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CAPACITY-BUILDING

Information from the Global Environment Facility and relevant international organizations on progress in the implementation of projects and programmes responding to decision 2/CP.7

Submissions from the GEF and relevant international organizations

1. The Subsidiary Body for Implementation, at its seventeenth session, invited the Global Environment Facility and relevant international organizations to provide, by 15 April 2003, information on progress in the implementation of capacity-building projects and programmes responding to the framework contained in decision 2/CP.7, for consideration at its eighteenth session.

2. The secretariat has received seven such submissions. In accordance with the procedure for miscellaneous documents, these submissions are attached and reproduced[*] in the language in which they were received and without formal editing.

[*] These submissions have been electronically imported in order to make them available on electronic systems, including the World Wide Web. The secretariat has made every effort to ensure the correct reproduction of the texts as submitted.

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PAPER NO. 1: ECONOMIC AND SOCIAL COMMISSION FOR ASIA AND THE PACIFIC (ESCAP)

UNESCAP IMPLEMENTATION OF CAPACITY BUILDING ACTIVITIES RELATING TO THE FRAMEWORK IN DECISIONS 2/CP.7

Introduction:

Decision 2 of the Marrakech Accords adopted at the Seventh Session of the Conference of Parties (COP-7), in November 2001 approved a framework for *Capacity building in developing countries (non- Annex –1 Parties)* with respect to UNFCCC and its Kyoto Protocol. The Subsidiary Body for Implementation (SBI) in its 17th Session held at the COP-8 in October/November 2002 in paragraph 35(f) of its report "…*invited the GEF and relevant international organizations to provide, by 15 April 2003, information on progress in the implementation of capacity-building projects and programmes responding to the framework contained in Decision 2CP.7, for consideration at its eighteenth session*;". In response, this report of ESCAP's capacity building activities in relation to the Convention on Climate Change and the Kyoto Protocol has been prepared.

ESCAP's Capacity Building Activities in Relation to the Convention on Climate Change and the Kyoto Protocol:

ESCAP undertook a number of activities for capacity building of its member and associate members in relation to the United Nations Framework Convention on Climate Change and its Kyoto Protocol. These activities included training workshops, seminars for exchange of information as well as technical cooperation activities for energy conservation. Some of the significant activities among these have been described below:

1) ***"Asia-Pacific Workshop on Clean Development Mechanism (CDM) and National Strategy Studies (NSS) on Climate Change",*** **United Nations Conference Centre, Bangkok Thailand 29-30 April 2002:**

The Workshop was organised jointly by ESCAP, the World Bank and the Royal Thai Government and supported by the Governments of Australia, Canada, Switzerland and Germany. It was attended by 125 participants from 19 countries and territories, namely: Australia (1), Canada (2), China (5), Fiji (1), Hong Kong, China (1), India (3), Indonesia (3), Japan (2), Lao PDR (1), Malaysia (2), Pakistan (2), Papua New Guinea (3), Philippines (1), Republic of Korea (7), Sri Lanka (3), Thailand (51), U.S.A (1), Vanuatu (3), and Vietnam (4), also present were Resource Persons (4), Consultant (1), representatives from UNDP/GEF (4), UNEP (3), UNCCD (1) UNFCCC (1), UNIDO (2), World Bank (8) Asian Development Bank (1), Asia-Europe Environmental Technology Centre - AEETC (1), Environment Resource Management (ERM) Consultants (1) and two Non-governmental Organisations: Centre of Renewable Resources and Energy Efficiency -CRREE (1) and WWF International Thailand Programme (1).

A number of presentations were made on the development of CDM projects through public-private partnerships, which were considered extremely useful by the participants. Technical presentations were also made on a number of other topics related to CDM as well as national sustainable strategies on climate change (NSS) and were followed by interactive discussions. The participants recommended that the workshop had provided a useful forum to share experiences on CDM and NSS and learning on how to participate in the carbon market. They felt that should not be a single event but part of a sustainable and continuous capacity building initiative in the region with various international organizations continuing to cooperate to synergize efforts for the benefit of the countries.

CDM was identified as a way to achieving important national sustainable development objectives if properly designed and implemented. CDM was also recognised as a mechanism that had the potential to attract foreign investment, and facilitate transfer of technology. Case studies on NSS were also considered useful. Public and community participation was recognised as an integral part of NSS. It was felt that the concept of additionality be addressed more clearly in formulating NSS.

A need was felt to promote partnerships between governments, business community and other stakeholders and sharing of benefits equitably was perceived as an important element of CDM. The workshop urged buyers to amend the discrepancy between current carbon prices, which were too low to improve financial rates of return on CDM projects and marginal abatement costs. A need was also felt to promote human resource development and build institutional capacity on CDM in the region especially with regard to project formulation, implementation, monitoring, enhancement of local and social benefits, and financial structure of underlying products.

http://www.unescap.org/enrd/environment/Activities/CDM/Documents/CDM_NSS_report_final.pdf

2. "Asia Pacific Workshop on the Prototype Carbon Fund (PCF)", *United Nations Conference Centre, Bangkok, Thailand, 30 April–1 May 2002:*

This workshop was held back-to-back with the previous workshop and attended by the same participants. The workshop provided an opportunity to the participants to learn from various international experts on how to successfully participate in the Carbon Market. The objectives of the PCF, the main topics covered included "Status of the Carbon Market", "Introduction to the Design of a PCF/CDM Project and the Project Cycle". *A PCF case study was also presented. Other topics included* "Institutional and Legal Issues for PCF Host Countries", "How to Develop a Good Project Idea", "How to Create the Carbon Asset: Baseline and Additionalities", *and* "Lessons Learned from PCF Portfolio".

The workshop recommended that public and community participation form an integral part of the PCF. It reiterated the need to remove the misconception of the perceived complexity of CDM projects. It was felt that greater efforts be made to reduce transaction costs, including the use of accredited experts from developing countries. It was also felt that efforts should be made to involve experts from other sectors besides energy, such as insurance and banking in the development and implementation of PCF projects.

The workshop also recognised that PCF project formulation is an essential first step towards implementing CDM and recommended that concrete training programmes on design and formulation of CDM projects be undertaken without delay. The workshop also expressed concern that underlying finance was difficult to identify and requested that concerned institutions provide further guidance in this regard. It was also felt that the project proponent and PCF recognise their responsibility with respect to default in contracts, risk assessment and risk management. The workshop also emphasised that further research needs to be done for establishing baseline criteria.

The participants strongly recommended that the workshop should be part of a sustainable and continuous capacity building initiative in the region rather than a single event and called upon the various international organizations to cooperate and synergise efforts for the benefit of the countries.

http://www.unescap.org/enrd/environment/Activities/CDM/Documents/PCF_report_final.pdf

It was especially noteworthy in the previous two workshops, that besides being well attended, they attracted a large number of participants (33) from the Private Sector who will be the main actors in promoting CDM and PCF in the region.

3. "The Twelfth Asia-Pacific Seminar on Climate Change", ***United Nations Conference Centre, Bangkok, Thailand 30 July–2 August 2002:***

The Seminar was organised jointly by the Ministry of Environment, Japan, the Institute for Global Environmental Strategies (IGES) and ESCAP in cooperation with the Ministry of Science, Technology and Environment (MOSTE) of Thailand. It was attended by 93 participants from 26 countries namely: Australia (1), Cambodia (1), China (1), Fiji (1), Indonesia (1), Islamic Republic of Iran (1), Japan (6), Kazakhstan (1), Lao PDR (1), Malaysia (1), Mongolia (1), Nepal (1), Pakistan (1), Papua New Guinea (1), Philippines (1), Republic of Korea (1), Russian Federation (1), Samoa (1), Sri Lanka (1), Singapore (2), Thailand (6), Tonga (1), U.S.A (1), Uzbekistan (1), Vanuatu (1), Vietnam (1), also present were Resource Persons (10), Consultant (1), representatives from UNDP (3), UNEP (3), UNCCD (1) UNFCCC (1), UNIDO (1), Global Environment Facility - GEF (1), Asian Development Bank (1), Asia-Europe Environmental Technology Centre - AEETC (1), Asia-Pacific Network for Global Change Research - APN (1), Organisation of Economic Cooperation and Development - OECD (1), South Pacific Regional Environment Programme - SPREP (1) International Council for Local Environmental Initiatives - ICLEI (3), Creative Convention Centre - CCC (2), Institute for Global Environmental Strategies - IGES (4) Japan Bank for International Cooperation - JBIC (2), National Institute for Environmental Studies - NIES (1), Nomura Research Institute - NRI (3), Overseas Environmental Cooperation Centre - OECC (1) and Observers from Thailand (10).

The major objectives of the Seminar were to exchange information, experience and views on climate change among countries in Asia and the Pacific and to facilitate further activities to address the climate change in the region. The specific focus of the Twelfth Seminar was placed on the steps needed to be taken after the Bonn and Marrakech Conferences, as well as issues related to the clean development mechanism (CDM), adaptation strategies, information dissemination through networking, and multi-stakeholders approach to climate change.

The seminar covered several areas including steps after Bonn and Marrakech, details of on-going CDM related projects, developing countries readiness for implementing CDM, updates on the latest progress in scientific assessment of climate change, development of national and regional adaptation strategies - issues and experiences, capacity building and technology transfer with emphasis on development of national and regional adaptation strategies, multi-stakeholder approach to address climate change and capacity building, data exchange and information dissemination on climate change through networking.

A Study Tour was organised to the Project entitled "*Model Project on Equipment for Recovery of Heat from Combustion of Waste in Paper and Pulp Mill in Thailand*" which is being implemented jointly by the Department of Energy Development and Promotion (MOSTE/Thailand) and Babcock Hitachi Co., Ltd., with support of the New Energy and Technology Development Organization (NEDO), Japan. The project demonstrated the efficient use of energy and the protection of the environment, especially in the GHG emissions.

Among the recommendations made by the Seminar was a proposal for a Type II partnership within WSSD framework to strengthen partnerships amongst countries in the Asian and Pacific region and international organisations with the aim to develop a regional strategy in addressing climate change, utilising the AP-net for capacity building of countries in the region towards implementing UNFCCC and the Kyoto Protocol.

http://www.ap-net.org/apseminar/bangkok2002.htm

***4. "The Training Workshop on Negotiations and Implementation of the United Nations Framework Convention on Climate Change and its Kyoto Protocol",* United Nations Conference Centre, Bangkok Thailand 2-4 December 2002:**

The Workshop was organised by ESCAP in cooperation with the UNFCCC Secretariat, the United Nations University (UNU) and the World Bank. It was attended by 38 participants from 28 countries, namely: Bangladesh (1), Bhutan (3), Cambodia (1) China (1), Fiji (1), Indonesia (1), Islamic Republic of Iran (1), Kiribati (1), Lao PDR (2), Malaysia (1), Mongolia (1), Nepal (1), Pakistan (1), Philippines (1), Sri Lanka (1), Thailand (17), Turkmenistan (1), Uzbekistan (1), Vietnam (1). Also present were four experienced negotiators as Resource Persons.

This workshop was the first of its kind organised by ESCAP for climate change negotiators in the region. It provided an opportunity for the participants to enhance their understanding of UNFCCC and its Kyoto Protocol with a view to strengthening their capacity in climate change negotiations in the future. It also provided a forum for senior negotiators/ resource persons to share their information, lessons and experience on climate change negotiations with the participants.

From the first day negotiations formed the main topic of discussion in the context of issues related to climate change, its scientific basis, its impacts, and the available technological and policy options for reduction of greenhouse gas emissions, as well as options and measures for climate change adaptation. The workshop had intensive interactive discussions after each presentation. The workshop concentrated on different perspective among groups of countries and emphasized that it was extremely important for a skilled negotiator to comprehend these perspective and develop alliances during negotiations accordingly. A panel discussion was also organized to simulate these perspectives and facilitate exchange of views on negotiation.

The post workshop evaluation by the participants gave a high rating to the training workshop, its training materials and resource persons.

Future Activities

The secretariat proposes to continue the organization of training workshops on UNFCCC and Kyoto Protocol in future, targeting different levels of climate change negotiators on technical, technological and policy issues. It also proposes to continue organization of training on CDM. Further, in cooperation with UNFCCC, ESCAP is planning to hold a Workshop on Adaptation Strategies because it is a major area of concern for member countries of the ESCAP region with respect to Climate Change. The workshop is planned for November 2003 and details on participants, agenda and speakers are being currently worked out.

PAPER NO. 2: GLOBAL ENVIRONMENT FACILITY (GEF)

OVERVIEW OF CLIMATE CHANGE CAPACITY BUILDING ACTIVITIES SUPPORTED BY THE GLOBAL ENVIRONMENT FACILITY

This paper is submitted in response to Decision 2/CP 7, requesting the GEF, bilateral and multilateral agencies, and other intergovernmental organizations and institutions to provide the UNFCCC Secretariat with information on its activities supportive of the capacity building framework. As requested by the decision, the GEF already reports generally on its support of the implementation of the framework in its reports to the Conference of the Parties. The information that follows provides a broader description of the GEF approach to capacity building and emerging initiatives that would further expand this support.

Support for capacity building is fundamental to the range of GEF financial commitments for climate change, as of June 2002 excess of $1.4 billion. The largest source of financial support for capacity building is through mitigation projects, which typically include large components providing for training, information dissemination, institution building, and related activities. Additional support is provided through funding of national communications and other enabling activities. It should also be noted that GEF resources provided through other focal areas (biodiversity, land degradation, ozone, and international waters) also often has cross-cutting benefits by supporting human resources and institutions related broadly to global environmental goals.

Enabling activities

1. The GEF's entire support for climate change enabling activities (extended to almost all eligible countries) falls in the category of capacity building. In accordance with UNFCCC decisions and priorities, the primary objective of EA projects has been the preparation of initial national communications, thereby building capacity in varying degrees (depending on national priorities) for the assessment of GHG emissions, identifying national activities and programs for implementing the Convention, integrating climate change issues in national planning, and to a lesser extent identifying vulnerability to climate change and adaptation options.

2. Beyond initial national communications, the GEF has provided specific support through enabling activities for capacity building in priority areas including

1)the identification of technology needs and modalities to acquire and absorb them, and to design, evaluate and host projects for the purpose,

2) participation in systematic climate change observation networks,

3) improvement of emission factors to assess GHG emissions,

4) developing, strengthening and improving national activities for public awareness and education, and access to information.

3. One project was specifically designed to strengthen the capacity of climate change focal points in LDCs to access information and databases related to climate change.

4. The Least Developed Countries Fund, adopted by the Parties at COP 7, was created to meet the special needs of these countries. Based on the initial COP guidance, donor funds were mobilized to support capacity building related to adaptation. The Fund has been operationalized and funding of NAPA preparation is contributing to the building of capacity in LDCs to prepare for adaptation according to

nationally agreed criteria. While the completion of the NAPAs will require at least 12 to 18 months, the need for further support and accordingly additional guidance and donor contributions is to be considered at the next COP.

National Capacity needs Self Assessments (NCSA)

5. This is a new program launched in May 2001 as an outcome of the GEF's Capacity Development Initiative (CDI), through which assistance is offered for countries to assess their own capacity building needs to address global environment issues, especially climate change, biodiversity and land degradation. The exercises are expected to build on sectoral work that may have been done (for instance through GEF enabling activities) and are also expected to pay particular attention to cross-cutting needs, on which subject the Conventions have placed great emphasis. The GEF's operational guidelines for funding NCSAs encourage countries to keep the capacity development framework adopted by the COP of the UNFCCC in mind when assessing needs in the climate change area.

6. Once completed, NCSAs may provide a very useful set of priorities, defined by countries themselves, to address capacity building needs through the support of the international community and institutions, including the GEF.

Examples of Capacity Building in GEF Projects

Capacity building is a critical element of GEF climate mitigation projects and more generally in almost all GEF activities. A review undertaken by the GEF Implementing Agencies to assess the role of capacity building in GEF projects found that 96 % of the UNDP projects, 100 % of the UNEP projects and 86 % of the World Bank projects have capacity development components. In addition, some projects are designed primarily to address capacity needs. GEF projects have focused on improving wind and energy resource data; providing technical and institutional support for building and appliance efficiency standards; adapting efficient boiler and other industrial technologies to the needs and circumstances of developing countries; supporting changes in utility regulatory policies to facilitate renewable energy technologies; improving business plans for small and medium enterprises with environmentally beneficial products; and in a myriad of other ways contributing to capacity development.

Some examples from the climate change portfolio illustrate the diverse ways capacity building needs are addressed:

- The Pacific Island Renewable Energy Programme, under implementation by UNDP, is helping to define and address capacity needs for renewable energy in 14 Pacific island states. These states will develop capacity to design projects and plans that can serve as the basis for future efforts in the area of climate change mitigation and renewable energy. The GEF contribution is $0.8 million.
- A UNEP project, “Assessments of Impacts of and Adaptation to Climate Change in Multiple Regions and Sectors (AIACC)” is supporting substantial climate change scientific capacity building in cooperation with the Global Change System for Analysis Research and Training, the Third World Academy of Science, and the IPCC. Twenty to thirty individual research activities, all focused on assessment of climate change impacts and adaptation options, have been selected for the most vulnerable regions and sectors through a competitive process with technical assistance provided by leading research climate modellers and researchers. The targeted regions and sectors represent gaps in the existing assessments. This project will develop capacity to address these gaps through training, technology transfer, and interaction with international assessment teams. The GEF contribution is $7.8 million with about $4 million in additional financial support.

- A World Bank project in Bangladesh, "Rural Electrification and Renewable Energy Development", offers an example of the integration of renewable energy technologies and capacity building efforts. This project promotes solar energy in rural areas implemented by rural electricity cooperatives, community-based organizations, NGOs, micro finance institutions and the private sector. The project supports: a) increasing awareness of solar home systems (SHS) among consumers and providers; b) building technical and management capacity to design, implement and evaluate SHS programs; c) providing technical and business development support to implementing institutions; d) introducing standards and programs for testing and certification; and e) financing grants to buy-down capital costs and increase affordability of SHS. The project is expected to result in the installation of 65,000 solar systems, displacing fossil and traditional biomass energy in rural areas. The project budget is $38.6 million with $8.2 Million from GEF.
- The Technology Transfer Network (TTN) project, a UNEP project included in the May 2003 work program, aims to increase the quality and flow of environmentally sound private sector investments in developing countries and countries with economies in transition. The approach is based on strengthening and expanding a network of national agencies, the "TTN Local Desks", to seek out and facilitate environmentally beneficial private investments by providing access to information on technology and financing to business groups, potential investors, and other interested parties. A central element of the approach is to link needs and opportunities at the country and regional levels to information and technical assistance at the global level. The GEF contribution is $2 million and builds on an earlier pilot project.
- A new World Bank project, "Mainstreaming Adaptation to Climate Change", is supporting capacity for identifying and responding to the risks of climate change in the Caribbean region. The project will support (i) mainstreaming of climate change considerations into development planning and sectoral investment projects; (ii) technical and institutional response mechanisms for adaptation to global climate change; and (iii) regional climate change monitoring and modelling. The project will receive $5 million in GEF support toward a total budget of $9.6 million.
- In two projects focused on biomass power generation, the GEF has laid the groundwork for commercialization of power production from bagasse and other agricultural resources in Brazil. A UNDP project with $8 million from GEF established the technical and environmental feasibility of the technology in the Brazilian market, and a $40 million World Bank project is seeking to demonstrate the technology at a commercial scale in partnership with local private interests. In the course of the two projects, technology has been developed to harvest and use locally abundant sugar cane wastes in a more efficient and environmentally beneficial manner.
- The GEF/UNDP project "Co-generation of Electricity and Steam Using Sugarcane Bagasse and Trash" in Cuba is attempting to establish a commercial demonstration of state-of-the-art biomass co-generation technology and to create the preconditions for the utilization of a significant fraction of the biomass energy potential in Cuba, including the necessary legal and financial instruments. In this case, a GEF grant of $12.5 million will leverage additional investments of $73.3 million. The first two activities support a demonstration of the technology, development of trash handling processes, and other activities necessary to learn by doing in adapting the technology to local resources and circumstances.
- A World Bank project, "Household Energy" in Mali was designed to: (i) create an enabling regulatory and policy environment for project implementation; and (ii) provide technical assistance and training to charcoal makers, producers and sellers of stoves and urban consumers to efficiently harvest and carbonize fuelwood, to manage the natural forest in a sustainable manner, and to effectively market and use improved kilns, biomass and kerosene stoves. The project included components addressing the supply and demand for woodfuel and its efficient use, institution building in the energy sector, as well as information, education and communication. As a result of the project, woodfuel is being marketed on a sustainable basis in

200 rural markets. Stoves are produced by local blacksmiths. Energy sector institutions have also been improved through the project management within the central and local governments, as well as in the central unit responsible for the implementation of the Household Energy Strategy with the objective of a continuing awareness campaign, in cooperation with the national energy authorities as well as with NGOs. NGOs as well as private sector operators play an important role. GEF contributed $2.5 million of the $5 million budget.

- A medium size ($1 million) World Bank project in Morocco called "Energy and Environment Upgrading of the Industrial Park of Sidi Bernoussi Zenata, Casablanca". will promote improvements in energy efficiency through enhancing the capacity of the private sector, financial institutions, and local agencies to create sustainable and replicable business practices. The project supports information and awareness efforts, assistance to industrial clients *on a cost sharing basis* to identify eligible and effective projects, development of contracts and legal arrangements, and performance monitoring. It includes formulation, negotiation and implementation of performance contracts. These activities, together with a $100,000 contingency loan are expected to leverage private investments of almost $12 Million. The project is implemented by a local industry association (IZDIHAR) which operates the industrial park and which will receive technical assistance to improve its operational efficiency, increase social and environmental services for the park, and support energy and water saving initiatives.
- In the Philippines, two different GEF projects are linked to a large World Bank program in the energy sector. One focuses on improving the technical and management capacities of a set of electricity cooperatives in order to improve the efficiency of the transmission of power and save on greenhouse gas emissions. The total cost is $62.5 million with $12.4 million from the GEF. In the second project, a renewable energy component of the energy sector reform program is being introduced. This project, which focuses on rural electrification, has total cost of $43.4 Million with $10 million GEF-financed. This project builds on prior capacity development efforts of other agencies (in this case ESMAP and local NGOs).

Proposed Strategic Framework for Capacity Building

The proposed GEF Business Plan for FY 04-06, to be considered by the GEF Council at its meeting May 14-16, 2003, including a proposal for a strategic framework to give greater focus to capacity building in the GEF consistent with recent decisions by the WSSD and the Second GEF Assembly. Document available at the GEF website: http://www.gefweb.org/Documents/Council_Documents/GEF_C21/C.21.9_GEF_Business_Plan_FY04-06.pdf.

The strategy builds on the results of the 18 month Capacity Development Initiative (CDI) undertaken in partnership with UNDP and includes four elements:

(i) clearer identification of capacity building elements in GEF investment projects;
(ii) targeted capacity building within the focal areas;
(iii) clarifying the scope of enabling activities to focus more on assisting countries to meet their reporting requirements under the conventions; and
(iv) cross-cutting capacity building projects to allow countries to establish the basic capacity needed to meet global environmental goals and to meet requirements for accessing GEF funds for projects.

It is anticipated that approximately 25 percent of GEF resources will be directed towards capacity building over the four fiscal years covered by the Business Plan. Targets, indicators, and details of the strategy are to be developed and submitted for Council review in November 2003.

PAPER NO. 3: UNITED NATIONS CONFERNCE ON TRADE AND DEVELOPMENT (UNCTAD)

THE UNCTAD/EARTH COUNCIL CARBON MARKET PROGRAMME (CMP)

The UNCTAD / EARTH COUNCIL CARBON MARKET PROGRAMME (CMP) presents below its current activities and strategies in response to the request of the Subsidiary Body for Implementation (SBI) addressed to the GEF and relevant international organizations in the SBI Seventh Session Report (FCCC/SBI/2002/17, 28 January 2003, Para. 35 (f)) concerning the provision of "*information on progress in the implementation of the capacity-building projects and programmes responding to the framework contained in decision 2/CP.7, for consideration at its eighteen session*".

I – STRATEGIES TO IMPLEMENT CAPACITY BUILDING

The Kyoto Protocol and other measures to address climate change through the reduction of greenhouse gas emissions have spurred the emergence of a market for carbon emissions. Domestic climate policies and the application of the Kyoto mechanisms will have trade, investment and economic impacts on both developed and developing economies. The Carbon Market Programme explores these impacts, and works to promote a fair and effective global carbon market by using, basically, two strategies:

1) *Assisting in the implementation of the Clean Development Mechanism (CDM) and*

2) *Providing education, training and information exchange on the use of the Kyoto Protocol Mechanisms and related issues.*

3) *Other UNCTAD projects under CMP.*

The CMP supports the establishment of public-private operational entities in developing countries, particularly in least development countries (LDCs) and countries with economies in transition in order to facilitate investments and the transaction of the CDM. The main objective is to promote their participation in the emerging carbon market through the use of clean technologies and by bringing together governments, industry and civil society. The activities related to the implementation of CDM related projects take into account the national circumstances of developing countries by supporting the establishment of projects that better suit each country's economic, social and environmental needs and conditions.

The strategy adopted by UNCTAD of assisting the implementation of CDM related projects is consistent with the guidelines of the *Framework for Capacity Building in Developing Countries* (Annex to Decision 2/CP.7 - FCCC/CP/2001/13/Add.1) as it focus on the promotion of effective participation of developing countries in a country-driven manner, by addressing their specific needs (Framework Part B, Paragraphs 5, 6, 7, 9). That strategy also covers one of the scope of needs and areas for capacity building, as identified in the Framework in Decision 2/CP.7, which is the implementation of the Clean Development Mechanism in those countries, particularly in LDCs (Framework Pat C, Paragraphs 15 (l) and 17).

In addition, the CMP provides complementary learning opportunities to a global audience on the use of emissions trading (including trading in CDM and JI credits) through the Carbon Market E-Learning Center (CMEC). The Center offers on-line courses and more importantly a "virtual workshop" facility to other institutions so that they can effectively and conveniently implement their own courses through the e-learning facilities of the CMEC. The main objective is to provide information and

networking on the use of emissions trading as an economic instrument to implement the UNFCCC and the Kyoto Protocol.

The activities related to the CMEC follow the guidelines contained in the Framework in Decision 2/CP.7 (Framework, Part. B Para. 6), which defines capacity building as a "continuous, progressive and interactive process". These activities respond to the main scope of capacity building, which consists of providing education, training, awareness and networking on matters related to climate change and more specifically to the implementation of the Kyoto Protocol (Framework Part C, Para. 15 (n) (o)).

The above-referred strategies are consistent with the ultimate objective of capacity building as defined in the Framework in Decision 2/CP.7, Para. 14. Both strategies intend to 1) assist developing countries to "build, develop, strengthen, enhance, and improve their capabilities" required to combating climate change and to 2) prepare these countries for an "effective participation in the Kyoto Protocol".

II – CURRENT PROJECTS/ACTIVITIES

A. Assisting in the Implementation of the Clean Development Mechanism

The following activities respond to Part C Para. 15 (l) of the Framework in Decision 2/CP.7.

1) Engaging the Private Sector in CDM - UNFIP-funded inter-agency project. The UNCTAD component is focused on supporting Brazil's Inter-Ministerial Commission on Climate Change and the Brazilian Climate Change Forum to establish a public-private operational entity to facilitate CDM investments in Brazil.[1]

2) Getting started with CDM in Least Developed Countries - a capacity-building project aimed at prompt starting CDM from the ground-up in LDCs. Currently involves Tanzania, Uganda, Mozambique, Zambia and Malawi in partnership with Environmental Protection and Management Services (EPMS) in Tanzania and Sustainable Development Promotion Centre (SDPC) in Uganda.[2]

3) Supporting GHG markets in countries with economies in transition - a plan of action project to develop the capacity of economies in transition (starting with the Central Group 11 - Bulgaria, Croatia, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia, Slovenia) to participate in the Kyoto Protocol mechanisms, including the proposed EU emissions trading scheme.[3]

B. Providing education, training and information exchange on the use of the Kyoto Protocol Mechanisms and other related issues

The following activities respond to Part C Para. 15 (n) (o) of the Framework in Decision 2/CP.7

1) **Carbon Market E-Learning Center (CMEC)** - prototype funded by UNFIP. The E-Learning Center provides complementary learning opportunities to a global audience on the use of emissions trading (including trading in CDM and JI credits) as an economic instrument to implement the UNFCCC and Kyoto Protocol. The Center offers its own on-line courses but more

[1] URL Address: http://r0.unctad.org/ghg/sitecurrent/projects/engaging_psic.html
[2] URL Address: http://r0.unctad.org/ghg/sitecurrent/projects/cdm_ildc.html
[3] URL Address: http://r0.unctad.org/ghg/sitecurrent/projects/eit_cb.html

importantly offers its "virtual workshop" facility to other institutions so that they can effectively and conveniently implement their own courses through the e-learning facilities of the CMEC.[4]

C. Other UNCTAD Projects under CMP

1) CDM Challenges and Opportunities in the Rubber Commodity Sector – the goal is to promote the possibility of CDM investment in the rubber commodity sector. Its objectives are to analyse the potential of CDM projects in the rubber commodity sector; dialogue with the stakeholders and potential investors in CDM projects in this sector in the participating countries; and identify possible next steps to promote and facilitate CDM investments in this commodity sector.[5]

2) OPEC Study - at the request of OPEC, UNCTAD is preparing a number of studies of the impacts of globalisation on trade and investment in OPEC countries. One of the studies being considered is a study on the possible impacts of climate change responses to OPEC countries. One of the studies being considered would examine possible impact of climate change responses on OPEC countries. "The Trade/Energy Interface and the Doha Round of Trade Negotiations" and the "Kyoto Protocol and OPEC" are some of the discussion items being considered in formulating the terms of reference for the study that the Carbon Market Programme will carry out.[6]

[4] URL Address: http://r0.unctad.org/ghg/sitecurrent/activities/carbon_melc.html
[5] URL Address: http://r0.unctad.org/ghg/sitecurrent/projects/rubber_s.html
[6] URL Address: http://r0.unctad.org/ghg/sitecurrent/projects/opec_s.html

PAPER NO. 4: UNITED NATIONS DEVELOPMENT PROGRAMME (UNDP)

CAPACITY BUILDING IN DEVELOPING COUNTRIES: UNDP AND THE IMPLEMENTATION OF UNFCCC DECISION 2/CP.7

UNDP is considered a key player in capacity-building initiatives in developing countries. This is sustained by the fact that UNDP is primarily involved in the process of preparation of national communications and in assisting governments to establish and strengthen national climate change programmes, improving climate change data and methodology, in line with Decision 2/CP.7.

Out of the 96 non-Annex I Parties that presented a First National Communication to the UNFCCC by December 2002, 80 received assistance from this Implementing Agency. UNDP is also involved in preparation of 69 projects related to capacity building of non-Annex I Parties within the framework of Phase II Enabling Activities and is expected to continue assistance to non-Annex I Parties in the preparation of the Second National Communication.

In addition, UNDP participates in a series of other regional and global activities aiming at building capacity of national and regional institutions. UNDP is working to improve the quality of greenhouse gas (GHG) inventories in 26 countries in francophone West Central Africa and Europe and the Commonwealth of Independent States and implements a third project directed at capacity-building in Adaptation in Central America, Mexico and Cuba. A global project to improve observing systems for climate in developing countries is being implemented with GCOS. It will develop national capacity in a significant number of non-Annex I Parties to participate in systematic observation networks through the development of regional action plans. Another global project will develop a practical methodology to provide input to non-Annex I Parties for assessing technology needs in the context of the UNFCCC. Table 1 contains a description of all Enabling Activity projects implemented by UNDP.

Regarding the needs of Least Developed Countries (LDC), in addition to financing the preparation of the National Adaptation Programmes of Action (NAPAs) through GEF, UNDP is also involved in two key projects aiming at capacity building of LDCs, both executed by UNITAR. The first is a project directed to build human and institutional capacity of LDCs, enabling improvement of electronic communications with the UNFCCC Secretariat. The second is aimed at providing technical assistance and training to LDCs in the preparation of NAPAs. Table 2 describes the NAPA related projects under preparation and implementation by UNDP.

A third category of projects implemented by UNDP is also directly linked to Decision 2/CP.7: the National Capacity Self-Assessments (NCSA). As the first Multiple Focal Area Enabling Activity and the first GEF-sponsored exercise to formally involve the Convention to Combat Desertification, the NCSA process will afford countries the opportunity to take stock of and build upon past assessments, reports and action plans to prioritize their most critical capacity needs and devise credible strategies for effectively addressing them.

More than 140 countries have initiated the NCSA process worldwide, with 118 of them expressing an interest in working with UNDP as the Implementing Agency for the exercise. The UNFCCC Capacity Building Framework has already represented a critical reference point during the NCSA design and proposal development phase of this process and will continue to do so as countries prepare the thematic profiles required under the NCSA guidelines. It will also be a crucial input into the optional action planning process that every UNDP country has opted to include as part of their NCSA. Table 3 contains a list of those countries that have actively begun the NCSA preparation and implementation process with UNDP.

UNDP is committed to enhancing an enabling environment to the non-Annex I Parties of the Convention through the implementation of regular UNDP/GEF projects that remove technical, financial, legal and social barriers and establish regulatory frameworks in climate change national policies. Some of these projects also include assessment for implementation of mitigation options through energy efficiency measures and some have components on education, training and public awareness. A complete list of Full-Scale and Medium-Sized UNDP/GEF projects under implementation in developing countries is included in Table 4.

UNDP plans to implement capacity-building activities consistent with the Framework in Decision 2/CP.7 by continuing to support national governments and regional institutions in the preparation and implementation of projects linked to capacity building for presentation of national communications, climate change programmes, national regulatory frameworks and policies, mitigation options and self-assessments of national capacities.

Table 1: Climate Change Enabling Activities implemented by UNDP

Table 1.1. Enabling Activities Phase I and II

No.		TITLE	Approved Allocation (Phase I)	Approved Allocation (Phase II)	STATUS
1.	RBA	BENIN: Enabling Benin to Prepare its First National Communications in response to commitments to the UNFCCC	$100,425	$100,000	Under implementation
2.	RBA	BOTSWANA - Enabling Botswana to fulfill its commitments to the United Nations Framework Convention on Climate Change	$350,000	N/A	Under implementation
3.	RBA	BURKINA FASO: Enabling Burkina Faso to Fulfill its Commitment to the United Nations Framework Convention on Climate Change (UNFCCC)	$233,810	$100,000	Under implementation
4.	RBA	BURUNDI: Preparation of the First National Communication to the UNFCCC	$345,050	$100,000	Under implementation
5.	RBA	CAPE VERDE ISLANDS: Enabling Cape Verde to Prepare its First National Communications in response to commitments to the UNFCCC	$316,049	$100,000	Under implementation
6.	RBA	CHAD: Enabling Chad to Prepare its First National Communications in response to commitments to the UNFCCC	$100,425	$100,000	Under implementation
7.	RBA	CONGO: Preparation of the First National Communication to UNFCCC	$319,450	$100,000	Under implementation
8.	RBA	ERITREA: Enabling Eritrea to Prepare its First National Communications in response to commitments to the UNFCCC	$301,312	N/A	Under implementation
9.	RBA	ETHIOPIA: Enabling Ethiopia to Prepare its First National Communications in response to commitments to the UNFCCC	$213,210	$100,000	Under implementation
10.	RBA	GABON: Preparation of the First National Communication to the UNFCCC	$319,450	$100,000	Under implementation
11.	RBA	GAMBIA: Enabling Gambia to Prepare its First National Communications in response to commitments to the UNFCCC	$137,900	$100,000	Under implementation
12.	RBA	GHANA: Enabling Ghana to Prepare its First National Communications in response to commitments to the UNFCCC	$94,760	$100,000	Operationally Completed
13.	RBA	GUINEA: Enabling Guinea to Prepare its First National Communications in response to commitments to the UNFCCC	$345,600	$100,000	Under implementation
14.	RBA	GUINEA BISSAU: Enabling Guinea Bissau to Prepare its First National Communications in response to commitments to the UNFCCC	$345,000	N/A	Under implementation

15.	RBA	MADAGASCAR: Enabling Guinea Bissau to Prepare its First National Communications in response to commitments to the UNFCCC	$350,000	N/A	Under implementation
16.	RBA	MALAWI: Enabling Malawi to prepare its first communication in response to its commitments to the UNFCCC	$193,640	$100,000	Under implementation
17.	RBA	MALI: Enabling Mali to Prepare its First National Communications in response to commitments to the UNFCCC	$94,760	$100,000	Under implementation
18.	RBA	MOZAMBIQUE: Enabling Mozambique to Prepare its First National Communications in response to commitments to the UNFCCC	$216,000	N/A	Under implementation
19.	RBA	NAMIBIA: Enabling Namibia to Prepare its First National Communications in response to commitments to the UNFCCC	$130,000	N/A	Under implementation
20.	RBA	NIGER: Enabling Niger to Prepare its First National Communications in response to commitments to the UNFCCC	$345,600	$100,000	Under implementation
21.	RBA	NIGERIA, Federal Republic of Enabling Activities for the Implementation of the Convention on Climate Change	$259,500	N/A	Under implementation
22.	RBA	SENEGAL: Preparation of the First National Communications in response to the Provisions of the United Nations Framework Convention on Climate Change (UNFCCC)	$87,550	$100,000	Under implementation
23.	RBA	SEYCHELLES: Enabling Seychelles to Prepare its First National Communications to the United Nations Framework Convention on Climate Change (UNFCCC)	$250,290	$100,000	Under implementation
24.	RBA	SAO TOME & PRINCIPE: Preparation of Initial Communication for the Implementation of the UNFCCC	$350,000	N/A	Under implementation
25.	RBA	SIERRA LEONE: Enabling Sierra Leone to prepare its first Communication in Response to its Commitments to the UNFCCC	$309,000	N/A	Under implementation
26.	RBA	SWAZILAND: Enabling Activities for the Implementation of the Convention on Climate Change	$259,560	N/A	Under implementation.
27.	RBA	TOGO: Enabling Togo to Prepare its First National Communications in response to commitments to the UNFCCC	$338,040	$100,000	Under implementation
28.	RBA	UGANDA: Enabling Uganda to prepare its first national communications in response to its commitments to the UNFCCC	$83,430	$100,000	Under implementation
29.	RBA	DEM. REP. OF CONGO: Enabling Zaire to prepare its first Communication in Response to its Commitments to the UNFCCC	$345,000	Under GEFSEC Review	Under implementation
30.	RBAS	ALGERIA: Elaboration of a National Climate Change Strategy and Action Plan	$259,560	$100,000	Under implementation

31.	RBAS	EGYPT: Building Capacity for GHG Inventory and Action Plans in response to UNFCCC Communication Obligations	$402,000	$48,000	Under implementation
32.	RBAS	JORDAN: Capacity Building to enable Response to the UNFCCC	$329,550	$100,000	Under implementation
33.	RBAS	LEBANON: Enabling Activity (Building Capacity for GHG Inventory and Action Plans in Response to UNFCCC Communications Obligations	$292,600	$100,000	Under implementation
34.	RBAS	MOROCCO: Enabling Morocco to Prepare its First National Communications in response to commitments to the UNFCCC	$140,000	N/A	Under implementation
35.	RBAS	OMAN: National Capacity Building to Enable the Sultanate of Oman to Prepare its National Action Plan and First National Communication	$300,000	N/A	Project Document Completion
36.	RBAS	SAUDI ARABIA - Enabling Saudi Arabia to Prepare its First National Communications in response to commitments to the UNFCCC	$350,000	N/A	Under implementation
37.	RBAS	SUDAN: Capacity Building to Enable the Sudan's Response and Communications to the UN Framework Convention on Climate Change	$290,000	$100,000	Under implementation
38.	RBAS	TUNISIA: GHG Inventory: National Strategy and Action Plans for Emission Reduction and Communications under the UNFCCC	$570,000	N/A	Under implementation
39.	RBAS	YEMEN: Enabling Yemen to Prepare its First National Communications in response to commitments to the UNFCCC	$195,700	$100,000	Under implementation
40.	RBAP	BHUTAN: National GHG Inventory and Adaptation Assessment	$296,600	$100,000	Under implementation
41.	RBAP	CAMBODIA: Enabling Cambodia to Prepare its First National Communications in response to commitments to the UNFCCC	$325,480	$100,000	Under implementation
42.	RBAP	CHINA: China's Initial Communication: Needs Assessment and Enabling Activity Preparation	$324,000	N/A	Under implementation
43.	RBAP	INDONESIA: Enabling Indonesia to Prepare its First National Communications in response to commitments to the UNFCCC	$226,310	$100,000	Operationally Completed
44.	RBAP	INDIA: Enabling India to Prepare its First National Communications in response to commitments to the UNFCCC	$2,000,000	N/A	Under implementation
45.	RBAP	IRAN: Enabling Iran to Prepare its First National Communications in response to commitments to the UNFCCC	$349,995	$100,000	Under Implementation
46.	RBAP	KOREA, DPR: Enabling D.P.R. Korea to Fulfill its Commitment to the (UNFCCC)	$154,200	N/A	Under implementation
47.	RBAP	LAO: National Greenhouse Gas Inventory	$313,000	$100,000	Under Implementation
48.	RBAP	MALAYSIA: Enhancement of Technical Capacity to Develop National Response Strategies to Climate Change	$470,000	N/A	Operationally Completed

49.	RBAP	MALDIVES: National Greenhouse Gas Inventory and Vulnerability Assessment for the Maldives: A Climate Change Enabling Activity	$856,400	N/A	Under implementation
50.	RBAP	PALAU: Enabling the Republic of Palau to Prepare its First National Communication in Response to its Commitments to the UNFCCC	$309,000	N/A	Under implementation
51.	RBAP	PAPUA NEW GUINEA: Climate Change Assistance Programme	$345,600	N/A	Under implementation
52.	RBAP	PHILIPPINES: Enabling Philippines to Prepare its First National Communications in response to commitments to the UNFCCC	$154,500	$100,000	Operationally Completed
53.	RBAP	SRI LANKA: Enabling Sri Lanka to Prepare its First National Communications in response to commitments to the UNFCCC	$110,000	$100,000	Operationally Completed
54.	RBAP	THAILAND: Enabling Thailand to Prepare its First National Communications in response to commitments to the UNFCCC	$189,500	$100,000	Operationally Completed
55.	RBAP	TONGA: Enabling Tonga to Prepare its First National Communications in response to commitments to the UNFCCC	$325,000	N/A	Under implementation
56.	RBLAC	ARGENTINA: Country Study on Climate Change	$1,000,000	N/A	Operationally Completed
57.	RBLAC	ANTIGUA AND BARBUDA: Enabling Antigua and Barbuda to Prepare its First National Communications in response to commitments to the UNFCCC	$161,500	$100,000	Under implementation
58.	RBLAC	BAHAMAS: Enabling The Bahamas to fulfill its Commitment to the United Nations Framework Convention on Climate Change (UNFCCC)	$185,300	$95,000	Operationally Completed
59.	RBLAC	BARBADOS: Enabling Barbados to fulfill its Commitment to the United Nations Framework Convention on Climate Change (UNFCCC)	$189,900	$100,000	Under implementation
60.	RBLAC	BELIZE: Enabling Belize to Prepare its First National Communications in response to commitments to the UNFCCC	$185,100	N/A	Under implementation
61.	RBLAC	BOLIVIA: Enabling Bolivia to prepare its National Communication in Response to commitments to the United Nations Framework Convention on Climate Change	$185,220	$100,000	Under implementation
62.	RBLAC	BRAZIL -Enabling Brazil to Fulfill its Commitment to the United Nations Framework Convention on Climate Change (UNFCCC)	$1,500,000	N/A	Under implementation
63.	RBLAC	CHILE: Enabling Chile to Fulfill its Commitments to the UNFCCC	$350,000	$100,000	Operationally Completed
64.	RBLAC	COLOMBIA: Enabling Colombia to prepare its National Communication in Response to commitments to the United Nations Framework Convention on Climate Change	$345,000	N/A	Under implementation

65.	RBLAC	COSTA RICA: Building National Technical Capacity to Develop Policy Options for Greenhouse Gas Emissions Reductions and Sink Enhancements	$467,200	N/A	Under implementation
66.	RBLAC	CUBA: Enabling Cuba to Prepare its initial Communications to the UNFCCC.	$1,535,000	N/A	Under implementation
67.	RBLAC	DOMINICA: Enabling the Commonwealth of Dominica to Prepare its First National Communications in response to commitments to the UNFCCC	$168,700	N/A	Under implementation
68.	RBLAC	DOMINICAN REPUBLIC: Enabling Dominican Republic to Prepare its First National Communications in response to commitments to the UNFCCC	$350,000	$100,000	Under implementation
69.	RBLAC	ECUADOR: Enabling Ecuador to Prepare its First National Communications in response to commitments to the UNFCCC	$220,000	$100,000	Operationally Completed
70.	RBLAC	EL SALVADOR: Enabling El Salvador to Prepare its First National Communications in response to commitments to the UNFCCC	$320,000	$100,000	Under implementation
71.	RBLAC	GRENADA: Enabling Grenada to Prepare its First National Communications in response to commitments to the UNFCCC	$184,370	$100,000	Under implementation
72.	RBLAC	GUATEMALA: Enabling Guatemala to Prepare its First National Communications in response to commitments to the UNFCCC	$326,000	$100,000	Operationally Completed
73.	RBLAC	GUYANA: Enabling Guyana to Prepare its First National Communications in response to commitments to the UNFCCC	$205,600	N/A	Under implementation
74.	RBLAC	HONDURAS: Enabling Honduras to Prepare its First National Communications in response to commitments to the UNFCCC	$325,000	$100,000	Operationally Completed
75.	RBLAC	JAMAICA: Enabling Jamaica to Prepare its First National Communications in response to commitments to the UNFCCC	$232,780	Under GEFSEC Review	Under implementation
76.	RBLAC	MEXICO: Study on GHG Emission Coefficients from Live Systems in Central Mexico and Development of a Related Information Management System	$306,000	N/A	Operationally Completed
77.	RBLAC	NICARAGUA: Enabling Nicaragua to Prepare its First National Communications in response to commitments to the UNFCCC	$299,100	$100,000	Operationally Completed
78.	RBLAC	PANAMA: Enabling Panama to Prepare its First National Communications in response to commitments to the UNFCCC	$298,700	$100,000	Operationally Completed
79.	RBLAC	PARAGUAY: Enabling Paraguay to Prepare its First National Communication to the UNFCCC	$190,550	$100,000	Under implementation
80.	RBLAC	PERU: Enabling Peru to Prepare its First National Communications in response to commitments to the UNFCCC	$195,700	$140,300	Operationally Completed

81.	RBLAC	SAINT KITTS AND NEVIS: Enabling Saint Kitts and Nevis to Prepare its First National Communications in response to commitments to the UNFCCC	$158,620	$100,000	Under implementation
82.	RBLAC	SAINT LUCIA: Enabling Saint Lucia to Prepare its First National Communications in response to commitments to the UNFCCC	$169,900	$100,000	Under implementation
83.	RBLAC	SURINAME: Enabling Suriname to prepare its National Communication in Response to its Commitments to the UNFCCC	$350,000	N/A	Under implementation
84.	RBLAC	TRINIDAD AND TOBAGO: Enabling Trinidad and Tobago to Prepare its First National Communications in response to commitments to the UNFCCC	$218,870	Under GEFSEC Review	Under implementation
85.	RBLAC	URUGUAY: Institutional Strengthening and Enabling Activities to Comply with the United Nations Convention on Climate Change UNFCCC	$700,000	N/A	Operationally Completed
86.	RBLAC	URUGUAY: Enabling Activity for the Preparation of Uruguay's Second National Communication to the UN Framework Convention on Climate Change (UNFCCC)	$595,800	N/A	Under implementation
87.	RBLAC	VENEZUELA: Support to the Government of Venezuela for the Preparation of the First National Communication on Climate Change	$350,000	N/A	Under implementation

* RBA: Africa; RBAP: Asia and Pacific; RBAS: Arab States; RBLAC: Latin America and the Caribbean

Table 1.2. Global and Regional Enabling Activities

No.	Lead Country	Short Title	***Project Description***	GEF Project Amount (million US$)	Status
1	Global	Building Human and Institutional capacities to address Climate Change Issues in Least-Developed Countries	This project will equip and train with ICTs the focal points of all LDCs that have ratified the Climate Change Convention. An immediate outcome is an improved communication between UNFCCC Secretariat, GEF and UNFCCC Focal Points and well as an improved understanding of LDCs needs and GEF interventions. Another outcome of this project is to facilitate at a later stage the establishment of a network linking the National Focal Points of the United Nations Convention on Climate Change (UNFCCC) to develop effective communication strategies.	0.90	Under Implementation
2	Global	Capacity Building for Observing Systems for Climate Change	The objective of the project is to improve observing systems for climate in developing countries. The project will launch processes that will develop national capacity in a significant number of non-Annex I Parties to participate in systematic observation networks for meeting the multiple needs of the UNFCCC. This process will involve training and assessment, and will help to develop regional Action Plans for improving observing systems. To ensure that the project feeds into National Communications, the workshops will involve national climate change coordinators of enabling activities.	1.22	Under Implementation
3	Global	Assessing Technology Needs	The project will develop a practical methodology to provide input to non-Annex I Parties for assessing technology needs in the context of the United Nations Framework Convention on Climate Change (UNFCCC). The lack of such a methodology has been consistently reported by non-Annex I Parties as a critical constraint for national technology assessments. Currently, 52 non-Annex I Parties with enabling activities are facing this constraint, and the numbers are expected to increase. The project objectives are to assist countries in analyzing priority technology needs, as a basis for developing a portfolio of Environmentally Sound Technology (EST) projects, and programmes to facilitate the transfer of, and access to, the EST and know-how.	0.2	Under Implementation

4	RBA	Capacity Building for Improving GHG Inventories	This project will use a regional framework over its three-year lifetime to build national capacity for improving the quality of data inputs to national greenhouse gas inventories. The use of key sources for national greenhouse gas inventories, as defined in the IPCC Good Practice Guidance (GPG), contributes to the project design by allowing countries to systematically prioritize their efforts to improve overall estimates in the most cost-efficient manner. Based on the key source analysis carried out under the PDF phase of this project, the full project will focus on reducing uncertainties and improving activity data and emission factors in the land-use change and forestry (LUCF) sector. Countries will also use GPG to strengthen national arrangements so that, as a result of this project, GHG inventories for future National Communications will be compiled in a sustainable manner and the inventories will be of a higher quality than those prepared for the Initial National Communications. The project will build upon the existing national institutional frameworks established under the enabling activities. The same national institutions from the Initial National Communication will be targeted in this project to create a more permanent infrastructure.	2.6	Project Document Completion
5	RBAP	Pacific Island Climate Change Assistance Programme (PICCAP)	This programme of enabling activities will enable Pacific Island countries to meet their reporting obligations under the UN Framework Convention on Climate Change, leading to their national communication as required under Article 12. The project has six major capacity building objectives that lead to the following outputs: (1) an inventory of greenhouse gas sources and sinks; (2) an evaluation of mitigation options; (3) national vulnerability assessments; (4) an evaluation of adaptation options; (5) a national implementation plan and (6) the first National Communication to the Conference of the Parties to the UNFCCC. Under the Top-Up all participating countries have continued to strengthen their national coordination and institutional roles on climate change, addressing public awareness, vulnerability and adaptation assessment, and national implementation strategies.	3.4	Operationally Completed

6	RBAP	Asia Least-Cost Greenhouse Gas Abatement Strategy (ALGAS)	The project assisted 12 ALGAS participating Asian countries in preparing an inventory of man-made emissions and sinks of greenhouse gases (GHG), evaluating the costs and effectiveness of measures available to reduce GHG emissions or enhance sinks, and developing national action plan policy responses that will be required to implement the measures that are identified. The project also contributed to identifying training needs of the countries and institutions in the region in meeting the commitments of the UNFCCC.	9.6	Operationally Completed
7	RBEC	Capacity Building for Improving the Quality of GHG Inventories (Europe/CIS region)	The project will initiate a regional programmatic approach developed to build capacity for improving the quality of data inputs to national greenhouse gas inventories, using the good practice guidance of the Intergovernmental Panel for Climate Change for cost-effectiveness. The project will build on the expertise gained during the preparation of the initial National Communications. By strengthening institutional capacity to prepare inventories and establishing a trained, sustainable inventory team, the project will help countries to reduce uncertainties and improve the quality of inventories for Second National Communications. This, in turn, will allow countries to improve national strategies for reducing greenhouse gas emissions. The project includes common activities for all participating countries carried out under a regional umbrella; countries may choose the remaining activities to carry out, based on national priorities. The approach has been built on the concept of key sources of emissions; this allows the approach to be replicated for use in other regions with only minor modifications.	1.9	Project Document Completion

8	RBLAC	Capacity Building for Stage II Adaptation to Climate Change in Central America, Mexico and Cuba	Central America, Mexico and Cuba will serve as the pilot region for elaborating and applying an Adaptation Policy Framework for preparing adaptation strategies, policies and measures. The application of this framework will demonstrate how policy for adaptation can be integrated into national sustainable development for at least three human systems: water resources, agriculture and human health. This demonstration project will build upon the Stage I vulnerability and adaptation assessments of the Initial National Communications of the eight participating countries of the region and will prepare them to move onto Stage III Adaptation. As other countries meet the conditions for participation, they can adapt the framework initially developed for this region, thereby engaging in their own regionally focused initiative. The outputs of the full project will also contribute to the Second National Communications to the United Nations Framework Convention on Climate Change.	3.0	Under Implementation

Table 2: National Adaptation Programmes of Action (NAPAs) Projects under preparation and implemented by UNDP

No.	Region*	Country	Project Status
1	RBA	Benin	Under Preparation
2	RBA	Burkina Faso	Under Preparation
3	RBA	Burundi	Under Preparation
4	RBA	Cape Verde	Under Preparation
5	RBA	Chad	Under Preparation
6	RBA	Democratic Rep. of Congo	Under Preparation
7	RBA	Eritrea	Under Implementation
8	RBA	Ethiopia	Under GEFSEC Review
9	RBA	Guinea	Under Preparation
10	RBA	Guinea - Bissau	Under Preparation
11	RBA	Madagascar	Under Preparation
12	RBA	Malawi	Under GEFSEC Review
13	RBA	Mali	Under Preparation
14	RBA	Mozambique	Under Preparation
15	RBA	Niger	Under Preparation
16	RBA	Sao Tome and Principe	Under Preparation
17	RBA	Sierra Leone	Under Preparation
18	RBA	Togo	Under Preparation
19	RBA	Zambia	Under Preparation
20	RBAS	Yemen	Under Implementation

21	RBAS	Sudan	Under GEFSEC Review
22	RBAP	Bangladesh	Under GEFSEC Review
23	RBAP	Bhutan	Under Preparation
24	RBAP	Cambodia	Under Implementation
25	RBAP	Lao People's Democratic Republic	Under Preparation
26	RBAP	Maldives	Under Preparation
27	RBAP	Kiribati	Under Preparation
28	RBAP	Samoa	Under Implementation
29	RBAP	Tuvalu	Under Implementation
30	RBAP	Vanuatu	Under GEFSEC Review

* RBA: Africa; RBAP: Asia and Pacific; RBAS: Arab States

Table 3: National Capacity Self-Assessment (NCSA) Projects under preparation and implemented by UNDP

No.	Region*	Country	Project Status
1.	RBA	Benin	PDF A under Implementation
2.	RBA	Burkina Faso	PDF A under Implementation
3.	RBA	Burundi	PDF A under Implementation
4.	RBA	Central African Republic	PDF A under Implementation
5.	RBA	Chad	PDF A under Implementation
6.	RBA	Comoros	PDF A under Implementation
7.	RBA	Congo	Proposal under Preparation
8.	RBA	Congo Democratic Republic	PDF A under Implementation
9.	RBA	Cote d'Ivoire	NCSA under Implementation
10.	RBA	Djibouti	Proposal under Preparation
11.	RBA	Gabon	Proposal under Preparation
12.	RBA	Ghana	NCSA under Implementation
13.	RBA	Guinea	PDF A under Implementation
14.	RBA	Lesotho	PDF A under Implementation
15.	RBA	Malawi	PDF A under Implementation
16.	RBA	Mali	PDF A under Implementation
17.	RBA	Mauritania	PDF A under Implementation
18.	RBA	Namibia	NCSA under Implementation
19.	RBA	Niger	PDF A under Implementation
20.	RBA	Sao Tome And Principe	PDF A under Implementation
21.	RBA	Senegal	Proposal under Preparation
22.	RBA	Seychelles	PDF A under Implementation
23.	RBA	Swaziland	Proposal under Preparation
24.	RBA	Tanzania, United Republic Of	PDF A under Implementation
25.	RBA	Togo	PDF A under Implementation
26.	RBAP	Bhutan	PDF A under Implementation
27.	RBAP	Cambodia	Proposal under Preparation

28.	RBAP	China	Proposal under Preparation
29.	RBAP	Cook Islands	PDF A under Implementation
30.	RBAP	Fiji	PDF A under Implementation
31.	RBAP	Indonesia	Proposal under Preparation
32.	RBAP	Lao People's Democratic Republic	PDF A under Implementation
33.	RBAP	Malaysia	Proposal under Preparation
34.	RBAP	Maldives	PDF A under Implementation
35.	RBAP	Marshall Islands	PDF A under Implementation
36.	RBAP	Niue	PDF A under Implementation
37.	RBAP	Pakistan	Proposal under Preparation
38.	RBAP	Palau	PDF A under Implementation
39.	RBAP	Philippines	Proposal under Preparation
40.	RBAP	Solomon Islands	PDF A under Implementation
41.	RBAP	Thailand	Proposal under Preparation
42.	RBAP	Tonga	PDF A under Implementation
43.	RBAP	Tuvalu	PDF A under Implementation
44.	RBAP	Viet Nam	Proposal under Preparation
45.	RBAS	Egypt	Proposal under Preparation
46.	RBAS	Jordan	Proposal under Preparation
47.	RBAS	Lebanon	Proposal under Preparation
48.	RBAS	Libyan Arab Jamahiriya	Proposal under Preparation
49.	RBAS	Morocco	Proposal under Preparation
50.	RBAS	Samoa	PDF A under Implementation
51.	RBAS	Sudan	Proposal under Preparation
52.	RBAS	Syrian Arab Republic	Proposal under Preparation
53.	RBAS	Tunisia	NCSA under Implementation
54.	RBAS	Yemen	PDF A under Implementation
55.	RBLAC	Belize	Proposal under Preparation
56.	RBLAC	Bolivia	Proposal under Preparation
57.	RBLAC	Costa Rica	Proposal under Preparation
58.	RBLAC	Dominican Republic	Proposal under Preparation
59.	RBLAC	Ecuador	Proposal under Preparation

60.	RBLAC	El Salvador	Proposal under Preparation
61.	RBLAC	Grenada	PDF A under Preparation
62.	RBLAC	Guatemala	Proposal under Preparation
63.	RBLAC	Haiti	PDF A under Implementation
64.	RBLAC	Honduras	Proposal under Preparation
65.	RBLAC	Jamaica	Proposal under Preparation
66.	RBLAC	Nicaragua	Proposal under Preparation
67.	RBLAC	Peru	Proposal under Preparation
68.	RBLAC	Saint Kitts And Nevis	PDF A under Implementation
69.	RBLAC	Saint Vincent And The Grenadines	PDF A under Implementation
70.	RBLAC	Suriname	Proposal under Preparation
71.	RBLAC	Uruguay	NCSA under Implementation
72.	RBLAC	Venezuela	Proposal under Preparation

* RBA: Africa; RBAP: Asia and Pacific; RBAS: Arab States;
RBLAC: Latin America and the Caribbean

Table 4: UNDP/GEF Full-Scale and Medium-Sized Projects implemented by UNDP in Developing Countries, per region

Table 4.1. Africa

No.	Lead Country	Short Title	***Project Description***	Project Type	OP	GEF Project Amount (million US$)	Status
1	Benin	Participatory Management of Natural Forests and Village Reforestation to reduce Carbon Emissions	This project is aimed at demonstrating the possibility of using ligneous formations in the semi-arid areas in order to stabilize the carbon balance by means of forest management and agrosylvopastoral measures adopted by the village communities and managed by the communities and the technical services.	FULL	5	2.50	Operationally Completed
2	Cote D'ivoire	Control of greenhouse gas emissions through energy efficient building technology in West Africa	In West Africa, operating large buildings accounts for 25 to 30% of the total consumption of electricity, most of which is generated by thermal power plants causing the emission of greenhouse gases, which are added to emissions from the other local or global sources. Despite their environment interest and cost-effectiveness, investments in energy efficiency in buildings can only be made on a large scale in the region by combining a technical capacity and an adequate institutional framework (regulations, standards, appropriate taxes and tariffs, fiscal incentives, introduce and disseminate energy-efficient building technologies in West Africa and prove their cost-effectiveness, in order to create sustainable conditions allowing to retrofit the existing buildings and to design, build and operate more efficient new buildings. The GEF will provide the core funding for the project which will be managed by UNDP and executed by OPS. The GEF recommends approaching other donors to obtain parallel co-financing in order to disseminate the results of the project to other French-speaking countries in West Africa.	FULL	5	3.50	Operationally Completed

3	Ghana	Renewable Energy-based Electricity for Rural, Social and Economic Development	Over 4,000 communities lack electricity services, and for the majority of them the cost of basic electricity services from grid extension would be considerably greater than the costs of supplying these services from decentralized renewable energy systems. The project will result in the establishment of a private-sector renewable energy-based rural energy services company (RESCO), to provide electricity services to off-grid communities for household, community, and economically productive uses. The project will be established as a special project of the Volta River Authority / Northern Electricity District (VRA/NED), and as a for-profit enterprise as part of NED when NED is privatized (expected before the end of 1998). The new enterprise will begin operations in the Mamprusi East District of northeastern Ghana, with several operation and maintenance facilities in the district. End-users will contract for the energy services they need (grain grinding, commercial refrigeration, vaccine refrigeration, community water pumping, household lighting, etc.) and the RESCO will own, maintain, and repair the equipment. The electricity services will be provided from freestanding photovoltaic (PV) units and, for a few larger communities, from a local low-voltage minigrid employing PV/diesel hybrid power units. Service fees will reflect revenue requirements for sustainability and growth of the enterprise. The project will establish the technical, financial, institutional, and socio-cultural requirements for sustainable provision of renewable energy-based electricity services in Ghana. Following privatization of NED, private concessions for renewable energy-based electricity services may be established.	FULL	6	2.47	Under Implementation
4	Ghana	Building capacity in sub-Saharan Africa to respond to the UN Framework Convention on Climate Change	This project aims to build capacity in Africa countries to respond to their obligations under the UN Framework Convention on Climate Change. Activities are initiated in four representative countries: Ghana, Kenya, Mali and Zimbabwe. Activities aim to create or strengthen national institutions to give countries the capacity to respond to the Convention. These include the development of inventories of greenhouse gas emissions and their sinks, cost-effective policy options based on these inventories.	FULL	5	2	Operationally Completed

5	Kenya	Removal of barriers to energy conservation and energy efficiency in small and medium scale enterprises	The outcome of this project will be a reduction of CO2 emissions resulting from increased energy efficiency within Kenya's small and medium scale enterprises. This will be accomplished by removing capacity and financial barriers through formal and on the job training as well as by introducing new financial mechanisms. Energy service companies (ESCOs) will be incorporated. A capital endowment fund will be established to cover the transaction and incremental costs required to implement profitable demonstration projects. This fund will be available for energy efficiency, fuel switch, and renewable energy technologies.	FULL	5	3.19	Under Implementation
6	Malawi	National Sustainable and Renewable Energy Programme	The project will help to mitigate greenhouse gas emissions by addressing institutional, information, know-how, perceived risk and other investment barriers to increased use of photovoltaic energy sources by households, institutions, commercial entities and agro-industries. Specifically the project will: Assist local stakeholders in building local capacities to promote, install and service PV applications; help to develop and implement favorable regulatory frameworks, facilitate the establishment of viable financial mechanisms (micro lending). The latter will address up-front investment cost barriers and related risk perceptions. The project will help to demonstrate viability of investments in photovoltaic energy and encourage widespread replication. Expected project outputs: Increase of off-GRID PV installations from about 5000 systems in 1998 to at least 30.000 systems by the year 2015. This will result in a total abatement of about 600,000 tones of carbon over the lifecycle of these systems. The following progress monitoring milestones are suggested: At least 9.000 systems will be installed by 2004(project completion), installation of 20,000 systems is foreseen by 2010.	FULL	6	3.35	Under Implementation

7	Mauritania	Decentralized wind electric power for social and economic development (Alizes Electriques)	The project will work to establish a successful replicable, widely-used mechanism for sustainable diffusion and support of small-scale decentralized wind electric power generation units as a form of pre-electrification to support investments in social and economic development in rural and semi-rural Mauritania. The approach includes (1) determination of the needs, markets, and opportunities for use of small-scale wind electric technologies in the rural sector, (2) establishment of tecnical, financial, and institutional mechanisms for private sector-based introduction and sustainable diffusion of these technologies, and (3) implementation of an effective program of wind electric applications. An associated objective is to share the project experience with decision makers, investors and the private sector in other developing countries, especially in Africa and Asia and with the international development community.	FULL	6	2.2	Operationally Completed
8	Namibia	Barrier removal to the development of commercially institutionally and technically sustainable solar energy services in Namibia (Phase 1)	The GEF project proposed here will help to reduce the barriers for the development of the demand for solar technologies and thus mitigate greenhouse gas emissions by addressing institutional, information, human capacity, financial, technical, awareness and other market barriers to increased use of solar energy services by urban and rural households, government institutions (schools, clinics, and police stations), NGO facilities, beverage retailers, communal and commercial farmers. The project implemented in two phases will specifically assist local stakeholders in building local capacities to promote, finance, install and maintain solar applications, help to develop and implement favorable regulatory frameworks, and facilitate the establishment of viable financial mechanisms (micro lending and mortgage additions). The latter will address up-front investment cost barriers and related risk perceptions. The project will help to demonstrate viability of investments in solar energy and encourage widespread replication in households, government institutions (schools, clinics, and police stations), NGO facilities, beverage retailers, communal and commercial farmers. The project implemented in two phases will specifically assist local stakeholders in building local capacities to promote, finance, install and maintain solar applications, help to develop and implement favorable regulatory frameworks, and facilitate the establishment of viable financial mechanisms (micro lending and mortgage additions). The latter will address up-front investment cost barriers and related risk perceptions.	FULL	6	2.6	Project Document Completion

			The project will help to demonstrate viability of investments in solar energy and encourage widespread replication.				
9	South Africa	Solar Water Heaters for Low-Income Housing	This project aims to provide parallel support to a Solar Water Heater business plan in South Africa in order to overcome market barriers for widespread use of SWHs. The plan was designed and negotiated as part of the application of the FINESSE strategy in South Africa where 9000 solar water heaters are to be installed over 5 years in a low-income housing peri-urban upgrade. The parallel activities, contingent on the business plan, provide specific support to the business plan but predominantly engineer a change in the market environment for SWHs nationally.	MEDIUM	6	0.73	Project Document Completion
10	South Africa	Pilot Production and Commercial Dissemination of Solar Cookers in South Africa	According to the White Paper on Energy Policy of the Republic of South Africa, which was approved by Cabinet on 2 December 1998: "The energy sector has larger environmental impacts than most other economic sectors, with associated greenhouse gas emissions feared to be a major contributor to global warming. Energy policies are already responding to pressures to reduce emissions as energy investments are subjected to greater environmental scrutiny. The research and development of alternative and renewable energy sources is also being promoted. As a signatory to the UNFCCC, South Africa intends to play a constructive role in the alleviation of environmental emissions". Part of South African Energy Policy is conducting pilot projects in order to promote the use of renewable energy resources and appliances. In this context the Department of Minerals and Energy (DME) and the German Technical Cooperation (GTZ) undertook a Phase I Pilot Project to investigate the social acceptability and functional appropriateness of 7 solar cookers selected for a comparative test on the basis of cooking profiles for 3 areas. The (successful) results have led to the development of a second phase consisting of the pilot production and commercial dissemination of 3-4 different solar cooker models for which assistance is being requested from UNDP/GEF.	MEDIUM	6	0.80	Under Implementation
11	Tanzania	Electricity, fuel and fertilizer from municipal and industrial waste in Tanzania: a biogas plant for Africa	The goal of this project is to reduce emissions of greenhouses gases in Tanzania by substituting bioenergy (methane gas and electricity) produced from anaerobic digestion of industrial and municipal waste in the Dar-es-Salaam area for fossil fuels. Additional greenhouse gas reduction will be achieved by reducing the uncontrolled release of methane from improperly disposed organic waste and organic fertilizer will be produced.	FULL	6	2.5	Operationally Complete

12	Uganda	Uganda photovoltaic pilot project (PV) for rural electrification	The UPPPRE is a pilot project whose goal is to establish the foundation for the sustainable use of PV technology for rural electrification in areas that will not be accessed by the national electric grid in the foreseeable future. Its objective is to overcome the financial, social and institutional barriers that presently exist to the widespread dissemination of the technology within Uganda. The targets of the project are individuals, communities and government services which have the ability/willingness to pay the real market cost of PV-based services. It is expected that a rapid scaling up of PV-based rural electrification activities will begin on or before the completion of the pilot project.	FULL	6	1.76	Under Implementation
13	Zimbabwe	Photovoltaics for household and community use	The objective of the proposed project is to assist the Government of Zimbabwe in removing markets barriers to the use of renewable energy for basic needs, rural electrification, and economic development, thereby reducing the long-term growth of the greenhouse gas (GHG) emissions. Markets for a wide range of renewable energy technologies will be created or expanded using an integrated suite of financing mechanisms, policy initiatives, and capacity building efforts. A new institutional framework will be enabling renewable energy technologies to assist in national poverty alleviation and commercial/industrial development activities.	FULL	6	7	Operationally Completed

Table 4.2. Arab States

No.	Lead Country	Short Title	***Project Description***	Project Type	OP	GEF Project Amount (million US$)	Status
1	Egypt	Fuel Cell Bus Demonstration Project in Cairo (Phase 1)	This project, Part I of a two-part project, proposes a five-year demonstration program to operate eight fuel cell buses (FCBs) for public transport in Cairo under actual revenue service conditions. The major objective is to introduce this zero emission bus technology in Egypt as a long-term solution to the severe urban transport pollution problem in Cairo and to reduce global GHG emission. It will assist the Egyptian transport sector to gain experience in operating, and servicing FCBs under local conditions. It will also help increase the initial volume demand for FCBs and provide much needed feedback of fleet operating experience for the manufacturers to further improve their products and accelerate the commercialization.	FULL	11	6.1	Project Document Completion
2	Egypt	Introduction of Viable Electric and Hybrid Electric Bus Technology in Egypt	The overall objective of the project is to introduce to Egypt a viable electric, hybrid-electric, and eventually fuel cell technology program, that would have significant benefits and sustainability in various segments of the country. The project will contribute to the long-term reduction of low emission bus system, to the enhancement of Egypt's technological competitiveness, and to job creation. This will be applied to antiquity sites starting with the Giza plateau as well as the Cairo public ground transport sector. The proposed project consists of a multi-year, multi-phase plan reducing the pollution in Egypt and meeting some of the objectives of Egypt Vision 2017. The current phase I (a) encompasses six tasks aimed at addressing specific operational technology questions, testing a bus in various sites in Egypt, conducting economic, environmental and societal studies, providing training to managers, engineers and, technicians. Two electric buses will be used to perform the six tasks outlined here. By the end of Phase I(a), a technology transfer and commercialization plan will exist, based on real demonstration routes.	MEDIUM	11	0.75	Under Implementation

3	Jordan	Reduction of Methane Emissions and Utilization of Municipal Waste for Energy in Amman	The goal of the project is to reduce emissions of greenhouse gases in Jordan by substituting bioenergy (methane gas and electricity), produced from anaerobic digestion of industrial and municipal waste in Amman, for fossil fuels. Additional greenhouse gas reduction will be achieved by reducing the uncontrolled release of methane from improperly disposed organic waste and organic fertilizer will be produced. The project's main activities include a combination of a landfill operation and a biogas plant. Although such a combination is logical in many respects, it has so far never been demonstrated in a developing country.	FULL	6	2.5	Under Implementation
4	Lebanon	Cross Sectoral Energy Efficiency and Removal of Barriers to ESCO Operation	The proposal will strengthen the capacity of the Government of Lebanon in implementing and sustaining long-term energy efficiency efforts that have a well-documented positive impact on the global as well as the local environment.	FULL	5	3.4	Under Implementation
5	Morocco	Market Development for Solar Water Heaters	Activities covered in this proposed project intend to remove barriers related to (i) improving the solar water heating quality; (ii) reducing the price and improve affordability; (iii) increasing awareness; and (iv) improving a policy context favorable for solar water heater market development.	FULL	6	2.97	Under Implementation
6	Regional (Egypt and Palestinian Authority)	Energy Efficiency Improvements and GHG Reduction	The project will address the removal of barriers to enhance energy efficiency in the regional context of Egypt and the Palestinian Authority. By creating an appropriate institutional setting and adequate capacity in the region to engage in energy conservation activities, alternatives to the existing tendency to meeting the ever-increasing demand for power by expansion of generating facilities will emerge. As such, the project will address both supply and demand side energy efficiency from an economy-wide perspective.	FULL	5	6.5	Under Implementation
7	Regional (Lebanon and Palestinian Authority	Energy Efficient Buildings	This medium-sized project will capitalize on the on-going surge of building and construction that is currently on-going in both Lebanon and the Palestinian Authority. Codes and standards for energy utilization and design in buildings will be established. The project will include mainly the capacity building for monitoring and verification of performance in addition to promotion and enforcement of standards. The project will also seek to learn from past and on-going experiences in other countries in the region, especially those with GEF support for issues such as Egypt and Tunisia. There will be no demonstration efforts in this project.	MEDIUM	5	0.99	Under Implementation

8	Regional (Morocco)	Building Capacity in the Maghreb to Respond to the Challenges and Opportunities created by National Response to the UNFCCC	The project takes a regional approach to increase capacity for meeting UN Framework Convention on Climate Change objectives, focusing initially on the Maghreb countries. Identifies and strengthens capacities of selected regional and sub-regional organizations, develops indigenous capacity to independently identify cost-effective greenhouse gas strategies, seeks to leverage private sector investments, and builds on national programmes to develop data of GHG sources and sinks.	FULL	EA	2.5	Under Implementation
9	Sudan	Community-Based Rangeland Rehabilitation for Carbon Sequestration	Carbon sequestration and biodiversity conservation in region where drought and overgrazing have had drastic effects. Project develops and implements community-based land use and range management master plans, revegetates economically-sensitive areas, and tests several new techniques to rehabilitate rangeland.	FULL	MFA	1.5	Operationally Completed
10	Sudan	Barrier Removal to Secure PV Market Penetration in Semi-Urban Sudan	Present project will complement an ongoing national project entitled Rural Solar Energy Development in the Kordofan state. It will focus on the application and dissemination of photovoltaic systems and other renewable sources of energy.	MEDIUM	6	0.73	Under Implementation
11	Syrian Arab Republic	Supply-Side Efficiency and Energy Conservation and Planning	This project has two components. The first is to supply-side intervention where the Government rehabilitates an old power plant so that GEF can implement efficiency control measures and maintenance management measures that would sustain a higher degree of thermal efficiency and high levels of availability. The second component has two parts: (a) industrial demand side management where energy service companies conduct energy audits and make recommendations, e.g. retrofitting; and (b) integrated resource planning where the country would do exercises in integrated resource planning that would recommend optimum mixes of renewables, i.e., conventional sources and energy conservation and demand-side management.	FULL	5	4.07	Under Implementation

12	Tunisia	Experimental Validation of Building Codes and Removal of Barriers to their Adoption	Through this project, an experimental validation process, EVP, accompanied by targeted barrier removal activities will be carried out to validate already developed energy efficiency codes and ensure their adoption of standards.	FULL	5	4.36	Under Implementation
13	Tunisia	Barrier Removal to Encourage and Secure Market Transformation and Labeling of Refrigerators	The project's goal is the increased use of and demand for energy efficient refrigerators. It will address the removal of barriers to enhance energy efficiency in Tunisia, as well as training and public awareness issues.	MEDIUM	5	0.71	Under Implementation

Table 4.3. Asia and Pacific

No.	Lead Country	Short Title	***Project Description***	Project Type	OP	GEF Project Amount (million US$)	Status
1	China	CPR: End Use Energy Efficiency Programme (EUEEP)	The objective of a partnership between the GOC and the GEF in energy efficiency would be to provide the incremental assistance necessary to remove barriers inhibiting realization of the full potential of energy efficiency measures and technologies across a range of problem areas. Given the long-term program approach, expected outcomes will be broader in nature than the outcomes generally targeted in individual projects. On the macro level, the program will provide an effective umbrella for all donor activities in energy efficiency in China, so that no projects in the sector go ahead without consideration of the overall framework.	FULL	5	17	Project Document Completion
2	China	CPR: Wind Power	This project aims to reduce GHG emissions by accelerating the growth of large-scale grid-connected wind power development to replace current fossil fuel consumption in China. The objectives of the project are to a) remove the policy, information, and institutional barriers to wind power development to promote wide replication of wind power commercialization in China; and b) facilitate the implementation of three wind farms to be financed by ADB through contingent grant support which will reduce technical risks associated with the deployment of this new technology and accelerate commercialization of wind farms in China. This project will adopt a bottom-up approach, which will primarily focus on acceleration of commercialization of wind power development in the three provinces selected in the ADB wind power project, and then promote and disseminate these provincial experience and lessons across the nation.	FULL	6	12	Project Document Completion

3	China	CPR: Targeted Research	Targeted Research Related to Climate Change is a climate change enabling activity and targeted research project funded by the GEF and the Government of China, implemented by the UNDP, and executed by the Chinese State Development Planning Commission. The principal aim of the project is to enable China to strengthen and develop capacity in research areas of relevance to compliance with the United Nations Framework Convention on Climate (UNFCCC) and to generate research results that may be used in formulating climate change related policy. Research activities of the project involve capacity development related to determining greenhouse gas (GHG) emissions from specific sectors, which will improve China's capacity to prepare national emissions inventories to be submitted as a part of future Enabling Activity under the requirements of the Convention.	FULL		1.5	Under Implementation
4	China	CPR: Methane Recovery from Landfill Waste	The project's long-term objectives are to promote wide spread adoption of landfill gas recovery technology in China based on the technical and organizational experience gained from the three pilot landfills proposed in this project. Specifically, these include 1) significant reduction of emissions of methane; 2) reduction in air, water and land pollution associated with refuse dumping; and 3) promotion of indigenous enterprises that will build and operate recovery systems and utilize the energy.	FULL	6	5.28	Under Implementation
5	China	CPR: Renewable Energy	This project is designed to promote the widespread adoption of renewable energy technologies in China by removing a range of barriers to increase market penetration of the technologies. The project will develop market-based institutions and instruments to attract new players in the renewable energy industry and increase investments in the sector. It will undertake activities to improve the local policy environment for renewable energy and initiate activities to demonstrate or strengthen the capabilities in several renewable energy technology fields. The project will strengthen local institutions working on renewable energy to be able to provide information and services to potential entrepreneurs and investors seeking to initiate renewable energy activities in China. The project will support pilot activities for five promising technologies, namely, rural electrification by solar and wind hybrids, wind farm development, large-scale biogas production, bagasse cogeneration, and solar water heaters.	FULL	6	8.8	Under Implementation

6	China	CPR: Energy Efficient CFC Free Refrigerators	The overall objective of this project is to promote the adoption of energy-efficient designs and technologies in the refrigerator industry in China under Operational Programme #5 of the GEF Operational Strategy. The operational strategy under this programme emphasizes removal of barriers to energy efficiency improvements and conservation, dissemination and implementation. This project will support the large scale application of energy efficient refrigerators in China, and it will complement CFC phase-out work planned for this sector under the Montreal Protocol.	FULL	5	9.61	Under Implementation
7	China	CPR: Green Lights/ Improving Lighting Efficiency	The project aims at addressing identified market barriers to wide spread use of energy efficient lighting in China by broadening the China Green Lights start-up efforts. The overall objective of this project is to save energy and protect the environment by reducing lighting energy use in China in 2010 by 10% relative to a constant efficiency scenario. The specific objectives include upgrading of Chinese lighting products; increased consumer awareness of, and comfort with, efficient lighting products and the establishment of a vibrant, self-sustaining market in efficient lighting products and services and associated supporting policies.	FULL	5	8.13	Under Implementation
8	China	TVE (Phase I and Phase II)	The second phase of the previous TVE project, whose primary objective is to raise the energy efficiency and reduce greenhouse gas emissions of the rural industrial sector in China by selecting several TVEs to carry out demonstration projects involving improved technologies, innovation, maintenance techniques, technical transformation, staff training and commercializing the improved technologies. It will cover the small-scale town and village brick, cement, metal casting and coking establishments. The project removes key market, policy, technological, and financial barriers to the production, marketing and utilization of energy efficient technologies and products in these industries.	FULL	5	8.99	Under Implementation

9	China	CPR: Fuel Cells in the Transport Sector	This project will help catalyze the cost-reduction of fuel-cell buses (FCBs) for public transit applications in Chinese cities by supporting significant parallel demonstrations of FCBs and their fueling infrastructures in Beijing and Shanghai. In collaboration with the Chinese national government, the municipal governments of Beijing and Shanghai, and the private sector, the GEF and UNDP will assist the public transit companies of Beijing and Shanghai to obtain 6 FCBs each and to operate these over a combined total of 1.6 million km. The knowledge and experience gained through this project will enable the technology suppliers to identify cost reduction opportunities and the host public transit operators to gain valuable experience needed to adopt larger fleets of FCBs in the future. Finally, a series of activities will also focus on defining a detailed strategy for large-scale FCB implementation in China, which is planned as follow-on to this initial project.	FULL	11	5.81	Under Implementation
10	China	CPR: Coal Bed Methane	The Project assisted China in controlling emission of methane, a potent greenhouse gas and thereby aims to better protect the global and local environment. This aim was achieved by technical and institutional preparation for the formulation of the national strategy to develop the methane industry, by introduction and demonstration of a wide variety of technologies and techniques required, and by sensitization of policy makers of the Government both at central and local levels about environmental and economic significance of rational recovery and use of methane resources. Three benefits have resulted from the project: improved air quality for the local and international communities, improved safety environment for miners and a new clean-burning energy source.	FULL	STR M	10	Financially Completed
11	Fiji	FIJ: Renewable Energy Hybrid Village Power	This project is aimed to reduce greenhouse gas emissions through commercial utilization of renewable energy hybrid village power systems which would replace the diesel generators currently used in Nabouwalu, and which could be replicated in other parts of Fiji. This objective is consistent with the goal of FDoE to promote development of renewable energy, which is be exemplified by the Nabouwalu system.	MEDIUM	6	0.74	Under Implementation

12	India	IND: Fuel Cell Bus	The project consists of two phases. Phase 1, the proposal for which is described in this document will involve completing assessments of the status and prospects for commercialization of hydrogen fuel cell bus technology, potential hydrogen resource supplies, and refueling and infrastructure networks in India. Phase 1 will culminate in the preparation of a proposal to the GEF for hydrogen fuel cell bus demonstration and commercialization activities. The Phase II project that will be designed to contribute significantly toward achieving the long-term objective of reducing the costs of fuel cell buses to near-competitive levels in India.	FULL	7	5.98	Project Document Completion
13	India	IND: Coal Bed Methane	This project will demonstrate the commercial feasibility of utilizing methane recovered during coal mining activities from coal and surrounding strata before, during and after extraction of coal. Recovered methane will be used as fuel in a 1MW internal combustion generator and in 50 tones mine dumper trucks that are powered by converted bi-fuel engines.	FULL	6	9.19	Under Implementation
14	India	IND: Removal of Barriers to Biomass Power Generation in India (Part I)	The objective of this two-part project is to remove barriers to the increased use of biomass energy sources for generating electricity for own consumption and export to the grid. This project aims at accelerating the adoption of environmentally sustainable biomass power and cogeneration technologies in India. It will promote combustion, gasification and cogeneration technologies using different types of captive and distributed biomass resources for electricity generation. Further, the project will induce investments in the three identified major biomass power sectors: cooperative sugar mills; agro- processors and biomass producers; and distributed or decentralized biomass. Part I of the project will focus on providing technical assistance to remove the identified barriers and implementing 7 model investment projects to demonstrate the use of biomass in those applications with the greatest potential for replication.	FULL	6	5.65	Project Document Completion
15	India	IND: Dev of High Rate BioMethane - Reducing Greenhouse Gas Emissions	The project develops the national master plan for the generation and utilization of bioenergy, creates commercially viable packages for replication, and promotes and disseminates technology for high-rate bio-methanation. The project will introduce, demonstrate, and standardize a wide variety of cost-effective technologies.	FULL	6	5.5	Under Implementation

16	India	IND: Optimizing Dev of Small Hydel Resources in Hilly Areas	The project's overall objective is to formulate technical and economic guidelines and to adopt advanced, feasible, and environmentally superior technologies for optimizing planning and development of small hydro resources in the hilly region. The project will provide renewable, perennial, and non-fossil fuel-based energy to the region, thereby reducing carbon emissions and helping to prevent deforestation in such ecologically-fragile areas. Energy produced through the project can meet lighting, cooking, heating, agricultural and commercial needs. The project will contribute to reduction of population migration to cities and mega-cities by creating local opportunities for employment, and it will help prevent soil erosion through better management of water resources for agricultural and related activities.	FULL	5	7.5	Under Implementation
17	India	IND: Carbon Emission Reduction Through Biomass Energy for Rural India	This project aims at developing and implementing a bioenergy technology package to reduce GHG emissions and to promote a sustainable and participatory approach to meeting rural energy needs. The project will be implemented mainly in two panchayats (a cluster of about 24 villages), of Tumkur district in Karnataka. The project goals will be achieved through (i). Demonstrating the technical feasibility and financial viability of bioenergy technologies on a significant scale, (ii). Building capacity and developing appropriate mechanisms for implementation, management and monitoring of the project; (iii). Developing financial, institutional and market strategies to overcome the identified barriers for large-scale replication of the bioenergy package for decentralized applications; and (iv). Disseminating the bioenergy technology and information package on a large scale.	FULL	6	4	Under Implementation
18	Iran (Islamic Republic of)	IRA: Carbon sequestration	The major objective of the project is sequestering carbon through the establishment of a hand planted Haloxylon forest. The secondary objective is to build capacity through training and extension activities and promote environmental awareness. The final objective is to rehabilitate a desertified land and increase the sustainable community-based forage producer for local people.	MEDIUM	STRM	0.72	Under Implementation

19	Malaysia	MAL: Biomass Residue (Phase 1)	This project aims to reduce the growth rate of GHG emissions from fossil fuel fired combustion processes & unutilized biomass waste through the acceleration of the growth of biomass-based power generation & combined heat & power(CHP). It also aims to develop & exploit the energy potentials of biomass waste realized through the successful implementation of programs such as: 1. Information services & awareness enhancement; 2. Policy studies & capacity building; 3. Financial assistance for biomass energy projects; 4. Demonstration schemes; and 5. Biomass energy technology development.	FULL	6	4	Under Implementation
20	Malaysia	MAL: IEE Industrial Energy Efficiency	About one quarter of the total CO2 emissions from fuel combustion in Malaysia comes from manufacturing industries. Significant reductions in CO2 emissions can be effectuated by the efficient and rational use of energy in this sector. However, there are a number of barriers that hinder the implementation of energy efficiency and conservation efforts in the Malaysia context. This project aims to reduce such barriers and will contribute to the rational use and improved energy efficiency in Malaysian industries. In particular, capacity-building demonstration incentive schemes will be established to address inadequate information and perceived risk among industrial producers.	FULL	5	7.3	Under Implementation
21	Mongolia	MON: Commercialization of Strawbale Bldg. Tech.	Recent studies (under ALGAS) indicate that burning coal to provide heating for buildings accounts for over 50% of Mongolias CO2 emissions. On going work by the international NGO ADRA strongly indicates that by super-insulating small buildings, the amount of coal used to heat these buildings would be cut by over 75%. In this light the widespread commercialization of straw-bale technologies, through this project will enable this technology to become viable and Straw-bales and super insulation will have established themselves as a mainstream construction technology in Mongolia, in reducing not only the CO2 emissions but also the levels of wood cutting. About 25% of annual housing demand in Mongolia is conservatively projected to be met by straw-bale buildings, after this project removes all the barriers. Hence at least 72,000 less tons of coal will be burnt, and annual CO2 emissions will be reduced by at least 115,000 less tons. As a result of the project, straw-baled super-insulated houses will become viable and commercially successful in Mongolia.	MEDIUM	5	0.72	Under Implementation

22	Pakistan	PAK: Fuel Efficiency	This project aims to reduce at source emissions of greenhouse gases and other pollutants by improving fuel efficiency of road transport vehicles. This is to be achieved by the development of a market for instrumented tune-ups through the establishment of tune-up demonstration centers, providing training to mechanics and workshop owners and launching a public awareness campaign. At a later stage, a revolving loan fund is to be set up for financing the purchase of tune-up equipment by private sector entrepreneurs. A number of special studies to identify long-term options and to prepare policy recommendations for sustaining fuel efficiency in the road transport sector will also be carried out.	FULL	5	7.0	Under Implementation
23	Philippines	PHI: Palawan Alternative Rural Energy and Livelihood	The province of Palawan has enacted the Strategic Environmental Plan, which guidelines for the protection of the environment and the natural resources of Palawan in the context of its economic development. This his project will encourage the provincial government to spend a large portion of the expected revenues from natural gas on renewable energy development, and the RESCO will be able to extend the renewable energy services to entire Palawan and other parts of the Philippines.	MEDIUM	6	0.75	Under Implementation
24	Philippines	PHI: Renewable Energy Project (CBRED)	The UNDP-GEF PDF-B work that lead up to this proposal identified multiple barriers to the rapid market expansion of new and renewable energy (NRE). This project removes key market, policy, technical and financial barriers through a rationalized program. The project components include: a) strengthening the capacity of the GOP agencies to enact and implement sound NRE policies; b) providing information for targeted audiences to build an NRE market; c) creating a "one-stop-shop" market service center for preparing and promoting NRE projects; d) increasing coordination among organizations concerned with NRE; e) assisting the market penetration of NRE in remote, off-grid communities by providing incentives for innovative market delivery and financing mechanisms; f) improving the quality of NRE technologies and systems through assistance with standard setting. The project has been designed to be complementary to ongoing and planned NRE and rural electrification sponsored by the GOP. In particular this capacity building project will lay important groundwork for future NRE-related projects in the country.	FULL	6	5.14	Under Implementation

25	Regional PIREP	RAS: Pacific Islands Renewable Energy	This project will promote an environment within the Pacific Island Countries (PICs) conducive for the widespread implementation of renewable energy technologies (RETs) through the removal of bias policies (fiscal, financial, regulatory, technical, information) and institutional structures currently favoring fossil fuel-based technologies over RETs. It will also establish the frameworks and capabilities required for the sustainable management (design, implementation, monitoring, maintenance and the evaluation) of applicable renewable energy (RE) projects in each PIC. Appropriate RET demonstration schemes will also be implemented showcasing not only the merits of the technology application but also the process by which such applications are designed, developed, financed, and delivered. Such schemes will cater to replicable and economically profitable "win-win" transactions and activities to kick-start the growth of profitable transactions and a sustainable renewable energy market in the PICs and other Small Island Developing States (SIDS).	MEDIUM	6	0.70	Under Implementation
26	Sri Lanka	SRL: Renewable Energy	This project aims to remove barriers to the expanded and sustainable utilization of renewable energy in Sri Lanka by facilitating and accelerating the use of renewable energy technologies and energy efficiency measures in Sri Lanka, thus reducing the need for additional fossil fuel thermal power stations and the decentralized use of kerosene and wood fuel. The project has been developed with the objectives of supporting activities for enhancing the World Bank/GEF Energy Services delivery project.	FULL	6	1.51	Under Implementation
27	Thailand	THA: Biomass Cogeneration	This project aims to reduce GHG emissions by accelerating the growth of biomass co-generation and power generation technologies to replace current fossil fuel consumption in Thailand. The objective of the project is to a) build capacity to provide information and services to potential biomass power project investors; b) improve the regulatory framework to provide financial incentives to biomass co-generation and power projects; c) create easy access to commercial financing for biomass co-generation and power projects; and d) facilitate the implementation of two initial biomass power pilot plants through support for commercial guarantees which will reduce technical risks associated with the deployment of this new technology in Thailand.	FULL	6	6.8	Under Implementation

Table 4.4. Latin America and the Caribbean

No.	Lead Country	Short Title	***Project Description***	Project Type	OP	GEF Project Amount (million US$)	Status
1	Bolivia	Rural Electrification with Renewable Energy through the Popular Participation Process	The programme will remove barriers to the successful implementation of rural electrification projects using renewable energy technology. By focusing on the financial, institutional, technical and human resource barriers, the Program will be sustainable and replicable in other areas of the country. Because of the socio-economic and institutional diversity found in rural Bolivia, as well as the innovative nature of the Program, the experiences in each community will be carefully documented and evaluated in order to identify the most viable and cost-effective options to meet the goals of renewable rural electrification. The proposed Program will establish 22 electrification projects in Bolivia's rural areas. Using historical data of CO2 emissions generated by the normally utilized diesel generation equipment, it is estimated that the average municipal-level project of this program will avoid the production of approximately 50,59 MT of CO2 for each year of the operation. In this manner, the 22 projects will contribute to avoid the production of nearly 21,000MT of CO2 during a 25-year period. Additionally, through the use of the funds recovered by the revolving fund, another 47 projects can be implemented in the next 25 years.	FULL	6	4.23	Under Implementation
2	Brazil	Biomass Integrated Gasification/Gas Turbine (BIG/GT)	Adaptation of promising technology to generate electricity through plantation grown fuel. Project resolves important engineering, economic, and financial issues, and assesses commercial feasibility and environmental compatibility of demonstration plant, which would be constructed in follow-on phase.	FULL	6	8.12	Financially Completed
3	Brazil	Biomass Power Generation: Sugar Cane Bagasse and Trash	This project will develop and evaluate the technology needed for the economic integration of cogeneration systems based on sugarcane bagasse and trash into sugar mill operations. Biomass integrated gasification/gas turbine technology is considered, in part using information and data generated from the GEF-financed pre-investment project BRA/92/G31- BIG/GT in which plantation-produced woodchips were the fuel. By using sugarcane trash and bagasse, resulting power production will be effectively neutral in terms of net carbon emissions.	FULL	6	3.75	Under Implementation

4	Brazil	Environmental Strategy for Electrolytic Hydrogen as a Mass Transit Fuel for Brazil	This project is to help accelerate the commercialization of fuel cell buses that can use hydrogen (or hydrogen carriers) produced from renewable resources. It is anticipated that reaching commercially mature cost levels will allow such buses to play major roles in the urban mass transit systems of Brazil and other countries, thereby helping to reduce the emission of a variety of pollutants, of which carbon dioxide is the most important from a global perspective. While fuel cell bus technology can be considered technically demonstrated, costs are not yet down to commercially- mature levels. Additional development and increased volume of production are needed to reduce costs.	FULL	11	12.27	Under Implementation
5	Chile	Reduction of Greenhouse Gases	Given changing conditions in energy markets since it was initiated, the project has undergone two substantive revisions aimed at pursuing the original goals of reduction of greenhouse gases in Chile but using different approaches. The project will demonstrate power generation through biomass gasification, and assist small and medium enterprises in the Santiago area to improve the efficiency of energy combustion by facilitating the replacement of older systems with newer ones with improved air and temperature controls.	FULL	6	1.70	Under Implementation
6	Chile	Removal of Barriers to Rural Electrification with Renewable Energy	The project will help remove the existing barriers to the use of Non-Conventional Renewable Energies (NCRE) within the framework of the National Rural Electrification Program of Chile, by developing a set of activities that will allow for a decrease in the greenhouse gas emissions produced by energy sources in rural areas and improve the living conditions of rural communities. By means of co-funding and a Financing Mechanism, approximately 10,370 households out of a total household market of 74,000 will be supplied with electricity. This project also aims to generate, within rural electrification, the market conditions that will allow for the reduction of emissions produced by diesel-fueled electricity systems. The desired effect is to establish the market conditions for the NCRE to develop in rural and urban areas.	FULL	6	5.98	Under Implementation

7	Costa Rica	National Off-Grid Electrification Programme Based on Renewable Energy Sources (Phase 1)	The overall objective is to reduce Greenhouse Gas Emissions (GHG) by promoting the use of decentralized renewable energy systems in areas isolated from the National Interconnected System (SNI) of Costa Rica. The project will help remove existing barriers that prevent the utilization of renewable energy sources in remote rural areas that are inaccessible through conventional grid extensions. This will be achieved in two phases. Phase I will focus on the creation of a systematic approach within the Costa Rican energy sector to rural electrification with renewable energy. This will include the creation of an institutional, financial, and regulatory environment supportive of renewable energy. Phase II will focus on the implementation of this approach by including renewable energy projects within the national initiative to reach all Costa Rican households with modern sources of electricity. As a result, it is expected that 329 communities will receive electricity through either micro-hydro or photovoltaic systems; reducing CO2 emissions by estimated 210 thousand tons over the project lifetime.	FULL	6	0.98	Project Document Completion
8	Cuba	Producing Energy Efficient Home Refrigerators without Making Use of Ozone Depleting Substances	The Cuban Government is engaged in a significant effort for the technological conversion of the INPUD home refrigerators manufacturing line. New Cuban refrigerators should be highly efficient from the point of view of power consumption and, as additional features, should not use substances depleting the ozone layer (ODSs). The government investment, of about 7 million U.S. dollars, will allow an output of up to 30,000 refrigerators annually. This medium-sized project is expected to cover the incremental costs associated with this investment, under operational program No.5 on Climate Change that foresees the elimination of obstacles for electric power conservation and efficiency. The project will address design problems in the new refrigerators, the technical training of INPUD staff and will complete some equipment on time, especially that in the control laboratory, associated with the implementation of the ISO 9000 standards.	MEDIUM	STR M	0.75	Under Implementation

9	Guatemala	Renewable Energy-based Small Enterprise Development in the Quiche Region	This project will create and /or strengthen the required renewable energy-based inputs for small enterprise development, including the small enterprise development necessary to deliver renewable energy-based services for industrial, communal and domestic purposes in the Quiche region. This project will provide the technical assistance to increase the sustainability of this effort, especially related to small enterprise development, increasing economic self-sufficiency and raising the quality of life of local population.	MEDIUM	6	0.75	Under Implementation
10	Mexico	Demonstration Project of Hydrogen Fuel Cell Buses and an Associated System for Hydrogen Supply in Mexico City (Phase 1)	Full-scale project will promote the development, manufacture and large-scale commercialization of hydrogen-fuel cell buses (FCBs) in Mexico, through the initial operation of a fleet of 10 fuel cell buses in Mexico City during 5-year period. This project represents the first part of a two-part project designed to test - under conditions of commercial operation - a zero emissions technological option for public transport in a dynamic metropolitan area.	FULL	11	5.07	Under Implementation
11	Mexico	Action Plan for Removing Barriers to the Full Scale Implementation of Wind Power in Mexico (Phase 1)	This project aims to reduce global CO2 emissions by 4 million tones (Mt) per year by promoting the development of a commercial wind energy market in Mexico with a target of 2000 MW of installed wind power capacity in ten years. Phase 1 of the project will launch a comprehensive and systematic effort to reduce identified barriers to wind energy development, beginning with a coordinated initiative aimed at revising the institutional, legal and regulatory frameworks of the electricity sector so that they provide a more level playing field for wind energy. An educational campaign, geared towards raising awareness among government officials of the benefits of wind energy, will be carried out simultaneously. Technical, informational and human resource barriers will be addressed through the creation of a regional centre for wind energy technology. At this centre, local technicians and engineers will obtain hands-on experience in the operation of a diverse range of wind turbines, wind energy equipment will be assessed for operation under local conditions, and international standards and best practices will be applied and adapted for Mexico. A set of comprehensive feasibility studies will be developed in Phase 1, in conjunction with any required preparatory activities, all geared toward the formulation of three 15 MW business-demonstration wind power plants. Lessons learned end best practices will be monitored and documented to assist future	FULL	6	4.73	Project Document Completion

			developments. Data and experience gained from both phases of the project will be widely disseminated throughout Mexico and Latin America, by means of a best practices manual and a series of training courses and workshops as well as via the internet.				
12	Nicaragua	Small Scale hydro-electricity for Productive Use	This project aims to reduce CO2 emissions by 343,670 tons at a 10 year horizon by promoting the development of hydroelectricity-based rural electrification for productive uses in Nicaragua for a total of around 10 MW and 30 projects. Project activities are designed to reduce institutional, financial and information and capacity related barriers to create a market stream hence reducing implementation costs. It is hoped that international donor contributions would be directed in a rational manner toward renewable energy based rural electrification for productive use, consistent with Nicaragua Strategy for Poverty Reduction. 30 local public/private electricity companies will be set up to operate and maintain hydro-based system in a sustainable manner and with O&M and amortization related costs paid by consumers. Project sustainability is achieved through this mechanism complemented by a watershed management and capacity building scheme and by the creation of a financial revolving facility as a sub-account of FODIEN. This effort is closely coordinated with the World Bank PERZA project, a portion of which is subject to this joined presentation.	FULL	6	3.48	Project Document Completion
13	Peru	Technical Assistance to the Centre for Energy Conservation	Project will enable Peruvian NGO to become fully functioning regional training centre which, among other activities, will develop program of emission control for Lima. Emissions control workshops and study tours will build upon energy audits and efficiency demonstrations already conducted successfully.	FULL	5	0.81	Operationally Completed
14	Peru	Photovoltaic-based Rural Electrification in Peru	The beneficiaries of the project would be rural households ill-suited for grid extension and where use of solar PV systems represent the least cost option to deliver electricity services. The aim is to install 12,500 PV systems over 5 years in four regions of the country. This will be done through small enterprises and marketing arrangements developed cooperatively with rural communities.	FULL	6	3.95	Under Implementation

15	Peru	Renewable Energy Systems in the Peruvian Amazon Region - RESPAR	This project will assist in removing technical, financial, informational and institutional barriers to renewable energies, through (i) installation and operation of RAPS systems in Indiana and Padre Cocha; (ii) identification and training of private RAPS systems operators; (iii) establishment of energy efficiency program and tariff structure; (iv) identification and promotion of income generating activities; (v) coordination, monitoring and evaluation of RAPS systems; and (vi) promotion of policy dialogues for renewable energy and rural electrification.	MEDIUM	6	0.75	Under Implementation
16	Peru	Obtaining Biofuels and Non-Wood Cellulose Fiber from Agricultural Residues/Waste	This projects aims at the installation and operation of equipment for primary treatment of biomass (sugar cane bagass) and production of biofuels, demonstrating the viability of using agricultural waste residues for energy generation. The project main objectives are: to reduce sugar cane harvesting cost and transportation cost from field to factory; to obtain biofuels at lower costs than fossil fuels of caloric equivalence; to improve the conversion relation sugar cane/sugar, sugar cane/molasses, molasses/ethanol; and to substitute in the pulp and paper industry the wood cellulose fiber by the cellulose fiber contained in the sugar cane bagass.	MEDIUM	7	0.97	Under Implementation
17	Regional	Regional Cooperation to Support Global Change Research in Countries of the Inter-American Institute for Global Change Research	This project aims at improving the capacity of participating countries to conduct research on global climate change issues, establishing appropriate networks and methodology. Participating countries: Argentina, Bolivia, Brazil, Chile, Colombia., Costa Rica, Cuba, Dominican Republic, Ecuador, Mexico, Panama, Paraguay, Peru, Uruguay.	FULL	5	2.90	Operationally Completed

18	Regional	Caribbean Renewable Energy Development Programme (CREDP)	This project aims at removing barriers to renewable energy utilization in the Caribbean. Through specific actions to overcome policy, finance, capacity and awareness barriers it is estimated that the contribution of renewable energy sources to the region's energy balance will be significantly increased. Currently, renewable energy provides less than 2% of the region's commercial electricity. It is estimated that due to the planned barrier removal activities the share of renewable energy could reach 5% by 2015. This would imply annual reductions of CO2 emissions by some 680,000 tons. Part of the GEF funding will be used through non-grant instruments to remove incremental risks related to RE investments thus improving the cost-effectiveness of the GEF resource utilization. Participating countries: Antigua and Barbuda, the Bahamas, Barbados, Belize, British Virgin Islands, Cuba, Dominica, Grenada, Guyana, Jamaica, St Kitts and Nevis, St Lucia, St Vincent and the Grenadines, Suriname, Trinidad and Tobago and Turks and Caicos.	FULL	6	4.07	Project Document Completion
19	Regional	The creation and strengthening of Capacity for Sustainable Renewable Energy Development in Central America (FOCER)	The project will create and strengthen the capacity for renewable energy project development based on regional cooperation and in-country linkages, thereby reducing greenhouse emissions by fostering small-scale renewable energy in Central America. It will (i) remove institutional, financial and technical barriers to increase access to basic energy services for rural areas communities, (ii) replace fossil fuels and reduce firewood consumption; (iii) initiate discussions to facilitate the integration of global environmental protection into the energy policies of the Central American political agenda. The project will implement replicable experiences in the seven participating countries.	MEDIUM	6	0.75	Operationally Completed

Table 4.5. Global Projects

No.	Lead Country	Short Title	***Project Description***	Project Type	OP	GEF Project Amount (million US$)	Status
1	Global	Training program on Climate change (CC:TRAIN)	The project aims to enhance the capacity of developing countries to implement the United Nations Framework Convention on Climate Change as well as take advantage of the opportunities provided by the convention to harmonize climate change considerations with national development goals. The programme employs training resources developed during the Pilot phase and by other programmes and institutions and facilitates the sharing of resources among and between other GEF/UNDP climate change projects.	FULL	5	2.56	Operationally Completed
2	Global	Alternative to Slash and Burn Agriculture	The purpose of the project is to 1) identify land-use practices that produce environmental benefits and 2) provide guidelines and analytical tools to governments and developing agencies.	FULL	STRM	3	Operationally Completed
3	Global	Research on Methane from rice fields	The project is designed to establish, in collaboration with national programmes in major rice growing countries, reliable data about the scale and control mechanisms of methane emission of major rice growing ecosystems and to foster sustainable rice productivity and production by providing methane mitigating technologies that are technically and socio-economically feasible.	FULL	STRM	5	Operationally Completed
4	Global	Technical Assistance to LDCs to implement the UNFCCC 8/CP 8 Decision on NAPAs	The project aims for significantly enhancing national institutions capacity and community involvement in managing NAPAs projects. By building the scientific and technical expertise of the LDC delegations, this project will reduce the existing knowledge gap about NAPAs tools and decision-making processes to allow the production of high quality NAPAs.	MEDIUM	MFA	0.87	Under Review by GEFSEC

PAPER NO. 5: UNITED NATIONS ENVIRONMENT PROGRAMME (UNEP)

UNITED NATIONS ENVIRONMENT PROGRAMME CAPACITY-BUILDING ACTIVITIES TO IMPLEMENT 2/CP.7 OF THE UNFCCC

Turning words into actions is no easy task. Often tools need to be developed, new skills learned, institutional infrastructures evolved. An essential foundation to achieve all this depends upon the capacity of the people. Capacity building is central to the work of UNEP. In whatever field UNEP finds itself working, whether in assessing global environmental trends and conditions, developing international or national legal instruments for environmental management, or encouraging new partnerships and mind-sets within civil society and the private sector, capacity building is, and has always been, an integral component.

It is the mandated role of UNEP, as the voice for the environment within the United Nations system, to promote the incorporation of environmental protection into development planning at all levels. UNEP also has the responsibility of helping national, regional and global bodies to develop the capacity to do so. The UNEP mission statement is a manifesto for capacity building.

The organisation's role is "to provide leadership and encourage partnership in caring for the environment by inspiring, informing and enabling nations and peoples to improve their quality of life without compromising that of future generations." How UNEP fulfils its mandate within the UNFCCC framework is the subject of this submission. Sustainable development is the goal. Capacity building is a means to achieving it.

What does that mean in practical terms? UNEP develops environmental capacity in developing countries and countries with economies in transition in three principal ways:
• Facilitating and supporting environmental institution building by governments at regional, sub-regional, national and local levels.
• Providing expert advice on the development and use of environmental concepts and instruments.
• Developing regional programmes for the environment.

The major results of UNEP activities should include:
• International arrangements to enhance environmental protection and policy advice to governments, multilateral organisations and others to strengthen environmental protection and incorporate the environment into the sustainable development process.
• Periodic assessments and scientifically sound forecasts to support decision making and international consensus on the main environmental threats and responses to them.
• More effective co-ordination of environmental matters within the United Nations system.
• Greater public awareness and capacity for environmental management and effective national and international responses to environmental threats.

UNEP input to capacity building within the United Nations Framework Convention on Climate Change (UNFCCC) focuses on the following scope of needs and areas identified in 2/C.P.7:
(a) Assessment for implementation of mitigation options
(b) Development and transfer of technology
(c) Vulnerability and adaptation assessment
(d) Capacity building for implementation of adaptation measures
(e) National communications
(f) Research and systematic observation
(g) Education, training and public awareness

(h) Clean development mechanism

(a) Assessment for implementation of mitigation options

UNEP has always been concerned about energy because energy production and use cause a wide range of serious environmental local, national, regional and global problems. In recent years, global warming and climate change have thrown a spotlight on the links between energy use and the global environment. At the same time energy poverty hinders the economic and social development of billions of people. UNEP is working to help countries meet the challenge of sustainable energy—the production, delivery and use of energy in ways that support human development in all its social, economic and environmental dimensions.

The goal for UNEP is to insert a longer term, environmental dimension into energy sector decisions. UNEP activities enable decision-makers to understand better the link between the energy choices they face and broader sustainable development issues. Working with a wide range of partners, UNEP helps develop and implement approaches for:
• Analysing various energy policies.
• Climate change mitigation.
• Energy sector reform.
• Industrial energy efficiency.
• Environmentally sound transport choices.

Strategies that improve energy policy analysis are complemented by tools that help decision-makers achieve practical solutions to energy problems. A special effort is made to help financial institutions understand better the good investment opportunities available in renewable energy and energy efficiency projects, work that builds off UNEP co-operation with banks and insurance companies. A new UNEP partner, the Basel Agency for Sustainable Energy (BASE) is instrumental in this effort. UNEP efforts are primarily directed at developing countries, and much UNEP work is done jointly with energy/environment/development institutes world-wide. UNEP is now strengthening this informal network of centres of excellence to build a tighter global community of sustainable energy practitioners, a structure where creative solutions to energy and environment problems are more easily shared. One of the strengths of UNEP in the energy field is the UNEP Collaborating Centre on Energy and Environment (UCCEE). The UCCEE group of international scientists, engineers and economists provides technical and analytical support to UNEP and partners in developing countries. UCCEE works catalytically, supporting research by local institutions, co-ordinating projects, disseminating information and carrying out a full in-house research programme in close collaboration with an international and multidisciplinary community of sustainable energy and development practitioners.

<u>The UNEP Energy Programme</u>

The UNEP Energy Programme addresses the environmental consequences of energy production and use, such as global climate change and local air pollution. UNEP builds the capacities of decision-makers in government and the private sector to make better, more informed energy choices, which fully integrate environmental and social costs.

UNEP Energy is concerned with issues of:
• Renewable energy.
• Energy efficiency.
• Sustainable transport.

• Energy finance.
• Energy policy.

Most of this work is conducted with partners, including governments, NGOs, academic and research institutions, banks and private sector companies. Important resources of the programme are the UNEP Collaborating Centre on Energy and Environment (UCCEE) and the Basel Agency for Sustainable Energy (BASE). Financial Support for the programme comes from the UNEP Environment Fund, bilateral donors, the Global Environment Facility (GEF) and the United Nations Foundation.

Some UNEP energy projects and activities

Renewable energy

- The African Rural Energy Enterprise Development Initiative (AREED) is enabling the private sector to deliver affordable energy services based on clean and renewable energy technologies in five African countries. A similar initiative has started in Northeast Brazil.
- UNEP has helped Natural Resources Canada to enhance the performance of the RETScreenTM renewable energy pre-feasibility analysis software by adding a greenhouse gas emissions calculator.
- UNEP recently published *Natural Selection: Evolving Choices for Renewable Energy Technology and Policy*, which describes different renewable energy technologies and the policies that can make them a reality. Other publications include: *Technology without Borders: Case Studies of Technology Transfer*, in collaboration with the International Energy Agency and the Climate Technology Initiative; *Managing Technological Change*, which provides a succinct explanatory summary of the IPCC Working Group III Special Report; and *Methodological and Technological Issues in Technology Transfer*.

Energy efficiency

- The GEF funded Energy Management and Performance Related Energy Savings Scheme (EMPRESS) project is helping establish specialised energy service companies that provide services to industrial and commercial clients in CEE countries.
- With the World Bank, UNEP is investigating ways to overcome financial sector barriers to lending for energy efficiency projects in Brazil, China and India.
- A GEF-funded effort is helping national cleaner production centres integrate energy efficiency into their mainstream programmes.

Energy policy

- Efforts in sub-Saharan Africa are aimed at helping governments with power sector reform, energy sector finance, energy subsidy reform, and climate change policy.
- UNEP is creating a Network of Energy Centres of Excellence, which promotes sustainable energy approaches through co-ordinated programmes of policy analysis, practical advice, targeted research and investment promotion.
- Together with the International Energy Agency, UNEP has conducted a series of regional workshops on environmental, social and economic impacts of energy subsidies and their reform. Summary reports of the meetings including policy recommendations are available.

Energy finance

- By working with various types of financial institutions, insurance companies and export credit agencies, UNEP is exploring ways to direct finance and investment flows to sustainable energy projects, particularly in developing countries.

- The Renewable Energy Technology/Energy Efficiency Investment Advisory Facility (IAF) helps financial institutions evaluate potential renewable energy or energy efficiency investments in developing countries and countries with economies in transition.
- UNEP is working with rural Indian finance institutions to develop a credit facility for solar system purchases that uses UN Foundations resources to buy down the initial risks of lending to this sector.

Transport

- UNEP manages a Mobility Forum for discussion and joint activities involving representatives of major automotive manufacturers. A report on past activities and remaining challenges in the field of road transport and the environment is under preparation, and indicators for sustainability reporting specific to the automotive sector are being prepared in a stakeholder dialogue process. Furthermore, a campaign on environmentally friendly driving behaviour is planned.
- UCCEE is also engaged in activities related to transport policy options like e.g. fuel pricing, integrated assessment of social and environmental aspects, etc.
- As a starting point for its work in the area of aviation and environment, UNEP organised a conference on airports and the environment in early 2002.

Solar credit facility

In Spring 2001, the United Nations Foundation (UNF) approved a planning grant for preliminary development of the solar credit facility in preparation for a full project submission to UNF and other foundation boards in 2002. The project development strategy involves five steps:

1. Prepare a brief on the design of a credit facility for one or two states in southern India, specifically addressing portfolio and risk mitigation issues, the use of direct refinance or related guarantees, and the transaction structure.
2. Carry out a set of consultations with stakeholder groups—rural finance institutions, solar vendors and government institutions—to assess the needs for solar PV financing and discuss ways in which targeted support could help banks increase lending for this sector.
3. Based on the consultations, propose a solar credit facility support mechanism and identify rural banking institutions as partners.
4. Design the facility and negotiate its terms with banking partners.
5. Prepare a comprehensive project proposal of $1.5 to $2 million for UNF and other foundation support that would allow UNEP and its partners to establish, implement and monitor the credit facility. The proposal would include letters of intent from the partner financial institutions and relevant government offices.

Rural Clean Energy Promotion

UNEP is initiating the Brazil Rural Energy Enterprise Development programme in north-eastern Brazil in partnership with its Collaborating Centre on Energy and Environment (UCCEE) and E&Co, a non-profit energy investment company created by the Rockefeller Foundation. B-REED seeks to develop new sustainable energy enterprises that use clean, efficient and renewable energy technologies to meet the energy needs of under-served populations, thereby reducing the environmental and health consequences of existing energy use patterns. B-REED will offer rural energy entrepreneurs a combination of enterprise development services and start-up financing. B-REED's services will include training, hands-on business development assistance and, for promising businesses, early stage investment and help to secure financing. B-REED will also work to broaden the skills of organisations in the energy and investment sectors to nurture energy entrepreneurs.

Sustainable Development & Climate Change

This area has emerged from COP8 as key for future climate negotiations. Prior to COP7, UNEP in collaboration with other partners initiated a programme, linking sustainable development and climate change. This looks at how to structure environmental and climate policy around development priorities. The focus is on how developing countries can contribute to managing the risks of climate change. This is a dimension of climate policy and action, amenable to be developed as a side-benefit of sound and internationally supported development.

An important thrust of this activity is to develop capacities of national policy-makers to guarantee achievability. The challenge for integrated development and environmental policies is the practical question of how best to choose and stay on the paths that minimise the local and global environmental costs of relieving poverty, providing adequate food, getting electricity to households and industry, providing employment and transportation facilities consistent with the needs of developing country people. To reframe global environmental policies as deriving from development priorities does not make climate change easier to solve. Rather, it suggests that global collaboration on climate change should be approached on multiple levels through local and national development programmes, as well as though multilateral efforts to establish co-operation mechanisms within an equitable and efficient global climate change regime.

The programme includes country studies for Brazil, China, India, South Africa, Bangladesh, and West Africa. The first phase of these studies started with an identification of major linkages between current national development trends and climate change, including adaptation as well as mitigation policies. The energy and food/water sectors have been a special focus, and a number of potential win-win policies that both support SD policies and climate change have been identified in this scooping exercise. The studies have reviewed how the sector policies can be evaluated using specific SD indicators and available analytical approaches and tools. The initial country studies have also included an analysis of actors, stakeholders and the civil society that are important to the implementation of SD and climate policies. These stakeholders have participated in a first national workshop and have been invited to participate in ongoing dialogue sessions throughout the second project phase.

The Development and Climate Project will also strengthen the capacities of the different partners through scientific collaboration about integrated development and climate change research. The capacity will include enhancing the insights and experiences about methodological approaches, analytical tools, case studies, and participatory approaches that involve a broad range of stakeholders.

The capacity building activities will be conducted as “on the job” training exercises implying that the “learning” process in the project will be built into activities like:

- Methodological approaches and tools will be developed and tested as a joint effort between DC and IC partners.
- Team members from the IC partner organisation will follow the DC partners case study activities.
- DC and IC partners will participate in specific national experts in national training activities if needed.
- Comparative assessment of the project results in different project components will be carried out as a joint effort between all partners.

Sources and sinks of greenhouse gases

UNEP's activities in this area started by a GEF-funded project titled "Country Case Studies on Sources and Sinks of Greenhouse Gases". The project had the main objective of drawing up comprehensive inventories of greenhouse gas (GHG) emissions and sinks through country case studies within the framework of the United Nations Framework Convention on Climate Change (UNFCCC), and using the guidelines of the Intergovernmental Panel on Climate Change (IPCC)/Organisation for Economic Cooperation (OECD)/International Energy Agency (IEA). Country studies were carried out in nine developing countries and countries with economies in transition (Costa Rica, Gambia, Mexico, Morocco, Poland, Senegal, Uganda, Tanzania and Venezuela) by national country study teams with technical assistance from abroad.

Capacity building objectives and activities were an integral part of the project. In addition to the significant contribution of the project in establishing a scientific basis for future GHG inventory work and follow-up activities in the fields of mitigation assessments and GHG emission reduction policies, the project was highly successful in building capacity in the participating countries for complying with the requirements of the UNFCCC objective for national GHG inventories. Expertise was established in the countries to continue work on GHG inventorying and to further disseminate knowledge and expertise in this field to other countries. Project activities included national and regional workshops, networking among the national teams and partner organisations, actual implementation of the study by local experts and the establishment of links with other relevant projects and programmes.

The project led to the refinement and finalisation of the IPCC/OECD/IEA *Guidelines for National GHG Inventories*, and the subsequent approval of the guidelines by the Conference of the Parties to the UNFCCC as a standard method that the Parties to the convention may use to meet GHG inventory reporting requirements.

(b) Development and transfer of technologies

UNEP is fulfilling the objectives of the UNFCCC to promote transfer of environmentally sound technologies. An example of UNEP capacity building in the field of technology transfer is the work of the UNEP International Environmental Technology Centre (IETC). IETC, based in Japan, was established by UNEP in 1994 to support the sustainable management of urban areas and freshwater basins in developing countries and countries with economies in transition.

IETC pays specific attention to the promotion, adoption and use of environmentally sound technologies in helping solve urban environmental problems such as water quality, sewage, solid waste, energy, urban sprawl, land contamination, transport, air pollution and noise. With urban populations growing two and a half times faster than their rural counterparts, the United Nations estimates that urban populations will represent over 50 per cent of the world's total population by 2005. By 2025, more than 60 per cent of the world's population will live in urban areas. The estimated urban population in that year will be approximately 5.4 billion, of whom 77 per cent will live in developing countries. The management of freshwater basins is also of prime concern to IETC.

Over the last five years, IETC information and capacity building services have served the world. IETC publications are distributed globally. The information system and management tool, maESTro, is a global, comprehensive information directory of environmentally sound technologies that is appreciated for its objectivity and neutrality. IETC activities have reached almost 98 per cent of developing countries

and countries with economies in transition. The only countries its information materials and services have not reached are those that are unreachable because of war.

To build the capacity of UNEP clients and beneficiaries, IETC global training activities have included:
• A training course on environmental management for least developed countries, co-organised by the government of the Philippines in 1999.
• Two workshops on the full range of selection, application and management of environmentally sound technologies, held in Germany in 1997 and in Australia in 1998.
• Several international expert meetings and round tables, e.g. on solid waste management; environmental management systems; wastewater and storm water management; and environmental technology verification.
• A symposium on efficient water use, in Japan in 1999.

To enhance the knowledge base in its focal areas, IETC has undertaken two global surveys. The first was on information systems and sources that focus on environmentally sound technologies, done on the request of the Commission on Sustainable Development (CSD) in 1995. The results of this survey served as the basis for the creation of maESTro. The second global survey, although on a limited scale, was on endogenous environmentally sound technologies. Again, this was undertaken in response to a CSD suggestion. A recent resource tool developed by IETC is the Environmental Management Exchange and Resources Alliance for Local Development (EMERALD). EMERALD is an umbrella initiative that brings together existing initiatives and web sites related to urban and local environmental issues.

(c) Vulnerability and adaptation assessment

The 22nd Governing Council (2003) of UNEP resolved to strengthen the area of adaptation to climate change to support regional and national actions and programmes, including National Adaptation Programmes of Action (NAPAs) for Least Developed Countries (LDCs). The aim is to enhance programmes for reducing the vulnerability of developing countries to climate change, particularly pertaining to LDCs and the small island developing States. UNEP's activities are to develop scientific and technical capacities in developing countries to take incremental interventions to mainstream climate concerns in development for addressing and reducing the negative impacts.

Learning by doing - scientific capacity building in developing countries

UNEP's work to enhance scientific capacity in developing countries is based on supporting "learning by doing" projects by extending financial and technical support to experts for undertaking research on priority areas. One major project is the *Assessments of Impacts and Adaptations to Climate Change (AIACC*), in collaboration with the IPCC to advance scientific understanding of climate change vulnerabilities and adaptation options in developing countries. By funding collaborative research and providing training and technical support, AIACC aims to enhance the scientific capacity of developing countries to assess climate change vulnerabilities and adaptations, and generate and communicate information useful for adaptation planning and action. AIACC is funded mainly by the Global Environment Facility (GEF) and executed jointly by START and the Third World Academy of Sciences (TWAS).

AIACC in its second year of implementation is already providing financial support to 24 regional study teams to conduct three-year investigations of climate change impacts, adaptation and vulnerability in 46 developing countries. The studies selected from more than 150 submitted proposals through a competitive peer review process involve 235 developing country scientists and more than 60 graduate and undergraduate students.

The AIACC regional studies are diverse in their objectives, scientific methods, and in the sectors and systems to be investigated. These include, among others, food security, water resources, livelihood security, and human health. Despite this diversity, the studies share a common "second generation" assessment approach that places understanding vulnerability at the centre of the assessment, engages stakeholders in the assessment process, and gives priority to strengthening the information base for making decisions about adaptation to climate change.

UNEP is also supporting scientific capacities of developing country natural resource managers and scientists to help integrate the potential impact of climate change in their area of work and link with the national policy community. For example, on the request of Indian Government UNEP organised a *South Asia Expert Workshop on Adaptation to Climate Change for Agricultural Productivity* jointly with the Government of India and the Consultative Group on Agricultural Research (CGIAR) in New Delhi. The workshop attracted more than 150 participants, including senior policy makers and agriculture scientists from India, Nepal, Bangladesh, Sri Lanka and Bhutan. The main goal of the workshop was to identify strategic actions, nationally and internationally, to strengthen the planning process and decision making framework to mainstream adaptation to climate change in the context of agriculture. One immediate outcome of the workshop is a follow-up project that the Government of India is developing to identify actions to increase and/or sustain agricultural productivity in areas susceptible to climate change.

Similarly, UNEP was successful in supporting the capacities of African scientists and experts in the development of a climate action plan for the New Partnership for Africa's Development (NEPAD). Through UNEP's support and GEF funding the plan was developed by experts from the region focussing on the impact of climate change and adaptation activities. The main aim was to demonstrate an integrated assessment of vulnerability to food insecurity, climate change risks and adaptation strategies to manage disaster risks while promoting sustainable development. The action plan, which lists specific activities, once approved by the African Ministers of Environment will be discussed at a donor meeting to be held in Algiers in December 2003.

Another interesting project initiated by UNEP has been to develop scientific capacity in early warning systems for Glacier Lake Outburst Flooding hazards. The specific objectives were to inventorying of existing glacier lakes along the Hindu Kush Himalayas (Nepal and Bhutan), monitoring of potential risk lakes for draining; and preparation of an operational early warning mechanism for GLOF hazards. The global climatic change during the first half of the twentieth century has brought a tremendous impact on the high mountainous glacial environment. Many of the big glaciers melted rapidly and gave birth to the origin of a large number of glacier lakes. Due to the faster rate of ice and snow melting, possibly caused by the global warming, the accumulation of water in these lakes has been increasing rapidly and resulting sudden discharge of large volumes of water and debris and causing flooding in the downstream.

Recognising the positive synergy that can be gained by linking carbon sequestration activities with adaptation UNEP is also concentrating on capacity building and training of national focal points in developing countries for enhancing abilities to contribute to the negotiations. This is in recognition that the implementation of carbon 'sinks' projects will require a well-conceived institutional framework at the national level, which crosscuts between different sectors, namely, forestry, agriculture, environment and sustainable development.

Development of analytical tools and guidelines

Assisting developing country experts develop decision-making tools to help mainstream adaptation to climate change in national sustainable development planning is another aspect of UNEP's work. A project applying a vulnerability/adaptation approach to understanding climate change risks for

agriculture and developing vulnerability indices is one such example. The project will systematically link current approaches of vulnerability to short-term risks with emerging understanding of vulnerability to long-term development issues, such as sustainable livelihood security and global change, taking into account the changing nature of risks and uncertainty.

Approaching climate change through the perspective of vulnerability will facilitate links to sustainable development policy and emerging climate policy on adaptation. Exploration of potential impacts and adaptive capacity will be a useful contribution also to UNFCCC. The potential and constraints for adapting to climate change can only be identified through research that links local situation to global institutions, and that is the main aim of the project.

The project will demonstrate an integrated assessment of vulnerability to food insecurity, climate change risks and adaptation strategies to manage disaster risks while promoting sustainable development.

UNEP is specifically assisting the Least Developed Countries prepare the National Adaptation Programmes of Action (NAPAs). It includes providing training and support material to help Least Developed Countries (LDCs) identify priority activities for adaptation to climate change and its incorporation into national sustainable development planning as part of their National Adaptation Programmes of Action (NAPAs). This project will lead to the preparation of substantive training material for use at regional workshops for Least Developed Countries (LDCs) to prepare the National Adaptation Programmes of Action (NAPAs). The training material will then be published for long-term use by developing countries. The National Adaptation Programmes of Action will result in identification of urgent needs to cope with climate change and variability by the LDCs. It will also lead to strengthened technical capacity in LDCs to develop policy and programmes to cope with climate change.

Scientific collaboration

UNEP strengthens and expands co-operation within appropriate scientific organisations to build capacities on policy and know-how for reducing the vulnerability to climate change in various sectors, in particular water resources, biodiversity, agriculture, coastal zone management and health, in the context sustainable development. For example training workshops are held on impact assessment and adaptation in collaboration with various scientific organisations, pilot projects are initiated to develop and test methodologies for activities linking mitigation and adaptation to climate change and Governments are being supported to organise scientific conferences on climate change.

UNEP is developing, together with partners such as IUCN, FAO, and CGIAR, an approach to strengthen the science-policy interface by supporting an enhanced exchange of scientific knowledge in the forestry and agricultural sector to optimally utilise the synergy between adaptation and carbon mitigation measures. UNEP and its partners will also develop an approach to strengthen the science-policy interface by supporting an enhanced exchange of scientific knowledge in the forestry and agricultural sector pertinent to international and national environmental policy development in climate change.

UNEP along with IUCN and FAO is currently supporting regional capacities for the on-going negotiation on the modalities for afforestation and reforestation activities under the CDM in the first commitment period. Technical workshops have been held in Quito, Ecuador (2-4 October 2002), Nairobi, Kenya (21-23 January 2003) and Montevideo, Uruguay (9-1 February 2003). UNEP together with IUCN and FAO supported governments in Latin America and Africa with technical and legal support for the preparation of their submission on the topic.

Health

UNEP has published with its partners, on the assessment of climate change and health linkages and the management of environmental health hazards. Furthermore, UNEP, with its partners, has conducted several training courses and has prepared training material for capacity building of environmental health managers, particularly in developing countries.
Training activities, including manuals, include:
• Environmental management for vector control.
• Integrated management of pests.
• Climate change and human health.

UNEP has published a textbook *Basic Environmental Health* jointly with WHO. Several 'train the trainers' courses have been held in the use of the basic textbook. In addition, UNEP, jointly with WHO, WMO and Health Canada are preparing *Guidelines for Assessing the Health Impacts of Climate Change.* More recently, UNEP, jointly with IDRC, Canada, has been promoting the concept of ecosystem approaches to human health management through training, research, networking, promotional material and a global forum.

UNEP with UCCEE is hosting a website on health and economic impacts of air pollution (WWW.AIRIMPACTS.ORG) with the purpose of developing a web-based resource to increase global awareness of the health and economic impacts of air pollution including greenhouse gases, and improve collaboration and facilitate information exchange between experts and institutions involved in research and policy programs related to the health effects of air pollution. Partners and collaborators include:

Partners:
- •The United Nations Environment Program (UNEP)
- •The World Bank (WB)
- •The United States Environmental Protection Agency (USEPA),
- •The World Health Organization, Regional Office for Europe (WHO/Europe),
- •The United Nations Environment Program/Collaborating Centre on Energy and Environment (UNEP/UCCEE)
- •The National Renewable Energy Laboratory (NREL)
- •Health Effects Institute (HEI)

Collaborators:
- •Carnegie Mellon University (CMU)
- •Peking University Health Sciences Center
- •P. Catholic University of Chile (PCU)
- •Fudan University (formerly Shanghai Medical University)

(d) Capacity building for implementation of adaptation activities

UNEP is working with more than a dozen least developed countries, as a GEF implementing agency, to provide funding from the LDC Fund to prepare national adaptation programmes of action (NAPAs). These projects will enable the LDCs to develop national capacity through training and receipt of technical assistance to identify immediate and prioritised adaptation activities for the country including adaptation to extreme weather events.

UNEP is also involved in several initiatives to promote capacity for managing climate-related disasters that have profound environmental consequences.

Preparing for environmental emergencies
The Strategic Framework on Emergency Prevention, Preparedness, Assessment, Mitigation and Response is an important instrument that UNEP has developed in close co-operation with governments, United Nations entities and NGOs. The strategic framework identifies the institutional and global contexts for action on the management of environmental emergencies arising from natural and human induced disasters. The framework serves as key information source for developing regional, sub-regional and national programmes for disaster management and has therefore been widely distributed to governments and other relevant organisations.

UNEP has also developed a brochure on environmental emergencies which provides relevant information on environmental emergencies, including types of disasters, challenges and factors contributing to the increasing severity of disaster. It details the UNEP environmental emergency programme with examples of responses to the challenges. These two documents are important services for understanding issues relating to disasters that have profound consequences on the environment.

For example following the devastating floods that hit Mozambique between January and March 2000, a joint UNEP/UN-HABITAT mission was sent to Mozambique to assess the impacts of the floods on the environment and on human settlements. The joint mission report provided a framework for raising awareness of the extent to which Mozambique is vulnerable to natural disasters and formed a basis for the development of project proposals, three of which were included in the United Nations Consolidated Appeal for Emergency Relief and Initial Rehabilitation for Mozambique. The joint mission also prepared a comprehensive programme for mitigating the effects of floods on the environment and reducing vulnerability to future floods. The programme also raised awareness of environmental emergency management.

(e) National Communications

UNEP is supporting the governments of twenty-five countries to prepare national communications on their implementation of the UNFCCC through GEF funding: Bahrain, Bangladesh, Cameroon, Central African Republic, Comoros, Côte d'Ivoire, Djibouti, Haiti, Kenya, Lesotho, Libya, Mauritania, Mauritius, Mongolia, Nepal, Niue, Pakistan, Rwanda, South Africa, Tanzania, Turkmenistan, United Arab Emirates, Vietnam, Zambia and Zimbabwe. In addition, UNEP has successfully implemented, in collaboration with UNDP, a $3 million National Communications Support Programme providing technical assistance to developing countries.

In the area of direct support to the implementation of environmental conventions, UNEP has implemented and completed country case-studies in four countries also through GEF funding: Cameroon, Lesotho, Tanzania and Zambia. UNEP has successfully helped these countries to produce their initial national communications for submission to the UNFCCC secretariat. This activity also helped the countries to build capacity and awareness at community and government decision-making levels concerning climate change as it relates to sustainable development. During 2001 and 2002 several of the above mentioned 25 countries received funding for capacity building to conduct technology needs assessment.

(f) Research and Systematic Observation

El Niño Southern Oscillation (ENSO)
The term El Niño means 'Christ Child' and was first used by Peruvian fishermen in the late 1800s to describe the warm current appearing off the western coast of Peru around Christmas time. Today El Niño describes the warm phase of a naturally occurring sea surface temperature oscillation in the tropical

Pacific Ocean. The corresponding cold phase is called La Niña. El Niño events are linked to extreme weather across the globe. The 1997–1998 El Niño event was labelled as the 'El Niño of the century'. Climate-related natural disasters caused by this El Niño created havoc in many parts of the world, including loss of life,
destruction of infrastructure, depletion of food and water reserves, displacement of communities and disease outbreaks.

To help mitigate the effects of future El Niños and El Niñas UNEP initiated a project entitled Reducing the Impact of Environmental Emergencies through Early Warning and Preparedness: The Case of the 1997-98 El Niño. The project was implemented jointly with the National Center for Atmospheric Research (NCAR), the World Meteorological Organisation (WMO), the United Nations University (UNU) and the United Nations International Strategy for Disaster Reduction (ISDR), with funding from the United Nations Fund for International Partnership (UNFIP). The project studied the impacts of the El Niño event on sixteen countries in four major areas: Asia, Southeast Asia, sub- Saharan Africa and Latin America. The project reviewed the forecasts and impacts of the 1997-98 El Niño, and climate-related early warning and disaster preparedness systems in the countries to improve their ENSO coping mechanisms. Based on the review, the project identified research and policy needs and developed suggestions for regional and national disaster
preparedness plans for ENSO warm and cold events and their impacts.

(g) <u>Education, training and public awareness</u>

The 22nd UNEP Governing Council in February 2003 adopted a decision requesting UNEP to disseminate the IPCC's findings widely, complementing efforts underway under the UNFCCC on the implementation of Article 6 on education, training and public awareness. Together with WMO and other partners, we will seek to redouble our efforts in this field. UNEP remains fully committed to promoting the findings of the IPCC by informing the general public, business leaders and others about the causes and impacts of climate change and the response options available to us. UNEP staff have worked closely with the media to promote the TAR and other reports, with great success. We continue to produce booklets, information sheets and visually attractive graphics to help disseminate the IPCC conclusions.

Further activities on outreach and information on climate change that are being planned or implemented, include translations of the "IPCC Climate Change 2001: Synthesis Report", a CD ROM of the IPCC Third Assessment Report, a climate change calendar, greenhouse gas emissions graphics, popular guides to the IPCC Working Group 2 and 3 assessment reports in major UN languages, and translations of other selected IPCC reports.

(h) <u>Clean Development Mechanism</u>

The main activity in this area is the programme Capacity Development for the CDM funded by the Netherlands and implemented by UNEP/Risoe for UNEP. This commenced in 2002 and will continue through 2005.

The project helps establish GHG emission reduction projects that are consistent with national sustainable development goals, particularly projects in the energy sector. It seeks the development of national capabilities for enhancing capacities in non-Annex I countries to analyse the technical and financial merits of possible CDM projects and negotiate finance agreements with Annex I countries and investors.

The project aims at: (1) generating a broad understanding of the opportunities offered by the CDM in the countries participating in the project, and (2) developing the necessary institutional and human capabilities that allow developing countries to formulate and implement projects under the CDM.

Twelve countries in four developing regions are participating in the project:

North Africa and Middle East:	Egypt, Jordan and Morocco
Sub-Saharan Africa:	Côte d'Ivoire, Mozambique and Uganda
Asia:	Cambodia, The Philippines and Vietnam
Latin America:	Bolivia, Ecuador and Guatemala

The project has established an advisory committee with representatives of the UNFCCC secretariat, World Bank, UNDP, UNIDO, Asian Development Bank, the World Business Council for Sustainable Development and the Netherlands Government.

The programme has published a popular guide to the CDM for host countries, to be translated by national teams making it available for general use in Arabic, French, Spanish and Chinese.

The UNEP/Risoe team supports project implementation through an analytical work-programme funded largely by core resources.

The focus in 2003 will be on:

1. National and regional Phase I workshops, to be convened by March;
2. Contracting Phase II with national and regional institutions;
3. Phase II regional training workshops on CDM project cycle, possibly with PCF;
4. Development of analytical and training material on:
    - CDM project cycle guidance,
    - Baseline scenarios,
    - Sustainable development impacts criteria, and
    - Legal, institutional, and financial framework for project implementation.

The first publication in 2003 will be a CDM Project Guidance Report aiming an overview of the various steps in the national CDM project process. It will be based on internationally available best practice guidance and supplemented with new material, as relevant, which focuses on regional and national issues for implementing the CDM**.**

The Italian Government has recently indicated its desire to set up a CDM programme with UNEP-DTIE focusing on support to host countries and promoting sustainable energy projects under the CDM. The modalities are to be worked out. Indications are that support will be in the same order of magnitude as the Netherlands programme.

In addition to the CDM activities there is a need to further develop work on Emissions Trading and Joint Implementation. A first activity to gain visibility is a joint publication with UNCTAD in the form of a "layman's" Guide to Emissions Trading.

PAPER NO. 6: UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION (UNIDO)

ITEMS OF CAPACITY-BUILDING FRAMEWORK RELEVANT TO UNIDO ACTIVITIES

(a) Institutional capacity building, including the strengthening or establishment, as appropriate, of national climate change secretariats or national focal points;
(b) Enhancement and/or creation of an enabling environment;
(d) National climate change programmes;
(h) Assessment for implementation of mitigation options;
(j) Development and transfer of technology;
(k) Improved decision-making, including assistance for participation in international negotiations;
(l) Clean development mechanism;
(n) Education, training and public awareness;
(o) Information and networking, including the establishment of databases.
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Since 1999, UNIDO has supported a number of non-Annex I Parties in Africa and ASEAN in their assessment of (industrial) technology and capacity building needs focusing on issues related to the Clean Development Mechanism **(a,b, l)** and subsequently assisted in the development of six national capacity building programmes in Africa **(a, b, d, h, j, l, n, o)**. UNIDO has also been implementing activities related to the identification, formulation and promotion of industrial CDM investment opportunities, including the development of methodologies for determining emissions reductions **(h, k, l)**. In addition, the Organization has supported the involvement of developing country industry managers in the COP's and related climate negotiations **(k)**.

UNIDO's future programme will help to identify and develop industrial energy efficiency CDM and JI projects **(h, k, l)** capable of generating measurable emissions reductions which are additional to the *"business as usual"* case and advise emerging national CDM/JI institutional frameworks **(a, b, d)** on issues pertaining to industrial projects. The activities will focus upon three issues:

- Tools for awareness raising and CDM/JI project development
  - Expert group meetings on bundling & financial incentives related to energy efficiency projects **(n)**
  - Workshops to discuss policy and regulatory frameworks for active engagement of industry in CDM activities, institutional and capacity-building issues, as well as technical issues pertaining to the preparation of CDM/JI project design documents as well as for general awareness-raising **(a, b, h ,k, l, n)**
  - Research on baselines for specific project categories (e.g. cogeneration, industrial energy efficiency) **(k, l)**
  - Publicity material **(n)** and
  - Training & analytical materials **(k, l, n)** ;
- Capacity building and technology diffusion for public and private sector
  - Support for creation of institutional framework for industrial technology transfer / CDM projects **(a, b, j, l)**
  - Develop / expand national capacity to identify and design CDM/JI projects and negotiate contracts governing sale or transfer of ERU's/CERs **(k, l)**

- Stimulate demand for and help businesses (private sector consulting and engineering firms) to provide carbon financing and efficiency services to industrial energy users [(a, b, h, k)]
- Training in energy efficiency [(n)];

□ Capacity building & services for CDM/JI project financing [(b, h, k, l)]
- Project screening (assessing eligibility of projects for the CDM)
- Project development assistance (analyses of emission reductions, preparing investment plan and undertaking financial analysis, preparing required project documentation);

Past and ongoing activities

□ *Developing National Capacity to Implement Industrial Clean Development Mechanism (CDM) Projects in Africa"*, undertaken in 1999 in six countries (Ghana, Kenya, Nigeria, Senegal, Zambia and Zimbabwe) and in 2001 in two more countries (Tanzania & Republic of Congo);

□ *Developing National Capacity to Implement Industrial Clean Development Mechanism (CDM) Projects in ASEAN"*, undertaken in 2001 in five countries (Indonesia, Malaysia, Philippines, Thailand and Vietnam);

□ Preparatory Assistance to review barriers to the introduction of climate-friendly industrial technology, work out a strategy and prioritized actions to address the barriers, determine national institutional and skills capacity as well as technology needs at selected facilities and develop a full-scale, learning-by-doing capacity building programme (undertaken in Ghana, Kenya, Nigeria, Senegal, Zambia and Zimbabwe in 2001);

□ Adaptation of the Nigeria full-scale, learning-by-doing capacity building programme for CIDA funding and implementation (2003-2007);

□ *Engaging the private sector in Clean Development Mechanism* (Interagency project UNDP, UNIDO, UNCTAD, WBCSD). UNIDO's intervention is focused on capacity-building of participating countries (Brazil and South Africa) in the identification, formulation and promotion of CDM industrial investment opportunities;

Addressing CDM-related capacity needs in Costa Rica, El Salvador and Guatemala through the Cleaner Production Centres.

PAPER NO. 7: THE WORLD CONSERVATION UNION (IUCN)

PROGRESS IN THE IMPLEMENTATION OF CAPACITY BUILDING PROJECTS AND PROGRAMMES

BACKGROUND

Through decision 2/CP.7, Parties adopted a framework for capacity building in developing countries. This framework sets out the scope of capacity building activities related to implementation of the Convention and effective participation in the Kyoto Protocol process. At its seventeenth session, the Subsidiary Body on Implementation invited the Global Environment Facility and relevant international organizations to provide information on progress in the implementation of capacity-building projects and programmes in response to the framework for consideration at its eighteenth session (FCCC/SBI/2002/17 para. 35(f)). IUCN welcomes the opportunity to submit information on its capacity building activities.

PROGRESS IN IMPLEMENTATION

With a network of 10,000 experts worldwide, IUCN-The World Conservation Union provides information, technical expertise and advice on climate change in areas of its core competence, namely natural resource management. The Union regularly convenes global, regional and national forums on climate change, and assists its 1,000 government and non-governmental Members with practical measures to mitigate and adapt to climate change in an environmentally sound manner. Together with development agencies, international organizations, scientific institutions, governments and NGOs, IUCN carries out projects and activities to further develop the capacities of countries to strengthen their implementation of the UNFCCC and its Kyoto Protocol. The Union's activities are briefly described below.

1) Institutional capacity building.

IUCN enhances the participation of stakeholders at the national and regional level by regularly organizing forums and workshops to exchange views on climate change and sustainable development. Examples of recent activities include: (a) Conducting an analysis of the inter-linkages between the National Adaptation Plan of Action (NAPAs) and the National Biodiversity Strategy and Action Plan (NBSAPs) in Bangladesh and in Lao PDR; (b) Preparing guidelines on incorporating biodiversity concerns into NAPAs and climate change issues into NBSAPs. These guidelines will be available before COP9; (c) An Asia regional workshop on Mainstreaming Biodiversity and Climate Change organized in early 2003 with the Government of India, UN Development Programme (UNDP), the UN Environment Programme (UNEP), Secretariats to the Convention on Biological Diversity and Secretariat to UNFCCC, the International Institute for Sustainable Development (IISD), and others; (d) A multi-stakeholder Latin America Forum on Forests and the CDM organized in Ecuador in 2002 with the Government of Ecuador, UNEP, the Food and Agriculture Organization of the UN, the Dutch Embassy, the Canada International Development Agency and GTZ-Ecuador (Germany); and finally (e) preparing recommendations and case studies for mainstreaming climate change into the WEHAB Principles agreed at the World Summit on Sustainable Development and the Millennium Development Goals agreed by the United Nations. IUCN and its partners plan to continue these activities.

2) Vulnerability and adaptation assessment

IUCN is conducting case studies on how ecosystem management and restoration can reduce vulnerability to climate variability and climate change. A Task Force on Climate Change, Vulnerable Communities and Adaptation under the IUCN Commission for Environmental, Economic and Social Policy that includes development agencies, international organizations, research institutions, and NGOs has produced "Livelihoods and Climate Change," a publication which provides a synthesis of the fields of natural resource management, poverty alleviation, disaster management and climate change. Task Force is using this conceptual framework as a basis for documenting examples of natural resource management projects that improve the adaptive capacity of communities in developing countries. The IUCN Species Survival Commission is assessing the observed and projected impacts of climate change species, and is preparing to include climate change as a factor in the next edition of the Red List of Threatened and Endangered Species.

3) Improved decision-making

IUCN actively contributes to the effective participation of developing countries in the Convention process and the Kyoto Protocol. Recent activities include: organizing a pre-COP-6 meeting for Southern African delegates with the Southern Africa Development Community; holding a pre-COP-6 meeting for South America delegates on forests and the CDM; and organizing a national preparatory meeting in Bangladesh prior to COP-8. IUCN and UNEP jointly published "Carbon, Forests and People" in 2002, which evaluates the potential impact of carbon sequestration activities and provides a guidebook for countries to implement these activities in a manner that is environmentally sound and socially equitable. As partner to the Ramsar Convention on Wetlands, IUCN regularly contributes information and analysis on the impacts and response measures for climate change and wetlands. The Union also participates in the Convention on Biological Diversity expert group on climate change and its work to prepare scientific advice to decision makers on how to integrate biodiversity considerations into the UNFCCC and its Kyoto Protocol. IUCN will continue to these activities in the future.

4) Clean development mechanism

Together with FAO and UNEP, IUCN is implementing an initiative to support developing countries in designing environmentally sound forest projects under the CDM. In 2003, IUCN and its partners have organized expert meetings for Latin American and African delegates to review the options papers for the modalities for including forest projects under the CDM. Legal support to several countries has been provided to several countries in their submissions to the UNFCCC secretariat. Planned activities include capacity building workshops in Asia, Latin America and Africa for foresters and environmental experts in relation to CDM forest projects. A 3-year action programme is envisaged to provide developing countries with institutional and technical assistance for CDM forest projects. IUCN is also initiating a science-based initiative with the private sector, NGOs and research institutes to address the role of dams in mitigating climate change.

5) Needs arising out of the implementation of Article 4, paragraphs 8 and 9, of the Convention

IUCN, working with several partners, is implementing a multi-year effort to reduce the vulnerability of developing countries to climate change in the water sector. IUCN has prepared studies the impact of climate variability and change on water and wetland resources in Central America, the Mediterranean, Southeast Asia, Southern Africa, West Africa, and Bangladesh, and assessed the level of preparedness of countries to respond. Dialogues were held to engage water professionals in the climate change issues and

to identify actions to adaptation in each of these regions. Adaptation frameworks are currently being prepared in consultation with climate change focal points, water authorities, NGOs and research institutions. IUCN is committed in the coming 2-3 years to assist countries in creating national and regional adaptation coalitions that bring together water sector professionals in order to catalyze a society-wide process of adaptation to climate change.

6) Enhancing public awareness

Through the work of the Commission on Education and Communication, IUCN supports countries in improving their ability to communicate climate change and other environmental issues among the general public, and specific social groups such as local communities and government officials. The Commission undertakes capacity development activities to assist governments and NGOs to communicate effectively – including regional training, and at national level, coaching communication planning and implementing activities, providing a help desk and examples and tools for communicating environmental issues. IUCN maintains a network of communication professionals to advise governments, NGOs and for professional exchange on how to raise awareness and to generate action. The commission network is also a dissemination network for information on climate change. The Commission is revamping its web site to be a node of knowledge about how to plan education and communication on a suite of environmental issues including climate change.

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