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The Global Change System for Analysis, Research, and Training (START) proposes that the Global Environmental Facility make a critical startup investment in the first stage of the establishment of the START system. This investment will permit less-developed countries in South and Central America and the Caribbean, and in South East Asia, to participate fully in the Regional Research Centers for their regions, will provide essential funding to create viable centers, will take necessary steps to facilitate communications and the networking of scientists, and will train scientists to work in this emerging field. In addition, this investment will begin to prepare for the creation of a center in Northern Africa.

START is a cross-cutting activity of the International Geosphere-Biosphere Programme of the International Council of Scientific Unions, conducted in collaboration with the World Climate Research Programme and the Human Dimensions of Global Environmental Change Programme. START is the international scientific community's answer to the needs for regional research with a global perspective and the development of competence and consensus on scientific issues worldwide. It is administered by an international, interdisciplinary standing Committee.

GEF is requested by this proposal to provide $ 50,000 towards the development of a full proposal. These planning funds will be used to ensure full participation by the scientists of the three regions in the formulation of a proposal that is practical for each region, that meets the specific needs of scientists in the region, and that will produce not only short-term benefits but also strengthen the commitment of sustaining funding from national governements and multi-latoral organizations.

In addition, planning funds will permit the nascent START secretariat to employ a professional from one of the three regions to draft the full proposal.

The Scientific Problem.

Humans, by taking actions to improve the quality of their lives -- or simply to live -- are forcing large-scale, long-term changes in the global environment.
These changes, still only portially understood, include possible climate change and loss of biodiversity, as well as depletion of the stratospheric ozone shield and pollution of coastal and international waters. In the developing world, human actions are the result of efforts to satisfy the most basic human needs for food, energy, transportation, water, and industrial products. In the industrialized NATIONS ~~motions~~ it is also the result of overconsumption.
All of these changes first occur as a result of things done at the local to regional levels before they are manifest at the global level.

However, many of the global changes -- possible global warming or ozone depletion, for example -- can affect a region which has fraction contributed little to the problem. Africa ~~emits~~ emits a smaller ~~function~~ of greenhouse gases, but global warming would perhaps particularly affect the ecologically, socially, and economically vulnerable countries of Northern Africa.

Understanding the regional processes that contribute to global problems is therefore only part of the task. The task is also to understand how global problems might affect specific regions. The START program puts into effect in research the regular injunction: it is designed to encourage scientists to think globally but to act locally.

It is largely by fostering research in the various regions of the world -- research done by scientists of the region -- that scientific progress can be made on issues of the human forcing of global change, the impacts of those changes on both humans and their environments, and the human response to and mitigation of global change. The natural processes of global change -- the chemical reactions, the meteorological phenomena, the ecosystem adaptations -- may be universal and easily studied in the laboratories of the advanced industrial countries. But the specific processes that occur and the human actions that force them are not universal. The reasons for deforestation and its effects are demonstrably different in South East Asia and Amazonia. A global understanding of deforestation will require a regional understanding of its causes and impacts.

In addition, a situation in which global-level studies are done only in the advanced industrialized countries is neither politically nor scientifically viable. General Circulation Models, as predictivetools, will never gain credibility worldwide until they are understood and critiqued by scientists worldwide. Successful international action on global changes requires a global scientific consensus on the main points: what is happening, why is it happening, and what does it mean for humans and their environments? Such a consensus cannot be attained until the scientists of less-developed countries are integrally involved as equal partners in a global research enterprise.

The START Programme

The START programme provides a carefully-constructed design for creating a partnership of scientists around the world. Its designers explored a variety of models, ranging from creating regional centers in the advanced countries that would study regions from afar, through creating new highly-centralized research centers on the CGIAR model, to creating regional research networks built around core institutions. They explored the advantages and disadvantages of creating new institutions and of building upon existing institutions.

What they chose, after thoughtful deliberation and a careful appraisal of causes for failure or success, is a model that is flexible enough to be adapted to the particular needs and capabilities of a region while retaining a compatibility in aims and modes of operation across regions.

START centers are:

. International, with the participation of many or most of the countries of a region.

. Interdisciplinary, including the natural sciences, the social sciences, the policy sciences, and engineering and especially focusing on their interactions.

. Sustainable, because it is built upon existing institutions, existing scientific agreements, and existing patterns of international cooperation.

. Political commitment, because governmental leaders not only support the concept and will provide funding, but will also provide a setting that is hospitable to science.

. Fundable, because where the concept has been discussed, governments have already indicated their support.

. Acceptable, because it will not drain scientific talent from other institutions, nor will it wrest control of the scientific agenda from the hands of the scientists of the region.

A START regional programme involves a

. Regional Research Center, which serves as the core of the program. It is responsible for cummunications and coordination, and it might be one of several leading research facilities. The concept permits more than one institution in a region to function as "the" center.

. Regional Research Sites, which may be focused on particular problems or on particular geographic subregions.

. Linking all these together, a Regional Research Network that helps scientists of the region plan and conduct their research in collaboration, and helps to develop a shared understanding of the problems. This center will also sponsor programs of conferences and workshops.

This decentralized concept is adaptable to world regions which have few centers of scientific excellence and to those with many such centers.

It permits research programs and even institutions to come and go. It is not wholly dependent on the success of any one institution or even of any one administrator. It does not commit the START program to perpetual support of a particular research program or a particular institution. It can respond quickly to new discoveries and the changing needs by growing quickly in one direction or shrinking in another. It advantages no particular institution or country. And it provides for control of the scientific agenda by scientists, of a region, including in its capacity to house projects based upon conflicting perspectives and diagnoses.

A Jump-Start Needed

Nowhere in the world does the START programme now exist. It is closest to realization in the proposed Inter-American Institute for Global Change Research, which has been greatly aided by on initiative of the United States of America. But even there a key ingredient is missing: the capacity of the U.S.'s partners in South and Central America and the Caribbean to function as equal partners with the U.S. In South East Asia there is as yet only strong interest in a START programme. And in Northern Africa there is neither that level of interest nor presently the capacity to create a programma. Jump-Starts are needed in all three cases, but there are very different needs in the three regions.

Inter-American Institute:

Scientists and decision makers from the region have agreed on a broad level scientific agenda and proposed some mechanisms to engage in a partnership in the activities for global change research through the Inter-American Institute. In order for this partnership to develop to match the international programmes (IGBP-WCRP-HDGEC) and the regional initiatives (US Western Hemisphere) both scientists and decision makers need to reinforce their capabilities to react to global issues, fine-tuning of the science agenda and create the necessary (new) mechanisms to ensure the dialog between science and politics on the one hand. On the other hand the interpretation, analysis and synthesis of global phenomena at a regional scale and the regional contribution to global change understanding and policies will need to establish innovative structures analogous to the IPCC but with a regional focus. Regular funds are clearly not available. GEF funds would be relatively neutral and serve as a unique investment to prime the new concept. These funds will support:

- Regional Meetings;
- Fellowships programme (Ph.D., Postdoctoral levels); and
- Improved communications.

South East Asia:

This region has substantial scientific talent in at least three countries (Indonesia, Singapore, and Thailand). Here there is the capacity to initiate a full START program. But as is true elsewhere, the scientific community is not yet well connected to the global change research agenda. This agenda requires that scientists make unprecedented Forays into other disciplines: climatologists must learn something about technology and its diffusion, meteorologists must learn some atmospheric chemistry, and social scientists must learn some natural science. All disciplines must learn to think at a global level of long-term, large-scale changes.

A major postdoctoral fellowship programme is required for South East Asia. This programme will bring local scientists to a few institutions in the region, where they will teach each other and learn from short-term resident scientists from outside the region. The South East Asian Regional Research Center will provide essential communications and networking support. and it will likely be itself a major center for analysis, research and training. Recognizing that communications among (and within) the countries of this region are not reliable, much less sufficiently advanced to permit exchange of scientific data, the Regional Research Network will be built around a satellite-based telecommunications network. Funds will be provided to permit regional scientific meetings and the participation of the region's scientists in international meetings.

The basis for regional cooperation already exists in ASEAN. Our vision is that the countries of ASEAN (plus perhaps Taiwan because of its meteorological and ecological similarities) would work with START in formulating this programme and in selecting the institutions to comprise it.

Northern Africa:

In our judgment it is not now possible to create a START programme in Northern Africa. This region has scientists trained in some of the world's pre-eminent institutions, However, their excellent training has not been fully exploited in their own institutions, and as a result they are even less connected to the global change research agenda than are scientists in South East Asia. They have neither the laboratory facilities nor the libraries that they need. Although they operate scores of measuring instruments, the export the data they collect; they are not often enabled to analyze the data themselves. They have few resources with which to conduct their own research and analysis projects.

The pressing need for Africa is to develop the minimal scientific core for global change research. At the beginning, this is not primarily a need for training: it is a need for small grants with which highly-trained investigators can begin to do relevant research. From this small core of researchers START will be able to build the momentum that will lead to the development of a Northern Africa START programme. The model that we might emulate -- and that we might even engage and expand -- is that of the International Foundation for Science. This diagnosis and prescription is not ours alone -- it comes to us from African Scientists.

In addition to its need for grants so that a small number of scientists can actually do research, Northern Africa needs resident assistance in defining its research agenda and sounding a "call to arms" -- not assistance from outside the region but instead an indigenous secretariat whose personnel will know not only Northern Africa but also its scientific needs and capabilities.

Annual summer institute:

In alll three regions we propose an investment in annual summer institutes, each involving perhaps 50 scientists. Our model is that of the Woods Hole summer program or the Office of Interdisciplinary Earth Sciences summer program. For a substantial period of time, perhaps two weeks, some of the region's senior scientists, rising junior scientists, and a few advanced graduate students will convene around a common topic in global change. A suitable format might be that of the Dahlem Conferences. Among the products would be a series of books.

Such conferences will not only advance the scientific agenda. They will also help to create a regional scientific community. They will assist in the formation of intra-regional collaborations. They will contribute to the identification of new scientific questions. And they will, we believe, help to formation of scientific consensus about what is known, and what remains to be understood.

We present our plans as if there were a tube down which START centers will pass, with the Inter-American Institute nearly ready to emerge from the tube, the South East Asia center near the entrance, and Northern Africa still outside the tube. In some respects this metaphor captures reality, However, in an important sense it is too linear a model. The complete START programme may see much variety among the centers in their form, functioning, and levels of development. We will not seek to replicate the Inter-American Institute or any other model around the world; instead, we will adapt the general concept to regional needs and capabilities -- or better, the scientists of the region will adapt it.

Products

In a fundamental sense, people will be the most important product of this first stage of START. In the Inter-American Institute, there will be people empowered to deal on an equal footing with the scientists of their large, rich neighbour to the north. In South East Asia, these will be people who have extended their training so that it now encompasses the global change research agenda. And in Northern Africa, the much more modest programme will have turned trained scientists into operating scientists with a global view. This will create in each region a resource on which START can continue to draw for many years.

People are not the only product. Arrangements for cooperation are another. Only in the ASEAN countries is there now any evidence of frequent, sustained cooperation, and even there it must be strengthened, particularly around the global change agenda. The communications and networking START will provide -- especially through the summer institutes -- will establish expectations and patterns that will be sustained after the GEF jump-start is expended.

Of course, there will also be scientific progress. We cannot now specify the scientific problems on which scientists will work, for that is the business of the scientists of the region themselves. We can only point to the pace of scientific advance in regions of the world where the scientific community is already organized around global change problems and claim with confidence that similar progress can be expected from regions in the less-developed world.

Research and Policy Formulation.

Ite is not the business of the START programme to recommend policies to governments. It is the business of the programme to make sure that the science underlying policy debates is sound, that all options are up for discussion, and that decision makers have reason to trust the science that they are presented.

On a worldwide basis, global change research is now too general to be of much use in the fomulation of policy. What is needed are regionally-specific scientific assessments, regionally-specific impact analyses, and regionally-specific identification of policy options. The START program is designed to provide such science. By utilizing the scientists of the region, it will ensure that its findings are awarded a local stamp of credibility, not suspect as part of a plot to disadvantage developing countries. Empowering regional scientists, to work as equal partners in a global research enterprise may well be the most inmportant contribution of the START programme.

Is There Life After GEF?

What is needed is a jump-start, not funding in perpetuity. The START programme is needed now not years from now, but governments, are unlikely to be able to commit new funds for START activities in the near term and before they see evidence of probable success. This will be particularly true of developing countries. Even private foundations are likely to wait to see if success is probable before committing funding. So despite bread governmental support for the START concept and despite the indisputable salience of the global change research agenda to the funding community, an initial investment is required.

We need substantial support from an innovative organization that can quickly act. That is why we have approached the GEF for this critical initial funding.

What we have sketched here is only preliminary. Our next step, given GEF planning funding, will be to test and correct these ideas with scientists of the regions. From that process there will emerge in six month a full proposal endorsed by scientists and governments of the regions. Even taking this first step will have great benefits, for it will initiate conversations across countries and across disciplines that have yet to occur.

Impressions
from
The START Meeting in Amsterdam
August, 1991

Prepared by Robt. W. Corell

Background:

The IGBP, in cooperation with WCRP and HDGEC, has established a Standing Committee to provide guidance to and oversight of the START System - the international network of regional research centers. The START Standing Committee held its second meeting at the Netherlands Academy of Sciences, during the period of August 25-27, 1991, with a joint meeting with the U.N./World Bank Global Environmental Facility's(GEF) Scientific and Technical Advisory Panel (STAP) held on August 23, 1991. This set of impressions will follow that schedule.

The Joint START/GEF-STAP Meeting (August 23, 1991)

The central purpose of the joint START/GEF-STAP meeting was to explore the potentials of GEF support (Funding) for the initial regional research centers/networks of the START. The discussions focussed extensively on that issue, with the guidance that GEF-STAP is very much interested in a proposal from the START effort to provide "jump-start" funding for the early development of the START network. The GEF-STAP interests are focussed on four scientific priority areas", which are:

1. **"Reducing Global Warming"**
2. **"Protecting biodiversity"**
3. **"Reduction of international waters pollution"**
4. **"Protection of the Ozone Layer"**

The discussions centered on the priority regions of the START, that is:

1. **The Equatorial South America Region(ESA)** - a region comprised of all of northern South America except the Caribbean coast down through mid-South American continent. See START definition of this region in IGBP Report No. 15.

2. **Northern Africa(NAF)** - a region comprised of all of northern Africa except the Mediterranean coast down into the more temperate parts of the continent.

See START definition of this region in IGBP Report No. 15

3. **Tropical Asian Monsoon Region(TAM)** - a region comprised of that part of the Indian Ocean/far east that is subject to the strong influence of the tropical monsoon, including the Indian continent south of the Tropic of Cancer, the countries of South-East Asia and the Malay Archipelago. See START definition of this region in IGBP Report No. 15.

The discussions centered on the thought that GEF-STAP would be willing to entertain a proposal for a couple of these regions, strongly encouraging (i) the further development of the "Inter-American Institute for Global Change Research", which grew out of the U.S. initiative and the Puerto Rico Workshop,with a focus on the Equatorial South America Region (ESA) and (ii) the nurturing of the development of one of the other priority regions (NAF) or (TAM). The discussions centered on the need for a focussed effort, consistent with GEF's overall objectives which are a bit more "mission focussed' that the basic research effort of the IGBP/WCRP/HDGEC efforts. However, the over-lap of interests were very consistent and complimentary. Simply, the GEF-STAP appeared to be very much interested in a proposal from that START community.

The general guidance provided to the START Standing Committee was excellent, and provided the basis for substantial further development by the START Standing Committee. The GEF-STAP must be submitted by November, 1991, to be considered in the "so-called Third Tranche", or simply the third funding cycle of the GEF-STAP program, of which there are only four such cycle anticipated in the early work of the GEF. It is critical, in my view, that the START GEF-STAP proposal be submitted as it is anticipated that little funding will remain for the fourth Tranche. The total funding for the GEF is about $1.5 Billion during the next several years. The November deadline must be met !

The attendees and other materials for this joint meeting are attached.

START Standing Committee Meeting (August 25-27,1991)

The agenda for the START Standing Committee Meeting covered a number of issues, the most important of which are:

1. The GEF-STAP Proposal

2. The Guidelines/Criteria that regional research centers/networks must address to be considered for START status.

The agenda and others materials on the START Standing Committee meeting are contained in Appendix I.

Amsterdam GEF and START Meeting

1. GEF-STAP Proposal:

A Working Group, along with discussions by the START Standing Committee, developed a general framework for a GEF-STAP proposal. The START proposal to GEF-STAP will focus on (i) a substantive research effort within the Equatorial/Amazonian sub-region of the Inter-American Institute for Global Change Research and (ii) the nurturing of the development of the other two START region priorities, i.e. NAF and TAM, with a recognition that TAM has the capacity to be developed into an operating regional research center/network in the next year or two, while the NAF will require longer term development. It should be noted that while GEF-STAP expressed interest in a pragmatic approach to those regions that can move aggressively forward, they express an interest in longer-term investments, properly conceived, in the NAF region. Therefore, the START Standing Committee discussions evolved into a strategy that involved all three areas. My view of the strategy is simply:

1. Focus on the substantive research issues in the ESA, most likely the issue of the role of Amazonian in climate and global change with a focus on the role this region plays in the potential for global warming, i.e. fund a research program,

2. Aggressively nurture a research PROGRAM in the TAM, i.e. fund a planning effort that leads rapidly to a research program, and

3. Facilitate the development of a regional research center/network in the NAF, through an focussed effort that leads to a center/network within a few years, i.e. build scientific infrastructure so that a regional research program can evolve.

The proposal will be developed through the IGBP Secretariat, but it was urged that item (1.), i.e., the Inter-American Institute part, be developed by that region. I indicated that the Interim Working Group would review this matter in depth at the October/Miami meeting, and that the U.S. would support a small drafting group meeting before September 23, 1991. The drafting group would supply a draft to both the IGBP Secretariat and the Miami meeting. A parallel set of drafting efforts will need to be implemented, but it is assumed that full and open review of all drafted documents will be assured, both for the START and the three regions. It should be noted that the Executive Secretary of the IGBP will travel to the TAM region to seek counsel from that region for that section of the proposal. A schedule for the development of the proposal is being prepared by Thomas Rosswall. While a 5-7 page proposal is due into the GEF-STAP system by November, there is another more detailed proposal due about sic months later. These deadlines, while short, it is essential that we meet them. The prospect of GEF support is fundamentally important, in my view.

Amsterdam GEF and START Meeting

2. The Guidelines/Criteria that regional research centers/networks must address to be considered for START status.

The START Standing Committee discussed at considerable length this issues, and prepared the following draft - which was forwarded immediately to the IGBP Scientific Committee, which met August 28-30, 1991. The Amsterdam draft follows:

Guidelines for Developing Proposals
to Seek START Status
for
Regional Research Center's/Networks's (RRC's/RRN's)

1.1 BACKGROUND:

The International Geosphere-Biosphere Programme (IGBP), in association with its partner Programme's in the study of Global Change - the World Climate Research Programme (WCRP) and the Human Dimensions of Global Environmental Change (HDGEC) - seeks:

> ***"To describe and understand the interactive physical, chemical, and biological processes that regulate the total Earth system, the unique environment it provides for life, the changes that are occurring in this system, and the manner in which they are influenced by human action."***

In the development of these Programmes, it is fully recognized that research must be carried out in all regions of the world in order to obtain the necessary understanding of global change processes. Further it is accepted that the development of a system of regional research centers and associated regional networks is essential. The IGBP, with the participation of the WCRP and the HDGEC, has initiated a mechanism to facilitate the development of such a regional research system, entitled the "Global Change System for Analysis, Research, and Training (START)". The strategy for establishing the START System is outlined in IGBP Report No. 15. As stated in that Report, the START regional programme seeks to address three central global change questions. (Thomas - It was suggested that we use a sentence or two from Report No. 12, second opening paragraph which states something about humans making unprecedented changes in the Earth system, please add if it looks like it fits here). These questions lead to the objectives of the START effort, which are to determine:

a.) "How do regional changes in, for example, land use, demographic patterns, industrial practice, energy production, and urbanization alter regional atmospheric composition, the regional water cycle, and local ecosystem structure and function ?

b.) How can such changes within a region or in combination with those from other

regions affect biogeochemical cycles and physical aspects of climate on a global scale ?

c.) How will the ensemble of global change, acting through either direct effects or through altered feedback loops, lead to further regional change in the biospheric life support system ?"

Report No. 15 established a set of definitions for the START system, and which are used throughout this document, namely:

START = System for Analysis, Research, and Training, which in turn is the sum of all RRN's.

RRN = A Regional Research Network, which in turn is the sum of a RRC and the associated RRS's.

RRC = The Regional Research Center for a region.

RRS = An affiliated Regional Research Site within a region, consisting of research institutions and stations.

This document sets forth the functions, essential criteria, financial and legal arrangements, and proposal endorsement requirements that need to be addressed in any RRC/RRN proposals seeking START status.

1.2 FUNCTIONS:

The Objectives for an RRC/RRN will be met by:

a.) Stimulating and facilitating interdisciplinary research on regional aspects of the study of global change in both the natural and social sciences;

b.) Strengthening regional participation in the projects of the IGBP, the WCRP, and the HDGEC;

c.) Providing a focus for data and information management, including data acquisition, quality control, archiving, and effective dissemination and exchange;

d.) Providing regional analysis, interpretation, and modeling in relation to global change;

e.) Developing indigenous scientific capabilities through training, collaborative research, and scientific and technical cooperation;

f.) Involving decision-makers in the region and through them interpreting and incorporating global change research findings in the policy process, and addressing research needs on global change questions arising within the region;

g.) Participating fully in the system of START through exchange and collaboration with other RRC's/RRN's, and;

h.) Providing comprehensive knowledge of and directories to the projects, activities, and databases within the RRN.

1.3 ESSENTIAL CRITERIA FOR AN RRC/RRN:

RRC's/RRN's proposed for inclusion in the START System should meet these criteria:

a.) The existence of a mission statement with specific research, analysis and training goals relating to the IGBP, WCRP, and HDGEC projects;

b.) The presence of scientific competence and credibility relating to global change research and education;

c.) The presence of, or the ability to develop, the necessary infrastructure, such as computing capability, laboratories, equipment, libraries, and scientific and technical personnel;

d.) An explicit commitment to involve scientists and scientific institutions throughout the entire region;

e.) A commitment to facilitate scientific exchange of both scientists within the RRN as well as to scientists from other RRN's;

f.) A policy of full and open access to the facilities of the RRC/RRN;

g.) Expectation of long-term stability of interest and support from the host and donor governments/organizations to provide financial support.

h.) An agreement to abide by the IGBP/DIS Data Exchange Policies.

1.4 FINANCIAL AND LEGAL ARRANGEMENT:

The proposal for recognition of an RRC/RRN should include a detailed plan for the Center and Network organization and management, proposed legal arrangements between participating countries and organizations, and the financial agreements and fiscal projections for five years.

1.5 PROPOSAL ENDORSEMENT REQUIREMENTS:

Proposals that seek START status for an RRC/RRN should be based upon consensus statements that address the guidelines herein outlined and which are developed through regional consultations. Such proposals should be submitted to the IGBP START Standing Committee, with the endorsement of the IGBP National Committees of the region. The START Standing Committee will favor the establishment of an RRC in a developing country over one established in an industrialized country in the region. START status may be conferred for up to five years.

1.6 REVIEW AND EVALUATION PROCEDURES;

The START Standing Committee, in concert with the governing body for an RRC/RRN, shall conduct an independent review and evaluation. This review and evaluation should occur initially after the first three or four years of RRC/RRN operation and continued every five years thereafter. The review will be used by the START Standing Committee, along with appropriate materials provided by the RRC/RRN, to renew or terminate the START status.

1.7 IMPLEMENTATION:

The IGBP START Standing Committee shall implement these Guidelines on behalf of the SC-IGBP, in consultations with the JSC of the WCRP, and the SC of the HDGEC.

APPENDIX I
Agenda and other START Materials from the August 25-27, 1991 Meeting

GLOBAL CHANGE
IGBP

Joint Consultations Between

STAP-GEF and START-IGBP

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23 AUGUST, 1991

AMSTERDAM, THE NETHERLANDS

AGENDA AND WORKING PAPERS

1991-08-19 CE

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Joint Consultations Between STAP-GEF and START-IGBP

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Amsterdam, The Netherlands
23 August, 1991

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Draft Agenda

Joint Consultation Between STAP-GEF and START-IGBP

**Koninklijke Nederlandse Akademie van Wetenschappen,
Kloveniersburgwal 29, Amsterdam, the Netherlands**

Friday 23 August, 1991 at 0900 hours

1. Opening of the meeting

2. Approval of the agenda and time table for the meeting

3. Brief overview of START

4. Report from the 2nd STAP meeting, Washington, DC, July 1991

5. Brief report from the meeting of a Western Hemisphere Regional Reserch Institute, Puerto Rico July 1991

6. Discussion on relevance of the IGBP-START initiative for the GEF process

   - What is the potential contribution of Regional Centres to GEF with reference to all four programme areas?
   - If specific centres are funded under GEF, what outputs could be expected as furtherance of GEF objectives?
   - Would such regional centres support a "targetted" research component for GEF?
   - An assessment of how a scientific centre provides an input into policy formulation at the regional and national levels
   - The issue of "sustainability" beyond GEF funding both scientifically and financially/administratively
   - Can centres be identified that have worked and those that have not and in the case of the latter, why not
   - If it is decided to propose GEF support, which regions are best suited for such support and what are the necessary scientific, administrative and political steps needed to achieve the establishment of such centre(s)

7. Feasibility of GEF support for elements of START

   - Preparation of further documentation
   - Governmental and scientific contacts in the targetted regions
   - Policy of GEF participating countries
   - Further contacts

8. Plans for an ad hoc START Sercretariat

9. Other business

GLOBAL ENVIRONMENT FACILITY

PARTNERS IN GLOBAL SOLUTIONS

REPORT BY THE CHAIRMAN TO THE PARTICIPANTS' MEETING TO DISCUSS THE GLOBAL ENVIRONMENT FACILITY

APRIL, 1991

VOLUME ONE
MAIN REPORT

THE WORLD BANK

UNITED NATIONS DEVELOPMENT PROGRAMME

UNITED NATIONS ENVIRONMENT PROGRAMME

REPORT BY THE CHAIRMAN
TO THE PARTICIPANTS' MEETING
TO DISCUSS THE GLOBAL ENVIRONMENT FACILITY

MAIN REPORT

Introduction

1. This report has been prepared for the first meeting of the Participants in the Global Environment Facility since the funding negotiations were completed in Paris last November. This report reviews the working arrangements for the Facility, progress made to date in implementing the GEF, and the activities which the three partner agencies (UNDP, UNEP and the World Bank) propose to undertake during the initial phase of the three-year pilot program.

2. The formal approval of the GEF by the three agencies is now complete. On 14 March, 1991 the World Bank's Board approved the resolution for the establishment of the Global Environmental Trust Fund (GET). The Governing Council of UNDP took note of the concept and objectives of the GEF during its thirty seventh Session in June, 1990 and gave support to the concept of a partnership among UNDP, UNEP and the World Bank to launch the GEF. The Administrator of UNDP will report to the Governing Council at its thirty eighth Session in June, 1991. The Executive Director of UNEP has expressed the willingness of his agency to participate in the GEF and will inform the Governing Council of UNEP accordingly. Affirmation of the tripartite partnership between the Bank, UNDP and UNEP was given in a joint statement of the three Heads of Agencies in September, 1990.

3. The Global Environmental Facility consists of the "core" Trust Fund (GET) together with various cofinancing arrangements with the GEF. Funds will be committed over a three year period. Implementation of the GEF will be coordinated with that of the Montreal Protocol, which already has an interim multilateral fund as part of a financial mechanism established by the contracting parties. Specific procedures for the function of this Fund have already been agreed by the contracting parties.

I: Key Developments Since the Paris Meeting

A. International Context

4. The GEF has recently been given special emphasis in the context of a number of important international conferences. For example, in the preparatory process for the United Nations Conference on Environment and Development (UNCED) a special working party has been set up which will focus inter alia on institutional and funding issues, building on the GEF experience. In addition, the first session of the Inter-Governmental Negotiating Committee on the Framework Convention on Climate Change was held in Virginia, USA in February 1991. Although it was largely procedural, a number of delegations from both developing and developed countries referred to the importance that they would attach to the funding provisions of any future convention. Some statements made specific reference to the GEF. Work is also continuing on other possible Conventions such as the Protection of Biological Diversity and on Tropical Forests, where experience from the GEF may also be relevant. Finally, as planning proceeds for the 1992 World Parks Congress, to be held four months before UNCED, it becomes clear that here too a great deal of attention will be given to lessons learned from the GEF.

5. The conclusions to be drawn from this pattern of interest and activity are twofold: first, every activity that is funded under the GEF is likely to attract an unusual amount of attention, and second, the success of inter-agency cooperation in the GEF will be carefully tested by governments and other interested parties before decisions are made on the establishment of any new, more permanent, funding mechanism. It is significant therefore that even in the first meeting after the launching of the Facility, Participants can expect their discussions about the future direction of the GEF to generate considerable interest.

B. GEF Implementation Arrangements

6. Immediately after the Paris meeting, the tripartite partners established a pattern of close collaboration through the formation of the GEF Implementation Committee (IC). The IC is an "ad hoc" working committee composed of representatives of the three agencies. It meets regularly and reviews both policy, program and project issues. The IC prepared a timetable and action plan for interagency cooperation over the six months leading to this meeting. The IC has provided a vital forum for exchanges of views and resolving issues faced in the rapid development of the first tranche of GEF activities such as the interpretation of GEF objectives and eligibility criteria, the definition of an operational strategy, and resource allocation and planning. The IC has met three times to date. The meetings have focused on the screening of project proposals to determine eligibility for GEF assistance, the arrangements and terms of reference for the establishment of the Scientific and Technical Advisory Panel (STAP) to be administered and guided by UNEP, the development of a GEF Pre-investment Facility to be administered by UNDP, the identification and review of policy issues emerging during the processing of the initial tranche of projects, and the preparation of a publicity kit.

Scientific and Technical Advisory Panel (STAP)

7. UNEP has successfully established the STAP. Wide-ranging consultations with the Participants and between the implementing agencies led to the announcement in April, 1991 of the formation of the Panel. The provisional terms of reference for the STAP are provided in Annex 1. Its first session took place in Geneva on April 22nd and 23rd, 1991, where STAP members were apprised of the history and operations of the GEF since its formal inception in November, 1990, and on the issues affecting GEF implementation that have already been identified as needing close attention. It is proposed that the Chairman of the STAP, Dr. Robert Watson, will address the Participants at this meeting.

The Governance of GEF and Organizational Arrangements

8. The principles underlying the governance of the GEF have been established in line with the wishes of the Participating countries. From the outset the Participants have stressed the need for the GEF to move as rapidly as possible into an operational mode. Four broad principles have been followed: (i) that no new GEF superstructure would be created; (ii) that modest modifications to the existing institutions and organisational structures of the implementing agencies would be made; (iii) that there would be a minimum of formal interagency agreements and greater emphasis would be placed upon consensus building and informal working arrangements; and (iv) processes for ensuring the technical and scientific integrity of proposed GEF activities would build upon outside expert scrutiny. The Chairman of the GEF is expected to play a key role in fostering the high degree of collaboration and cooperation needed between implementing agencies and Participants. Important policy issues may, at the Chairman's discretion, be submitted to the Heads of the implementation agencies for consideration at their periodic meetings. At the working level, regular meetings between the agencies will play a key role in reaching consensus on program and policy matters. The Scientific and Technical Panel will provide an independent view of the validity of the scientific underpinnings of GEF and technical review procedures have been established to ensure scrutiny by outside experts.

9. In accordance with the wishes of the Participants, the implementing agencies are relying on existing administrative arrangements to administer GEF activities. Nevertheless, each agency has made minor modifications to its structure and procedures to adequately prepare for undertaking GEF business. This has involved some modest additions to capacity, as well as some redeployment of staff. The arrangements in each agency are discussed below.

10. In the World Bank Group, the Senior Vice President for Policy, Research and External Affairs, Mr. Wilfried Thalwitz, has been designated Chairman of the GEF, with responsibility for administering the Facility within the mandate set out by the Participants. He is also the Bank's chief spokesman on the GEF. Mr. Thalwitz will be assisted and advised by a GEF Administrator appointed within the Environment Department of the Policy,

Research and External Affairs Complex. The Operations Complex of the Bank has responsibility for assisting GEF clients to prepare individual GEF-financed investment projects which it will appraise and supervise. A GEF Operations Coordinator has been appointed in the Bank's operations complex to coordinate GEF activities across regions. The International Finance Corporation (IFC) will also prepare private sector projects for consideration under the GEF.

11. In UNEP, the Executive Director has assigned a focal point for the GEF, and UNEP's implementation activities are reviewed by a standing Task Force. UNEP has reviewed project proposals for the GEF, prepared a number of background issues papers for the STAP, and will provide logistics and administrative support to the STAP. It is expected that UNEP staff will participate selectively in project appraisal missions.

12. In the UNDP, the Resident Representatives, in its 112 field offices, play a key role in coordinating activities and in ensuring that the programs being undertaken by the GEF complement other development activities. At the UNDP Headquarters, the Regional Bureaux are primarily responsible for coordination of the operation of GEF related activities in each geographical region. Each Bureau has appointed a focal point for the GEF. Interregional programs and projects are coordinated by the Division for Global and Interregional Programmes. Overall coordination of GEF activities in UNDP is the responsibility of the Deputy Assistant Administrator in the Bureau for Programme, Policy and Evaluation who is also the Chairman of the Inter-Bureau Environmental Action Team. UNDP is administering the pre-investment trust fund established by the GEF. A trust fund agreement between UNDP and the World Bank has been established for technical assistance activities of the GEF.

The Participation of Multilateral Development Bank and other U.N. agencies

13. The Participants have provided a role for the regional multilateral development banks (MDBs) as sponsors of GEF investment operations. In April, 1991 in connection with the annual meeting of the Committee of International Development Institutions on the Environment (CIDIE) the Bank, UNDP, and UNEP will meet with representatives from the regional MDBs to discuss operational modalities for this participation. In addition, United Nations specialised agencies have been involved in the preparation of selected projects for the GEF. Further consultations with the specialised agencies are planned in order to clarify how they can effectively participate in the GEF process.

II: Strategy and Policy Issues

14. The challenge of a pilot program such as the GEF is to demonstrate the potential and the constraints for similar interventions on a larger scale. Despite their absolute size, GEF resources are small in comparison with the problems they are to address. Hence, GEF's success will be measured, inter alia, by:

- the generation of practical experience immediately relevant to replicating technical and policy interventions to address global environment problems covered under the Facility; and
- the ability to catalyze and leverage larger and sustainable improvements in environmental management than those financed by the GEF alone (simultaneously at the global and local level).

15. The STAP will provide broad advice on scientific issues which arise during the implementation of the GEF. The STAP, and its working groups or sub-panels, are expected to provide feedback on the overall relevance and direction of the strategy for fulfilling GEF objectives. The STAP will advise on the three GEF scientific objectives discussed below. The ozone depletion reduction objectives are handled under the arrangements for the Montreal Protocol and are not detailed here.

Scientific Objectives for GEF Operations

16. For "reducing global warming", the direct impact on overall greenhouse gas emissions from GEF pilot operations will be very small. On the other hand, the demonstration effect of projects should be of considerable importance in the longer term. Operationally, the strategy being pursued is to obtain practical experience of a wide array of potentially feasible techniques and technologies to address global warming. The GEF global warming project portfolio will include renewable energy alternatives, such as solar electric and biomass sources; energy efficiency and demand management projects; interfuel substitution from heavily polluting solid to gaseous fossil fuels and substitution by non-fossil-fuel alternatives (e.g. geothermal); and carbon sequestration through forestry projects. An important element of the demonstration effect of these projects will be to systematically identify cost-effective means to ensure build-up of knowledge for low-cost and thus more replicable applications.

17. Under the "protecting biodiversity", objective, the GEF will give priority to biodiversity "hot spots" and megadiversity countries recognized internationally by the scientific community - in particular by the IUCN - and by special conventions, such as the Ramsar convention for wetlands and the World Heritage convention. The strategy under the GEF is to facilitate rapid learning of successful approaches to biodiversity protection by applying to each major class of biodiversity a range of innovative management and preservation techniques, financing mechanisms, and treatments of difficult socio-economic issues, with a view to establishing a range of "models" suited for wide dissemination. The STAP will play a key role in providing advice on scientific priorities with respect to the biodiversity sites under consideration. To enhance the relevance of this learning experience, the GEF would ensure that activities were undertaken in each of the important sources of biodiversity, including high altitude Himalayan ecosystems; tropical moist rain forests; woodland and savannah ecosystems; arid lands and deserts; mangroves, wetlands and estuaries; coral and marine ecosystems; and rich isolated island ecosystems. Special efforts will be made to consult with local and indigenous groups to ensure that their knowledge and views are utilised fully in the design of projects.

18. In addressing the "reduction of international waters pollution" objective, the GEF will seek to demonstrate practical technical and policy interventions for alleviating each major class of pollution, including oily wastes, garbage, harmful and noxious substances, and ship's sewage in both fresh and marine waters. In attempting to ensure that GEF-supported infrastructure and environmentally sound waste disposal facilities are fully utilized, special attention will be paid to regulatory and incentive systems, including revenue generation, which would sustain operation and maintenance of waste receiving and disposal, or pollution control systems.

19. The role of the GEF in facilitating compliance with MARPOL (International Convention for the Prevention of Pollution from Ships), and regional treaties and agreements governing international rivers, lakes and seas, is especially important. Hence, GEF projects are expected to demonstrate effective project support and associated technical assistance to enable developing countries to comply with MARPOL and other regional conventions. GEF investment projects serving this objective would mostly target regional problems, albeit with single country investments and technical assistance, rather than use a compartmentalized approach at the national level. The Caribbean and Mediterranean Seas projects exemplify this approach, each addressing a different class of waste, and set of regulation and incentive issues for the entire sea, rather than piecemeal, port by port.

Policy Issues arising from the preparation of the work program

20. As the initial work program has evolved, a number of policy issues or deviations from normal practices of the implementing agencies have arisen. This is inevitable in a pilot project aimed at facilitating a rapid implementation phase and, at the same time, encouraging a high level of innovation. The approach taken by the implementing agencies has been to review such policy questions at the time of the implementation Committee

meetings and, on occasions, request individual agencies to prepare short issues papers outlining key issues and options. The main policy issues which have arisen over the past six months in connection with the development of the work program are discussed below.

The Role of Research in the GEF

21. A number of proposals have been received by all three agencies which are primarily research and/or monitoring projects. While such proposals would, in any case, need to be reviewed to establish their scientific credibility they do raise a broader question related to whether the GEF should support research and monitoring activities. This issue was briefly discussed at the most recent Implementation Committee. The view largely endorsed by the agencies is that modest contributions by the GEF to self-standing research and monitoring may indeed be warranted but only where they addressed high priority issues in the GEF's areas of concern and where such research would likely lead to a better understanding of options for direct implementation. Other criteria would include (i) that any funding would be channelled through well established existing institutions; and (ii) other financing was difficult to secure. Of course, small research and monitoring components of projects would be supported. Indeed, most biodiversity projects would include a research and/or survey component.

The Role of NGOs in the GEF

22. From the outset, the agencies have been committed to working with non-governmental organizations (NGOs), and NGO's have already played an important role by bringing specialized scientific knowledge and advice, of both global and local significance, to bear in project identification, in reviewing preliminary project proposals and in project preparation. To date, approximately 20 NGO's have become associated with GEF projects.

23. It is expected that, as GEF carries out its activities, NGOs will contribute at all levels. Some members of the Scientific and Technical Panel and its working groups will be drawn from the NGO community. NGOs will also continue to be involved in helping to identify and formulate projects for GEF support, in assessing the possible impacts of proposed projects, in providing project implementation services and/or in evaluation projects selected for GEF support.

24. Whereas NGOs may contribute various kinds of services in the different substantive areas, they will have a special role to play in the area of biodiversity. This may include helping to establish priorities for actions to preserve biodiversity, carrying out biodiversity assessments and promoting and supporting local activities, including community-based participatory activities, to preserve biodiversity in the context of development.

25. It is proposed that, in addition to providing project services for government-endorsed GEF projects, NGOs and grassroots organizations carrying out global, regional and local activities to promote and preserve biodiversity be supported in such efforts through a GEF Small-Grants Program. The most recent Implementation Committee meeting discussed the feasibility, criteria and possible modalities of such a program. The Committee attached considerable importance to a number of issues: (i) the importance of securing government commitment and approval for all GEF funded - NGO managed activities in a country; (ii) the importance of adhering to rigorous technical and scientific criteria for project selection, no matter how small those projects were; (iii) the importance of building upon local expertise in designing appropriate interventions and (iv) the need to find cost-effective and efficient mechanisms to serve the NGO community and bring its particular skills fully into the GEF.

26. A number of organisational options worthy of consideration for managing small grants to NGOs were discussed by the agencies. The most promising options include:

A. <u>A small grants window within UNDP</u> - Funds could be made available through UNDP under a Small-Grants Program to international and national NGOs and NGO networks for activities to promote and preserve biodiversity, including both (i) activities which a recipient NGO would itself manage directly and (ii) small-scale-

community-based activities to be carried out by grassroots groups and other local organizations with microgrants from larger recipient NGO. An international selection committee representing the GEF participants, the NGO community and specialists in biodiversity could be formed to recommend criteria and strategies for the Small-Grants Program; act on requests from NGOs and NGO networks of funding for global, regional and national projects; and assess program effectiveness. UNDP could provide support services for the Small-Grants Program. At UNDP Headquarters, the NGO Division, which has considerable experience in implementing small- and micro-grant programs could provide secretariat services to the international selection committee, develop procedures and forms for program implementation, monitor program implementation, and report to the GEF. At the country-level, UNDP's Field Offices would secure government agreement for NGO projects approved by the international selection committee; facilitate the establishment of local screening mechanisms, possibly including government participation, if such mechanisms are needed; and provide other support services including information on possible grassroots agencies and local technical resources, if needed, to complement information already available to the implementing NGO.

B. An international NGO as conduit - One option is to build upon the experience and contacts of one or more major and broadly representative international NGO in the biodiversity field by funding their participation in the GEF as a "retailer" of small grants. Such NGOs would have to demonstrate that they had technical competence in the field of biodiversity and that they could effectively manage a small grants program. Oversight procedures would be agreed to ensure consistency between larger country GEF activities and policy dialogue; review procedures would be agreed to ensure the technical integrity of the projects; and limitations per sub-contract would be established. UNDP Resident Representatives would play a key role in ensuring that government agreement had been secured. In order to ensure effective management it may be desirable to include this option as a sub-component of the small grants window program noted above.

C. UNDP Resident Representatives - In a limited number of countries UNDP Resident Representatives could manage a small grants program within their respective countries. To assure the quality and relevance of project proposals an in-country independent technical review process would be instituted, drawing upon local scientific skills and knowledge.

27. Finally, several NGOs have demonstrated a keen interest in engaging the agencies in discussions of broader questions of GEF policy and strategy. Some informal discussions have taken place, including the recent NGO-Bank consultations on the Bank's draft Forestry Policy, where a group of international NGOs reviewed progress in GEF implementation, UNDP-NGO consultation on biodiversity, and on poverty, environment and development. The latter will be reflected in a document to be presented by UNDP to UNCED. A coalition of more than 40 NGOs has also requested observer status at the Participants meeting similar to the status being granted NGOs in Preparatory Committee meetings for the United Nations Conference on Environment Development and the meetings of the intergovernmental negotiating committee for the Climate Framework Convention. The agencies have responded that this is a matter for the Participants to consider.

28. An important element of the GEF work program will be the continued preparation of a number of issues and policy working papers which explore policy issues and options with respect to the GEF. To date, these have included a review of endowments and trusts in order to ensure the sustainability of recurrent cost expenditures (as noted); a review of guidelines for free-standing technical assistance (prepared by UNDP); and, as discussed above, a review of means by which the GEF can substantively work with the non-governmental organisation community (NGOs). A working paper on land acquisition is under preparation as this is likely to become an issue in the near future with respect to a number of project proposals recently received. These papers will vary from technical papers and guidance for task managers in designing projects to broader policy and strategic studies , and may be prepared by any of the implementing agencies. Once completed these papers will be discussed at the Implementation Committee meetings, summarised in the bi-annual Chairman's report, and, where necessary, discussed as agenda items by the Participants.

III. Preparing the Work Program

29. The GEF has been faced with the submission of a large number of eligible proposals to address pressing and multifaceted global environment concerns. On the basis of experience over the past few months it is clear that eligible projects submitted for consideration through the three agencies will be considerably larger than the availability of finance under the GEF. While this is clearly an encouraging sign, it also means that considerable attention is required to ration the funds by carefully selecting projects. The strategy followed is to identify a broad and representative sample of projects dealing with a wide variety of environmental problems. GEF activities should cover as diverse a set of countries, regions, and activities as possible, so as to maximise the learning feedback, while at the same time achieving global environmental benefits. As recommended in the last Participant's meeting, the guiding principles in selecting GEF operations for the first tranche of projects have been: (i) to identify and prepare the best available projects to serve satisfactorily well-defined scientific and operational objectives; and (ii) to maximize the leverage that GEF resources should bring in mobilizing other financial resources.

30. The implementing agencies have also established procedures for selecting GEF projects with a view to ensuring quality and maintaining a consultative approach between the agencies at every stage, from project identification to implementation. The pilot nature of the GEF makes it imperative that the limited funds at its disposal be used in a large and diverse number of activities. The implementing agencies consider that, at least initially, the use of the grant-based GET funds would be limited to US $30 (SDR 22) million per project[1]. Efforts to cofinance projects in order to reduce the GET contribution would also be made in all cases.

A. Building the Project Pipeline

Project Identification

31. Projects are normally submitted by governments through the UNDP Resident Representative. Governments are also the primary agent in identification and selection of GEF projects, but may obtain assistance in the identification process from the implementing agencies, NGOs, the private sector and others. By the end of March, about 35 governments had formally submitted project proposals for further review, although not all of these were for consideration in the first tranche of the FY92 work program. However, other channels, especially through the three implementing agencies, are open for submissions of project ideas and/or proposals

32. Proposed projects are screened to ascertain their eligibility for GEF funding, and to ascertain whether they would add value to the overall GEF portfolio by demonstrating new and relevant techniques, policy instruments, and/or technologies. While it is likely that GEF projects will be widely dispersed throughout all regions of the world, a priori country allocation limits - aimed at distributional objectives - would not be consistent with a pilot operation of this nature. Throughout the process, extensive consultation takes place between the three implementing agencies. The Implementing Committee is periodically informed of projects that have passed the identification stage and are slated for technical review. In addition, exchanges of views occur regularly on each project proposal. From this consultation process emerges a matched program of pre-investment, free-standing TA, and investment operations for more thorough technical review prior to being included in GEF work programs.

Technical Review of Projects

33. Each agency has developed its own technical review procedures based upon the principle of independent technical scrutiny of project proposals. The STAP has prepared and approved a roster of competent and well

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[1] The $30 million ceiling refers to the GET only. Funding under the GEF (e.g. from cofinanced sources) could be greater. For example, the Philippines Geothermal Project may be financed up to a level of about $70 million from both the GET and from the Japanese co-financing arrangement.

recognised scientific and technical experts from which each agency can chose to review specific project proposals.

34. Within the World Bank, review and approval procedures have been agreed. These procedures are similar to existing procedures for investment loans except that there is an additional technical review stage and Bank management formally approves GEF projects. Projects are submitted for review to a project-specific technical review panel which includes Bank technical experts and external specialists, many, coincidentally from NGOs. In future, when important generic issues arise from the project review process, the STAP will be consulted. The objective is to be able to draw upon a wide range of world renowned experts from outside the Bank to strengthen the institution's capacity to make scientific and technical judgements on GEF projects.

35. Review procedures by UNDP will follow existing procedures where emphasis is given to in-country processing. Project preparation will be the responsibility of the UNDP field offices and local officials together with technical experts (both local and international) where warranted. All GEF proposals are reviewed by both an in-country Project Appraisal Committee (PAC) and a specially constituted Headquarter's PAC which includes external consultants, scientists and technical experts.

36. Within UNEP the substantive units involved as well as the regional office(s) concerned are invited to comment upon and review GEF project proposals.

Approval of Projects[2]

37. For those investment operations involving modifications in the design of normal World Bank projects, the Bank's Executive Directors will approve the Bank's component(s) and review the GEF component. Projects developed by other MDBs for cofinancing by the GEF would be approved in accordance with the regular procedures of each agency for cofinanced and trust funded-operations. There are also likely to be some free-standing GEF investment projects, but these would not be permitted to exceed $10 million in size. Approval of projects smaller than $5 million will be the responsibility of World Bank management. In this regard, the Senior Vice-President, Operations will approve such projects. Projects between $5 million and $10 million will also be approved by management but only after such projects have been reviewed by the GEF participants at the semi-annual bank meetings. For such projects, Participants will be provided with expanded documentation. Approval for technical assistance and scientific and technological support activities which form part of their work programs would follow UNDP and UNEP's standard procedures.

Program Review

38. Broader program issues that relate to the extent to which GEF resources are allocated prudently to maximize the effectiveness of the pilot phase are also important. As the program unfolds it is important to identify gaps, assess new and innovative means of addressing global environmental problems, and, in general, ensure that the program is geared up to provide as wide a range of potentially useful demonstration projects as possible. Many of these program issues are largely related to the overall strategy being followed and the extent to which the projects eventually selected form an integral part of that strategy. Strategic concerns of this nature will need to be discussed extensively throughout the course of the GEF. Implementation Committee meetings already review both broad issues of strategy as well as review project proposals. Papers may also be commissioned by the IC on matters of policy and strategic concern. It is also intended that the STAP will focus some of its attention on issues of a strategic nature. Finally, the Participant's bi-annual meetings will provide an open forum for an exchange of views between the implementing agencies and the GEF donors.

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[2] This section is taken from the document "Global Environment Facility" dated February 25, 1991 which was submitted to the World Bank's Board of Executive Directors for approval. The document was discussed and subsequently approved by the Board on March 14, 1991.

B: Work Program FY92, First Tranche

39. The approved work program of the three agencies is summarized below and included in greater detail in Volume II of this report. The work program has been compiled by each implementing agency and reviewed at the Implementation Committee meetings. Each project in the work program has been submitted by the respective government and subjected to an independent technical review and is ready for further processing. It should be noted that while the work program of projects has been prepared, individual projects included within the program have not yet received final approval and further work is required to develop the individual projects up to the approval stage. In most cases, considerably more work will be required in refining the project scope, assessing final costs and justifying the appropriate level of GEF financing, finalising technical design and associated policies, and agreeing upon adequate institutional arrangements for implementation and monitoring. A final step will be to scrutinize the ability of the local institutions to ensure that the level of finance provided is commensurate with the capacity of those institutions to efficiently utilise the funds. Furthermore, as is customary for all Bank projects, each project in the portfolio will, where required, be subject to a full environmental impact assessment.

40. Figures and summary tables for the GEF first tranche are given in Annex 2. Individual projects proposed in this first tranche are given in Annex II. As agreed with the Participants, proposed free-standing GEF investment operations are described with expanded documentation to enable fuller review. The expanded documentation includes the Bank's Initial Executive Project Summary (IEPS) and the "technical opinion" on the project.

41. The present work program of investment projects accounts for approximately 20 per cent of the total GEF. This is an upper limit and it is anticipated that as cofinancing opportunities are explored the contribution from the core fund (GET) will decline. Similarly, as projects are prepared in greater detail and cost estimates refined, it is also fully expected that the actual commitment of GEF resources will be somewhat less than currently included in the work program estimates. There are fifteen projects slated for approval through the end of Calendar 1991 with a combined estimated cost of $214 million. Of these, eleven are biodiversity projects averaging $15 million, three are global warming reduction projects averaging $15 million, and one international waters pollution reduction project.

42. The work program of investment projects presented for review comprises the first tranche of projects scheduled for approval before the end of calendar year 1991. The documentation includes components of Bank projects as well as free-standing projects.

43. The work program of technical assistance projects are planned for approval by UNDP during the remainder of calendar year 1991. The documentation contained in Volume II includes a project summary, anticipated cost estimates, and possible sources of co-financing. For projects in the estimated US$5 to 10 million range, additional documentation taken from UNDP's Project Formulation Documents is included.

44. Of the eleven projects listed under technical assistance, seven address biodiversity preservation, three address global warming and one is concerned with international waters. The total technical assistance package amounts to US$59 million.

45. Key features of the projects included in the work program are summarized in the respective narrative introductions to the investment and technical assistance projects included in Volume II.

46. As the preparation of the first tranche of projects proceeded two issues have become apparent: the balance of the work program, and the issue of financing recurrent costs on a sustainable basis. These are discussed below:

A. The Balance and Sequencing of the Work Program

47. The pilot nature of the GEF immediately suggests that over its lifetime considerable care will be needed to implement a large number of projects which is sufficiently representative not only of the broad range of ecological circumstances faced throughout the developing countries but also captures the wide range of possible approaches and solutions. However, this does not imply that each tranche of project activities will necessarily be a perfectly representative sample of the ultimate portfolio of interventions. This has been discussed at the Implementation Committee and each agency is fully aware of the need to be vigilant with regard to ensuring the appropriate balance of activities and has taken steps in that direction. The first tranche of projects, for example, contains a disproportionate number of biodiversity projects. This probably stems from the unmet demand for financing such projects. Furthermore, global warming and water pollution projects which typically are large in scale typically require longer lead times to prepare. However, in order to improve the balance of the work program, special efforts are being made to identify and include in subsequent work programs a larger number of global warming and international-water projects. For example, the global warming pipeline includes solar electric options (photovoltaic technologies, solar thermal), windpower, and innovative energy efficiency options (using fluorescent bulbs). It is also anticipated that carbon sequestration projects (mainly afforestation) will also be developed for GEF financing. Consultation with the STAP will greatly assist the design of a global warming portfolio of replicable demonstration projects. In the case of water pollution control projects a number of potential projects are under development including investments in up to 20 Caribbean ports to demonstrate treatments of solid waste disposal stemming largely from the regional cruise ship industry, and the Mediterranean sea ports program to address oily wastes in Algerian, Moroccan and Tunisian ports. Furthermore it is intended that each regional sea program focus on the technology, physical, regulatory and incentive framework required to receive, process and dispose of major marine pollutant, including oily bilge water, deballasting wastes, ocean-dumped solid refuse and sewage, and oil spills, as well as innovative recurrent cost financing and control systems for sustained use of waste disposal facilities.

B. Recurrent Costs

48. It is clear that the management of biodiversity areas requires a sustained level of recurrent cost financing. Some schemes can resort to self-financing, especially where eco-tourism opportunities exist; for others more innovative schemes may be required. One possibility is to establish trust funds or permanent endowments. This was the subject of an issues paper prepared within the World Bank and subsequently discussed at an implementation committee meeting. The paper argued that endowments and trust funds could, under certain circumstances, play an important role. The Bhutan Project (see Volume Two) is the first project in the GEF to include the establishment of a trust fund. It is likely that the GEF will finance the establishment of more trust funds but would clearly need to ensure that: (i) the level of funding from the GEF was linked to a larger contribution from other sources; (ii) that adequate fiduciary controls were in place; and (iii) that adequate management systems were in place.

Implementation Issues

Monitoring and Evaluation

49. Owing to their innovative and pilot nature, GEF projects will warrant intensive supervision and systematic monitoring and evaluation. This will be achieved mainly through project design, but also through strengthening of supervision arrangements. Wherever appropriate, GEF projects will incorporate a strong monitoring and evaluation (M&E) component to assist the client and the GEF to better understand the success or failure of the project against objectives. These M&E activities would be contracted in cooperation with the local implementing authority, consultant or contractor for the main project activity. As implementation of the GEF proceeds it is expected that discussion of project outcomes on the basis of monitoring information will become a significant item for discussion by the implementing agencies at the Implementation Committee meetings.

50. Since most of the projects will be managed through Bank channels, the Bank's Management Information System (MIS) is being modified to enable the performance of GEF components of investment operations and free-standing projects to be monitored. Twice a year, a progress report will be submitted to the Participants for their review. In addition it is proposed that the findings of the report would be reflected in the Annual Review of Project Implementation which is presented to the Bank's Board.

Reporting to Participants

51. The reports of GEF supervision missions, and the special reports of key monitoring and evaluation activities will provide the basis for regular feedback to the Participants. Participants can expect, on an ad hoc basis, short discussion papers highlighting "lessons learned", "best practice" in techniques and technologies, special and innovative projects, policy and strategy notes and an assessment of approaches to serving GEF scientific objectives. In addition, as soon as projects are under implementation, annexes to the GEF semi-annual reports will regularly feature brief project by project summaries of implementation performance. This system of project feedback and reporting will also enable the STAP to play its role as scientific and technological advisor to the GEF more effectively.

IV. Managing Resource Allocation

Sources of Funds

52. As of March 31, 1991, total commitments to the GEF stood at SDR 935 million (See Table 1). Belgium and Canada have indicated that they expect to contribute to the GEF, but are not yet in a position to confirm the amount, and a number of developing countries have also indicated their intention to participate. These contributions are expected to bring total GEF commitments to about SDR 1 billion. There are three components of GEF resources: the contributions made to the Global Environment Trust Fund (GET), the associated Co-financing Arrangements, as well as the contributions to the Interim Multilateral Fund of the Montreal Protocol.

(a) GET Contributions are SDR 599 million as of March 31, 1991. This includes contributions from industrial countries in the amount of SDR 536 million as well as contributions from developing countries amounting to SDR 28 million. In addition, about SDR 34.6 million will be contributed by the Bank from its net income.3/ The contribution from industrial countries will be provided as note deposits made in three equal annual installments (by July 31 of 1991, 1992, 1993), each of which will be encashed in five equal annual installments.4/ The contributions from developing countries (SDR 4 million) each, will be made in eight equal annual payments of SDR 500 thousand each;

(b) Co-financing Arrangements have been committed by three countries – the U.S., Japan, and Switzerland. Total cofinancing commitments are $ 388 million in nominal terms. However, because Japan's cofinancing is not on a grant basis, for purposes of comparability with other GEF contributions, it is shown in Table 1 on a grant equivalent basis; and

(c) Other contributions may also be accepted by the GEF, such as debt instruments held by governments, public and private institutions, to be used for debt-for-nature swaps. Thus far, no such contributions have been received by the GEF.

3/ The Bank's board approved an allocation of SDR equivalent to a contribution of about SDR 34.6 million if drawn on the regular encashment schedule of the GET.

4/ Contributors can of course pay cash in advance of encashment dates. These amounts will be invested until they are needed with the proceeds adding to the Facility's resources. In addition, note deposits can also be provided earlier in the cycle so as to allow for larger commitment authority in the earlier years.

CONTRIBUTIONS TO THE GLOBAL ENVIRONMENT FACILITY*
AND THE MONTREAL PROTOCOL

Contributor	Contributions to the Core Fund		Grant Equivalent of Joint Financing		Montreal Protocol		Total Contribution
	SDR m	LC m	SDR m 3/	LC m	SDR m 3/	US$ m	SDR 3/
Austria	26.05	400.00			1.01	1.39	27.06
Denmark	16.25				0.95	1.30	17.20
Finland	20.44	105.00			0.70	0.96	21.14
France	114.33	837.05			8.60	11.78	122.93
Germany	110.05				12.88	17.64	122.93
Italy	65.10	105000.00			5.49	7.52	70.59
Japan	7.32		100.00 1/		15.64	21.42	122.96
Netherlands	37.74				2.26	3.10	40.00
Norway	19.57	165.00			0.76	1.04	20.33
Spain	10.00				2.67	3.66	12.67
Sweden	24.54				1.66	2.27	26.20
Switzerland	30.06 2/		9.94		1.48	2.03	41.48
U.K.	54.78	40.30			6.68	9.15	61.46
US	0.00		109.49	150.00	29.20	40.00	138.69
China	4.00						4.00
Egypt	4.00						4.00
India	4.00						4.00
Indonesia	4.00						4.00
Mexico	4.00						4.00
Pakistan	4.00						4.00
Turkey	4.00						4.00
Other MP contributions					26.82	36.74	26.82
Other GET contributions 4/	65.00						65.00
IBRD	34.56 5/						34.56
TOTAL	663.79		219.43	150.00	116.80	160.00	1000.02

* As of March 31, 1991

1/ Depending on the distribution of loans under the normal terms of cofinancing from Japan, the grant equivalent (based on staff estimates) of US$ 220 million in cofinancing would fall within a range of SDR 90-110 million.

2/ Contribution divided between core fund and cofinancing in proportion to the overall GEF division between the two types.

3/ Average exchange rates for the three-month period ending Sept. 30, 1990.

4/ Canada and Belgium have indicated agreement in principle on a GEF contribution. Australia and New Zealand have this under consideration. Discussions are also continuing with other developing countries.

5/ Approximate figures based on SDR 27 million transfer from net income, which would be equivalent to about 34.56 million in drawn on the regular encashment schedule of the GEF.

Terms

53. All funding emanating from the Core Fund (GET) will be on a grant basis. In the case of co-financing arrangements, terms are established by the Cofinancier subject to the agreement that such funding will be on a grant or highly concessional basis. The US and Swiss governments have indicated that their cofinancing will be on grant terms. The terms of Japan's cofinancing are still under discussion, but are expected to be in the order of 2%-3% interest, with 7-10 years grace, and 25-30 years maturity. However, actual terms will depend on the country receiving the loan. Therefore, until specific project opportunities are identified, actual loan terms cannot be established.

V: Accountability

GEF Accounts

54. As agreed by the Participants, the agencies will recover from the GET all reasonable expenses incurred in carrying out the pilot program. Expenditures in the start-up phase of the program will, however, be higher than average over three years during which funds will be committed. The agencies will apprise the Participants at each of the semi-annual meeting on expenditures incurred and estimated requirements for the forthcoming period(s). Budgeting systems will be established within each agency and any variations from initial and emerging "norms" will be flagged and reviewed with the respective managements of the agencies.

55. Each agency has established interim financial arrangements to fund the ongoing preparatory work through the current fiscal year. By June, 1991 each agency will prepare for reimbursement from the GET all reasonable expenses incurred up to that date.

Budgets and Expenditures

56. Budget estimates submitted by each of the agencies have been compiled to give a proposed administrative budget for the GEF. Further work is still required to refine the budget data, especially given the fact that the implementing agencies do not operate on the same financial year and budget categories and procedures are not standard across the agencies. Given that the bulk of administrative costs will be incurred by the Bank it is proposed that the GEF follow the Bank's fiscal year (July through June) with each agency providing six monthly estimates of expenditures. Thus the agencies would provide at each Spring Participant's meeting a consolidated budget for the forthcoming fiscal year, and at each Fall Participant's meeting a consolidated estimate of expenditures incurred during the previous fiscal year. An estimate for actual expenditures incurred during FY91 will be submitted to the Participants in time for the Fall 1991 meeting.

GEF FY 92 Budget

57. The preliminary budget for administering the GEF during FY92 is $14.7 million. This figure is based on submissions by the three agencies prepared subsequent to the completion of the draft work program for review by the participants. These estimates have therefore not had the benefit of detailed scrutiny by budget officers within the agencies, let alone discussions among the three agencies to ensure that there is a fully consistent approach to what is and what is not being charged to the GEF. It is proposed to do this at the IC meeting which will be held on May 3rd. A revised budget will subsequently be circulated to Participants.

58. The bulk of the budgetary incidence falls upon the World Bank, which accounts for an estimated $9.76 million during FY92. This is likely to be well within the targeted 3 percent of expected commitments for investment activities during the course of the fiscal year. It includes staff, consultant and travel costs in each regional office for identifying, appraising and supervising projects; operational coordination; the costs of administering the Facility

including the Participant's meetings and preparation of documentation; and the financial and legal costs associated with administering the Trust Fund. UNDP's budget of $3.65 million includes travel, staff and consultant costs associated with managing the technical assistance components of the portfolio; the management of specific pre-investment and feasibility studies; and overhead costs charged at 1 percent of actual funds paid into the pre-investment trust fund account. These somewhat higher costs per dollar of GEF commitments reflect the nature of technical assistance activities which involve relatively small amounts of resources and relatively large supervisory inputs. Finally, UNEP's budget estimate ($1.3 million) is primarily for the provision of secretariat services to the STAP including travel, consultant costs and attendance at meetings for STAP, implementation committee and Participant's meetings.

Financial Monitoring and Reporting

59. The agencies have agreed to absorb within their own budgets a substantial portion of the costs of managing the GEF, and therefore only a limited number of new positions have been created specifically for GEF management and coordination. For example, the substantial time spent by senior managers in all three organisations will not be charged. In addition, the GEF benefits from being able to combine GEF-related work with regular agency work. In these cases only the incremental costs associated with the GEF is charged.

60. Modifications to each agencies budget and planning systems have, where required, been approved to enable an accurate estimate to be made of the actual costs of undertaking GEF business. As noted, Participants will be informed annually of the estimated cost of administering the GEF.

61. Finally, GEF funds will be audited annually through the existing audit arrangements for each agency. Participants will receive copies of the audits as and when they become available.

GLOBAL ENVIRONMENT FACILITY
SCIENTIFIC AND TECHNICAL ADVISORY PANEL

PROVISIONAL TERMS OF REFERENCE

1. Purpose

The Scientific and Technical Advisory Panel (STAP) shall be established by UNEP as requested by the Participating Countries of the Global Environment Facility (GEF) to advise the implementing agencies (World Bank, UNDP and UNEP) on generic technical issues related to the implementation of environmental projects and programs under GEF. STAP shall provide the implementing agencies with priority criteria for projects and programs in relation to global environmental objectives. STAP shall advise on technological options and their cost effectiveness for addressing key environmental issues in countries where projects are planned. Significant technical developments arising from GEF projects activities shall be submitted to the implementing agencies for guidance and to Participating Countries for information.

2. STAP Secretariat

To support the effective functioning of STAP, UNEP will carry out the Secretariat function for STAP primarily through additional Headquarters staff, in Nairobi. The costs of the Secretariat function shall be borne by the GEF.

3. Composition of STAP

STAP shall consist of approximately twelve (including a Chairman and Vice Chairman) appointed by the Executive Director of UNEP, who shall seek nomination from the Participating Countries, and consult UNDP and the World Bank for their views.

The composition of STAP shall reflect broad geographical representation and have participation of experts from both developed and developing countries. Members of STAP will have expertise in the following fields: climate change, ocean and fresh water management, ozone depletion, biodiversity, forestry and desertification policies and energy efficiency.

The Chairman and Vice Chairman of STAP will be invited to attend and report to the regular review meetings of the Participating Countries. The Chairman will present his views and findings at such meetings.

Should a member be replaced, the Executive Director of UNEP shall appoint his/her replacement in consultation with the Chairman and Vice-Chairman and with UNDP and the World Bank.

4. STAP meetings

The dates and venue of each STAP meeting shall be decided by the Chairman in consultation with the STAP Secretariat. At each meeting, the Chairman shall fix the opening date and duration of the next meeting.

In addition to the designated UNEP staff, representatives(s) from UNDP and the World Bank shall be invited to attend the meetings of STAP. STAP may invite experts to attend the meetings of STAP in an advisory capacity as and when required.

5. Procedures and Working Groups

The STAP will apply mutatis mutandis the rules of procedures of the UNEP Governing Council.

STAP may need additional scientific or technological expertise to address particular issues or questions which arise. For this purpose the Chairman, with the assistance of UNEP, may convene specialized working groups on an ad hoc basis to address such issues. The working groups which may include members of the Panel will also be expected to provide specific technical advice to the implementing agencies, including review of project proposals, as required by them.

Unless otherwise decided by STAP, the chairman for each such working group shall be elected by STAP.

Such working groups will be drawn from rosters of experts established by UNEP in consultation with STAP and the other implementing agencies. The timing of working group meetings will be decided by the Chairman of STAP.

Members of STAP will, as appropriate, inform the Scientific Community and NGOs of the purposes of GEF.

6. Language of work

The meeting shall be conducted in English. Documentation to be considered by the Panel shall be submitted in English.

7. Costs

The travel, subsistence and other related costs of all STAP members as well as members of working groups in connection with meetings of STAP and its working groups shall be borne by GEF funds. In addition, appropriate honoraria will be provided from GEF funds.

8. Method of work

1. STAP shall discuss the appropriate actions needed to address problems in the four areas of focus of the GEF - ozone depletion, global warming, loss of biodiversity and pollution of international waters. STAP may also consider whether other topics should be incorporated into GEF.

2. STAP shall consider in each area of concentration the state of scientific knowledge, the availability of new technologies and their suitability for application in particular country settings, and the relative priority of different actions. STAP shall advise the implementing agencies on technological options available for addressing the issues in countries where GEF projects or programs are planned. It is expected that a set of guidelines and criteria will emerge from these discussions which can be put to the GEF participants for review.

3. STAP, at the request of the implementing agencies, will address and provide guidelines on specific issues and questions which may arise in the course of GEF implementation. In addition, the GEF participants may, through their Chairman, wish to address specific questions or issues to the Panel or refer to them for guidance on particular points.

4. STAP shall regularly review evaluation and performance reports on the implementation of activities supported by GEF. STAP may also prepare or commission occasional working papers and reports on the lessons of a scientific and technological nature learned in the course of GEF implementation. STAP may in turn commission or recommend to the implementation committee particular studies or analyses to be carried out. STAP shall specify the terms of reference for such studies. The minutes from STAP meetings will be available to the implementing agencies. The minutes are prepared by UNEP, acting as Secretariat and approved by the Chairman, STAP.

5. STAP shall, when requested by the implementation Committee and/or the Chairman of the semi annual meeting of the Participating Countries, undertake to:

   (a) Provide specific guidelines or advice on technical issues related to activities under GEF funding of pilot programs to protect the global environment;

   (b) Provide advice on the monitoring of the implementation of GEF activities, operational policies and guidelines related to GEF activities, for use by the implementing agencies in their operations;

   (c) Advise on the relative priorities of the work program, its broad composition and balance, and the extent to which it conforms with GEF objectives;

   (d) Develop detailed criteria on the scientific and technological aspects of project eligibility and implementation for activities supported by the GEF;

   (e) Advise on the guidelines for the determination of cost- effectiveness of environmental projects and programs;

(f) Advise on technological options available for addressing key environmental issues in countries where GEF projects or programs are planned;

(g) Review significant experience gained as a result of GEF project activities and report these findings to the implementing agencies.

6. In carrying out its duties STAP shall be provided by the implementing agencies with all relevant and available documentation.

Special Conditions

7. Members who currently hold positions in government or non-governmental agencies shall, at the discretion of the STAP Chairman, be excluded from attending such matters where potential conflict of interest arises.

8. Documentation submitted to members of STAP shall be treated in a confidential manner if so marked by an implementing agency, and shall not be disclosed without the express consent of that agency.

Work Program FY92 - First Tranche

AFRICA

Investment Projects

Country	GEF Project Name	Bank Associated Project Name	GEF Funds	Bank Funds	NGOs Involved	Project Keywords
Biodiversity						
C[illegible]o	Congo Tropical Forest Preservation	Free standing	10.0		WCI	Congo-Cameroon Forest, megadiversity, transboundary reserve
Kenya	Lower Tana River Primates	Wildlife Conservation & Tourism Project	6.2	30.0		Endangered primates unique lowland riverine forest
Uganda	Gorilla Reserve Bwindi Forest	Free-standing	4.0		WCI, AWF, FFPS, IUCN, WCI, FZS	1/3 worlds gorillas, rich biodiversity, birds, transboundary reserve
		Totals	**20.2**	**30.0**		
Global Warming						
Mauritius	Sugar Crop Residue Energy Project	Sugar II	3.5	26.0		Sugar crop energy use model, coal/oil displacement
		Totals	**3.5**	**26.0**		

Technical Assistance Projects

Country	GEF Project Name	Other Associated Program/Project	GEF Funds $ million	Other Funds $million	NGO Involved	Comments
Biodiversity						
East Africa	Institutional Support to Protect E. African Biodiversity	Assistance to Kenya Wildlife Service	10.0	to be determined	many local & international NGO's	biodiversity, protected areas focusing on training and pilot projects
Central & West Africa	Protecting Wildlife in Central and Western Africa	"TRAFFIC" international network of wildlife monitoring offices	1.0	to be determined	WWF, IUCN	Zaire office; add to existing regional network & controlling illicit trade in wildlife.
		Totals	**11.0**			
Africa Totals			**34.7**	**56.0**		

ASIA AND THE PACIFIC						
Investment Projects						
Country	**GEF Project Name**	**Bank Associated Project**	**GEF Funds**	**Bank Funds**	**NGO Involved**	**Project Keywords**
Biodiversity						
Bhutan	Trust Fund for Environment Conservation	Free standing; Trust Fund implemented by UNDP	10.0		WWF	Biodiversity surveys and management planning
Laos	Wildlife and Protected Areas Management	Forest Management and Conservation	5.5	20.0	IUCN	Biodiversity protection, institutional development
Philippines	Conservation of Priority Protected Areas	SECAL	20. 0	158.0	Haribon, WWF-US	Biodiversity conservation, fauna & floral surveys, management plans.
		Totals	**35.5**	**178.0**		
Global Warming						
China	Coal-Bed Methane Pilot Project	Free standing	10.0			Coal Bed methane capture and use, pilot, technology transfer
Philippines	Geothermal Energy Development	Leyte Geothermal	30.0 (plus 40.0 cofinanced)	350.0		Renewable energy, geothermal development, coal displacement
		Totals	**40.0**	**350.0**		
International Waters Pollution						
China	China Marine Pollution	China Marine Environment Project	30.0	15.0		Oil spill contingency planning, oily waste disposal, heavily trafficked sea lane
		Totals	**30.0**	**15.0**		

ASIA AND THE PACIFIC

Technical Assistance Projects

Country	GEF Project Name	Other Associated Program/Project	GEF Funds $million	Other Funds $million	NGO Involved	Comments
Biodiversity						
Vietnam	Protected Areas and Wildlife Conservation	Freestanding	3.0	-	to be determined	biodiversity, institutional strengthening, training
South Pacific Region	Support for the Conservation of Biological Diversity in South Pacific	South Pacific Regional Environment Program	8.2	2.5		Special island ecosystems, endangered species, training, management plans
		Totals	11.2			
Global Warming						
China	Limiting Emissions of Greenhouse Gases	Freestanding	2.0	-	-	freestanding, but investment opportunities will be identified
		Totals	2.0			
Asia and the Pacific Totals			118.7	545.5		

EASTERN EUROPE, NORTH AFRICA AND THE MIDDLE EAST REGION (EMENA)

Investment Projects

Country	GEF Project Name	Bank Associated Project	GEF Funds	Bank Funds	NGOs Involved	Project Keywords
Biodiversity						
Algeria	El Kala National Park	Pilot Forestry & Watershed Management	12.0	30.0	Numerous. See Footnote.	Ramsar site wetlands conservation, endangered species migratory bird. deer.
Poland	Forest Biodiversity	Free-Standing	4.0		WWF	
North Africa Region	New World Screw Worm Eradication	FAO Sponsored Regional Program	9.0	60.0		Major generalized threat to African wildlife and associated biodiversity, biological control technique
		Totals	25.0	90.0		

Technical Assistance Projects

Country	GEF Project Name	Other Associated Program/Project	GEF Funds $million	Other Funds $million	NGO Involved	Comments
International Waters						
Eastern Europe, Bulgaria, Czechoslovaquia Hungary, Romania, Yugoslavia	Environmental Management in the Danube River Basin		8.5	15.0	to be determined	Institutional support, scientific study leading to investment Action Plan
		Totals	8.5	15.0		
EMENA Totals			33.5	105.0		

Footnote: IUCN, WWF, Amis de la Terre, European Environmental Bureau, Greenpeace, ICBP, WCMC, IWRB, Association Tunisienne de la Protection de la Nature

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LATIN AMERICA AND THE CARIBBEAN

Investment Projects

Country	GEF Project Name	Bank Associated Project Name	GEF Funds	Bank Funds	NGOs Involved	Project Keywords
Biodiversity						
Brazil	National Conservation Units	National Environmental Project	30.0	117.0		Conservation units, megadiversity, endangered species
ico	Biodiversity Conservation	Biodiversity & Development Project	30.0	30.0	CI, Local NGO's	Megadiversity, biological corridors, coastal wetlands
		Totals	**60.0**	**147.0**		

hnical Assistance Projects

Country	GEF Project Name	Other Associated Program/Project	GEF Funds $ million	Other Funds $million	NGO Involved	Comments
Biodiversity						
Colombia	Conservation of Biodiversity in the Choco Region (Pacific Coast)	PLAIDECOP. IDB/UNDP Ecological Zoning of the Pacific Region	9.0	0.2 UNDP 0.8 IDB	various*	Assessment of biodiversity, training, local management, zoning
Guyana	Programme for Sustainable Tropical Forestry	Programme for Sust. Trop. Forestry (Comm. Secretariat, UNDP/FAO	3.0	0.5 UNDP, other to be det'd	IUCN, WWF	ecological studies, pilot projects, training, other institutional strengthening
Amazon Region	Regional Strategies for the Conservation & Sustainable Management of Natural Resources of the Amazon	Amazon Treaty	4.5	1.5 (IDB) 0.3 (UNDP)	several local & international NGO's	regional studies, research, GIS, institutional strengthening
		Totals	**16.5**	**3.3**		
Latin America and the Caribbean Totals			**76.5**	**150.3**		

Footnote: *Fundacion Natura, F. Herencia Verde, FES La Planada

INTER-REGIONAL PROJECTS						
Country	**GEF Project Name**	**Other Associated Program/Project**	**GEF Funds $million**	**Other Funds $million**	**NGO Involved**	**Comments**
Technical Assistance Projects						
Global	Monitoring of Greenhouse and Ozone Depleting Gases	WMO Programme	4.8	to be determined	none	regional monitoring centres, research
Global	Emissions of Global Warming Gases from Rice Fields	IRRI Programme	5.0	to be determined	none	research based in Philippines, but undertaken in various countries
		Totals	9.8			
Inter-regional Totals			9.8			

Note to Summary Tables: World Bank, UNDP and other sources of financing complementary to GEF funds are given in order to provide an indication of leveraging of GEF resources. The aim of this leveraging is to promote cost-effectiveness of GEF resource commitments, as well as to ensure that adequate resources are brought to bear on problems addressed. The latter consideration is especially relevant in the context of broad institutional strengthening, often a pre-condition of successful GEF activity implementation. In some cases (Type 3 projects), global impacts are directly leveraged through GEF financing.

Similarly, information on NGO participation is furnished to convey a broad sense of involvement-to-date of non-governmental organizations. In this early stage of GEF operations, NGO roles have been primarily in project identification and design, and in serving as external technical reviewers. In later stages of the GEF project cycle, it is expected that NGOs will take on selected implementation, monitoring and evaluation roles as well.

GLOBAL ENVIRONMENT FACILITY

PARTNERS IN GLOBAL SOLUTIONS

WHAT IS IT?

The Global Environment Facility (GEF) is a three-year pilot program providing grants and low interest loans to developing countries to help them carry out programs to relieve pressures on global ecosystems. The billion-dollar-plus fund supports international environmental management and the transfer of environmentally benign technologies. The Facility is a co-operative venture among national governments, the World Bank, the United Nations Development Programme (UNDP) and the United Nations Environment Programme (UNEP).

The GEF was established by representatives of a group of industrialized and developing countries in Paris in November 1990. The first projects are set to begin in mid-1991.

The goals which the GEF is established to address are all critical to the management of emerging planetary problems. They include:

-- Reducing and limiting emission of greenhouse gases which cause global warming.
-- Preserving the earth's biological diversity and maintaining natural habitats.
-- Arresting the pollution of international waters.
-- Protecting the ozone layer from further depletion.

Donor countries recognize that industrialized countries must assist developing countries' efforts to sustain fragile ecosystems. The need for global cooperation is urgent, and all nations must be involved if this is to succeed. Therefore, all nations are welcome to join this effort.

Funds provided through the Global Facility are additional to regular development assistance, offering developing countries the opportunity to demonstrate how development projects can integrate environmental management elements while addressing global environmental concerns.

To qualify for funding from the facility a project must relate to at least one of its four specific areas of concern. A further qualification is that a project would not be economically viable in the particular country without support from the Facility. There is also a provision that only nations party to the Montreal Protocol on ozone-depleting substances are eligible for GEF funds addressing ozone protection.

The Facility engages expertise from international, governmental and non-governmental organizations (NGOs), and reviews projects to consider carefully the local and global environmental impact of each.

THE WORLD BANK

UNITED NATIONS DEVELOPMENT PROGRAMME

UNITED NATIONS ENVIRONMENT PROGRAMME

GLOBAL ENVIRONMENT FACILITY

PARTNERS IN GLOBAL SOLUTIONS

WHO DOES WHAT?

The participating countries requested the World Bank, UNDP and UNEP to create a tripartite, cooperative means of implementing the Global Environment Facility (GEF).

The facility's trust fund is administered by the World Bank. Projects supported by the facility are carried out by the beneficiary developing country or regional institutions with support from the three co-operating international agencies. Each is responsible for specific tasks which relate to its particular expertise and which make the most of its comparative advantage. A range of non-governmental, regional and specialized organizations will also play an important role.

UNEP provides scientific and technological guidance in identifying and selecting projects; it coordinates research and data collection. A Scientific and Technical Advisory Panel (STAP), convened by UNEP, gives advice on broad scientific and technical issues. Experts from industrialized and developing countries serve on the STAP.

UNDP co-ordinates and manages the financing and execution of pre-investment and technical assistance activities. Through the Resident Representatives in its 112 field offices, UNDP plays a key role in identifying projects, communicating with recipient governments, and co-ordinating with donors at the country level. UNDP and UNEP help governments harmonize proposed GEF programmes and projects with other environment and development activities in beneficiary countries.

The World Bank administers the trust fund and is responsible for GEF investment operations. It undertakes identification, appraisal and supervision of investment projects with the participation of UNDP and UNEP. The Bank is experienced in exploring cost-effective approaches to project design and implementation. In countries seeking investment support for their national environment plans the Bank, in addition to its regular lending, considers funding for the four areas endowed by the GEF.

All three agencies are well placed to identify technically skilled non-governmental organizations (NGOs) and other specialized agencies, (including those in the United Nations), to assess impact on local populations, to advise on project design and to implement projects.

THE WORLD BANK

UNITED NATIONS DEVELOPMENT PROGRAMME

UNITED NATIONS ENVIRONMENT PROGRAMME

4/26/91

Initially, most GEF projects will be associated with regular World Bank and UNDP projects and as such will be subject to the same kind of rigorous planning and design as the agencies' regular projects. Information on the progress of proposed and on-going projects is contained in the Bank's Monthly Operational Summary. This is available from the World Bank bookstore and is published in Development Business, a United Nations publication.

GLOBAL ENVIRONMENT FACILITY

PARTNERS IN GLOBAL SOLUTIONS

HOW DOES IT WORK?

To qualify for financial support from the Global Environment Facility (GEF), both the beneficiary country and the project itself must meet strict criteria. The three partner agencies -- the World Bank, the United Nations Environment Programme (UNEP) and the United Nations Development Programme (UNDP) -- review each proposal. As part of this process they consult with other specialized organizations, including NGOs.

The three cooperating agencies determine whether a project qualifies for GEF support. They ensure that it protects the global environment in a cost-effective, technologically sound way, while respecting the interests of the country's people. A project should contribute to the understanding of global environmental problems and their solutions. Training and other human resource development activities are another focus of the Facility.

ELIGIBILITY

Developing countries with per-capita Gross Domestic Product at or below US$4,000 in 1989 are eligible for GEF funding. While most of the GEF funding will be for investment projects, a range of other activities can be supported within the financial limits of the trust fund. These may include technical assistance, pre-investment and feasibility studies, information from the scientific community, and training.

This form of GEF support is intended to strengthen environmental policies and to reinforce the institutions that implement them in beneficiary countries. It will also contribute to sustainable development in the beneficiary countries.

Establishing eligibility for projects is outlined below. Basically, GEF grants and low-cost loans should support a country's programs and activities which, while they benefit the environment of the world as a whole, would not otherwise be economically viable for that country.

The GEF complements, but does not substitute for, action under existing programs to achieve its objectives. Thus, a project would not normally qualify, even when it offers significant global benefits in GEF areas of concern, if it is economically viable on the basis of an analysis of domestic costs and benefits. An exception might be made despite an adequate

rate of return if, for other reasons, the operation could not go ahead without GEF involvement.

The costs of GEF technical assistance projects can be shared with UNDP or bilateral development agencies and regional development banks. Free-standing projects can receive up to a maximum investment of $10 million from the GEF.

APPROVAL

Once a project's eligibility is determined, it is appraised to determine benefits, costs and risks. The effectiveness of the global environmental component will be determined on the basis of physical rather than strictly monetary benefits. Thus, effectiveness is determined, for example, in terms of how much a greenhouse gas project reduces emissions of carbon dioxide or, in a marine pollution control project, on the increased volume of fuel oil sludge collected. With experience, the monetary cost-benefit effect will become more apparent and measurable.

Projects must meet other broad tests. These include consistency with global environment conventions, like the Montreal Protocol, and with national development and environment strategies. The technical feasibility of a project is crucial to demonstrating that it can realize the benefits sought and whether these benefits are sustainable in the long term. This relates to institutional capacity building, appropriate technology and local community involvement. Non-governmental organizations are well equipped to play a key role here and in other aspects of project design and implementation.

Grants for pre-investment studies and technical assistance projects are financed through a fund managed by UNDP. Investment projects are supported by both grants and low-interest loans. Projects are favored which most increase the leverage of GEF funds by mobilizing a substantial portion of total project costs from the World Bank, regional development banks and other financiers.

IMPLEMENTATION

The recipient of GEF funds, whether a government, an NGO or a specialized agency, will have primary responsibility to make the project work. The World Bank administers the Facility's trust fund and is responsible for investment operations. UNDP manages the pre-investment phase and will administer technical assistance. UNEP is responsible for ensuring that operations are in line with global environmental conventions and will provide scientific and technical advice to all parties involved.

The first projects are expected in the spring of 1991. This

will enable experience of the GEF's operations to be shared at the United Nations Conference on Environment and Development in Brazil in June, 1992.

MONITORING AND FEEDBACK

Learning from project experience is crucial. The concept of country and regional projects designed to protect the global environment is new. Supervisory teams can use their new insights to refine the GEF's guidelines and procedures. Their work will help define the most effective areas for GEF intervention. Technical innovations and significant developments are submitted to the Scientific and Technical Advisory Panel for review. Its findings are available to all.

GLOBAL ENVIRONMENT FACILITY

PARTNERS IN GLOBAL SOLUTIONS

TASK: LIMIT EMISSIONS OF GREENHOUSE GASES

The Global Environment Facility (GEF) can help the world community better understand, and slow, the process of global warming through practical, cost-effective pilot projects which reduce emissions of greenhouse gases. Areas for action include the adoption of cleaner fossil fuels and renewable energy technologies in power generation, agriculture, mining and industry.

The GEF can support energy efficiency and renewable energy activities which developing countries may not find economic to undertake. An important focus of support is the management of existing forests on a sustainable basis. Forests hold carbon and growing trees absorb significant quantities of atmospheric carbon, as well as harbor extensive biodiversity.

A variety of projects can be considered for funding. These range from attempts to modify coal consumption patterns to the encouragement of the use of renewable sources of energy. Other project candidates include the reduction of gas flaring in oil fields, limiting methane emissions from coal mining operations, and reducing the burning of wood. The maintenance of undisturbed tropical forests and reforestation are another focus of GEF funding.

GLOBAL ENVIRONMENT FACILITY

PARTNERS IN GLOBAL SOLUTIONS

TASK: PROTECTION OF BIODIVERSITY

The world's varied ecosystems and the diverse species they contain represent an invaluable global resource. They contribute a wide variety of goods and services, ranging from medicine, through genetic resources for food production, to the regulation of climate and rainfall patterns.

Yet many of these ecosystems and species are under serious threat of disruption and extinction. The Global Environment Facility (GEF) will support the efforts of developing countries to manage specific areas to ensure the protection of their ecosystems and biodiversity.

A number of proposals to protect biodiversity have been made for early consideration by the GEF. These range from the protection of small island ecosystems, watersheds, wildlife and forests to proposals to halt desertification and preserve wetlands. Also included are plans for ecological zoning.

The professional skills and know-how of non-governmental and international scientific organizations will be a valuable resource in preparing and considering proposals on biodiversity.

THE GLOBAL ENVIRONMENT FACILITY

PARTNERS IN GLOBAL SOLUTIONS

TASK: PROTECTION OF INTERNATIONAL WATERS

Dumping of solid and liquid wastes in oceans and seas is a classic "global commons" problem. Collective action is needed to deal with pollution found in these water systems. Marine oil spills, industrial waste and wastewater pollution affect international water systems and biodiversity.

The Global Environmental Facility, building on the experience of governments and UN bodies in regional efforts, funds improved reception facilities for unloading ship ballast material in the ports of developing countries. It also supports measures to prevent and clean up toxic waste pollution along major international rivers, and to conserve unique bodies of international water.

The following kinds of projects are eligible:

-- Controlling pollution -- such as municipal waste and heavy metals -- in major international river systems.

-- Provision of equipment to protect marine ecosystems in bays and coastal areas.

-- Protection of oceans through oceanographic monitoring and research.

-- Contingency planning for oil spills.

-- Deballasting equipment in ports.

GLOBAL ENVIRONMENT FACILITY

PARTNERS IN GLOBAL SOLUTIONS

TASK: PROTECTION OF THE OZONE LAYER

There is consensus in the world's scientific community th- the present levels of chlorofluorocarbon (CFC) emissions, halons and other gases contribute significantly to the depletion of stratospheric ozone. This ozone layer acts as Earth's shield against harmful ultraviolet radiation, and its depletion is expected to have adverse consequences for human health and ecological processes.

Developing countries require assistance to make the transition from CFC use and production into alternative technologies.

Prior to the setting up of the GEF, several countries had agreed (June 1990) to make available up to $240 million under the Montreal Protocol, which regulates the use of ozone-depleting substances such as CFCs. The World Bank, UNEP and UNDP are also the executing agencies for this separate ozone-layer protection effort.

The GEF will only consider funding ozone-related projects in countries that are party to the Montreal Protocol. The general principles on which the Facility decides on project funding must be agreed upon by the Executive Committee of the Multilateral Fund under the Montreal Protocol.

GLOBAL ENVIRONMENT FACILITY

PARTNERS IN GLOBAL SOLUTIONS

WHERE TO REACH THE GEF OFFICES

World Bank

THE GEF ADMINISTRATION
ENVIRONMENT DEPARTMENT
WORLD BANK
1818 H STREET NW
WASHINGTON, D.C. 20433
USA

Telephone: 1-202-477-1234 (Ask for office of GEF Administrator)
Facsimile: 1-202-477-0565

United Nations Development Programme

GEF/TECHNICAL ADVISORY DIVISION
UNITED NATIONS DEVELOPMENT PROGRAMME
ONE UNITED NATIONS PLAZA
NEW YORK, NY, 10017
USA

Telephone: 1-212-906-5057
Facsimile: 1-212-906-5365

(IN DEVELOPING COUNTRIES, INQUIRIES MAY BE MADE AT THE OFFICES OF THE UNDP RESIDENT REPRESENTATIVES)

United Nations Environment Programme

GEF/UNEP
c/o CLEARING HOUSE
P.O. BOX 30552
NAIROBI, KENYA

Telephone: 254-2-333-930
254-2-520-600
Facsimile: 254-2-520-711

THE WORLD BANK

UNITED NATIONS DEVELOPMENT PROGRAMME

UNITED NATIONS ENVIRONMENT PROGRAMME

GEF/STAP/1/L.1/REV.4
10 June 1991

GLOBAL ENVIRONMENT FACILITY
SCIENTIFIC AND TECHNICAL ADVISORY PANEL

PROVISIONAL TERMS OF REFERENCE

1. Purpose

The Scientific and Technical Advisory Panel (STAP) shall be established by UNEP as requested by the Participating Countries of the Global Environment Facility (GEF) to advise the implementing agencies (World Bank, UNDP and UNEP) on generic technical issues related to the implementation of environmental projects and programmes under GEF. STAP shall provide the implementing agencies with priority criteria for projects and programmes in relation to global environmental objectives. STAP shall advise on technological options and their cost effectiveness for addressing key environmental issues in countries where projects are planned. Significant technical developments arising from GEF project activities shall be submitted to the implementing agencies for guidance and to Participating Countries for information.

2. STAP Secretariat

To support the effective functioning of STAP, UNEP will carry out the Secretariat function for STAP primarily through additional Headquarters staff, in Nairobi. The costs of the Secretariat function shall be borne by the GEF.

3. Composition of STAP

STAP shall consist of fourteen members (including a Chairman and Vice Chairman) appointed by the Executive Director of UNEP, who shall seek nominations from the Participating Countries, and consult UNDP and the World Bank for their views.

The composition of STAP shall reflect broad geographical representation and have participation of experts from both developed and developing countries. Members of STAP will have expertise in the following fields: climate change, ocean and fresh water management, ozone depletion, biodiversity, forestry and desertification policies and energy efficiency.

The Chairman and Vice Chairman of STAP will be invited to attend and report to the regular review meetings of the Participating Countries. The Chairman will present his views and findings at such meetings.

Should a member be replaced, the Executive Director of UNEP shall appoint his/her replacement in consultation with the Chairman and Vice-Chairman and with UNDP and the World Bank.

4. STAP meetings

The dates and venue of each STAP meeting shall be decided by the Chairman in consultation with the STAP Secretariat. In consultation with the members at each meeting, the Chairman shall fix the opening date and duration of the next meeting.

In addition to the designated UNEP staff, representative(s) from UNDP and the World Bank shall be invited to attend the meetings of STAP. STAP may invite experts to attend the meetings of STAP in an advisory capacity as and when required.

5. Procedures and working groups

The STAP will apply mutatis mutandis the rules of procedures of the UNEP Governing Council.

STAP may need additional scientific or technological expertise to address particular issues or questions which arise. For this purpose the Chairman, with the assistance of UNEP, may convene specialized working groups on an ad hoc basis to address such issues. The working groups which may include members of the Panel will also be expected to provide specific technical advice to the implementing agencies, including review of project proposals, as required by them.

Unless otherwise decided by STAP, the chairman for each such working group shall be elected by STAP.

Such working groups may include experts drawn from rosters established by UNEP in consultation with STAP and the other implementing agencies. The timing of working group meetings will be decided by the Chairman of STAP.

Members of STAP will, as appropriate, inform the Scientific Community and NGOs of the purposes of GEF.

6. Language of work

The meetings shall be conducted in English. Documentation to be considered by the Panel shall be submitted in English.

7. Costs

The travel, subsistence and other related costs of all STAP members as well as members of working groups in connection with meetings of STAP and its working groups shall be borne by GEF funds. In addition, appropriate honoraria will be provided from GEF funds.

8. Method of work

1. STAP shall discuss the appropriate actions needed to address problems in the four areas of focus of the GEF - ozone depletion, global warming, loss of biodiversity and pollution of international waters. STAP may also consider whether other topics should be incorporated into GEF.

2. STAP shall consider in each area of concentration the state of scientific knowledge, the availability of new technologies and their suitability for application in particular country settings, and the relative priority of different actions. STAP shall advise the implementing agencies on technological options available for addressing the issues in countries where GEF projects or programmes are planned. It is expected that a set of guidelines and criteria will emerge from these discussions which can be put to the GEF participants for review.

3. STAP, at the request of the implementing agencies, will address and provide guidance on specific issues and questions which may arise in the course of GEF implementation. In addition, the GEF participants may, through their Chairman, wish to address specific questions or issues to the Panel or refer to them for guidance on particular points.

4. STAP shall regularly review evaluation and performance reports on the implementation of activities supported by GEF. STAP may also prepare or commission occasional working papers and reports on the lessons of a scientific and technological nature learned in the course of GEF implementation. STAP may in turn commission or recommend to the implementation committee particular studies or analyses to be carried out. STAP shall specify the terms of reference for such studies. The minutes from STAP meetings will be available to the implementing agencies. The minutes are prepared by UNEP, acting as Secretariat and approved by the Chairman, STAP.

5. STAP shall, when requested by the implementation Committee and/or the Chairman of the semi annual meeting of the Participating Countries undertake to:

   a) Provide specific guidelines or advice on technical issues related to activities under GEF funding of pilot programmes to protect the global environment;

   b) Provide advice on the monitoring of the implementation of GEF activities, operational policies and guidelines related to GEF activities, for use by the implementing agencies in their operations;

   c) Advise on the relative priorities of the work programme, its broad composition and balance, and the extent to which it conforms with GEF objectives.

   d) Develop criteria on the scientific and technological aspects of project eligibility and implementation for activities supported by the GEF;

   e) Advise on the guidelines for the determination of cost-effectiveness of environmental projects and programmes;

   f) Advise on technological options available for addressing key environmental issues in countries where GEF projects or programmes are planned;

   g) Review significant experience gained as a result of GEF project activities and report these findings to the implementing agencies.

6. In carrying out its duties STAP shall be provided by the implementing agencies with all relevant and available documentation.

Special Conditions

7. Members who currently hold positions in government or non-governmental agencies shall, at the discretion of the STAP Chairman, be excluded from attending such matters where potential conflict of interest arises.

8. Documentation submitted to members of STAP shall be treated in a confidential manner if so marked by an implementing agency, and shall not be disclosed without the express consent of that agency.

FIRST REPORT BY THE CHAIRMAN
OF THE SCIENCE AND TECHNICAL ADVISORY PANEL
OF THE GLOBAL ENVIRONMENTAL FACILITY
TO THE PARTICIPANTS MEETING

APRIL, 1991

Global Environment Facility
Participants' Meeting
1-2 May, 1991, Washington D.C.

First Report of STAP Chairman

1. Mr. Chairman, delegates of the participating countries, and representatives from the World Bank, United Nations Development Programme (UNDP), and United Nations Environment Programme (UNEP), I am pleased to be here today to address you in my role as chairman of the Science and Technology Advisory Panel (STAP) of the Global Environment Facility (GEF). I would like to mention that Dr Edward Ayensu, the vice-chairman of STAP, is also present at this meeting.

2. I am pleased to inform you that STAP has been formed and has fourteen members with excellent scientific, technical, and geographic balance. The panel members are Drs Watson (USA), Ayensu (Ghana), Dessus (France), Dolzer (Germany), Falkenmark (Sweden), de la Garza (Mexico), Goldemberg (Brazil), Gomez (Philippines), Hashimoto (Japan), Holdgate (U.K.), Isaksen (Norway), Lu (China), Mageed (Sudan), and Reddy (India). Four of its members attended an organizational meeting in Nairobi, Kenya, and eight of its members attended the first official STAP meeting in Geneva, Switzerland. Drs Watson, Ayensu, Dolzer, de la Garza, Gomez, Isaksen, Mageed and Reddy were in attendance at the Geneva meeting. This chairman's report is based on discussions that took place at the Geneva meeting.

3. The members of STAP are excited at the prospect of providing scientific and technical guidance to the GEF. STAP recognizes that GEF is a pilot program which affords us the opportunity to develop techniques, technologies and policies that will provide practical and implementable interventions for four key global environmental issues (global warming, biodiversity, ozone depletion, and protection of international waters) in developing countries. In our opinion, the GEF must, and can, be made to work, and the members of STAP are committed to play their part in ensuring its success. The formation of the GEF was most timely, and the participating countries should be congratulated on their initiative. It seems that almost every month there are new and disturbing scientific findings in one or more of these four environmental issues that make us recognize that human activities are changing our global environment with adverse consequences for present and future societies. Only two weeks ago new data from a National Aeronautics and Space Administration satellite demonstrated that atmospheric ozone was being depleted over highly populated areas of the mid and high latitudes in both hemispheres at a rate more than twice as fast as previously reported, and that the depletion was occuring not only in winter, but in spring, an important period in the growing cycle of terrestrial ecosystems, particularly agricultural crops.

4. I would like to report that the interactions to date between STAP and each of the three implementing agencies has been excellent, and that STAP looks forward to a continuing close and collegial working relationship.

5. The immediate priority for STAP is to develop a set of scientific and technical criteria and priorities for each of the four environmental issues to guide the selection of future GEF projects. In addition, STAP will identify the types of projects which would afford the opportunity to simultaneously contribute to more than one of the environmental issues. STAP, at its first meeting in Geneva, initiated the process of drafting a set of criteria and priorities. Four ad-hoc working groups, chaired by members of STAP, were formed to assist in the rapid formulation of the criteria and priorities. The four working groups and corresponding chairs are: (i) biodiversity--Dr Ayensu; (ii) global warming--Dr Reddy; (iii) international waters--Dr Mageed; and (iv) ozone depletion--Dr Isaksen. These working groups will meet during June to develop a draft set of criteria and priorities, which will be finalized by STAP at its next meeting in July to be held in Washington D.C. As indicated, STAP will develop criteria and priorities for all four environmental issues, including ozone depletion, although the Chairman's report suggests otherwise in paragraph 15, page 4, volume 1. STAP is confident that those

responsible for managing the Interim Multilateral Fund of the Montreal Protocol, will find the criteria and priorities useful. STAP is concerned that the scope of issues to be addressed under the protection of international waters is too restrictive and suggests that a broader interpretation of project eligibility be adopted. Consideration should be given to the development of regional management structures for river basin and enclosed and semi-enclosed seas. STAP is willing to consider relevant criteria and priorities for project selection for either the current mandate or a broader scoped program.

6. STAP is currently developing, in conjunction with the implementing agencies, a roster of scientific and technical experts for each of the four environmental issues. The implementing agencies can then select one or two external reviewers from this roster for GEF project evaluation, thus providing a certain level of consistency for the scientific and technical review procedures among the implementing agencies. STAP is optimistic that the other bilateral funding agencies , such as the U.S. Government, will also work with STAP in developing this roster so that reviewers of projects will be consistent with the other agencies.

7. STAP will review each GEF Initial Executive Project Summary (IEPS) and provide scientific and technical comments to the implementing agencies and advise them on the consistency of the projects with the criteria and priority framework. In addition, and more importantly, STAP is prepared to give its views on the complete portfolio of GEF projects as it is developed to ensure balance among, and within, the four issues. STAP recognizes that the number of GEF ozone depletion projects will be quite limited because of the existence of the Interim Multilateral Fund for the Montreal Protocol. The ultimate portfolio of GEF projects must clearly demonstrate that a wide range of techniques, technologies and policy instruments have been attempted under a variety of political and cultural conditions. Because of the pilot nature of the GEF it is clear that it cannot protect all critical species and ecosystems, nor significantly reduce greenhouse gas emissions on a global scale, but it can demonstrate how, with adequate funding in a post initial-GEF era, the problems can be successfully addressed in an operational manner.

8. The first tranche proposals were selected prior to the formation of STAP and to the development of overall criterea and priorities. Hence, STAP did not contribute to the review process for the first tranche of GEF proposals. However, the implementing agencies have discussed the first tranche proposals with STAP and carefully articulated the criterea that were used for project selection. It is quite clear to all involved that there is an imbalance within this initial portfolio with the majority of projects being associated with biodiversity, and with most of the global warming projects associated with energy supply, rather than energy conservation or energy efficiency. This imbalance, while understandable, must be corrected as the portfolio is developed in the future. Consequently, it is essential to ensure that developing countries are made aware of the opportunities afforded them under the GEF. STAP will analyze the range of techniques, technologies, policy instruments, and in the case of biodiversity, range of species and ecosystems, within the first tranche of proposals. While STAP does not criticize the objectives of any individual proposal, it is concerned by the lack of balance within the portfolio and pipeline and, like the implementing agencies, is concerned that, (i) the large budgets of some of the biodiversity projects will exceed the local absorptive capacity of the recipient governments and (ii) there may be a lack of sustainability of recurrent costs beyond the lifetime of the GEF project.

9. STAP would like to endorse the approach that all projects are subjected to a thorough environmental impact assessment prior to selection. For example, STAP would like to be ensured that the environmental impact assessment for a project such as the Philippines

geothermal project has included an examination of the environmental impacts of both the exploration and development phases of the project.

10. STAP believes that while the GEF is an action oriented program that will, if successful, develop a broad range of approaches to complex environmental issues that can be implemented, it is absolutely essential that there is a "targeted" research element. STAP wishes the participating countries to note that the current scientific and technical research infrastructure in many developing countries is wholly inadequate because of a lack of financial resources. This has been recognized on numerous occasions, most recently at the Second World Climate Conference. While GEF, as currently mandated, is not the vehicle to solve this critical problem, the participating countries should note that this problem must be resolved if developing countries are to fully participate in the development and implementation of strategies to protect the environment while continuing their economic development. The GEF should, however, have a "targeted" research component that will facilitate current or future technical assistance or investment projects. For example, (i) all biodiversity projects should have an inventorying component and some should have a modest research component to understand how best to protect the species or ecosystem under consideration; (ii) national inventories of the sources and sinks of greenhouse gases would lead to an improved understanding of the type of greenhouse gas reduction investment project that would be most cost-effective. A second justification for "targeted" research is where there is a recognized need to generate scientific information for international conventions currently under negotiation, e.g. conventions on biodiversity and climate change. Negotiators of both the biodiversity and climate change conventions have recognized the need for country studies of inventories of biological diversity and greenhouse gas sources and sinks, respectively.

11. STAP is initiating a quick study to examine the need for regional research/technical/policy institutes in the context of the GEF, recognizing that regional institutes located in developing countries are currently being considered as a central component of the International Geosphere Biosphere Programme.

Scientific, Technical and Advisory Panel (STAP) of the Global Environment Facility

Terms of Reference for a Study on Regional Research Centres

Background

The Global Environment Facility was established in 1990 as a three year pilot programme providing grants and low interest loans to developing countries to address priority global environmental problems in the four programme areas of global warming and energy, international waters , pollution preservation of biodiversity and protection of the ozone layer. The programme is conceived as a cooperative venture between participating governments, the World Bank, the United Nations Development Programme (UNDP) and the United Nations Environment Programme (UNEP).

UNEP's role in GEF is to, inter-alia, provide scientific and technical guidance in identifying and selecting projects and to coordinate research and data collection. The Scientific and Technical Advisory Panel (STAP) has been convened by UNEP to give scientific and technical guidance to GEF.

STAP perceives GEF additionally as an opportunity to develop techniques, technologies and policies that will provide practical and implementable interventions for the four programme areas of GEF in developing countries. STAP is currently formulating criteria for project eligibility and priorities within each programme area to guide the selection of future GEF projects.

As STAP further perceives GEF as an action-oriented programme that, if successful, will develop a broad range of approaches to complex environmental issues that can be implemented, a "targeted" research element would be an essential component of the programme. In recognition of the fact that current scientific and technical research infrastructure of developing countries is often inadequate due to lack of financial resources, an avenue for the full participation of developing countries in the development and implementation of strategies to protect the environment while continuing economic development is essential. While GEF, as currently mandated, may not be the vehicle to solve this critical problem, GEF should have a "targeted" research component to facilitate current or future technical assistance or investment projects. For example, i) all biodiversity project should have an inventorying component and some should have a modest research component to best understand how to protect the species or ecosystems under consideration; ii) national

inventories of all sources or sinks of greenhouse gasses would improve understanding of the type of greenhouse gas reduction project should be most cost-effective. A second justification of "targeted" research is where there is a recognized need to generate scientific information for international conventions currently under negotiation eg. conventions on biodiversity and climate change.

In recognition of such scientific information needs, STAP is therefore initiating a quick desk study to examine the need for regional research/ technical/policy institutes in the context of the GEF, recognising that regional institutes located in developing countries are currently being considered as a central component of the START initiative of the International Geosphere Biosphere Programme.

Terms of Reference

a) The anticipated desk study should be 20 to 30 pages length and be completed in a period of 4 to 5 weeks. The study should focus on the role and effectiveness of existing regional institutes in developing countries relevant to GEF ie. paying particular attention to the above mentioned four programme areas of GEF.

b) For the purposes of the study, regional research centres could be defined as those that have the financial support and administrative involvement of at least three regional governments.

c) The study should take a 'Sampling' approach in selecting a representative number of regional institutes and provide a description of the role and scientific, technical, manpower and financial capacity of the selected institutes.

d) The study should contain an analytic assessment of the role and capacity of the selected regional institutes and further pinpoint weaknesses and strengths in terms of their potential for supporting global environmental initiatives such as GEF.

e) The study should provide guidance and recommendations to STAP on the possibility of strengthening/enhancing the capacity of existing regional institutes to contribute to the the stated objectives of GEF and to supporting other global environmental initiatives, for example, by providing relevant

scientific and technical information for negotiators of international conventions on the environment (biodiversity, climate).

f) The study should examine the potential of regional institutes in the development of innovative scientific approaches to global environmental projects particularly in terms of developing innovative and cost-effective techniques, technologies and policies for the purposes of project identification, design and implementations.

g) The study should provide an assessment and make recommendations concerning critical issues in the establishment of regional institutes in developing countries either as part of, or to support, GEF technical assistance and investment projects in the four identified programme areas.

Global Change Regional Research Centres

Discussion paper

Introduction

The UN General Assembly has recommended governments (resolution 44/207) to "increase their activities in support of the World Climate Programme and the International Geosphere-Biosphere Programme" ... "and further recommends that the international community supports efforts by developing countries to participate in these scientific activities". The need to involve scientists from developing countries in the IGBP was also stressed in the report from the working group on needs of developing countries of the IPCC.

The technical session of the Second World Climate Conference called for "a special initiative (that) would create a network of regional interdisciplinary research centres, located primarily in developing countries, and focusing on all the natural sciences, social sciences, and engineering disciplines required to support fully integrated studies of global change and its impacts and policy responses ... and (to) study the interaction of regional and global policies".

The Governing Council of UNEP in decision 16/36 (May 1991):

- Welcomes the initiative of the International Geosphere-Biosphere Programme to address regional problems of global importance through its Global Change System for Analysis, Research and Training (START);

- Appeals to all States to establish and support national committees for the International Geosphere-Biosphere Programme;

- States that the START activities of the International Geosphere-Biosphere Programme in the developing regions deserve the support of the Governments from within and outside the region concerned;

- Requests the Executive Director to provide, within available resources, support to the International Geosphere-Biosphere Programme regional research centres and networks, which should be planned and implemented in conjunction with the relevant World Climate Programme activities.

In response to the UN GA resolution and strengthened by the statements of the Second World Climate Conference, the IGBP has presented a plan for a Global Change System for Analysis Research and Training (START) consisting of a number of Regional Research Centres (RRC) and affiliate Networks of collaborating institutes (IGBP Report 15). The development of the START concept has also developed from a scientific necessity identified during the development of the plans for the IGBP Core Projects over the past four years.

In the first report by the Chairman of the Science and Technical Advisory Panel of the Global Environmental Facility to the Participants meeting in April 1991, Dr. Robert Watson

stated the STAP "is initiating a quick study to examine the need for regional research/technical/policy institutes in the context of GEF, recognising that regional institutes located in developing countries are currently being considered as a central component of the International Geosphere-Biosphere Programme".

The STAP Secretariat at UNEP has drafted terms of reference for such a study on Regional Research Centres. The study should focus on the role and effectiveness of existing regional institutes in developing countries relevant to GEF, i.e., paying particular attention to the four programme areas of GEF:

- Reducing and limiting emission of greenhouse gases which cause global warming,
- Preserving the earth's biological diversity and maintaining natural habitats,
- Arresting the pollution of international waters,
- Protecting the ozone layer from further depletion.

The study should provide guidance and recommendations to STAP on the possibility of strengthening/enhancing the capacity of existing regional institutes to contribute to the stated objectives of GEF and to support other global environmental initiatives, for example, by providing relevant scientific and technical information for negotiations of international conventions on the environment (biodiversity, climate).

After consultations between the Chairman of STAP/GEF, Dr. Robert Watson, and the IGBP Executive Director, Professor Thomas Rosswall, as well as discussions between STAP/UNEP Secretarial Staff (Mr Adnan Z. Amin and Ms Brigitte Kochan) and the Chairman of the IGBP Scientific Committee, Professor James J. McCarthy, and the IGBP Executive Director, it has been agreed to submit a discussion paper for consideration by the Second STAP meeting in Washington, DC in July 1991. The discussions during that meeting will provide a feedback for the further development of the paper for consideration at a joint STAP/IGBP meeting, probably in Amsterdam, on 23-24 August 1991. This meeting will be attended by a few representatives of STAP, 3-4 representatives of the IGBP-START Standing Committee (see Annex) and a few other participants knowledgeable about other regional research centres in developing countries (e.g., CGIAR). In the short time available, it has not yet been possible to evaluate other regional initiatives as a guidance to the future developments of Global Change RRCs.

Global Change Research and Policy Development

There are two major international research programmes devoted to the study of global change: the International Geosphere-Biosphere Programme: A Study of Global Change (IGBP, under the International Council of Scientific Unions, ICSU) and the World Climate Research Programme (WCRP, under ICSU and the World Meteorological Organization, WMO). In addition, the social sciences community is developing a complementary effort "Human Dimensions of Global Environmental Change" (HDGEC, under the International Social Sciences Council, ISSC, in affiliation with the United Nations University and Unesco). Other relevant activities are included in the World Climate Programme in addition to WCRP.

The international science community has in place the framework for doing the necessary research, and several projects are ongoing that will provide necessary understanding needed

to narrow the scientific uncertainties. This is summarized in Chapter 11 of the report from Working Group 1 of the Intergovernmental Panel on Climate Change (IPCC).

The IPCC plays an important role in assessing current knowledge (WG 1 and 2). This information is necessary as a background to the work of the Intergovernmental Negotiating Committee for the climate convention. Similar arrangements have been developed for further scientific research, scientific assessment and policy developments exist, linked to the Vienna Convention and Montreal Protocol on the protection of the ozone layer. IGBP is involved in an advising capacity also in this context. As far as I know, no similar arrangements exist regarding pollution of international waters (Law of the Sea?). In relation to biological diversity, IUCN plays a major role, but IGBP (in collaboration with IUBS, SCOPE and MAB) is also considering biodiversity in relation to the functioning of the Earth system and how this may change in response to global change.

At the international level, there is thus a system of collaborating organizations relating to global/climate change that can address scientific research (IGBP, WCRP), scientific and policy assessments (IPCC) and international policy development (INC). Fragments of such a system exist for the other three GEF priority areas.

Developing Countries

The relative lack of involvement of developing countries in both research and assessments has been pointed out by SWCC through a special working group on LDCs that stressed the need for involving scientists and policy makers from developing countries in all aspects of global change research, assessment and policy development.

The IGBP has also identified this need and made special efforts to involve LDC scientists in all aspects of IGBP planning, coordination and implementation. There is a perceived danger that LDC scientists may be involved in collecting data relevant for global change projects but may not be fully involved in data synthesis, interpretation and modelling. It is important that the following aspects of global change research be promoted in a regional context, especially for developing countries:

- How do regional changes in, for example, land use, industrial practices, energy production, and urbanization alter regional atmospheric composition, the regional water cycle, and local ecosystem structure and function?

- How can such changes within a region or in combination with those from other regions affect biogeochemical cycles and physical aspects of climate on a global scale?

- How will the ensemble of global change, acting through either direct effects or through altered feedback loops, lead to further regional change in the biospheric life support system?

Current scientific and technical research infrastructures of developing countries is often inadequate due to lack of financial resources, and infrastructures must be developed to allow the full participation of developing countries in the development and implementation of strategies to assess the effects of global change on a national and regional level.

The ability to develop expertise on the scientific aspects of global change is depended on the ability to stimulate research institutes and individual scientists to take part in the

international collaborative effort. In addition, Regional Research Centres would be able to provide the mechanism to make the necessary assessments needed to develop appropriate policies. National and regional policies must be formulated with full realization of their mutual interaction with global policies. Integration of the over-all policy making process requires an unprecedented collaborative effort to develop the knowledge base to support that process. New institutional mechanisms are urgently needed to address that challenge and Regional Research Centres with affiliated collaborating institutes would provide this.

Potential Contributions of Regional Research Centres to GEF

STAP has perceived GEF as an action-oriented programme that, if successful, will develop a broad range of approaches to complex environmental issues and a "targeted" research element would be an essential component of the programme. A "targeted" research element within GEF would facilitate current or future technical assistance or investment projects related to the four priority areas.

The START initiative would provide the critical link between regional and global scales by putting in place the infrastructure necessary to insure an effective regional dimension in the study of global change. The international science agenda identified to address crucial global change issues defines the global context for regional studies. The flow of new scientific information through the system and back into each regional network will permit scientists within the region to prepare regional assessment of global change for decision makers in the region. The RRCs will cover three broad areas of study:

(i) Direct contributions to the global and regional scale scientific objectives of global change research;

(ii) research directed at the detection of global environmental change, through long term measurements and observation of regional aspects of global change phenomena; and

(iii) scientific research directed towards assessing regional aspects of global change and its impacts, including research directed towards improved policy formulation including strategies for mitigation and adaptation.

The Regional Research Centres with the affiliated scientific institutions within the region will form a Regional Research Network, the objectives of which are to:

(i) strengthen environmental change detection research within the region;

(ii) conduct research aimed at improving the assessment of causes and effects of global change in a regional context, including adaptive capability and mitigation measures; and

(iii) to forecast future changes, so that appropriate action may be taken to mitigate or respond to the effects of these changes.

The RRCs must promote a clear communication of scientific results to decision makers of the region. Envisioned is the assessment of issues related to global environmental change in order to provide timely and responsible scientific information for regional and national needs within the region. This will include the scientific input required for the definition of

strategies for mitigation and adaptation.

Expected Outputs That Would Address GEF Objectives

The following examples are outputs that would be generated and of special interest to GEF. The GEF areas are listed in priority order to the envisioned focus of START:

1. Greenhouse gases and global warming

   - measurements of production and consumption of greenhouse gases within the region
   - development of inventories of sources and sinks of greenhouse gases for all countries of the region
   - assessment of the role of the greenhouse gas loading from the region for the global climate
   - assessment of effectiveness of greenhouse gas reduction projects on the regional source strength
   - prediction of effects of global change on future greenhouse gas production in the region
   - prediction of the effects of global change on ecosystems of the region
   - assessment of effects of changed ecosystem distribution on the climate system through feedback mechanisms other than greenhouse gas emissions; albedo, roughness, water and heat transfers
   - assessment of the role of land-use change in affecting the global climate system
   - analysis of effects of global change on national and regional water balances
   - determination of impacts of global change on agriculture and forestry
   - development of GIS methodology and interpretation of remote sensing data; links to UNEP/GEMS/GRID
   - linkage to the developments of a Global Climate Observing System; links to WMO, IOC and UNEP.

2. Preserving biological diversity

   - determination of land-use/land-cover changes through remote sensing and ground truth observations
   - assess impacts of global change on ecosystem and biotope distributions in the region
   - identifying the role of species diversity for the functioning of the Earth system.

3. Protecting the ozone layer

- monitoring of stratospheric ozone and ground level UV-B radiation
- assessment of the effects of predicted increases in UV-B on biospheric components in the region
- assessment of the effectiveness of the Montreal protocol in reducing emissions of ozone depleting compounds from the region.

4. Pollution of international waters

- assess the role of river discharges on coastal and regional seas
- forecast the affects of global change and land use changes on coastal and regional seas
- link with the IOC and development of an oceanic component of a Global Climate Observing System.

Long-Term Sustainability of RRCs

The sustainability of an RRC scientifically will be ensured through links to the recognized international research programmes (IGBP, WCRP, HDGEC).

The START concept and Regional Research Centres have received considerable interest from governmental international bodies (see references in introducing section). In addition, nations have in various ways expressed support for the establishment of RRCs (e.g., France, Germany, Japan, The Netherlands, Sweden, USA).

Although RRCs may be financed differently in different regions initially, it is also possible to consider a donors coordination in relation to funding in similar manner as have been developed for the CGIAR centres.

In view of the interest of the international community in global change issues and the fact that the problem will remain for many decades, the possibility for long-term funding can be considered realistic and feasible.

Funding Requirements and Formal Mechanisms

The financial levels of support necessary for each RRC with affiliated network will vary considerably depending on regional differences, but when fully developed each may require an annual operating budget in the range of $5 to $10 million. Additional one-time funding for major capital expenditures will also be required, as for computing and data-handling facilities. The funding provided through the RRN should support the operation of the RRC and those activities within the RRN that directly serve approved projects and activities of the START network. While the RRCs should not serve as "third-party" granting institutions, the RRCs, with the assistance of the START Standing Committee, should seek to develop avenues of grant support for individual principal investigator projects implemented at RRSs that serve the total programme of the RRN.

The formal establishment of an RRC will require, be necessity, formal instruments of agreement between the regional participants involved. While the legal arrangements for each RRC will vary from location to location, they will be characterized by: Memoranda of Understanding (MOU's) between the partner countries and the RRC with affiliated regional networks; bilateral and multilateral agreements; and the appointment, in some cases, of an existing legally established institution that will serve as the legal fiscal agent for the RRN, and in other cases, by the creation of a new legal entity recognized by law as an appropriate fiscal agent for the RRN. These legal entities will most likely be non-profit institutions in the host country. A comprehensive analysis of this aspect of management should be a prerequisite for establishing of an RRC. As an complement to this, a comprehensive analysis of proposed management, administrative policies, and organizational structure should be documented for each individual RRC.

The implementation plan for an RRC should also include mechanisms to assure accountability of each RRC to its sponsors. The plan will often include provisions for Boards of Trustees, Scientific Advisory Committees, methods for periodic review, and other management strategies needed to maintain a high level of excellence and credibility.

Examples of Other Centres and Networks

The experience from CGIAR has been drawn upon in developing the plans for START. A further analysis of centres that have worked and those that have not with an assessment of causes for success or failure should be developed. Time has been too short to include such an assessment in this discussion paper.

CORENT

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Second Meeting of the

IGBP Standing Committee for START

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25 - 27 AUGUST, 1991

AMSTERDAM, THE NETHERLANDS

AGENDA AND WORKING PAPERS

a0/020

1991-08-14 CE

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2nd START Standing Committee Meeting

Amsterdam, The Netherlands
25-27 August, 1991

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START Open Meeting

Amsterdam, The Netherlands
25-26 August, 1991

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+ Two representatives from Taiwan, ROC

International Council of Scientific Unions (ICSU)

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Draft Agenda
for the
Second Meeting of the IGBP Standing Committee for START

25-26 (27) August, 1991
Hotel Caransa (Karena), Rembrandsplein 19,
Amsterdam, the Netherlands

1. Opening of the meeting

2. Adoption of the agenda and time-table for the meeting

3. Review of the report from the 1st START-SC meeting and matters arising:
   - Criteria
   - CGIAR ecoregions

4. Report from a meeting between members of the START-SC and members of the Scientific and Advisory Panel of the Global Environmental Facility (STAP/GEF)

5. Report from the meeting on a Western Hemisphere Institute for Global Change Research

6. Review of other START initial priority areas

   a. Northern Africa

   b. Asian Tropical Monsoon Region

7. Discussion on other specific proposals:

   a. Proposal from the Chinese National Committee for IGBP

   b. Proposal to establish a Regional Research Centre for the Mediterranean Basin and Subtropical Africa

The International Geosphere-Biosphere Programme: A Study of Global Change (IGBP)
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8. General discussion on possibilities for RRC/RRNs in other START regions

   a. Arctic } Gunter Weller
   b. Antarctic }

   c. Central Arid Asia — Interest by USSR in spawning an RRC in this area
      ↳ plus 5 Republic, Syria, Iran, Pakistan & China

   d. Oceania Jim Bruce letter

   e. Southern and Eastern Africa

   f. Temperate Northern Hemisphere

   g. Western North America

9. Links between the START proposal and UN organizations (except GEF): UNEP, WMO, Unesco, UNCED

10. Ad hoc START Secretariat

11. Promotional material

12. Agenda for the 3rd START-SC meeting

13. Other business

- Ocean Matters Re START (Tab 10)
- o Planning & Inter RRC Activities

Annotated Agenda
2nd Meeting of the IGBP Standing Committee for START

Amsterdam, the Netherlands
25-27 August, 1991

1. *Opening of the meeting*

At the invitation of the Dutch National Committee for the IGBP, the 2nd meeting of the IGBP START Standing Committee will be held in Amsterdam 25-27 August 1991. The Chairman of the START-SC, Professor G. N. Golubev, will open the meeting on 25 August at 0900 hours. All members of the START-SC except Dr. J. P. Bruce will attend the meeting. The Officers of the SC-IGBP have decided to invite Dr. W. Menden as an additional member of the committee. In addition, Dr. A. Moura will attend the meeting for the first time. The Chairman and Executive Director of the SC-IGBP, Professors McCarthy and Rosswall, will also attend the meeting. It is hoped that Professor J. W. M. la Rivière, ICSU Secretary-General, will attend at least part of the meeting. Professor Golubev has also invited national committees to be represented during the first two days of the meeting.

Documents: List of participants

2. *Adoption of the agenda and time table for the meeting*

The draft agenda is enclosed. The committee should decide on a time table for the meeting.

Documents: Draft agenda

3. *Review of the report from the 1st START-SC meeting and matters arising*

The draft report from the 1st meeting held in Stockholm 24-26 April 1991 is enclosed. The committee is invited to comment on its contents and any matters arising from the report that is not covered elsewhere on the agenda.

In particular, the committee might wish to review the guiding principles for the recognition of RRCs and RRNs.

Professor R. Dudal has submitted a report from CGIAR on "An Ecoregional Approach to Research in the CGIAR following the discussions at the 1st meeting. The committee may wish to review how this regional approach might related to the START regions.

Documents:
- Draft report from the 1st START-SC meeting
- CGIAR report on "An Ecoregional Approach to Research in the CGIAR"

4. *Report from a meeting between members of the START-SC and members of the STAP/GEF*

Further to the discussions at the 1st meeting, the IGBP Secretariat has consulted with the Scientific and Technical Advisory Panel for the Global Environmental Facility of the World Bank, UNDP, and UNEP. Further information on STAP/GEF is enclosed. The Executive Director prepared a draft discussion paper for consideration by the second STAP meeting, which the Chairman of the SC-IGBP, Professor McCarthy, attended. He and the Executive Director will also report on their discussions with UNEP, the World Bank and UNDP during visits in June-July.

A joint meeting between STAP and START was held immediately prior to this meeting, and Professor Golubev will report on the discussion and conclusions from those deliberations. The Committee will review the relationship with GEF and decide on appropriate action.

Documents: - Information on STAP/GEF
- Draft discussion memo for 2nd STAP meeting

5. *Report from the meeting on a Western Hemisphere Institute for Global Change Research*

The US government invited countries in the Western Hemisphere to a meeting on a Regional Centre for Global Change Research in Puerto Rico 15-19 July 1991. The SC-IGBP was invited as an observer and was represented by the Executive Director. Drs Corell, Herrera, Risser, Rockwell and Rosswall, who all attended the meeting, will report on its conclusions. The Committee is asked to review how the US initiative relates to the need for RRC/RRN in the START regions in the Western Hemisphere.

Documents: Draft report from the Western Hemisphere meeting

6. *Review of activities in relation to other START initial priority areas*

a. Northern Africa

The IGBP Secretariat has written to Dr. M. Boulahya, Director General, African Centre for Meteorological Applications and Development (ACMAD), Niamey, Niger and suggested that a meeting should be set up with him at an appropriate time when he is in Europe. No answer has yet been received, but it is hoped that Dr. Boulama can advise on the next steps to be taken. Drs Boulama and Bied-Charreton will also discuss other steps, which the START-SC should take to ensure that an RRC can be established in the region. Links to, e.g., the Sahara and Sahel Observatory (SSO) should be considered. The Committee should also note the proposal for establishment of an RRC for the Mediterranean Basin and Subtropical Africa (agenda item 7b).

The original US proposal suggested the establishment of three centres as part of its initiative. Apart from the Western Hemisphere Centre, Africa and South-East Asia were mentioned specifically. In the opening address to the Western Hemisphere workshop in Puerto Rico, Dr. D. Allan Bromley, Science Adviser to President Bush, suggested that the International Institute for Applied Systems Analysis (IIASA) in Vienna might play the role as a regional centre for Africa. Drs McCarthy and Rosswall have subsequently discussed this issue with Dr. R. White, Chairman of the US Committee for IIASA, and expressed concern about the suitability of IIASA as an African centre. Professor Golubev has also discussed this issue with Dr. P. de Janosi, Director of IIASA, and Dr. B. R. Döös, head of the Environment Programme of IIASA.

The American Association for the Advancement of Science (AAAS) has expressed interest in collaborating with the START-SC, especially in relation to the establishment of an RRC in Latin America and Africa. Professor Rosswall discussed this with Phil Abelson, Gene Rosenberg and other AAAS staff, when he visited Washington in July.

The status of the development of a programme for a regional global change meeting for Africa, originally planned for July 1991 and now postponed to 1992, will be reviewed, including the role this meeting can play in the development of RRC/RRNs for Africa.

b. Asian Tropical Monsoon Region

Professor Rosswall visited South-East Asia (Thailand, Taiwan, Indonesia, Singapore and Malaysia) in July and will report on the discussions during this visit. The report from the regional meeting for Asia, held in New Delhi in February, has been published as IGBP Report 18:1. A second, smaller meeting for Asia will be organized in Singapore 12-14 December 1991 to review follow-up activities from the Asian meeting. A major agenda item will be related to START. The SC-IGBP will consider a proposal to arrange a regional meeting for South-East Asia in Thailand in 1992. The Committee might wish to discuss if this meeting could be used to discuss and agree upon a scientific agenda for a Regional Research Centre in South-East Asia. It is also possible that a meeting with potential donors should be organized in conjunction with such a meeting.

Documents:
- ACMAD brochure
- AGRHYMET brochure
- ICRISAT in West Africa brochure
- Sahara and Sahel Observatory Draft Programme
- Draft programme for a regional IGBP workshop for Africa (original version for a July 1991 meeting)
- Excerpt from IGBP Report 18
- Letter from AAAS and informational material

7. *Discussion of other specific proposals*

a. Proposal from the Chinese National Committee for the IGBP

The Committee is asked to review the proposal from the Chinese Academy of Sciences and recommend appropriate action. Drs. Golubev and Herrera, together with the Chairman of the IGBP Standing Committee for Data and Information Systems Dr. S. I. Rasool, have been invited to visit China in January 1992. This would be an appropriate opportunity for further consultations.

b. Regional Research Centre for the Mediterranean Basin and Subtropical Africa

It is hoped that Dr. J.-C. André or Dr. J.-L. Fellous can present the French proposal. The Committee is asked to review if the proposal is compatible with the START guiding principles and propose appropriate further action.

Documents:
- On the establishment of a IGBP-RRC in Beijing, People's Republic of China
- MEDIAS. An IGBP Regional Research Centre

8. *General discussion on possibilities for RRCs/RRNs in other START regions*

a. Arctic

b. Antarctic

c. Central Arid Asia

d. Oceania

e. Southern and Eastern Africa

f. Temperate Northern Hemisphere

g. Western North America

9. *Links between the START proposal and UN organizations (except GEF)*

Following the 1st meeting of the START-SC, the IGBP national committees were contacted and asked to use their influence to obtain support for draft decisions of the UNEP Governing Council. Through these efforts, the annexed decisions were passed by UNEP in May. This was also discussed with UNEP officials, when Professors McCarthy and Rosswall visited UNEP in June.

Further interaction with WMO will be covered under agenda item 6 (ACMAD). Further initiatives should be discussed.

The International Oceanographic Commission (IOC) of Unesco has expressed interest in START.

The possibility of including START on the UNCED agenda should be explored.

The links between START and the process for developing a convention on climate change should also be discussed.

Documents:
- UNEP Governing Council
- Draft Annex 1. Research and Systematic Observations. INC for a Global Climate Convention.

10. *Ad hoc START Secretariat*

No funds have as yet been received, although France, Japan and the US have promised to annually contribute USD 25,000 each for three years. A proposal has also been submitted to the Swedish Foreign Office for support of USD 80,000 per year for three years. There is as yet no news from the MacArthur Foundation.

The situation is critical, and the SC should consider how an ad hoc secretariat function can be established immediately. The large number of ongoing and planned initiatives makes it impossible for the IGBP Secretariat staff to handle also START

in an efficient way. The leading role that the IGBP has played so far is in danger of being overtaken by a large number of individual initiatives without coordinating machinery.

11. *Promotional material*

IGBP Report 15 has been translated into Spanish and will be published shortly. The report should also be translated in to Russian and French and published. The Committee is invited to consider how this can best be achieved. Other promotional activities should also be considered.

12. *Agenda for the 3rd START-SC meeting*

It has been decided that the 3rd START-SC meeting will be held in Vienna on 30 November - 1 December. The Committee should consider the agenda for this meeting as well as the time and venue for its 4th meeting.

13 *Other business*

1991-04-30 HV/TR

DRAFT

Objective

The International Geosphere-Biosphere Programme: A Study of Global Change

To describe and understand the interactive physical, chemical, and biological processes that regulate the total Earth system, the unique environment it provides for life, the changes that are occurring in this system, and the manner in which they are influenced by human action.

IGBP'S START INITIATIVE: STEPS TOWARDS IMPLEMENTATION

Preamble

This report stems from the discussions at the first meeting of the IGBP Standing Committee on the System for Analysis, Research and Training (START-SC) held in Stockholm, Sweden on 24-26 April 1991. As such, it constitutes a progress report on development and implementation of a comprehensive plan for START.

At its first meeting, the START-SC focussed on the specific issues identified during definition of IGBP's START initiative (see IGBP Report No. 15). Particular attention was devoted to promulgating the overall plan for START, developing the guiding principles that the START-SC shall follow for the recognition of Regional Research Networks (RRNs) and Regional Research Centers (RRCs), reviewing the status of planned RRNs and examining the means to develop strong and effective ties to the UN system. The substantive decisions made by the START-SC are presented in the following pages. As the structure of the report parallels that used in the IGBP Report No. 15, the two documents should be read consecutively.

During the remainder of 1991, the START-SC intends to establish an ad hoc START Secretariat in Stockholm, vigorously stimulate and nurture the development of RRNs in the priority regions identified in the IGBP Report No. 15, identify and institute formal mechanisms for funding and management of the RRC/RRN components of the START initiative, promote a START International Fellowships Program, and to prepare a report outlining progress in the implementation of START.

1. Guiding Principles for the Recognition of RRCs and RRNs

1.1 The objectives for a RRC/RRN are:

a) to stimulate, conduct, and sponsor multidisciplinary and interdisciplinary research on scientific problems of importance to the study of global change;

b) to strengthen regional scientific cooperation through the IGBP, the World Climate Research Programme (WCRP), and Human Dimensions of Global Environmental Change (HDGEC) mechanisms as well as through other intergovernmental and nongovernmental avenues for cooperation;

c) to provide a means for regional data collection, analysis, interpretation, and modeling in a global context for key problems related to both the natural and the social sciences;

d) to develop scientific capacities through training, collaborative research, and technical cooperation and to ensure that relevant research is coordinated with ongoing and planned projects within the IGBP, WCRP, and HDGEC;

e) to communicate research findings to policy-makers;

f) to cooperate with other RRCs/RRNs, with the assistance of the START Standing Committee and Secretariat; and

g) to develop a clearinghouse function that identifies not only significant research issues but also individual scientists and research centers in need of support, and to develop ways of mobilizing that support.

1.2 The START Standing Committee will ordinarily recognize one RRC in each region of the world, as provisionally outlined in IGBP Report No. 15, according to these criteria:

a) the presence of scientific competence in issues of global change, so that scientific credibility is unchallenged;

b) the presence of, or the ability to develop, an infrastructure for the RRC/RRN, such as computing capability, laboratories, library, and technical personnel;

c) a commitment to assessing the role of the region in a global change context through data synthesis, interpretation and modelling

d) an international orientation to science to facilitate scientific exchanges and equipment transfers, and reasonable access to the institution from the region and elsewhere;

e) assurance of long-term stability of interest and support from the host government, and a commitment from the host government to provide some financial support;

f) support from other countries, including region-wide participation in the planning, funding, and governance of the RRC, and region-wide

participation of RRSs; and

g) the capacity to provide training on global change issues.

1.3 Where possible, the START Standing Committee will favour the establishment of an RRC in a developing country over its establishment in an industrialized country in the region. This will maximize the opportunity for START to foster the development of a global research capacity and a global consensus on scientific findings.

1.4 An RRC/RRN will be encouraged to build upon regional scientific agreements where they exist.

1.5 Proposals for the establishment of an RRC should be submitted through the National Committee for the IGBP of the host country.

1.6 Evaluation
1.7 Disapproval Mech. (Probation)
2.0 Provisional Approval
2.1 Links to the RRC
1.8 Finances Responsibility & Legal Framework
19. SCGIAR & other Regional R.C.

2. The START Secretariat

The START SC noted with considerable encouragement that the request for funding of an ad hoc secretariat for START for a three-years period had been received very favourably by France, Japan and the USA and that the request would be met. The Committee noted, however, that positive responses had not yet been received from Rockefeller Foundation or MacArthur Foundation.

The Committee requested the Executive Director to approach Swedish funding sources for possible support.

The START SC, upon the recommendation of its chairman, decided to establish an ad hoc START Secretariat at the Royal Swedish Academy of Sciences following a positive response by the Academy to such a request. It is anticipated that agreements for the establishment of a permanent START Secretariat in another country can be reached during the 3-years period. The Committee authorized the Chairman and Executive Director to search for a scientist to be head of the START Secretariat.

3. Status of the planned RRNs

3.1 The Western Hemisphere Regional Institute for Global Change Research

At the White House Conference on Science and Economic Research related to Global Change held during April 1990, the US proposed the establishment of several regional institutes for global change research, one of which would be located in the western hemisphere. During subsequent further work on this proposal, close coordination was maintained with the parallel development of IGBP's START initiative, thus ensuring virtual congruence between the two efforts.

The goals of the western hemisphere institute for global change research would be to: (1) promote regional cooperation in relevant natural, physical and social sciences; (2)

enhance cooperation both between north and south and east and west; (3) improve technological capabilities of countries within the region to participate in global change research; (4) establish linkages between global change research and the policy process both at regional and national levels; and (5) improve overall understanding of global change within the region.

Specific objectives of this institute could be: (1) to develop cooperative programs of research, analysis and modeling in which scientists and institutions from all countries in the region would participate fully; (2) to stimulate interdisciplinary and interactive studies of the science and economics of global change; (3) to promote the collection, analysis and exchange of data and information relevant to global change; and (4) to provide opportunities for education and training, including fellowships.

Such an institute could conduct science and economic research related to important hemispheric global change concerns. It could consist of a network of affiliated centers, and could conduct research with staff of regional scientists and analysts who are invited to work for specific periods of time on topics of regional interest.

A western hemisphere institute for global change research could provide a focal point for exchange of data, research results, and related information, not only within the region, but also with other institutes and with international organizations with global data management responsibilities. It would also provide a focal point for training and for regional seminars and conferences related to global change.

The institute would ideally build on existing facilities made available through host country governments. It could include: (1) scientific and technical facilities, such as a computer system; (2) analytical laboratories; (3) facilities for field studies and their support; (4) conference facilities; and (5) satellite receiving stations and related support systems.

The management of this institute will need to be designed and developed through consultations among contributing countries. At a minimum, this may consist of some form of a governing board and a director who would be responsible for: (1) establishing policy and identifying areas for programmatic emphasis, possibly with support of an advisory council; (2) approving the institute's organization, programme of work and budget; (3) arranging for the institutes's funding; and (4) interacting with other such institutes and organizations as appropriate.

The USA will host a workshop during 15-19 July, 1991 in Puerto Rico on the development of a Western Hemisphere Regional Institute for Global Change Research. Representatives of governments of the nations in the Western Hemisphere and other invited observers are expected to attend the workshop.

The primary objectives of this workshop will be to: (1) Develop a scientific agenda for such an institute; (2) develop an organizational plan; (3) develop specific criteria for determining the location of the RRN/RRC; (4) determine the level of interest of the participants in contribution resources to this effort. The workshop will prepare recommendations on the above issues which would then be distributed to participating governments in preparation for a follow-up meeting of senior governmental representatives later in 1991, which would approve the recommendations and commit resources to the institute.

The START Standing Committee noted that the US initiative is especially relevant for the Equatorial South American Region priority as outlined in IGBP Report 15 and the recommendations from the IGBP Regional Meeting for South America (IGBP Report 16):

(i) welcomed the U.S. initiative to foster the development of the Western Hemisphere Regional Institute for Global Change Research,

(ii) encouraged the participants at the upcoming planning meeting for this Institute to focus on the RRC/RRN priorities defined in the IGBP Report 15,

(iii) encouraged the National IGBP Committees in the Western Hemisphere to support vigorous national participation and to promote regional links to ensure equal participation of regional scientific institutions, and

(iv) encouraged the participants at the upcoming planning meeting for this institute to take particular note of the "Guiding Principles for the Recognition of RRCs and RRNs" as developed by the IGBP START Standing Committee, so that the planned institute can be fully compatible with the IGBP START concept.

3.2 Northern Africa

At the initiative of the French government, the planning for a Sahara and Sahel Observatory (SSO) has been initiated. The goal set for the SSO programme is to bring new stimulus to the struggle against drought and desertification by complementing and strengthening existing mechanisms in North Africa, East Africa and West Africa. The SSO shall simultaneously carry out activities with respect to the observation, research and prevention-correction facets. The programme should be conducive to establishing a "control panel" of the desertification process as well as to identifying and developing the preventive and remedial actions called for. It is intended to promote relations between African scientists and the major international scientific environmental programmes. and especially the IGBP. In view of the vulnerability of the region to climate change, and the importance of the region in a global context, the START SC welcomed the SSO initiative and expressed an interest in involving the OSS in the RRN for Northern Africa.

The START SC noted the establishment of an African Centre of Meteorological Applications for Development (ACMAD) in Niamey, Niger. This centre, which is being established by the Economic Commission for Africa (ECA) and the World Meteorological Organization (WMO), will analyze and forecast the weather and the climate forces that affect the 50 countries of the region. At the same time, the centre will enable the developed countries of the world to improve the quality of their own predictions through the utilization of better information from Africa. As climate change will profoundly affect African countries, the effects of climate change in Africa, especially those related to drought, must be monitored and predicted so that nations can take the appropriate adaptive and protective measures. The START SC welcomed this initiative and considered that ACMAD should be a prominent component of the RRN for Northern Africa. The START SC requested its chairman and the Executive Director to continue discussions with WMO and the ACMAD Director to elucidate what role the centre may play within START. The START SC also noted the existence of the AGRHYMET Center in Niamey, Niger supported by FAO and WMO.

With respect to the Northern Africa Region, the START Standing Committee further noted that in accordance with the recommendation from the IGBP-START's Bellagio meeting, the initial START SC effort will be targeted on stimulation and nurturing of RRNs in the region. In this regard, fostering strong linkages between the OSS, ACMAD and other international regional research efforts are steps in the right direction and two START SC members (Drs. Boulama and Bied-Charreton) shall focus their personal energies to that end. Continued input from START SC members in the development of OSS and other regional research programs is highly desirable.

In view of the need for encouraging establishment of national IGBP committees in this region and elsewhere in Africa, The START SC charged Drs. Boulama and Bied-Charreton with the task of promoting and fostering establishment of such national

bodies through the excellent contacts they have with the scientists in the region. The START SC further noted that the upcoming African Regional Meeting (planned for March, 1992 in Niamey) provides a unique opportunity to promote such activities. Moreover, the START SC suggested that interest in global change issues in Africa might be stimulated by a joint approach to the African countries by a combination of the IGBP and the ISSC, perhaps with the assistance of the UNU. A delegation so composed and charged with the task of stimulating development of national IGBP committees may be a productive mechanism. Hence the START SC requested the Chairperson and the IGBP Executive Director to explore such a possibility.

3.3 Tropical Asian Monsoon Region

The START Standing Committee reviewed the recommendations from the regional IGBP meeting for Asia held in New Delhi in February 1991. It especially noted the expressed interests of the IGBP Committees in India and China (CAST and the Academy in Taipei) that they wished to be considered for hosting RRCs. The Committee further noted the recommendation from the meeting that the Indonesian region should receive priority consideration.

The Standing Committee also noted the plans for IGBP to arrange a regional meeting for South-East Asia in the latter part of 1992 and the question of the establishment of a Regional Research Network with a Regional Research Centre should be addressed at that time. The Chairman of the START SC and the IGBP Executive Director have had preliminary discussions with representatives of the Dutch Foreign Office (together with the ICSU Secretary-General Professor J. W. M. la Rivière). In addition, Professor T. Rosswall has discussed the possible interest of Japan in an RRC for the Tropical Asian Monsoon Region with representatives of the Japanese Ministry for Education, Science and Culture.

The START SC decided to request the Executive Director to explore the interest of countries in South East Asia in START during his visit to the region in July 1991. The Standing Committee further decided to explore the possibility to arrange a special meeting to discuss the interest of establishing a regional network with an RRC in the Tropical Asian Monsoon Region.

3.4 Other Regions

3.4.1 Temperate South America

The START SC noted that this region would be discussed at the meeting for the Western Hemisphere to which the US have invited nations in that region. It also noted that a second regional IGBP meeting for Latin America and the Caribbean is tentatively scheduled to be arranged in Costa Rica in 1992 and that further initiatives should be discussed at that time.

3.4.2 Southern and Eastern Africa

The START SC noted that the needs of this region will be addressed at the IGBP regional meeting for Africa to be held in Niamey, Niger in early 1992. In addition, it noted suggestions from IGBP committees in the Nordic countries to explore possible interest of their governments for the establishment of an RRC in this region.

3.4.3 Central Arid Asia

The SC-IGBP noted with interest initial suggestions from the USSR national Committee for the possible establishment of an RRC affiliated to the Institute of Desert Research, Academy of Sciences of Turkmen, Ashkhabad. There is a need to identify the Regional Research Sites that could form part of a network for the region. There are indications that the Desert Institute of the Chinese Academy of Sciences would be interested in such collaboration. Contacts should also be established with the Arabic Centre for the Studies of Arid Regions and Highlands. located in Damascus, Syria.

3.4.4 Initiatives related to other regions

Antarctic

The Committee noted with great interest the proposal from the New Zealand IGBP Committee for the establishment of an RRC in Christchurch. The START SC decided to propose that Christchurch becomes a component of the RRN for Antarctica and to request SCAR to evaluate the proposal and to comment on the criteria for selection of a site for an Antarctic RRC.

Arctic

The Committee noted the establishment of an International Arctic Science Committee (IASC) and that IASC has decided that global change research will be one of its initial priorities. The network of collaboration that will develop within IASC will form an excellent initial component of an RRN for the region. The START SC also noted the MAB Northern Science Network in this context and that this network could hopefully also be an integrated component of an RRN.

Caribbean

The START SC noted the existence of the UNEP Regional Seas programme for the region, that the region would be included in the discussions regarding the US Western Hemisphere initiative, and that the next regional IGBP meeting for South America will include all of Latin America and the Caribbean.

Mediterranean

The START SC noted the proposal from France for the establishment of an RRC for the arid, semi-arid and desertification-threatened regions in Toulouse, France. It also noted the UNEP Regional Seas Programme for the Mediterranean with a secretariat in Athens.

Oceania

The START SC noted that a session on IGBP will be included in the next meeting of the Pacific Science Conference (Hawaii, USA June 1991) and hoped that the issue of a possible RRN for Oceania could be discussed at that time.

Temperate East Asia

The START SC noted with great interest the proposal from China (CAST) to establish an RRC for Temperate East Asia in China. The Committee stressed the need for any such RRC must be developed in parallel to an RRN for the region with strong participation of countries outside of China. The Chairman and Dr. R. Herrera as well as the Chairman of the IGBP-DIS Standing Committee, Dr. S. I. Rasool, have agreed to visit China in September 1991 to discuss this issue further.

Temperate Northern Hemisphere

The START SC noted the proposal from the Irish IGBP Committee for the establishment of an RRC in Galway. The Committee looks forward to the involvement of an institute in Galway in the RRN for the region. The Committee also noted that a meeting on START will be convened in Canada in May 1991 and it looks forward to receiving the results from that meeting. It also noted that part of this region will be included in the discussions on the Western Hemisphere initiative.

The START SC also decided to consult with IIASA in relation to East-West collaboration in the area of global change relevant to the Temperate Northern Hemisphere region. It will also continue the discussions with the Centre for Earth and Environmental Sciences that is being set up in Trieste, Italy. The Committee stressed that such a centre may play an important role in promoting training of scientists from developing countries in areas such as General Circulation Modelling.

Western North America

The START SC noted that this region will be considered in the discussions of a centre for the Western Hemisphere.

3.5 Treatment of the Open Oceans

The START-SC noted the decision by the IGBP Scientific Committee to request JGOFS and IGAC, in consultation with CCCO, to comment on the report from Bellagio and to give their views on what, if any, institutional structures will be needed to facilitate regional observations of oceanic areas.

The START SC reviewed the proposal received from the Bermuda Biological Station and decided to ask JGOFS and IGAC to consider this proposal in their evaluation of the needs for an RRN for oceanic areas.

4. Relationship to the UN system

In developing the START initiative, it is important that appropriate links to relevant parts of the UN system are maintained and strengthened. The START SC and Secretariat will discuss the Regional Research Centres and Networks particularly with UNEP, Unesco, WMO and FAO.

The START SC noted with great satisfaction the report from a meeting of the Advisory Committee for the Global Environmental Facility (UNEP/UNDP/World Bank) held in Geneva in April 1991. The meeting had expressed considerable interest

in the START initiative and will recommend that GEF becomes involved in the further developments.

As a follow-up to the recommendations form the Second Meeting of IGBP National Committees (London, UK February 1991), the START SC recommends all national IGBP Committees to contact their national delegations to WMO Congress (May 1991) and UNEP Governing Council (May 1991). It is hoped that both will discuss and adopt resolutions in support of the initiative for IGBP, WCRP and HDGEC to collaborate in the development of a set of Global Change Regional Research Centres and Networks as described in IGBP Report 15. The START Standing Committee provides the following draft resolution text that national committees may wish their national delegations to UNEP Governing Council to consider and that similar wording may be useful for a resolution from WMO Congress:

> The Governing Council being concerned by the changes in the global life-supporting system due to human activity,
>
> Considering that the understanding of the changes is a necessary step towards mitigation or adaptation to them,
>
> Being cognizant that a proper monitoring of global change is an indispensable element of an environmentally sound strategy for sustainable development,
>
> Considering that the International Geosphere-Biosphere Programme (IGBP) and the World Climate Programme (WCP) play an essential role in improving the understanding of the causes and consequences of global change,
>
> Noting UN GA Resolution (A/C.2.4/L.40/rev. 1) that urged governments to "...continue and where possible, increase their activities in support of the World Climate Programme and the International Geosphere-Biosphere Programme..." which further recommended "that the international scientific community supports efforts by developing countries to participate in these scientific activities",
>
> and further noting the technical statements from the Second World Climate Conference calling for "a special initiative (that) would create a network of regional interdisciplinary research centres, located primarily in developing countries, and focussing on all the natural science, social science, and engineering disciplines required to fully support integrated studies of global change and its impacts and policy responses"
>
> Welcomes the IGBP initiative to address regional problems of global importance through its Global Change System for Analysis, Research and Training (START),
>
> 1. Appeals to all member nations to establish and support national IGBP Committees;
>
> 2. States that the IGBP-START activities in the developing regions deserve the support of the governments from within and outside the region in question;
>
> 3. Requests the Executive Director to render financial support to the IGBP Regional Research Centres and Networks within available resources;

4. Further requests the Executive Director to provide necessary support to the IGBP-START activities through the Global Environmental Facility.

The START SC Chairman and the Executive Director reported on discussions with the Secretariat for UNCED. It is important that the concept of START be included in the discussions at UNCED in Rio de Janeiro 1-12 June 1992. The START and IGBP Secretariats will continue its contacts with the UNCED Secretariat. In addition, the national IGBP Committees are urged to contact their national preparatory committees for UNCED.

ICSU is arranging an International Conference on an Agenda of Science for Environment and Development into the 21st Century (ASCEND 21) to be held in Vienna 24-29 November 1991 in response to the request from the UNCED Secretariat for ICSU to act as the principal scientific advisor to the conference. The SC-IGBP has recommended that it wishes to propose the following three items for consideration by the conference: (i) the need for scientific research needed to develop a predictive understanding of the Earth system (IGBP and WCRP), (ii) the need for START, and (iii) the necessity for collaborative activities between IGBP and HDGEC as exemplified by the planning for joint activities in relation to land use/land cover change.

5. Interactions between IGBP, WCRP, HDGEC and CGIAR

The START SC welcomed the decision by the IGBP Scientific Committee to invite the WCRP to nominate two and the ISSC to nominate one member to the START Standing Committee. In view of the recommendations from the Bellagio meeting, strengthened contacts between the three programmes is a necessity in the further developments of the START concept.

The START-SC also welcomed the continued interaction with the Technical Advisory Committee for the Consultative Group for International Agricultural Research. The presence of Professor R. Dudal at the first START SC meeting was helpful in outlining further avenues for possible collaboration. The START SC was especially interested in the CGIAR development of a new ecoregional approach. It was decided that the START SC would review the CGIAR regional division and consider how the two regional approaches might be mutually supportive.

The special interest of the International Rice Research Institute (IRRI, Los Baños, The Philippines) in global change causes and effects was also noted. It was decide to establish improved communication links between the IGBP and CGIAR secretariat functions.

6. Fellowship Programme for Global Change Research

The START SC stressed the need for the strengthening of fellowship programmes for global change research. It noted the decision by the Scientific Committee for the IGBP to establish an ad hoc committee on education and training under the chairmanship of Professor J. Sarukhán together with WCRP. A preliminary report from that ad hoc group will be available at the next START-SC meeting.

The Rockefeller Foundation has established a fellowship scheme for global change research, and as soon as further details are available, this will be circulated to the national IGBP committees. The START SC also noted that nations, such as the USA and India, have initiated fellowship programmes for global change research. These initiatives were very much appreciated, and it is hope that national IGBP committees in other countries can consider similar initiatives.

7. Other Issues

7.1 START/IGBP-DIS/GCOS Relationship

The START SC recognized the need for close interaction with the IGBP Data and Information System in the further planning. As is recognized in the Bellagio Report, the RRCs must have access to both regional and global data sets and have efficient communication channels to other data bases of relevance for the research within the network. In particular, the need for links to the GRID system of UNEP was stressed.

The START SC will follow the further developments of the proposed Global Climate Observing System (GCOS) with interest.

7.2 Promotional Material

The START SC decided to prepare a report on the implementation of START including initiatives mentioned in this report from its first meeting. A draft of that report will be available in mid-July and distributed at the meeting for the Western Hemisphere Global Change Research Centre. A revised draft will be available for the committee at its second meeting and the final report should be available to the ASCEND 21 conference in late November.

8. Next Meetings

The START SC decided to convene its second meeting in Tokyo 25-27 August 1991 and to ask Professor Higuchi to be responsible for the practical arrangements. The Committee further decided to invite all national committees with an interest in funding the establishments of RRC/RRNs to the first two days of the meeting. In addition, representatives of relevant UN organizations and others may also be invited at the discretion of the Chairperson of START SC.

The Committee further decided to arrange its third meeting in Vienna on either 23-24 November or 30 November-1 December 1991.

Glossary

ACMAD	African Centre of Meteorological Applications for Development (WMO/ECA)
CGIAR	Consultative Group on International Agricultural Research
ECA	Economic Commission for Africa
FAO	Food and Agricultural Organization
GRID	Global Resource Information Data Base (GEMS/GRID)
HDGEC	Human Dimensions of Global Environmental Change Programme (ISSC)
IASC	International Arctic Science Committee
ICSU	International Council of Scientific Unions
IGAC	International Atmospheric Chemistry Project; An Established IGBP Core Project
IGBP	International Geosphere-Biosphere Programme (ICSU)
IIASA	International Institute for Applied Systems Analysis
ISSC	International Soil Science Council
JGOFS	Joint Global Ocean Flux Study; An Established IGBP Core Project
MAB	Man and the Biosphere Programme of Unesco
RRC	START Regional Research Center
RRN	START Regional Research Network
RRS	START Regional Research Site
SSO	Sahara and Sahel Observatory
START	IGBP System for Analysis, Research, and Training
START SC	START Standing Committee
UNCED	United Nations Conference on Environment and Development
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
WCRP	World Climate Research Programme (ICSU/WMO)
WMO	World Meteorological Organization

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First Meeting of the START Standing Committee

24-26 April 1991, Stockholm

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WHITE HOUSE SITUATION ROOM

PAGE 01 OF 08

PRT OSTP
SIT VAX

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FM AMEMBASSY NAIROBI

TO RUEHC/SECSTATE WASHDC PRIORITY 4326
INFO RUEHXX/IO COLLECTIVE
RHEHAAA/WHITEHOUSE WASHDC
RUCPDC/USDOC WASHDC
RUEADOE/DOE WASHDC
RUEATRS/TREASURY DEPT WASHDC
RUEANAT/NASA WASHDC
RUFHFR/AMEMBASSY PARIS 8250
RUFHLD/AMEMBASSY LONDON 0439

UNCLAS SECTION 01 OF 03 NAIROBI 21626
DEPARTMENT FOR IO/T/SCT (BUNCHER), OES/EHC (CLORE),
IO/D/ECH (POLLACK), OES/ENV (USREY), OES/EGC (REIFSNYDER),
OES/EHC (SAVAGE), OES/OA (SCULLY), S/P (DAWSON),
L/OES (DONOGHUE), EB/ERF (RAMSEY), EB/IFD/ODF (BUTCHER),
AID/PPC/PDPR, A/AID (HAUSMAN), AID/S AND T/EN (VANDERRYN),
AID/LAC/DR/E (HESTER), AID/AFR/TR/ARD (GAUDET)
ROME FOR FODAG; PARIS FOR UNESCO OBSERVER, SCICOUNS,
USOECD; MONTREAL FOR ICAO; LONDON FOR SHIPPING ATTACHE
WHITEHOUSE FOR OSTP, CEQ
USDOC FOR NOAA, ITA
DOE FOR IE, PE (WILLIAMS)
NASA FOR ROBERT WATSON
DEPARTMENT PASS TO: EPA/OIA (DRAKE), DOI, USDA, NSF, USTR
E.O. 12356: N/A
TAGS: AORC, UNEP, SENV, EAID, ETRD, KSCA
SUBJECT: GLOBAL ENVIRONMENTAL FACILITY UPDATE
REF: NAIROBI 10033
1. PERMREP MET WITH MIKKO PYHALA, COORDINATOR OF THE

SECRETARIAT FOR THE SCIENTIFIC AND TECHNICAL ADVISORY PANEL (STAP) OF THE GLOBAL ENVIRONMENTAL FACILITY (GEF) AT UNEP ON AUGUST 28. PYHALA WANTED TO DISCUSS PROGRESS MADE BY THE STAP TO DATE AND UNEP'S CONCERNS OVER DIFFICULTIES IN SIGNING THE INTERAGENCY AGREEMENT AND FUNDING FOR BIODIVIERSITY COUNTRY STUDIES.

-

2. PYHALA SAID THAT THE STAP AD-HOC WORKING GROUP ON BIOLOGICAL DIVERSITY MET IN WASHINGTON JUNE 10 - 12, AND THE STAP HAD HELD ITS SECOND SESSION, ALSO IN WASHINGTON, ON JULY 15 - 17. PYHALA SAID THE STAP'S MEMBERSHIP WAS BEGINNING TO GEL. IUCN DIRECTOR GENERAL MARTIN HOLDGATE, WHO HAD BEEN UNABLE TO ATTEND ANY OF THE STAP MEETINGS, HAD RESIGNED AND WILL BE REPLACED BY UNIVERSITY COLLEGE OF LONDON ECONOMIST DAVID PEARCE. PYHALA COMMENTED THAT THE WORLD BANK HAD NOT BEEN KEEN ON HAVING AN ECONOMIST ON THE STAP, POSSIBLY FEARING COMPETITION, BUT PEARCE HAD BEEN STRONGLY SUPPORTED BY UNDP. PYHALA ADDED THAT STAP CHAIRMAN WATSON WILL ASK JOSE GOLDEMBERG OF BRAZIL TO RESIGN FROM THE STAP IF HE MISSES A THIRD MEETING.

-

3. PYHALA SAID THE STAP HAD PRODUCED DRAFT RECOMMENDATIONS ON PRIORITIES AND CRITERIA. HE

UNDERSTOOD CHAIRMAN WATSON HAD PROVIDED A COPY TO THE DEPARTMENT. THE WORLD BANK AND UNDP HAD EXPRESSED SOME MISGIVINGS ABOUT THE ALLOCATION OF PERCENTAGE SHARES OF FUNDING TO REGIONS, SAYING THIS HAD NOT BEEN FULLY THOUGHT THROUGH. A BETTER DRAFT WOULD BE OUT IN A WEEK OR SO.

-

4. PYHALA SAID THE WORLD BANK HAD ALSO BEEN UNHAPPY THAT THE STAP WANTS TO ENLARGE THE SCOPE OF INTERNATIONAL WATERS ACTIVITIES. HOWEVER, POLLUTION FROM SHIPS IS NOT THE MOST SERIOUS PROBLEM. LAND-BASED SOURCES OF MARINE POLLUTION ARE MUCH BIGGER, AND THE GEF NEEDS TO FOCUS ON

THINGS LIKE WATERSHED MANAGEMENT. OF COURSE, INCLUDING LAND-BASED SOURCES WILL MAKE GEF OPERATIONS MORE COMPLICATED. THE BANK, PYHALA ADDED, WANTS TO ADD A MARINE POLLUTION EXPERT TO THE STAP AND IS LOOKING FOR CANDIDATES.

-

5. PYHALA SAID AGREEMENT HAS REACHED THAT ALL GEF PROJECTS WILL BE SUPPORTED BY EXTENDED DOCUMENTATION FROM THE WORLD BANK AND UNDP, CONSISTING OF SIX RATHER THAN TWO PAGES, AND WILL BE AVAILABLE FOR REVIEW BY EVERYONE, INCLUDING THE STAP, GOVERNMENTS AND NGOS.

-

6. UNEP, PYHALA SAID, STILL HAS TWO MAIN CONCERNS:

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A) THE WORLD BANK, UNDP AND UNEP HAVE STILL NOT BEEN ABLE TO SIGN AN INTERAGENCY AGREEMENT. UNEP WANTED TO DEFINE THE ROLES OF EACH AGENCY PRECISELY AS SET FORTH IN THE FEBRUARY 1991 WORLD BANK "WHITE PAPER" ENTITLED, "ESTABLISHMENT OF A GLOBAL ENVIRONMENTAL FACILITY." HOWEVER, THE BANK NOW WANTS TO CHANGE THINGS. THE ORIGINAL SCHEME WAS GENUINELY TRIPARTITE, WITH THE BANK CONSULTING UNEP AND UNDP FULLY. HOWEVER, THE BANK'S LATEST REVISION IS STRONGLY SLANTED IN FAVOR OF THE BANK AS PRIMUS ENTER PARES. TOLBA HAS SO FAR DECLINED TO SIGN

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DEPARTMENT FOR IO/T/SCT (BUNCHER), OES/EHC (CLORE), IO/D/ECH (POLLACK), OES/ENV (USREY), OES/EGC (REIFSNYDER), OES/EHC (SAVAGE), OES/OA (SCULLY), S/P (DAWSON), L/OES (DONOGHUE), EB/ERF (RAMSEY), EB/IFD/ODF (BUTCHER), AID/PPC/PDPR, A/AID (HAUSMAN), AID/S AND T/EN (VANDERRYN), AID/LAC/DR/E (HESTER), AID/AFR/TR/ARD (GAUDET)

ROME FOR FODAG; PARIS FOR UNESCO OBSERVER, SCICOUNS, USOECD; MONTREAL FOR ICAO; LONDON FOR SHIPPING ATTACHE

WHITEHOUSE FOR OSTP, CEQ
USDOC FOR NOAA, ITA
DOE FOR IE, PE(WILLIAMS)
NASA FOR ROBERT WATSON
DEPARTMENT PASS TO: EPA/OIA(DRAKE), DOI, USDA, NSF, USTR
E.O. 12356: N/A
TAGS: AORC, UNEP, SENV, EAID, ETRD, KSCA
SUBJECT: GLOBAL ENVIRONMENTAL FACILITY UPDATE
THE AGREEMENTP IN THE MEANTIME, THE SECRETARIAT IS RUNNING OUT OF FUNDING SINCE THE GEF TRUST FUND IS CONTROLLED BY THE BANK, WHICH WILL NOT PAY ANYTHING UNTIL THE AGREEMENT IS SIGNED. THIS IS A MATTER THAT HAS TO BE

RESOLVED BY THE HEADS OF THE THREE AGENCIES AND THEIR LEGAL DEPARTMENTS.

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B) THE BIODIVERSITY CONVENTION PROCESS HAS HIT A SNAG. COUNTRY CASE STUDIES WERE CONTEMPLATED AS A KEY ELEMENT. THE PROCESS IS WELL ALONG, AND COUNTRIES HAVE EXPRESSED INTEREST. UNEP HAS PUT UP USD 1 MILLION OF ITS OWN. HOWEVER, THE CASE STUDIES WILL COST USD 5 TO 6 MILLION. THIS WAS TO HAVE COME FROM THE GEF. HOWEVER, THE BANK AND UNDP HAVE WITHHELD AGREEMENT FOR GEF FINANCING. PYHALA HASTENED TO ADD THAT THEY DID NOT SEEM TO BE CONSCIOUSLY OBSTRUCTING THE COUNTRY CASE STUDIES, BUT RATHER SEEMED INEXPLICABLY UNCONCERNED AT THE NEED FOR HASTE. THE GEF PARTICIPANTS MEETING LAST MAY GAVE EMPHATIC SUPPORT TO THESE STUDIES AS A HIGH PRIORITY. THE STUDIES ARE NEEDED TO THROW LIGHT ON WHAT PROTECTION OF BIODIVERSITY REALLY COSTS AND WHAT IS THE VALUE OF THE BIO DIVERSITY RESOURCES COUNTRIES POSSESS. SUCH INFORMATION WILL FORM THE BASIS FOR ANY FINANCIAL MECHANISM TO BE INCLUDED IN THE BIODIVERSITY CONVENTION.

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7. PYHALA SAID HE HAD NO DOUBT THAT THE INTERAGENCY AGREEMENT HOLDUP WILL EVENTUALLY BE RESOLVED. THE

BIODIVERSITY COUNTRY CASE STUDIES PROBLEM WAS MORE WORRYING. TECHNICAL PREPARATIONS FOR THE COUNTRY STUDIES ARE GOING AHEAD ON SCHEDULE WITH UNEP MONEY, BUT GEF FUNDING IS ESSENTIAL TO UNDERTAKE THE STUDIES. AN INTERNATIONAL EXPERT ADVISORY GROUP ON BIODIVERSITY COUNTRY CASE STUDIES WILL MEET IN GENEVA SEPTEMBER 5-6 TO REVISE THE STUDY GUIDELINES. UNEP HOPES THE WORLD BANK WILL RELEASE THE GEF FUNDS BEFORE THE PARTICIPANTS MEETING IN DECEMBER. HOWEVER, PYHALA SAID HE IS NOT SURE THE BANK FULLY REALIZES THE IMPORTANCE OF THE COUNTRY STUDIES TO THE BIODIVERSITY CONVENTION NEGOTIATION PROCESS, AND CONSIDERS THEM TO BE SOMETHING UNEP IS UNDERTAKING FOR ITS OWN INTERESTS.

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8. PYHALA COMMENTED THAT UNEP HAS A PROPOSAL FOR COUNTRY STUDIES ON GREENHOUSE GASES WHICH WILL INVOLVE WORKING CLOSELY WITH THE IPCC AND OECD. HE MENTIONED AN OECD WORKSHOP HELD LAST FEBRUARY WHICH HE THOUGHT HAD INVOLVED FUNDING FROM NORWAY AND THE U.S. (EITHER EPA OR AID). A U.S. EXPERT, DR. PAUL SCHWENGALS, AND A PHILIPPINE EXPERT FROM THE UK WILL BE WORKING ON THESE STUDIES AT OECD. THE UNEP PROPOSAL INVOLVES SHOWING ABOUT SIX TO EIGHT DEVELOPING COUNTRIES HOW TO DO NATIONAL STUDIES ON SINKS AND SOURCES.

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9. PYHALA SAID THE GEF PROJECT INVENTORY IS CHANGING. THE FAO SCREW WORM PROJECT IN NORTHERN AFRICA IS OUT FOLLOWING OBJECTIONS RAISED BY FOUR COUNTRIES, INCLUDING THE U.S., NETHERLANDS, UK AND SWITZERLAND, WHO FELT THAT THE GEF WAS SIMPLY NOT THE CORRECT MECHANISM FOR THIS. ALSO OUT IS THE UNDP EAST AFRICAN WILDLIFE MANAGEMENT TRAINING PROJECT IN KENYA, UGANDA AND TANZANIA. PYHALA SAID NEW PROJECTS FOR THE SECOND TRANCHE WILL BE DISCUSSED BY THE AGENCIES ON SEPTEMBER 6 AT A PROJECT

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NASA FOR ROBERT WATSON
DEPARTMENT PASS TO: EPA/OIA (DRAKE), DOI, USDA, NSF, USTR
E.O. 12356: N/A
TAGS: AORC, UNEP, SENV, EAID, ETRD, KSCA
SUBJECT: GLOBAL ENVIRONMENTAL FACILITY UPDATE
SCREENING WORKSHOP TO BE HELD AT UNDP HEADQUARTERS IN NEW YORK. THE PROJECTS WILL BE REVIEWED BY THE STAP WHEN IT MEETS IN NEW YORK SEPTEMBER 23-25, AND BY THE IMPLEMENTATION COMMITTEE SEPTEMBER 25-27. THE RESULTING LIST WILL THEN BE MAILED TO GOVERNMENTS IN MID-OCTOBER, AND REVIEWED AND CONSIDERED AT THE MEETING OF GEF PARTICIPATING COUNTRIES TO BE HELD IN GENEVA DECEMBER 3-5. PYHALA SAID THAT NO REPEAT NO PROJECTS FROM THE FIRST TRANCHE HAVE YET BEEN FORMALLY APPROVED.

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10. THE STAP, PYHALA CONTINUED, HAS TAKEN A STRONG POSITION THAT ALL PROJECTS MUST INCLUDE INNOVATION AND BE REPLICABLE. THEY SHOULD ALSO HAVE LINKAGES TO NATIONAL GOVERNMENT POLICY-MAKING FRAMEWORKS, THAT IS, NOT JUST BE ISOLATED PROJECTS, BUT BE REFLECTED BACK IN CHANGES IN THE POLICY-MAKING PROCESS. HOWEVER, ALL THREE AGENCIES HAVE BEEN CAUTIOUS ON THIS IN ORDER NOT TO OFFEND

DEVELOPING COUNTRY SENSITIVITIES ON CONDITIONALITY AND NATIONAL SOVEREIGNTY. THE ENVIRONMENT-DEVELOPMENT LINK IS SO FAR VERY VAGUE IN THE GEF, PYHALA SAID, AND THE BANK'S ORIGINAL WHITE PAPER DOESN'T EVEN DEAL WITH DEVELOPMENT.

11. PYHALA HAS OPTIMISTIC THAT AS THINGS PROGRESS GREATER IMAGINATION WILL EMERGE. HE POINTED OUT THAT BRAZIL HAS PUT A PROPOSAL FOR A NEW PROJECT ON GASSIFLCATION OF BIOMASS AND NEW TURBINE TECHNOLOGY INTO THE PIPELINE THROUGH UNDP. THIS INVOLVES GREAT INCREASES IN EFFICIENCY OF COMBUSTION AND ENERGY OUTPUT, SUCH THAT SUGAR MILLS IN BRAZIL COULD BE DEVELOPED FIRST AS ENERGY PRODUCING UNITS, WITH SUGAR JUST A BY-PRODUCT. PYHALA NOTED THAT THE STAP SUBCOMMITTEE ON GLOBAL WARMING AND ENERGY HAD MET IN PRINCETON, AND EXPRESSED SPECIAL PRAISE FOR THE CONTRIBUTION BY ROBERT H. WILLIAMS, SENIOR RESEARCH SCIENTIST, CENTER FOR ENERGY AND ENVIRONMENTAL STUDIES, PRINCETON UNIVERSITY (PRINCETON N.J. 08544; TELEPHONE 609-258-5448; FAX 609-258-3661). PYHALA SHOWED PERMREP COPIES OF PAPERS BY WILLIAMS, INCLUDING ONE DATED 6/1/91 ENTITLED, "POTENTIAL FOR REDUCING CO2 EMISSIONS WITH NEW ENERGY TECHNOLOGY: ILLUSTRATED SCENARIO FOR THE POWER SECTOR IN CHINA," PREPARED FOR THE NATIONAL COMMITTEE ON U.S. - CHINA RELATIONS, AND ANOTHER ENTITLED, "ALTERNATIVE ROLES FOR BIOMASS IN COPING WITH GREENHOUSE WARMING," IN SCIENCE AND GLOBAL SECURITY 1991,

VOL. 2. PYHALA ALSO EXPRESSED PRAISE FOR THE CONTRIBUTIONS OF PETER RAVEN OF THE MISSOURI BOTANICAL GARDEN AND CHRISTINE PADOCH OF THE NEW YORK BOTANICAL GARDEN TO DEVELOPING THE BIODIVERSITY GUIDELINES AT THE STAP BIODIVERSITY SUBCOMMITTEE MEETING IN WASHINGTON D.C.

12. PYHALA GAVE PERMREP COPIES OF THE DRAFT MINUTES OF THE SECOND SESSION OF THE STAP (WASHINGTON D.C., JULY 15-17) AND THE APPROVED MINUTES OF THE STAP AD-HOC WORKING GROUP ON BIODIVERSITY (WASHINGTON D.C., JUNE

10-12), TOGETHER WITH AN AUGUST 21 DRAFT OF THE STAP ROSTER OF EXPERTS. PYHALA ADDED THAT HE WOULD LIKE TO HAVE MORE COMPLETE RESUMES FOR THE U.S. EXPERTS, AS WELL AS FAX NUMBERS. THE THREE DOCUMENTS ARE BEING POUCHED TO OES/EHC FOR RAY CLORE.

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