

**Statement of Julia Carabias, Chair of the Scientific and Technical Advisory Panel (STAP)
to the Global Environment facility (GEF) at the GEF Council meeting, Washington, DC
17 November 2004**

1. Madame Chair, distinguished Council Members, I want to thank you for this opportunity to make a presentation on what the Panel has been doing. STAP continues to be fully occupied in delivering the advice the GEF needs, in order to help ensure that its policies, programmes and priorities are devised with the very best scientific and technical advice. Council meetings are always useful in providing STAP with feedback, and a clear indication of what your concerns are – so that this can be reflected in our work.
2. In July, we welcomed six new members to the Panel: Angela Cropper, Sani Ibrahim, Thomas Johansson, Saburo Matsui, Anand Patwardhan, and Hubert Savenije. They have already proved to be very wise choices. The new members are very enthusiastic about making their own contribution to the success of the GEF.
3. I want to tell you about four pieces of advice STAP has recently produced on interlinkages, groundwater, biosafety, and mainstreaming biodiversity. I will outline briefly what each of these is about, and why it matters, before moving on to say something about where STAP is heading over the next two years.
4. First, interlinkages: over the last decade, there has been increasing interest in analysing and understanding the interactions between biodiversity, climate change, land degradation, and freshwater and coastal systems. And there is, of course, particular concern about how these interlinkages affect human well-being and sustainable development.
5. Our report provides a brief account of the scientific underpinnings of interlinkages, and systematically identifies the most important ones – some of which are not immediately obvious. But the principal innovation is to provide conceptual thinking

on a “design tool” that could enable the GEF to make better use of the synergies between focal areas.

6. The GEF has begun to embrace interlinkages more explicitly in its recent Operational Programmes, such as ecosystem management, and the conservation and sustainable use of biodiversity. The development of new strategic priorities, notably on adaptation to climate change, is further evidence of this. But much more needs to be done. I am very pleased therefore that the report has been formally endorsed by the Heads of Agencies, who have agreed to consider carefully the implications for the way in which the GEF designs projects. In order to help the GEF with this, we will provide further advice to operationalise the “design tool”, with particular reference to adaptation projects.
7. Our second piece of advice concerns groundwater. Over 98% of the accessible reserves of fresh, potable water are found as groundwater. Global reserves are immense, but natural rates of replenishment are finite. The current (and growing) rate of use is not sustainable. And over 2 billion people rely on groundwater for their daily needs. The proper management and protection of groundwater are also very important elements in addressing desertification, adaptation to climate change, and maintaining ecosystems for biodiversity, especially in wetlands.
8. STAP believes that the GEF could make a larger contribution to global environmental benefits if groundwater were to be mainstreamed in the design of GEF projects. For example, groundwater contributes to freshwater, brackish and coastal wetlands which host biodiversity. Climate change will bring a rising sea level, more flooding, and changes in precipitation patterns, which will increase the demand for drought-secure supplies. And sustainable land management has important effects on the recharge of aquifers, as does poor management of irrigation and drainage.
9. STAP recommends that the GEF should fund a series of groundwater demonstration projects with artificial aquifer recharge as the first priority. STAP will therefore be

- holding a workshop on this. Groundwater recharge could also have beneficial effects on other focal areas, for example, maintaining groundwater-dependent ecosystems, land-water management, and adaptation to climate change.
10. Our third piece of advice is on biosafety. It takes the form of a source book, which provides an environmental risk assessment of genetically modified organisms – a case study of *Bt* maize in Kenya. This book provides scientifically peer-reviewed tools that can help countries strengthen their own scientific and technical capacity in biosafety of genetically-modified organisms. It does not draw conclusions. It will be for each country to make its own scientific risk assessments, and draw its own conclusions before making decisions about biosafety. (We are also planning two further source books: a case study of *Bt* cotton in Brazil, and transgenic fish.) I think this advice is a very useful contribution to capacity building, and illustrates how STAP goes about fulfilling that part of its mandate which calls for integrating expertise on science and technology, and synthesising, promoting and galvanising state of the art contributions from the scientific community.
 11. And fourthly, an interim report on mainstreaming of biodiversity in production landscapes and sectors. Biodiversity is critically important to all sectors of human society and is the life insurance for life itself. While biological resources are used for human livelihoods, this use is often unsustainable, and many human activities ignore any consideration of biodiversity, at a high cost to human development.
 12. Protected areas are not enough to conserve biodiversity. They must be supplemented by integrating the concerns and values of biodiversity conservation into the wider landscape. Investment in mainstreaming can generate both immediate benefits, and act as a safeguard for sustainable development in the long term. The objective of mainstreaming biodiversity is to internalise the goals of biodiversity conservation and the sustainable use of biological resources into economic sectors, and therefore into all human behaviour.

13. Our advice includes a cogent set of 10 principles which STAP believes should guide the GEF's work on mainstreaming biodiversity. It also makes practical suggestions on priority areas for GEF interventions, including establishing markets for ecological services, supply chain initiatives, and improving production processes. STAP intends to follow up this advice with further work on how to mainstream biodiversity in production water bodies – rivers, lakes, coastal and marine.
14. Copies of these reports are available on the STAP websites – www.unep.org/stapgef. A limited number of hard copies are available at the back of the room: more can be provided. Copies of the biosafety source book have been mailed to all Council members and alternates. If anyone else would like a copy please let me have your business card. And CDs have been distributed, which contain all of the STAP III's advice from July 2002 to date.
15. I now want to say a few words about some of the things STAP is currently working on – in addition to the follow-up activities I have already mentioned. At its last meeting in October, STAP decided that it would, in future, place rather greater emphasis on its role as a provider of strategic advice, while still, of course, continuing to provide advice on more technical issues. This is, I believe, the right direction for STAP to take. Because the real value of the Panel lies, not only in particular expertise of the individual member, but in what the members can achieve collectively, by taking a cross-cutting perspective on issues – as the Panel did, to good effect, with its interlinkages report.
16. Let me illustrate this with a climate change example. We shall be looking at applications for liquid biofuels, both for transport and stationary uses, such as cooking and electricity generation, which are obviously important for sustainable development. The use of biofuels can help to reduce greenhouse gas emissions. But equally, it would be a mistake to ignore the effects which the production of biofuels can have on biodiversity, land degradation, water and food production. The Panel will also be looking separately into modern biomass.

17. And the Panel will do work on adaptation, both as a climate change issue, but also as an issue which affects all the other GEF focal areas because climate change is a major driver of global environmental change.
18. STAP also has work underway on a number of other topics. Land degradation is one of the greatest threats to food production in drylands. It manifests itself as soil compaction, erosion, nutrient depletion, and salinisation, often resulting in a loss of soil biota, plant and animal species, with concomitant risks to the sustainable production of food and ecological goods and services.
19. We need to know much more about the process of farmer experimentation, adaptation and adoption of technologies for sustainable land management. STAP will therefore provide a better understanding of the conditions under which technologies are adapted and adopted at local community level; this is essential for developing projects and institutional structures that help communities make the transition to more effective, culturally-appropriate, and sustainable systems of land management, for food production and the provision of ecological good and services. (And we shall also be completing our guidance on the design of dryland restoration and rehabilitation projects.)
20. Other issues include the population biology of alien invasive species, i.e. how species spread through different ecosystems, from the time they are initially introduced, to the stage at which they become a major environmental problem. A better understanding of this process could be an important step in developing responses for controlling the spread of invasive species. STAP is considering what sort of activity to undertake to deliver this.
21. Groundwater and small island developing states (SIDS). In the face of climate change, the sustained development of small island states will increasingly depend on two related factors: the protection of ecosystem services; and the management of

- groundwater resources. STAP will provide a science-based stocktaking of the groundwater-related risks, and the opportunities for action in managing groundwater in SIDS.
22. STAP will also work on Persistent Organic Pollutants (POPs), in particular, soil remediation, and provide further advice on non-combustion technologies for the destruction of POPs.
 23. Finally, two rather different issues: the use of science and technology in the GEF; and targeted research. A better conceptual and contextual understanding of how science and technology should be integrated into the GEF; this would help to 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 the Millennium Development Goals, and hence the overall goal of sustainable development.
 24. I believe that part of STAP's role is to advise on research, by identifying targeted research which would improve the design and implementation of GEF projects. The targeted research window appears to be under-utilised, with relatively few projects coming forward. STAP will: analyse the main scientific and technical outcomes derived from targeted research proposals; 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.
 25. Full details of STAP's FY05/06 work programme can be found on the CD, and hard copies are also available at the back of the room.
 26. As I said at the last meeting in May, STAP is delivering on the topics on which the GEF has asked for advice. STAP's links with the GEF family continue to grow and strengthen, and this will be very important to ensure that STAP gets proper feedback on its work. But we feel we still need more feedback.

27. I want to close now by thanking once again Len Good and Dr. Töpfer for the time they have set aside to meet with STAP; these discussions are not only very stimulating, they are essential in keeping us on track.

28. Thank you very much for your attention. I would now be pleased to answer any questions.