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SCIENTIFIC AND TECHNICAL ADVISORY PANEL (STAP) OF THE GLOBAL ENVIRONMENT FACILITY:

WORK PROGRAMME FY05-06

(Prepared by the Scientific and Technical Advisory Panel)

**Scientific and Technical Advisory Panel to
the Global Environment Facility:**

work programme FY05/06

November 2004

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I. STRATEGIC OBJECTIVES

The overall strategic objectives for STAP III in the third phase of the GEF are:

1. to identify and provide strategic advice on: scientific and technical priorities; the scientific and technical coherence of GEF operational programmes and strategies; and emerging issues and gaps relevant to the implementation of operational programmes.
2. to provide scientific and technical advice aimed at strengthening the scientific and technical quality and underpinning of GEF projects.
3. to enhance and improve the collaboration with other scientific and technical bodies, communities and the private sector in areas of relevant to the GEF's priorities.
4. to advise on capacity building efforts in science and technology relevant to the development and implementation of GEF projects.
5. to advise on targeted research relevant to the GEF's strategic priorities.
6. to advise on monitoring and evaluation indicators for the GEF's focal areas and cross-cutting issues.

II. INTRODUCTION

1. STAP III developed a triennial work programme (FY03/05) to allow for a more strategic programming of its work over a longer time period; this work programme identified tasks for the first part of the period, allowing flexibility to respond to new priorities and merging issues later. Hitherto STAP had drawn up work programmes annually.
2. The triennial work programme was drawn up in consultation with the GEF Secretariat and the Implementing Agencies (IAs) – UNEP, UNDP and the World Bank – and agreed at the March 2003 STAP meeting. The May 2003 GEF Council was informed about the outcome in the Report of the Second Meeting of STAP III (GEF/C.21/Inf.16): a concise version of the work programme was included in an annex. The triennial work programme was discussed and further refined at subsequent STAP meetings in October 2003 and March 2004, with the outcomes reported by the STAP Chair in her statements to the Council. The relevant parts of the work programme were included in the GEF's Business Plan submitted for Council approval in May 2004. (Annex I provides an account of STAP III's achievements to date.)
3. In October 2004, STAP had extensive discussions with the GEF Secretariat and the IAs about work which the Panel might undertake over the next two years; this followed suggestions put forward by the GEF Secretariat, IAs and STAP members themselves. STAP decided that in future it would emphasise its role as a provider of strategic advice, while continuing to advise on narrower, more technical issues. After further consultation, this paper sets out STAP's agreed FY05/06 work programme, including an update on work in progress from the triennial work programme (FY03/05), and details of new activities – summarised in Table 1.

Summary table of work in progress, new planned activities, and deliverables (in italics) FY05/06

Activity	FY05				FY06
	July-Sept	Oct-Dec	Jan-Mar	April-June	For further details, see Section III.
Biodiversity	Mainstreaming biodiversity workshop, 20-24 September, Cape Town.	<i>Biosafety source book on Bt maize in Kenya (Nov).</i> <i>Interim advice on mainstreaming biodiversity (Nov).</i>		Workshop on transgenic fish (July). <i>Third biosafety source book on transgenic fish (June 06).</i> <i>Second biosafety source book on Bt cotton in Brazil (June).</i> <i>Final advice on mainstreaming biodiversity (June).</i>	Mainstreaming biodiversity in production water bodies.
Climate change			Workshop on adaptation (Jan). Workshop on biofuels (Feb/Mar). <i>Advice on biofuels (June).</i>	<i>Advice on adaptation (June).</i>	Energy efficiency standards in new buildings.
International waters		<i>Advice on strategic priorities in groundwater (Nov).</i>		Workshop on managing the subsurface environment (June). <i>Advice on managing the subsurface environment (Dec).</i>	Upstream/downstream linkages.
Land degradation			Workshop sustainable land management in drylands (Feb). <i>Advice on sustainable land management (Dec).</i>	<i>Advice on the restoration and rehabilitation of drylands (June).</i>	
POPs					Technical review of technologies for soil remediation. Update a technical review of non-combustion technologies.
Cross-cutting		<i>Interlinkages report (Nov).</i>	Workshop to operationalise the interlinkages design tool (adaptation) (Jan).	Advise on operationalising interlinkages (June).	Follow-up to the STAP report on interlinkages (identification of gaps). Invasive species. Groundwater and SIDS. Modern biomass.
Corporate			STAP meeting to discuss use of S&T in the GEF (March).		Corporate activities.
Targeted Research (TR)			STAP meeting to discuss TR (March).	<i>Advice on Targeted Research (June).</i>	Targeted research.
M&E		PIR meetings for BD and CC, 29 November to 3 December t.b.c.; IW 21 December.	PPR meeting, 24-25 January.		M&E.

III. DETAILS OF WORK IN PROGRESS, NEW PLANNED ACTIVITIES AND DELIVERABLES FY05/06

This section outlines the status of work in progress from the FY03/05 work programme, indicating when advice is expected to be delivered, and new planned activities: it does so for the focal areas (biodiversity, including biosafety, climate change, international waters, land degradation, and POPs), cross-cutting issues, corporate issues, targeted research, and monitoring and evaluation. Together these elements comprise the FY05/06 STAP work programme.

1. Biodiversity

(a) From the triennial work programme

Advice to be delivered:

1.1 Environment risk assessment of genetically modified organisms (GMOs): a case study of *Bt* maize in Kenya

Rationale: the advent of GMOs offers new options for meeting food and agriculture needs in developing countries, but some GMOs used in agriculture can also affect biodiversity and natural ecosystems. These potential environmental risks and benefits need to be taken into account when making decisions about the use of GMOs. International trade and the unintentional trans-boundary spread of GMOs can also pose environmental risks depending on the national and regional contexts. The complex interactions that can occur between GMOs and the environment heighten the need to strengthen worldwide scientific and technical capacity for assessing and managing environmental risks of GMOs. This book will provide scientifically peer-reviewed tools that can help developing countries strengthen their own scientific and technical capacity in biosafety of GMOs. This book will also provide methods and relevant scientific information for risk assessment, rather than drawing conclusions. It will be for each country to conduct their own scientific risk assessment in order to inform their own biosafety decisions.

Activity: the book is the outcome of a scientific partnership between the STAP and the Global Working Group on Transgenic Organisms in Integrated Pest Management and Biological Control (under auspices of the International Organization for Biological Control). An international Advisory Board provided scientific and strategic advice that led to this book and included representatives from the STAP, the Secretariat of the Convention on Biological Diversity, and numerous agricultural, environmental, academic, and governmental organizations, listed in the preface.

Output: a biosafety source book, Kapuscinski, A.R. and P.J. Schei, Series Editors, A. Hilbeck and D. Andow, Book Editors, *Environmental Risk Assessment of Genetically Modified Organisms: A Case Study of Bt Maize in Kenya*. CABI Publishers.

Timetable: published November 2004.

STAP lead: Anne Kapuscinski and Peter Schei, who conducted an independent, international, anonymous scientific peer review.

Work in progress:

1.2 Mainstreaming biodiversity in production landscapes and sectors

Rationale: to determine an operational *definition* of the concept of mainstreaming biodiversity in production landscapes and sectors, building on the work of previous workshops; to demonstrate the *role* of mainstreaming in advancing CBD goals and Strategic Priority 2 of the GEF-3 programme of work; to explore the *scale* at which mainstreaming can most effectively be carried out; to critique *successes and failures* in achieving mainstreaming outcomes to date – consolidating and evaluating experience in different sectors; and to brainstorm on modified or new *approaches and tools* to assist in designing more effective interventions and achieving more effective mainstreaming outcomes in future, e.g. models of best practice, principles and indicators.

Activity: a workshop was held in Cape Town, 21-25 September 2004, co-hosted by the South African National Biodiversity Institute.

Outputs: interim advice November 2004, final advice by June 2005, plus a collection of papers from the symposium, workshop proceedings, and the submission of an article to a scientific journal.

STAP lead: Brian Huntley.

1.3 Environmental risk assessment of GMOs: a case study of *Bt* cotton in Brazil.

Rationale: (as for 1.1 above)

Activity: (as for 1.1 above)

Output: a biosafety source book, Kapuscinski, A.R. and P.J. Schei, Series Editors, A. Hilbeck and D. Andow, Book Editors, *Environmental Risk Assessment of Genetically Modified Organisms: A Case Study of Bt Cotton in Brazil*. CABI Publishers.

Timetable: to be published in June 2005.

STAP lead: Anne Kapuscinski, Peter Schei.

1.4 Environmental biosafety science of transgenic fish

Rationale: aquaculture is the world's fastest growing food animal sector, with an average global growth of 9% per year since 1970, compared with 2.9% for terrestrial livestock and 1.3% for capture fisheries. Fish farming is a major contributor to food security and protein nutrition in developing countries, especially in Asia but increasingly in parts of Africa and the Americas. Developing countries also derive substantial economic benefit from exports of farmed fish, shrimp and other aquaculture products. This 'Blue Revolution' is happening in parallel to rising incomes and population levels in the developing world and consequent rising protein demands, pressures on land and water resources and widespread over-fishing of freshwater and marine species. Aquaculture is thus under tremendous societal pressure to become more environmentally and socially sustainable. The aquaculture sector needs to reduce usage of

water and wild-caught fish (an important source of fish meal used in aquaculture feeds), stem pollution from fish farm effluents and prevent harm to aquatic biodiversity from escaped farmed fish.

Lack of adequate scientific capacity for assessing and managing the biosafety of transgenic fish is a major obstacle to potential global environmental benefits from transgenic fish and there is a pressing need to build scientific capacity.

Biological control of aquatic invasive species is another potential use of aquatic biotechnology for global environmental benefit. It could involve the purposeful release of transgenic fish engineered to spread a deleterious gene to a target invasive aquatic species, triggering a decline and possible eradication of the invasive species. This offers the potential of an effective way to control aquatic invasive species– which are causing economic damage and displacing native aquatic biodiversity throughout the tropics and rest of the world. It also raises extremely challenging biosafety questions.

Activity: a workshop in July 2005, hosted and co-organised by the WorldFish Center, Penang, Malaysia.

Timetable: book to be published in June 2006.

Outputs: a book on the science of environmental biosafety for transgenic fish, which will,

- a) provide the GEF and Implementing Agencies with a tool for building the scientific capacity of developing countries to address scientific aspects of environmental biosafety of gene technology applied to aquatic organisms;
- b) provide a ‘one step’ and accessible scientific reference on transgenic fish environmental biosafety for biotechnology developers and decision makers in business, academia and government in developing countries; and
- c) stimulate developing country aquatic scientists from diverse biological disciplines to become leaders in research on transgenic fish environmental biosafety and in the practice of biosafety science for transgenic fish.

STAP lead: Anne Kapusinski and Peter Schei.

(b) New planned activities

(See also section 6.4, cross-cutting issues)

1.5 Mainstreaming biodiversity in production water bodies

Rationale: the intention of the Cape Town mainstreaming biodiversity workshop (1.2 above) had been to include also water bodies, i.e., fresh, coastal and marine, but it was decided, for focus, to concentrate on the terrestrial environment.

Activity: Concept note to be developed for discussion at the March 2005 STAP meeting.

Output: Advice to the GEF Council.

Timetable: Workshop in FY06.

STAP lead: Anne Kapuscinski, Brian Huntley, Peter Schei, Angela Cropper.

2. Climate Change

(a) From the triennial work programme

(See Annex I for STAP III's achievements)

Work in progress:

2.1 Applications for liquid biofuels

Rationale: the GEF is receiving an increasing number of project proposals to support biofuels in developing countries and countries with economies in transition. Biofuels have the potential to reduce greenhouse gas emissions, especially in the transport sector; biofuels also have important stationary applications, e.g. for electricity generation, and heat, which are important for sustainable development. The GEF has therefore requested STAP's advice on liquid biofuels. STAP will examine the potential for reducing greenhouse gas emissions, as well as evaluate the impact on biodiversity, land degradation, water and food production.

Activity: Workshop in February (or March) 2005.

Output: Advice to the GEF Council.

Timetable: June 2005.

STAP lead: Anjali Shanker and Thomas Johannson.

(b) New planned activities

2.2 Adaptation

Rationale: as the GEF develops its pilot programme on adaptation there are areas that could require STAP guidance.

Activity: Concept note to be developed (November 2004), with a workshop in January 2005.

Output: Advice to the GEF Council.

Timetable: June 2005.

STAP lead: Anand Patwardhan.

(See also Section 6.3, cross-cutting issues)

2.3 Energy efficiency standards in new buildings

Rationale: renewable energy alone will not be sufficient to resolve the demand for energy and deal with climate change. Integrating better energy efficiency into new investment will be essential for more sustainable consumption patterns. Energy efficiency in new buildings is a key issue. A substantial amount of work is being done, but there is a need for a greater exchange of experience and best practice.

Activity: Concept note to be developed for discussion at the March 2005 STAP meeting.

Output: Best practice advice.

Timetable: Workshop in FY06.

STAP lead: Peter Hennicke, Thomas Johansson.

3. International waters

(a) From the triennial work programme

Advice to be delivered:

3.1 Strategic options and priorities in groundwater resources

Rationale: groundwater represents a dominant, but often forgotten, freshwater resource: its wise use is essential to support sustainable development – more than 2 billion people rely on groundwater. The proper management and protection of groundwater are also very important elements in effective strategies to address desertification, adapt to climate change, and maintain ecosystems for biodiversity, especially in wetlands. The purpose the workshop was to examine the following issues: the major global threats affecting groundwater resources; how to improve the protection of aquifers, and their sustainable use; strategic uses of groundwater in relation to land degradation, natural ecosystems and environmental sustainability; the management of groundwater resources; and the relationship between groundwater and the GEF's focal areas, i.e. climate change, biodiversity, international waters, land degradation and persistent organic pollutants.

Activity: A workshop was held in Paris, 5-7 April 2004, co-hosted by UNESCO.

Outputs: Advice to the GEF Council (November 2004), and a review and synthesis report, summarising the current state of knowledge on groundwater.

Timetable: November 2004.

STAP lead: Leonard Nurse and Alexei Maximov.

Work in progress:

3.2 Upstream/downstream linkages

Rationale: the STAP triennial work programme FY03/05 included a request from the GEF for a review of the experience with economic incentives and mechanisms for the remuneration of environmental services within the context of basin management, including coastal areas, with a focus on upstream/downstream linkages and transboundary issues.

Activity: the FAO and IIED have a joint project underway to develop an inventory of water-related payments for environmental services, based on recent work done by these two organisations. There are two planned outputs: first, an inventory of cases in a standard format, available in an online database; and second, a critical analysis of case studies highlighting the lessons learned on, for example, incentive design, institutional setup, market drivers, transaction costs, maintaining of biophysical and socio-economic impact of schemes, etc. STAP will give further consideration to whether there would be advantage in collaborating with the FAO and IIED on this project, which is due to conclude at the end of 2005.

Outputs: Advice to the GEF Council.

Timetable: tbc.

STAP lead: Hubert Savenije, Angela Cropper, Saburo Matsui.

(b) New planned activities

(See also sections 6.5 and 6.6, cross-cutting issues)

4. Land degradation

(a) From the triennial work programme

Work in progress:

4.1 The restoration and rehabilitation of drylands

Rationale: Operational Programme 15 (sustainable land management) links sustainable development benefits with global environmental benefits, whether the latter fall within existing focal areas, e.g. biodiversity, climate change and international waters, or whether they take the form of other reduced transboundary, e.g. air or water, impacts. The GEF asked for STAP's help with methodologies, baselines and decisions support tools in the restoration and rehabilitation of degraded land in particular in drylands.

Activity: a brainstorming session was held in the margins of the International Rangelands Congress, Durban, 28 July to 1 August 2003; this was followed by a small writing group meeting, Washington D.C., 22-23 April 2004.

Output: guidance for GEF project proponents and assessors on the decision to undertake, and the design of, dryland restoration and rehabilitation projects. The guidance will include recommendations, and a checklist of what to do, and not to do. It will also incorporate the disjunction that occurs between biophysical and livelihood issues, and the policy and institutional structures which can lead to the failure, but which if incorporated properly, can lead to success.

Timetable: by June 2005.

STAP lead: Habiba Gitay, Tim Williams.

4.2 Sustainable land management in drylands

Rationale: land degradation is one of the greatest threats to food production in drylands. Land degradation, manifested as soil compaction, erosion, nutrient depletion, salinisation etc., often results in loss of soil biota, plant and animal species with concomitant risks to sustainable production of food and ecological goods and services.

The underlying socioeconomic and policy drivers of land degradation include: high population pressure, inappropriate sectoral and macroeconomic policies, poverty, unclear land rights and land tenure insecurity, lack of access to markets, credit and other services. Much remains to be learned, however, about the process of farmer experimentation, adaptation and adoption of technologies for sustainable land management in dry areas. For instance, the ways in which wider policy, institutional and socio-political changes influence and shape farmers' adaptive strategies for land management and determine the level of success of local initiatives are not well understood. Strategies for generating global environmental benefits while addressing problems of land degradation and poverty at the local level and strategies for scaling-up successful initiatives to enable wider impact are also not well understood.

Understanding the conditions under which technologies are adapted and adopted at local community level is essential for developing projects and institutional structures that would help communities to make the transition to more effective, culturally-appropriate and sustainable systems of land management for food production and provision of ecological good and services. Furthermore, careful analysis to identify and distinguish between the local (on-site), national (off-site) and global environmental benefits generated through successful adoption of technologies that promote sustainable land management in drylands will provide useful inputs to the GEF Secretariat and IAs in defining appropriate baselines against which to measure the incremental costs of new projects that address similar problems.

Activity: Workshop in February 2005, Kano, Nigeria.

Outputs: Analysis and synthesis of the available knowledge on the socioeconomic, institutional and policy conditions that influence technology adaptation and adoption for sustainable management and use of drylands for food production and provision of ecological goods and services.

Timetable: Advice to the GEF Council by June 2005.

STAP lead: Tim Williams, Habiba Gitay.

5. POPs

(a) From the triennial work programme

(See Annex I on STAP III's achievements)

(b) New planned activities

5.1 Soil remediation

Rationale: remediation of soil contaminated by POPs, and other persistent and toxic chemicals, is of major concern to the GEF. (This issue is also important for surface and groundwater contamination.) There are a number of technologies available for which it would be useful to know more about their efficacy, the lessons to be learned, economic feasibility, and applicability in developing countries.

Activity: terms of reference for a technical review to be drawn up for discussion at the March 2005 STAP meeting.

Outputs: an assessment of technologies suitable for soil remediation in developing countries.

Timetable: report by January 2006.

STAP lead: Saburo Matsui, Sani Ibrahim.

5.2 Further advice on non-combustion technologies for the disposal of POPs

Rationale: STAP provided advice on May 2004, but this is a field where new technologies are appearing, for example, co-carbonisation. The GEF has therefore asked STAP for a two-year update of its advice.

Activity: terms of reference for a technical review to be drawn up for discussion at the Fall 2005 STAP meeting.

Output: further advice on non-combustion technologies.

Timetable: report in May 2006.

STAP lead: Sani Ibrahim, Saburo Matsui.

6. Cross-cutting issues

(a) From the triennial work programme

Advice to be delivered:

6.1 Interlinkages

Rationale: there has been an emerging recognition of important links between various global environmental issues such as loss of biodiversity, climate change, land freshwater and coastal systems degradation. Actions taken to fulfil human needs have local, regional and global environmental consequences. Hence there are links between human activities and these environmental issues.

The challenge is to understand how the interactions and feedbacks between the various human activities that affect the environment can be better managed to enhance prospects for perspective, an additional challenge is to ensure that these interlinkages are properly reflected in the design and implementation of its projects.

STAP has developed a conceptual design tool to help incorporate interlinkages into project design, and thereby improve the delivery of global benefits and the sustainability of GEF projects.

Activity: interlinkages was discussed at the STAP meeting in October 2003, and was the principal focus of the March 2004 meeting. In addition a small writing group meeting was held 14-16 April 2004 in Washington, DC, to develop the report further.

Outputs: a GEF working paper, "A conceptual design tool for exploiting interlinkages between the focal areas of the GEF".

Timetable: pre-publication draft November 2004.

STAP lead: Habiba Gitay (editor), Dennis Anderson, Julia Carabias, Habiba Gitay, Peter Hennicke, Brian Huntley, Saleemul Huq, Anne Kapuscinski, Alexei Maximov, Leonard Nurse, Cristian Samper, Peter Schei, Anjali Shanker, Shinsuke Tanabe, Timothy Williams, Xiao-bai Xu.

(b) New planned activities

6.2 Following up the STAP report on interlinkages: identification of gaps, e.g. economic and institutional aspects

Rationale: it was recognised that the interlinkages report did not cover economic and institutional aspects sufficiently, and there was therefore a need to cover the gaps.

Activity: draft note for discussion at the March STAP meeting.

Output: t.b.d.

Timetable: Advice to the GEF Council.

STAP lead: Peter Hennicke.

6.3 Following up the STAP report on interlinkages: development of tools (adaptation)

Rationale: the STAP interlinkages report recommended a “design tool” to help project developers identify what to do to ensure that interlinkages between the GEF focal areas were properly taken into accounts, but it does not cover how to do this. Adaptation to climate change provides a particularly useful theme for assessing the nature of interlinkages, and exploring ways of dealing with interlinkages in practice. The follow-up activity would therefore look particular at the major interlinkages affecting, and affected by, adaptation to climate change. The focus would be on: (i) differentiating the most important interlinkages and how their importance varies between sectors and regions; (ii) assessing our current understanding of the nature of these interlinkages; (iii) establishing work plans for enhancing our capacity to manage these interlinkages in development planning; and (iv) discussing practical ways of implementing these interlinkages.

Activity: (revised) draft concept note by November 2004, followed by workshop in January 2005, back-to-back with the adaptation workshop (see 2.2 above). (This will be done in close collaboration with the GEF Secretariat and IAs, because it is they who are best placed to implement a practical design tool.)

Output: advice on an operational design tool to assist the GEF Sec and IAs in designing adaptation projects.

Timetable: Advice to the GEF Council, June 2005.

STAP lead: Habiba Gitay, Anand Patwardhan.

6.4 Invasive species

Rationale: relatively little is known about the population biology of alien invasive species, i.e., how species spread through different ecosystems in different parts of the world, from the time they are initially introduced to the stage at which they become, through large disturbance events, such as land clearance, drought or a major flood, a major environmental problem. A better understanding of this process, through a comparative study, could be an important step in developing responses to controlling the spread of invasive species.

Activity: Concept note to be developed for discussion at the March STAP meeting.

Output: Advice to the GEF Council.

Timetable: Workshop in FY06.

STAP lead: Brian Huntley, Peter Schei, Habiba Gitay.

6.5 Managing the subsurface environment

Rationale: following the STAP workshop on groundwater priorities (3.1 above), the GEF has asked STAP to assess three particular opportunities for enhancing sustainable development and ecosystem protection. These are:

- (a) managed artificial recharge (MAR), including, and in combination with, water re-use and desalination of saline groundwater, can provide numerous benefits ranging from smoothing of supply-demand fluctuations to reduction of loss of water to evaporation and runoff. MAR may increasingly become a tool for mitigating the impacts of extreme climatic events, and sustain groundwater dependent ecosystems.
- (b) deep freshwater resources. In general terms water contained in deep aquifers is too saline for human consumption, but in many cases good quality freshwater in aquifers is located at depths normally beyond the reach of commonly-used water well technology. As demand for water increases, and shallow aquifers are being mined well beyond their recharge capacity, these deeper, more costly resources may become economically attractive in many regions with arid and semi-arid climates and/or subject to severe climatic fluctuations.
- (c) waste disposal in deep-seated formations; this affects several GEF focal areas: the global contamination of international waters, climate change, i.e., CO2 disposal, land degradation, and POPs.

Activity: Concept note to be developed for discussion in December 2004.

Outputs: Advice to the GEF Council.

Timetable: Workshop in summer 2005.

STAP lead: Hubert Savenije, Angel Cropper, Saburo Matsui.

6.6 Groundwater and Small Island Developing States (SIDS)

Rationale: in the face of climatic fluctuations, the sustained development of small island states will increasingly depend on two related factors: protection of ecosystem services, and management of groundwater resources. The challenges relate to human/climate induced alterations of the marine/freshwater interface, and to pollution of unconfined aquifers by excess nutrients and their impacts on coral reefs and other habitats. While the GEF is very active in SIDS in all its focal areas, groundwater has not been so far at the centre stage.

Output: STAP could consider providing a science-based stocktaking of the groundwater-related risks, and the opportunities for action in managing groundwater in SIDS with a focus on: recharge areas; salt water intrusion from rising sea levels; and the interlinkages between contaminated groundwater and coral reefs.

Activity: Concept note to be developed for discussion at the March 2005 STAP meeting.

Timetable: tbc.

STAP lead: Angela Cropper, Hubert Savenije, Saburo Matsui.

6.7 Modern biomass

Rationale: modern biomass has the potential to make a significant contribution to sustainable development. Technologies are evolving, and resources, in different forms, are widely available.

Activity: Concept note to be developed for discussion at the March 2005 STAP meeting.

Output: Advice to the GEF Council.

Timetable: Workshop in FY06.

STAP lead: Thomas Johannson, Anand Patwardhan, Anjali Shanker, Habiba Gitay, Tim Williams.

7. Corporate issues

(See Annex I for STAP III's achievements to date)

(a) New planned activities

7.1 The use of science and technology in the GEF

Rationale: a better conceptual and contextual understanding of how science and technology should be integrated into the GEF (and IAs) would help to increase the global benefits from projects. It could also increase global benefits and the GEF's contributions to the achievement of the (environmental, economic and social goals) of Agenda 21, the WSSD Plan of Implementation, and Millennium Development Goals (number 7, first part), and the overall goal of sustainable development.

Activity: a note will be drafted for discussion by a small group of STAP members on 16 November 2004, in Washington D.C. This group will develop an outline for the conceptual paper, and also look for examples of potential projects. The March 2005 STAP meeting will discuss the conceptual paper. A decision would be made about next steps in evaluating the use of S&T in GEF projects.

Outputs: an annex to OPS 3 on science and technology in the GEF.

Timetable: Advice to the GEF Council in June 2005.

STAP lead: Julia Carabias, Habiba Gitay, Anne Kapuscinski, Cristian Samper, Peter Schei, Peter Hennicke.

7.2 Land degradation

The GEF Sec has asked STAP for advice on two papers: a draft on the scope, implementation, focus and coherence of land degradation activities in the GEF; and on integrated resources management and the GEF. A third paper, on indicators, will follow later.

STAP lead: Habiba Gitay, Tim Williams.

7.3 UNEP's Global Environmental Outlook (GEO)

Rationale: GEO provides periodic comprehensive reports on the state of the global environment. The next edition (fourth) is due in 2007, and will feature interlinkages as a major theme – hence the collaboration with STAP.

STAP lead: Julia Carabias, Habiba Gitay, and other STAP members, as science advisers in the various GEO consultations.

7.4 Dissemination of STAP's report on interlinkages

Rationale: STAP was invited by the Executive Secretary of the UNFCCC to make a presentation on the interlinkages at COP 10. (The report was prepared for the GEF with the involvement of the Executive Secretaries of the Conventions, and the subsidiary bodies. It is also of potentially much broader applicability, and should be of interest to a range of development agencies, national governments, NGOs and academics.)

Activity: side event at COP 10, Buenos Aires, 8 December 2004.

STAP lead: Habiba Gitay.

7.5 Global Policy Network on renewable energy

Rationale: the GEF Sec has asked for STAP's participation in discussions about the development of a Global Policy Network on renewable energy.

STAP lead: Peter Hennicke.

7.6 UNEP Governing Council

Rationale: the Executive Director of UNEP has invited STAP to participate in the Governing Council, which will discuss inter alia, strengthening the scientific base of UNEP.

Timetable: 24-25 February 2005, Nairobi.

STAP lead: Brian Huntley.

8. Targeted research

(See Annex I for STAP III's achievements to date)

(a) New planned activities

8.1 Strengthening targeted research (TR) in the GEF

Rationale: part of STAP's role is to advise on research, by identifying targeted research which would improve the design and implementation of GEF projects, and also to promote targeted research. The targeted research window appears to be under-utilised, with relatively few projects coming forward. (Other GEF projects may also have elements of targeted research but are not identified as such.)

Activity: STAP will undertake an analysis of the main scientific and technical outcomes derived from targeted research proposals, and other relevant GEF projects; examine the mechanisms for dissemination and knowledge management for targeted research projects; and provide a preliminary list of topics where targeted research is likely to have the largest impact on the GEF.

Outputs: Recommendations on how TR could be strengthened.

Timetable: Advice to the Council by June 2005.

STAP lead: Cristian Samper.

8.2 Review TR project proposals

Rationale: STAP has a particular role in reviewing, through a Research Committee, targeted research proposals.

Activity: review TR projects.

Output: review of the scientific and technical soundness of projects.

Timetable: on request.

STAP lead: Julia Carabias, and STAP members, depending on the projects.

9. Monitoring and evaluation (M&E)

(See Annex I for STAP III achievements to date)

9.1 Climate change programme study

Rationale: the GEF Sec has asked for advice on the recommendations related to strategy, policy and programming coming from the climate change programme study prepared as part of the preparation for the third Overall Performance Study (OPS III).

Activity: review the climate change programme study.

Output: advice to the GEF Sec.

Timetable: tbc.

STAP lead: Peter Hennicke.

9.2 The 2004 PIR/PPR round

Rationale: the 2004 PIR (project implementation review)/PPR (portfolio performance review) process will comprise a portfolio analysis and review of key findings (accomplishments and shortcomings), lessons learned and specific recommendations to improve portfolio monitoring and project performance.

PIR timetable: international waters (21 December); biodiversity (between 29 November - 3 December, tbc); and climate change (between 29 November and 3 December, tbc).

STAP lead (PIR): STAP will contribute, subject to the availability of Members.

PPR timetable: 24-25 January 2005.

STAP lead (PPR): STAP will contribute, subject to the availability of Members.

Annex I: STAP III's achievements to date

Climate change

Advice on Operational Programme 7, reducing the long term costs of low greenhouse gas-emitting energy technologies

(Anjali Shanker, Dennis Anderson and Peter Hennicke).

GEF/C.23/Inf.16 (May 2004)

POPs

Advice on non-combustion technologies for the destruction of POPs stockpiles

(Xiao-bai Xu)

GEF/C.23/Inf.19 (May 2004)

Advice on the use of bioindicators, biomarkers and analytical methods for the analysis of POPs in developing countries

(Shinsuke Tanabe, Xiao-bai Xu)

GEF/C.23/Inf.18 (May 2004)

Corporate issues

- Julia Carabias reported to the GEF Council on STAP's advice and progress with the work programme at the May 2003, November 2003, and May 2004 meetings.
- STAP convened a Panel on "Science and the Global Environment", second GEF Assembly, October 2002 Beijing. (Julia Carabias, Habiba Gitay.)
- STAP's quadrennial report on the broad scientific and technical issues which emerged during the second phase of the GEF.
- Discussion of draft Rules of Procedure for STAP with Dr. Topfer (Executive Director, UNEP). (Julia Carabias, Habiba Gitay, Anjali Shanker, Brian Huntley.)
- New STAP roster of 250 experts
- An evaluation of the quality of the reviews undertaken by roster experts.
- Website revamped (www.unep.org/stapgef).
- A performance-based allocation framework for GEF resources (Habiba Gitay).
- The development of methodologies to measure CO2 emissions from GEF projects (Habiba Gitay).
- "Piloting an operational approach to adaptation" (to climate change). (Saleemul Huq and Habiba Gitay).
- STAP commented on the questionnaire on strengthening the scientific base of UNEP. Habiba Gitay attended, and chaired a session at a scientific and technical meeting for selected experts, January 2004, Nairobi.
- Fifth meeting of the Steering Group "Global International Waters Assessment" (GIWA), Sweden, Kalmar, 8-9 October, 2002. (Alexei Maximov)
- STAP presentation at the CBD COP in Malaysia, 12 February 2004. (Habiba Gitay).
- STAP presentation at the Biosafety MOP in Malaysia, 23 February 2004. (Anne Kapuscinski).

- Strategic advice on terms of reference for involvement of resource persons in UNEP/GEF Biosafety Frameworks Project (Anne Kapuscinski)
- Second Meeting of Steering Committee of UNEP/GEF Development of National Biosafety Frameworks, January 2003 (Anne Kapuscinski)
- Third Meeting of Steering Committee of UNEP/GEF Development of National Biosafety Frameworks, 19 January 2004 (Anne Kapuscinski)

Targeted research

STAP reviewed a number of targeted research proposals. There were:

- “Malaysia: Conservation of Biological Diversity Through Improved Forest Planning Tools” (UNDP) Habiba Gitay.
- World investigation of localised stress and compounding effects on climate change on sustainability of coral reef systems” (World Bank) Habiba Gitay, Leonard Nurse
- Assessment of Agricultural Science and Technology for Development (UNDP, UNEP, World Bank) Julia Carabias, Habiba Gitay, Cristian Samper, Tim Williams.
- Sustainable management of inland wetlands in Southern Africa: a livelihood and ecosystem approach (UNEP). Julia Carabias, Cristian Samper, Brian Huntley, Tim Williams, Alexei Maximov.
- Assessment of risk management instruments for financing renewable energy (UNEP) Anjali Shanker, Anand Patwardhan.

And Habiba Gitay was a member of a Technical Advisory Group on UNEP’s peatlands targeted research proposal.

Targeted research proposals were provided on: the development of methods for monitoring a novel transboundary source of coastal ecosystems’ pollution, for minimising the damage to human health in coastal megapolises (Alexei Maximov); and on capacity building for monitoring POPs in developing countries (Xu Xiao-bai).

Monitoring and Evaluation (M&E)

STAP contributed to the following M&E activities:

- Project Implementation Review (PIR) meetings (Peter Schei, Cristian Samper, Peter Hennieke, Leonard Nurse)
- Programme Performance Review (PPR) meetings (Anjali Shanker, Peter Hennieke)
- Programme Performance Indicators for the international waters focal area (Alexei Maximov)
- Principles for engaging the private sector, (Anjali Shanker).
- Nature and role of local benefits in GEF focal areas. (Julia Carabias).
- Knowledge management (Peter Hennieke, Anjali Shanker).
- Indicators for sustainable consumption and production patterns (Peter Hennieke).
- Comments on the biodiversity programme study (Cristian Samper, Brian Huntley, Peter Schei) and the international waters programme study (Hubertus Savenije).