Scientific and Technical Advisory Panel

Report of the Chairperson of the Scientific and Technical Advisory Panel (STAP) to the 51st GEF Council

INTRODUCTION

1. The following report is an update on the implementation of the STAP Work Program that the Panel wishes to bring to the Council's attention. The report covers the period since STAP's last report to the Council, from June 2016 until the present.

2. At the time of posting, the Panel was preparing to meet with invited science and policy experts in the Our Global Commons – International Dialogue (Oct. 11 to 13) in Washington, D.C., convened by the GEF Secretariat to review the findings of current Earth system science, challenges to maintaining the stability of these systems, and future strategies to achieve this. At the same time, the Panel is now mobilizing to undertake its own broad science review for the upcoming GEF Assembly, taking place in the first half of 2018. STAP has accelerated the traditional timetable for preparing this report, in order to ensure that findings and recommendations from our efforts are available to the GEF Council and Donors when the GEF-7 Replenishment Process begins in the second quarter of 2017.

3. We are pleased to present the executive summary of our most recent report "Governance Challenges, Gaps and Management Opportunities in Areas Beyond National Jurisdiction (ABNJ)" (GEF/STAP/C.51/Inf.02). We believe this report is timely in that it specifically addresses the opportunities associated with improving governance, conservation, and management efforts in what is effectively a global commons extending over almost half of the surface area of the Earth. In particular, STAP is optimistic that this review will assist in facilitating a discussion on how best the GEF Partnership can play a constructive, leadership role in this increasingly important space. The science is clear that ocean health and resilience is a critical prerequisite to maintaining overall earth system stability. The Panel believes that the GEF Partnership is well positioned to play a leadership role in environmentally sustainable development in this region which would benefit both the environmental and development agenda as reflected in the Sustainable Development Goals.

4. In addition, STAP is also pleased to present the summary of our report "Measuring, Monitoring, and Evaluating Adaptation to Climate Change" (GEF/STAP/C.51/Inf.03). It describes the Climate Change Adaptation (CCA) landscape in the context of monitoring and evaluation (M&E), summarizing key challenges associated with M&E in this space. The paper emphasizes the importance of orienting M&E toward learning, and concludes with a list of recommendations for approaching M&E in climate adaptation investments to effectively serve learning and future investments in a manner that will improve results over time.

5. Ongoing improvement in knowledge management (KM) systems in the GEF continues to be a priority for the Panel. STAP serves on the GEF Inter-Agency Advisory Group on Knowledge Management, and is working to develop best practice guidance on building knowledge strategies into project design. A report on progress in this effort will be presented to the KM Advisory Group which meets at the conclusion of the 51st Meeting of Council on October 27, 2016.

6. The Panel is preparing for a busy round of Convention Meetings over the next two months, specifically with UNFCCC CoP 22 in Marrakech and CBD CoP 13 in Cancun. STAP will host side events on recent work in the areas of resilience planning[1] and the socio-economic effects of protected areas[2] respectively. In addition, the Panel is also working closely with the Independent Evaluation Office in providing review comments on the approach papers for a number of evaluation exercises that will contribute to OPS-6, for example, "Evaluation of Multiple Benefits from GEF Support and the Governance Evaluation". STAP also looks forward to making substantive contributions to these evaluations as they progress over the coming months.

7. Finally, as outlined in previous updates to Council, over the balance of 2016 and early into 2017, STAP will continue to invest in supporting development of the Integrated Approach Pilots (IAPs) where requested, and complete the implementation of our ongoing Work Program activities highlighted in the annex to this report.

8. This report includes the following sections:

(a) Observations on STAP's Screening of the GEF Work Program

(b) Governance Challenges, Gaps and Management Opportunities in Areas Beyond National Jurisdiction

(c) Measuring, Monitoring and Evaluating Adaptation

(d) Ongoing Work:

i. Green Chemistry - A holistic approach to curtailing Marine Litter from Plastics

ii. Mercury - Fate and movement

iii. Biodiversity, protected areas, and human well-being

iv. Knowledge management – reviewing best practice for projects

v. STAP contributions to the GEF replenishment process

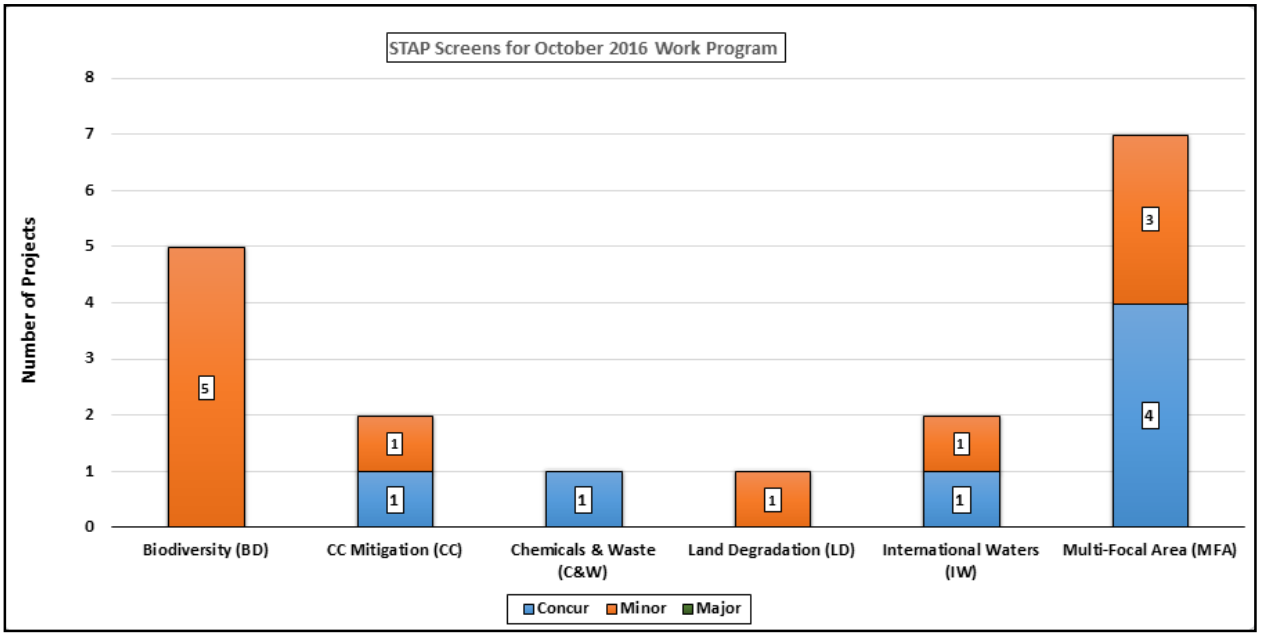
[1] This will be based on our recent RAPTA Report – "Designing Projects in a Rapidly Changing World" presented to the last Council Meeting (http://www.stapgef.org/the-resilience-adaptation-and-transformation-assessment-framework/).

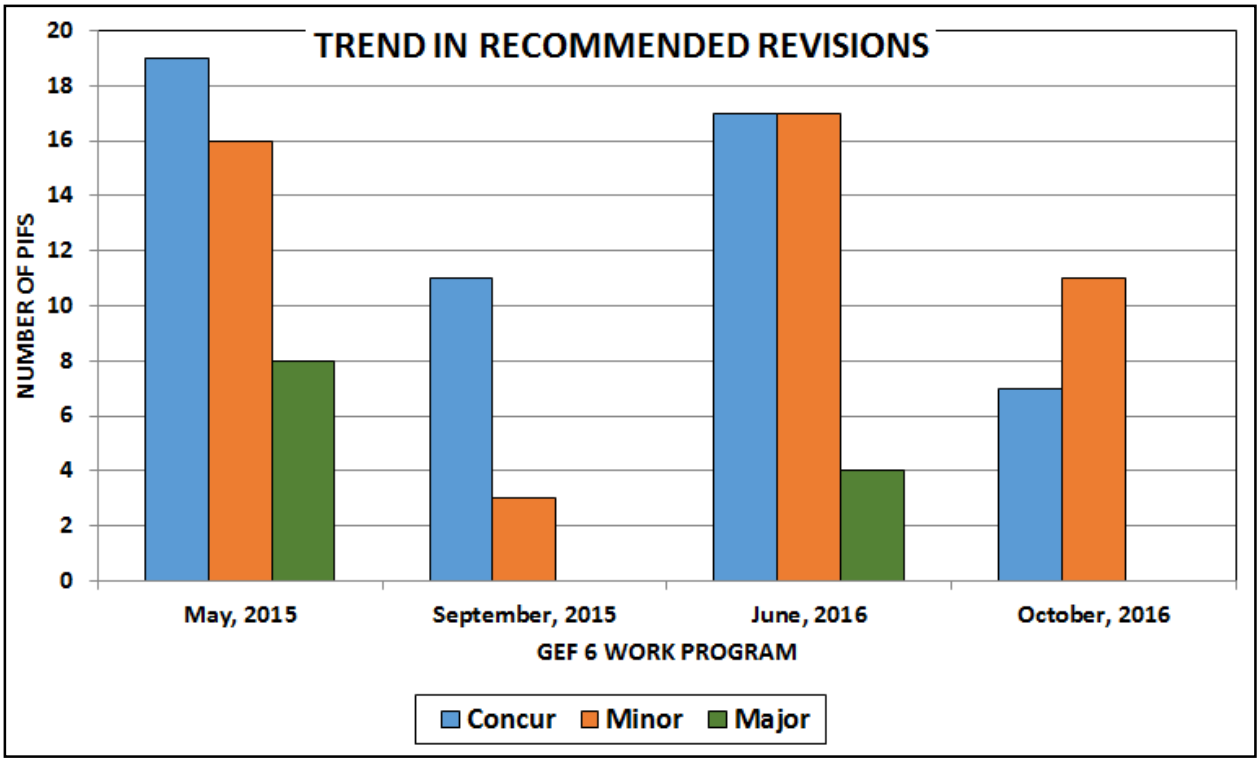
[2] STAP is preparing a follow up report, focused on methods, to its recent work on the Socio-Economic Effects of Protected Areas http://www.stapgef.org/assessing-the-effects-of-terrestrial-protected-areas-on-human-well-being/

(e) Revised STAP Work Program

OBSERVATIONS ON STAP'S SCREENING OF THE GEF WORK PROGRAM

9. STAP would like to highlight the program "Global Opportunities for Long Term Development of the ASGM Sector- GEF Gold", with regard to design, clear objective, incremental argument and theory of change. This program seeks to address, through private and public inter-institutional collaboration, the complex issues affecting mercury use in the ASGM sector, including aspects of markets, informality of the sector, and information needs. Clarity of design carries through to the child projects, which are in turn clearly aligned with the programmatic framework, and include mechanisms for information and knowledge capture and exchange. The following tables indicate the results of STAP screening for the most recent work program as well as cumulative to date (respectively).





GOVERNANCE CHALLENGES, GAPS AND MANAGEMENT OPPORTUNITIES IN AREAS BEYOND NATIONAL JURISDICTION

10. The objective of the STAP Information Paper (GEF/STAP/C.51/Inf.02)[3] is to provide a comprehensive mapping and description of the current regulatory landscape of the ocean areas beyond national jurisdiction (ABNJ), and to identify potential gaps and weaknesses in the system and its management. The starting point of this exercise is the 1982 UN Convention on the Law of the Sea (UNCLOS), supplemented by a review of other key conventions and institutions that have mandates in relation to activities in ABNJ. The study also provides an overview of global commitments to conservation and sustainable use of the ocean and marine ecosystems to identify opportunities to enhance implementation through targeted action in ABNJ.

11. Governance in areas beyond national jurisdiction is currently at a political crossroads, in view of the recently initiated UN General Assembly process to develop an international legally binding instrument under UNCLOS on the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction (BBNJ)[4]. This is a potentially very important step towards improving coherence, cooperation, and coordination as well as filling certain substantive voids discussed in this report. However, capacity and technologies to manage

[3] The Executive Summary of the Information Paper is presented for the 51st Council Meeting. Full paper will be available in electronic and printed form by the end of 2016.
[4] UN General Assembly Resolution A/69/780 at: http://www.un.org/ga/search/view_doc.asp?symbol=A/69/780

human impacts in ABNJ in an integrated manner are still lacking, particularly in developing countries and small-island developing states.

Key messages to the GEF partnership

12. This study points towards a number of key activities that the GEF partnership could consider going forward in the context of conservation and management of Areas Beyond National Jurisdiction (ABNJ). In light of the recently concluded UNFCCC Paris Agreement[5] on Climate Change, the UN 2030 Agenda for Sustainable Development "Transforming Our World" [6] and specifically its goal #14 ('Sustainable use of the oceans, seas and marine resources') and the commencement of the UN negotiations for a new international legally binding instrument for the conservation and sustainable use of marine biodiversity beyond national jurisdiction, new actions are needed to support these global goals, targets and commitments. This report, although not an exhaustive analysis, suggests a number of promising areas:

(a) **Enhance knowledge about ABNJ**, inter alia, by increasing marine scientific research that can contribute to the study, conservation, and sustainable use of marine biodiversity in ABNJ and by broadening the understanding of the interconnections between land-based activities and ABNJ (e.g., ocean acidification, marine litter) and their socio-ecological linkage[7]. This capacity-building could be undertaken as part of existing and new initiatives to improve conservation and management of distinct areas in ABNJ. It could include financial support for technical assistance and training to improve the ability to collect exchange and analyze key data relevant to ocean health, resilience and productivity, to undertake marine scientific research, and to monitor, control and enforce environmental rules and regulations. Knowledge should be made accessible in a manner similar to the current IWLEARN[8] and LME LEARN[9] platforms.

(b) **Support the collective identification of key environmental projects in ABNJ** such as those involving ocean monitoring, observatory infrastructure, and efforts that reduce impacts of pollution in ABNJ from any land-based, vessel-based or off-shore sources. Measures should start from the perspective of the impact of pollution on ecosystems in ABNJ and hence be multi-sectoral in nature. Consideration could be given to a long-term ocean sustainability finance mechanism to provide a "blue finance hub" for knowledge, skills, and project preparation support that promote safe and sustainable use of resources in the high seas and the seabed taking into account cumulative environmental impacts.

[5] FCCC/CP/2015/L.9, 12 December 2015
[6] United Nations General Assembly resolution A/RES/70/1
[7] Granit et.al 2016. A Conceptual Framework for Governing and Managing Key Flows in a Source-To-Sea Continuum. A GEF STAP Information Paper. GEF/STAP/C.50/Inf.05/Rev.01
[8] http://iwlearn.net/
[9] The Global Environment Facility (GEF) International Waters Learning Exchange and Resource Network which is currently linking a new Large Marine Ecosystem (LME) Learning Network.

(c) **Support development of innovative area-based tools for integrated ecosystem protection-based management and a blue economy in ABNJ**, in particular approaches such as marine protected areas and large scale marine spatial planning to address the combined impacts of multiple stressors on marine biodiversity. In addition, enhance the capacity of relevant large marine ecosystem (LME) management bodies, Regional Seas Conventions and Action Plans (RSCAPs), and Regional Fisheries Management Organisations (RFMOs) to act as platforms for integrated conservation and management of areas beyond national jurisdiction that are adjacent to their existing regional mandates.

(d) **Enhance the ability of flag states, coastal states and port states to implement their existing rights and obligations** under UNCLOS and other relevant international instruments, with a particular focus on protection of the marine environment and conservation of all living marine resources and biodiversity in ABNJ. The role of environmental principles in ABNJ could be particularly highlighted. Other jurisdictional bases for regulating and enforcing activities in ABNJ (through asserting jurisdiction over nationals, ports, markets financial flows etc.) could be explored. Cooperation on legal mechanisms to address compliance and enforcement issues in ABNJ could be promoted.

(e) **Build technical capacity amongst Small Island Developing States (SIDS)** and other developing countries to participate actively in ABNJ management and governance negotiations, and resulting frameworks, with a view towards ultimately sharing benefits from sustainable use of resources in areas beyond national jurisdiction. This would include developing integrated conservation and management activities to address the interconnectedness of ABNJ and the livelihoods of coastal communities (e.g., by sustainably managing species migrating between coastal areas and ABNJ) and addressing key drivers of habitat degradation and species decline within and beyond national jurisdiction. Support for initiatives to help deliver management and enforcement capabilities of flag and port states, including implementation of the Agreement on Port State Measures to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing and improved traceability against overfishing.

MEASURING, MONITORING, AND EVALUATING ADAPTATION

13. Since 2001, the Global Environment Facility (GEF) has programmed over $1 billion USD toward climate change resilience, adaptation, and disaster risk reduction. Monitoring and evaluation (M&E) plays an essential role in understanding where to focus investments, what is working and why, and how to learn from experience to maximize impact. M&E can (and should) support strategic and effective investments in climate change adaptation. Despite 15 years of climate change adaptation project implementation experience at the GEF and elsewhere, the need for a comprehensive look at climate change adaptation M&E has only gained broader attention in the last few years.

14. In this context, the GEF STAP and the UNEP Global Programme of Research on Climate Change Vulnerability, Impacts and Adaptation (PROVIA) commissioned a series of discussion papers which were completed in 2015. These have since been consolidated and expanded upon in a new synthesis report which will be available in its entirety before the end of 2016. This synthesis begins with a brief overview of basic M&E concepts, given that these are not widely understood and can easily be confusing. It describes the Climate Change Adaptation (CCA) landscape with respect to monitoring and evaluation in this space, citing examples of CCA M&E frameworks and of M&E in practice at different levels (program, national, project). It also summarizes some of the well-known challenges associated with CCA M&E, as these are a foundational point from which to proceed, and cannot be ignored.

15. Secondly, the paper emphasizes the importance of orienting M&E toward learning, which ultimately requires a paradigm shift from M&E for accountability of outcomes to M&E that is accountable to learning. Although M&E typically is designed to serve two overarching functions, accountability and learning, traditional development M&E has emphasized accountability and, to some extent, retrospective learning through ex-post evaluations and other after-the-fact reviews. For CCA, however, there is a growing emphasis on using M&E for ongoing learning and improvement during the course of an intervention's implementation. Learning underpins adaptation, and thus designing for adaptation requires designing for learning. Yet learning is not embedded into M&E, and in fact learning requires a different approach, set of disciplines, and culture foreign to many M&E practitioners. Embedded throughout this paper is a call for a fresh approach to M&E, which could, over time, shift the paradigm from M&E, to Monitoring, Evaluation and Learning (or MEL).

16. Finally, the paper further explains why and how the degree of complexity inherent to the CCA context and targeted interventions should inform what M&E (and learning) approaches are needed, lessons from M&E in climate-vulnerable sectors, and insights into mainstreaming gender into CCA M&E (a cross-cutting issue). The synthesis report, which will be available in final format by the end of 2016, concludes with a reflection on key themes and a summary list of recommendations for approaching CCA M&E to effectively serve learning and improvement in a manner that will improve results over time.

ONGOING WORK

Green Chemistry - A holistic approach to curtailing Marine Litter from Plastics

17. This work began in October 2015, as a follow-up to the STAP 2011 advisory document "Marine Debris as a Global Environmental Problem: Introducing a Solutions-Based Framework focused on Plastics"[10], where the Panel identified a strong intersection between three of the GEF's Focal Areas in this effort - Chemicals, Biodiversity, and International Waters - including private sector engagement. With this in mind, effort on this second paper launched with a view to showcasing how innovations in Green Chemistry could generate innovations to provide

[10] http://www.stapgef.org/stap/wp-content/uploads/2013/05/Marine-Debris.pdf

strategies for implementing the principles of the circular economy[11] – with particular emphasis in global plastics management. Innovation in this domain has been primarily in academia and the private sector – including many partners operating at the nexus of innovation, entrepreneurship and plastic pollution with focus on materials, manufacturing and product design.

18. This paper is in peer review and STAP expects to finalize by the November 2016. It will present findings which have arisen through discourse with a global network of partners including public and private sector organization drawn from science, policy, academia, investment banks, and businesses involved in technology commercialization. The paper is a first attempt at a systemic view of the entire plastics management supply chain – beginning upstream, moving through consumption pathways, and finally exploring those innovations that have the greatest potential for material flow transformation with minimum negative economic and environmental externalities. The innovations are examined through the lens of green chemistry, economic, and business benefits, to weigh the pros and cons of various innovative solutions and to try to showcase where the GEF can help incentivize further innovation, investment, and help lay the foundation to environmental and economic viability.

19. In terms of materials innovations, the paper explores bio-catalysts, natural polymers, and biopolymers such as thermoplastic starch, polyhydroxyalkonoates (PHAs) and polyhydroxybuturate (PHB) which are biosynthesized and 100% biodegradable; treatments of cellulose (including bagasse, nanocrystalline cellulose and lignin) for packaging; as well as other alternative materials that are emerging but for which there may still be need for additional testing. The important role of the business and investment community is also highlighted is also highlighted. The paper also puts forward a waste valuation format for rapid assessment of potential plastics management interventions, and seeks to establish some comparison of cost and performance of various alternatives.

20. STAP has been presenting aspects of the evolving work at such fora as the United Nations Environment Assembly in May 2016, where developing country representatives in particular welcomed the evolving work in this area.

[11] There are many definitions of the circular economy in the literature, often with different emphases based on whether being defined from a finance, industrial or sustainable production and consumption perspective. A good neutral definition can be seen from the Waste and Resources Action Programme (WRAP UK), which states 'A **circular economy** is an alternative to a traditional linear **economy** (make, use, dispose) in which we keep resources in use for as long as possible, extract the maximum value from them whilst in use, then recover and regenerate products and materials at the end of each service life." The McKinsey Group offers further clarification in stating that the "… **circular economy** aims to eradicate waste—not just from manufacturing processes, as lean management aspires to do, but systematically, throughout the life cycles and uses of products and their components. Indeed, tight component and product cycles of use and reuse, aided by product design, help define the concept of a circular economy and distinguish it from the linear take–make–dispose economy, which wastes large amounts of embedded materials, energy, and labor".

Mercury: Fate and movement

21. Phase 1 of this work is drawing to a close, with STAP having worked closely with the Minamata Convention Secretariat and the UNEP Mercury Partnership to develop consensus on data sharing with Parties, researchers, database holders and potential users as to the form and function the Mercury Portal on the UNEP Live Platform should take. The pilot data being utilized is that of the Global Biotic Mercury Synthesis (GBMS), which consists of biotic mercury data compiled by the Biodiversity Research Institute (BRI) from published literature and governmental sources into a single database. Data for this report have been compiled from 315 different references, representing 81 countries, 722 unique locations, and 3,238 averaged mercury samples from 143,831 total individual organisms, and includes details about each organism sampled, its sampling location, and its basic ecological data. From each reference, mercury concentrations are averaged (using arithmetic means) for each species at each location. Mercury concentrations in the database represent muscle tissue on a parts per million (ppm), wet weight (ww) basis. Where appropriate, mercury data on a dry weight basis are converted to ww using a percent moisture content of 80 percent. Samples analyzed in tissues other than muscle are converted to muscle tissue.

22. Data from the GBMS database can be used to understand spatial and temporal patterns of mercury concentrations in biota, and can also help establish baseline concentrations for a particular species and identify ecosystems sensitive to mercury inputs[12]. There has been significant focus on operationalizing the interfacing of the complete pilot data set to the UNEP Live Platform, with experimental, subset data transfers having taken place thus far to test functionality in UNEP Live. The terms of reference for the Communities of Practice and the data collection and management protocols are undergoing finalization, and the results of the survey carried out in early 2016 are being reviewed once more to help draw information that can be channeled into the design parameters of the pilot, as well as informing expansion into the next phase of the work where more data can be connected to and reflected in the platform. A beta version of the UNEP Live mercury portal has been established and will be circulated for testing and comment to help inform ongoing development and rollout:

http://pre-uneplive.unep.org/theme/index/16#.

Biodiversity, protected areas, and human well-being

23. STAP is developing operational guidance to assist the GEF Partnership to measure the socio-economic impact of GEF protected area project interventions in terms of positive and negative effects on local communities and the national economy. This is in line with the GEF Independent Evaluation Office's recent recommendation that: "GEF needs to expand benefit-sharing across a wider cross-section of the impacted local populations, to better mitigate the

[12] See "Mercury in the Global Environment – Understanding Spatial Patterns for Biomonitoring Needs of the Minamata Convention on Mercury http://www.briloon.org/uploads/BRI_Documents/Mercury_Center/Lo%20Res%20Final%20GBMS%20Booklet%20022916.pdf

unequal distribution of costs and benefits of PA management interventions, with the aim of reducing local pressures on biodiversity stemming from adverse local socioeconomic conditions." The GEF should also "… establish long-term partnerships for biodiversity and socioeconomic monitoring"[13].

24. In June 2016, STAP tested several methods in South Luangwa National Park (SLNP) in Zambia to better understand both the positive and negative impacts of a PA on local businesses and communities in an effort to maximize the former and minimize the latter. The following methods were tested by an international team of researchers:

(a) Financial analysis of Park income and expenditure to determine efficiency;

(b) Economic impact of visitor spending in terms of total economic impact, park income, taxes, upstream and downstream economic multipliers, local employment and charity;

(c) Focus groups and the Social Assessment of Protected Areas (SAPA) process, led by the International Institute for Environment and Development (IIED);

(d) The use of household livelihood, governance and capitals surveys to assess impact of Park relative to counterfactual locations.

25. STAP believes these methods could be tailored to GEF-supported protected area projects throughout the portfolio, and also help inform the practices and investments of other organizations in this space.

26. In September 2016, STAP presented initial findings from testing these methods at the IUCN World Conservation Congress (WCC) in Hawaii to obtain feedback from experts and practitioners from around the world. For South Luangwa National Park, initial findings indicate that financial viability of the Park has steadily increased due to added tourism revenue since the early 1990s, during which time donor funding has declined. Surveys with local businesses highlight the importance of direct local procurement for food, hardware, building materials, etc. in boosting the surrounding economy. In addition, local communities have benefitted from the existence of the Park though increased access to education and improvements in infrastructure. Some negative impacts include crop damage and resource access restrictions. Importantly, the process of testing methods, particularly the SAPA, has the added benefit of bringing together various stakeholders to discuss and analyze the findings, which can in turn help further actions to enhance positive impacts and minimize negative effects.

27. The methods tested in Zambia will be developed as a series of short policy briefs and a practical guidance document aimed at assisting GEF Agency managers and others to design, assess and report on the impact of protected area projects on communities and businesses through financial, economic and social analyses, as appropriate.

[13] Biodiversity Impact Evaluation - Support to Protected Areas and Protected Area Systems (2015).

28. STAP has also participated in virtual and face-to-face workshops to support the Global Wildlife Program which is managed by the World Bank. It is clear that the inclusion of experienced experts in this process is both necessary and helpful.

Knowledge management – GEF practitioner guidance document on mainstreaming knowledge management into project design

29. The GEF Knowledge Management (KM) Approach Paper (GEF/C.48/07/Rev.01) identified the main challenges faced by the GEF partnership in successfully capturing and exchanging knowledge across the GEF portfolio. Among them are gaps in knowledge capture and dissemination from project and program-level interventions. STAP's assessment (GEF/STAP/C.48/Inf.03/Rev.01) corroborated this conclusion and emphasized that at the design stage, GEF programs and projects typically provide relatively little evidence of systematic or cross project treatment of KM needs for impact. Most program and project evidence reviewed by the STAP also tended to contain little information concerning how knowledge products and services generated by projects were subsequently used. Moreover, baselines for KM products or services were typically inadequately specified, and dissemination pathways often missing.

30. To help address the above gaps, in May 2016 STAP commissioned the development of a **GEF practitioner guidance document on mainstreaming knowledge management into project design**. The longer-term objective of the guidance is to facilitate the capture, exchange and update of knowledge within and beyond the partnership. The guidance focuses on *upstream* advice to project developers on how to design GEF projects and programs with strong and effective KM elements taking into account the specific contexts of GEF recipient countries.

31. As part of the development of the practitioner's guide several interviews with project managers and those involved with GEF project design were conducted. Some of the challenges identified by respondents include the following:

- The inadequacy of the project preparation grants to allow for a fully developed baseline;
- The perception that the GEF is not willing to fund KM;
- The desire to provide and share lessons on how KM works in the field and an acknowledgement that what is provided through the GEF templates does not necessarily fully reflect what is being undertaken on the ground; and

32. The draft practitioner's guide incorporates findings from the interviews as well as respective research to identify different tools, methods, technologies, and practices that are being used in project-level KM globally. The guide brings together ideas from knowledge and experience available in other multilateral agencies, nonprofit organizations, the public and private sector and addresses the following main issues:

(a) Defining KM in the GEF context;

(b) Role of Theory of Change as a project learning tool and its potential use to support project-level KM;

(c) Comparative role of different stages in KM (knowledge creation, capturing, exchange, and update) during different stages of the GEF project cycle;

(d) Successful examples and case studies of KM practice in project settings (in the GEF and beyond);

(e) Recommendations and reference guide on how to monitor and evaluate KM efforts; and

(f) A compendium of relevant resources for further reading.

33. While the document is intended to provide those developing GEF projects and programs with a comprehensive guide to KM at the project and program design stage, the hope is that the guidance itself will help spark discussion across the GEF Partnership about providing *stronger support and incentives* to those at the country and regional level to facilitate the capture, exchange and update of knowledge for improved impact of GEF interventions.

34. The draft GEF practitioner guidance document will be presented and discussed with participants at the GEF Interagency Working Group meeting following the October 2016 Council meeting. Final guidance will be available for GEF partners at the beginning of 2017. STAP will disseminate the guidance document among GEF partners and is considering introducing the document at the GEF constituency meetings and other related GEF discussions with the recipient countries.

STAP contributions to the GEF replenishment process

35. Every four years, STAP delivers a report to the GEF Assembly identifying scientific and technical priorities which the Panel believe would be important for consideration in the GEF Program. STAP recognizes the importance in contributing to the GEF's strategic directions, and has begun to develop its report to the Sixth GEF Assembly at an early stage. This will allow STAP to contribute in a timely manner to the GEF's initial replenishment discussions in 2017. The departure point for STAP's report to the Sixth GEF Assembly will draw from three key messages STAP delivered in 2014 to the Assembly:

(a) Environmental degradation must be tackled in a more integrated and holistic way, addressing individual focal area concerns in ways that yield multiple benefits, enhance ecosystem services, and improve governance systems within and across national boundaries.

(b) Sustainable development should be at the core of GEF interventions, enabling improved human well-being, health, livelihoods and social equity at the same time as environmental protection.

(c) The GEF should continue to be catalytic and innovative while actively seeking to effect permanent and transformational change. This will require effectively leveraging the best scientific knowledge from the design of projects through implementation and evaluation, as well as learning from the experiences of past interventions through effective learning and knowledge management strategies.

36. The report will expand on these key messages to identify strategic and actionable guidance for GEF-7. The report also will identify new ideas the GEF should consider pursing during its sixth phase. Among other issues STAP's report will address the following:

(a) Science of integration and future GEF programs: Mapping of strategic priorities as expressed in the GEF supported Multi-lateral Environmental Agreements (MEAs), and in the Sustainable Development Goals can assist to understand the policy landscape for future GEF integrated programs.

(b) Exemplary practices in supporting integration: Assessing how to develop integrated projects and programs based on a review of the literature on systems thinking, sustainability science and related disciplines. Examples from the GEF will be used to demonstrate lessons on integrated programming in support of sustainable development and multiple benefits.

(c) Enhancing GEF's catalytic role through innovation and experimentation: Exploring the GEF's unique role in financing innovation and exploring experimentation where possible by leveraging the wealth of technical expertise within the GEF partnership.

37. STAP has commissioned background studies on these topics to inform its input to the replenishment discussions, and its report to the Assembly. The Panel will also be engaged directly in providing both oversight and substantive content towards developing the overall findings and recommendations, as well as the final report.

ANNEX 1: STAP WORK PROGRAM FOR GEF-6

(Updated – August 2016)

Rationale: Enhance effectiveness of GEF programs and their impact through greater integration and stronger science linkages with sustainable development goals.

The STAP Work Program is a result of careful consideration of the GEF's overall mandate to deliver global environmental benefits (GEBs), a review of recommendations from the Fifth Overall Performance Survey (OPS-5), and requests made of the STAP from the GEF Council, Secretariat, Agencies, and in particularl Multi-Lateral Environmental Conventions supported by the GEF. The STAP Work Program has also been informed by the following:

1. **Fifth Overall Performance Study, 2014. Sub-study on Results Based Management in GEF - #11: Knowledge Management in the GEF - #11: Evaluation of the STAP of the GEF - #15.** (http://www.thegef.org/gef/OPS5)
2. **GEF 2020 Strategy, 2014. (GEF/C.46/10;** http://www.thegef.org/gef/sites/thegef.org/files/documents/GEF.C.46.10_GEF2020_-_Strategy_for_the_GEF_May_15_2014.pdf);
3. **Delivering Global Environmental Benefits for Sustainable Development: STAP Report to the GEF-6 Assembly, 2014**. (http://www.stapgef.org/delivering-global-environmental-benefits-for-sustainable-development-report-to-the-5th-gef-assembly/);
4. **STAP in GEF-6 – Discussion Brief, 2014.** (http://www.stapgef.org/the-staps-role-in-the-fifth-gef-assembly/);
5. **Enhancing the GEF's contribution to sustainable development, 2013. (GEF/R.6/Inf.03;** http://www.thegef.org/gef/council_document/enhancing-gefs-contribution-sustainable-development**)**
6. **Research within the GEF: Proposals for revising the targeted research modality, 2012.** (GEF/STAP/C.43/Inf.02; http://www.thegef.org/gef/council_document/research-within-gef-proposals-revising-targeted-research-modality);

Efforts have been made to formulate the STAP Work Program to maximize its contribution during GEF-6, by increasing the emphasis on strategic deliverables and support to integrated approaches that leverage the collective strengths of the STAP Panel[14] to generate advice that meets the evolving needs of the partnership. In its reports to the First GEF-6 Replenishment meeting (March 2013 – document 1 above) and to the GEF-6 Assembly (May 2014 – document 3 above), STAP argued that an enhanced conceptual framework could improve the relevance and effectiveness of the GEF as a champion of the global environment in delivering support to the global sustainable development agenda.

[14] http://www.stapgef.org/about-stap/

Role of STAP in GEF-6

The evolution of STAP's activities from primarily focal-area driven scientific and technical advice towards a more strategic approach will require focusing on a limited number of ***inter-connected*** priority areas. In addition, a much closer interaction will be needed between the STAP and the GEF partnership, as well as with outside scientific and technical communities. While STAP will continue to support focal areas through project screening, contribution to strategy development, and preparation of focal-area specific knowledge products, STAP will concentrate on those activities which support greater program integration whilst also addressing sustainable development goals.

Objective 1: Support cross-focal area synergies and analyze trade-offs, including in the context of IAPs

In GEF-6, three integrated approach pilots (IAPs) have been agreed to in areas where GEBs are strongly linked to larger developmental goals - on sustainable cities, avoiding deforestation associated with commodity supply chains, and food security in sub-Saharan Africa. STAP believes that these integrated approaches represent good examples of the way in which GEBs and sustainable development can be aligned and further represent a promising new direction for the GEF. STAP is committed to supporting the IAPs and contributing to their success. A key deliverable under this objective is the STAP Report to the GEF Assembly, which will be developed under Activity 1.4. An early draft of this effort is expected in March 2017.

Objective 2: Improve STAP's advice in support of focal area programming through demand-driven knowledge products

STAP Panel Members participate actively in the work of GEF Focal Area Task Forces. A traditional component of STAP's work is to support the efforts of individual Focal Areas through targeted activities to improve the efficiency and impact of program delivery. STAP will continue to support the efforts of GEF focal areas as requested within resource limitations. Key deliverables expected by the end of GEF 6 include:

- Planning for socio-economic co-benefits in protected area projects;
- Database and protocols to access global mercury data, and an assessment of mercury reduction technologies;
- Guidelines and recommendations for strengthening National Adaptation Plans;
- Recommendations for improving monitoring and evaluation of adaptation projects;
- Integrated Source to Sea planning guidelines;
- Guidance on future programming in Areas Beyond National Jurisdiction;

Objective 3: Analysis of emerging global environmental issues for GEF action

As noted above, identifying important areas for cross-focal area integration and characterizing emerging priorities for GEF intervention, such as green chemistry, or environmental security, represents a dynamic

area of STAP's work[15]. This complements the on-going focal area-specific work and can bring to the table new stakeholders including the broader scientific community. The main focus of this effort is exploring the emerging science of green chemistry, and how this can inform evolving notions of a "bio-based" or circular economy and and possible future GEF actions in this area.

Objective 4: Support GEF initiatives for knowledge management and learning

STAP will contribute to assist the GEF in becoming a more evidence and knowledge-based institution. This includes working with the GEF Secretariat in strengthening corporate KM systems; collaborating with the IEO for capturing insights and lessons from GEF experience; and, supporting approaches that more strongly connect science and implementation. A GEF KM system should ensure long-term data collection and management, and focus on global environmental benefits and impacts, through collaboration across the network of GEF Partner Agencies. As a contribution to this effort, STAP will seek to develop of guidance for project managers to improve the impact of this knowledge on the performance of GEF projects, and learning from these. STAP will also continue to collaborate with the GEF Independent Evaluation Office on areas of mutual interest – particularly with respect to the reviews being undertaken in the context of the 6th Overall Performancy Study.

Objective 5: Provide support to GEF Corporate and Operational objectives

STAP will continue to play an important operational role in the GEF Project Cycle, particularly with respect to screening GEF full-sized projects at entry to the Work Program. Details on the role of STAP in the project cycle are provided in the "GEF Project and Programmatic Approach Cycles", GEF/C.39/Inf.3 (in revision).

[15] http://www.stapgef.org/delivering-global-environmental-benefits-for-sustainable-development-report-to-the-5th-gef-assembly/

STAP WORK PROGRAM FOR GEF-6

Objective 1: Support cross-focal area synergies and analyze trade-offs, including in the context of IAPs					
Task/Activity	**Title/Description/Notes**	**Expected Outputs**	**Indicators**	**Time**	**Panel Lead**
1.1 Contributions to the Commodities IAP	This entry in the STAP work program will be further developed as planning for individual IAPs advances	Support for development of IAP, including advisory products, pilot design, and modalities for extraction of knowledge, complementing the indicator work. For the Commodities IAP, STAP has tentatively identified the following outputs: a) Development of metrics and indicators to support program monitoring. Specifically, attributes for identifying and evaluating appropriate areas for commodity production and multi-attribute frameworks for evaluating and assessing production practices. [COMPLETED – Final report tabled at latest IAP coordination workshop Jan 2016]. b) STAP will support the identification of learning objectives within the development of a research program for the IAP under the Coordination child project, and will contribute to knowledge management and tracking success. [UNDERWAY – Coordination and KM child project will be developed between Feb and Sept 2016].	Indicators of success for this area of work are:- STAP technical advice is integrated into IAP design and theory of change for child projects. Records of STAP contributions to IAP Working Groups. STAP participtes directly in the design of the learning and KM components of the coordination child project.	Nov 2014 – June 2017	Lead: Anand, Rosina, Contributors All Panel Members Secretariat lead: Tom

1.2 Contributions to the Cities IAP	This entry in the STAP work program will be further developed as planning for individual IAPs advances.	STAP was tasked with contributing to the development of metrics and indicators to support program monitoring, and began work on the following outputs: a) Assessment of the outcomes of the WCCD 20 city pilot with Global Cities Initiative (GCI) to help monitor cities (of various sizes and income levels)[16]. Areas of problematic reporting and capacity building needs could also be identified. [COMPLETED. STAP successfully coordinated engagement of key partners particularly WCCD/GCI 20 City pilot program and the ISO certification program]. b) Assist in pilot city IAP design, particularly in the development of the KM and research components of the coordination child project. Identify capacity building needs as related to data and knowledge centralization, index development and utilization et. al.. [ON HOLD. Made in roads in assisting GEF Sec and WB to identify common characteristics for all child projects, and suggesting modalities for assuring cohesion with the umbrella programme during the work of the 2nd Cities IAP meeting March 7 – 11. STAP continues to be willing to support the identification of learning objectives and indicators for testing. This may include the development of a research program for the IAP, and would contribute to knowledge management and tracking success[17].]	Indicators of success for this area of work are: STAP technical advice is integrated into IAP design and theory of change for child projects. Records of STAP contributions to IAP Working Groups. Written record of broader input of STAP advice (on indicators, suggested targeted research areas, guidance in pilot project design, embedding of knowledge asset generation elements etc) incorporated into Cities IAP Strategy document as requested. (also heavily contingent on GEF Sec requests).	Nov 2014 – June 2017	Lead: Ralph Contributors All Panel Members Secretariat lead: Christine

[16] STAP brought WCCD to the table with the WB-led multiagency working group to find areas of collaboration. In addition, STAP opened discourse with Dr. Chris Kennedy (University of Toronto) on the use of urban metabolism indicators, which could also provide a means of tracking the impact of a city's consumption on commodities, biodiversity and food.

[17] Please see memo from Ralph Sims to Juha Uitto and Mohamed Bakarr Dated March_, 2016 in advance of the 2nd Cities IAP meeting March 7 – 11

1.3 Contributions to Agro-ecosystem resilience and Food Security IAP	The activity on this IAP aims to enhance the efforts of the UNCCD, CBD, UNFCCC, as well as the GEF on ecosystem resilience and food supply. Scientific methods will help reinforce the coherence between the Conventions' and the GEF's monitoring of land-based adaptation and ecosystem resilience. This effort also supports the GEF's integrated approach on Food Security. Three sub-activities will focus on: a) An analysis of the concept of agro-ecosystem resilience, including a framework for indicator selection. b) Development of guidelines on the application of a resilience, adaptation and transformation framework (RAPTA) c) A review of remote sensing- based metrics that can be used to assess land degradation at the national and sub-national levels.	a) Improved harmonization between the Conventions' monitoring and reporting of common goals and objectives on land-based adaptation and ecosystem resilience, including selection of indicators for cross-cutting projects in the land sector. b) Assess the efffectvness and utility of RAPTA in guiding project design in the FSIAP; work with the cross-cutting project to assist in devising approach for assessing resilience at regional level; and, work towards scientific journal publication on RAPTA. c) Development of the results-based management for the integrated approach on "Sustainability and Resilience for Food Security in Sub-Saharan Africa". These outputs will include: i) Periodic input to GEF Secretariat's update on the IAPs, and how RAPTA is contributing to it ii) Scientific journal publication on RAPTA based on implementation in the FSIAP if funding is available to support this output iii) Input to a future, independent report evaluating the effectivenss of RAPTA	Indicators of success for this area of work are: STAP technical advice is integrated into IAP design and theory of change for child projects[18]. Records of STAP contributions to IAP Working Groups. STAP participtes directly in the design of the learning and KM components of the coordination child project.	July 2014 – June 2017 Milestones FSIAP inception meeting in January, 2017 in Kenya	Lead: Annette Brian, Michael, Anand, Ralph Secretariat lead: Guadalupe

[18] Examples of RAPTA uptake: a) CoP decision on the use of the RAPTA for identifying resilience indicators for land-based projects. [Note: See ICCD/COP(12)/CST/L.4/Rev.1;(b) Use of RAPTA to assess resilience of social-ecological systems to design IAP child projects [Note: Thus far one project (UNDP) will use the RAPTA to design its interventions in the food security IAP]; (c) Citation of RAPTA in peer-reviewed literature [Note: Quinlan, et al. refers to the RAPTA in the paper Journal of Applied Ecology, 2015, doi:10.1111/1365-2664.12550]; (d) Use of RAPTA used by non-GEF agencies to design projects. [Note: CSIRO and the Stockholm Resilience Centre (SRC) have agreed to field test the RAPTA in at least one resilience project funded by SRC].
For NDVI publication: (a) Citation of STAP's report on NDVI. [Note: Report referenced in UNCCD background note on land based indicators common to SDGs and Rio Conventions, & LDN Workshop February 2016]; (b) In addition, the NDVI paper was cited in the Food Security IAP program document to validate the use of NDVI as a proxy for an indicator on land cover and NPP. The NDVI paper was the basis for developing a GEF medium-sized project on developing tools and methods to assess land status and trends at the global and national level, for input into the Food Security IAP.

1.4 Science of Integrated Approaches - Longterm	STAP's Report to the GEF-6 Replenishment Process and Assembly will provide a science-informed blueprint for the continuing reform of the GEF. This activity also aims to provide support in defining the future direction of the GEF with regard to the SDGs and Paris Agreement, and also in preparation of the Global Commons Conference.	Iterative discussion between the Panel and the GEF Secretariat is ongoing. STAP will provide support to the Global Commons conference through: a) Names of experts to participate [ONGOING] b) Review of draft background paper [UPCOMING] c) Participation in Conference Oct. 2016 [UPCOMING] Preparation of STAP's Report to GEF-6 Assembly will include multiple steps that will be defined by May 2016. Rrecommendations will focus on the science of sustainability in social-ecological systems. The main focus of STAP's Report will be on solutions to realize the aspirations expressed in GEF2020 Strategy, drawing on results of recent and ongoing global assessments. Initial stages of the development of STAP's Report to GEF-6 Assembly: a. STAP Retreat to agree on the Report's outline and delivery – May 2016; b. STAP's contributions to the GEF Conference on Global Commons including Special Issue of World Development Journal – Oct 2016; c. Up to two stakeholder workshops to highlight specific themes of the Report (summer 2016 – Jan. 2017); d. Finalization of the Report and outreach activities [March, 2018] The Panel will identify specific multi-focal issues that span across multiple areas where there is a demand. These may include land degradation, adaptation and transboundary freshwater in Africa; forests and climate change mitigation in the Amazon Basin; and REDD+.The Panel will also seek opportunities to publish the findings from this work in scientific journals, and/or in succinct policy or operational briefs for the GEF partnership.	Uptake of STAP advice into GEF-7 Strategy; future MFA projects and programs and IAPs Greater understanding within the GEF community of the science supporting integrated approaches. Evidence of STAP's advice reflected in the GEF-7 strategy	June 2016 – May 2018	Lead: Rosina Entire Panel Secretariat lead: Tom, Lev, Guadalupe, Sarah

1.5 Enhancing climate resilience of GEF interventions, and enhancing synergies between climate resilience and GEF interventions for GEBs	In earlier work, STAP has identified climate change risks as having the potential to prevent the delivery of GEBs across GEF focal areas, and provided guidance regarding more in-depth screening for climate risks for GEF interventions. Current scientific thinking on decision-making and best-practice as reflected in the IPCC's Fifth Assessment Report emphasizes the importance of climate information to support robust interventions. STAP will seek to bring these new advances in thinking to practical and actionable guidance for the GEF.	a) STAP will examine the utility and applicability of the range of climate risk screening tools currently available (e.g. who uses these tools, how are they being used, how are the results being reported). b) STAP will examine how climate information is being used to design climate adaptation projects. c) Building on the previous steps, STAP will develop a framework that could be used for identifying appropriate risk management approaches and adaptation pathways that can enhance climate resilience of GEF interventions. [NOTE: Results of this work will also be embedded in STAP's Report for GEF-6 Assembly].	Records that GEF projects and programs have screened for, and suitably incorporated, climate risk management measures. Evidence that climate risks are assessed for the period of expected project benefits rather than limited to the project implementation timeframe. Evidence that climate risk assessments are strongly supported by relevant and accurate future climate information.	March 2016 - October 2017	Lead: Anand Contributors Brian, Annette, Rosina Secretariat lead: Sarah
1.6 Advice on strengthening resilience of the GEF Program	With the GEF Council's welcoming of the RAPTA guidelines and its application to strengthen the resilience across the GEF program, STAP will work to improve the resilience of GEF projects	Adapt RAPTA to specific contexts beyond food security/ land degradation. This includes working with GEF Agencies and countries to apply the RAPTA in multi-focal area projects, and in non-NRM sectors. Training possibilities alongside GEF Agencies and countries will be sought on how to apply the RAPTA in the design and implementation project phases. Possiblities to further develop the meta-indicators for monitoring resilience also will be explored. Possible outputs include: Chapter in the GEF Assembly Report that includes RAPTA theory and preliminary learning from its application in GEF projects, and supplements to the RAPTA guidelines providing guidance on application of RAPTA to several focal areas.	Record of GEF Agencies and countries verifying the utility of the RAPTA in assessing resilience of social-ecological systems to shocks, stresses, and risks	September 2016-June 2018	All Panel Members with Annette Cowie as the lead Secretariat: Guadalupe, Tom

Objective 2: Provide demand-driven knowledge products through support of focal area programming					
Task/Activity	**Description/Notes**	**Expected Outputs**	**Indicators**	**Timeline**	**Panel Lead**
2.1 Biodiversity –	Following on from the STAP publication "Assessing the Effects of Terrestrial Protected Areas on Human	a) Operational guidance document that enhances understanding of how to design protected areas projects to create synergies between biodiversity benefits and	a) Incorporation of design components into PA projects which enhances the	Field work completed in July 2016.	Lead: Brian

Protected Areas	Well-Being", this effort will identify how to augment project design for GEF PA projects so that they provide biodiversity benefits and socio-economic co-benefits and tangible evidence of these benefits.	socio-economic co-benefits, together with tools for measuring these benefits at different scales. [UNDERWAY] b) Development of methods and advice to enable projects to provide tangible evidence for improving socio-economic outcomes, and to ensure that impacts can be measured and lessons about implementation strategies and socio-economic outcomes derived. [UNDERWAY]	probability of improved socio-economic outcomes b) Records of uptake of advice in the design and screening of GEF biodiversity projects related to enhancing and measuring improved socio-economic benefits of GEF PA projects.	Product by March 2017.	Secretariat lead: Virginia Gorsevski
2.2 Mainstreaming Biodiversity	Develop operational guidance for project developers that incorporates the recent STAP assessment on the determinants of successful mainstreaming.	Develop an economic conceptualization of the main approaches that GEF uses for "mainstreaming biodiversity" Develop operational guidance document and checklist for GEF biodiversity projects to apply mainstreaming principles, including community involvement in landscape management, bringing biodiversity into the economy, PES (already done) and so on. Provide specific guidance for project developers. [PENDING - NOT YET BEGUN]	a) Records of uptake of advice in the design of GEF biodiversity projects; b) Measureable improvements in effectiveness of biodiversity mainstreaming.	March 2017 ongoing	Lead: Brian Secretariat lead: Virginia Gorsevski
2.3 Wildlife Trade and Enforcement	Illegal trade in wildlife and wildlife parts is a significant driver of the decline of key species in some areas, particularly in Africa	Work with Global Wildlife Programme to strengthen GWP, but also to develop principles and guidelines for similar GEF projects. Specific outputs may include: a) Guidance on community involvement, benefit sharing and CBNRM b) Indicators for child projects as they are developed c) Knowledge management in program [UNDERWAY]	a) STAP technical advice is integrated into projects funded under this objective of the GEF Biodiversity Strategy	on-going. Develop guidelines March 2017-Dec 2017	Lead: Brian Secretariat lead: Virginia Gorsevski
2.5 Mercury: Fate and Movement in the Environment	This work will assist in efforts to (i) promote sharing of access to mercury data, and determine minimum common standards in the quality requirements and capabilities of data repositories; (ii) help to streamline protocols for collection of mercury data within projects; and (iii) ensure	a) Inaugural Meeting between real and potential partners in the area of Mercury data support to the Minamata Convention. [COMPLETED. 1st meeting Nov 2014, Vancouver, with follow up October 2015, Brussels, back to back with a SETAC Mercury Symposium)]	Increase in availability of fully documented, high quality non-atmospheric mercury data from within and without the GEF partnership.	July 2014 – December2016.	Lead: Ricardo Secretariat Lead: Christine

	that data generated meets minimal standards of quality for purposes of modeling of mercury fates and movement through the environment.	b) Sample data protocols and a preliminary draft of elements for a targeted research modality, to help pilot the protocols, and validate and record data collection specifications and submittal processes for (a) selected database(s), ultimately deriving a standardized mercury data collection process for the GEF portfolio. (Note: piloting of sampling protocols may also be able to take place within other GEF projects, as part of monitoring). [UNDERWAY. Data wire frame and stage site have been set up with UNEP Live to be populated with pilot fish species mercury data from Biological research Institute (BRI). Mercury survey to identify data holders, users and needs carried out in April-May 2016, and analysis to be completed in July 2016 for sharing with the Minamata community and to inform construction and future phases of the mercury portal. Drafting of ToR template for communites of practice started as well as fish sampling protocols. Phase 2 of work (post December2016 end of Phase 1) also being planned based on survey results as well as feedback from UNEP Chemicals, and key Minamata Bureau members and parties. This work has also been included in the business plan of the UNEP Mercury Partnership Fate & Transport group, which serves to advise the Minamata Convention.	a) Traceable increase in the number of contributions of streamlined Mercury data from GEF projects (as recorded on open source platforms or in the literature.)		
2.6 National Adaptation Plan process	Responding to the UNFCCC's COP guidance, the GEF Secretariat seeks STAP's advice in strengthening scientifically the National Adaptation Plan (NAP) process. The STAP will develop guidance for improving the NAP process and recommendations to make GEF support more effective.	Strengthened NAP process and outcomes drawing from multiple attributes including scientific, technical and social arrangements for mainstreaming long-term adaptation into institutional and policy frameworks. A report drawing from selected country experiences describing their efforts at national and sub-national level adaptation planning and strategy formulation.	STAP advice on NAPs is used in GEF's projects to strengthen the effectiveness of national and sub-national adaptation planning and adaptation strategy formulation. The report is expected to be informing GEF supported projects for developing NAPs. -STAP's work on NAPs has been presented and used by relevant	Jan 2014 – June 2016	Lead: Anand Secretariat Lead: Tom, Guadalupe

			stakeholders, including the UNFCCC Adaptation Committee, LDC expert group, and the NAP GSP.		
2.7 Measuring, monitoring and evaluating adaptation	The GEF programming strategy for adaptation to climate change under the LDCF/SCCF includes a new strategic objective on mainstreaming and long-term adaptation. To measure and monitor these interventions, there is a need to develop indicators to measure and monitor outcomes at different scales. Indicators will also be required for "process" related outcomes, and it will be important to establish their relevance and validity for the overall objective of vulnerability reduction.	Expected outcomes from this effort are: Technical report(s) supporting the development of M&E systems useful within countries for long-term adaptation planning and implementation	Information document for internal use of the GEF	July 2014 – Aug 2016	Lead: Anand with UNEP-PROVIA Contributors Annette, Ralph, Rosina Secretariat Lead: Sarah, Guadalupe
2.8 Source to Sea	Water resources flow in a continuum from land, to the coast and to the sea. For over twenty years GEF has tested integrated approaches to management of the different systems through IWRM in transboundary basins, IZCM along coastal zones, ecosystem management in LMEs and marine and fisheris management in the ABNJs. Key environmental concerns in this continuum include land-based pollution, changes in the sediment regime resulting from upstream land use changes and/or damming, encroachment and habitat destruction in coastal areas and the increasing, and sometimes unregulated, development activities in marine areas, and the effects of climate change.	Integrated analytical work with multiple partners such as SIWI, the S2S Action Platform, and IW Learn to increase the understanding of institutional, governance and management opportunities and baselines from source to sea under climate change. Expected outcome: a) Final report will provide project design guidance for GEF-6 and beyond on institutional options, governance baselines and management systems along the continuum supporting an integrated and multifocal approach considering, for example, combating eutrophication and marine debris. Draft report expected for Council in June 2016; internal agency review process to take place in May at IWC-9 with the final report expected in the fall 2016	Records that report how source to sea governance and management approaches have been utilized from IW freshwater, coastal, LMEs and marine management. Contributing to project design in GEF-6 and sustainable delivery of GEBs. STAP's report will provide recommendations for project design and further program guidance to GEF 7 (to be embedded into the STAP's Report to GEF-6 Assembly).	Nov 2014 – Sept 2016	Lead: Jakob ContributorsAll Panel Members (peer review) Secretariat Lead: Lev

2.9 Areas Beyond National Jurisdiction (ABNJ)/ Oceans	The health of oceans is being compromised. Challenges include over fishing, ocean acidification, marine debris, shipping, energy installations, sea bed activities and threatened food security. Integrated ocean management and the need to protect and manage areas beyond national jurisdiction (ABNJ) (equivalent to 40% of the planet surface) where a governance and management gap exists is gaining attention. The analysis will increase the understanding of tools available for international policy-makers and their respective suitability.	Prepare a scientific paper including an assessment of emerging ABNJ challenges, a survey of existing and emerging law in this domain, and the identification of areas where collective action can make a major difference. This will guide further GEF investments and beyond to achieve GEBs and food security in particular. The paper will be externally peer reviewed including by the GEF partnership for publication in a science journal. Expected outputs are: a) Draft to be presented at IW Science conference in Sri Lanka in May 2016 and discussed with IW stakeholders and wider IW community. b) Final report expected for publication in the fall 2016 will provide a primer on environmental frameworks in ABNJ and recommendations for the GEF in this area.	STAP's advice is used to inform future programming of IW focal area in the ABNJs building on GEF investments on land, the coast, LMEs, and the sea. Further uptake of the advice of the ocean community beyond the GEF family highlighting GEF investments and lessons learned supporting IAPs. [NOTE: Results of this work will also be embedded in STAP's Report for GEF-6 Assembly].	Jan 2015 – Dec 2016	Lead: Jakob Secretariat Lead: Lev
2.10 C & W – Assessment of Mercury Reduction Technologies		Advisory document on appropriate technologies to eliminate and/or minimize the use of mercury in sectoral processes. This document shall include safe handling advice, where relevant. Efforts to address sectors where mercury emissions are critically problematic will also be explored, (eg. the coal combustion sector).	Record of STAP's advice on Mercury reduction technologies contributing to a more streamlined incorporation of alternative technological approaches in GEF mercury projects.	July 2016 – June 2018	Lead: Ricardo Secretariat Lead: Christine

2.11 Engaging with the International Chemicals Agenda	The 2011 Emerging Chemicals Management Issues (ECMI) STAP publication highlighted those areas of chemicals management that were most critical in the eyes of scientists around the world, sometimes appearing at odds with what was being reported through Convention mechanisms. The ensuing 5 years has seen several of the predicted issues (plastics, nanomaterials, endocrine disruptors, for example) emerge as problems. Faced with supporting implementation of the SDGs (particularly goals 12, 14, 3, 8), the Basel Rotterdam Stockholm (BRS) Secretariat, and the Second Global Chemicals Outlook (GCO-II – Taking Stock and Exploring the Future of Chemicals Management in a Sustainable Development Context), which informs the SAICM post 2020 process and chemcials conventions in general, have been seeking collaboration with the STAP to build on the ECMI advice, set priorities and formulate new approaches to global chemicals management.	STAP will participate in the development of select GCO II Thematic papers, namely those that relate to "Chemicals of emerging concern"; and secondarily, if requested, "Chemicals in waste products and secondary raw materials". The work of the STAP on Plastics alternatives and waste management issued will also be used to help provide input to the thematic papers of the GCO II, which in turn will be used to help with the SAICM post 2020 process. The GCO II Preparatory meeting of April 2016 estimates that thematic papers will be developed by December 2016, with the first interessional SAICM meeting projected for February 2017, and the overall SAICM post 2020 roadmap being concluded by the end of 2018. The advice also will target the International Chemicals Agenda and the BRS Convention on the Science Policy Interface.	Written evidence of STAP contribution in the GCO II meeting reports, and relevant thematic papers. Uptake of advice in the SAICM post 2020 agenda.	August 2016 – April 2018	Lead: Ricardo Secretariat Lead: Christine

2.12 Advice on portfolio monitoring (linked to RBM/indicators work)	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 on an as needed basis and within STAP resources. This output will include advice on developing focal area "learning objectives" including efforts towards greater harmonization, and direct support for carrying out studies of learning objectives as needed.	Strengthened results-based management of the GEF through portfolio monitoring tools. This may include improved methods to collect and report on focal area objectives within the GEF-6 Programming document. For example, STAP is contributing to the work of the IW Scientific and Technical Advisory Committee (IW Learn). In addition, STAP is also participating on the committee overseeing improvements to the methodology to calculate greenhouse gas emission reductions from CC-M projects. These activities are taking place in the near term, although most activities under this item would normally take place in the latter half of GEF-6	STAP's contributions to reporting on impact of GEF interventions highlighted through portfolio evaluations and assessments of lessons learned.	Nov 2014 – June 2018. Aligned to the focal area planning schedule as needs arise	All Panel Members All Secretariat staff members
Objective 3: Analysis of emerging global environmental issues for GEF action					
Task/Activity	**Description/Notes**	**Expected Outputs**	**Indicators**	**Timeline**	**Panel Lead**
3.1 Green chemistry compendium	The GEF is interested in exploring new approaches in the area of green chemistry during the GEF-6 period, considering the relevance of the issue of green chemistry for chemicals & waste, namely through removal of hazardous substances from the production and consumption chain, whilst seeking out and/or noting multiple benefits from greater environmentally friendly technologies inother focal areas such as climate change, biodiversity and international waters in the chemicals domain.	STAP will generate a compendium, looking at specific sectors and project types in the GEF-6 portfolio where Green Chemistry could be a tool for GEF projects in the developing world, aiming to improve the benefits of using BAT/BEP in different focal areas. Preliminary areas for consideration in GEF-6 piloting are: a) replacement of emerging POPs, b) replacement of endocrine receptors from key production processes (eg fertilizers and plastics), and c) a sectoral approach for implementing Green chemistry (eg. The textiles dye industry). [Phase 1 of the compendium (Green Chemistry in plastics) ONGOING – as of July, 2016, drafts towards peer review are in preparation, describing innovations, and waste valuation assessment approaches with an eye to overall completion in **September/October 2016.** Input and outreach in the course of work thus far with GEF Sec, UNEP CAR RCU, UNEP GPA, foundations (Macarthur, Oak Foundation et. al.]. The Chemicals Task Force has been kept abreast and will be included in the review. They have also been asked to think of	Record of provision of advice to the appropriate GEF Task Forces. STAP assistance in piloting of the incorporation of green chemistry principles in at least 2 GEF funded projects, particularly in the chemicals & waste focal area.	January 2016 - April 2017	Lead: Ricardo Contributors Rosina Secretariat lead: Christine

		the next priority area for which they wish to see Green Chemistry innovations for work in the 2016-2017 period.			
Objective 4: Support GEF initiatives for knowledge management and learning					
Task/Activity	**Description/Notes**	**Expected Outputs**	**Indicators**	**Timeline**	**Panel Lead**
4.2 Knowledge Management in the GEF: Key characteristics and elements	Advisory paper to articulate the rationale, constituent parts and utility of a shared GEF knowledge management system. This will be based primarily on a survey of KM approaches amongst GEF Agencies as well as selected outside organizations.	Consensus building within the GEF partnership on the constituent elements of a GEF knowledge management system achieved through mediated dialogue and workshop(s). STAP is taking part and contributes as requested to thje work of the standing GEF Interagnecy Group on KM. STAP's longer-term objective is to support development of a common Knowledge Management mechanism/system for the GEF. STAP's specific activity is to: a) develop project-level guidance on knowledge management. The guidance will support effective design of KM components (completed and published by Dec 2016)	In the short-term STAP's "Practitioner Guidance on Mainstreaming Knowledge Management in the Design of Projects and Programs financed by the Global Environment Facility" should improve evidence-based project design, as expressed in PIFs CEO endorsement packages.	July 2015 – Dec 2016	Lead: Michael (Brian, Rosina) Secretariat Lead: Lev (Tom)
4.3 Learning from country-portfolio evaluations (CPE): Assessing the impact of KM	STAP will work closely with the GEF IEO on an as needed basis to assess the impact of KM products and processes at the national level using Country Portfolio Evaluations . As a result of this work, the role of science and knowledge in general will be strengthened in GEF impact evaluations and inform further development of the GEF M&E systems addressing knowledge needs	Assessment of KM products and processes in the two-three ongoing CPEs during GEF-6. Recommendations from CPE to inform measurable improvements in project design with regard to implementing KM approaches, and tracking of knowledge products and outcomes from projects.	i) Records of technical support provided by the STAP Secretariat and the Panel to 2-3 CPEs evaluations of the GEF IEO. ii) Publicly available written reports with clear citation of STAP contribution to evaluation reports	Periodic as required. Aligned to the IEO evaluation schedule in GEF-6	Lead: Brian (Rosina) Including all Panel Members Secretariat Lead: Lev (Tom)
Objective 5: Screening of GEF Work Programs					
Task/Activity	**Description/Notes**	**Expected Outputs**	**Indicators**	**Timeline**	**Panel Lead**
5.1 Report to Council on GEF Work Programs	STAP screening of all full-size projects, particularly those with a major component of science and technical innovation and significant scientific	Preparation of STAP Screening Report to the GEF Council for each Council meeting	i) Records of STAP's screening advice on GEF project and program concepts strengthening scientific and	On-going. Aligned to the GEF Council and Secretariat	All Panel Members

Sreening of GEF projects and programs	and/or technical methodological barriers to implementation. This may also include dialogue with GEF Agencies upstream of PFD submissions.	Individual project screens to Agencies and the GEF Secretariat [ONGOING]	technical merit of GEF activities.	schedule as GEF Work Programs are developed	All Secretariat staff members