

GEF Council meeting  
November 13 – 15, 2012  
Washington, D.C.

**RESEARCH WITHIN THE GEF: PROPOSALS FOR REVISING THE  
TARGETED RESEARCH MODALITY**

**SUMMARY OF REVIEWS UNDERTAKEN BY STAP**

# Targeted Research: Proposals for Revising the Modality

## Summary of Reviews Undertaken by STAP

### Recommendation

Under the guidance of the GEF Council and its Chair, STAP Chair recommends that the GEF Secretariat and STAP work collaboratively, with due input from the GEF Agencies, to amend the 1997 policy on targeted research and to submit a revised policy on applied research for consideration by the GEF Council at its 44<sup>th</sup> Session, incorporating recommendations contained in Council Document GEF/C.43/Inf.

### Introduction

1. “The GEF is and must remain an innovator”<sup>1</sup>. Through applied research, the GEF is eminently suited to promote innovation in order to change global environmental outcomes. It does this by catalyzing investments from other donors and countries about what works to deliver global environmental benefits while generating knowledge with which the GEF improves its own actions. Unquestionably, the GEF should continue to benefit as a consumer of this information while strengthening its function as a prominent leader in generating credible knowledge about improving the performance of global environmental projects. Research thus plays a prominent part in sustaining the GEF’s mission to support innovation, and carrying forward the promotion of transformational change.
2. Recognizing the overarching goal of the GEF to promote global environmental change, the GEF Council approved a new modality of funding for Targeted Research (TR) in 1997. TR is a type of applied research that has the objective of undertaking “research that supports the GEF operational strategy by providing information, knowledge and tools that improve the quality and the effectiveness of the development and implementation of GEF projects and programs”. STAP has the mandate to (a) develop the TR Policy, (b) review all TR proposals in terms of their scientific and technical quality, and (c) monitor the progress of projects, if necessary<sup>2</sup>.
3. Since 2005, STAP has undertaken at least four reviews of the TR modality because of expressed concerns that the modality was not being taken up by the GEF agencies and that opportunities were being lost to improve the efficient and evidence-based functioning of the GEF in terms of up-to-date science and new tools and techniques. The analysis revealed *inter alia* that the modality is not often used, that GEF research projects tend to be small and non-

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<sup>1</sup> Dr. Naoko Ishii, GEF CEO and Chairperson in her Vision Statement speech entitled *The Global Environment Facility: Time for Transformational Change*, 5 September 2012, Washington DC - <https://www.thegef.org/publications/time-transformational-change>

<sup>2</sup> GEF, 1997. Principles for GEF Financing of Targeted Research. GEF/C.9/5.

strategic, and that there is little evidence of uptake of research results. One of the earlier reviews suggested that the barriers to use of the modality (e.g. the need to establish a separate STAP research committee to review all proposals) were too great and that there is little incentive for agencies to propose TR projects (due, in part, to the fact that most funding is now found within national STAR allocations). The two most recent reviews were completed in 2012<sup>3</sup>. This document, an integrated summary of the findings of the reviews, is presented to the GEF Council, with the objective of STAP being requested to revise the present policy on Targeted Research to meet the current needs of the GEF<sup>4</sup>.

4. There is compelling evidence for the continuing demand for targeted/applied research in the GEF. At each of the last two replenishments, applied research has been commissioned – often informally – to examine current priority issues in the focal areas in order to provide the evidence-base for a new focal area strategy. STAR funding to countries is based on algorithms that include, for example, a Global Benefits Index. Applied research is needed to derive the algorithms and examine the outcomes. In the focal area strategies, Objective 3 of the GEF-5 International Waters Strategy specifically noted that there is a need for continued funding of targeted research on joint, ecosystem-based management of transboundary waters, including coral reefs and nutrient reduction.<sup>5</sup> Moreover, embedded in each focal area strategy are learning objectives that, in a number of cases, could well be answered through applied research methods or projects (e.g. biodiversity focal area).

5. The first of the recent reviews (see Footnote 3) was commissioned by STAP to examine the use and viability of directed research funding initiatives in the GEF; to propose ways research results, methods, and implementation science principles can be used to strengthen the delivery of global environmental benefits; and to assist formulation of a new TR policy. The methodology consisted of a largely qualitative survey and analysis of information from both within the GEF and from other environment and development agencies. The second review selected as many TR projects as possible from GEF records on the PMIS (17 projects) to identify project goals and outcomes in order to understand how far projects could be considered as useful in providing evidence-based guidance to the GEF. This latter study was a desk review based on available project documentation.

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<sup>3</sup> Hough, J. 2012. Review of GEF Targeted Research Modality: Assessment of Research Funding Programs and Recommendations for the GEF. An independent report for the Scientific and Technical Advisory Panel (STAP) of the Global Environment Facility (GEF), Washington DC, 41pp; Dyubanova, M. 2012. Review and Analysis of Experiences of Targeted Research Projects in the Global Environment Facility: A Report to the Scientific and Technical Advisory Panel of the Global Environment Facility, Washington DC, 35pp.

<sup>4</sup> The reviews have not undertaken a needs analysis of research in the GEF. This would be a major undertaking outside the scope of the current paper. Instead, the reviews have been predicated on the desirability, as evidenced by other organizations, to have a structure and policy in place for research should a specific need arise in the future. Innovation is usually underpinned by the evidence gained from research

<sup>5</sup> GEF, 2010. *GEF-5 Focal Area Strategies* (International Waters Strategy), page 46.

6. Targeted research is a GEF-specific term that corresponds to the term ‘applied research’ used often by public sector agencies and to ‘research and development (R&D)’ in commercial enterprises. It can also be taken to include Experimental Development as identified by the OECD. Basic or pure research is specifically excluded.

7. As of June 2012, 17 targeted research projects with a total GEF contribution of US\$28 million have been undertaken – see Annex I. This corresponds to less than 1% of all GEF projects approved and less than 0.3% of the total GEF financial allocation to projects. On average only one TR project is approved annually; none has been proposed since 2009. It is clear, however, that much research, or research-like activity, is undertaken in projects that are not tagged specifically as ‘TR’ or as components in standard investment projects. The GEF and its agencies, including STAP, regularly commission research (often under the guise of ‘evaluation’ or ‘testing’<sup>6</sup>) but this is not systematically identified either as research or TR, nor are results systematically utilized beyond project level in most cases. With the exception of three major projects – the first a demonstration project, the second a global assessment, and the third an applied research project specifically supporting GEF-related research needs (please see paragraphs 10 and 11 below) - STAP’s reviews have not attempted to analyze these.

### Findings of the Reviews

8. There is no process in the GEF, or its agencies, for systematically identifying priority research needs, and no mechanism for identifying finance for such research. The current (1997) Targeted Research Policy is now largely ignored, and has lost relevance with respect to the improvement of GEF strategies, processes and methods.

9. Targeted research projects approved under the 1997 policy have not consistently contributed to improving the quality and effectiveness of the GEF. None of the five biodiversity targeted research projects had measurable influence on the formulation of operational programs within this domain, or apparent relevance to broader GEF processes. In contrast, the three International Waters projects have led to the development of parts of the IW focal area strategy. The evidence of effectiveness in the area of climate change (4 TR projects) and multi-focal (5 projects) is unclear; however, much has gone to meeting project-level needs, rather than directed at generic issues. One aspect that may differentiate between effectiveness of research in the GEF is whether a focal area strategy has a clearly-identified Knowledge Management component. IW:Learn provided this function for the international waters focal area.

10. Three global projects not tagged as TR have had, and continue to have, considerable impact on the GEF and more widely in science and our understanding of the global

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<sup>6</sup> Typically, a GEF project may undertake ‘pilot’ testing of a new approach for a geographical region, involving the collection of data and the evaluation of performance. This is, in all but name, research. Some ‘demonstration’ projects may similarly involve activities that are research; the *PLEC* project cited in para 10 here was one such.

environment. The first is the *People, Land Management, and Environmental Change* project (approved 1998) operative with GEF-finance in 8 countries<sup>7</sup> which was designed as a demonstration project, though it was executed by researchers and its outputs published in the research literature including top high-impact-factor journals such as *Global Environmental Change*<sup>8</sup>. For the GEF, it helped enhance understanding of how farmers and communities can conserve biological diversity even in intensively cultivated areas. It gave rise to the evidence-base for a considerable part of the biodiversity strategy that relates to agricultural systems. The second project was the *Millennium Ecosystem Assessment* (2001), again largely undertaken by researchers which has led to our new understanding and construction of ‘ecosystem goods and services’, improved our knowledge on the specific threats to different ecosystems, and contributed substantively in laying the groundwork for the current discussions on IPBES. The impact of either of these two projects globally, with respect to improving our understanding of key global environmental challenges, is arguably greater than any other project financed by the GEF<sup>9</sup>.

11. The third project, the *Carbon Benefits Project (CBP): Modeling, Measurement and Monitoring*, ending in December 2012, developed a suite of tools for the GEF to estimate and monitor carbon stock changes applicable to all projects involving interventions in natural resources management, such as forestry, agroforestry, agriculture and pasture management in all climate zones, soils types, and land uses. A recent review of the project by STAP concludes that the CBP is the leading development in carbon measuring and assessment. Not only will its tools better equip the GEF to assess how its natural resource management interventions (e.g. sustainable land management, sustainable forest management, land use, land-use change and forestry) contribute towards its global environmental goals, but also it has the potential to track and verify changes in total system carbon.

12. Comparison with other environment and development agencies (many of which contribute to the GEF) revealed that the GEF undertakes a far smaller amount of research (as evidenced by the small number of projects officially labeled as targeted research) than comparable organizations. Major bilateral development agencies examined have substantial commitments to research to improve the effectiveness of Official Development Assistance (ODA). Multilateral agencies undertake research, either integrated within their divisions or in specialized sections. There exists a wide variety of formats for undertaking research: ad-hoc studies undertaken as needed by individuals and units; major planned studies organized centrally, often by a research division; and research programs put out to tender. In consequence the level of formal investment in research by public environment and development organizations is difficult to ascertain but is probably around 3%: i.e. ten times the investment that the GEF makes in TR. In many cases the figures given for research

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<sup>7</sup> A further five countries used co-financing, to make a 13-country network that is still operative.

<sup>8</sup> E.g. Liang, L., Stocking, M., Brookfield, H., and Jansky, L., 2001. Biodiversity conservation through agrodiversity. *Global Environmental Change* 11(1): 97-101.

<sup>9</sup> The book on *Ecosystems and Human Well-Being*, one of the main outputs of the Millennium Ecosystem Assessment has been cited 4912 times [Source: Google Scholar].

investment are for research and development (R&D) combined. In the private sector R&D spending can at times exceed 20% of gross annual revenues, depending on the sector.

13. Generally, large public-sector agencies either in development or the environment undertake research as part of their commitment to improving effectiveness in the delivery of their mandates. *De facto* research is seen as an integral part of operations, even in organizations that have no interest in generating new knowledge. A counterweight to the need for research is that one study found no statistically significant relationship between financial performance and innovation spending (Jaruzelski et al 2011).

14. There are a number of recurring themes that are used to justify research in organizations broadly similar to the GEF. First, the uptake of research results is more likely when the research is commissioned by its intended users. Secondly, research results always need to be scientifically reviewed and validated. Thirdly, research needs to be protected from political interference, and be more responsive to science-based priorities and evidence. These themes have implications for the way the GEF should review its current TR policy – see Recommendations below.

## Recommendations

15. **Recommendation 1:** The GEF should amend its current Targeted Research Policy, possibly renaming it Applied Research. The current definition of Targeted Research would largely stay the same, but it should allow for pilot testing, experiment, demonstration and development. These categories would be specified further in a revised policy. *Justification:* the current 1997 policy is not working as intended, but the GEF retains legitimate needs for directed or applied research that will contribute to further improving its performance, learning from its activities, and its position as a leader in innovation. The GEF will only finance research under a research and development umbrella that meets the needs of its own strategies and processes.

16. **Recommendation 2:** Evidence-based decision making should become the standard when deciding on operational strategies and processes. This should be an integration of individual expertise with the best available scientifically-reviewed evidence from systematic research. *Justification:* Evidence-based decision-making is growing in popularity and is being progressively adopted in most applied disciplines (such as health and engineering), including at least one bilateral development agency.

17. **Recommendation 3:** During future replenishments, resources amounting to no more than 2 percent of total GEF disbursements should be identified to support the GEF's applied research needs. Sources may include country STAR allocations with appropriate incentives to encourage national and regional research institutes to participate; focal set-asides within the STAR; and from focal areas outside the STAR. *Justification:* Applied research will need clarity as to source of funding. The 2 percent maximum is suggested to be well within the levels for applied research and R&D in other broadly similar agencies – see paragraph 11 above and the first cited review in Footnote 3.

18. **Recommendation 4:** A systematic process for encouraging the identification, prioritization and testing of assumptions and the development of new solutions to improve the quality and effectiveness of GEF policies and practices should be established. Research priorities, if any, should be first defined explicitly in each focal area strategy – as was done for the International Waters focal area strategy. Between replenishments, the focal area task forces, led by the GEF Secretariat, would identify and prioritize themes worthy of applied/targeted research. As part of these task forces, STAP would need to play an important role in their identification and prioritization. *Justification:* a clear unambiguous structure will be needed with defined roles by GEF agencies.

19. **Recommendation 5:** STAP approval would be required of applied/targeted research proposals prior to presentation to the Council (for FSPs) or the CEO (for MSPs). As with all current full sized GEF project proposals, STAP review of applied research could be undertaken at proposal (PIF) stage. For especially innovative or important projects, a STAP

nominee may join the project scientific steering committee. The current requirement of a special STAP research committee to be convened to review and track such proposals should be abolished. *Justification:* STAP should ensure on behalf of the GEF the scientific and technical quality of research proposals for their innovativeness and potential impact on the GEF. STAP believes abolishing the STAP research committee will remove a potentially unnecessary step in the review process.

20. **Recommendation 6:** Consistent with current guidelines, each GEF applied/targeted research proposal should specify at the outset: (1) how it will improve the quality and effectiveness of the GEF<sup>10</sup>; (2) why it reflects value for money; (3) which specific policies and/or practices of GEF entities will be targeted, and in what way. *Justification:* all GEF research must be justified in terms of both financial investment and relevance to GEF processes.

21. **Recommendation 7:** The GEF's support for applied/targeted research should (1) contribute to the science and knowledge base for decision making in the GEF; (2) be fully integrated with the GEF Knowledge Management system; (3) align with quality assurance processes within the GEF that ensure results and lessons learnt are taken up by future projects; (4) contribute to the evidence-base for the scientific strategies of the Conventions. *Justification:* GEF research needs to be closely linked with, and mutually reinforcing of, the GEF's Knowledge Management aspirations.

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<sup>10</sup> Through, for example, tracking causal and plotting uptake pathways.

**Annex 1 Targeted research projects in the GEF; the 17 unequivocally tagged as TR**

<b>GEF ID</b>	<b>Agency</b>	<b>Country</b>	<b>Project Title</b>	<b>Project Approval Year</b>
<b>BIODIVERSITY</b>				
<b>17</b>	World Bank	South Africa	<i>Conservation of Globally Significant Biodiversity in Agricultural Landscapes through Conservation Farming</i>	<b>1999</b>
<b>846</b>	World Bank	Ecuador	<i>Albarradas in Coastal Ecuador: Rescuing Ancient Knowledge on Sustainable Use of Biodiversity</i>	<b>2000</b>
<b>905</b>	UNEP	Regional (Kenya, Tanzania, Uganda)	<i>Land Use Change Analysis as an Approach for Investigating Biodiversity Loss and Land Degradation</i>	<b>2000</b>
<b>1176</b>	UNDP	Malaysia	<i>Conservation of Biological Diversity through Improved Forest Planning Tools</i>	<b>2006</b>
<b>1384</b>	UNEP	Regional (Ecuador, Kenya, Philippines, Ukraine)	<i>Biodiversity Indicators for National Use</i>	<b>2001</b>
<b>CLIMATE CHANGE</b>				
<b>19</b>	World Bank	South Africa	<i>Concentrating Solar Power for Africa (CSP-Africa)</i>	<b>1999</b>
<b>880</b>	UNDP	China	<i>Targeted Research Related to Climate Change</i>	<b>2002</b>
<b>2538</b>	UNEP	Global	<i>Assessment of Risk Management Instruments for Financing Renewable Energy</i>	<b>2005</b>
<b>3224</b>	UNEP	Global	<i>Establishing Sustainable Liquid Biofuels Production Worldwide (A Targeted Research Project)</i>	<b>2009</b>
<b>INTERNATIONAL WATERS</b>				
<b>514</b>	UNEP	Global	<i>The Role of the Coastal Ocean in the Disturbed and Undisturbed Nutrient and Carbon Cycles</i>	<b>1998</b>

<b>985</b>	UNDP	Egypt	<i>Developing Renewable Ground Water Resources in Arid Lands: a Pilot Case - the Eastern Desert of Egypt</i>	<b>2001</b>
<b>1531</b>	World Bank	Global	<i>Coral Reef Targeted Research and Capacity Building for Management</i>	<b>2004</b>
<b>MULTIPLE FOCAL AREAS</b>				
<b>984</b>	World Bank	Mongolia	<i>Dynamics of Biodiversity Loss and Permafrost Melt in Lake Hovsgol National Park</i>	<b>2001</b>
<b>1378</b>	UNEP	Global (Brazil, India, Jordan, Kenya)	<i>Assessment of Soil Organic Carbon Stocks and Change at National Scales</i>	<b>2001</b>
<b>1394</b>	World Bank	Regional (Burkina Faso, Cameroon, Egypt, Ethiopia, Ghana, Kenya, Niger, Nigeria, Senegal)	<i>Climate, Water and Agriculture: Impacts on and Adaptation of Agro-Ecological Systems in Africa</i>	<b>2001</b>
<b>1769</b>	UNEP	Global (China, Indonesia, Russia)	<i>Integrated Management of Peatlands for Biodiversity and Climate Change: The Potential of Managing Peatlands for Carbon Accumulation While Protecting Biodiversity</i>	<b>2002</b>
<b>2503</b>	World Bank	Global	<i>International Assessment of Agricultural Science and Technology for Development (IAASTD)</i>	<b>2006</b>