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INVESTING IN OUR PLANET

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REPORT OF THE CHAIRPERSON
OF THE SCIENTIFIC AND TECHNICAL ADVISORY PANEL

STAP Chair's Report to
The GEF Council

June 2021

STAP Chair's Report to the GEF – 60th Council Meeting

Introduction

This report provides an update on STAP's work since the last Council Meeting in December 2020. Over the past 6 months, STAP has worked on:

Reports

1. Circular Economy and Climate Mitigation – Advisory Document
2. Achieving Transformation through GEF investments – Information Brief
3. Making GEF investments resilient – Information Brief

Workshops

4. Behavioral Change – report of a workshop
5. Business and Biodiversity Mainstreaming – report of a workshop
6. Risk appetite and the GEF: Catalysing innovation for transformational change – report of a workshop

Other activities

7. Adaptation
8. Knowledge Management
9. GEF-8 and Replenishment
10. Additional STAP activities
11. Observations from the June Work Program

1. Circular Economy and Climate Mitigation: Advisory Document

Circular economy principles have appeared in GEF-7 investments, and are set to be a much more prominent feature in GEF-8. They have been applied, for instance, to address the effects of plastic pollution in the international waters and chemicals and waste focal areas. STAP has produced two advisory papers on the circular economy in 2018: one focused on its [application in plastic production, use, and management](#); the other addressed [circular economy principles in food and agriculture](#).

Circular economy can play a much more significant role in GEF programming, especially in the climate mitigation focal area. Over the past year, STAP has worked with Circle Economy (a think-tank on the circular economy) to develop an advisory report that addresses how the circular economy could contribute to climate mitigation and generate other global environment benefits (GEBs), as well as local environmental and socio-economic benefits.

As part of the report preparation process, two virtual workshops were held in October 2020 and January 2021, which brought together leading experts and practitioners on the circular economy and climate change mitigation. The discussions at the workshop, along with a background report, formed the basis for the new [STAP Advisory Document on circular economy and climate change mitigation](#).

The report found that the circular economy is crucial for climate change mitigation and environmental sustainability because key aspects of environmental degradation, including 70% of global greenhouse gas emissions and more than 90% of biodiversity loss and water stress, relate to the current linear nature of material, food, and energy extraction, processing, handling, and disposal¹.

The report presents 14 circular climate change interventions (Box 1) that the GEF could implement in recipient countries to reduce greenhouse gas emissions and also deliver a wide spectrum of global environmental and socio-economic benefits.

Box 1: The 14 circular economy interventions to mitigate climate change and provide other environmental and socio-economic benefits

1. Reducing emissions from crop production through regenerative agriculture
2. Improving resource efficiency in livestock production
3. Shifting to alternative protein sources and sustainable diets
4. Reducing food losses from harvest to processing
5. Avoiding food waste at the retailer and consumer levels
6. Closing loop on organic wastes
7. Deploying bio-based materials and accelerating the bioeconomy
8. Making the renewable energy transition circular
9. Making the most of widely used materials
10. Circular design in construction
11. Incorporating the circular economy into electrification of transport
12. Expanding non-motorized and shared mobility
13. Scaling up climate action across product value chains – textiles and electronics
14. Eco-innovation in industrial clusters, small businesses, and informal networks

To support countries in implementing circular economy measures and reduce greenhouse gas emissions, STAP recommends that GEF agencies:

- Design projects in accordance with STAP's foundational enabling conditions² which are of broad applicability, including circular economy projects. These conditions include: systems thinking; a robust theory of change; incorporate innovation; appropriate multi-stakeholder dialogue; establish monitoring, evaluation and learning; consider needed behavioral change; and ensure durability;
- Consider how circular economy approaches could be applied in GEF-8 programming more broadly, especially in the next generation of Integrated Programs;
- Support measures to improve access to finance, and assistance with business planning for companies implementing circular economy solutions;
- Facilitate South-South knowledge and technology exchange for circular solutions;
- Develop policies and institutional frameworks which are conducive to circular economy approaches;

¹ Circle Economy. 2021. The circularity gap report 2021. Circle Economy. Amsterdam: Circle Economy. <https://www.circularity-gap.world/2021>; IRP. 2019. Global Resources Outlook 2019: Natural Resources for the Future We Want. A Report of the International Resource Panel. United Nations Environment Programme. Nairobi, Kenya. <https://www.resourcepanel.org/reports/global-resources-outlook>

² Scientific and Technical Advisory Panel. 2020. *Nature-based solutions and the GEF*. Washington, D.C., pgs. 16-17. <https://stapgef.org/resources/advisory-documents/nature-based-solutions-and-gef>

- Develop the GEF’s knowledge management system to include what works, what doesn't, why and how, and in what contexts, for circular economy approaches; and
- Work in partnership with organizations globally to facilitate innovation, attract finance, promote more widespread adoption and replication of circular economy solutions.

2. Achieving Transformation through GEF investments: An information brief³

In the face of accelerating rates of global environment change, the Global Environment Facility (GEF) seeks transformative investments to deliver durable global environmental benefits and systemic change. What qualifies as a transformative goal should be clearly specified and plausible. ‘Transformation’ means different things to different people, and in many projects, the term is used to claim impacts which are not really transformational. STAP recommends that a transformative investment should involve a pathway to durable change at a sufficient scale to deliver a step improvement in one or more global environmental benefits.

Transformation can occur directly but usually scales from many individual step improvements. A good [theory of change](#) is essential to help assess whether a set of interventions is necessary and sufficient to achieve transformational change. The theory of change for a transformative program or project should specify credible causal pathways addressing scaling mechanisms, after having identified the key barriers. This will often require multiple forms of innovation. At the global scale, transformation invariably requires well-designed partnerships among diverse stakeholders, often from the local to global levels, and in the private, community, and public sectors.

STAP recommends that that designers and assessors of GEF interventions should be challenged with three questions:

- a) Could this GEF investment be transformational?

Many, but not all, GEF investments are intended to be transformational, including the integrated programs (IAPs, IPs, and their successors). It is important to be clear which parts of the GEF’s portfolio are expected to be transformational; this should be a strategic decision related to the overall ambition of GEF-8. Transformative change requires greater innovation to explore new ways of achieving more impact, which often entails higher risk as well as higher rewards.

- b) If so...does the goal of the program or project really have transformational ambition?

If an intervention (whether project or program level) is intended to be transformational, there should be a clear-eyed appraisal of whether its goal is truly for *durable change* at a *sufficient scale* to deliver a *step improvement* in one or more *global environmental benefits*. The step-change may be in the quantity, durability, resilience, efficiency or even the volume of co-benefits, but it needs to be relevant to the GEF’s global mission.

- c) If so...are the mechanisms proposed for achieving this transformation plausible?

If the goal is plausibly transformational, the proposed interventions should be appraised critically in an appropriate theory of change. Where the intention is to scale, this should be articulated at the outset. Transformation invariably involves social and institutional issues, as well as economic and political dimensions. The implications for partnerships and engagement should be analysed with these in mind.

³ <https://stagef.org/resources/advisory-documents/achieving-transformation-through-gef-investments>

3. Making GEF investments resilient: An information brief⁴

The term resilience⁵ is used in many different ways. Resilience matters to the GEF to enable the delivery of global environmental benefits (GEBs) that endure in the face of rapid global environmental change, and against a backdrop of increasing systemic risk. STAP put together this short to help ensure consistency and clarity in how this term is used in GEF programming.

Resilience is about maintaining the essential character of systems where humans and the natural world interact, including how such systems work and what benefits they deliver to human beings. The concepts of resilience, adaptation, and transformation are closely linked but different: adaptation is a process that allows a resilient system to *maintain* its essential characteristics in the face of shocks and stressors (such as climate change), when this is desirable, and transformation is about *changing a* system's structure or function to be more resilient to future shocks and stresses. Often this is scale-dependent – transforming at one level may allow another level to simply adapt.

A question in resilience thinking is: resilience *of what* (the scope and scale of the social-ecological system), *to what* (what trends in what stressors and shocks), and *for whom* (who sets the purpose of the system, who defines 'good' or 'bad' resilience)?

Regarding resilience of what to what, it is important to distinguish *specified resilience* – resilience of a defined system to a known set of shocks and stresses – from *general resilience* – resilience to unforeseen threats that affect an unpredictable range of actors and systems. A balance is needed between *building resilience of a defined system to specified risks* such as known trends in population or climate, or known possible shocks such as extreme events, and *building general resilience* to unforeseeable events or events with unforeseeable implications, through building the adaptive capacity, reserves, and response diversity to deploy in the face of any shock. GEF investments could be designed explicitly to avoid undermining general resilience, and in some cases to enhance it.

A simple scenario-based approach to future risks can help GEF investments be resilient. Projects often identify trends in drivers like climate change, population, migration, and the economy, but are less good at incorporating these trends into project design. STAP recommends:

- Identify the most important drivers of change (e.g. climate, demography, security), and create 3 or 4 qualitative descriptions of diverse possible future conditions, to consider how these affect the baseline case;
- Develop possible responses, including those that are likely to work in all the future scenarios, considering explicitly whether adaptation or transformation is needed to achieve desirable resilience, and for whose benefit; and
- Select the best response, giving priority to options that are robust to future uncertainty, i.e. those that work reasonably well in all possible futures, rather than working very well in one future but failing disastrously in others.

⁴ <https://stapef.org/resources/advisory-documents/making-gef-investments-resilient>

⁵ Resilience can be defined formally as “the capacity of a social-ecological system to absorb, withstand or adapt to shocks and stresses such that the system remains within the same regime, maintaining its essential structure and functions”, or less formally as “the capacity of a system to deal with change and continue to develop”, but both definitions raise as many questions as they answer. This brief argues it is more important to put *resilience thinking into practice* than to wordsmith a definition.

4. Behavioral Change: Report of a workshop

In December 2020, STAP presented the report [Why behavioral change matters to the GEF, and what to do about it](#). The work highlighted how greater attention to behavioral change could significantly improve the outcomes of GEF investments. Behavior change is often an underlying assumption in GEF investments, but typically not directly addressed in project design. This can be a source of project failure or lack of durability of outcomes.

The advisory document included a checklist⁶ to guide project design toward attention to behavioral change. STAP has since determined that inadequate attention to the social context in understanding behavior change may create potential blind spots (e.g. values, culture, norms) for expected changes in behavior that are important prerequisites for achieving and maintaining global environmental benefits. A common strategy often pursued by practitioners and policy makers is to identify “nudges” (e.g. rewards for the desired behavior, or encourage a behavior through rules and regulations) to alter individual behaviors amongst stakeholders. For example, communities might be “nudged” to embrace market incentives, and national trade policies, to diversify agricultural production. Nonetheless, systemic barriers to project success, such as underlying power dynamics in a community related to (for instance) land tenure or access to resources, often do not receive proper attention in projects.

STAP organized a workshop on 25 and 26 March to further consider how the integration of insights across both the behavioral and social sciences could advance project design and implementation. Approximately 45 participants joined the workshop from a variety of disciplines (anthropologists, sociologists, geographers, environmental scientists), many with experience in sustainability science, as well as GEF agencies, GEF Secretariat, and the Independent Evaluation Office.

The participants concluded that individual behavior, the cultural context, and the institutional setting are *all* key to the success of projects. For example, there will be occasions when individual and socio-cultural support for change is high but institutional support is low. In such settings, projects should consider behavioral change interventions that focus on removing institutional barriers. Alternatively, institutional support can be high, and an intervention well aligned with individual psychology, but individual motivation for change is low because of how that change challenges the socio-cultural order in which that individual lives. For instance, an intervention to balance land resources between men and women within a household might be designed to maximize food, or increase income for women (traditionally, women earn less income, or have less access to land or other resources). It might appear obvious to design an intervention that moves towards a more balanced allocation of resources within households and communities. However, this may undermine traditional power or authority structures structured along gender lines. Thus, any “nudge” towards increasing women’s access to agricultural plots may not be taken up because it comes into conflict with local culture. A report of the workshop is available on STAP’s website. STAP is considering the outcome of this workshop and will offer further advice on behavioral change in due course.

⁶ Table 1, pg. 17

5. Business and Biodiversity Mainstreaming: Report of a workshop

STAP has provided [guidance on mainstreaming biodiversity](#) in 2005 and 2015. The business sector will be key to making further progress rapidly, in order to achieve the goals of the Convention on Biological Diversity (CBD)

Nature plays a critical role in providing essential resources that are fundamental to human existence. These include food, energy, medicines, and genetic resources, as well as a variety of materials fundamental for humanity's physical well-being and cultural identity. Nature also provides a range of ecosystem services such as clean air, fresh water, productive soils, crop pollination, and a stable predictable climate upon which humanity depends for its existence (IPBES, 2019⁷; Dasgupta, 2021⁸).

The resource-based production sectors of the global economy, such as agriculture, logging, and mining, have had particularly significant direct impacts on terrestrial ecosystems through land-use change, pollution, habitat fragmentation, and overexploitation (IPBES, 2019; UNEP, 2021). Food production is now the biggest direct driver of terrestrial biodiversity loss (Dasgupta, 2021). In addition, there are indirect effects associated with pollution and climate change, including the loss of pollinators and the proliferation of invasive species⁹. Although all of these stressors are directly impacting biodiversity now, the steadily accumulating effects of climate change, if left unchecked, will soon have an even greater impact on biodiversity (UNEP, 2021).

The GEF defines "biodiversity mainstreaming" as: "the process of embedding biodiversity considerations into policies, strategies, and practices of key public and private actors that impact or rely on biodiversity, so that it is conserved and sustainably used both locally and globally."¹⁰

The CBD's [draft post-2020 Global Biodiversity Framework](#) (GBF) recognizes the urgency of transforming economic, social, and financial models that have exacerbated biodiversity loss in recent decades. As with previous iterations, the [biodiversity strategy](#)¹¹ for GEF-8 is consistent with the CBD's objective and approach. The goal of the GEF's biodiversity focal area strategy is: "*globally significant biodiversity conserved, sustainably used and restored*". Biodiversity mainstreaming has three main elements: spatial and land-use planning to ensure that land and resource use is appropriately situated to optimize production without undermining or degrading biodiversity; improving and changing production practices to be more biodiversity-positive with a focus on sectors that have significant biodiversity impacts, and; developing policy and regulatory frameworks that remove perverse subsidies and provide incentives for biodiversity-positive land and resource use that remains productive but that does not degrade biodiversity. As part of biodiversity mainstreaming, the GEF supports Natural Capital Accounting¹² (NCA) to help national government agencies in making specific target decisions or responding to policy questions.

⁷ IPBES (2019) Global assessment report on biodiversity and ecosystem services of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services. E. S. Brondizio, J. Settele, S. Díaz, and H. T. Ngo (editors).

⁸ Dasgupta, P. (2021) The Economics of Biodiversity: The Dasgupta Review. (London: HM Treasury)

⁹ United Nations Environment Programme (2019) *Global Environment Outlook – GEO-6: Healthy Planet, Healthy People*. UNEP, Nairobi.

United Nations Environment Programme (2021) *Making Peace with Nature: A scientific blueprint to tackle the climate, biodiversity and pollution emergencies*. UNEP, Nairobi. (<https://www.unep.org/resources/making-peace-nature>)

¹⁰ GEF, 2016. Biodiversity Mainstreaming in Practice.

https://www.thegef.org/sites/default/files/publications/GEF_MainstreamingBiod_11.28.16.pdf

¹¹ Pg. 158-181

¹² Natural Capital Accounting is the process of calculating the total stocks and flows of natural resources and services in a given ecosystem or region. Accounting for such goods may occur in physical or monetary terms.

The GEF Independent Evaluation Office ([IEO, 2019](#)), reviewed the implementation of mainstreaming biodiversity in the GEF portfolio and found that:

- a) Mainstreaming biodiversity takes time, making the sustainability of institutional, financial, and human resources over longer time frames critical;
- b) Features that facilitate mainstreaming biodiversity include aligning interventions with national development objectives; long-term partnerships with nationally recognized organizations; engagement with key stakeholder groups; and the presence of good governance;
- c) GEF projects have successfully mainstreamed biodiversity conservation into institutions, policies, and territories with globally significant biodiversity;
- d) Engaging the private sector remains a challenge for mainstreaming biodiversity. The GEF and its partners have found it difficult to engage with large-scale commercial enterprises in biodiversity mainstreaming projects.

STAP held a workshop on 5 and 6 May, to approach biodiversity mainstreaming from the business perspective, and considered two questions: how do selected companies address nature and biodiversity in their business strategies and planning, investment decisions, and operations? And what could national governments and the GEF do to advance nature-positive development by business?

Over 50 participants from businesses such as BASF, BlackRock, BP, and HSBC, joined the workshop, together with members of the GEF partnership, including agencies, Secretariat, the Independent Evaluation Office, and the Natural Capital Project of Stanford University.

Summary of points:

- Unsurprisingly, businesses take a variety of different approaches to biodiversity, depending on the sector, use of natural resources etc., a useful reminder that the private sector is not homogeneous;
- The term biodiversity is not universally well understood and there were different interpretations about what it meant. Nor did the term mainstreaming resonate well. “Nature-positive” development might be a more useful term;
- Business has a good understanding of climate change, but less so of biodiversity. Business would favor an integrated approach that includes both climate and biodiversity within a systemic approach to environmental sustainability, rather than treat biodiversity as a separate issue;
- Business is faced with a multiplicity of schemes and frameworks through which to engage with biodiversity which could be confusing for newcomers;
- At the company level, a process which encourages thinking about how a business intersects with biodiversity - both how its activities affect biodiversity, and its reliance on biodiversity - could be helpful in encouraging business to incorporate biodiversity concerns more directly into their business plans; and
- Many businesses were working proactively on biodiversity. However, the current rate of progress was slow, and the scale of business engagement on biodiversity issues was not sufficient to deliver transformational change in an effective timescale;

Business did not articulate a particular ask of governments or the GEF. In terms of solutions, policy and institutional coherence between government departments were cited as essential. Mainstreaming

biodiversity is not an issue only for environment ministries – rather, a more comprehensive approach is needed. Improved spatial planning at a national level could be helpful in scaling mainstreaming actions, and natural capital accounting could be valuable to governments and businesses in gaining a better understanding of what natural assets were critical to address as sectors developed. Building on the workshop, STAP will explore these proposed solutions in more depth in the coming months, and offer advice on this topic later this year.

6. Risk appetite and the GEF: Catalysing innovation for transformational change – report of a workshop

In GEF-8, transformational change is sought in many global systems, including natural ecosystems, as well as food, energy, and urban systems. Systems change requires greater innovation to explore new ways of achieving more impact, which often entails greater uncertainty with a higher likelihood of failure, compared to tried and tested approaches. The GEF's commitment to transformational change will therefore necessarily entail greater innovation and risk.

The issue is therefore how could the GEF approach programmatic risk to encourage higher risk/higher reward investments?

On 13 May, STAP convened a conversation that brought together a small group of knowledgeable individuals to discuss the topic of risk appetite and the GEF: it was chaired by Dr. Bierbaum, moderated by Dr. Blake Ratner, the Panel Member for international waters, and began with a presentation from Walt Reid (Packard Foundation). Packard has devoted 10% of their resources to risk and innovation, and shifted the emphasis of their higher risk investment to people, rather than strategies or projects.

The discussion considered the rationale for a more structured approach to the programming of risk, priority areas for greater programmatic risk, and advice about how best to promote a culture of risk taking. Summary points included:

1. “Wicked problems” require experimentation, learning, and iteration to address. With uncertainty and divergent stakeholder perspectives on both the nature of the problem and likely outcomes, a purposeful acceptance of programmatic risk is necessary.
2. The GEF has moved to tackle systemic problems further upstream, which entails addressing such factors as the policy environment, institutional dynamics, and consumer behavior – where there is high potential leverage but no guarantees of success.
3. Many of the risks that GEF operations incur are external, such as political changes or natural hazards. Other risks are endogenous to the project or program investment, including the types of innovation supported and shifts in behavior expected. It's important to clearly distinguish types of risk and different levels of appropriate risk acceptance or aversion.
4. From a private sector perspective, the ability of the GEF to reduce and mitigate financial risk is a key attractor.
5. While much of the attention focuses on innovation in financial mechanisms, business models, and technology, there is a similar need for risk-taking with regards to institutional and policy innovations.
6. The time and process requirements of the typical GEF project cycle can impose significant constraints on the ability to source and apply innovative approaches. The GEF may consider a

wider range of institutional mechanisms or set-aside funding windows to segregate and promote risk-taking, with streamlined decision-making and approval.

7. Promoting a culture of innovation and smart programmatic risk-taking is influenced as well by the metrics used to measure success. The venture capital perspective, for example, takes a portfolio view of net impact over a project-by-project calculation of win-loss. This has parallels for the GEF in indicators of performance that track progress towards system-wide impact.
8. A portfolio approach to innovation and risk is useful, but this should be supported by systems for learning and gathering evidence of successes, failures, and adaptive measures taken from these investments. This may also imply a substantial increase in the priority given to experimentation and experimental project design.

Following this discussion, STAP will give further consideration to how science-based approaches to programmatic risk could encourage well-informed, higher risk and higher reward GEF investments.

7. Climate Change Adaptation

On April 28, the GEF held a technical dialogue on enhancing adaptation impact to “strengthen shared understanding among the GEF partnership of good practices for enhancing adaptation impact and ambition.” The workshop was attended by the GEF Secretariat and GEF Agency staff involved in the development and execution of projects under the LDCF/SCCF funds. STAP Panel Member for Climate Change Adaptation, Dr. Ed Carr, was actively involved in the preparation of sessions, to articulate the key adaptation framework elements and their relevance to project development, compile a corresponding glossary of terms, and develop a framework for assessing and increasing the level of ambition in GEF adaptation projects.

Dr. Carr chaired the session on the use of climate information, noting the importance of considering multiple plausible scenarios using climate data to assess the effectiveness of proposed projects and interventions and the durability of their outcomes. He stressed that such data is globally available, although the amount, quality, and specific datasets used will likely vary by place.

In addition, STAP worked with the GEF Secretariat and CSO network to provide input into the June 11 Consultations with Civil Society on “Enhancing Resilience: the role of Civil Society and Indigenous Peoples and Local Communities.” Two specific themes will be addressed: 1) Adaptation experiences in fragile and conflict affected situations, and; 2) Inclusion in community-based and autonomous adaptation. Dr. Carr was asked to moderate the second session.

Future work in this area will include engaging with GEF Partners to better integrate climate adaptation in programming, based on GEF’s unique comparative advantage of being the funding mechanism for all MEAs.

8. Knowledge Management

At the GEF agency retreat on 7 April, the STAP Chair made a presentation on, “STAP’s perspective on the way forward on knowledge and learning for the GEF partnership.”

Dr. Bierbaum began by setting out some of STAP's previous advice and findings on knowledge management over the last 6 years, including:

- A report to the Sixth GEF Assembly [Managing knowledge for a sustainable future](#) which recommended, inter alia, the adoption of an enterprise-wide GEF KM system
- STAP's foundational enabling conditions for GEF investments, including, "Establish a monitoring, evaluation, and learning process to track the intended innovations, integration, and transformation, as well as indicators of durability. Develop explicit plans and funding for good quality knowledge management including sustainable databases, simple, useful, and usable common indicators; this is essential for 'lessons learned', scaling up, and adaptive management."
- And in its report on [nature-based solutions](#) (NbS), STAP found that "Monitoring and evaluation were more common in recent NbS projects, but there was relatively little on why something worked or didn't, i.e. learning that could help advise on future best practices was missing."
- STAP's [Initial perspective on GEF-8](#) paper for the December Council, recommended that the GEF "Codify monitoring, evaluation, and learning, to develop a knowledge management system that documents best practices, what works, what doesn't, and why."

She noted that we would not succeed in delivering transformational change if we don't learn from past investments. We need learning before we can have knowledge. And we need to know what works, what doesn't work, and why, and how, and in what contexts.

Dr. Bierbaum drew attention to a new publication, "Realizing the World Bank Group's Knowledge Potential for Effective Development Solutions: A Strategic Framework" which sets out why KM matters to the Bank, and how it fosters knowledge sharing and learning. The report explores how to improve knowledge flows and collaboration across the Bank, and how to use the knowledge to ensure the Bank is a leader in innovation. Other GEF agencies were grappling with the same issues, and the GEF family could learn from each other by comparing best practices.

The recent IEO evaluation had noted that "the [GEF] portal is not yet a KM tool, because it does not provide a functionality to aggregate and extract lessons and good practices across projects that would allow partners to learn from each other and scale up good practices."

The future operating modality of the GEF will include more integrated programming, and the GEF-8 programming document has set out proposals for several new programs. It makes sense, therefore, to start by focusing attention first on programs. Each of the Integrated Approach Pilots (IAPs) and Impact Programs (IPs) have a global program, with a remit that includes KM. Thus, lessons learned in developing and implementing the current crop of IPs should be harvested and could be applied to the formation of the next generation of integrated programming, including:

- How are the KM platforms operating in practice?
- Does each of the platforms have the same basic approach to KM?
- Are the platforms linked?
- Can agencies access each other's in-house KM systems?
- How does the GEF learn from the platforms?
- Can non-IAP/IP agencies and countries access the platforms?

The STAP Chair also offered ideas on how knowledge management systems could be developed which document best practices. Dr. Bierbaum emphasized the importance of thinking carefully about how to best organize information from the perspective of potential users. Stakeholders want accessibility and curation of knowledge products, which enables them to be easily searched and accessed. Ideally, one would want to see knowledge organized in terms of best practices and technologies, for example, circular economy, and nature-based solutions. There are multiple typologies and lexicons that could be further developed to achieve this. Some such databases already exist. For example, the [Conservation Measures Partnership](#) establishes a lexicon of conservation threats and response actions and identifies monitoring actions that can test whether interventions are working in particular contexts, and builds the results of this evaluation into an evidence system for learning. And the [WOCAT Database on Sustainable Land Management](#) facilitates the exchange of knowledge on key challenges, approaches and technologies on sustainable land management.

IW Learn gathers data and deliverables from individual projects, makes available case studies, and tools for better management of transboundary waters. It also supports practitioners through trainings and regional and global dialogues. IW Learn has some affinities with the Conservation Measures Partnership and WOCAT. It may be interesting to explore whether there could be a “BD Learn” or a “C&W Learn”, which specifically brings together those with a strong interest in biodiversity or chemical and waste projects in the GEF partnership to share lessons learned and knowledge. STAP looks forward to continued improvements in the GEF KM systems during the replenishment process and into GEF-8.

9. GEF-8 and Replenishment

STAP’s initial perspective on GEF-8 (December 2020)

At the December Council, the Chair presented [STAP’s initial perspective on GEF-8](#). STAP noted that the drivers of global change have contributed to increased systemic risk, despite positive progress in some areas, and that the GEF’s resources remained modest compared to the need. STAP concluded that the GEF needs to evolve, both in its strategic positioning and targeting of investments, if it is to play a key role in delivering the transformational change needed to achieve the objectives of the MEAs and environmentally sustainable development. Incremental improvements in GEBs are no longer be sufficient to address accelerating rates of global environmental change. STAP proposed the following:

- Ensure that its investments are transformative, and durable in producing global environmental benefits (GEBs);
- Further ensure that its overall portfolio is more integrated and coherently transformational; and
- Contribute to the transformation of global economic systems, using its convening power and leverage, to form partnerships with others to deliver more environmentally sustainable development.

STAP Chair facilitation of the Technical Advisory Group (TAG) meeting, 8 to 11 February

The TAG meeting brought together more than 400 global experts from GEF agencies, MEAs, STAP, outside organizations, and was moderated by the STAP Chair. In her opening remarks, Dr. Bierbaum noted that, in its 30th year, the centrality of the GEF was underscored by the World Economic Forum's COVID-19 outlook that “the risk of neglecting climate and biodiversity protection in the face of COVID-19 would not only be a setback on the sustainability agenda but create a greater risk of future pandemics.” She also noted that the 2021 Davos Conference had concluded that the top five most likely risks were:

extreme weather events, climate action failure, human environmental disruption, infectious diseases, and biodiversity loss – most of direct importance to the GEF. In closing remarks, Dr. Bierbaum said, “The biggest single issue that has suffused all four days of our deliberations this week was the COVID-19 pandemic. It is the most recent crystallizing crisis, but it is certainly not the last surprise that will occur in the current short decade that will include GEF-8 and GEF-9. We must be on cleaner, greener, bluer, more equitable paths in this decade or else we will reach tipping points in many dimensions – ecologically, economically, and socially.”

First Meeting for the Eighth Replenishment of the GEF Trust Fund, 22 and 23 April

The STAP chair participated in the first replenishment meeting which brought together representatives of donor and recipient countries, civil society, and observers from the wider GEF community, including partner agencies, environmental conventions, the private sector, and international climate funds, for substantive conversations about how the GEF can scale up action on inter-related threats including climate change, biodiversity loss, chemical pollution, and pressure on forests, oceans, and landscapes.

STAP’s views on the Strategic Positioning and Programming Directions for GEF-8:

- Welcomes the centrality of a theory of change to anchor the strategy for GEF-8, and that the strategy is well-aligned with the Sustainable Development Goals;
- Notes that while the programming directions place a strong focus on the need for transformation and the importance of innovation there is no explicit recognition given to the GEF’s appetite for programmatic risk;
- Emphasizes the importance of being clear about the definition of transformation, resilience, and durability, and to their importance in improving the GEF’s operational efficiency;
- Looks forward to assisting and providing advice on a new system and metrics for monitoring transformation;
- Welcomes the prominence given to nature-based solutions, and circular economy approaches;
- Welcomes the recognition given to the importance of addressing behavioral change explicitly;
- Notes that adopting “One Health, One Planet” as the framework best suited to the work of the GEF will mean more attention needs to be paid to local co-benefits, including on health, jobs, and livelihoods, as well as clean air, and water, which are important to human health;
- Notes the recognition given to avoiding “leakage” to ensure that global environmental benefits are durable, i.e. the gains made in one place are not lost in others;
- Welcomes that climate change adaptation will be addressed synergistically with GEF-8 programming;
- Suggests continuing to add to the learning base from the ongoing IAPs and IPs to inform best design and implementation of future IPs and their coordinating projects.

10. Other STAP Activities

The Chair has participated actively in the GEF "One Health" working group over the past 12 months. One of the outcomes of this work is a completed manuscript “Healthy Planet Healthy People” which has been submitted to Science for consideration, with Dr. Bierbaum among the co-authors.

The initiative “Collaborating for Resilience”, led by Dr. Blake Ratner (IW Panel Member), has been recognized for its innovations on collaborative governance supporting restoration of degraded commons

in India with funding from the Skoll Foundation and LGT Venture Philanthropies among others, in collaboration with the Foundation for Ecological Security.

Dr. Saleem Ali (CCM Panel Member) has been invited to serve on the Group of Experts established by the Secretary-General of the International Seabed Authority (ISA), in preparation of a report on the contribution of ISA to achieving the 2030 Agenda for Sustainable Development.

Dr. Edward Carr (CCA Panel Member) was recently invited by the US Dept of Transportation's Volpe Center to be part of their Leadership Speaker Series. The series title is "Innovation for a Sustainable, Equitable Transportation System." Secretary Buttigieg will kick off the series, with Dr. Carr speaking next on climate change and justice.

Dr. Graciela Metternicht (LD Panel Member) has been collaborating with colleagues of the UNCCD Science Policy Interface (SPI) in the preparation of a technical report requested by the Parties for COP 14, providing science-based evidence on the potential contribution of integrated land use planning and integrated landscape management to positive transformative change, achieving land degradation neutrality and addressing desertification/land degradation and drought issues. The report will synthesize science- and practice-based evidence, on the use of ILUP and ILM to achieve LDN targets, and identify entry points for countries to embed LDN into their national land use planning systems.

Dr. Thomas E. Lovejoy, former STAP Chair and Senior adviser was elected to the U.S. National Academy of Sciences (NAS). He is one of 120 scientists elected this year. On his recent election, Dr. Lovejoy indicated "I am delighted – indeed honored -- to join Rosina [Bierbaum] as an Academy member. And salute all those at STAP and GEF!". Dr. Lovejoy is also a University Professor of Environmental Science and Policy at George Mason University, Senior Fellow at the United Nations Foundation, and Explorer at Large at the National Geographic.

Both Dr. Lovejoy and Dr. Bierbaum moderated sessions at the recent [Nobel Prize Summit "Our Planet, Our Future"](#) in April. The online event was hosted by the Nobel Foundation, and was organized by the U.S. National Academy of Sciences in partnership with the Potsdam Institute for Climate Impact Research, and the Stockholm Resilience Centre/Beijer Institute. Over three days, Nobel Laureates, scientists, policy makers, business leaders, and youth representatives addressed the question: "What can be achieved in this decade to put the world on a path to a more sustainable, more prosperous future for all of humanity?" Speakers explored solutions to some of humanity's greatest challenges: climate change and biodiversity loss, increasing inequality, and technological innovation in support of societal goals. Dr. Lovejoy held a conversation in the Plenary Session "Think Globally, Act Locally" with Dr. Sandra Diaz of Cordoba University in Argentina – IPBES Global Assessment Co-Chair and former STAP Panel Member for Biodiversity. Dr. Bierbaum moderated the session "Science Supporting Transformations towards Global Sustainability" as well as the session "Towards Sustainable Futures: Governance, Inclusiveness and Stewardship".

11. Observations from the June Work Program

STAP formally received the Work Program on Monday 17 May and completed the screening process on Friday 28 May. A total of 32 projects were screened¹³, of which 7 were multi-focal (containing 4 multi-

¹³ Note: Consistent with GEF policy, a number of projects in the current Work Program were not screened, - including MEA enabling conditions projects and re-submissions of programmatic approaches.

trust fund projects) and also including three LDCF projects. The cumulative STAP ratings on the projects reviewed were as follows: Concur - 8; Minor revisions - 21; Major revisions - 3.

STAP wishes to cite the projects below, all with well developed theories of change, as particularly noteworthy and innovative:

Caribbean BluEFin Project no. 10782

This effort seeks a comprehensive approach to scaling private investment in the Caribbean to support action on environmental challenges through improved access to funding, improved mechanisms for private sector participation, connections between SMEs and opportunities through a business hub, along with valuation and decision tools to support planning and implementation. Importantly, this project links to recent initiatives / pledges / commitments that the project aims to reinforce, suggesting an approach responding to a shifting set of opportunities to effect change at scale. Linking components and their outcomes/outputs to SAP Strategies from prior GEF projects illustrates clear evolution in thinking to address these challenges.

Pathways to Decarbonizing Transport Project no. 10790

This project targets the most rapidly growing carbon emissions sector in China – transport – with a comprehensive set of strategies in four components focusing on rural-urban connectivity particularly in under-served areas. The climate risk assessment was particularly noteworthy, and an additional important feature of this project is the development of a full life-cycle carbon footprint accounting mechanism for transport. The project has also provided a detailed emissions reduction inventory. Another innovative aspect is the component supporting green hydrogen production for Jiangyin port, and connecting this to other upscaling opportunities across the project.

PROCARIBE+ Project no. 10800

This effort aims to protect and restore the marine natural capital of the Caribbean region, build resilience, and support comprehensive investments for sustainable blue socio-economic development in the wider Caribbean. It encompasses many different issues from unsustainable fisheries to land based marine pollution, to promoting natural capital and blue carbon, and responds well to the latest science-based priorities on post-COVID blue recovery. The project is conceived at an ambitious geographic scale (44 states & territories), so learning to deliver systems change at this scale could in itself be transformative in the region. There is also ambitious scope in the integration across sectors and between marine and terrestrial landscapes (S2S), including 23 transboundary river systems. There is a strong recognition of linkages to biodiversity and climate adaptation priorities, along with attention to institutionalization of mechanisms for future regional cooperation beyond the project.