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The Newsletter of the UNEP Collaborating Centre on Energy and Environment

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UNEP

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In this issue:

The UNEP Collaborating Centre on Energy and Environment (UCCEE) at Risø National Laboratory, Denmark supports the United Nations Environment Programme (UNEP) in pursuing its aim of incorporating environmental aspects into energy planning and policy world-wide, with special emphasis on developing countries. UCCEE works catalytically, encouraging, promoting and supporting research by local research institutions, coordinating projects and disseminating information, as well as carrying out a full in-house research programme in close collaboration with colleagues at Risø National Laboratory - the main public scientific research institute in Denmark.

Climate Change Mitigation:

Country Studies and Capacity Building

The United Nations Framework Convention on Climate Change (UNFCCC), now ratified by 165 countries, aims at stabilising the concentration of greenhouse gases in the atmosphere at a level that 'would prevent dangerous anthropogenic interference with the climate system' (Art. 2, FCCC). The convention recognises that the industrialised countries must take the lead in stabilising and reducing emissions. Developing countries and countries with economies in transition nevertheless have commitments under the convention. These consist of reporting on the amount of emissions, and on the measures that can be taken to reduce these emissions from the levels they would otherwise be and adapt to climate change impacts. Such reporting requires considerable analytical and institutional capacity in the countries concerned, and the convention provides for assistance to countries to establish these capabilities. The Global Environment Facility (GEF), the financial mechanism which supports the implementation of the global environmental conventions, supports such "Enabling Activities" and similar funding is provided by national agencies like those of Denmark (Danida), Germany (GTZ), the Netherlands and the United States.

This issue of c_2e_2 *news* focuses on capacity building efforts through contributions from several involved organisations, both from the donor point of view and from that of a developing country recipient of such assistance. We attempt to provide an overview of the activities and opportunities in the different programmes for supporting countries in their efforts to fulfil their commitments to the UNFCCC.

A specific example of capacity building in a developing country where little climate change related capacity existed previously is presented in a critical examination of a recent UNEP Centre project in Burkina Faso. As an example of a large on-going capacity building and methodological development activity, this issue also presents, in a special supplement, descriptions of a series of climate change mitigation country studies being carried under the coordination of the UNEP Centre.

Scope Of The Convention and Obligations Of The Parties

Andrea Pinna and Chantal Farinelli Freitag,
UNFCCC Secretariat, Bonn, Germany

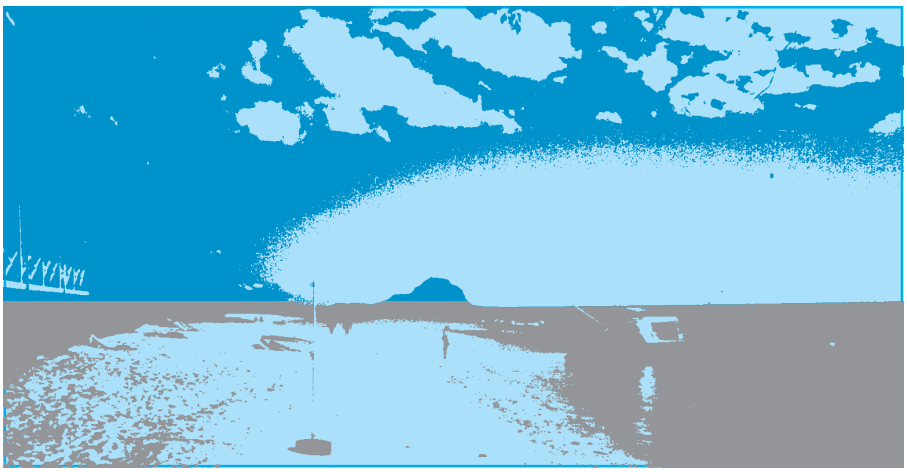
The ultimate objective of the United Nations Framework Convention on Climate Change (UNFCCC) is to achieve stabilisation of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system.

In order to achieve this goal, all Parties to the UNFCCC, taking into account their common but differentiated responsibilities and their specific national and regional development priorities, objectives and circumstances, have committed themselves to a number of response measures listed under Article 4 of the Convention. One of these commitments is for each Party to prepare, and periodically update a communication containing information related to the implementation of the Convention in that Party (Article 12.1. of the Convention).

In the case of developing country Parties, these communications are due three years from the entry into force of the Convention for the Party, or three years from the availability of financial resources for the preparation of the communication.

In July 1996, the Conference of the Parties adopted guidelines for the preparation of initial national communications of developing country Parties (Decision 10/CP.2).

Decision 10/CP.2 further elaborates on the elements of information that, according to the above mentioned Article 12.1. of the Convention, the communications should contain: the national circumstances of the country; an inventory of greenhouse gases emitted by sources and removals by sinks; a general description of steps taken or envisaged by the Party to implement the Convention; the proposal of projects; the description of financial and technological needs and constraints associated with the communication of information and; any other information deemed relevant to the achievement of the objective of the Convention.



Support to Parties

It is generally recognised that the process of preparation of national communications, which are seen as building blocks of the Convention, requires a pro-active and coordinated approach by all actors concerned, so as to support the submission of high quality and timely communications.

To this aim, the Convention secretariat, as requested by Parties, has set up a number of initiatives to facilitate the provision of such support to developing country Parties.

These initiatives include:

Workshops
The Convention Secretariat has and continues to supplement and organise regional and sub-regional workshops, in order to offer general information on the Convention, Decision 10/CP.2, and information on the financial and technical assistance available to developing country Parties. In an effort to expand this endeavour, an agreement has been made with UNITAR/ CC:TRAIN for the development of a workshop presentation module on the guidelines. The module, based on a slide presentation developed by the Convention secretariat, will be prepared in three languages: English, French, and Spanish.

CC:INFO
The Climate Convention Information Exchange Programme (CC:INFO) is especially intended as a service to developing country Parties and to organisations as a source of information of various aspects of the implementation of the Convention. CC:INFO includes detailed information on multilateral and bilateral organisation which provide financial and technical assistance to Parties in the implementation of the Convention; information on climate change enabling activities and response measures undertaken by the Parties to the Convention; and information on climate change related events. In order to increase outreach and save costs associated with the printing and distribution of information, CC:INFO has been progressively relying on electronic means of dissemination such as e-mail and the World Wide Web.

CC:INFO/WEB
CC:INFO/Web is an initiative designed to assist Parties in publishing and sharing information related to the Climate Convention and their countries through the creation of a network of

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national Climate Convention web sites. The main advantage of this system is to group and make available complex information, the production of which requires inputs from several individuals and institutions. The information made available on the web is easily accessible to all Parties, the Conference of the Parties, domestic and international organisations and programmes, and the public.

CC:TRAIN
CC:TRAIN is a UNDP programme funded by the Global Environment Facility (GEF) and bilaterally, and executed by the United Nations Institute for Training and Research in close cooperation with the Convention secretariat. This project is designed to support the efforts of developing countries to implement the Climate Change Convention by providing training, technical, and financial support to national teams responsible with the preparation of national communications.

CC:FORUM
CC:FORUM is an informal consultative forum among policy makers from developing and transitional countries, non governmental organisations, and multilateral and bilateral agencies. The objective of the forum is to bring participants together to share experiences, opinions and ideas on how best to develop, implement and follow up climate change projects, and respond to the needs of the Convention process. To this purpose, the Convention secretariat has established and maintains an electronic list-serve that is used by members of CC:FORUM to exchange information with each other.

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UNEP's Role in Climate Change Enabling Activities

Pak Sum Low, GEF Coordination Office, UNEP

UNEP has been playing an active role in enabling activities on climate change even before the UN Framework Convention on Climate Change (UNFCCC) was signed by 155 countries in June 1992 in Rio de Janeiro. The definition of enabling activities is contained in Box 1.

In 1991, UNEP secured GEF funding of US$4.5 million to undertake a project entitled "*Country Case Studies on Sources and Sinks of Greenhouse Gases*". This is one of the very first GEF projects in enabling activities, and involved Tanzania, Uganda, Morocco, Gambia, Poland, Venezuela, Costa Rica, Mexico and Senegal. The objective was to develop and refine methodology for preparing national inventories of sources and sinks of greenhouse gases (GHG) and to enable the selected countries to complete their national GHG inventories using the approved IPCC guidelines. This project has now been completed.

Two more UNEP projects, which can also be regarded as enabling activities, were included in the work programme approved by the GEF Council in February 1995. These are:

- *Country Studies on Climate Change Impacts and Adaptation Assessments (Phase 1).*

This US$ 2 million project is executed by the Atmosphere Unit of UNEP. It involves Antigua and Barbuda, Cameroon, Estonia and Pakistan. Its objective is to provide appropriate methodologies for countries to assess the potential impacts of climate change, especially on vulnerable sectors such as agriculture, forestry and the marine environment and to elaborate integrated policies and plans for adaptation responses to climate change.

- *Economics of Greenhouse Gas Limitations - Phase 1: Establishment of a Methodological Framework for Climate Change Mitigation Assessment.*

This US$ 3 million project is executed by UNEP Collaborating Centre on Energy and Environment (UCCEE). It involves Argentina, Ecuador, Estonia, Hungary, Indonesia, Mauritius, Senegal and Vietnam. Its objective is to complete integrated assessments of least-cost mitigation strategies and their costs in selected countries leading to the establishment of a common methodology for calculating the costs of climate change mitigation.

The project documents of the above two projects were endorsed by the Chief Executive Officer of the GEF in early 1996, and these two projects are now being implemented.

In May 1996, at the request of the Government of Lesotho, UNEP assisted the country to formulate a stand-alone enabling activities proposal for the preparation of its initial national communication as required by Article 12 of the UNFCCC (see Box 1). The proposal, at an estimated cost of US$ 350,000, was submitted to the GEF in August 1996 and approved in September 1996.

With the assistance of UNEP, Zimbabwe was granted US$93,600 by the GEF in February 1997 to further support its enabling activities for the preparation of its initial national com-munication, which is expected to be completed before COP3 in December 1997.

UNEP has also received requests from the governments of Bahrain, Cameroon, Central Africa Republic, Comoros, Cote D'Ivoire, Congo, Guinea, Mauritania, Zambia, Tanzania and Turkmenistan for assistance in the formulation of enabling activities proposals for the preparation of initial national communications. Proposals for Cameroon,

Box 1

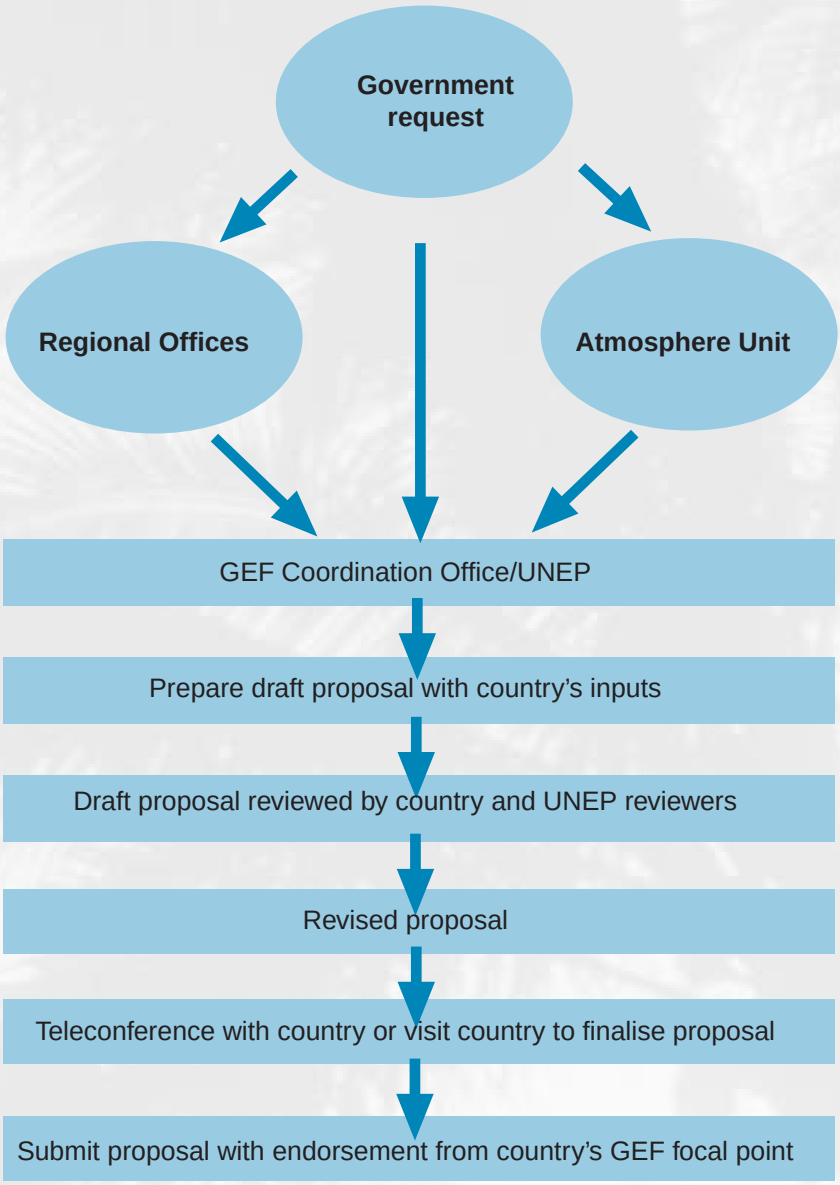
ENABLING ACTIVITIES

According to the guidance provided by COP1 to the GEF, enabling activities are

"[measures] such as planning and endogenous capacity building, including institutional strengthening, training, research and education, that will facilitate implementation, in accordance with the Convention, of effective response measures".

However, only enabling activities related to the preparation of national communications as required by Article 12 of the UNFCCC are financed by the GEF as "agreed full costs". Funding for "agreed full incremental cost" may be available for other enabling activities not directly related to the preparation of national communications.

According to the COP2 Guidelines, the countries are required to include, in their initial national communications, the description of programmes to address climate change and its adverse impacts, including GHG inventories, abatement and sink enhancement, policy options for monitoring systems and response strategies for impacts, as well as policy frameworks for implementing adaptation measures and response strategies.



UNEP's procedure: From country request to submission of climate change enabling activities proposal.

Mauritania and Zambia have been submitted to the GEF for consideration for funding and other proposals are being prepared. More countries are expected to be added to this list.

In February 1997, recognising the need for further technical support to non-Annex 1 Parties in the preparation of their initial national communications, the UNFCCC Secretariat, the GEF Secretariat and the three GEF Implementing Agencies agreed that UNEP would take the lead, in conjuction with UNDP, to draft a proposal on "*Technical Support on Climate Change Enabling Activities for the Preparation of the Initial National Communications*". This draft proposal will form the basis for further elaboration of technical support needed for non-Annex 1 Parties in the near future.

Together with the other GEF Implementing Agencies, UNEP will continue to play an active and constructive role in climate change enabling activities. In terms of UNEP's procedure for processing enabeling activities proposals is rather simple and straightforward, as shown in box 1. Any government request for assistance can be sent directly to UNEP's GEF Coordination Office, or via the Atmosphere Unit or Regional Offices (see Box 2). As soon as a request is received, UNEP will start the process for assisting the country to prepare the proposal immediately.

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Box 2

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Maria de Amorim, Director, Regional Office for Africa (ROA), UNEP; P.O. Box 30552, Nairobi, Kenya; Tel: 2542 624283; Fax: 2542 623928.

Makram Gerges, Director, Regional Office for West Asia (ROWA), P.O. Box 10880 Manama, State of Bahrain; Tel: 973 276072, Fax: 973 276075.

Suvit Yodmani, Director, Regional Office for Asia and the Pacific (ROAP); United Nations Building, Rajdamnern Avenue, 10th Floor, B-Block, Bangkok 10200, Thailand; Tel: 662 281 6101, Fax: 662 280 3829/ 662 288 1000.

Arsenio Rodriguez Mercado, Director, Regional Office for Latin America and the Caribbean (ROLAC), Boulevard de los Virreyes No. 155, Col. Lomas Virreyes, Apartado Postal 10793, 11000 - Mexico, D.F., Mexico; Tel: 525 202 7529/525 202 7493, Fax: 525 202 0950/ 525 520 7768.

Fritz Schlingemann, Director, Regional Office for Europe (ROE), 15 Chemin des Anamones, 1219 Chatelaine, Geneva, Switzerland; Tel: 4122 979 9276; Fax: 4122 797 3420.

Joanne Przeworski, Director, Regional Office for North America (RONA), Room DC2-803, 2 United Nations Plaza, New York, N.Y. 10017, USA; Tel: 1-212 963 8138, Fax: 1-212 963 4114.

UNDP, GEF and Climate Change Enabling Activities

Richard Hosier, Climate Change Technical Adviser, UNDP/GEF

As the implementing agency of the GEF charged with providing capacity building and technical assistance in support of the implementation of the UNFCCC, UNDP has come to view itself as the donor of last resort for climate change enabling activities. Dating back to GEF's Pilot Phase (1991 to 1994) and continuing through to the present, UNDP has provided enabling activity support to nearly 60 countries. In addition, we currently have enabling activity projects under preparation in another 40 countries. Since all non-Annex I Parties are guaranteed support for the preparation of their communications from GEF, this is a large task, and one which has been made more challenging by the constantly changing focus of enabling activities.

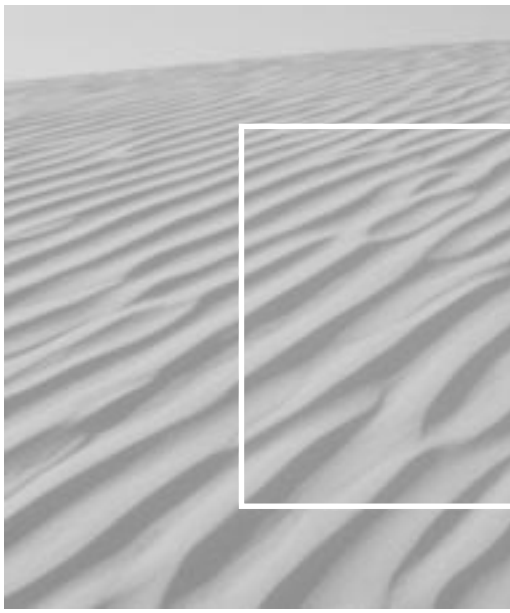
Evolution of Thinking about Enabling Activities

From the early Pilot Phase to the current stage of GEF-sponsored expedited procedures, the form of enabling activity projects has changed significantly. The earlier approach was to focus on regional or global projects designed to "build capacity to respond" to the Convention. Some of the resulting projects were loosely structured to produce some outputs and a shopping list of fungible projects. From this beginning, the GEF enabling activity guidelines (first put forward in August 1995) shifted the design of these projects toward more tightly-structured projects focused on the production of concrete outputs which can serve as components of a national communications. Because of this shift in thinking, the UNDP enabling activity portfolio contains a wide variation of projects whose management is made even more complex by the vast differences in the needs and capabilities of the implementing countries.

This shift in the approach to enabling activities makes the task of managing them extremely complex and challenging. UNDP's decentralised structure, with offices in more than 130 countries, makes the goal of universal coverage achievable. However, the process of monitoring and keeping up with each individual project remains an enormous and difficult task that, at times, appears to stretch the agency's capabilities. Nevertheless, UNDP remains firmly committed to the UNFCCC and seeing that all countries that are Parties to the UNFCCC have the resources and technical support they need to complete their first communication to the Convention.

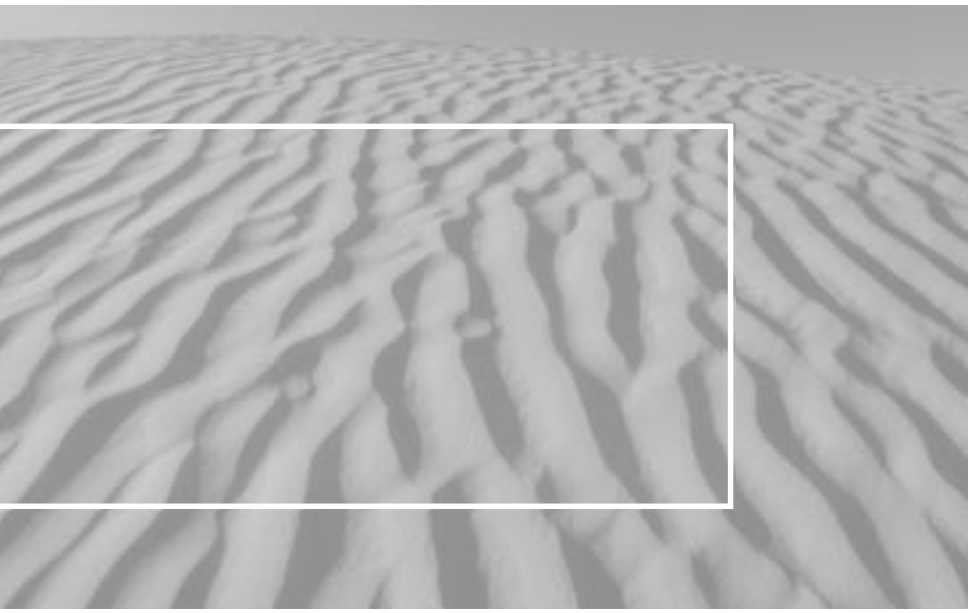
Evolution of Goals in Response to Needs

Not only has thinking about the best way to formulate enabling activities changed, but also UNDP's strategy has changed. Since the onset of GEF I, the strategy has been to ensure that all countries that have ratified the Convention have some level of enabling activity support. Because many countries had received generous support from bilateral programmes (such as from the US, the Netherlands or Germany), the percentage of eligible countries engaged in some form of enabling activity projects was quite high. However, with the communication guidelines developed under COP 2, the goal has shifted from merely engaging in studies to actually preparing a communication, for which GEF support is required. There is a new sense of urgency to ensuring that all countries have adequate resources not just to undertake inventories and vulnerability assessments but especially to prepare national communications. Many countries which received support that



we once considered adequate now are eligible for additional enabling activity support. The role of "gap-filling" projects which complete the shortcomings left by previous projects and donors has become more important, and the job of providing this support now appears to be endless.

Because of this renewed commitment to communication support, even our own Pilot Phase enabling activities will require gap-filling. For example, all of the countries which have participated in the ALGAS project have received assistance for preparing the required components for the national communications. However, they still require support to prepare the communications themselves. Therefore, these countries are all eligible for another round of enabling activity projects. UNDP must move quickly to avoid delaying the preparation of national communications. The COP 2 Guidelines have enlarged the task of preparing national communications projects and imbued it with a new sense of urgency.



Evolving Challenges

The constantly evolving thinking about, strategies for, and urgency of climate change enabling activities present UNDP with a number of challenges. At the present moment, four of them have emerged as being pressing.

1) The processing of smaller gap-filling projects: As indicated above, the size of enabling activity projects is decreasing as their needs become more specialised and more closely linked to the preparation of communications. UNDP will have to remain attentive and responsive to countries' needs. As the self-proclaimed donor of last resort for enabling activities, we must remain in a dialogue with our programme countries that are Parties to the Convention to ensure that they have all of the support for which they are eligible in order to meet their communications obligations.

2) The preparation of a climate change enabling activity support programme: In order to ensure the timely and effective delivery of technical support to GEF's enabling activity projects, UNDP (in collaboration with UNEP, the World Bank, and the GEF Secretariat) is preparing a project to support the implementation of these projects. Although the proposal will be formulated over the coming months, it is anticipated that the project will provide urgent assistance to help countries solve the problems they encounter; coordinate training and information exchange workshops; and ensure that enabling activity projects move ahead successfully to prepare countries' communications.

3) The re-consideration of long-term capacity building needs: Although early enabling activities included activities which could be considered to be long-term capacity building activities, the recent shift in focus to preparing initial communications has meant that these long-term needs are no longer given much emphasis. It has become clear to many observers that the long-term capacity building needs have not gone away during the "initial communications" rush. The question facing all observers and actors in this field remains how best to accommodate these long-term needs while still meeting the short-term requirements. As countries begin submitting their initial communications and the Convention negotiations progress, the best way to increase climate change capacity in developing countries will again become an issue.

4) The maintenance of links with in-country proponents: Typically for UNDP's work in GEF, a great deal of contact is had with in-country proponents while projects are being prepared and finalised. However, as projects enter the implementation stage, the responsibility for their oversight shifts to UNDP's country offices. It is important for those of us working with GEF to maintain contact with the individuals carrying out the projects in the field and keep informed of the current challenges they face. To this end, we welcome all e-mail communications and enquiries coming from project teams working on enabling activities. Additionally, we hope that CC:FORUM continues to assume greater importance as an avenue for interchange with those implementing enabling activity projects. In short, for all of those wondering if they are eligible for additional support, for those preparing enabling activity projects and for those implementing them, we welcome all inquiries, comments and complaints. Please do not hesitate to contact us at any time.

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U.S. Country Studies Program

Robert K. Dixon, Director, U.S. Country Studies Management Team

The U.S. Country Studies Program (U.S. CSP) was initiated in 1992 as part of the United States' effort to help developing countries meet their commitments to the UN Framework Convention on Climate Change (FCCC). The U.S. CSP is now assisting 55 developing countries and countries with economies in transition (the Newly Independent States and Eastern Europe) with climate change studies designed to build human and institutional capacity to address climate change. During the next phase of the program, Support for National Action Plans (SNAP), the U.S. CSP is also assisting 18 of these countries in using their study results to prepare national climate change action plans that will delineate specific response measures that countries intend to implement, and will lay the foundation for their national communications required under the FCCC. All 55 nations have access to more than 100 experts from federal and state agencies, NGOs, and the U.S. private sector. The primary objectives of the U.S. CSP are:

- To enhance the abilities of countries and regions to inventory their greenhouse gas emissions, assess their vulnerabilities to climate change, and evaluate strategies for mitigation emissions and adapting to the potential impacts of climate change.
- To enable countries to establish a process for developing and implementing policies and measures to mitigate and adapt to climate change, and for re-examining these policies and measures periodically.
- To develop information that can be used to further regional, national, and international discussions of climate change issues and increase support for the Framework Convention on Climate Change (FCCC).

Most of the 55 countries conducting country studies with U.S. support have completed their studies and disseminated their results to the international community in more than 200 publications, journal articles, workshop papers, and project reports. The U.S. CSP has issued handbooks on vulnerability and adaptation assessments on mitigation assessments, and three major synthesis reports that document the results of these studies:

- *Interim Report on Climate Change Country Studies*, March 1995
- *Greenhouse Gas Emission Inventories: Interim Results from the U.S. Country Studies Program*, May 1996
- *Vulnerability and Adaptation to Climate Change: Interim Results from the U.S. Country Studies Program*, May 1996

The U.S. CSP has also sponsored more than 20 regional and global workshops to provide countries with an opportunity to share their results and learn from each others' experiences. These workshops were co-sponsored with other countries and international institutions, and proceedings were published for each workshop that document the country results, methods, and common assessment issues.

The U.S. CSP has helped to improve countries' understanding of climate change issues and their capacity to implement response measures and their support for the FCCC. Most of the 18 SNAP countries have already established specific priorities for mitigation and adaptation measures and are currently working with U.S. and international experts on the development of their measures and implementation plans. Several countries have made substantial progress in developing their national action plans, and each country is taking a unique approach to designing its plan. For example, the Czech Republic has focused on six priority areas and is also developing measures

to promote four promising technologies. In addition to this progress, after Czech authorities identified access to capital as a major barrier to implementing energy-efficiency projects, the U.S. CSP in conjunction with the International Institute for Energy Conservation (IIEC) assisted the Czech team in presenting energy-efficiency projects to representatives in 11 financial institutions that are interested in making environmentally oriented investments. Several of these institutions are considering providing funding for one or more of the projects.

Activities in 1997 include a training

Location of U.S. CSP studies and countries preparing action plans.

workshop in Pretoria, South Africa, on March 10 –14, the publication of a synthesis report on mitigation assessment, and a methane mitigation workshop in Kiev, Ukraine, in late spring or early summer.

The U.S. CSP also works closely with the U.S. Initiative on Joint Implementation (USIJI). USIJI is a pilot program encouraging organisations in the United States and other countries to implement projects that reduce, avoid, or sequester greenhouse gas emissions. To date, 22 projects in nine countries have been approved under the USIJI, employing a range of technologies and practices including wind, geothermal, hydroelectric, solar, and biomass waste energy; coal to natural gas fuel switching; methane gas capture; and forest management and preservation. USIJI may provide another source of financing for specific mitigation measures that countries have identified under the U.S. CSP and SNAP.

The U.S. CSP complements programs implemented by other donors, such as the United Nations Development Programme, the United Nations Environment Programme, the Global Environment Facility, and individual OECD countries.

For more information on the U.S. CSP, contact the Director, U.S. CSP, PO-6, GP-196, 1000 Independence Avenue, SW, Washington, DC 20585 USA. phone:202-586-3288, fax: 202-586-3485 or 586-3486, e-mail: csmt@igc.apc.org, or visit the U.S. CSP web site at http://www.gcrio.org/CSP/webpage.html.

Danish environment-related assistance and support for climate change analysis

Erik Fiil, Secretariat for Environment and Sustainable Development, Danish Ministry of Foreign Affairs (Danida)

Environmental issues have been an important element in Danish Overseas Development Assistance (ODA) for many years. Recognition of the global challenge and the transboundary nature of environmental problems has been expressed, for example, in the Danish Government's Plan of Action for Environment and Development of 1988, and environmental strategies and guidelines have been developed to cover assistance to sectors such as fisheries, energy, agriculture, forestry, agroforestry, water, health and industry.

Efforts to incorporate environmental activities into Danish development assistance were further strengthened in connection with the United Nations Conference on Environment and Development (the Earth Summit) in 1992. Following a parliamentary resolution in 1992, the Danish Environment and Disaster Relief Facility (EDRF) was established. This allocation is planned to increase gradually to reach 0.5% of GNP in 2005, in addition to the 1% of GNP already allocated to ODA.

Denmark's environment-related assistance efforts are expressed primarily by the incorporation of environmental concerns as an important cross-cutting theme of bilateral assistance, on a par with women in development, human rights and democratisation.

It is difficult to quantify the actual amount of resources devoted to environmental activities, apart from specific projects which define environment as the prime objective. A broad assessment, however, indicates that 15-20% of total Danish bilateral assistance aims at important environmental objectives. In addition a multilateral allocation is devoted to global environmental activities, with the major recipients being UNEP and GEF, particularly through innovative and catalytic pilot activities, focused on implementing the UN Conventions relating to Climate Change, Biodiversity and Combating Desertification.

Danish support has been provided to the following activities related to climate change:

- Core funding to UNEP Collaborating Centre on Energy and Environment (although Danida support to the Centre predates both UNCED and UNFCCC)
- Climate Change Secretariat - various activities
- UNEP - country case studies and guidelines for assessing climate-change impacts and adaptation measures
- IPCC
- UNEP Regional Office for Latin America and the Caribbean for participation of developing countries in UNEP's Open Forum on New Partnerships to Reduce the Build-up of Greenhouse Gases
- World Bank - Study of Renewable Energy Component of the Vietnam Rural Electrification Master Plan
- various NGOs in the climate change field
- mitigation analysis country studies in Southern Africa[1]
- mitigation analysis country studies in Peru[2]

The two latter activities are running in parallel to the UNEP/GEF project "Economics of GHG Limitations" coordinated by the UNEP Centre. A primary aim of Danish support to these studies, and indeed to the UNEP Centre, is to assist developing countries to enhance their capacity to take into account environmental issues in their sectoral policy and planning.

Danida support for climate change mitigation analysis dates back to one of the first studies within the UNEP GHG

Abatement Costing Studies, namely that of Zimbabwe[3].

The country study carried out by the Southern Centre for Energy and Environment, the Ministry of Transport and Energy, Zimbabwe, and the UNEP Centre was instrumental in developing climate change analysis capacity in Southern Africa. The activity also contributed significantly to the establishment of the methodological framework on which current mitigation analysis is based.

Danida has also provided major funding for international meetings on climate change analysis, in particular the International Conference on National Action to Mitigate Global Climate Change, held 7-9 June 1994, in Copenhagen[4], and the IPCC Workshop on "Mitigation and Adaptation Cost Assessment: Concepts, Methods and Appropriate Use" to be held 16-18 June 1997 at Risø National Laboratory.

These activities underline the Danish government's continued commitment to supporting capacity building in developing countries, with regard to environmental issues in general, and in line with the aims of the UNFCCC in particular.

[1] Climate Change Mitigation in Southern Africa: Phases I and II, Botswana, Tanzania and Zambia.

[2] Greenhouse Gas Abatement Project for Peru: Assistance for Capacity Building, Institutional Coordination and Personnel Training.

[3] UNEP Greenhouse Gas Abatement Costing Studies. Zimbabwe Country Study. Phase Two. (Risø National Laboratory. Systems Analysis Department, Roskilde, 1993).

[4] "National Action to Mitigate Climate Change", Proceedings of the International Conference, 7-9 June Copenhagen, Denmark. (UNEP Collaborating Centre on Energy and Environment, Risø National Laboratory, Denmark. June 1995).

Netherlands Climate Change Studies Assistance Programme

In 1996, the Netherlands Government (the Ministry of Foreign Affairs, Directorate-General for Development Cooperation) officially started a Climate Change Studies Assistance Programme. At the start of the Assistance Programme, it included 7 countries: Bolivia, Costa Rica, Ecuador, Ghana, Senegal, Surinam and Yemen. In the meantime, the programme has been expanded to include three additional countries in the programme. The country studies are envisaged to be finalised in June 1998.

The climate change studies within the Assistance Programme include a variety of topics, ranging from GHG emission inventories to mitigation and climate change impacts and adaptation studies. All these studies should be seen within the context of the commitments under the United Nations Framework Convention on Climate Change (UNFCCC) and will contribute to the National Communications of the countries participating. The scope of the studies will depend on national needs, priorities, experiences and expertise. Box 3 lists an overview of current studies.

The Assistance Programme will be managed by the Institute for Environmental Studies (IVM/IES). The IVM has considerable experience and expertise in climate change country studies. The IVM will cooperate closely with the Netherlands Coastal Zone Management Centre (CZMC). The CZMC will coordinate the activities in those countries which have proposed a Coastal Zone Study as the main part of the climate change studies.

Besides the consultations with the IVM, the Assistance Programme will provide technical assistance by international consultants. Further, two regional workshop are envisaged at the beginning and the end of the programme, and a common workshop at the third Conference of the Parties to the UNFCCC.

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Box 3

Current studies in the Netherlands Climate Change Studies Assistance Programme

Bolivia

Building upon earlier results of climate change studies, Bolivia will conduct the following studies:
updating of the 1990 emission inventory to 1994, using the revised IPCC guidelines;

an impact and adaptation study, including:
- revision of climate change scenarios
- agriculture (livestock, grasslands, potato and maize)
- forestry
- water resources;
- a mitigation study for the energy and forestry sector;
- the preparation of the National Communication.

Ecuador

Ecuador has already carried out detailed climate change studies. For this reason, and due to the large vulnerability of the coastal area in Ecuador, the studies under the Netherlands Assistance Programme will focus specifically on a Coastal Zone Management study. The study will include:
- a coastal profile for the entire coast of Ecuador
- a climate change impact assessment of the Gulf of Guayaquil
- an evaluation of adaptation measures.

Surinam

Surinam has not yet conducted specific climate change studies. To meet its commitment under the UNFCCC, Surinam will carry out an emission inventory for 1994. However, the studies in Surinam will focus on coastal zone management since the low lying coast of Surinam is very vulnerable to sea level rise. Both studies will form the input for the National Communications.

Costa Rica

Building upon earlier results of climate change studies, Costa Rica will conduct the following studies:
an impact and adaptation study, including:
- agriculture
- forestry (also mitigation)
- coastal zone
- the preparation of the National Communication.

Yemen

Yemen did not yet conduct specific climate change studies. To meet its commitment under the UNFCCC. Yemen will carry out an emission inventory for 1994 and a mitigation study, funded by UNDP/GEF. These studies will be complemented by the Netherlands Programme with:

an impact and adaptation study, including:
- agriculture
- water resources
- the preparation of the National Communication.

Ghana

Building upon earlier results of climate change studies, and complementing on-going studies, Ghana will conduct the following studies in the Netherlands Programme:

an impact and adaptation study, including:
- water resources
- coastal zone
- the preparation of the National Communication.

Senegal

Building upon earlier results of climate change studies, and complementing on-going studies, Senegal will conduct the following studies in the Netherlands Programme:

an impact and adaptation study, including:
- agriculture
- coastal zone
- the preparation of the National Communication.

German Support Programme to Implement the UNFCCC

Holger Liptow, GTZ, Eschborn, Germany

Introduction

Immediately following UNCED 1992, Germany allocated bilateral development funds to implement the UN FCCC, particularly to support enabling activities, in addition to its contribution to the Global Environment Facility (GEF). The Deutsche Gesellschaft fuer Technische Zusammenarbeit (GTZ) was commissioned by the Ministry of Economic Co-operation and Development (BMZ) to set up and execute the German support programme.

Programme Focus

Measures supported by GTZ focus on drawing up emission balances and on greenhouse gas abatement measures, particularly CO_2 mitigation. Initial measures consisted extensively of inventory studies and country studies on mitigation options like those in Colombia, Pakistan, Tanzania, Zambia. Once the programme achieved a certain "awareness rating" GTZ was better able to identify approaches with a more sectoral or regional (country-specific) thrust. In our view, this improves our chances of actually achieving the planned results: implementation of option to reduce GHG-emissions (pertinent examples including activities in China, India, Indonesia, the Philippines, Thailand and Zimbabwe).

Co-operation within German Technical Co-operation (TC)

As a large organisation engaged in development co-operation activities in more than 120 countries, we naturally make use of our existing connections to ongoing projects and familiar partners. This yields synergistic effects with ongoing German TC projects in the energy sector.

Only two examples: In Zimbabwe, we have integrated the "Reduction Options within the Framework of Southern African Power Pooling" measures into the local GTZ-supported Energy Programme. And in Bangalore, India, we are expanding our co-operation with TERI beyond the present energy conservation and efficiency enhancement scope for the local industry. We have included a climate protection measure in which we will explore the available alternatives for environmentally and climatically correct planning and implementation in the fields of transportation and waste management in the city of Bangalore.

Results of Completed Studies

Some extremely condensed sampling of results from Indonesia, the Philippines, Thailand and Tanzania follows below. Our pamphlet entitled "Measures to Prevent Climate Change" provides information on our programme's results to date and additional data documenting how climate protection is already being built into GTZ's energy projects. And for anyone interested in specific cases, we will be glad to provide copies of studies we have conducted in various partner countries.

Indonesia

Above and beyond the country's already environment-oriented energy planning, there are still other win-win options that could help reduce GHG emissions. In the end-use sector, these would include advanced lighting systems, energy-conserving refrigerating equipment and variable-speed motors. And in the power sector, highly sophisticated options like pressurised fluidised-bed combustion and gas-fuelled fuel cells have emerged as additional options for enhancing established technologies.

The Philippines

According to the results of the GTZ-assisted study in the Philippines, there are two options for substantially reducing CO_2 emissions in the energy sector: by improving the gross heat rate in power generation and by reducing transmission and distribution losses. The use of natural gas, hydropower and geothermal energy can further reduce emissions by significant degrees.

With the Environmental Manual, a software tools developed by GTZ, we also conducted a pilot project in which the environmental impacts of the entire power-generating sector were investigated and scenarios developed for engaging in least-cost forms of environmental and climate protection.

Tanzania

In Tanzania, the options for reducing GHG emissions are limited more by market and institutional barriers than by any lack of access to appropriate technologies. Indeed, industry has numerous technological win-win options to offer - like efficient combustion, power-factor correction and efficient motors. The power sector also presents opportunities for climate protection, one example being the intensified use of hydropower. Conversely, the large number of people who would have to be involved in measures geared to private households and agriculture would make them difficult to implement.

Thailand

In most of the surveyed industrial operations and commercial buildings there were identifiable win-win options (that is, options with payback periods of up to 4 years) that would make climate protection attractive and reduce CO_2 emissions by seven to ten percent. Now, the decision makers have to be persuaded to make use of the available opportunities. A long-term German TC project aims to follow-up and to help achieve that goal.

Planned Measures

GTZ are in a planning stage for country measures in Namibia, Syria, South Africa and Vietnam and intend to continue with follow-up activities in Columbia and China. The programme will continue at least until the end of 1998.

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Capacity Building Under the UNFCCC:

R.S. Maya ,
Southern Centre for Energy and Environment, Harare, Zimbabwe

A frequently cited justification for the participation of non-Annex I parties[1] in the UNFCCC is that it may contribute positively to national development objectives. Because Africa's national development objectives are intricately tied to forging a long lasting and competitive role in the global economic sphere, the convention would do well to address the constraints on Africa's economic development at this level.

Capacity building efforts seen so far under the various country studies on climate change tend to reinforce Northern hegemony with respect to the global knowledge base and the economic advantage that accompanies it. Because of this relationship, efforts fall far short of the level that Africa should expect in order to enable the continent to make an effective contribution to climate change mitigation. Existing arrangements are likely to be sufficient to enable Africa to respond to the requirements of the convention in terms of reporting on national communications and contributing to the global information base on emissions through national GHG inventories. Fulfilling these commitments, however, will not improve Africa's ability to improve its position in the global economy, and in fact may be deleterious to this end.

There is no insinuation of a conspiracy on the part of the North to control Africa. Nevertheless there are indications that, even within the good intentions of the convention, important after-effects of the current mode of capacity building may leave Africa worse off than it was before the convention epoch, if not properly addressed. One manifestation of this danger is evident in how parties from the North have apparently made a hasty transition from value-free support to non-Annex I countries to a "scramble for climate change technology and investment markets".

Capacity building is perhaps the latest entrant into global climate change collaboration under the convention. The commitment to capacity building is underlined in Article 5 of the UNFCCC [Research and Systematic Observation] and particularly in 5.c. where it is stated that Parties shall " ... Take into account the particular concerns and needs of developing countries and cooperate in improving their endogenous capacities and capabilities ... ". It cannot be said, however, that Parties to the convention, including its established institutions like GEF, put together an early and focused capacity building programme. Instead, capacity building gained focus over time, beginning with haphazard individual country interventions and now systematically pursued through a special tranche for enabling activities in GEF and through the CC:TRAIN programme. This represents a significant departure from the first round of country studies conducted mainly under the auspices of UNEP and the second round supported primarily by the US and German country studies programmes.

The earlier exercises (UNEP, US and GTZ), however, did embody an element of built-in, albeit incidental, capacity building. The approach has had varying degrees of effectiveness with regard to the response to Africa's capacity building expectations and the need to enable Africa to contribute meaningfully to the mitigation of climate change. Seen liberally, the line between the two forms of capacity is fine as it can be argued that capacity building for climate change inherently includes capacity to manage a sustainable economy. The experience of the present set of "centres of excellence" working on the subject of climate change in the region confirms this. These centres, manned primarily by researchers with a background in energy analysis, like their Northern counterparts, have built useful capacity to analyse development issues in an interdisciplinary environment focusing on the specific requirements for mitigat-

An African Perspective

ing climate change through economic interventions. This type of skill or capacity goes a long way in meeting the convention's objective of building a global body of knowledge for understanding factors influencing climate change. It also provides capability within African countries or among African scholars to conduct the technology assessment necessary to structure a practical GHG mitigation path for African countries.

Analysed more critically, this form of capacity building carries little effectiveness in the context of constructing a long-term capability for Africa and the rest of the world to forge a long term regime for "cleaner production under equal exchange". The term "cleaner production under equal exchange" is perhaps a more representative catchword for African participation in climate change than simply "cleaner production". The latter alone in fact, effectively addresses the needs of Annex I Parties, and building capacity within its limited context only prepares the rest of the world to contribute to relieving the North of its climate change mitigation obligation. Such capacity building as we have seen so far is likely to be short-lived. There are limits to the extent to which a beleaguered Africa can collaborate before being forced to reorient its focus from global issues to the more immediate issues of poverty and hunger.

A few of the present African centres have been established with the conscious aim of reducing the Northern monopoly of knowledge and, in the process, increasing the appreciation in the North of African problems while enhancing the ability to place Africa's views on the global technical agenda. Climate change, therefore, came in as a timely paradigm to ride on as it affords a significant opportunity for serious global dialogue on technical matters commonly affecting the world.

It can be said that the present group of centres, working closely together, have been reasonably successful in building the necessary level of analytical capacity, participating in the global dialogue, and putting forward or defending the African position. By far their most worthwhile contribution in this regard has been to fill the analytical gap between the African arguments presented at Rio and the present-day transition from the politics of climate change to the economics of investing to reduce emissions of GHGs. The centres became active at a time when African negotiators and those participating in the climate change dialogue were beginning to have their traditional arguments at Rio pitched against the technical and economic interests of Annex I countries, supported by well researched data from Northern academic institutions. This research support (in the North) has been the mainstay of industrial and economic development in the North and it is this back-up support which has been visibly lacking in Africa. So, to the extent that climate change collaboration contributes to such capacity, it can be acknowledged that it has responded to long-term skills development for economic development in the continent. More important than purely technical skills in this regard are skills in policy analysis and policy dialogue.

Policy analysis, hitherto the domain of government, requires, if it is to be conducted by the centres, three key attributes in order to be effectively achieved: credibility, consistency, and recognition or acceptance. Credibility (which is closely related to acceptance or recognition) has to be achieved with local governmental and other social institutions such that the centre views find relevance and application within the country or region. Consistency relates both to the physical survival of the centre and to its ability to espouse an identifiable school of thought with an identifiable clientele or constituency to serve. Both credibility and acceptance have to be achieved at the international as well as the local level, and this is a critical aspect with serious implications for consistency.

A centre with international credibility stands a much better chance of survival and achieving consistency than one without similar attributes or with only local credibility. This is because, as it stands, most centres in Africa survive on external funding. Without a specific international clientele, however, credibility and external funding can contribute to the demise of a national or regional centre since it may

be forced to seek funding from various "Northern masters" with differing priorities and agendas, risking loss of consistency in the process.

The present generation of centres have had to strike an uneasy balance between local relevance and international acceptance on the one hand, and between local political acceptance and international recognition for academic and analytical independence. But perhaps the most critical attribute of these centres has been the ability to forge international sisterships with centres of similar interests. This relationship has in a number of cases enabled technical cross fertilisation and the ability to link up with Northern funds, particularly those relating to short term projects. This sistership has also been an important avenue for impregnating Northern think-tanks with African technical and policy perspectives at the nascent stage, thereby ensuring that African views find respectable residence among Northern research counterparts. This yields benefits for both parties. The African position is appreciated and Northern partners do not lose time designing programmes based on false views about Africa.

Locally, the success of the centres regarding acceptance and relevance has had more to do with the presence at their helm of individuals whose professional history lies in government. This breed of researchers, with the benefit of many years in government, have practical insight into government machinery and have learned to appreciate the often misunderstood interest and concerns of African governments. Such professionals generally also have ready access to government decision makers, making policy dialogue both practical and fruitful.

This role of the centres should become even more prominent as climate change collaboration continues to develop in practice. The centres thus provide a bridge of trust between Northern parties and local institutions on matters of collaboration by providing local perspectives in the design of collaborative programmes.

It is clear from the foregoing that capacity building does not receive the same interpretation from Annex I parties as it does from non-Annex I parties. The latter see capacity requirements in a broader sense and resent the impression that capacity building is a North-South flow. Current experience fortunately displays evidence of much more dynamic exchange of skills and experience among Northern and Southern scholars. This may be because climate change mitigation analysis and the development of methodologies for assessing emissions inventories have not developed within a purely Northern domain. Both Northern and Southern scholars are groping in the same darkness to find appropriate analytical approaches. But even in this same darkness, the Northern scholar keeps the lead and push-leads his African counterpart towards the light. This condition derives much less from superior technical skills on the part of the Northern counterpart, but more from the fact that the Northern counterpart has greater access to funding. His African colleague must participate in the knowledge building exercise either through Northern financing or as a subcontractor to the Northern counterpart. In this setting, the African counterpart sees not only an opportunity to contribute to the generation of knowledge, but also financial resources and an opportunity to build a possible sistership for future collaboration. While, indeed, it cannot be argued that this relationship inhibits the academic input of the African scholar, it certainly has the effect of setting the working environment and of building impressions about the true ownership of the final analytical product.

But there are situations where Southern centres are given direct contracting or funding to generate knowledge on the subject. It is quite unfortunate that, even in such cases, the level of effort of the African scholar has sometimes fallen short of expectations to meet international standards, thereby undermining the objective of building credibility and acceptance, and denying the centre an opportunity to balance the global flow of knowledge.

The UNFCCC provides for building capacity, taking into account the needs and interests of developing countries and building on their endogenous capacity to enable them to contribute to the global effort to mitigate climate change. Each mode of collaboration should therefore be tested against this commitment and a few cases have in fact made positive gains in this regard.

The next stage beyond building capacity to analyse climate change response options is to bring mitigation into national development programmes in an environment that yields joint benefits. This can be achieved by smoothing out some of the approaches applied today. But indeed more critical to the long-term ability of Africa to contribute to the objectives of the convention is the construction within Africa of the necessary infrastructural and technological conditions (beyond human skills which is the first step) to enable the African economies to shoulder the added responsibility for addressing climate change. This is a much broader and indeed more fundamental subject which cannot be covered within the scope of this article. Before this level of capacity is built, it may turn out that capacity being built in Africa will contribute more to the North's ability to assess their re-entry into Africa during the climate change regime, than for Africa to gain a meaningful position in global economic exchange.

A vehicle for such re-entry would be the new climate change technologies marketed in Africa and the new investment drive premised on such technologies. For a continent with dire need of foreign investment, the African scholar must assess the benefits of holding out on such investment.

This is more the case in this new era of globalisation because one wonders in the new scramble for climate change markets if the convention and globalisation are the same or collectively exhaustive. Our experiences in climate change capacity building together with Northern counterparts is that, while Southern centres gain from a broadened analytical perspective, we remain limited to the nation state while our colleagues, backed by ODA and multilateral funds, can go into the next territory and influence thinking both in our own local territory and abroad. In

the worst case, the Northern counterpart is much better placed to provide climate change intelligence to his government or investors than his Southern counterpart. Armed with only the expanded knowledge base, we remain unable to analyse climate change issues against a set objective function and quite unable to influence events in the direction that best benefits Africa.

It must be said, writing as we do in c2e2 news, that the UNEP Centre's collaboration with Southern centres of excellence puts it in a unique position for global climate change intelligence, paralleled perhaps only by the US and German country studies programmes. To reiterate, capacity building, has many stages: the first stage is the ability to perform rigorous value-free analysis for all to benefit; the second stage is the ability to contribute to the global body of knowledge and to influence views and opinions; and the third stage is the ability to use the information to influence events, plans and strategies to maximise benefits to one's society.

The present narrow focus of CC capacity building only makes a minor dent on a process hardened by long years of calculated resource exploitation and technology denial. For Africa indeed, the climate has hardly changed.

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[1] Annexes I and II of the UNFCCC comprise the OECD and transitional economy countries, and the OECD countries respectively. Non-Annex I countries are thus essentially the developing countries.

Cooperation between the UNEP Centre and the team from Burkina Faso. Left to right: Arturo Villavicencio, Jørgen Fenhann (UNEP Centre), Abdoulaye Ouedraogo (Direction de la Meteorologie Nationale, Burkina Faso) Mamadou Honadia (Ministére de l'Environnement et l'Eau, Burkina Faso).

Burkina Faso:

National Climate Convention Reporting and Capacity Building

Arturo Villavicencio, UNEP Centre

For the past two years (April 1995 to March 1997) the UNEP Centre has been responsible for a Danida-funded project in Burkina Faso aimed at assisting the Government to build sufficient indigenous institutional capability to:

- establish the initial reporting to UNFCCC
- periodically carry out national inventories of anthropogenic GHG emissions
- pursue policies and actions that could mitigate climate change.

Institutional strengthening

The development and strengthening of local institutions was a key component of the capacity-building process, and one which absorbed more project resources than initially anticipated. Although the success of the project in terms of institutional strengthening is difficult to measure, there is general agreement that important objectives have been achieved, including:

- effective consolidation of the Climate Change Unit (CIMAC) within the National Council for Environment Management (CONAGES), the national focal point for international conventions.
- initiation of a participatory process involving key institutions.
- consolidation of the first local NGO (GERED) dedicated to energy-environment related studies and analysis, in which the project played a catalytic role. This is an important achievement taking into account the important role GERED can play in the future as 'capacity builder', fostering local organisation, education and skills formation.
- enhancement of institutional awareness of climate-change issues, made evident by the number of participants at national workshops as well as by the active discussions which followed the presentations of the preliminary report on the GHG inventory. The project has thus

helped to create, within different government agencies, a certain degree of concern regarding the potential negative impacts of climate change.
- elaboration of a preliminary report containing: (i) the national inventory on GHG emissions and sinks; (ii) a preliminary forecast of GHG emissions and possible mitigation options; and (iii) a first attempt to analyse the vulnerability and possible adaptation strategies to climate change.

Lessons learned

When the project was conceived and planned, little experience was available on similar activities in other countries. After completion of the project it is now possible to identify important issues and lessons which should be taken into account in planning and executing similar activities in other countries. Although the institutional details are specific to Burkina Faso, analogous issues and relationships are likely to exist in many countries. Most importantly, the complex nature of the task must be recognised. Capacity building in climate-change related topics is a broad subject, still at the development stage, and encompassing a complex linkage of activities related to human, organisational, institutional and scientific resources.

Clarification of mandates and roles: CIMAC is now well established in its role as lead agency for climate change issues in Burkina Faso. It is important to clarify the mandates and co-ordination links with other agencies. More attention has to be placed on articulating the institutional and organisational links with other relevant government agencies. These agencies have key roles to play in the formulation and implementation of climate change related policies and strategies.

Assimilation of built-up capacity: Substantial effort remains in order to ensure that capacity-building interventions achieve a broad sphere of influence and that the newly established expertise can be fully assimilated into the policy-making system.

Estimation of existing capacity: It is important in planning a project of this kind to form a realistic impression of the existing local administrative and technical capacity, so that project priorities can be set. In this case, initial targets had to be adjusted after it appeared that project activities were overestimated in relation to local capabilities.

Support for long-term process: Technical assistance took place under short-term missions and focused mainly on finding solutions to immediate short-term problems and issues, rather than on supporting a long-term learning process. Future action should do more to emphasise the transfer and adaptation of ideas, skills and practices which could foster the development of national expertise.

Specific training needs: In this early stage of capacity building emphasis was given to broad training programmes. Future training programmes need to be focused on more specific targets and more directly linked to ongoing activities.

Project evaluation: Clear and specific targets have to be defined against which to assess the success of capacity-building projects. This will facilitate a continuous monitoring and partial evaluation of ongoing activities.

Future activities

Further support to Burkina Faso must embrace both immediate and long term goals. Immediate goals relate to the preparation of an Initial National Communication to the UNFCCC. Longer range objectives involve capacity building beyond the specific requirements of the Convention, aiming at the establishment of a self-sustaining capacity in the country for monitoring, formulating policy and implementing measures related to climate change.

Proposals for addressing these two sets of goals have already been formulated and submitted for funding. Continued cooperation with Burkina Faso will hopefully build on the broad foundation established within the project presented here.

UNEP Centre Activities: Mitigation Analysis and Country Studies

The UNEP Centre is engaged in a large number of capacity-building programmes for climate change mitigation analysis, through the UNEP/GEF project "Economics of Greenhouse Gas Limitations" and through parallel activities funded by Danida and the United Nations Development Programme (UNDP). The country studies carried out under these projects have the triple purpose of producing mitigation analysis reports, establishing capacity in the countries for carrying out such work, and testing and refining the methodological framework.

Fourteen countries are taking part in the current programme of national mitigation studies coordinated by the UNEP Centre. The UNEP/GEF project comprises Argentina, Ecuador, Estonia, Hungary, Indonesia, Mauritius, Senegal, and Vietnam; Danida supports three countries in Southern Africa (Botswana, Tanzania and Zambia) as well as Peru; and UNDP/GEF funding is providing support for Egypt and Jordan.

Two workshops were held in Denmark in June and August 1996 bringing together the national project coordinators and the country technical teams, respectively. At the one-week August workshop, teams received training in the mitigation analysis methodology. At the same time contractual arrangements with most of the countries were completed, allowing in-country work to commence by September 1996.

The start of national project work was marked in each country by a workshop, attended by one or more UNEP Centre staff. In addition to the national teams responsible for carrying out the studies, national workshops brought together representatives from ministries, organisations, industries and utilities who had been identified as stakeholders" within the national climate change context. The main aims of the two to three day national workshops were to establish awareness of the national mitigation analysis study among stakeholders, and to discuss in detail issues, methodology and work schedule specific to the country.

A particularly important topic for discussion, involving qualified input from a wide range of different representatives, was the establishment of the long-term baseline scenario for the country. This scenario represents the reference against which efforts to reduce the increase of greenhouse gas emissions have to be evaluated. Thus the analysis requires a 20-30 year vision for economic, social and industrial development, consistent with, but going beyond the normal time horizon of, official government planning.

The fourteen countries involved in the study programme span a wide range of geographical, developmental and physical settings. Some countries, such as Argentina, Egypt, Tanzania and Zambia, have already carried out in-depth greenhouse gas inventory and abatement studies, and the present activity involves an extension to other sectors and gases, or more detailed examination of the options. For some participating countries, such as Estonia, Jordan, Mauritius and Vietnam, the activity represents the first mitigation study and analytical capacity has to be established.

The national studies are scheduled to be completed in early 1998. Further workshops are planned throughout the project period, both in the respective countries, in regional centres and at Risø. Country team members will also visit Risø for extended periods to work closely with UNEP Centre staff. The supplement to this issue of c_2e_2 *news* presents status reports on the country studies within the programme.

Recent UNEP Centre Publications

Working papers:

Implementation strategy to reduce environmental impact of energy related activities in Zimbabwe, Working Paper No. 5, January 1997, Southern Centre for Energy and Environment /(Zimbabwe), National Environmental Engineering Research Institute (India), UNEP Collaborating Centre on Energy and Environment, Risø National Laboratory Denmark, January 1997/ 78 pp.

Environmentally sound energy efficient strategies: a case study of the power sector in India,
Prof. Jyoti Parikh, Dr. J.P. Painuly, Dr. Kankar Bhattacharya, (Indira Gandhi Institute of Development Research, Bombay, India) / Working Paper No. 6, UNEP Collaborating Centre on Energy and Environment,
Risø National Laboratory, Denmark,
February 1997, 86 pp.

Conference contributions:

Key Issues Facing the transport Sector in Sub-Saharan Africa,
John Turkson, Gordon Mackenzie, Jørgen Fenhann, in "Transport, Energy and the Environment", IAEE Regional European Conference,
Helsingør, Denmark,
3-4 October 1996.

New staff at the UNEP Centre

Ian H. Rowlands BASc, PhD
Ian Rowlands joined the Centre on 1 October 1996 to work for one year, primarily on the UNEP-GEF project on "The Economics of Greenhouse Gas Limitations". More specifically, he is concentrating upon the regional aspects of the project, focusing upon the institutional and political aspects of regional mitigation strategies, with an emphasis on the case of Southern Africa.

Ian's permanent position is at the London School of Economics and Political Science, where he is a Lecturer in International Relations and Development Studies. His research and teaching at the LSE have focused upon the international political economy of sustainable development generally, and on global management of the atmosphere in particular.

Ian holds a PhD in International Relations from the LSE, a diploma in World Politics from the LSE, and a BASc in Engineering Science from the University of Toronto. He is the author of The Politics of Global Atmospheric Change (Manchester University Press, 1995) and co-editor of Global Environmental Change and International Relations (Macmillan, 1992). He has contributed articles on climate change, ozone layer depletion, African energy and development, sustainable development and business and the environment to many journals and books.

Maria J. Figueroa "Mariajo" MS (Energy and Resources), MA (City and Regional Planning) joined the UNEP Centre in March 1997 as Energy Planner. Prior to joining the centre Mariajo worked as a Post-Graduate Researcher at the Environmental Health Science Division, University of California at Berkeley. Her previous work included a position as Research Associated at the International Energy Studies Group, Lawrence Berkeley Laboratory where she specialised in the evaluation of energy use and energy efficiency options for the transportation and residential sectors of Latin American countries.

Mariajo has worked as a consultant for UNDP and The World Bank on projects related to energy efficiency in transportation. Her interest includes the characterisation of environmental and health implications of transportation energy use and identifying feasible measures for overcoming barriers to improve energy efficiency in developing countries.

c_2e_2 news provides up-to-date information at regular intervals on the activities of the UNEP Centre, UNEP and related events and developments. Information on forthcoming conferences, reports, studies, etc. are welcome. The views expressed in this newsletter do not necessarily represent those of the United Nations Environment Programme, Risø National Laboratory or Danida.

c_2e_2 *news* on the web

This newsletter (and back issues) is available on the World Wide Web at www.risoe.dk/sys/ucc/c2e2/index.htm as part of the Risø site. The other Risø web pages include descriptions of all departments and research activities at Risø as well as useful links to Danish and international web sites. Point your browser to www.risoe.dk.

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