environment Center Director	18	7,500	0	0	2	810	12	5,010	4	1,680
11.05 Energy/Environment Center Asst.	36	7,500	0	0	2	810	12	5,010	8	1,680
11.06 Energy/Environment Center Secty.	18	2,100	0	0	2	210	12	1,410	4	480
11.07 National Committee Representation	54	22,500	10	4,140	20	8,340	20	8,340	4	1,680
12 Component Total	216	59,100	30	8,520	56	16,650	86	26,250	30	7,680
15 Travel										
15.01 National Personnel Travel (local)		3,000		600		1,200		1,200		0
15.02 National Personnel Travel		7,500		1,500		2,100		2,100		1,800
15.99 Component Total		10,500		2,100		3,300		3,300		1,800
30.00 Training										
31.00 National Workshops		22,500		3,000		9,000		9,000		1,500

PROJECT BUDGET COVERING GOVERNMENT OF LIBYA CONTRIBUTION (continued)

Code Description	Total	1994		1995		1996		1997	
		m/m	Dinars	m/m	Dinars	m/m	Dinars	m/m	Dinars
32.00 Participation in Regional			13,500						
39.00 Component Total			36,000		1,500		4,500		3,000
					4,500		13,500		4,500
40.00 Equipment									
41.00 Expend. Equipment			3,000		900		900		300
42.00 Non-Expend. Equip.									
42.01 Computer/Communications Equipment			2,100		2,100		0		0
42.02 Energy/Environment Center			15,000		0		12,000		0
49.00 Component Total			20,100		3,000		12,900		300
43.00 Premises									
43.01 National Coordinator Office			3,750		840		1,230		450
43.02 Energy/Environment Center Space			4,500		0		510		990
49.00 Component Total			8,250		840		1,740		1,440
50.00 Miscellaneous									
50.01 Office supplies, local phone,			3,000		900		900		300
50.xx International phone, fax,			7,500		2,250		2,250		750
50.02 Energy/Envmt Info. Centers: Utilities and			2,700		0		300		600
59.00 Component Total			13,200		3,150		4,950		1,650
99.00 Grand Total			147,150		22,110		51,540		17,370

PROJECT BUDGET COVERING GOVERNMENT OF MOROCCO CONTRIBUTION (in Moroccan dirhams)

Project Title: Building Capacity in the Maghreb to Respond to the Challenges and Opportunities

Created by National Response to the Framework Convention on Climate Change

Project Number: RAB/94/G31

Exchange rate: US\$ 1 = Moroccan dirhams 9.33

Code Description	Total		1994		1995		1996		1997	
	m/m	Dirhams	m/m	Dirhams	m/m	Dirhams	m/m	Dirhams	m/m	Dirhams
10 Project Personnel										
11.1 Project Coordinator	36	1,027,233	8	228,585	12	342,411	12	342,411	4	113,826
11.2 Project Coordinator Asst.	36	513,616.5	8	114,292.5	12	171,205.5	12	171,205.5	4	56,913
11.3 Project Coordinator Secretary	36	139,950	8	31,722	12	46,650	12	46,650	4	14,928
11.01 National Coordinator	18	233,250	4	52,248	6	77,439	6	77,439	2	26,124
11.02 National Coordinator Asst.	36	233,250	8	52,248	12	77,439	12	77,439	4	26,124
11.03 National Coordinator Secty.	36	139,950	8	31,722	12	46,650	12	46,650	4	14,928
11.04 Energy/Environment Center Director	18	233,250	0	0	2	25,191	12	155,811	4	52,248
11.05 Energy/Environment Center Asst.	36	233,250	0	0	4	25,191	24	155,811	8	52,248
11.06 Energy/Environment Center Secty.	18	65,310	0	0	2	6,531	12	43,851	4	14,928
11.07 National Committee Representation	54	699,750	10	128,754	20	259,374	20	259,374	4	52,248
12 Component Total	324	3,518,809.5	54	639,571.5	94	1,078,081.5	134	1,376,641.5	42	424,515
15 Travel										
15.01 National Personnel Travel (local)		93,300		18,660		37,320		37,320		0
15.99 Component Total		93,300		18,660		37,320		37,320		0
30.00 Training										
40.00 Equipment										

PROJECT BUDGET COVERING GOVERNMENT OF MOROCCO CONTRIBUTION (continued)

Code Description	Total		1994		1995		1996		1997	
	m/m	Dirhams	m/m	Dirhams	m/m	Dirhams	m/m	Dirhams	m/m	Dirhams
41.00 Expend. Equipment		93,300		27,990		27,990		27,990		9,330
42.00 Non-Expend. Equip.										
49.00 Component Total		93,300		27,990		27,990		27,990		9,330
43.00 Premises										
43.01 Project Coordinator Office		326,550		74,640		111,960		111,960		27,990
43.02 National Coordinator Office		116,625		26,124		38,253		38,253		13,995
43.03 Energy/Environment Center Space		139,950		0		15,861		93,300		30,789
49.00 Component Total		583,125		100,764		166,074		243,513		72,774
50.00 Miscellaneous										
50.01 Office supplies, local phone,		93,300		27,990		27,990		27,990		9,330
50.02 Energy/Env't Info. Centers: Utilities and		83,970		0		9,330		55,980		18,660
59.00 Component Total		177,270		27,990		37,320		83,970		27,990
99.00 Grand Total		4,465,804.5		814,975.5		1,346,785.5		1,769,434.5		534,609

PROJECT BUDGET COVERING GOVERNMENT OF TUNISIA CONTRIBUTION (in Tunisian dinars)

Project Title:

Building Capacity in the Maghreb to Respond to the Challenges and Opportunities

Created by National Response to the Framework Convention on Climate Change

Project Number: RAB/94/G31

Exchange rate: US\$ 1 = Tunisian dinars 1.01

Code Description	Total		1994		1995		1996		1997	
	m/m	-Dinars	m/m	Dinars	m/m	Dinars	m/m	Dinars	m/m	Dinars
10 Project Personnel										
11.01 National Coordinator	18	25,250	4	5,656	6	8,383	6	8,383	2	2,828
11.02 National Coordinator Asst.	36	25,250	8	5,656	12	8,383	12	8,383	4	2,828
11.03 National Coordinator Secty.	36	15,150	8	3,434	12	5,050	12	5,050	4	1,616
11.04 Energy/Environment Center Director	18	25,250	0	0	2	2,727	12	16,867	4	5,656
11.05 Energy/Environment Center Assts.	36	25,250	0	0	4	2,727	24	16,867	8	5,656
11.06 Energy/Environment Center Secty.	18	7,070	0	0	2	707	12	4,747	4	1,616
11.07 National Committee Representation	54	75,750	10	13,938	20	28,078	20	28,078	4	5,656
12 Component Total	216	198,970	30	28,684	58	56,055	98	88,375	30	25,856
15 Travel										
15.01 National Personnel Travel (local)		10,100		2,020		4,040		4,040		0
15.99 Component Total		10,100		2,020		4,040		4,040		0
30.00 Training										
40.00 Equipment										
41.00 Expend. Equipment		10,100		3,030		3,030		3,030		1,010
42.00 Non-Expend. Equip.										
49.00 Component Total		10,100		3,030		3,030		3,030		1,010

PROJECT BUDGET COVERING GOVERNMENT OF TUNISIA CONTRIBUTION (continued)

Code Description	Total		1994		1995		1996		1997	
	m/m	Dinars	m/m	Dinars	m/m	Dinars	m/m	Dinars	m/m	Dinars
43.00 Premises										
43.01 National Coordinator Office		12,625		2,828		4,141		4,141		1,515
43.02 Energy/Environment Center Space		15,150		0		1,717		10,100		3,333
49.00 Component Total		27,775		2,828		5,858		14,241		4,848
50.00 Miscellaneous										
50.01 Office supplies, local phone,		10,100		3,030		3,030		3,030		1,010
50.02 Energy/Env't Info. Centers: Utilities and		9,090		0		1,010		6,060		2,020
59.00 Component Total		19,190		3,030		4,040		9,090		3,030
99.00 Grand Total		266,135		39,592		73,023		118,776		34,744

WORKPLAN

#	ACTIVITY	Month→	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36		
1	IMPROVE TECHNICAL CAPACITY TO RESPOND TO THE FCCC																																								
1.1	Review of Relevant Institutions, Policies, and Expertise of Maghreb Countries																																								
1.1.1	Conduct Country-Specific Reviews at Project Start																																								
1.1.2	Commission a Project-End Report																																								
1.2	Strengthened National, Regional Capacity to Pursue FCCC Objectives																																								
1.2.1	Identify Interested Organizations and Needs																																								
1.2.2	Build Capacity by Filling Targeted Needs																																								
1.3	Build a Maghreb Regional Network																																								
1.3.1	Establish Contacts Across Sectors in Maghreb Countries																																								
1.3.2	Link Maghreb and International Networks																																								
1.4	Maghreb Regional Policy Dialogue																																								
1.4.1	Integrate Regional Participation into National Activities																																								
1.4.2	Conduct 3 Regional Workshops																																								
1.4.3	Regional Dissemination of Workshop Results																																								

#	ACTIVITY	Month→	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36			
2	DEVELOP PROJECT PROPOSALS, BUILD CAPACITY, AND SOLICIT FUNDING																																									
2.1	Materials to be Used in Proposing and Funding Mitigation Projects																																									
2.1.1	Develop a Climate Change Mitigation Project Manual																																									
2.1.2	Prepare or Maintain an Assessment of Funding Options																																									
2.2	National and Regional Project Proposals Suitable for Funding																																									
2.2.1	Prepare and Distribute Request for Proposals																																									
2.2.2	Conduct Regional Workshop on Proposal Writing and Project Development																																									
2.2.3	Develop Project Proposals on Climate Change Topics																																									
2.3	Network of Potential Funders																																									
2.3.1	Prepare Funding Briefing Package																																									
2.3.2	Seek Financing for Projects																																									
	Activities with Definite and Scheduled Outputs																																									
	Activities that are Ongoing Over the Indicated Period																																									

Annex
Page 1 of

#	ACTIVITY	Month→	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	
3	IMPLEMENTATION OF ENERGY AND ENVIRONMENT INFORMATION CENTERS																																							
3.1	Review Performance of Similar Energy Service Centers																																							
3.1.1	Request Documentation																																							
3.1.2	PC, NC Review of Desirability of Establishing Maghreb Centers																																							
3.2	Establish Energy and Environment Information Centers																																							
3.2.1	Managers to-Be Visit Europe and Arab Centers																																							
3.2.2	Select Sites and Equip Centers																																							
3.2.3	Conduct Specialized Seminars, Demonstrations and Workshops																																							
3.2.4	Provide Grass-Roots Energy Consulting Services																																							
3.2.5	Undertake Public Awareness Campaigns																																							
3.2.6	Encourage Establishment of Additional Centers																																							

#	ACTIVITY	Month→	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	
4	CONTINUE AND EXPAND PROJECT ACTIVITIES																																							
4.1	Coordination Between Maghreb and Other Arab Focal Points																																							
4.1.1	Identify Focal Points in Other Arab Countries and Regions																																							
4.1.2	Invite Regional Representatives to Meetings																																							
4.2	Regional Expansion of Project Activities into Other Arab Regions																																							
4.2.1	Establishment of Parallel Project in Mashreq or Gulf States																																							
4.2.2	Build Regional Element into Project Proposals Prepared Under 2.2.3																																							
4.2.3	Coordinate with Capacity 21 Progress																																							
4.2.4	Raise Funds for Project Expansion																																							
4.2.5	Regional Arab Conference																																							

■ Activities with Definite and Scheduled Outputs

■ Activities that are Ongoing Over the Indicated Period

Annex 2

SCHEDULE OF PROJECT REVIEWS, REPORTING AND EVALUATION

This schedule is a possible reporting schedule, to be used as a guide. It will be refined further by project management at the start of project operations.

<u>Description</u>	<u>Proposed starting time</u>
<i>Project reports</i>	
1. Inception report	Month 3 after start of project.
2. PPERs	As per GEF procedures, to be submitted biannually.
3. Technical reports	To be issued as appropriate, but at least biannually.
4. Tripartite reviews (TPRs)	To be conducted every twelve months. PPER nos. 2, 4 and 6 to be submitted two months prior to each TPR.
5. Terminal TPR	To be submitted four months prior to the end of the project, and at least two months prior to the terminal TPR.
<i>External evaluations</i>	
1. Mid-term evaluation	To be conducted by month 24 of the project.
2. Terminal evaluation	To be conducted by month 33 of the project.

Annex 3

TRAINING PROGRAMME

Since this is a capacity and institution building project, training activities form a significant component at all levels, as described in Section D. The training element of the project is made up of three kinds of inputs: technical experts and consultants, in-service training, and study tours. The personnel inputs for training will include technical experts in climate change, climate change mitigation, energy and forestry, the UN Framework Convention on Climate Change, as well as private sector proposal development. These experts will be supplemented by "process" expertise in networking, policy analysis, workshop management, and information services.

Technical expert and consultancy training

Extensive reliance on technical experts and consultants will be required during the project to conduct studies and analysis, and to train national governmental and non-governmental organizations in a wide variety of subjects related to the substance and process of climate change and its mitigation. More than 100 person-months of consultancy time are provided for in the project budget.

Study tours

- The Project Coordinator will undergo an in-depth immersion tour after being selected for the position. The study tour will supplement the Project Coordinator's technical expertise, but will also be intended to familiarize him or her with many ongoing climate change and climate change mitigation activities in Sub-Saharan Africa, Europe, and the United States, including preliminary joint implementation efforts. It will include meetings with governmental, non-governmental, academic, and research organizations. The study tour is expected to be approximately two months long.
- The National Coordinators will undergo less extensive but similar study tours, emphasizing any activities in Sub-Saharan Africa and Europe. These tours are expected to be approximately one month long.
- Once assigned, the Directors of the Sustainable Energy and Environment Information Centres will participate in study tours to the Middle East and Europe to visit similar centres, and to develop an understanding of their functioning. In order to visit several such centres, the study tours are expected to last approximately two months.
- During the course of the project, individual project representatives will participate in short study tours to complement project activities. Such tours will include the opportunity to participate in international meetings, visit energy and forestry projects analogous to those being considered in this project, and other topics. A total of ten months of such short-term tours are planned.

In-service training

In-service training will include participation of governmental and non-governmental representatives in national as well as international workshops and seminars to be organized by the Project and National Coordinators, with national and international expert support. Topics for this training will be selected by these coordinators, and are likely to include climate change, the FCCC and related national and international policies, GHG mitigation options based on the energy and forestry situation in the Maghreb, GHG emissions inventories and scenarios, climate change mitigation economics, proposal writing, and project development.

Annex 4

**ARAB REGION SIGNATORIES AND RATIFIERS OF THE UNITED NATIONS
FRAMEWORK CONVENTION ON CLIMATE CHANGE**

<i>Country</i>	<i>Signature</i>	<i>Ratification</i>
Algeria	13/06/92	09/06/93
Bahrain	08/06/92	
Djibouti	12/06/92	
Egypt	09/06/92	
Jordan	11/06/92	12/11/93
Lebanon	12/06/92	
Libya	29/06/92	
Mauritania	12/06/92	20/01/94
Morocco	13/06/92	
Sudan	09/06/92	19/11/93
Tunisia	13/06/92	15/07/93
Yemen	12/06/92	

Annex 5

PROJECT ADVISORY PANEL MEMBERSHIP LIST

A preliminary contact list for the Advisory Panel is presented below. The list will be completed and updated prior to project implementation.

1. United Nations Development Programme
Contact: Inger Andersen
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UNEP
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Nairobi, Kenya
3. The World Bank
Contact: Ken Newcombe
Chief, Global Environment Coordination Division
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Fax: (202) 676-0483
E-mail: knewcombe@worldbank.org

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1818 H Street, NW, Room S-2141
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4. UNEP-RISØ

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Fax: 45 46 32 19 99
E-mail ucc-joch@risoe.dk

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5. The US Environmental Protection Agency
and Department of Energy

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6. Stockholm Environment Institute

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7. Gesellschaft fuer Technische Zusammenarbeit

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8. **Climate Change Convention Secretariat**
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9. **Climate Network Africa**
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10. **START Network**
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1825 K Street, NW, Suite 1101
Washington, DC 20006
11. **The Intergovernmental Panel on Climate Change**
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12. **ACTS (SEI) (Africa Climate Project)**
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