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Agenda Item 6

## GEF EXPERIENCE IN INCORPORATING THE WORK OF STAP

### **Recommended Council Decision**

The Council reviewed document GEF/C.10/5, *GEF Experience in Incorporating the Work of STAP*, and requests that that experience be taken into consideration in the reconstitution of STAP (as described in document GEF/C.10/Inf.9, *UNEP Information Note on the Reconstitution of STAP*). In particular, UNEP is requested, in collaboration with the Search Committee that it has established, to take fully into account the need for scientists and technical experts with specific knowledge in one or more of the focal areas, with experience in incorporating scientific and technical knowledge into field-based operations, and with strong links to relevant networks of scientific and technical experts that may contribute to the work of STAP. UNEP is also requested, when proposing for approval the composition of the reconstituted STAP, to prepare for Council consideration any revisions to the terms of reference for STAP that seem desirable in light of the Implementing Agency experience of the past three years, particularly in regard to integrating STAP's work more effectively into the overall activities of the Implementing Agencies and the Secretariat.

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## **GEF EXPERIENCE IN INCORPORATING THE WORK OF STAP**

1. The GEF Council, at its meeting of October 1996, requested the GEF Secretariat to prepare for its review an issues paper addressing the experience of the Implementing Agencies in incorporating the work of STAP in their activities, follow up to the work undertaken to date, and plans for publication and dissemination of STAP's work. This paper, an issues-focused review of that experience prepared with inputs from the Implementing Agencies, responds to that request
2. In accordance with the Instrument,<sup>1</sup> "UNEP shall establish, in consultation with UNDP and the World Bank and on the basis of guidelines and criteria established by the Council, the Scientific and Technical Advisory Panel (STAP) as an advisory body to the Facility." The GEF Council at its meeting of October 1995, approved terms of reference for STAP, on strategic advice, development and maintenance of the Roster of Experts, selective reviews, scientific indicators, cooperation and coordination with the scientific and technical bodies of the conventions, and engagement of the wider scientific and technical community.<sup>2</sup> These terms of reference are attached as Annex A.
3. In discussing the report of the Chairman of STAP to its meeting in April 1997, the GEF Council "also requested that when STAP undertakes a selective review of projects, the Implementing Agencies provide the Council with information on how they are responding to the recommendations of the STAP review as well as the project's technical review. This issue should be addressed on a generic level in the issues paper to be prepared by the Secretariat for the November Council meeting..."
4. STAP has undertaken the following activities:
  - (a) a review of GEF Operational Strategy and the Operational Programs;
  - (b) in biodiversity, the preparation of two papers on the ecosystem approach as an organizing framework for Operational Programs and an assessment paper analyzing successful examples of sustainability in the context of ecosystems;
  - (c) in climate change, the preparation of four papers on scientific and technical options in the transport sector; the preparation of a paper on the scientific and technical aspects of Stage 1 adaptation; an assessment of status of learning curves of renewable energy technologies and an

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<sup>1</sup> *Instrument*, Paragraph 24.

<sup>2</sup> Terms of Reference of the Scientific and Technical Advisory Panel (STAP), Mandate, Composition, and Role. GEF/C.6/Inf.7, October 6, 1995.

identification of most promising technologies; advice on advanced clean coal; and organization of a number of expert group meetings;

- (d) in international waters, the preparation of two papers on global and an exploration of the need for, and the character of, an international waters assessment;
- (e) an assessment of land degradation as it relates to the four focal areas and specific project selection criteria, organization of an Expert Group Workshop on Land Degradation in September 1996, and a significant contribution to the paper *Follow Up of STAP Workshop on Land Degradation*; and
- (f) preparation of Principles for GEF Financing of Targeted Research.

The STAP Secretariat has provided a list of STAP outputs, which is attached as Annex B.

5. There is evidence that the Implementing Agencies found STAP work useful and have incorporated it into their activities. This has varied by agency and the type of activity. UNDP and the World Bank found the STAP Roster of Experts to be most useful in the implementation of their activities. While the Bank found strategic advice and selective review relatively less useful, UNEP found strategic advice to be most useful, especially on land degradation and on international waters assessment. Both the Secretariat and UNEP found STAP's advice on the Targeted Research policy to be very helpful.

6. The Secretariat plans to publish and disseminate STAP work through the GEF Working Paper series. The Secretariat has established an Editorial Board to consider manuscripts for publication in this series. Each organizational unit of GEF is represented on the Board: the three Implementing Agencies, the Trustee, STAP, and the Secretariat, which chairs the Board. (STAP is represented on this board by the STAP Chair.) Board members have a technical responsibility not an institutional clearance function, since working papers are attributable to their authors and need not represent current GEF or institutional positions. Papers are reviewed anonymously according to technical merit, innovation, accessibility to a wide audience, and relevance to the GEF. STAP has submitted a number of papers, and so far reviews for two such papers have been completed. The two papers are the Renewable Energy Technology Workshop proceedings (which have been recommended for publication), and the paper *Implementing the Biodiversity Convention: The Ecosystem Approach as a Strategy to Achieve Sustainability in the Use of Biodiversity*<sup>3</sup> (which was not). Several other STAP papers are under review and are expected to be published in coming months.

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<sup>3</sup> STAP notes that this paper was written by STAP in cooperation with biodiversity experts of the Convention on Biological Diversity and its Secretariat and that it has been widely distributed by the

7. The following is a more detailed review of how STAP's work has been able to be incorporated, according to STAP's Terms of Reference.

## **I. STRATEGIC ADVICE**

8. Timely strategic advice of STAP is potentially the most valuable, as it would help to ensure the scientific coherence of the operational strategy and operational programs. The Operational Strategy built on a number of insights readily available from the previous STAP in the GEF Pilot Phase, as recorded in their Analytical Frameworks. Of particular note was the work in climate change which drove the long-term and strategic nature of the Operational Programs in climate change. Unfortunately, the timing of the first reconstitution of STAP after the Pilot Phase precluded the incorporation of inputs from the following (current) STAP into the Operational Strategy. However, their subsequent work provided general confirmation for approaches that had been adopted in the Operational Strategy: the ecosystem approach in biodiversity, a learning-curves approach in climate change, and a basin-wide approach in international waters. STAP comments on the operational programs were, however, more timely and directly useful, because these were elaborated in more detail after the Operational Strategy was approved.

9. While the work program of STAP is sensitive to discussions during Council meetings, the priorities and timing of work are established independently of those of the Secretariat. The Secretariat's work program is driven by the requirements of Council, such as for new operational programs, policies, and responses to the conventions. Fortunately, there have been occasions when the timing and content have closely matched policy development within the Secretariat, and at such times there has been a very fruitful interaction. For example, STAP's timely review of the scientific and technological options in the transport sector were particularly helpful in the preparation of the draft Transport Energy Operational Program, in which they are being incorporated by the Secretariat. Likewise, their advice on clean coal came at an important moment just as the operational implications of fossil fuel projects on the objectives of the Operational Programs were under review, and is currently being incorporated by the Secretariat in its draft policy papers for interagency review. The outputs of other workshops and brainstorming meetings will be considered when the Operational Strategy or the relevant operational programs are reviewed.

10. Scientific inputs have been crucial to the overall responses to global environmental issues. Basic science has been particularly relevant to the upstream processes, such as the work of IPCC and the Global Biodiversity Assessment, and

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Subsidiary Body on Scientific, Technical, and Technological Advice (SUBSTTA), which expressed its appreciation -- in particular for the elaboration of the ecosystems approach in terms of sustainable use example projects.

applied science and technology more relevant to the operational responses. As the GEF operational responses to the climate change issue set out in the operational programs are mainly in the energy sector, STAP's technical energy-related work has been particularly helpful. For example, the workshops on renewable energy, by focusing on the strategically important concepts that underlie specific operational programs (concepts such as learning curves), are helping to push the Secretariat's policy work forward as the portfolios are reviewed against the programmatic objectives set. As the GEF operational responses to biodiversity loss will increasingly be in sustainable development and in reducing the root causes of biodiversity loss in the productive sectors of the economy, any future guidance on the applied scientific and technical aspects of such responses could likewise also find immediate incorporation in GEF activities.

11. Although this report is concerned with the incorporation of STAP's work by the immediate clients (the Implementing Agencies), it should be noted the STAP regards its work on theme papers as having been particularly useful in enabling its own members, most of whom were new to the GEF at the time, to come to grips with the requirements of the GEF.<sup>4</sup>

12. When STAP's advice has focused on the fast-moving scientific and technical areas, where the GEF and its Implementing Agencies do not maintain the requisite skills on a permanent basis, it has been particularly helpful and easy to incorporate. STAP also organized international brainstorming meetings in other areas such as the *Incremental Costs and Global Benefits as Relating to Land Degradation*, and the concept of globality in the international waters focal area.

13. STAP's advice has also been readily incorporated when it was operationally focused. This is illustrated by the differing extents to which work in the focal areas has been incorporated. Climate change work was generally agreed to have been the easiest to incorporate, followed by international waters. Both UNDP and the World Bank consider that the work in biodiversity was less useful. UNDP, for example, considers that the two biodiversity papers produced by STAP (on the ecosystems concept and on sustainability) have been very general in scope and thus of very limited practical use, and would prefer in future a more focused approach indicating how the issues apply to potential GEF projects or the portfolios.

14. Specifically, UNDP noted that the current preparation of its LEARN project in international waters (Learning Exchange and Resource Network) is incorporating the operationally focused advice of STAP on recent developments in technology and modern tools for resource management and prediction, including dissemination of best practices and lessons. UNDP also anticipates that the outputs of the proposed Sustainable Uses workshop, scheduled to take place in Malaysia in November 1997, will be an important opportunity to provide operationally focused guidance that can be

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<sup>4</sup>STAP in the Operational Phase of the GEF. UNEP/GEF/STAP/9/11/Add.2. June 20, 1997. Page 6

incorporated into UNDP's work program. UNEP incorporated STAP's work in the area of renewable energy technologies in their development of five project concepts in that field, following contacts with institutions such as APEC/REETI and the National Renewable Energy Laboratory.

15. Both the Secretariat and UNEP found the STAP contribution in elaborating the targeted research paper to be most useful. Following the adoption of the *Principles of GEF Financing for Targeted Research* by Council in May 1997, UNEP convened an in-house meeting with representatives of its relevant substantive units on June 6, 1997. The purpose of the meeting was to explore ways to incorporate the principles in UNEP's regular work. In addition UNEP also took the initiative to convene a meeting of its traditional collaborating institutions on issues related to the GEF targeted research. It is expected that, following these initiatives, field activities in targeted research as required will be submitted to the GEF. The Secretariat will screen proposals in targeted research according to the principles adopted, and convene a Research Committee to provide appropriate advice.

16. Following STAP's observation that the lack of a scientific assessment of international waters (comparable to the Global Biodiversity Assessment, the Stratospheric Ozone Assessment, and the assessment by the IPCC on climate change) was a unique and serious impediment to the implementation of the international waters activities within the GEF, UNEP took the initiative of submitting a PDF B proposal in order to develop such an assessment. Two steering committee meetings have already been convened with active participation of the STAP Chair and Vice Chair, ICSU and representatives of the other Implementing Agencies. UNDP agrees that the work of such a project could substantially influence operations.

17. The World Bank considers that, by engaging in the dialogue on the contribution of land degradation activities to global environment objectives, STAP enriched the debate, and helped the collective effort to identify land degradation activities in the focal areas. UNEP has also incorporated STAP's activities in this field. As a follow-up to STAP's Workshop on Land Degradation held in Dakar, UNDP and UNEP collaborated regarding their common interest in incorporating this work into sound proposals in land degradation. UNEP elaborated six concepts for the preparation of field activities, and project development is now going on. However UNDP considers that the Land Degradation workshop did not fully highlight the relevance of land degradation within the focal area of climate change, as presumably had been intended.

## **II. ROSTER OF EXPERTS**

18. STAP reports that in order to develop the Roster and to ensure its effective management, it has:



- (a) reviewed the format of the Roster to facilitate the most user friendly and relevant presentation;
- (b) made an assessment of the specialization to be presented on the Roster in order to include the full range of expertise needed by the Implementing Agencies;
- (c) examined the appropriate level and type of experience required for inclusion in the Roster in order to ensure that STAP can be confident of the scientific and technical soundness of external technical reviews by experts from the Roster;
- (d) prepared generic guidelines for terms of reference for technical reviews from the Roster in order to ensure minimum and consistent standards of information in technical reviews; and
- (e) provided advice on quality control measures such as performance rating, conflict of interest provisions and screening mechanisms.

### **Quality of the roster**

19. For the Task Managers of all the Implementing Agencies, having a vetted roster of qualified technical experts has been critical for them to incorporate an independent check on scientific and technical viability into proposed project designs. UNDP believes that much progress has been made in the current version of the Roster, and encourages further development through inclusion of local components experts and experts with field experience in design and management of GEF-type projects in the different regions of the world.

### **Incorporating the reviews**

20. Both UNDP and the World Bank agree that project reviews by experts from the STAP Roster have added considerable value to project design, review, and approval decisions. Since the GEF was restructured, the World Bank has commissioned 57 technical reviews by STAP Roster Experts in 49 projects, involving 41 different reviewers. In six projects, more than one STAP reviewer was commissioned, and in twelve more the rostered expert was invited to review the project again, after further preparation. Task Managers judged the quality of these reviews to be high<sup>5</sup>. Reviews, including multiple reviews, that provide input at key early stages of preparation have proven more helpful than reviews carried out just prior to submission of project proposals for Council approval (i.e., after many critical design decisions have been finalized). Each World Bank-GEF project proposal explicitly states how the observations and recommendations of the reviewer have been taken into account in the project design.

21. World Bank staff found STAP members' own review of PDF and project proposals at GEFOP and beyond were less useful. They proffer several reasons. Most importantly STAP members have had little time to familiarize themselves with the proposals, lack sufficient background in the project, and have no effective opportunity to interact with Implementing Agency staff on issues and concerns. The World Bank believes that these inherent organizational and logistic problems require that STAP input at the project proposal review stage be limited and very selective, thereby freeing up STAP members for work where they have a comparatively greater impact (i.e., strategic advice and selective reviews).

22. The World Bank found some STAP advice outside its normal mandate to be very useful. Although not required by GEF procedures, STAP has on request provided valuable expert technical advice on matters such as opinions on concept eligibility (e.g. the Ecuador Open Ocean Seaweed Farming Proposal) and expert technical advice outside the context of a proposal review (e.g., the Argentina Waste Gas Reinjection Pilot Project). In the latter case, STAP provided critical, timely and independent input when objective third party guidance was needed.

### **III. SELECTIVE REVIEWS**

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<sup>5</sup> See the recent evaluation summary by the STAP Secretariat.

23. The selective review mechanism is a way to examine specifically scientific and technical issues in an operational setting. This would help complement the operational aspects of the Implementing Agencies work in capacity-building, institutional strengthening, investment appraisal, engineering feasibility, and so forth. In the period under review, STAP drafted criteria for Council approval to guide STAP's selective reviews of projects. STAP also undertook selective reviews of the Lake Victoria Environmental Management Project, the Rajasthan Solar Thermal Project, and the Alternatives to Slash and Burn (Phase 1) Project.

24. Overall, and as reported to the Council earlier, the World Bank found the selective review for the Lake Victoria project helpful. Their staff report that the review encouraged them to work with national scientists on harmonizing methods and standards for the project's scientific work and it has encouraged both the countries and the World Bank to pursue more aggressively the options for mechanical harvesting of water hyacinth. It also reinforced the monitoring and modeling components of the project. In addition to covering the scientific aspects above, the review also included broader project design and process issues.

25. Drawing on their experience with the selective review of the Rajasthan project, the World Bank concludes that for them to incorporate the work on selective reviews, the results and recommendations must be timely. STAP was timely in initiating the review of this project, but was very slow in producing its report.

26. Operational staff of UNDP are awaiting the final report of the selective review of the Alternatives to Slash and Burn project, to determine how best to incorporate its recommendations.

#### **IV. SCIENTIFIC INDICATORS**

27. The operational programs of the GEF, which follow the logical framework approach, describe indicators that would be needed at various levels: activity, project output, and programmatic outcome. The latter include many that are essentially scientific in nature, relating to overall biodiversity protection, reductions in greenhouse emissions from various industrial and other enterprises, etc. Any future work of STAP in this area could be readily incorporated if coordinated with the Secretariat's policy work and with the work of the GEF Monitoring and Evaluation program.

#### **V. CONVENTION SCIENTIFIC AND TECHNICAL BODIES**

28. The STAP Chairman and other members attend meetings of the subsidiary bodies of the conventions, and representatives of those bodies in turn are invited to STAP meetings.

## **VI. ENGAGEMENT OF THE WIDER SCIENTIFIC COMMUNITY**

29. As set out in the Terms of Reference of October 1995, STAP should provide a forum for integrating expertise on science and technology as well as providing an important conduit between the GEF and the wider scientific and technical community. Perhaps the most important conduits are the contacts individual members bring to STAP as eminent scientists and technical experts. Together the networks of STAP members are potentially a very powerful and *cost-effective* form of engagement. On STAP there were members who were strongly linked to networks of energy organizations at the regional level in developing countries and also at the international level, and this made STAP advice in climate change particularly practical, up-to-date, and credible.

30. STAP has sought to mobilize the wider scientific and technical community primarily through the convening of STAP Workshops and STAP Expert Group Workshops financed through the STAP budget.

31. In his address to the Seventh Meeting of STAP held in November, 1996, the GEF Chairman/CEO reiterated the importance attached to engaging the wider scientific and technical community in GEF work particularly at the national level in countries where GEF projects were being implemented. To do this, the Secretariat took an initiative with the U.S. National Academy of Sciences (as chair of the International Academies of Science), the International Council of Scientific Unions, and the Third World Academy of Science that would build scientific capacity into the GEF enabling activities and operational programs. STAP was invited to work with the National Academy of Sciences to prepare a workshop that would lead to two-way communication between the international scientific community and the GEF, to identify ways of involving existing scientists from developing countries in GEF activities in their own countries, and to identify key players and institutions. STAP is planning this workshop for November 1997.

32. Where STAP was able to draw on members' networks, its work proved especially valuable. As UNDP notes, the workshops in climate change stimulated wide-ranging discussions drawn from a relatively large pool of experts. The resulting STAP summary papers have been comprehensive, addressing nearly every option. STAP made a good effort to bring the broadest base of scientific and technical opinion to bear on the climate change issues.

## **ANNEX A**

### **TERMS OF REFERENCE OF STAP**

The major functions of STAP are:

#### **STRATEGIC ADVICE**

1. Strategic advice as a means to advance a better understanding of the issues of the global environment and how to address them; including advice on the state of scientific, technical and technological knowledge; scientific and technical aspects of strategic matters such as cross cutting issues, scientific coherence of GEF operational strategies and programs and their consistency with GEF policies and objectives; applied/targeted research and specific products such as triennial reports to the GEF Assembly and the review of the scientific and technical aspects of GEF operational strategies and programs;

#### **ROSTER OF EXPERTS**

2. Development and maintenance of Roster of Experts, consisting of a wide range of internationally recognized specialists to review the scientific and technical soundness of individual projects; and ensuring the quality of the Roster and the experts work;

#### **SELECTIVE REVIEW**

3. Undertake selective review of projects as well as on a selective basis conduct ex-post evaluations of strategic scientific and technical effectiveness of the GEF portfolio, particularly for those projects that are innovative or contain research, monitoring and assessment components;

#### **SCIENTIFIC INDICATORS**

4. Monitoring and Evaluation: guide the choice of scientific indicators that would measure project impact in the four focal areas;

## **CONVENTION SCIENTIFIC AND TECHNICAL BODIES**

5. Facilitate co-operation and co-ordination with the scientific and technical bodies of the Conventions, including reciprocal participation in meetings and other activities as well as common membership in STAP and/or its working groups;

## **ENGAGEMENT OF THE WIDER SCIENTIFIC COMMUNITY**

6. Provide a forum for integrating expertise on science and technology as well as providing an important conduit between the GEF and the wider scientific and technical community.

## **ANNEX B**

### **OUTPUTS OF STAP**

#### **TECHNICAL PAPERS**

1. Adaptation Stage Activities and Priorities -- Annotated Outline -- January 1996
2. Implementation of the Biodiversity Convention (The Ecosystem Approach as Strategy to Achieve Sustainability in the Use of Biodiversity) - August 1996
3. Incremental Cost in the GEF Focal Area of International Waters - June 1996
4. Progress Report of STAP to the Seventh Meeting of the GEF Council, 2-4 April 1996, Washington, D.C. - April 1996
5. Reflections of the GEF Work Program - A Theme Paper - January 1996
6. Some considerations about Targeted Research on Climate Change for the STAP/GEF, November 1996.
7. Targeted Research in International Waters - June 1996
8. Targeted Research on Land degradation as related to GEF Focal Areas - June 1996
9. Targeted Research Paper on Biodiversity - June 1996
10. The Concept of Globality in the GEF Focal Area of International Waters - May 1996
11. The Outlook for Renewable Energy Technologies, Strategic Consideration relating to the GEF Portfolio, and Priorities for Targeted Research - September 1996
12. International Industrial Collaboration for Accelerated Adoption of Environmentally Sound Energy Technologies in Developing Countries - Potential Roles for the Global Environment Facility in Supporting the Requisite Targeted Research and Technological Capacity Building - September 1996 Progress Report of STAP Selective Reviews - March 1997
13. Thematic Paper on Climate Change - January 1996

14. Theme Paper on Land Degradation as related to Biodiversity, Climate Change and International Waters - June 1996
15. Thematic Paper on Biodiversity and the GEF Operational Strategy - April 1996
16. Planning for Adaptation to Climate Change - September 1997
17. Options for Mitigating GHGs Emissions from the Transport Sector - Draft Overview Paper March 1997
18. Advanced Coal Conversion Strategies - June 1997

#### **REPORTS OF EXPERT GROUP WORKSHOPS/WORKSHOPS**

19. Report of the STAP Workshop on Stimulating Private-Sector Initiatives for Accelerating the Introduction of Renewable Energy Technologies (RETs) into the Power Sectors of Developing Countries - September 1996
20. Report of the Expert Group Workshop on Land Degradation - September 1996
21. Report of the STAP Workshop on Options for Mitigating Greenhouse Gas Emissions from the Transport Sector - March 1997
22. Report of STAP Workshop on Options for Improving Coal Systems to Reduce Greenhouse Gas Emissions - June 1997

#### **REPORTS OF STAP MEETINGS**

23. Report of the Fourth Meeting of STAP, February 1996
24. Report of the Fifth Meeting of STAP, June 1997
25. Report of the Sixth Meeting of STAP, September 1996
26. Report of the Seventh Meeting of STAP, November 1996
27. Report of the Eighth Meeting of STAP, March 1997
28. Report of the Ninth Meeting of STAP, June 1997
29. Report of the Tenth Meeting of STAP, September 1997



### **BRAINSTORMING SESSIONS**

30. Report of the Brainstorming Session on Land Degradation - June 1996
31. Report of the Brainstorming Session on Biodiversity - November 1996
32. Report of the Brainstorming Session on Incremental Cost of Land Degradation - June 1997

### **STAP ROSTER OF EXPERTS**

33. Annual Review of the STAP Roster of Experts - September 1997
34. STAP Roster of Experts Version 1 - September 1996
35. STAP Roster of Experts Addendum 1 Version 1 - September 1997