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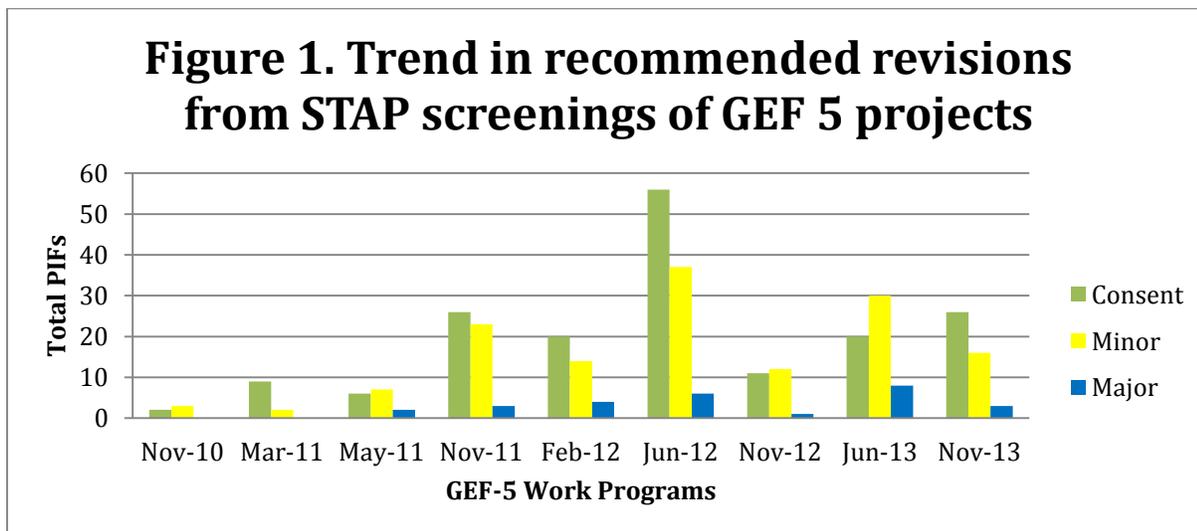
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**REPORT OF THE CHAIRPERSON OF THE SCIENTIFIC AND
TECHNICAL ADVISORY PANEL**

difficulties in applying the same screening criteria, particularly with regard to the assessment of risk.



STAP believes that responses to its screening of the GEF work programmes generally result, where necessary, in improvements to project design, monitoring and outcomes. Feedback from the agencies and GEF Secretariat offered during the recent STAP October meeting confirmed this perception. However, STAP is concerned that the reviews of programmatic approaches are less effective. In the case of Project Framework Documents (PFDs), STAP is increasingly concerned that advice may not be adequately reflected within individual project PIFs which are subsequently generated within a programme. STAP believes this is likely to be for two main reasons:

- a) Council-cleared PFDs are not always subsequently developed into fuller (and formally-considered) Programme Documents for later CEO endorsement;
- b) There is no GEF policy instructing the GEF Secretariat to verify whether advice or recommendations (including STAP’s) regarding PFDs is carried through into the “child” PIFs developed under the authority of a Programme.

In this context, issues identified in upstream review of PFDs may not inform subsequent project design within very large Programmes. This will have a tendency to reduce the value of the programmatic approach in terms of coherence and likely impact. STAP offers two recent examples of approved programmes (GEF IDs 4580 and 5395¹) whose proponents either submitted PIFs that diverged greatly from the approved Programme or failed to reflect earlier recommendations provided at the PFD stage within subsequent project PIFs within these programmes.

¹ 4580: Global sustainable fisheries management and biodiversity conservation in the Areas Beyond National Jurisdiction (ABNJ) mismatch with 4856: ABNJ: Ocean Partnerships for Sustainable Fisheries and Biodiversity Conservation Models for Innovation and Reform; 5395: Pacific Islands Ridge-to-Reef National Priorities – Integrated Water, Land, Forest and Coastal Management to Preserve Biodiversity, Ecosystem Services, Store Carbon, Improve Climate Resilience and Sustain Livelihoods.

Recommendation

STAP would greatly appreciate if the GEF partners would ensure that “child” PIFs consider advice and/or recommendations received during assessment of the PFD and ensure that, where appropriate, this is reflected in the subsequent PIFs. The Council could endorse that policy and reflect it in future editions of the GEF Project and Programmatic Approach Cycles paper. Council may also consider requesting that Agencies develop PFDs into a full brief, identifying and outlining subsequent projects and their contribution to the programme's intended outputs and outcomes.

3) GEF 2020 and Strategic Positioning Documents - Observations

STAP believes that the GEF 2020 Strategy Paper is a comprehensive analysis of current drivers of environmental change. It sets the context for GEF 6 and builds a case for shifting programme entry points further upstream. The analysis of drivers concurs with a number of recent assessments, including STAP's contribution to the First Replenishment Meeting for the GEF 6 held earlier this year². STAP argues that the GEF's niche in the environmental finance landscape is its ability to systematically address the interconnected global challenges present at the land/ food/ water/ energy interface – which are central to sustainable development.

STAP applauds the renewed emphasis towards knowledge generation and leadership in this area. The realization that an updated approach to knowledge management is an essential tool to scale up GEF's impact, and to greatly improve the efficacy of its interventions, is welcomed. STAP believes that collection and proficient management of knowledge is critical to determine not just the ‘outputs’ of projects and programmes, but the broader ‘outcomes’ for the global commons. Compendia of ‘lessons learned’ and ‘best practices’ must be assembled if one wishes to explore scalability of interventions. This is a much needed change, and one for which STAP has long and enthusiastically advocated.

The global trends identified in the Strategy are not new problems, per se, but what we are recognizing is that conventional approaches to tackle them may have reached their limits and may no longer be effective. The Strategy does not mention governance, political economic issues, and civil strife as causes of environmental degradation. The 2020 Strategy gives suggestions on what should be done, but there is far less about “how” implementation of solutions would take place in the GEF's current focal area structure.

There is extensive discussion and review of drivers and pressures, though the STAP feels that the causal chain concept needs further explanation, as relates to the “direct and indirect drivers” and “pressures”. To its credit, the GEF has effectively delimited the environmental “problem space”. The STAP feels we have been less successful, however, to respond to the critical need to elaborate the “solution space” (including creating the evidence base for the impact of a particular solution). In developing such, we should recognize the potential need to draw not only from the natural sciences, but also from a

² GEF/R.6/Inf.03 - http://www.thegef.org/gef/sites/thegef.org/files/documents/GEF.R.6.Inf._03_STAP%20Paper.pdf

broader range of disciplines, particularly from the social sciences – sociology, political science, economics, behavioural sciences, etc. STAP welcomes the opportunity to collaborate further on this. Indeed one can see the potential for pilot, targeted research work under certain crosscutting, thematic contexts to delimit the realm of best solutions, develop metrics, and ensure that there are knowledge generation elements embedded within the implementation framework to provide the evidence-base of impact. As such, there is direct tie-in with the desire of the 2020 Strategy to re-emphasise knowledge generation, ultimately giving justification for, and/or validation of GEF investment.

Equally important is consideration of the appropriate definition of, and metrics for, measuring success of the GEF as a whole. Innovation, scale, impact and cost-effectiveness are four attributes that all can agree are desirable: however the STAP would point out that these are not always achievable at the same time, and may in some cases be conflicting. For example, a strategy that seeks the lowest \$/tCO₂ may not be particularly innovative. Given the GEF's incremental funding role, catalysis should also be considered as being critical, given that the GEF is one among a growing number of players in the landscape of environmental finance. The strategy could highlight those areas where the GEF is the only player, and those where the GEF is one of many players. Articulating the comparative advantage of the GEF is a point that should not be lost.

The current paper is silent on the concrete role the STAP can play. STAP is in a prime position to facilitate the new knowledge generation function as proposed in the document, and to help with programmatic and project design. STAP members are linked into scientific networks in developing countries and CEIT, thereby adding a dimension of learning from local knowledge and expertise to aid in decision-making and prioritization. The STAP would therefore welcome an opportunity to explore how the document could reflect the potential roles of STAP in a more prominent and detailed way.

In this regard, the Panel also wishes to draw Council's attention to an assessment of research in the GEF, including recommendations prepared for the 43rd Meeting of Council³. Specifically, the STAP recommended a revision of the policy on [targeted] research to ensure that applied research to enhance the quality and effectiveness of GEF is encouraged, and undertaken efficiently to build the evidence base to support future GEF activities.

STAP strongly supports the notion of a GEF programme which is science driven and evidence based. In order to support this shift, STAP proposes that a GEF Science Policy be developed to ensure that these principles and objectives are clearly explicit, that the role of research is recognized, and effective mechanisms to support supportive research, where identified, are devised. This policy would be similar in nature to the GEF Evaluation Policy.

The Panel has prepared more detailed comments on the draft GEF 2020 Strategy and shared these with the Secretariat. These are available on the STAP website, and are Annexed to this report (see Annex 1).

³ http://www.thegef.org/gef/council_document/research-within-gef-proposals-revising-targeted-research-modality

Following on from the above, STAP strongly supports the GEF's efforts to improve results-based management (RBM), including the selective use of experimental design in some projects – as outlined in the GEF Strategic Positioning paper. During the 41st meeting of the GEF Council, STAP presented a proposal for introducing experimental design into a selection of projects across the portfolio in order to generate evidence-based results from these projects and to guide future programming⁴. STAP is pleased that these ideas and recommendations are being considered in the Strategic Positioning document for the GEF, under proposals for improving knowledge management and RBM⁵.

4) STAP Work Programme Activities and Products

The following provides a synopsis of current STAP work programme activities and results. In addition to the items below, STAP also organized a high level roundtable discussion on mainstreaming adaptation and climate-resilient development in conjunction with the bi-annual STAP meeting in October 2013. Participants included GEF agencies and representatives from the Intergovernmental Panel on Climate Change. The discussion covered a range of issues related to scaling-up adaptation, and participants presented a number of methods and tools being developed to support planning and mainstreaming. There was support for agencies to work together and for the GEF to develop a strategic approach towards climate resilience, with an emphasis on facilitating long-term adaptation.

a. Sustainable Land Management and the management of Soil Organic Carbon

As part of the recent STAP Panel Meeting on October 11-12, and in partnership with the International Food Policy Research Institute (IPFRI), a special technical session was organized to highlight the vital linkages between Sustainable Land Management (SLM) and management of land degradation, biodiversity conservation, mitigation of climate change, protection of water bodies and, more widely, human livelihoods and well-being. The event included keynote presentations from the following speakers:

1. **Dr. Diana Wall**, Colorado State University and the 2013 Tyler Prize Laureate | Presentation: Soils, Biodiversity, and Global Environmental Benefits
2. **Dr. Cheryl Palm**, Earth Institute at Columbia University | Presentation: Soils and Food Security
3. **Dr. Henry Janzen**, Agriculture and Agri-Food Canada | Presentation: Soil Organic Carbon Management

This recent event was part of an overall initiative to show how agricultural activities and soil management contribute to GEF's overall mission to deliver global environmental benefits. Another product in this regard is STAP's recent publication on "*Managing Soil Organic Carbon for Global Benefits*" which presents an overview of current technical and scientific knowledge of soil organic carbon (SOC). It demonstrates that soil organic carbon management should be an important component of future strategy for the GEF due to its

⁴ GEF.C.41.Inf.18 - <http://www.thegef.org/gef/content/experimental-project-design-gef-designing-projects-create-evidence-and-catalyze-investments->

⁵ GEF/R.6/12 - <http://www.thegef.org/gef/GEF6-Replenishment/2/strategic-positioning-gef>

vital cross-cutting role to each of the GEF focal areas - Biodiversity, Climate Change, Land Degradation, International Waters, and Persistent Organic Pollutants (POPS) – and to human development, livelihoods and well-being. More specifically, this publication shows how SOC management potentially supports two of the objectives of the GEF, namely:

1. Sequestering carbon and reducing greenhouse gas emissions for climate change mitigation;
2. Improving soil health as a basic element of any strategy in the food security area. Maintaining a consistently high level of SOC is essential to enhancing productivity and nutrient supply, overcoming short-term deficiencies in plant-available water and thus supporting food security.

STAP proposes the following principles to guide development of the GEF’s vision for SOC management that delivers multiple benefits globally and locally:

- SOC management requires an integrated, landscape scale approach, taking a systems view.
- SOC management needs to be adapted to local climate, soil and agricultural conditions.
- SOC is easier (and probably cheaper) to preserve than to restore.
- Improving crop and pasture yields and restoring soil fertility through judicious application of nutrients from chemical and organic amendments (together with sustainable management of soil water and agricultural pests) is key to sound SOC management.

The report underscores that, in addition to gaps in scientific knowledge about these priority areas, issues that may hamper efficient SOC management, such as local socio-economic context and inadequate project support systems, also need to be considered when developing strategies for SOC management.

b. Expert meeting on “Mainstreaming of Biodiversity”

‘Mainstreaming’ is a nascent approach for integrating biodiversity conservation goals at scale with those of other sectors – such as agriculture, forestry, fisheries, tourism and extractive industries. The GEF has led the way in pioneering these approaches, and their application is now gaining considerable attention.

Mainstreaming intervention types include the incorporation of the value of biodiversity and ecosystem services into national and local financial and development planning; in policy instruments; in private sector value chains, in achieving improved management practices in agriculture and other key production sectors; and in developing innovative financing mechanisms such as the payment for environmental services as well as the certification of products and other supply chain interventions.

Since 2003, the GEF has invested over \$1 600 million (with some \$5 300 million in co-financing) in 327 biodiversity mainstreaming projects in 135 countries. Of these projects, 89 were at a national level and 46 at regional or global levels. Of the total investment, 48% went to 10 countries (Brazil, India, China, Mexico, South Africa, Colombia, Russian

Federation, Indonesia, Vietnam and Argentina). Investment in mainstreaming initiatives by other international agencies and by national institutions is likely of a similar order of magnitude.

The impacts of such investments in terms of Global Environmental Benefits are difficult to evaluate. Whereas the traditional modalities of biodiversity conservation can be measured in readily quantifiable terms (e.g., area of protected areas [PAs] established and under effective management; population size and trend of threatened species under effective conservation) it is more difficult to measure the outcomes of mainstreaming interventions. However, mainstreaming has become accepted as an important approach in achieving biodiversity and human development goals; and there has been renewed emphasis in this area, underscored by the CBD Strategic Plan and Aichi Targets.

A Mainstreaming Workshop was held 30 September to 3 October, 2013 in Cape Town, South Africa, to examine the evidence base for mainstreaming of biodiversity by the GEF and other practitioners, in a bid to improve those approaches that might be employed in GEF-6 and beyond. Specifically, the workshop objectives were:-

1. Re-examine and assess the concept of mainstreaming biodiversity based on results from current practice and relevant scientific research and redefine it as necessary⁶;
2. Revise principles and guidelines for project design and implementation;
3. Identify linkages between the achievement of Goal A (*Address the underlying causes of biodiversity loss by mainstreaming biodiversity across government and society*) and the associated targets of the CBD strategic plan and other Aichi Targets⁷, and identify those mainstreaming actions that are likely to produce additional benefits vis-a-vis the achievement of other Aichi Targets;
4. Identify indicators and measuring instruments (e.g., GEF tracking tools) for the monitoring and evaluation of mainstreaming outputs and outcomes and the Global Environmental Benefits that they provide.

This workshop was timely in providing opportunity for an analysis of field experience in biodiversity mainstreaming, as well as enhanced understanding of successes and failures in employing the STAP-recommended biodiversity mainstreaming approaches. The outputs of this workshop are still being finalized, but will act as an input to GEF-6 strategy formulation, as well as to the CBD and the post 2015 Sustainable Development Goals

c. Human Well-Being Effects of Protected Areas (PAs)

As noted above, establishing PAs has been among one of the most common and successful interventions to address biodiversity conservation goals. The process of protecting areas from the threats posed by human activity will by definition inhibit some human actions and therefore potentially negatively impact human well-being. However, negative impacts could be balanced by maintaining valuable ecosystem services or through introducing new livelihood options. Consequently there is an ongoing debate on whether the net impact of PAs on human well-being at local or regional scales is positive or negative. We report here

⁶ Mainstreaming Biodiversity in Production Landscapes (2005) - http://www.stapgef.org/mainstreaming_biodiversity_in_production_landscapes

⁷ <http://www.cbd.int/doc/strategic-plan/2011-2020/Aichi-Targets-en.pdf>

on the conduct and outcome of a systematic review of evidence for impacts on human well-being arising from the establishment and maintenance of terrestrial PAs.

Following an *a priori* protocol, systematic searches were conducted of databases and organisational web sites, and calls for submission of information were made for evidence of impacts of PAs post 1992. The study involved a qualitative synthesis of explanations and meaning of impact derived from studies of people's views and related observations and documentary analysis, and a review of quantitative evidence of impact.

A total of 18,895 articles were identified from searches and calls for information. Following title screening 3,370 articles remained. The qualitative evidence review mapped 306 relevant articles and synthesised in detail 34 that were scored as high quality. The quantitative evidence review critically appraised 79 studies from 70 articles at full text and included 14 studies of low/medium susceptibility to bias.

The study constitutes a rich source of information on the different ways in which surrounding communities relate to PAs, and concluded that the evidence base provides a range of possible pathways of the impact of PAs on human beings, both positive and negative. However, it provides very little support for decision-making on how to maximise positive impacts. The nature of the research reported to date forms a diverse and fragmented body of evidence that, with current methods, is unfortunately not helpful for the purpose of informing policy formation on how best to achieve win-win outcomes for biodiversity and human well-being. In order to better assess the impacts of protected areas on human well-being and generate quantifiable evidence, the report provides some recommendations for improving project study design and reporting, including *inter alia*:-

- Studies must report sufficient methodological detail regarding the location of sample sites (in relation to the protected area boundaries in particular), the degree of replication, the data collection tool (e.g. quote questions posed to respondents in questionnaires), the method of sample selection (e.g. random or purposeful), and the times and duration of sampling.
- Where changes following establishment or change in protected area governance are being investigated, adequate baselines must be assessed.
- 'Control' or 'comparator' populations are vital to enable conclusions to be drawn about impacts in the absence of the intervention.
- When designing the study, the allocation of resources to pseudoreplication (improving precision) versus true replication (improving accuracy) should be considered carefully.

Considering the aforementioned points, if the GEF wishes to be able to generate lessons from its own portfolio, then experimental design and other scientifically rigorous elements should be embedded in GEF programmes and projects in order to generate the data and knowledge required for valid impact studies. Innovative tools and approaches, such as those involving Information Communication Technology and Knowledge Management could help uptake information, and ultimately the learning that will assess impact, and help steer the GEF decision-making process for investment.

d. Role of Regional Organizations in International Waters

The International Waters focal area has a long-term strategic goal of “promoting the collective management for transboundary water systems and subsequent implementation contributing to sustainable use and maintenance of ecosystem services”. In effect, in this domain the GEF supports projects and programmes that are concerned with the delivery of regional public environmental goods and services.

These projects are increasingly influenced by regional political and economic organizations—such as the Southern Africa Development Community (SADC), East African Community (EAC), Association of Southeast Asian Nations (ASEAN), Organization of American States (OAS), Central American Integration System (SICA), the Caribbean Community (CARICOM) and others – all of which build towards a set of integrated governance frameworks aimed at strengthening cooperation, trade and exchange within a regional and national context. Depending on the maturity and progress of these regional integration mechanisms, GEF interventions – within International Waters and across other focal areas – will likely benefit from stronger coordination between these bodies through the development of either formal or informal cooperation with these emerging regional structures.

There is strong evidence that regionalism and regional cooperation increasingly influence both the context and quality of transnational policy making in most sectors, ranging from economic development, trade, health, education, to peace and security. Regionalism refers to the common objectives, values, and identities within a geographical region. It is often combined with the creation and implementation of institutions or frameworks that shape collective action.

Based on the assessment, a number of observations and recommendations are beginning to emerge – detailed more fully in the report currently under peer review. Among these are:

- Collective action in the field of environment, particularly with respect to shared water bodies, is a vital ingredient to successful resource management – but is heavily dependent on functioning and viable regional governance frameworks.
- There is increasing evidence of the benefits of regional collaboration to achieve collective action as manifested through the development of regional organizations such as the EU, ASEAN, ECOWAS, MERCOSUR, and SADC.
- The management of international waters environmental issues often requires transnational political/institutional coordination, which may be found in multipurpose regional institutions.

e. Round Table on Adaptation and Climate Resilience and Development

STAP organized a session on climate change adaptation and climate resilience. The session objectives focused on the following aspects: i) brainstorming how the GEF could strengthen its thinking on adaptation by focusing more broadly and strategically on this topic; ii) considering the implications of this shift in thinking for the GEF, given its role as one of the primary sources of environment and climate-related finance for the developing world; and, iii) drawing insights for STAP and the GEF.

The first brainstorming discussion on climate change adaptation and climate resilience was held on 9 October 2013 in Washington, D.C. Several key points resonated throughout the discussions, including the following aspects: i) the importance of “usable information”, and STAP’s role in creating or assembling such information. This included identifying and facilitating best practices on climate change adaptation and climate resilience, as well as how the GEF can think about incremental adaptation and transformational adaptation; and, ii) the need for regulatory frameworks and support, and how these efforts could be integrated into resilience measures to strengthen stakeholders’ abilities to plan for future climate risks at the local, regional and national level. STAP will hold future roundtable discussions on climate change adaptation and climate resilience with its GEF partners to further advance the thinking on these relevant points, and other aspects raised at the brainstorming sessions.

5) Upcoming/Ongoing STAP activities

A number of planned STAP work programme activities are outlined below.

a. Marine spatial planning

In partnership with the Secretariat for the Convention on Biological Diversity, STAP recently completed an analysis of marine spatial planning practice – which is emerging as an important conservation and planning tool in many parts of the world⁸. Follow-up actions is planned to develop capacity building resources to assist national and regional decision-makers in GEF recipient countries, along with planners and practitioners, in design and implementation of marine spatial planning (MSP) and management by synthesising global experiences and good practices using a common framework. This work will include identifying enabling factors that have contributed to the successful delivery of MSP objectives or factors that have impeded marine spatial planning and implementation. The project outputs directly contribute to the recent decision of the CBD Conference of the Parties on marine spatial planning⁹, along with UNEP’s Marine and Coastal Ecosystem-based Management Capacity Building Support Programme.

The two main objectives of this effort are as follows:

- Collate, using a common case study framework, and in direct collaboration with Regional Seas Conventions and Action Plans secretariats and focal points, relevant Multilateral Environmental Agreements (MEAs) such as CBD and national planners, decision-makers and practitioners across relevant sectors (e.g. environment,

⁸ <http://www.stapgef.org/marine-spatial-planning-in-the-context-of-the-convention-on-biological-diversity/>

⁹ CBD decision XI/18 Section C, paragraph 2

fisheries, energy, transport, tourism, coastal development, agriculture, other sectors);

- Convene a technical workshop with experts and national decision-makers and planners involved in marine and coastal management, particularly in developing regions, to gather additional MSP case studies and review the available information to identify lessons and practices that have enabled practical context-specific implementation of MSP.

b. Black carbon

STAP will be undertaking a technical review of climate change mitigation profiles and options to address black carbon and other short-lived climate forcers. Using mechanisms to help reduce these emissions as GEF climate mitigation objectives under GEF-6 could help meet the challenge to address the UNFCCC target of stabilizing climate warming to below 2°C.

Reports on the topic have recently been published by UNEP, World Bank, and the IPCC¹⁰. The proposed activity extends STAP's previous assessment work in 2011 which reviewed climate mitigation science and proposed a range of recommendations for the GEF on its potential contribution to transformational change towards 2°C target¹¹. The conclusions reached on this specific topic will be further expanded by exploring and building regional black carbon mitigation profiles of measures and technologies that might be used to reach this target. The work complements STAP's technical advisory assessment in support of the formulation of GEF-6 climate mitigation strategy.

c. Liquid biofuels

An upcoming STAP review of biofuel initiatives aims to provide a simple guidance method for the GEF to assess under what circumstances transport biofuel projects should be supported. The major focus will be to assess the climate mitigation potential of an individual biofuel project as potentially funded by GEF, but with an over-arching aim of evaluating the role that GEF can play in stimulating sustainable low GHG biofuel production systems at national, regional and global scales, within the context of a 2°C mitigation scenario.

Biofuel production links with the nexus of climate/ energy/ food security challenges and the need to reconcile these with local community needs and people's aspirations. Biofuel project assessments should continue to be based on an in-depth analysis of case-by-case evaluations and recommendations made according to the project location, scale of implementation and its technical features.

The review will provide a meta-analysis of the criteria and background circumstances outlined in potential project proposals requesting funding from the GEF. As such it will limit its geographic scope to GEF recipient countries and only cover production and processing technologies, or supply pathways (technology chains) requiring market development, capacity building, or demonstration or pilot level activities. The work continues STAP's efforts to support GEF climate mitigation projects and to improve GHG ex-ante accounting. It

¹⁰ <http://www.unep.org/publications/ebooks/slcf/>

.. <http://documents.worldbank.org/curated/en/2013/06/18119798/integration-short-lived-climate-pollutants-world-bank-activities-report-prepared-request-g8>

IPCC 5th Assessment Report- Climate Science, Chapter 7

¹¹ <http://www.stapgef.org/climate-change-a-scientific-assessment-for-the-gef/>

is expected that the methodology will include life-cycle analyses where appropriate and will be built on principles already used in GEF transport and energy efficiency methodologies. It is expected that an algorithm for calculating the GHG impacts of biomass projects will be among the outputs developed, and that can be used to provide information on the development of baselines and GHG reporting.

d. Developing multi-focal area approaches

With the launch of the GEF-6 replenishment activities at the start of 2013, the STAP developed a paper¹² for the first GEF Replenishment Meeting, to suggest ways in which to improve delivery of Global Environment Benefits in GEF-6 and beyond. The STAP proposed a novel conceptual framework to improve the relevance and effectiveness of the GEF in delivering support to the emerging post-2015 global sustainable development agenda. The paper proposes a framework that better connects the GEF with sustainable development goals, and argues that there are thematic areas (cities, food systems, etc.) where these synergies may be better exploited.

A cross-cutting approach was recommended to facilitate collaboration within and between GEF focal areas and to help promote synergies and cost-effectiveness, complementing on-going development of the GEF-6 focal area strategies. STAP proposed four synergistic themes: (i) Green Cities; (ii) Smart Food Systems; (iii) Healthy Oceans and Coasts; and (iv) Resilient Ecosystems; that could become the outcomes of future GEF programmes which address the key environmental challenges of sustainable development. STAP notes that these closely match the Signature Programmes proposed by the GEF Secretariat¹³.

The STAP is beginning to explore multifocal approaches for these thematic areas, starting with the Green Cities/urbanization crosscutting area for GEF-6, and expanding the potential cross-cutting, multi-focal area modalities through which the GEF can support sustainable urban development, whilst acknowledging its obligations to individual focal areas and/or Convention objectives. The outputs envisioned in the STAP cross-cutting paper included the identification and prioritization of mechanisms, tools, and approaches towards sustainable urban development that the GEF could consider supporting through its focal areas, consistent with the GEF mandate to generate global environmental benefits in the most cost-effective way possible.

e. Information Communication Technology (ICT)

Another area the STAP has begun is exploring some of the tools by which the evidence-base and knowledge management mechanisms for (multi)focal area interventions can be created, improving decision-making and planning of GEF investments. In the summer of 2012, the STAP Secretariat reached out to and informally presented to the IBM Smarter Cities research project group, on the GEF and challenges in using the current Results Based Management (RBM) framework to monitor the portfolio for generation of GEBs. This culminated with an invitation to present on Information Communication Technology (ICT), and its potential to

¹² http://www.thegef.org/gef/council_document/enhancing-gefs-contribution-sustainable-development

¹³ http://www.thegef.org/gef/sites/thegef.org/files/documents/Signature%20Program_Revision_August23-2013.pdf

aid the GEF in its mandate, at the Fall 2012 STAP Meeting, with a parallel presentation organized with the GEF Secretariat Climate Team for the GEF Secretariat CEO and senior management. Following on from this, the STAP attended a Sustainable "Smarter" Islands forum with the University of West Indies in Barbados in January of 2013, as the island is also working with private sector to embed ICT in sustainable development efforts. In addition, the STAP has been helping the GEF Secretariat identify appropriate private sector and academia partners, as well as to shape the agenda for their upcoming meeting "GEF's Forum on Innovation Partnership: ICT Applications for Environmental Challenges" to be held in Washington DC, December 18, 2013.

The objective of the forum is to solicit expert perspectives on advancing the Global Environment Facility's (GEF) role in facilitating the use of Information Communication Technology (ICT) to address global environmental challenges, and provide the tools and approaches for measuring state, impacts, facilitating informed decision-making and providing evidence of the efficacy of implemented solutions. As the GEF moves forward into the new programming period, it is seeking to create a dynamic platform with ICT-related stakeholders to identify new areas for collaboration and innovation to meet the goals set for this period. The forum will serve as a first of several discussion series that will assist the GEF in integrating appropriate ICT solutions in its strategic goals regarding climate change and natural resources management especially related to cities, agriculture and forests. The STAP Chair will give remarks at this Forum and chair the session where key discussion points arising out of the session will be formulated into next steps for development of partnerships to promote and enhance the use of ICT in the GEF.

f. Scientific Basis for Monitoring and Evaluation of Adaptation

Under STAP's Adaptation work programme, a partnership effort with UNEP / PROVIA is planned which will include the preparation of a technical report addressing issues related to indicators, frameworks for planning and mainstreaming of long-term adaptation, including monitoring and evaluation approaches. The technical report will be validated and disseminated through a stakeholder / user workshop involving the GEF Secretariat, implementing agencies, and country representatives. The workshop will take place in 2014.

g. OPS 5

STAP Evaluation

Noting that there has not been a comprehensive evaluation of STAP in its history, the GEF Evaluation Office is currently engaging the STAP in a comprehensive evaluation during 2013. GEF Overall Performance Studies 1, 2 and 3 all touched on some aspect of STAP's work and have made recommendations; however, in general the tendency of evaluations has been to recommend a further focus of STAP on scientific and technical advice to the GEF on strategic and operational issues. Indeed, the latest STAP reform took place in 2007 partly in response to the recommendations of OPS3.

The last STAP reform aimed at making STAP's advice more strategic, timely and effective, and resulted in 1) the reduction of the number of panel members from 15 to 6 (though with

increased panel members contractual time); 2) the abolition of the STAP roster of consultants and in its place promised to engage a network of institutions by entering into agreements that would help expand the technical resources available to the GEF and; 3) the strengthening of the STAP secretariat to liaison with cooperating institutions and individuals, and the maintenance of data bases of experts to carry out selective reviews of projects.

The objective of this 2013 evaluation will be to assess the extent to which STAP has met its mandate, and the extent to which the 2007 reforms have been implemented and resulted in STAP advice to GEF that is more strategic, timely and effective. The evaluation will also identify factors affecting STAP's performance and will provide recommendations for improving the effectiveness of STAP advice to the GEF.

The STAP has cooperated with the Evaluation Office in this endeavour and is equally ready to work closely with UNEP and other GEF partners to implement recommendations made and improve its service to the GEF.

Other Sub-studies

At the time of writing of this report, the full complement of sub-study reports was not yet released by the Evaluation Office; however, the STAP has great interest in the various evaluation reports being generated. Though challenged by a small, globally distributed Panel, and a small Secretariat, the STAP wishes to express its keen interest in commenting on the documents, as well as being involved in helping the GEF detail solutions for, and implement the recommendations. Apart from the focal area related impact studies, the STAP takes particular note of (*inter alia*) the Results Based Management, Knowledge Management, Health of the Partnership, Project Cycle, Monitoring & Evaluation, and Gender papers; and hopes to be engaged closely with partners going forward on recommendations in GEF-6 and beyond.

6) STAP Engagement with Conventions

a. UNCCD CoP 11

STAP led two side events at the 11th Session of the Conference of the Parties (COP) to the United Nations Convention to Combat Desertification (UNCCD) held during the first week of the COP – 16th to 20th September 2013 in Windhoek, Namibia. The side events, held on 16th and 18 September 2013, organized jointly with the GEF were titled “Carbon Sequestration – A Valuable Global Benefit of Sustainable Land Management” and “Carbon Benefits Project – new tools to measure carbon & the GEF's experience applying the tools”.

The objectives of the side events were to:

- demonstrate the importance of the current work of the GEF Land Degradation focal area, with special reference to sustainable land management and the potential benefits derived from above- and below-ground sequestration of carbon;
- illustrate STAP's current scientific understanding of the relationship between soil organic carbon management and its importance to sustainable land management;
- demonstrate a set of carbon estimation tools developed by UNEP-GEF's Carbon Benefits Project and show how Parties could use the tools to monitor and report on Strategic Objective 3 (to generate global benefits through effective implementation of the UNCCD); and
- contribute towards policies that support UNCCD's efforts to generate global benefits through sustainable land management.

The "Carbon Sequestration" event presented scientific evidence as to how, why, and under what circumstances global benefits could be achieved through sustainable land management. This evidence is elaborated further in the STAP publication "Managing soil organic carbon for global benefits", published by STAP in August 2013¹⁴. Participants demonstrated an interest in understanding further the implications of soil organic carbon management on agricultural productivity and livelihoods. This included the vital effects of soil carbon management on plant available water – an important element for drylands, and areas affected by climate change risks, such as drought.

The "Carbon Benefits" event featured simple and detailed assessment tools developed by the UNEP/GEF Carbon Benefits Project (CBP). The session profiled experiences of the GEF agencies UNEP, UNDP and IFAD with the carbon tools in land management and sustainable forest management projects. The outcomes of the session demonstrated that GEF agencies are testing the tools in land management and sustainable forest management projects, and showing their utility in practical project situations. Challenges when using the tools were also demonstrated – especially when applied to peatlands - since values for some parameters used in the tools are not well enough understood. Discussion featured how the tools are being used to validate carbon sequestered in projects on payment for ecosystem services. This demonstrated the potential for using the tools beyond the expected reporting on carbon stock changes from land management projects.

**b. CBD – SBSTTA 16
STAP/GEF Side Event
Montreal, October 15 2013**

Results of a recent expert meeting, co-hosted by the STAP and GEF Secretariat, were presented at this side event. The aim was to review progress in mainstreaming biodiversity in policy and production landscapes over the past 10 years. The GEF has been instrumental in promoting mainstreaming activities in hundreds of initiatives around the world, from payment for ecosystem service schemes to changes in national policies. This session provided an overview of the results of this expert meeting, and the future of mainstreaming initiatives under the GEF 6 biodiversity strategy.

¹⁴ <http://www.stagef.org/managing-soil-organic-carbon-for-global-benefits/>

c. Diplomatic Conference for the Minamata Convention on Mercury, Kumamoto and Minamata, Japan, 7-11 October, 2013

STAP Secretariat attended this first diplomatic conference of the Convention under observer status, as the text of the new Convention was adopted and opened for signature. It presented the STAP with the opportunity to attend a number of key side events, and to expand its expert contacts, particularly as they relate to the UNEP Global Mercury Partnership, a joint side event between the Society of Environmental Toxicology and Chemistry (SETAC, a STAP partner) and the University of Kumamoto entitled “Managing Mercury Pollution in the 21st Century: bridging science and policy”. This contact is key as the STAP seeks to fine tune the areas of mercury work it should embark on behalf of the GEF, whilst avoiding duplication of effort. SETAC has already been engaged by the STAP to work on mercury, and so these meetings in the margins of the Diplomatic Conference were critical.

7. Summary

It has been a particularly busy period for STAP members and the STAP Secretariat since the last GEF Council meeting. Overall, the Panel is working well together as a team and all members look forward to further strengthening the relationships with the GEF Secretariat and Agencies in order to advance Global Environment Benefits as expeditiously as possible. In particular, the new STAP Chair is eager to build closer ties as we move to the final phase of the GEF-6 Replenishment, and seek to achieve the new GEF vision to transform the way environmental problems are tackled. STAP stands ready to provide technical input to help implement GEF-6 more effectively, and improve on - or pilot - new multifocal approaches.

The STAP sees that at this point in time, there is a convergence of elements that highlight the need for improved gathering, management and analysis of data to provide the GEF with the ability to identify sound and enduring solutions, and to monitor the performance and efficacy of such in generating Global Environment Benefits. This, in turn, helps the Council and the GEF Secretariat in its decision-making on the best way to guide the allocation of scarce resources. The role of scientifically based approaches, constructs and technologies, such as Knowledge Management, Results-Based Management, Targeted Research, Information Communication Technology et. al., should be recognized as significant. Therefore, there is opportunity for the STAP to work shoulder to shoulder with partners to improve the role of science in the GEF, concomitantly improving the information needed for decision-makers at every level of the GEF partnership.

GEF 2020 Strategy – Comments from the STAP (October 2013)

Thank you for giving STAP the opportunity to comment on the draft vision for 2020 “Strategy paper for the Global Environment Facility” (dated September 4, 2013). We hope our comments are helpful, and we look forward to assisting the GEF in realizing this exciting vision of the future. The general comments of STAP Panel members are summarized below, and these are followed with more specific comments.

General Comments

Drivers and the Approach to Causality

Overall, this is a comprehensive analysis of current drivers of environmental change, and the narrative is quite accessible. It sets the context for GEF 6 and builds a case for shifting the GEF entry point further upstream. STAP notes and can see rationale for the focus on drivers. This concurs with a number of recent assessments and with the CBD Strategic Plan. It coincides closely with the focus of the Conceptual Framework of the recently launched [Intergovernmental Platform on Biodiversity and Ecosystem Services IPBES](#), which places emphasis on human demands and institutions as underlying drivers of environmental change; as well as the [Blue Ribbon Panel of the Global Partnership for Oceans](#). At the same time, it is appropriate that pressures are not completely de-emphasized and there is an explicit acknowledgement that underlying drivers and immediate pressures have to be tackled in combination. ‘Capacity building’ should continue to be a central effort of the GEF in the coming years. Clearly one case for change that needs to be given greater emphasis is the 1-2 “bottom” billion people that lack access to basic water supply, sanitation, health and livelihoods (page 4). This deserves more attention than just being noted as a driver.

Many of the “megatrends” mentioned in the document are not new. What is new is the fact that conventional approaches to tackle them may have reached their limits (and may no longer be effective). Therefore, more critical thinking about the solution space is appropriate. Science has something to tell us about the problem space, but it also has something to tell us about the “solution space”. This may require drawing on a broader range of disciplines, particularly from the social sciences – sociology, political science, economics, behavioral sciences & so on. One may also want to identify and look for framing & analytical constructs that might help generate multiple benefits, multi-metric valuation etc.

STAP believes the causal chain (page 20) concept needs further explanation, as the “direct and indirect drivers” and “pressures” (see Exhibits 7 and 14) are quite complex. The main audience (GEF recipient countries, GEF Council, Agencies, business stakeholders, etc.) may also have difficulties following all these connections. In the discussion of upstream drivers, perhaps there should be more emphasis on addressing consumption patterns, governance and behavior. There is some passing mention of these as brief examples in the text and in Exhibit 14; however there is relatively little attention compared with reducing the side effects of consumption. In addition, the issue of poverty as a root cause for environmental degradation (and concomitant support for sustainable economic development) should be a key element in the causal chain analysis.

Knowledge Management

STAP applauds the renewed emphasis on knowledge generation and leadership in this area (for example on pages 30, 41, and within Annex IV (page 72-80)). The realization that an updated approach to knowledge management is an essential tool to scale up GEF’s impact and to greatly improve the efficacy of its interventions is welcome. This is a much needed change, and one for which STAP has long advocated. STAP welcomes, for example, the use of GEF case studies to illustrate points in the narrative (which could be expanded). However, there is a need to know what projects have actually achieved environmental and social benefits beyond the normally reported results and outputs. This is explored under “close the feedback loop” (page 48), which STAP endorses. It is important to measure actual “outcomes” and “impacts” as well, and to develop metrics for these. Making progress on this will help to correct a weakness of GEF to date, i.e., the dissemination of lessons learned, good or bad. There is a wealth of information from past projects that could be mined to quantifiably assess co-benefits, pitfalls in implementation, ways to avoid failures, etc. This could lead to a set of “best practices”.

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Competent management of knowledge is also critical if one wishes to explore scalability of interventions. There is opportunity for scaling up if key past projects are analyzed and the lessons learned are heavily promoted. In that case, replication can start soon – without waiting for new projects to be completed. Concomitantly, what appears to be missing is how an effort towards scalability will match with the present STAR allocation process. It is briefly mentioned (page 46), but only tentatively. While the notion of “scaling up” is welcome (page 18), this idea must be explored in conjunction with regional context and regional differences. This is a key issue - more emphasis should be placed in the Strategy on how to gain greater replication. Critical interventions, in order to be cost-effective and high-impact, may need to differ between major regions of the world. Replication and impact at a systems level is also key, and this is noted under “impetus for change” (page 18).

Carrying on from this idea, the STAP agrees that innovation, scale, impact and cost-effectiveness are all desirable, but these four attributes are not always achievable at the same time, and may in some cases be conflicting. For example, a strategy that seeks the lowest \$/tCO₂ may not be particularly innovative. Some careful thought is required about the appropriate metrics for success for the GEF as a whole. Catalysis should also be considered as being critical, given that the GEF is one among a growing number of players in the landscape of environmental finance. In this sense, the strategy needs to be explicitly more differentiated – differentiating between areas where the GEF is the only player, and those where the GEF is one of many players. Articulation of comparative advantage and positioning is particularly important in climate change – both mitigation and adaptation. Having the hard knowledge at hand to articulate and verify the comparative advantage of the GEF, is also a point that should not be lost.

STAP agrees with the proposal to identify a set of core indicators to be applied uniformly across projects, programs and focal areas] and would welcome the opportunity to work with GEF Secretariat and other members of the GEF family to develop and select suitable indicators. These core indicators could serve to encourage synergistic interaction in pursuit of sustainable delivery of global environmental benefits, and facilitate evaluation of progress towards this goal.

Conceptual Framework

The analysis is heavily based on the “planetary boundaries” conceptual framework. This is acceptable and understandable from a communications perspective – provided however there is an acknowledgement that such a framework has limitations. The scientific evidence behind this framework is weak in some areas, in particular for biodiversity and chemicals. The planetary boundary concept has in addition been difficult to scale down to the national level in a meaningful way. The discussion on page 14 that states “There is a growing recognition that environment and development are interdependent— not competing— objectives” provides a more nuanced approach. While the planetary boundary framework may have been extremely helpful in focusing the GEF on future needs, the description may be too lengthy, and this is one place where the text could be trimmed. It is adequate to mention this concept once in the case for change section.

This discussion also notes the implications of planned infrastructure investments. STAP recommends that this analysis mention the potential lock-in effects of such investments and unforeseen impacts if not fully evaluated over the expected lifespan of these investments.

Governance

The draft 2020 Strategy does not speak of governance, political economic issues, and civil strife as causes for environmental degradation. These issues are important barriers to add to the five barriers currently noted in the draft. The GEF partnership is, in many cases, working in environments that are post conflict and where the governance and institutional frameworks are weak at local, national, regional and global levels. A future strategy should be sensitive to and understand these issues. . A future GEF strategy should be sensitive to and understand these issues and include a discussion on how to understand the political economy of nations and regions.

Priority Setting

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The current paper raises “priority” in various contexts. However, there is very little on how priorities for intervention are to be determined. It may be relatively easy to prioritize within a focal area, but there are few tools available to assess, on an integrated basis, the priority issues in a cross-focal arena, nor in the Signature programs. Methods for supporting priority setting mechanisms should be identified, adapted, and/or developed, assuming there is a need.

Apart from setting priorities, there is much in the document about the “what”, but much less about the “how”. Many ideas are mentioned, but the way in which they may be implemented and over what time frame are not spelt out - key. More on the ‘how’ is key to making the Strategy actionable.

Role of the STAP

Finally, and quite importantly, the current paper is relatively silent about the role of STAP in the new strategy. While STAP is cited on a number of occasions in the first sections as a source of ideas, evidence, etc., its role is then mentioned only very briefly at the very end of the document in the “Path Forward” section. The concrete roles that STAP could play remain unclear. The roles of the GEF Secretariat and implementing agencies are mentioned in greater detail. This is puzzling, considering STAP is in a prime position to facilitate the new knowledge generation function as proposed in the document, and to help with programmatic and project design. STAP members are linked into scientific networks in developing countries and CEIT, thereby adding a dimension of learning from local knowledge and expertise to aid in decision making and prioritization. STAP would welcome an opportunity to explore how the document could reflect the potential roles of STAP in a more prominent and detailed way.

Further Detailed Comments (in order of page number)

- 1) In the Preface (page 2) there is a mission statement –“The GEF’s core mission is to help ensure the sustainable use of ecosystems and resources, upon which all life depends”. Is this quoting from somewhere else (we could not find a mission statement online), or a newly articulated mission? To the sentence that follows, “Our premise is that the environment is an essential pre-condition for sustainable development and are we committed to work that is both people-centered and planet-sensitive”, we suggest you add “the health of” before “environment”.
- 2) The statement “While working at the individual country level” put forward in the vision statement (page 3) does not capture the fact that many of the GEF investments already tackle regional collective action issues such as ocean governance and large marine ecosystem (LME) management. Current interventions in this space are geared towards regional single and multi-purpose organizations and evidence points towards the need for more regional action to address environmental degradation in several areas.
- 3) Section 1 (page 7): “the case for change” lists the major environmental issues of today as “emerging challenges” – however most are not really new, so are really “growing”. These largely coincide with those identified in STAP’s paper presented to the First Replenishment meeting (chapter IV) and our current focal areas; but there are some notable divergences. Nitrogen pollution is singled out in the Vision 2020 list, but land degradation is largely invisible – land is mentioned as being at risk from chemical pollution; agriculture is listed as a threat to water ecosystems; but there is no clear identification of the decline in soil health as an environmental challenge. STAP suggests that land degradation and/or loss of soil fertility/health should be added to this list.

The strategy should reflect upon the fact that for freshwater and ocean governance we lack global conventions and that the oceans are the largest ecosystem with no agreed multi-dimensional governance and management frameworks. The GEF is the only public financing

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entity that can tackle these challenges and support collective action. Today, and we hope in the future, the GEF will also finance global environmental benefits for areas such as International Waters that are not (yet) supported by global conventions.

- 4) In Exhibit 1 (page 8), why does "non-GEF" only appear on some graphs? In some cases it may be too hard to measure (e.g., GHG emissions) but it is also important not to give the impression that the GEF is the only contributor. It is also important to clarify that the GEF may contribute only incremental funding to the activities already supported by other sources of co-finance.
- 5) **The section** "Growing nitrogen pollution threatens freshwater and marine ecosystems" (page 9) should be changed so that it addresses the fact that it is about "nutrients" including nitrogen as well as phosphorus.
- 6) In Exhibit 3 (page 11), the figure of 60% of the total number of ecosystem services (15 out of 24) being degraded gives no account for their individual weightings - e.g., it assumes provision of wild food is equivalent to fresh water. Perhaps there is a better way to present it.
- 7) In addition, in Section 1 under the discussion on "population growth" (page 12) STAP suggests that the issues of water supply and climate change impacts be added to this paragraph. In the subsequent paragraph under "global middle class", it is suggested that the differing time lines – 2030 and 2050 respectively in this statement - are not necessary and may be confusing.
- 8) In Exhibit 4 (page 13), the unit of measurement "QBTU" (Quadrillion British Thermal Units) is not understood anywhere outside of the US. We propose that the International System of Units (SI) be used throughout – e.g., use EJ (exajoules) in this instance.
- 9) In Section 2, the last line (page 20) needs a subtle but meaningful rephrasing. It is not the goods and services, but the processes that supply them, that give rise to environmental pressures.
- 10) The logical consistency of Exhibit 7 (page 21) decreases from right to left – and it is not clear what it is trying to portray. Whereas the three major indirect drivers (second column from left) are clearly identified, the pressures column (second last column to the right) is a mixed bag of causes and consequences. For example, species loss is clearly a consequence of other things in the same column, e.g. change in habitat, over-exploitation, sometimes introduction of invasive species. What people actually desire for quality of life is not apparent (e.g. comfort, shelter, mobility, health, entertainment, etc). For instance, we don't want electricity as such but rather the energy services it provides. It seems fairly obvious that human demands result in environmental impacts - but there is no indication of how behavior, education, cultural differences are also involved in this analysis. Are the Impact and Response categories omitted intentionally? If so, perhaps the logic needs to be better explained.
- 11) The draft Vision states that "There is no universally accepted framework for defining the causal chain between the underlying socio-economic trends and the global environmental state" (page 22), yet the DPSIR framework and variations thereof (as partially illustrated in Exhibit 7) are widely recognized. While there is no universal acceptance of the causal links, there is indeed wide acceptance of the framework, despite some small variations in its application. The sentence should be reworded to acknowledge this. The draft continues on this page to say that "we draw a more nuanced distinction between indirect and direct

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environmental drivers”. Who is “we” in this statement? This is not the first time a distinction between direct and indirect drivers has been drawn. Also on this page, 3rd paragraph line 3 states “Similar causal chain”. Similar to what?

- 12) It is good that the Strategy document makes reference to the STAP crosscutting paper (page 25). However, the statement misrepresents the paper by saying it shows that “ by dealing with challenges across energy, urban areas and agriculture we can yield multiple global environmental benefits”. This should be reworded to better reflect the central message of the STAP paper, i.e., that integrated action **across focal areas** will improve the effectiveness and efficiency of the GEF in delivering global environmental benefits. In the paper, STAP proposes a novel conceptual framework incorporating four overarching themes aligned with the key goals of sustainable development (green cities, smart food systems, healthy oceans and coasts, resilient ecosystems), as a strategy to enhance the capacity of the GEF to support the global sustainable development agenda through its focal areas.
- 13) Exhibit 9 (page 26) is based on sectoral categories that do not align with the familiar UNFCCC sectors. Therefore they need explanation. For example, what is included in “Buildings”? Does “Food production” equate to the agricultural and fishing sector, or does it include other parts of the food supply chain such as processing that is normally included in industry? Why is biofuels classified in “Other industry” rather than in “Transport”? What is the deep green cell at the base of the land use change column? The text describing Exhibit 9 implies that the figure represents the current situation, yet the footnotes suggests GHG emission estimates are for 2030, and footnote 1 indicates that the Materials figures are for China alone, rather than global. These details need to be clarified. The sentence immediately below Exhibit 9 needs rewording to clarify, and presumably “tacking” is intended to say “tackling” or perhaps “tracking”?
- 14) Exhibit 11 (page 28) is not clearly explained. How is water scarcity defined and assessed?
- 15) Concerning Exhibit 13 (page 32) the expert qualitative assessment ranking soy cultivation impact on biodiversity as “low” is surprising. This might be so at the global scale, but it is certainly not the case (both in absolute terms and compared with other food items) in Latin America. A cautionary/explanatory note added to the description of this Exhibit would be useful, in terms of the scale, assumptions, whether diversity is mammals, plants, endemics, etc. Even better (if the data is available) would be to split it into major regions of the world. Otherwise it might raise more criticisms than awareness. Also, we assume that the CO₂ column should be headed "Greenhouse gases" and not just “CO₂”. There are also other anomalies - e.g., why is wheat high for CO₂ emissions, yet corn is moderate? And what exactly does "biomass" mean here? – it is a very broad term and so needs defining.
- 16) Under the section “Awareness and behaviour” (page 34) the term “intermittent renewable energy” is used incorrectly – it should be "variable" as intermittent implies being in a state of “on” or “off” and this is not the case for wind, wave and solar.
- 17) In the Conclusion paragraph (page 41) presumably a proposed future approach is being discussed, yet it is expressed in present tense. Logic is not clear.
- 18) The origin of these “two critical principles” (page 42) is not clear and they are not expressed as principles. Rewording is suggested.
- 19) Section 4, “The Path Forward” (page 42) is the least satisfying in this paper because it reads like business-as-usual for the GEF. In addition, the expression “knowledge ecosystem” seems technically untenable. It would be fine as a metaphor for communication in certain contexts,

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but is not clearly justified in a strategy-statement of a leading science-based institution such as GEF. Surely another, more technically appropriate and accurate term can be found to describe this new knowledge entity/vision. The definition is also not very clear: “Our knowledge ecosystem consists of our collaborative network of partners, the knowledge we collectively generate, and the ways in which we employ that knowledge become better are designing interventions with a high likelihood of generation significant and scalable environmental benefits across our programs.” (page 49). Not only are we already spreading our resources thinly within the focal areas, but within each project there are also sub-projects that tend to be unfocused, overly ambitious.

- 20) The statement “Agricultural, rangeland, and forest landscapes affected by desertification and deforestation ultimately become unproductive” (page 43) is a bit muddled. If “deforestation” was substituted by “land degradation” it would make more sense.
- 21) Another relevant example of “Ecosystems” (page 63) is coal seam gas extraction, leading to clearing of protected forests and loss of productive land, and contamination of groundwater.
- 22) Annex 3 “Operationalizing Private Sector Engagement” (page 65) focuses on the role of the private sector and the need for renewed engagement from the GEF. This is logical, given the private sector is the source of the majority of externalities apparent in the drivers of environmental change, as described in preceding sections. What is suggested by way of possible strategies moving forward, however – whether in the focal areas or signature programmes – appear to be relatively straight forward initiatives, many of which are site based and most are already under implementation, thus suggesting a “business-as-usual” approach. There appears to be a mismatch between the nature of the problem described in this paper and the future solutions suggested.
- 23) In the section on “measuring what matters” within Annex IV (page 73), surely periodic in-depth ex-post analyses will be helpful. Another very important element that deserves more attention here is the fact that projects need to be designed from the start in a way that will allow better monitoring of impact, and better usefulness for more general learning. The role of experimental and quasi-experimental design is mentioned later on in the section, but one might posit that the design of projects in a way that provides maximum learning goes beyond experimental design.
- 24) The paragraph on staffing (page 75) may be more appropriate in an operational planning document.
- 25) There is no Exhibit 50 (page 77, 2nd paragraph, line 3)—should this be Exhibit 30? The text referring to Exhibit 30 (page 78) discusses perceptions of knowledge management capacity, yet Exhibit 30 is a chart of publications. It does not appear to support the text. The relationship between the chart and its title is also not clear (how do the contents relate to user needs?)