Scientific and Technical Advisory Panel

Report of the Chairperson of the Scientific and Technical Advisory Panel (STAP) to the GEF Council
November - 2012

Introduction

1) The STAP Chair is pleased to provide an update on STAP progress in implementing its work program, STAP's screening of GEF projects, new advisory products, along with specific highlights and a number of recommendations it wishes to bring to the Council's attention. The report covers the period since STAP's last report to the Council in June 2012 until the present.

2) The report highlights the following:

- STAP's project cycle activities and observations of the November 2012 Work Programme
- Panel Member Recruitment
- The Role of STAP in the GEF Program – Results from a preliminary discussion
- Research in the GEF Program – Contribution to knowledge management
- Climate Change – Scientific assessment for the GEF
- Soil Organic Carbon – Results of a recent technical review workshop
- New advisory reports:
    a. Impacts of marine debris on biodiversity (in collaboration with the CBD Secretariat)
    b. Marine spatial planning in the context of the Convention on Biological Diversity

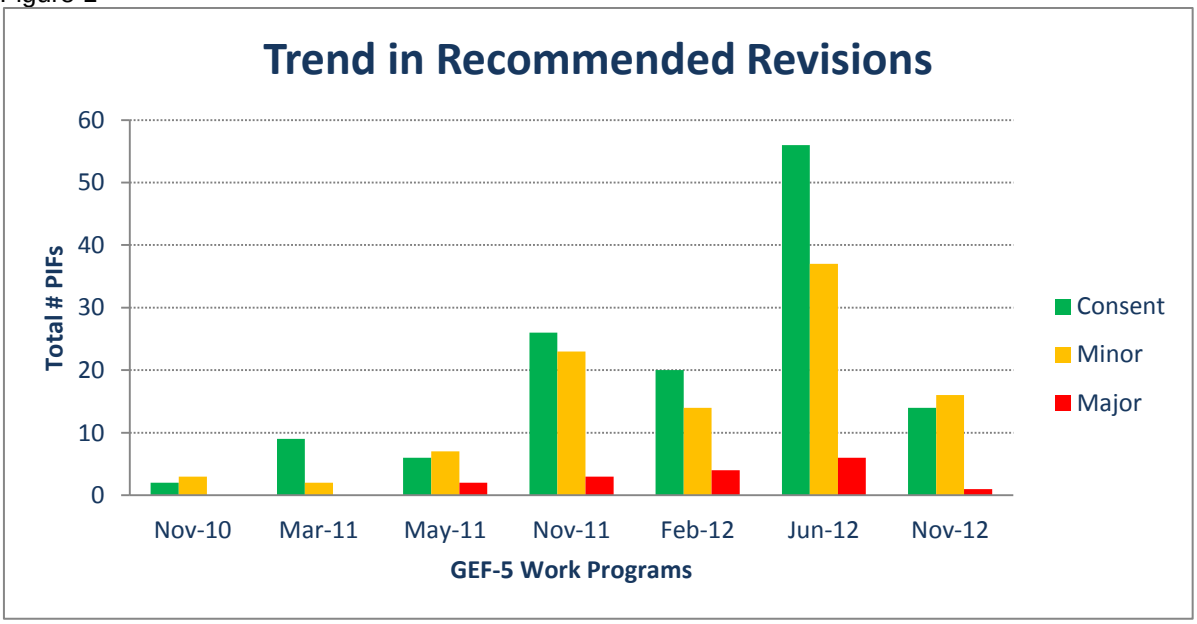
Observations on the November 2012 Work Programme

3) STAP's primary operational responsibility in the project cycle is to provide independent scientific and technical screening of full-sized projects at PIF stage. In addition, STAP continues to monitor trends in PIF screens overall (please see Figure 1 below).

4) In review of this work programme, including previous work programmes in GEF 5, STAP wishes to convey to the GEF Council the observation that many project PIFs are poorly referenced – whether to earlier GEF initiatives in the same domain and geographic area, national and international reports, or to the published scientific literature. In addition, in a limited number of cases the Panel has noted confusion in planned activities, outputs, and results – and in a significant number of cases a tendency towards over-stating of expected project outcomes. STAP believes that the overall quality of PIFs would be enhanced with greater attention to referencing of factual information, as well as greater care in defining project design.

5) STAP welcomes the ongoing trend towards multi-focal area (MFA) projects. The Panel, however, wishes to note the observation that in a significant number of cases the scientific reasoning for merging distinct focal area components into a comprehensive MFA initiative remains weak. Project 4905 Cambodia is a case in point. This initiative is largely funded from the biodiversity focal area, with additional funding from climate change mitigation (CCM) and sustainable forest management (SFM) – however, STAP believes that the fundamental rationale for including CCM and SFM funding in this initiative is only weakly defined at present.

Figure 1



Review of SCCF Work Program

6) With the appointment of a panel member for adaptation, STAP undertook a review of the PIF's for the SCCF work programme for the first time. As in the case of the other focal areas, the review of the PIF's provides an important opportunity for strengthening the scientific and technical elements of the projects. In particular, STAP feels that in many instances the key aspect of additional cost reasoning is often not fully developed and established. The additional cost reasoning expected in adaptation projects is to clearly bring out the implications of future climate change with respect to the baseline conditions, and the way in which the baseline interventions need to be modified or strengthened to cope with future conditions. STAP also felt that there is a need for greater detailing of the adaptation interventions, and for indicators and metrics that would better connect project outcomes to the focal area objectives, given that there are a diverse set of outcomes related to vulnerability reduction and adaptive capacity enhancement that are consistent with these objectives.

Collaboration with GEF Evaluation Office

7) STAP continues to engage with the Evaluation Office on a number of activities, including the recent quality at entry study and South China Seas evaluation – among others. STAP recently collaborated with the Evaluation Office to define assessment questions in order to assist in the scientific assessment of the current GEF focal area strategies. The Panel looks forward to future engagement with the Evaluation Office, particularly in the preparations and eventual implementation of OPS5.

Panel Member Recruitment

8) STAP is pleased to welcome the following new Panel Members: Annette Cowie, University of New England (Australia) for Land Degradation; Anand Patwardhan, University College Maryland and Institute of Technology Bombay (India) for Climate Change Adaptation; and Jakob Granit, Stockholm Environment Institute (Sweden) for International Waters. The recruitment for the next Climate Change Mitigation Panel Member has also just completed, and with the collaboration of the GEF Secretariat and Agencies we are pleased to announce that Ralph Sims, Massey University (New Zealand) has been selected for this position. Finally, the recruitment process for the next STAP Chair has now closed, and we look forward to announcing a result from this process at the next GEF Council Meeting.

Role of STAP in the GEF Program – Discussion with the CEO

9) The GEF CEO opened the formal session of the STAP meeting by outlining her vision for the GEF, stressing the importance of developing a shared GEF 2020 Strategy, and requesting STAP assistance in this process. The key elements of her vision include:

   i. GEF as an innovator - promoting not only new technologies but fundamentally new ways of doing business;
   ii. GEF as the champion of regional and global commons – convening key actors in recipient countries to promote and mainstream sustainable development policy, while concomitantly ensuring global environmental challenges are met;
   iii. GEF as partner of choice - the GEF cannot stand alone, and needs the proactive engagement of Agencies and other networked stakeholders to ensure real and lasting impact from investments;
   iv. GEF as a catalyst in the face of ever changing environmental finance and challenges – greater coherence in the multilateral financial system for environment, and a stronger working relationship with the private sector is paramount to this effort.

9) In collaboration with other meeting participants, the STAP was requested to explore ways to contribute to this vision and the development of the 2020 Strategy. STAP has an important role in bringing more integrated, innovative approaches and technologies to the fore within the GEF's work programs. She also felt that the Panel should also explore how they may engage more proactively at country and regional level, as well as in ongoing efforts to achieve greater efficiencies in the project cycle.

Summary of Key Outcomes

10) The STAP Chair proposed the following key points drawn from the brainstorming session with the CEO, along with subsequent discussions in plenary. The details and level of consensus associated with each point can be found in the extended summary at Annex 2 of this report:

   i. STAP should be engaged in developing the scientific rationale GEF 2020 Strategy and Focal Area Strategy Processes.

   ii. STAP should interact with the science bodies of the Conventions in a more structured manner.

   iii. The STAP should assist the GEF in identifying opportunities for innovation and for scaling-up, including how multi-focal area approaches can have greater impact

      Issues discussed included:

      - Appropriate Incorporation of Multi Focal Area Approaches
      - Analysis of Trade-Offs in Multi Focal area approaches
      - Regional Approaches for Multi Focal area work
      - Identification of Champion Countries for Mainstreaming and Scaling up of Innovative Technologies

   iv. The GEF needs to considerably strengthen its knowledge management framework – STAP can assist in the scientific aspects of this effort.

   v. Increase engagement with the private sector

<u>Issues for Continued Discussion</u>

Enhance the Value-Added of STAP's Involvement in the Project Cycle

11) In addition to current project screening responsibilities, STAP could identify and conduct a more in-depth review of projects which are considered particularly innovative or pose significant

technological or other risks – including the assessment of socio-economic issues as required – and report on this to Council. Periodic assessments could be undertaken of technologies or approaches that have produced exceptional results, and refine methods for scaling-up achievements and replicating these across the portfolio. STAP could also identify opportunities to encourage even greater innovation in GEF projects through the screening process.

STAP Work Program Activities and Products

12) A detailed record of achievement against the STAP Work Program FY12 is provided in Annex 1. The September 2012 Meeting of STAP in Washington, DC, focused primarily on potential new multi focal initiatives with the GEF (e.g. urbanization; disruption of the nitrogen cycle), research in the GEF, and preliminary discussions on the role of STAP in the overall GEF Program. New and returning Panel Members also met in working groups with their individual focal area task team groups to advance on STAP work program tasks. Highlights are provided below.

STAP Engagement with Conventions

13) STAP continued its efforts to work collaboratively with Secretariats and scientific subsidiary bodies of the Multilateral Environmental Agreements that are supported by the GEF:

a) The CBD, UNFCCC and UNCCD Secretariats and scientific bodies have collaborated with STAP on the recent and ongoing recruitment for new STAP Panel Members, and have actively engaged in STAP meetings.

b) STAP organized two sides events at the 16th meeting of the Subsidiary Body for Scientific, Technical, and Technological Advice of the CBD (April, 2012 – Montreal, Canada) related to joint work on marine spatial planning and marine debris.

c) A future side event is planned at the upcoming UNFCCC CoP in Doha, along with a technical workshop at the upcoming UNCCD Science Conference in early 2013 on the role of soil carbon as an important global benefit in future GEF programs.

d) STAP produced two advisory reports in conjunction with the Secretariat of the Convention on Biological Diversity, outlined in paragraphs 38 and 41 below.

Climate Change: Scientific Assessment for the GEF

14) Knowledge about climate change mitigation and adaptation is expanding at an unprecedented rate compared to almost any other branch of science. The GEF will soon start planning for GEF-6 (2014 to 2018) however the findings from the IPCC 5th Assessment Report will not be available early enough to inform the GEF policy formulation process on climate change. The aim of this report was to provide an analysis of recent scientific findings in order to assist the GEF in formulating its strategies and priorities in the context of GEF-6, including the GEF visioning process for 2020.

15) The Report highlights current climate change projections, impacts, and needs for adaptation and presents key mitigation technologies, policies and opportunities, particularly those relating to energy efficiency, renewable energy, transport and urban systems. Strategies for stabilizing atmospheric GHG concentrations are described, as are other technology options. The report focuses on the need for a transformational shift to low carbon development pathways in recipient countries in order to achieve global warming stabilization below 2°C above pre-industrial, and proposes recommendations for the GEF in this context.

16) The report concludes that in order to meet targets set by the 2010 Cancun and 2011 Durban Agreements of the UNFCCC to stabilize atmospheric GHG concentrations below 2^{o}C**, a transformational shift, leading towards significantly lower energy demand and the decarbonization of energy supply in current economic systems is required; incremental reductions in GHG emissions or mitigation interventions are insufficient and inadequate**.

This shift must be closely linked with the sustainable development goals of developing countries and countries with economies in transition.

17) The daunting nature of this challenge is underscored by evidence that the world has already warmed by 0.8°C since pre-industrial period, and a further 0.6°C warming is locked into the future climate system due to elevated GHG concentrations in the atmosphere. On the current trajectory, **a warming of 2°C could be achieved as early as the 2030s.** The International Energy Agency warns that if current emission trends are sustained based on fossil fuel economies, **a warming of 4°C could be reached by 2060** and above 6°C before the end of this century. Limiting mean global warming to below 2°C by the end of this century is becoming increasingly unlikely. Transformative action on climate mitigation and adaptation is required, including mitigation-adaptation synergies across multiple sectors and systematically screening for climate risk in the GEF portfolio.

The Report generated the following specific recommendations regarding future GEF programs in the area of climate mitigation and adaptation:

a. Assist developing countries and EITs to produce short and long-term low-carbon development strategies to help achieve the <2°C stabilization target, consistent with their national economic development goals;
b. Support countries by enabling them to analyze, evaluate and identify options for achieving transformational shifts in energy supply and mitigation strategies for forests and agriculture;
c. Support "leap-frogging" opportunities for transformational change in energy systems to enable developing countries and EITs to shift to low carbon pathways. Additional effort may be required to assist poorer countries improve energy access in a climate friendly way;
d. Assist the higher GHG emitters (such as Brazil, Russia, India, China and South Africa) to evaluate and pursue transformational shifts through energy efficiency improvements and renewable energy deployment in the building, industry and transport sectors, as well as mitigation options in the forest and agricultural sectors;
e. Promote demonstration of selected cutting-edge and emerging mitigation technologies such as very high performance building designs (both new and retrofit), novel and alternative cooling systems for commercial buildings (such as desiccant dehumidification), very high-efficiency appliances, and bioenergy + CCS;
f. Encourage policies that set ambitious appliance standards, building codes and fuel economy norms. Promote minimum efficiency performance standards due to their cost-effectiveness and high policy acceptability in most jurisdictions. Support "feebates" and proactive utility regulations that provide real mitigation opportunities as well as significant social and economic co-benefits;
g. Promote the development of carefully designed policy mechanisms which have the potential to increase the uptake of renewable energy power systems cost-effectively. Support programs/projects that can overcome the challenges to RE deployment by encouraging commercial scale-up to reduce costs and enable integration into present and future energy supply systems;
h. Support development of new state and national policies that remove subsidies for fossil fuels and promote the carefully designed transfer of subsidies to renewable energy technologies;
i. Support strategies that reduce the present fossil fuel dependence of the agri-food supply chain and reduce agricultural-related GHG emissions through efficiency improvements and shifts to renewable energy. Adopt sustainable integration of agricultural production systems that reduce GHG emissions and other negative environmental impacts from agriculture;
j. Discourage the development of peat-lands for energy crop production;
k. Respond to climate change in urban systems by developing an integrated, continuous and long-term strategy based on combined approaches in transport, buildings, water supply, waste treatment, food supply and land use zoning. Ideally, such an integrated approach should adequately address other challenges that have interfaces at the urban level such as management of chemicals, coastal management (where appropriate), and development goals for overall human well-being;

l. Adopt AFOLU techniques covering REDD+, LULUCF[1], soil carbon enhancement and methane emission reduction (from livestock and rice production) options that can provide low cost and immediate GHG mitigation opportunities as well as provide biodiversity conservation, land reclamation and livelihood improvement benefits when implemented with adequate environmental and social safeguards;

m. Throughout the GEF portfolio, recognize the risks to GHG mitigation potential across all sectors due to increasing climate variability, and mainstream resilience enhancement measures to combat projected climate change impacts across all GEF focal areas.

18) In addition, the following key programming principles were proposed to support a transformative approach in GEF-6 and in the GEF 2020 Strategy – to ensure significant additional contributions to global GHG mitigation efforts through the GEF while preserving the GEF's existing strategic goals in climate mitigation:

Principle 1: Have a common goal but with differential delivery approaches. Focus on the more rapidly urbanizing economies and major GHG emitting countries to enable deep emissions reductions, and in the case of low GHG emitting countries to focus on energy access for all**.** A common goal of reducing GHG emissions and supporting low-carbon development paths should be implemented taking into account differing geographies and levels of national development.

Principle 2: Enhance leverage of available global climate financing. Existing barriers in leveraging a range of public and private sector resources for GEF projects should be eased significantly. To ensure a transformational impact, private sector financing for GEF projects should be increased significantly.

Principle 3: Utilize economies of scale and potential synergies between sectors and GEF focal areas. In GEF-6 and beyond (assuming similar or higher levels of funding become available), a strong focus on systemic and programmatic approaches to energy production and consumption would utilize economies of scale and produce multiple benefits from several sectors and focal areas. There is a need to explore and promote mitigation and adaptation synergies when addressing climate change.

Principle 4: Account for climate risks and increase the resilience of GEF climate mitigation projects. The impacts of climate change can roll back achievement of GEBs. GEF projects should address these risks wherever possible to achieve climate resilience.

Principle 5: Assure transparency, accountability and global learning. Higher levels of transparency, GHG accountability and support for global learning should become essential ingredients of GEF funding support for climate change mitigation and adaptation initiatives.

The Role of Research in the GEF Program

19) At this Council meeting, STAP submitted results of a recent assessment of the targeted research modality – "Research within the GEF: Proposals for Revising the Targeted Research Modality" (GEF/STAP/C.43/Inf. 02). The Information Document contains the following recommendation for the GEF Council:

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 44th Session, incorporating recommendations contained in Council Document GEF/STAP/C.43/Inf. 02.

[1] AFOLU - Agriculture, Forestry and Other Land Use; REDD+ - Reducing Emissions from Deforestation and Forest Degradation "plus" Conservation; LULUCF - Land Use, Land-Use Change and Forestry.

20) STAP strongly supports Dr. Naoko Ishii's statement that the "The GEF is and must remain an innovator"[2]. Applied research and development is a key component of innovation, and the GEF is well suited to leverage and promote innovation in achieving global environmental outcomes. It does this by catalyzing investments from other donors and countries, while generating knowledge with which the GEF improves its own actions.

21) Unquestionably, the GEF should continue to benefit as a consumer of this information while strengthening its role as a prominent leader in generating credible knowledge about improving the performance of global environmental projects. Research plays a prominent role in sustaining the GEF's mission to support innovation, deliver global environmental benefits, and promote of transformational change.

22) Recognizing the GEF's unique role 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[3].

23) Since 2005, STAP has undertaken at least four reviews of the TR modality, due primarily to 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 two recent studies were completed in 2012.[4]). The analysis revealed *inter alia* that the modality is infrequently used, that GEF research projects tend to be small and non-strategic, and that there is little evidence of uptake of research results.

24) As of June 2012, 17 targeted research projects with a total GEF contribution of US$28 million have been undertaken. This corresponds to less than 1% of all GEF projects approved and less than 0.3% of the total GEF financial allocation to projects. However, much research or "research-like" activity is undertaken in projects that are not tagged specifically as 'TR', or as components in standard investment projects (often described as 'evaluation' or 'pilot' initiatives).

25) There is evidence, however, 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. Scientific assessment through applied research is needed to derive the basis for the algorithms and examine the outcomes. Moreover, embedded in each focal area strategy are learning objectives that are best answered through applied research methods or projects.

26) 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 than comparable organizations. While the exact level of formal budgetary investment in research by public environment and development organizations is difficult to ascertain, it is estimated to be roughly 3% - i.e. ten times the investment that the GEF currently makes in research.

27) Perhaps the most important justification for a robust applied research policy in the GEF is in the contribution to innovation and knowledge management. The GEF's support for applied/targeted research should contribute to improving the science base for decision making in the GEF. In addition, it should be fully integrated with and reinforcing of the GEF Knowledge Management system, align with existing quality assurance processes within the GEF that ensure results and

[2] 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 - http://www.thegef.org/gef/ceo-vision-statement

[3] GEF, 1997. Principles for GEF Financing of Targeted Research. GEF/C.9/5.

[4] 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.

lessons learnt are taken up by future initiatives, and contribute to the evidence-base for the scientific strategies of the Conventions.

Workshops, Symposia, Outreach

International Waters Science Conference

28) Under the direction of International Waters Panel Member Jakob Granit, STAP prepared and led a workshop on "the role of IW related science in support of regional cooperation" (IW Science Conference – Sept 26-28, Bangkok). Keynote presentations by Raymond Mngodo (Lake Victoria Basin Commission) and Cletus Springer (Organization of American States) cited evidence about how to achieve successful regional cooperation based on strong regional ownership in institutional frameworks that are multi-sectoral by design. It was demonstrated that GEF interventions can be catalytic in terms of triggering more cooperation and providing the type of financial resources and networks many times missing to avoid the degradation of common-pool resources.

Soil Organic Carbon Workshop – September 10-12, Nairobi, Kenya

29) STAP led a scoping workshop on "Soil organic carbon for global benefits for the Global Environment Facility" on 10th – 12th September at UNEP headquarters in Nairobi, Kenya. The purpose of the meeting was to scope how a focus on soils could deliver global environment benefits within GEF programs. In particular, the workshop discussed the following questions: 1) how could the GEF support program development that would comprehensively focus on soils, ecosystem services, and water? 2) What strategy would be appropriate for the GEF to deliver multiple benefits? 3) Which ecosystems and agro-ecologies have the best scope to deliver multiple benefits and under what conditions? These questions and the relevance of soils were discussed in the context of the current, and future, GEF land degradation strategy.

30) Approximately 50 prominent scientists/experts gathered from a number of organizations[5]. Presentations focused on: 1) the role of soil organic carbon in the delivery of ecosystem services; 2) the spatial dimensions of soil organic carbon; and, 3) monitoring and verification systems of soil carbon.

31) The meeting concluded with a number of emerging conclusions and recommendations, including: 1) any focus on soil organic carbon requires an integrated management approach; 2) soil organic carbon management needs to be adapted to the local climate, agricultural and soil conditions; and, 3) there is a need to enhance our understanding of soil organic carbon and its sensitivity to climate change.

32) The complete set of conclusions and recommendations will be developed fully in a technical report to be completed by December 2012, and will benefit from independent scientific peer review. Specific policy recommendations for the GEF on soil organic carbon will be developed. The GEF Secretariat will consider both documents in the development of the GEF 6 Land Degradation Strategy – in generating scientific evidence regarding soil organic carbon, and it's potential to generate multiple global environmental benefits.

Carbon Benefits Project Review – September 13-16, Voi, Kenya

33) STAP was asked by the GEF Secretariat to lead a review of the Carbon Benefit Project (CBP) tools as the project nears completion. The project developed a standardized system for the GEF to measure, model, and monitor carbon stock changes and greenhouse gas emissions from land management projects. In response to this request, the meeting objective focused, therefore, on the applicability and usefulness of the suite of tools developed by the CBP. The CBP team (composed of

[5] Alliance for a Green Revolution in Africa, the International Center for Tropical Agriculture, Kenya Forestry Research Institute, Joint Research Centre Institute for Environment and Sustainability, the World Agroforestry Centre, Brazilian Agricultural Research Organization, the Johan Heinrich von Thunen Institute, the U.S. Department of Agriculture, the Commonwealth Scientific and Industrial Research Organisation, the GEF Agencies and project staff (UNEP, IFAD, UNDP, FAO, AfDB), the GEF Secretariat, and a number of academic centers (University of Aberdeen, University of Leuven, Columbia University, Colegio de Postgraduous (Mexico), Cornell University, University of Florida, University of Sydney, University of Bern, Colorado State University, University of Maryland, Michigan State University).

scientists from several institutions based in Africa, Europe, and the United States) led with presentations on the modeling and measurement components, as well as one day training on the use of the tools. (For further information about the CBP, please visit - http://www.unep.org/climatechange/carbon-benefits/Home/tabid/3502/Default.aspx)

34) The meeting brought together the CBP scientists[6] as well as of experts on carbon monitoring from the U.S. Department of Agriculture – Forest Service; University of Maryland - Terrestrial Processes and Adaptation Group; Joint Global Change Research Institute Pacific Northwest National Laboratory; Commonwealth Scientific and Industrial Research Organisation; and, the Institute of Agricultural Research for Development. A number of GEF Agencies and project staff also participated (UNEP, UNDP, FAO, IFAD, UNIDO), along with the GEF Secretariat and STAP.

35) The participants concluded the tools were applicable and valuable for GEF projects. There was wide support for the Intergovernmental Panel on Climate Change (IPCC) data and structures used in the applications, as well as for the user-friendly platforms available on the web. Furthermore, the participants believed the tools were useful for project planning, measuring and monitoring of carbon stock changes resulting from land use interventions.

36) Issues related to the future use and upkeep of the tools was also discussed, which STAP will elaborate further in its meeting report. STAP supported the feedback provided at the meeting and committed to commissioning additional independent peer review of the results to fully establish the scientific and technical validity of the tools. STAP will draw from the outcomes of these reviews along with the meeting discussions to develop its conclusions and recommendations about the future use of the CBP tools, and report to the next meeting of the GEF Council.

STAP Advisory reports and papers

GHG accounting methodology for GEF energy-efficiency projects

37) Responding to the request from GEF partnership on further improving GHG accounting standards in GEF climate mitigation projects, STAP organized a workshop *"Developing GHG emission reduction methodology for GEF energy efficiency projects"* hosted by the GEF Secretariat on February 14th 2012. The workshop was well attended with about 40 participants from the GEF Secretariat, the World Bank, UNEP, UNDP, UNIDO, IDB and other partner organizations. A revised framework for energy efficiency methodology was presented and discussed at the meeting. STAP will present final GHG accounting methodology for energy-efficiency projects at the GEF Council in November 2012.

Marine Spatial Planning in the Context of the Convention on Biological Diversity

38) STAP assisted the CBD Secretariat in its response to COP-10 Decision X/29 para 75 "to compile and synthesise available information in collaboration with Parties, other Governments and relevant organisations on their experiences and use of marine spatial planning, in particular on ecological, economic, social, cultural and other principles used to guide such planning and the use of area-based management tools". The report was published in the CBD Technical Series No. 68 "Marine spatial planning in the context of the Convention on Biological Diversity", and launched at the CBD COP-11 held in Hyderabad, India, from 8 to 19 October 2012[7]. Initial findings of the Report were presented at the 16th CBD SBSTTA meeting held in Montreal, Canada, 30 April - 5 May 2012 and were used to inform a number of recommendations on marine spatial planning for the decision at CBD COP-11, namely Recommendation XVI/6 on marine biodiversity: marine spatial planning and

[6] Affiliated with Colorado State University, Michigan State University, International Soil Reference and Information Centre, World Agroforestry Centre, and the World Wildlife Fund

[7] Secretariat of the Convention on Biological Diversity and the Scientific and Technical Advisory Panel —GEF (2012). *Marine Spatial Planning in the Context of the Convention on Biological Diversity: A study carried out in response to CBD COP 10 decision X/29*, Montreal, Technical Series No. 68, 44 pages. Available electronically at: http://www.cbd.int/ts/

voluntary guidelines for the consideration of biodiversity in environmental impact assessments and strategic environmental assessments in marine and coastal areas[8].

39) This report explores spatial management as a means to protect marine and coastal biodiversity while at the same time addressing human needs across coasts, around estuaries and deltas, in near shore environments, and the open oceans. It synthesises available information on the scope of MSP activities around the world, lessons learned about the utility of spatial planning and management, processes and tools used, and criteria for success at various scales. The report reviews conventional approaches, identifies innovative new tools, and discusses the potential MSP has – as yet not fully realised – in aligning conservation and development interests while protecting vital ecosystems, the valuable goods and services they deliver, and the biodiversity they support.

40) The Report concludes that the development and introduction of MSP offers multilateral institutions significant opportunity to invest in capacity building, leadership development, mechanisms to address governance challenges, reduction of institutional overlaps/gaps, and development and use of conflict resolution mechanisms through MSP initiatives. Key management approaches include:

i. Strengthening governance, institutional and legal frameworks conducive for MSP mainstreaming into existing management frameworks;
ii. Establishing or enhancing monitoring, data analysis and scenario modelling of ecosystem goods and services as a basis for MSP development;
iii. Supporting impact assessments and embedding effectiveness monitoring into existing MSP efforts; and
iv. Nurturing and facilitating collaboration across multilateral organizations, government, private and public sectors, educational and scientific institutions, indigenous and local communities in the development and implementation of MSP.

Impacts of Marine Debris on Biodiversity

41) This report prepared by STAP for the CBD and the GEF reviews the current state of knowledge of the effects of marine debris, and provides a preliminary assessment of the impact on ecosystems and biodiversity. It seeks to inform the Parties and other participants in the CBD on the nature of this emerging issue and potential strategies to address it, following discussion the discussion at the 16th Meeting of the Subsidiary Body on Scientific, Technical, and Technological Affairs (SBSTTA) of the Secretariat of the Convention on Biological Diversity (CBD)[9].The report published in the CBD Technical Series No. 67 “Impacts of Marine Debris on Biodiversity: Current Status and Potential Solutions” was launched at the CBD COP-11 held in Hyderabad, India, from 8 to 19 October 2012[10].

42) This report reviewed and synthesized literature in order to describe the impact of marine debris on biodiversity, assessing the following impact categories: entanglement and ingestion (including microplastics), dispersal via rafting (potential to facilitate transport of invasive species), provision of new habitat (potential to provide new habitats), and ecosystem level effects. Impacts of marine debris were reported for 663 species. Over half of these reports documented entanglement *in* and ingestion *of* marine debris, representing a 40 % increase since the last review in 1997, which reported 247 species (Laist, 1997). Entanglement in and ingestion of marine debris can be fatal but can also have a range of sublethal consequences. Ingestion, particularly of microplastics, is also of concern as it could provide a pathway for transport of harmful chemicals.

43) The report revealed that all known species of sea turtles, about half of all species of marine mammals, and one-fifth of all species of sea birds were affected by entanglement or ingestion of marine debris. About 15 % of the species affected through entanglement and ingestion are on the

[8] Available at: http://www.cbd.int/recommendation/sbstta/?id=13055.
[9] CBD SBSTTA-16 Recommendation *XVI/5.*Marine and coastal biodiversity: sustainable fisheries and addressing adverse impacts of human activities on marine and coastal biodiversity (para 24-26) available at: http://www.cbd.int/recommendation/sbstta/?id=13054
[10] Secretariat of the Convention on Biological Diversity and the Scientific and Technical Advisory Panel—GEF (2012). *Impacts of Marine Debris on Biodiversity: Current Status and Potential Solutions*, Montreal, Technical Series No. 67, 61 pages. Available electronically at: http://www.cbd.int/ts/

IUCN Red List. The frequency of impacts varied according to the type of debris, however over 80 % of impacts recorded were associated with plastic debris.

44) Given the number of species and the substantial proportion of some populations that are affected by marine debris, coupled with the frequency of entanglement, ingestion and debris related dispersal of organisms, it is likely that marine debris is an important contributor among other anthropogenic stresses acting on habitats and biodiversity. It is increasingly evident that marine debris is having a substantial impact on individuals, populations and ecosystems, and ultimately on the important services we depend on from the world's oceans and coastal regions. For species that are already at risk such as the Hawaiian Monk Seal *Monachus schauinslandi*, Loggerhead turtle *Caretta caretta* and White Chinned Petrel *Procellaria aequinoctialis*, marine debris also has the potential to be an important contributor to species level decline and extinction.

Emerging Chemicals Management Issues

45) The Chemicals Abstracts Service (CAS) (http://www.cas.org/) states that there are 60 million registered organic and inorganic substances in the world. Of that, only a fraction have been tested and inventoried by chemicals oversight bodies. For example, the USEPA maintains an inventory of approximately 84,000 commercially important chemicals; of those a small fraction have been tested for toxicity including the majority of those categorized as "high volume".

46) In the face of rapid globalization and increased manufacturing, including sharp increases in chemical use and new chemicals, the last two decades has also seen the rapid implementation of a number of regional and international agreements regarding chemicals management, which have focused concerns on the need for a globally effective and sustainable chemicals management process. The Strategic Approach to International Chemicals Management (SAICM) pays particular attention to chemicals, products, uses, releases, or wastes that are currently not under consideration or taken up by existing Multilateral Environmental Agreements (MEAs).

47) This document seeks to define the issue as well as to identify, evaluate and prioritize ECMIs specifically in relation to the likely chemical management needs of GEF recipient countries. In doing so, it is hoped that it will assist with the prioritization and allocation of additional resources and support from the GEF within its mandate to anticipate, prevent, reduce and/or minimize adverse impacts of chemicals on human health and the environment.

48) This advisory document was utilised within the technical briefings of the third session of the International Conference on Chemicals Management (ICCM-3) in Nairobi, 17 to 21 September 2012. This meeting culminated with endocrine disruptors, an important group of chemicals highlighted in this report, being named as a critical emerging issue for the Strategic Approach to International Chemicals Management (SAICM).

Corporate Activities

Expanded Constituency Workshops

49) STAP participated in the following GEF Expanded Constituency Workshops (ECWs) – designed as outreach and capacity building sessions for GEF country focal points and their staff: Southern Africa 1-3 August 2012, Maputo, Mozambique; Eastern Europe and Central Asia counties September 25-27, Yerevan, Armenia. In response to the GEF CEO's request for greater STAP engagement and country and regional level, STAP is continuing to explore its specific role in science and technology advice at this level (in addition to current activities focused at the global and corporate GEF levels). ECWs provide an important basis for evidence gathering and useful experience in this context. Existing experience shows strong interest from countries and regions in STAP's thematic assessments and demand for science inputs in regional and multi-focal area projects. While ECWs are largely procedural in focus, there is scope for STAP's more effective engagement on technical aspects of project design at regional and possibly national levels. Recognizing these needs and given limited resources available in the Panel, STAP is currently considering best ways to deliver such advice and will work closely with the GEF CEO on these modalities.

ANNEX 1

STAP Work Program - record of achievement

ACT. Nr.	*Output / Product*	*Status as of November 2012*
Corporate Activities		
C#1	**Scientific/technical analysis of GEF portfolio in each GEF Work Program for GEF Council** **Justification:** Requested by GEF Council/Secretariat, GEF Agencies • STAP screening of all full-sized and on a selective basis medium-sized project concepts and program framework documents submitted as PIFs and PFDs, respectively; selected projects discussed with GEF Agencies and GEF Secretariat • Dialogue with GEF Agencies upstream on PFD submissions and on a selective basis for Production of Report for each GEF Council meeting	• All required STAP screens uploaded to PMIS by GEF work program deadlines **Expected delivery:** Continuous throughout the year as GEF Work Programs are developed
C#3	**Outreach and communication** Continuous improvement in delivery of the best available science and technology advice to the GEF partnership **Justification**: Recommended by STAP and several GEF stakeholders including GEF Council, Secretariat, Secretariats of MEAs, and GEF Agencies	▪ Records of STAP's participation and results at GEF Sec & Constituency meetings; ▪ Records of successful work between STAP and subsidiary bodies of MEAs; ▪ STAP's outreach materials and advisory products are fully accessible online, including GEF website; ▪ Records of STAP's participation at science/policy interface meetings of direct relevance for the GEF; • Fully functional and user-friendly STAP website **Expected Delivery:** Continuing task
C#5	**Provision of advice on science and technology to impact evaluations conducted by GEF EO** Objective: Role of science is strengthened in GEF impact evaluations and GEF M&E generates more reliable and systematic information on the impact of GEF support. **Justification:** Recommended by the GEF EO, STAP and GEF Secretariat	• Ongoing time allocation from STAP Secretariat and the Panel to identify and implement impact evaluation work with the EO and GEF Secretariat. **Expected delivery:** Advice on periodic impact evaluations - continuing task
C#6	**Targeted research modality review** **Justification**: Recommended by GEF Secretariat ▪ Review of the targeted research modality	A STAP led review of targeted research was completed in July 2012. Two background papers were developed, which can be found on the STAP website. An overarching paper based on the two background documents will be presented to the GEF Council at their meeting in November 2012. The overarching paper recommends a revision of the targeted research policy, led by STAP in collaboration with the GEF Secretariat and the GEF Agencies.
C#7	**Advice on portfolio monitoring** **Justification:** As the GEF Secretariat develops further its work plan on results based management and knowledge management, STAP will assist strengthening of the GEF's portfolio monitoring system. The output could include advice on harmonizing the "learning objectives", and direct support for carrying out studies of learning objectives as required. **Linked to:** The GEF Policy on "Results-Based Management and Knowledge Management Work Plan for GEF-5"	• Strengthened methodology for portfolio monitoring learning review across focal areas **Expected delivery:** Continuing task
C#8	**Advice on indicators to inform GEF investments in the land degradation, biodiversity and climate change focal areas**	Strengthening GBI for GEF-6-

ACT. Nr.	*Output / Product*	*Status as of November 2012*
	The GEF Secretariat requested assistance to strengthen the global benefits index (GBI) of the land degradation focal area. A similar request for the biodiversity and climate change portfolios also may be forthcoming, given STAP's experience in reviewing the scientific rationale of all the GBIs for the GEF-5. **Justification**: Recommended by the GEF Secretariat (Land Degradation)	• Small workshops – 2013 • Completed and peer reviewed report on improved global benefits index – 2013 **Expected delivery:** 2013
Cross Cutting Activities		
XC#4	**Scientific guidance to GEF Project 3449 Carbon Benefits Project (CBP): Modeling, Measurement and Monitoring (UNEP/World Bank MSP)** **Justification:** Responding to a request from the GEF Secretariat, STAP will lead an independent review of the utility of the set of tools developed by the Carbon Benefits Project. The review will be conducted by the GEF Agencies (project developers), and experts on carbon tools. The review outcomes will serve to strengthen the applicability and longevity of the tools for the GEF.	• STAP led a CBP review meeting in September 2012. Further details about the meeting including emerging conclusions and recommendations) can be found in the Chair's report to the GEF Council. • Recommendations and conclusions resulting from the review: December 2012 **Expected delivery:** February 2013
XC#7	**Promoting Climate Resilience in GEF Land Degradation, Biodiversity, SFM/REDD+ and CC/LULUCF, International Waters, and Chemicals Focal Area Projects and Programs for sustained flow of GEBs** **Justification:** GEF projects are lacking robust framework for accounting and incorporating climate risks in the project design. STAP work to date includes advisory documents/tools on measures GEF projects can take to enhance climate resilience across the GEF portfolio (built on the results of STAP's work (GEF/C.39/Inf.18) and STAP contribution to the SPA evaluation (GEF/ME/C.39/4). It will be implemented in three stages over the course of 2 years: Phase 1: To review approaches and methods used by other institutions for identification and incorporation of climate risks and climate resilient measures at the project design stage followed by a workshop. Based on findings and results of the workshop, STAP and GEF Partners will assess whether and how to move forward with the subsequent phases. **Requested by:** STAP and GEF Secretariat	After completing Phase 1 and presenting results to the GEF partnership (GEF/C.39/Inf.18), STAP was requested to postpone activities under this component until further notice by the GEF Secretariat. GEF Secretariat is currently working on the technical details and operational modality of the potential climate resilience tool. STAP stands ready to assist in the process.
XC#8 (revised)	**Advisory paper on endocrine disruptors** **Review of policies, innovative interventions, technologies and constraints for reducing releases of endocrine disrupters to aquatic environments.** **Justification:** Endocrine disruptors are a wide group of chemicals of growing concern as having a significant impact on the aquatic environment. The STAP advisory document responds to a request from the GEF Secretariat. The study will consider the range of sources of the endocrine disrupting chemicals, how the regulatory and business communities can be engaged in developing solutions, including 'polluter pays' and other economic strategies. This advisory paper should address all release scenarios and environmental pathways for endocrine disrupting chemicals, not only waters, in order to properly serve the cross-focal area concern of this class of substances.	The work under this component was postponed until finalization of the ECMI global prioritization work, now published (http://www.stapgef.org/ecmi). Endocrine disruptors did receive relatively high ranking. ECMI follow up work is planned at the national/regional level (see POPs#6 below) and this work is planned to be covered by this element in the work programme.
XC#11	**Scientific advice to GEF and CBD SBSTTA on marine debris** **Justification:** Emerging evidence on the geographical distribution and scale of marine debris and its multiple impacts on human health, marine biodiversity, transport of persistent organic pollutants, endocrine disrupting and other chemicals, as well as impacts on marine transportation and tourism and economies, particularly those of small island states, suggests that marine debris is a significant and growing problem. **Requested by:** STAP Panel, CBD Secretariat, UNEP, FAO	Completed. Final report is published: Secretariat of the Convention on Biological Diversity and the Scientific and Technical Advisory Panel—GEF (2012). *Impacts of Marine Debris on Biodiversity: Current Status and Potential Solutions*, Montreal, Technical Series No. 67, 61 pages is available electronically at: http://www.cbd.int/ts/ The report is distributed at the CBD COP-11 and is used to inform deliberations at the COP.

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		In addition, STAP is collaborating with the UNEP Office for Northern America in organizing a workshop focused on solutions in support of the Global Partnership on Marine Litter and CBD objectives To be held in Washington, DC in December 2012.
XC#12	**Scientific advice to GEF on impacts of urbanization on the delivery of GEBs** **Justification:** Half of humanity now lives in cities and within the next two decades 60% of the world's population will reside in urban areas. Urban growth is the highest in the developing world, Cities offer major opportunities to reduce environmental pressures, but if not properly managed can represent ever increasing threat to the global environment (GEBs). STAP's assessment of environmental impacts and opportunities of urbanization will help to inform GEF project implementation and contribute to the development of GEF-6 strategies to properly capture opportunities and avoid negative impacts on GEBs associated with expanding urban environments. **Requested by:** STAP Panel	Development of TORs delayed in favor of other STAP inputs and coordination of the STAP Meeting in concert with the Planet Under Pressure 2012 Conference, workshop. An Information Document will be prepared as an input towards GEF 6.
XC#13	**STAP-CBD Technical Report (Advisory Document) on marine spatial planning** **Justification:** This work is responding to para 75 of CBD COP-10 decision X/29 on marine spatial planning and aims to compile and synthesize available information experiences and use of marine spatial planning, in particular on ecological, economic, social, cultural and other principles used to guide such planning and the use of area-based management tools. The continuing work on MSP will build on the outcomes of the report prepared for CBD SBSTTA-16 as a part of STAP WP FY12 and will be extended to specific guidance on the application of MSP to GEF transboundary water projects Supports all SOs of the IW focal area and BD SO2 **Requested by:** CBD Secretariat, STAP Panel	Completed. The report published in the CBD Technical Series No. 68 "Marine spatial planning in the context of the Convention on Biological Diversity" was launched at the CBD COP-11 held in Hyderabad, India, from 8 to 19 October 2012[11]. Initial findings of the Report were presented at the 16th CBD SBSTTA meeting held in Montreal, Canada, 30 April - 5 May 2012 and were used to inform a number of recommendations on marine spatial planning for the decision at CBD COP-11, namely *Recommendation XVI/6* on marine biodiversity: marine spatial planning and voluntary guidelines for the consideration of biodiversity in environmental impact assessments and strategic environmental assessments in marine and coastal areas[12].
Biodiversity		
BD#6	**A case study methodology** for application in GEF-5 for implementation of LO1; **Technical advice** on the application of the case study methodology; and Analysis of the results of case studies. **Justification:** Requested by GEF Secretariat (Note – from FY 12, delivery delayed due to sabbatical leave of former BD Panel Member leading this work)	• STAP advice on case study design. • STAP participation in relevant technical meetings and missions. • Analyses of case study and learning mission results.
BD#7	**A review of the literature** that synthesizes global experience with the following question: "What has been the impact of protected areas in GEF-recipient countries on human welfare in neighboring communities, and under what circumstances has the impact been positive?" **Justification:** Requested by GEF Secretariat Supports LO2 of BD Focal Area Strategy	• TORs designed and reviewed – May 2011; • Assessment of possible reviewers undertaken and contracts established – May 2011 – Dec 2011 • Work initiated – February 2012 • Initial draft report expected Nov. 2012 **Expected Delivery of final report:** September 2013
BD#9	**IPBES** – Participation in planning group and plenary meetings; Participation in refining the terms of reference of individual assessments, contribution to specific assessments.	• Preparatory meetings – June, August 2011 • Preparatory meeting – October 2011 • First plenary meeting – Jan. 2013

[11] Secretariat of the Convention on Biological Diversity and the Scientific and Technical Advisory Panel —GEF (2012). *Marine Spatial Planning in the Context of the Convention on Biological Diversity: A study carried out in response to CBD COP 10 decision X/29*, Montreal, Technical Series No. 68, 44 pages. Available electronically at: http://www.cbd.int/ts/

[12] Available at: http://www.cbd.int/recommendation/sbstta/?id=13055.

ACT. Nr.	*Output / Product*	*Status as of November 2012*
	Justification: GEF providing financial resources for IPBES; ensure assessments are of relevance to GEF focal area programs.	**Expected delivery:** Ongoing until end FY 2013
Climate Change[13]		
CC#6	**Methodology for measuring the GHG impact of energy efficiency and renewable energy GEF projects** **Justification:** The update of the existing GEF GHG methodology for energy efficiency and renewable energy projects (GEF/C.33/Inf.18) is urgently needed. The study will provide gap analysis of the existing GEF methodology and others available outside the GEF tools, develop an algorithm for calculating the GHG impacts of EE and RE projects and provide sufficient information on the development of baselines and GHG reporting. Specific efforts will be taken to account for impacts of capacity/institutional building activities and co-benefits. **Requested by:** GEF Secretariat	One workshop was held in February 2012 to discuss draft report and seek comments on the direction of the methodology from the GEF Secretariat and GEF Agencies. The draft methodology benefited from the review by GEF Secretariat and GEF Agencies. The final methodology is expected to be completed in December 2012 and be presented to the GEF Council in May 2013. **Expected delivery:** End of 2012
CC#7	**Technical Report on climate change mitigation science** **Justification:** Climate change science is a dynamic field with multiple assessment and studies coming every year. The STAP report will provide an authoritative review of the most up-to-date scientific evidence on climate change mitigation with specific recommendations for GEF-5 and beyond towards framing climate change strategies for GEF-6. **Justification:** requested by the STAP	Completed (please see GEF/STAP/C.43/Inf.03) Whole report will be published until December 2012 and will be available electronically and as a hard copy.
CC#8	**Methodology for measuring the GHG impact of biomass for energy projects** ***Justification:*** The work continues STAP's efforts supporting GEF climate mitigation projects in improving GHG ex-ante accounting. This activity aims to develop a GHG accounting methodology for GEF projects using biomass sources for energy generation. The methodology will utilize life-cycle approach and will be built on principles already used in GEF transportation and EE methodologies. The activity will develop an algorithm for calculating the GHG impacts of biomass projects and provide sufficient information on the development of baselines and GHG reporting. ***Requested by:*** *GEF Secretariat*	This Work Program activity is planned to be dropped from the Work Program after discussing priorities with the GEF Secretariat and GEF Agencies at the biannual STAP meeting in September 2012
CC#9	**Technical Report on climate change mitigation profiles re: meeting UNFCCC target of warming stabilization below 2°C** ***Justification:*** Proposed activity extends STAP's work which reviewed climate mitigation science (CC#7) and proposed a range of recommendations for the GEF on its potential contribution to transformational change towards 2°C target. This work will expand these conclusions further by exploring and building regional mitigation profiles of measures and technologies to reach this target. The work completes STAP's technical advisory package for the formulation of GEF-6 climate mitigation strategy. ***Justification:*** *requested by the STAP and GEF Secretariat*	TOR, workshop, Technical Report: Oct 2012-Jun 2013 **Expected delivery:** June 2013 After completion of Activity CC#7, STAP is planning to organize consultation with the GEF partnership in November-December 2012 on the most effective follow up to Report's recommendations including necessity to develop regional mitigation profiles or focus on other priorities. A range of potential products was discussed at the STAP meeting in September 2012. Revised CC#9 activity will be submitted for the next STAP WP.
International Waters[14]		
IW#8	**Global Nitrogen Cycle** Global nitrogen cycle disruption is considered the second most	STAP will monitor ongoing scientific processes such as the Global Partnership on Nutrient

[13] Will be reviewed by incoming Panel Member for Climate Mitigation
[14] Will be reviewed by incoming STAP Panel Member for International Waters

ACT. Nr.	*Output / Product*	*Status as of November 2012*
	threatening Earth system process after loss of biodiversity (Rockstrom's et al, 2009). Following from recent STAP advisory work on hypoxia, an improved understanding of the causes, impacts, and strategies to address global nitrogen cycle disruption is needed – to assist GEF Partners in providing more targeted and efficient support to countries to reverse ongoing trends. ***Justification:*** GEF Secretariat request	Management (GPNM) and GEF-related initiatives, and will respond to requests from GEF partnership if needed.
IW#9	**The Political Economy of collective action in an IW Context (issues paper)** **Justification:** STAP introduces new activity to be focused on political economy of shared transboundary freshwater and marine systems. The proposed STAP Information Paper will be exploring inter-linkaged between management of transboundary systems and increasing global regionalization looking at incentives, drivers, outlooks in a regional context and value of water systems or lack of agreed environment/sustainability objectives at the regional level and the role of the GEF in strengthening GEBs through enhanced regional collaboration on transboundary systems for the benefit of regional socio-economic development. This activity supersedes proposed earlier work in this area	• Panel membera and STAP Secretariat to develop TOR – November 2012, • STAP Secretariat to set up and manage contracts – November 2012 – May 2013 • Organize review workshop – tentatively, February 2013; • Final report – May 2013 to be presented to GEF Council in June 2013
Land Degradation[15]		
LD#1	**Advice on organic matter and its role in carbon sequestration** **Justification:** The GEF-5 strategy calls for maintaining or improving flows of agro-ecosystem services to sustain livelihoods of local communities (Objective 1). The expected project outputs include reduced greenhouse gas emissions from agricultural (crop and livestock) activities. Through this activity, STAP plans to develop advice on organic matter and its role in carbon sequestration, and water and nutrient use efficiency. In particular, STAP seeks to highlight this important relationship by synthesizing the scientific knowledge, and build on project developers' knowledge and expertise in establishing a scientific rationale of how soil organic matter contributes to multiple global environment benefits and ecosystem services. Therefore, this activity will not overlap with the Carbon Benefits Project which aims to develop a methodology to model, measure, and monitor carbon and greenhouse gas benefits in GEF projects. The advice is expected to contribute to designing projects that target agroecosystem services and livelihoods (LD Objective 1). **Linked to:** LD Objective 1 Maintain or improve flows of agro-ecosystem services to sustain livelihoods of local communities	• STAP led a workshop on soil organic carbon and global benefits in September 2012. Further information about the workshop can be found in the Chair's report to the GEF Council. **Final report – June 2013**
LD#2	**A scoping study on valuing land-based ecosystem services** **Justification:** The GEF-5 (and GEF-4) strategy is based on the Millennium Ecosystem Assessment (MA). However, the scientific and policy communities recognize the MA falls short of valuing ecosystem services (biological, physical, and social changes). Considering further what analytical tools could be used to monitor and evaluate ecosystem services delivered through SLM interventions, can help strengthen the land degradation's portfolio rationale of delivering global environment benefits. Furthermore, monitoring and evaluating ecosystem services can contribute to measuring the portfolio's results.	This activity is on-hold until the STAP FY2014.

[15] Will be reviewed by incoming STAP Panel Member for Land Degradation

ACT. Nr.	*Output / Product*	*Status as of November 2012*
	Contribute to UNCCD's Scientific Conference (2013) on "Economic Assessment of Desertification, sustainable land management and resilience of arid, semi-arid and dry sub-humid areas". **Linked to:** UNCCD COP 10 and UNCCD's Second Scientific Conference	
Chemicals Management		
POPS#4 [16]	**Advisory Document on POPs monitoring and measurements** **Justification:** Developing countries have significant capacity gaps in monitoring and measurements of POPs, particularly recently added to the Stockholm Convention POPs. With the increased number of POPs regulated by the Convention, these gaps may become detrimental for those countries to comply with Convention requirements. Two activities will be implemented: - Commissioning and conducting desktop study proposing the most cost-effective analytical and policy tools for POPs analyses and monitoring including new POPs; - Advisory services provided to UNIDO GEF project #4410 **Requested by:** GEF Secretariat, STAP and UNIDO	This has been delayed following discussions with GEF Secretariat at the end of June 2012 on signals for reprioritization from the Convention level. It is now on hold until these prioritization activities have been completed.
POPS#5	**Guidance on Mercury impacts and the most critical interventions needed to combat the environmental impacts of mercury releases.** **Justification:** As the Mercury INC process nears completion; there should be an overall assessment of the known science, and what form potential interventions might take to mitigate the occurrence of releases and impacts of mercury. In addition, other emerging issues such as E-waste, should be scoped for potential GEF interventions. Primary outputs: - A desktop study and whitepaper on mercury, proposing the most critical and cost-effective areas for action - A desktop study and advisory document on E-Waste, highlighting the scale of the problem, latest data trends, and key areas for investment to mitigate the generation and trafficking of e-waste.	Potential experts for this paper have been sourced, though there needs to be finalization of the content of the Mercury work. The GEF Secretariat indicated that the STAP should seek to look at "filling the gap" of the sectoral work of the Global Partnership on Mercury, and perhaps focus on synergies work (eg reducing GHGs alongside mercury elimination in smelting processes). There was also a request to see prioritization assistance for countries in assessing how to manage mercury across sectors at national/regional level (see POPs#6 for details on this). STAP was informed that E-waste should be delayed in favour of the mercury work, given the impending Mercury convention**. A white paper on Mercury should be prepared for the joint Chemicals COP/MOP in April-May 2013**.
POPS#6	**A Quantitative Tool for Emerging Chemicals Analysis and Prioritization at the national/regional level** **Justification:** As it stands, there is a relative wealth of data in developed countries as relates to chemical impacts, norms, and overall state of the science. Developing countries are left to extrapolate from developed country datasets, and assume priorities that may not in fact be supported by on the ground data. Still, with the lack of resources in many countries for environmental monitoring, it is not likely that there will be a chance to catch up with developed countries any time soon. Therefore, other indicators and data might be utilized to elaborate on priorities, based on the prevalence of chemicals in countries, frequency of use, interactions and behavior in the environment, and risk of release. As follow-up to the work done under XC#6: Science-based document on emerging chemicals in developing countries**,** the quantitative process used to generate the emerging chemicals data by the STAP will be examined to inform development of a tool that might be used at national (and/or regional) level to help countries incorporate real and verifiable data into the generation of chemicals management priorities. Primary	With the completion of the Emerging Chemicals Management Issues (ECMI) global prioritization work[17], the STAP has received a request to apply this to chemicals management prioritization at national level, and to help apply it to individual chemicals with diverse uses (eg prioritization of management priorities for the use of mercury across sectors). Preliminary discussions for elaboration of the TOR have begun with SETAC (the STAP's partner in the ECMI work), with intent to meet with SETAC in November 2012 to help finalise elements for the TOR and get contracting underway to generate and test this tool. **Expected delivery:** end 2013

[16] In FY12, STAP will also continue working on the finalization of the two advisory documents from STAP WP FY10 in the area of chemicals and POPs: XC#6: Science-based document on emerging chemicals in developing countries and policy advice for GEF-5 and beyond; POPs#1: Practice guide on combustion and emerging non-combustion technologies for POPs in developing countries (consists of two parts).

[17] The final ECMI Advisory document was published in July 2012 (http://www.stapgef.org/ecmi)

ACT. Nr.	*Output / Product*	*Status as of November 2012*
	output:- • A quantitative, low tech, tool to help developing countries identify and prioritize chemicals intervention needs, thereby better equipping them to make appropriate allocation of scarce national resources, and to make better interventions and requests at the Convention and international funding level.	
Adaptation		
C#1	**Objective:** Screen the LDCF/SCCF proposals **Outcome:** Strengthen the scientific and technical foundations of the LDCF/SCCF proposals	On-going. Through this activity, STAP will screen the full-size projects under the LDCF / SCCF. This includes proposals funded jointly with the GEF trust fund. STAP's screen report will be made available to the Agencies and GEF Secretariat.
CCA#1	**National Adaptation Plan Process** **Justification:** *Background:* At its seventeenth session, the Conference of Parties to the UNFCCC (COP 17) adopted a decision on national adaptation plans (NAPs). With respect to financial arrangements for the formulation and implementation of NAPs, the decision: *Requests* the Global Environment Facility, as an operating entity of the financial mechanism, through the Least Developed Countries Fund, to *consider how to enable activities for the preparation of the national adaptation plan process for the least developed countries* Parties, while maintaining progress for the least developed countries work programme, which includes the national adaptation programmes of action; Responding to the COP guidance, the GEF Secretariat as the manager of the LDCF and the SCCF seeks scientific expertise of the STAP in ensuring that the NAP process and the consequent investments, for LDCs and all developing countries, are based on the up-to-date scientific information available.	STAP with input from the GEF Secretariat and the GEF Agencies will determine steps to implement this activity in November/December 2012.
CCA#2	**Adaptation in Multi-Trust Fund Projects** **Justification:** *Background:* With a growing number of multi-trust fund projects that draw resources from focal area STAR allocations as well as LDCF/SCCF, it has become important to devise a methodology that can be followed during project design by the agencies and during review by the GEF Secretariat to make sure that the project delivers adaptation benefits.	STAP with input from the GEF Secretariat and the GEF Agencies will determine steps to implement this activity in November/December 2012.