

59th GEF Council Meeting
December 7 – 11, 2020
Virtual Meeting

STAP'S INITIAL PERSEPCTIVE ON GEF-8

STAP's Initial Perspective on GEF-8

A STAP Document

December 2020

STAP's initial perspective on GEF-8

Over the last 6 months, STAP has reviewed what a science and technology perspective can contribute to the GEF's thinking about replenishment for GEF-8.

A brief review of the latest science on global environmental change leads to **two compelling conclusions**.

First, the drivers of global change have contributed to increased systemic risk, despite good intentions and some positive progress. **The bottom line is that greenhouse gas emissions are increasing, as is the rate of biodiversity loss, there is still net land degradation, aquifers are being depleted, waste is increasing, most fisheries are overfished, and ocean pollution is becoming more pervasive.** The result is not just the risks to each of these individual environmental elements, but a world of greater systemic risks to livelihoods and wellbeing. The effects of COVID-19 illustrate the costs of disruption imposed by these risks, due to a **resilience deficit**, i.e. a gap in humanity's ability to weather systemic risks, both specific, like COVID19, and more general. There is a growing understanding, increasingly quantified, of how current economic models create the drivers which cause this resilience deficit, through undervaluing environmental and social capital, unsustainable consumption and production, and exacerbating inequality.

The [White Paper](#) on a GEF COVID-19 response strategy sets out the background to the pandemic and the opportunities for GEF investment at the program scale, and in partnership at the global scale. As the White Paper notes:

“The pandemic reinforces the logic behind GEF's transformational programs and underlines the need for a lasting transformation to a sustainable, inclusive, resilient, low-carbon, low-polluting, nature-positive, and circular economy. Such an economy and a society will build resilience to thrive despite the inevitable shocks that will come through climate change and future pandemics.” (paragraph 9)

Box 1 offers **STAP's four key lessons from COVID-19**, recognizing that lessons are still being learned:

- (i) the global pandemic has highlighted how intertwined global risks are - the links between environmental degradation and the loss of intact ecosystems, biodiversity, and human health;
- (ii) it has laid bare the importance of equity and justice – the effects of COVID-19 are most often felt by the poor and more vulnerable sectors of society;
- (iii) beyond its direct effects, the pandemic has had systematic effects throughout political, social, economic, technological, and financial systems, for example in the food supply, as well as in the supply chain for medical safety equipment, and medicines; and
- (iv) the pandemic has illustrated the need to focus on resilience thinking in the face of uncertain and unknowable events - being better prepared for *specified* resilience to pandemics and *general* resilience to any possible system shock or stress.

Second, the GEF's resources remain modest compared to the need. The GEF can improve the effectiveness and efficiency of its investment incrementally, as well as by being an effective catalyst for investment by others. But STAP concludes that the **GEF needs to evolve, both in its strategic positioning and resourcing** if it is to play a bigger role in delivering the transformational change needed to achieve the objectives of the multilateral environmental agreements.

Accelerating global environmental change is challenging how the GEF and other like-minded investors operate. Environmental problems are deeply interlinked and globally networked across countries, sectors, and scales. These problems have deep roots, stemming from current patterns of unsustainable production and consumption, and they outstrip the resources currently available to address them. The upshot is that current “solutions” are not at sufficient scale, are inadequately integrated, and are undermined by the accelerating social and economic drivers of environmental degradation.

STAP suggests that GEF-8 consider a three-pronged strategy:

(a) Ensure that its investments are efficient, transformative, and durable in producing global environmental benefits (GEBs)

STAP suggests that a strategy of incremental improvement will not be sufficient to deal with increasing rates of global environmental change.

(b) Ensure that its overall portfolio is more integrated and coherently transformational

Incremental improvements will increase the transformative impact of the GEF’s portfolio as a whole, but STAP suggests that is insufficient to truly tackle the root causes of global environmental problems, and will not, by itself, mobilise the greater investment needed.

(c) 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.

For example, GEF can help to ensure that investors have the information they need to make better decisions, or work with selected groups of countries to enact policies for human well-being rather than only growth in GDP, or engage with policymakers and the private sector to establish stronger incentives for companies to deliver better environmental outcomes.

A. At the project level

The GEF could deliver more GEBs by **delivering multiple GEBs, and co-benefits, more systematically**; doing more to **leverage other investments**, especially by the private sector; and ensuring that claims about **transformational impacts are genuinely innovative, scaled, and durable**.

STAP, therefore, suggests that the GEF:

- Ensure that projects have a **clear rationale and robust theory of change**, which is both necessary and sufficient for the desired change, to tackle the drivers of environmental degradation by assessing assumptions and outlining causal pathways, and by devising responses that are robust to future change and adaptive if desired outcomes do not materialise.
- Ensure that the **risks from climate change and other uncertainties** are properly reflected in project design and implementation.
- Pay more attention to **successful multi-stakeholder processes** which are well-designed, and fit-for-purpose
- **Ensure that GEBs endure beyond the lifetime of projects** by engaging the right stakeholders, building the incentives for these key actors to act, incorporating adequate flexibility in project design and implementation, and underpinning this with a systems-thinking approach.

- Take lessons from **social and behavioural science** in designing projects to **deliver equitable, local co-benefits** (box 2), as well as GEBs.
- **Strengthen gender-responsive interventions, and create opportunities for youth** (box 3). The GEF has made progress in making gender issues more explicit, and disaggregating data by gender; this needs to be developed further, and be accompanied by similar concerns for youth, wherein lies the best chance to assure future capacity building.
- **Be more rigorous and systemic about innovation, additionality, and achieving multiple GEBs and co-benefits:**
 - o Make a renewed effort to ensure that GEBs are truly additional, by applying tighter guidelines for co-financing, i.e., avoid funding activities that ought to be fulfilled in other ways, such as paying for things the private sector was going to do anyway.
 - o Be more systematic about achieving **multiple GEBs, and co-benefits**. Consistently applying more integrative approaches, and measuring the multiple benefits and co-benefits, will help to make the most of GEF resources, to manage trade-offs better, and to seek synergies. (At present trade-offs and co-benefits are not often well defined, or measured.)
- **Avoid leakage** (box 4) to ensure that GEF investments contribute to reversing overall environmental change, and that the benefits in one location are not undermined by shifting detrimental activity elsewhere.
- **Seek to optimise synergies with the Sustainable Development Goals**. In addition to GEBs, stakeholders need to see social and economic benefits, to generate broad support and maintain durable outcomes from GEF investments. The SDGs provide a way to identify and capture co-benefits, in particular for social equity, poverty reduction, and gender equality, and other vulnerable groups.
- **Consider revisiting project design processes for GEF-8**, perhaps focusing around solid theories of change with a view to some simplification and consolidation.

B. At the portfolio level

To catalyse transformational change, the GEF could consider changes in the way it does business.

To make the overall GEF portfolio more integrated and transformative, in addition to actions at the project level, STAP suggests that the GEF:

- **Employ a toolbox of diverse integrated approaches**, such as [nature-based solutions](#), [land degradation neutrality](#), integrated land use planning, the circular economy (including on [food](#), [plastics](#), climate mitigation (forthcoming STAP paper)) (box 5), mainstreaming biodiversity, and [environmental security](#) (box 6).
- **Make better use of [Earth Observation](#) and geospatial technologies** for decision-making on interventions, baselines, metrics, and monitoring, e.g. for mapping.

- **Codify monitoring, evaluation, and learning, and develop common metrics to assess progress and evaluate success and improve the design of investments.** Develop a knowledge management system that documents best practices, what works, what doesn't, and why.
- **Decide on a risk appetite for the portfolio, and express this clearly** (box 7). To be innovative and to deliver transformational change, the GEF needs to take greater, intentional risks in some parts of its portfolio – how much, and in what parts?
- **Determine what is needed for transformation, rather than incremental improvement** (box 8). The GEF could work with recipient countries on the likely costs and returns of their national priorities, and where (and how) GEBs can best be achieved. This would require data-mapping, including natural capital accounting, ecosystem valuation, and better cost/benefit accounting, to enable country priorities to be set at the portfolio level. The GEF could act as a catalysing convenor of partners ensuring some standards for resolution, usefulness for decision-making, investing in gaps, and ensuring completeness.
- **Conduct a portfolio-wide approach to improving South-South knowledge exchange** (box 9) to gather knowledge and translate this into action, and thereby enable the scaling of tested innovations within and across regions. This requires investment in backbone and linking capabilities, leveraging the potential of technology for remote and diverse modes of engagement, and potentially investing in a series of key “innovation labs” that are driven from the South but can draw on developed country expertise. This would move beyond documenting outcomes individually by project, to identifying common challenges, promising innovations, and emerging lessons. Exchange should be structured - especially across regions with common problems and socio-ecological conditions, and along value chains. It would empower local traditional knowledge systems and enhance governance and leadership on environmental change in the global South.

C. At the global level

In addition to changing the way it does business, the GEF could contribute to transforming the global context; this would not only help GEF's own investments to be more durable, but also support a societal transformation towards valuing GEBs and resourcing them better in alignment with the GEF's mission.

The GEF could consider, in partnership with others, participating in actions which would contribute to **transforming global economic, and socio-economic, systems, thereby enhancing the durability of its investments**, including:

- **building the evidence base for the social, environmental, and economic costs and benefits** of investment; this would be designed to collect, collate, and synthesise evidence on what works in different socio-political contexts. This would provide better information to justify investments, but also will provide confidence to private finance that proposed returns are likely to be achieved and can be measured. This could also include interventions financed outside of the GEF portfolio. It would include monitoring indicators, including non-environmental co-benefits such as jobs and livelihood creation, health, economic recovery post-COVID, and other development goals. The evidence base might draw structure and partners from efforts for the SDGs.

- **country coalitions to demonstrate the viability of key innovations at scale**, for example, on: target-setting and implementation of land degradation neutrality; on post-COVID resilient recovery; a coalition of the willing on pollination; the sustainability, stability and security initiative (3-S); and on well-being.
- **policy dialogues to accelerate innovation, additionality, and resilience**, for example, to drive demonstration actions at scale; and to contribute to resilience, both to specific issues such as pandemics, and also to develop general resilience to future systemic risk.
- **a renewed effort to seek coordinated public and private investment flows**, including demonstrating new financing options and the viability of investments, to crowd much greater investment in GEBs. GEF should seek partners where it can apply its particular integrating leverage between environmental and financial capital systems to greatly magnify total investment across the GEBs.

And finally

STAP concludes that the science demonstrates continued negative trends in the global environmental commons of concern to GEF, that underpin the planetary life support system on which humanity depends, and that current levels of investment are at least one and perhaps two orders of magnitude too low^{1,2}. More positively, the increased focus and attention of the private sector and the investment community on the relationship between economic prosperity and intact ecological systems is heartening. There is good evidence of many positive environmental, social, technological, and economic innovations, which shows how a well-selected portfolio of interventions in GEF-8 can set up the pre-conditions for true systems' transformation.

¹ To limit warming to 1.5 degrees would require a roughly fivefold increase in average annual investment in low-carbon energy technologies by 2050, compared with 2015. \$2.4 trillion would be needed annually through 2035. (IPCC) https://report.ipcc.ch/sr15/pdf/sr15_spm_final.pdf

² "We need to be spending an additional \$598-824 billion annually to reverse the biodiversity crisis by 2030" (<https://www.nature.org/en-us/what-we-do/our-insights/reports/financing-nature-biodiversity-report/>)

Box 1: Lessons from the COVID-19 pandemic

COVID-19 is a long way from revealing all its lessons, but there are already many, and many of them are not about pandemics, *per se*.

First, **the pandemic has highlighted how intertwined the global risks are**. Although the precise emergence pathway of this pandemic remains to be unravelled, it is well known that the risks of zoonoses increase as biodiversity is lost, especially forests, are cleared, and as people come into closer contact with animal products, whether wild or domesticated. The risk of pandemics is linked to questions of ecological sustainability (Di Marco et al., 2020; UNEP & ILRI, 2020). But the reverse is also true – as countries contemplate recovery interventions, these could be tightly linked to sustainable development, or could entrench business-as-usual; even immediate individual choices, such as whether to continue to take public transport, have impacts here (Ali, 2020). Climate risks are compounding with the pandemic response (Phillips et al., 2020) – in May 2020, Bangladesh had to evacuate millions of people in the path of Cyclone Amphan whilst trying to maintain physical distancing, and through their summer of 2020, many western states in the USA have been battling exceptional fires at the same time as enforcing a pandemic lockdown.

Second, the pandemic has laid bare **the importance of equity and justice** in many ways that are equally relevant to other issues. Impacts, as ever, have often been felt most by the poorer and more vulnerable sectors of society and countries. Yet, the rich have not been immune, so that their safety has depended on supporting vulnerable sectors to reduce transmission (noting that the rich were often the first vectors into a new country). Unsung workers providing essential services have emerged as the heroes of the economy – lowly-paid nurses, teachers, and cleaners. Many parallels emerge for resource security in the environmental arena, whether in the unsung forest lungs of the world, the importance of Indigenous lands for conservation (Garnett et al., 2018), or commodity producers in low-income nations. **Attention to distributional outcomes is a key issue.**

Third, beyond its direct effects, the COVID-19 pandemic has created **systemic impacts throughout political, social, economic, technological, and financial systems** (Gaupp, 2020). In the food system, for example, despite successful harvests and availability of food reserves, interruptions to global food supply chains have led to food rotting in the fields or discarded at overburdened processing centres, border closures, and local hoarding. Food may be unaffordable to people who have lost incomes and the World Food Programme (WFP) has warned that 130 million extra people may face famine by the end of 2020. There are also indirect effects such as disrupting the role of schools in providing nutritious food to children. (The WFP estimates that 368 million school children globally are missing out on school meals due to closures.) These are profoundly systemic effects where **limited storage and just-in-time supply chains have increased economic efficiency but led to a systemic resilience deficit**. The same effects could be seen with supply chains for medical safety gear, medicines, and other materials closer to the health response itself. This all highlights the need for a systems approach in food and other systems (Gaupp, 2020).

And fourth, the pandemic has illustrated the need for a **focus on resilience thinking in the face of uncertain and unknowable, complex, and cascading causal links**. Society must **avoid preparing to fight the last war** – some pandemic plans were focused on a very different kind of outbreak, and were caught out initially by the unique characteristics of COVID-19. The nature of these events is often unpredictable, and **if the next global crisis is another pandemic, it will almost certainly be different from this one**; more likely, it won't even be a pandemic. Resilience thinking (Walker, 2019; Walker, 2020) suggests the system will be better prepared with a mixture of *specified* resilience to pandemics, and *general* resilience to any possible system shock or stress. To make progress requires an improved understanding of how to enhance resilience, who benefits and who loses from different approaches, and the politics of these choices at scales local to global must be rapidly developed (Carr, 2019; Matin et al., 2018; Pelling and Garschagen, 2019).

Box 2: Co-benefits

The GEF seeks to maximize global environmental benefits (GEBs) throughout its portfolio. The Integrated Approach Pilots and the Impact Programs recognize that most environmental problems are intertwined and linked to economic, and social issues, and cannot be solved if addressed in silos. They adopt a holistic approach, thinking in an integrated and systematic way across issues, sectors, and regions, to deliver multiple benefits and achieve transformational change.

For example, STAP is reviewing how there can be [co-benefits from the GEF's chemicals and waste](#) focal area which is strongly interlinked with other focal areas. The production, use, and management of persistent organic pollutants (POPs), mercury, ozone-depleting substances (ODS) can be major drivers of biodiversity loss, climate change, land degradation, and also affect international waters.

Chemicals and waste can contribute negatively to other environmental issues outside of GEF's immediate focal areas, including air pollution, and the contamination of local water resources. And chemicals and waste are also linked to socio-economic issues, including human health, food security, poverty, gender equality, and livelihoods.

Many chemicals and waste projects have been designed to deal simply with a particular chemical, for example, cleaning up a waste dump or materials containing POPs. However, it is rare for these projects not to be related to other environmental and socio-economic issues, for example, cleaning up POPs is likely to have beneficial effects on land, soils, freshwater, and human health – clear co-benefits that GEF should track.

Suitably designed chemicals and waste projects can, therefore, deliver multiple benefits. To do so, a systems approach is required in designing projects with co-benefits in mind from the beginning and then a clear process for tracking their achievement.

Nature-based solutions³ (NbS) are by definition tackling societal problems to which nature can contribute, i.e. they combine environmental and socio-economic benefits. As we have recently seen, the COVID-19 pandemic has increasingly highlighted the link between environmental degradation and human health.

Well-designed NbS projects can deliver multiple benefits ranging from global environmental benefits (GEBs), as is the primary purpose, to other positive improvements to biodiversity, air, and water quality, as well as to socio-economic conditions, e.g. jobs, food security, and human health. However, co-benefits need to be considered from the inception of a project. The recent STAP review⁴ of 50 projects identified by GEF Sec as NbS revealed that co-benefits are not usually specified in PIFs or CEO-endorsed documents in much detail.

For GEF to capture co-benefits, they need to be identified early in the project/program process, and then vigorously pursued with a sound theory of change, adaptive management, and plan for monitoring, evaluation, and learning. And, suitable indicators should be developed to determine progress in the desired environmental and socioeconomic factors.

In the near-term, STAP encourages the GEF to build on the integrative thinking that has gone into the IAPs and IPs, and the goal set to achieve transformational change, by: rigorously applying systems thinking to all projects and programs; developing theories of change that carefully define co-benefits as well as trade-offs; developing a checklist of environmental and socio-economic benefits early in the project and program design and build capacity within the GEF partnership on codifying and mainstreaming co-benefits into GEF investments.

³ The IUCN defines NbS thus, “actions to protect, sustainably manage, and restore natural or modified ecosystems, that address societal challenges effectively and adaptively, simultaneously providing human well-being and biodiversity benefits”.

⁴ [Nature-based Solutions and the GEF](#)

Box 3: Creating opportunities for youth

In 2015 there were 1.8 billion people between the ages of 10-24—they are the largest generation of youth in history⁵. Of these, close to 90% live in developing countries, where they make up a large proportion of the population. Their numbers are expected to grow— projections indicate that between 2015-2030 about 1.9 billion young people will turn 15 years old. Why is this so important? The 3S initiative captures it well: “**As environmental and economic pressures combine, vulnerable young people, who cannot move away for a better future, are increasingly trapped.** Trapped on degraded land, in a cycle of increasing desperation, frustration, and social exclusion, at risk of exposure to extremist activity and conflict” (3S Initiative, 2018 ⁶). The GEF can contribute to **breaking the negative feedback loop of environmental degradation and fragility driven by lack of job opportunities and livelihoods, and empowerment of young people and other vulnerable groups.**

The Small Grants Program has provided evidence of the environmental benefits that can be achieved through building human and social capital of youth —the Fiji’s ‘Heart of the Spirit’, the Environmental Stewards Training Project of Grenada, Ghana eco-friendly bamboo bikes, Eco-tourism Guarani in Argentina, the Youth Climate Change Warriors of South Africa are examples of **how investing in youth (its human and social capital) can inter alia support biodiversity conservation, climate change mitigation and adaptation, prevention of land degradation, while generating sustainable livelihoods.** These experiences can be scaled out to maintain and enhance the natural capital and GEBs with a focus on building the human and social capital of youth, women, and other vulnerable groups.

GEF-8 could strengthen the GEF’s policy on gender-responsive interventions, in tandem with vulnerable youth by:

- Designing programs and associated projects that provide jobs, training, and education of vulnerable groups, fostering social inclusion hand-in-hand with environmental stewardship;
- Extending gender considerations for the design of interventions to embrace the under 25s, for example, in land degradation;
- Creating opportunities to change views and perceptions of women and youth as ‘*recipients of aid*’ to ‘*transformers of aid*’;
- Fostering new entrepreneurship for women and youth, opportunities for enterprises that create value, are restorative, socially-connected, and environmentally-oriented; and create growth through eco-business;
- Developing **metrics that measure jobs as co-benefits of interventions to maintain and enhance GEBs**; and,
- Address distributional equality youth, as well as gender.

⁵ <https://www.un.org/sustainabledevelopment/youth/>

⁶ www.3S-Initiative.org

Box 4: Ensuring additionality, managing leakage

A major risk is that GEF investments in environmental benefits are not ‘additional’, or lose efficacy through leakage. Additionality requires that GEF should not fund commitments that ought to be fulfilled in other ways, either because countries would have done them without the GEF funding even if the project had not gone (e.g. protecting uncleared forest), or by paying for things the private sector was going to do anyway.

‘Leakage’ of global environmental benefits occurs when actions aimed at reducing undesirable effects in a target place, in fact, lead to (or at least do not prevent) these effects occurring elsewhere, thereby negating the benefits. This can occur locally (e.g. protection of Peruvian forests resulting in deforestation in surrounding areas) or distantly (e.g. Vietnamese forest protection displacing deforestation to trading partners abroad).

Leakage is likely to be one important reason why investments in GEBs are not reversing overall environmental change and is key to ensuring the enduring nature of the intended outcomes of GEF investments. Too often projects have no way of ensuring that the good they do locally is not undone in the next valley or another country. Leakage is a major issue for the global environmental commons. For greenhouse gas emissions, attention is increasingly paid to allocating emissions to end-users so that export of energy-intensive processing is tracked; for biodiversity, approaches emphasising very low net extinction rates are being proposed; for pollutants, recipient countries are starting to reject dumped waste. Land degradation neutrality⁷ (LDN) provides an example where there is a global commitment to LDN, and (gradually) each country also commits to it, such that, in principle, if every GEF project with land degradation benefits was lodged as part of a country’s LDN commitment, those benefits would be secure locally and globally, and subject to structured monitoring.

Leakage is a negative type of spill-over, which more generally can be positive or negative, and which is an expanding topic for scrutiny. In governing spill-overs in general, organisations are encouraged to adopt an explicit overall goal of minimizing negative and maximizing positive spill-over effects, supported by three general principles – fairness, responsibility, and capability (Liu et al., 2018). GEF could help develop mechanisms comparable to LDN but tailored for other GEBs, and then ensure that all GEF project outcomes were protected by those measures. GEF could adopt and operationalize these ideas in GEF-8, assisting the MEAs to ensure the global environmental commons have frameworks in place through which to do this.

⁷ [STAP LDN Guidelines 16-pager web version.pdf](#)

Box 5: Circular economy

Unsustainable consumption and production are significant drivers of environmental degradation and climate change. About half of global greenhouse gas emissions, and more than 90 percent of biodiversity loss and water stress⁸, are associated with the extraction, processing, and use of materials, fuel, and food. Instead of the traditional linear Take, Make, Waste model, the circular economy model seeks to break the link between resource depletion and the provision of goods and services.

The circular economy is designed to keep resources in use for as long as possible, extract the maximum value from their use, and recover and regenerate end-of-life products and materials. The approach promotes a production and consumption model that is restorative and regenerative by design. And it is designed to ensure that the value of products, materials, and resources is maintained in the economy at the highest utility and worth, for as long as possible, while designing out the generation of waste and hazardous materials. STAP has produced two reports on the circular economy – one on food, and one on plastics, and is preparing one on climate mitigation.

Global plastics production is projected to double by 2035 and almost quadruple by 2050⁹. Using a circular economy approach in the plastics sector would reduce the amount of fossil fuel inputs as well as the prodigious quantities of waste contaminating our land, air, water, and oceans. It would also reduce persistent organic pollutants (POPs) in the electronics, automotive, furniture, textile, and construction sectors, and lessen POPs emissions from burning waste plastics. (Barra et al., 2018).

In the food sector a circular economy approach would improve the efficiency of growing food, getting food to consumers, and keeping it fresh, thus reducing food loss and waste, use of fertilisers, land degradation, water use, and greenhouse gas emissions, while also providing co-benefits of better health and economic outcomes (Sims et al., 2018). A study¹⁰ showed that a circular food approach in Europe could, by 2050, reduce the use of fertilizers by up to 80 percent, decrease CO₂ emissions by 60 percent, and reduce water consumption by 70 percent. It could also lead to a 30 percent reduction in food costs per person, improved health, due to better food quality, and also provide economic and business opportunities.

The circular economy approach is part of the GEF-7 programming directions¹¹. It has already been used in international waters' projects to promote production and consumption patterns that reuse material waste created during the production process for additional products. As well, recycled products have been used to create new items (i.e. closed loop) to reduce plastic pollution of marine environments, and chemicals and waste projects have promoted resource efficiency and reduce POPs, mercury, and other harmful substances.

The circular economy approach is of wide applicability and relevant to all GEF focal areas and programs. Adopting this more broadly would help the GEF in maximizing global environmental benefits, and also deliver other environmental and socio-economic co-benefits.

⁸ 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>

⁹ WEF, EMF, McKinsey & Company. 2016. The New Plastics Economy — Rethinking the future of plastics. World Economic Forum, Ellen MacArthur Foundation and McKinsey & Company. https://www.ellenmacarthurfoundation.org/assets/downloads/EllenMacArthurFoundation_TheNewPlasticsEconomy

¹⁰ Ellen MacArthur Foundation. 2015. Growth Within: a circular economy vision for a competitive Europe. <https://www.ellenmacarthurfoundation.org/publications/growth-within-a-circular-economy-vision-for-a-competitive-europe>

¹¹ https://www.thegef.org/sites/default/files/council-meeting-documents/GEF-7%20Programming%20Directions%20-%20GEF_R.7_19.pdf

Box 6: Environmental security

Conflict has the potential to upset GEF's investments in multiple ways (nearly one-third of all GEF funding has been invested in projects during years when recipient countries experienced conflict), but GEF's interventions also have considerable opportunity to reduce the risks of conflicts that have environmental causes, as well as supporting peace-making through environmental cooperation, even where the conflict may not be environmental in nature (Ratner, 2018). These interactions can be a significant source of co-benefits.

Environmental threats can be used to stimulate conflict resolution among parties with wider grievances (e.g. Swain and Öjendal, 2018). This literature and related evidence are nascent, but potentially holds great appeal for policymakers who aim to engage in proactive problem-solving. Most significantly, for government decision-makers, even if a conflict is not environmental in nature, the approach to its resolution may be assisted through environmental means. Some environmental factors are so important that even adversaries must show some semblance of cooperation over them. However, if this is a route to peace, significant investment in the post-peace process must continue after hostilities are ended to ensure that environmental goals continue to be realized (Ali, 2019).

The policy community has adopted a broad framing of climate change as a threat multiplier that increases the risk of conflict, despite conflicting evidence (Abrahams, 2020). While acknowledging this complexity, GEF might consider screening projects for implementation in places where the five most influential factors driving conflict risk are in play (low socioeconomic development, low state capability, intergroup inequality, a recent history of violent conflict, and conflict in neighbouring areas; Mach et al. (2019)). Screens should also account for interventions that, while addressing climate change issues, risk causing, or exacerbating conflict (Dabelko et al., 2013).

Migration is another potential consequence of environmental insecurity, where policies may be able to mitigate risks by promoting more sustainable resource uses in both source and destination regions. On this point, the forthcoming Global Assessment on Migration and Natural Resources by the UN International Resource Panel will be a useful source.

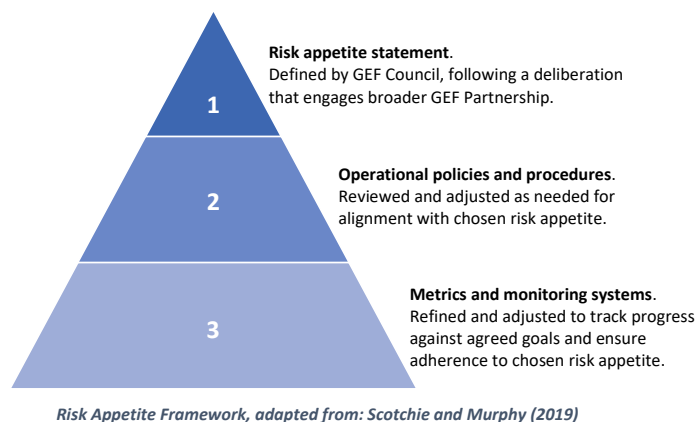
STAP has encouraged GEF to explore environmental security issues in more depth since its 2014 report to the Assembly in Cancun *Delivering Global Environmental Benefits for Sustainable Development* (<https://stapef.org/staps-role-fifth-gef-assembly>). "STAP believes it is important to consider how the GEF could potentially contribute to preventing or lessening the consequences of conflict on both people and the environment, while at the same time facilitating cooperation over shared natural resources. Specifically, the GEF could enhance knowledge generation in this field and capitalize on its portfolio experience. As well, it could develop best practices for working in conflict and post-conflict areas based on lessons learned over the past two decades, including demonstrative case studies."

Box 7: Risk appetite and innovation

Risk appetite is a concept that is widely probed in corporate governance literature, where best practice is that it should be a “written articulation of the aggregate level and types of risk that a firm will accept or avoid in order to achieve its business objectives” (Basel Committee on Banking Supervision, 2015). It is recognized as a key influencer of corporate culture, especially for decision-making under conditions of significant uncertainty.

For the GEF, focusing on innovation in the design and implementation of interventions, and with the aspiration to be transformational, can conflict to deliver on risk-averse operational expectations. Operational policies and modalities may also create disincentives for GEF agencies to develop and propose higher-risk projects. There are diverse elements to the GEF portfolio that require different levels of risk appetite, as well as diverse forms of innovation that are particularly important in scaling. (Innovation includes technological, financial, business model, policy, and institutional.) As with any investor in high risk-high return outcomes (where returns may extend beyond simple financial metrics), the GEF needs to accept some risk in exploring new technologies, private sector finance vehicles, management systems, or governance options that have transformational potential. This does not mean tolerating poor project design or a failure to think through a theory of change, but it does mean accepting without blame that a project may not achieve its goals despite good design but may still have been worthy of financial support. Failures can be the basis for rapid and valuable learning, and as previous GEF experience has shown, can be a foundation for future success.

The GEF should articulate what level and type of well-informed risk it is willing to take in different parts of its portfolio in GEF-8. There are tested approaches to the development of a Risk Appetite Framework¹² that could structure such an articulation, which should be based on a review of past experiences, structured deliberation about different forms of risk in different parts of the GEF portfolio, formal articulation, and a process of monitoring and review. (STAP is doing further work to assess how a selected group of public and private institutions have approached risk appetite.)



¹² <https://statswiki.unece.org/display/GORM/Section+1.+Risk+framework>

Box 8: Catalysing transformational change in GEF¹³

The GEF has committed to pursuing transformative impact in support of the global environmental commons in the face of accelerating change. However, ‘transformation’ means different things to different people. Transformation in the GEF context has been defined as “deep, systemic, and sustainable change with large-scale impact in an area of global environmental concern”

This could occur by directly causing a globally significant transformation – either a regional outcome with global significance (e.g. improve the functioning of Amazon rainforest, known to be of concern as a possible global climate tipping point) or a direct global outcome (e.g. supporting the negotiation of a new global instrument such as the Strategic Approach to International Chemicals Management). More commonly, it will occur by developing an innovation and then scaling it, such as by spreading better dryland management through all countries containing the same globally significant biome (e.g. the Miombo in southern Africa), or adding up changes in consumer demand to alter a whole value chain from multiple countries (e.g. coffee or cocoa) to deliver biodiversity benefits of global significance.

Scaling an innovation is a critical process that requires careful design, addressing multiple barriers that usually differ greatly from the barriers to achieving the original innovation. Proponents of transformational scaling need to explicitly address potential barriers related to knowledge about the innovation, institutional or cultural hindrances to its wider implementation, and financial or capacity limitations on its durability. There are usually winners and losers in any transformation, which raises an important question of who determines what is ‘desirable transformation’. Proponents need to pay close attention to power dynamics and ensure a transformation is not entrenching an inequitable system; good multi-stakeholder processes and well-thought-through local benefits are usually needed to ensure the durability of transformation that may otherwise be aimed at global benefits.

Importantly, direct levers for large-scale transformation are often hard to pull; often multiple smaller, easier changes can be implemented first to make the system more ‘transformable’ (Absom et al., 2017; Folke et al., 2010). For example, reducing risk exposure and vulnerability across an agrarian population can make a system more receptive to transformation. Thus, establishing changes in land tenure, creating better links to markets, and reducing the time women need to spend gathering fuel and water may be pre-requisites to a larger change towards a more diversified economy. Such steps need to be devised as a coherent package. GEF’s portfolio activities can equivalently seek to support transformability in wider economic and social systems.

STAP emphasizes that transformational projects should have a theory of change not only for individual innovations but also for scaling pathways; these should particularly address diverse barriers and enablers, appropriate multi-stakeholder processes, durability in the face of long-term changes, and monitoring and learning.

¹³ https://stapgef.org/sites/default/files/publications/DURABILITY_web%20posting_2.pdf

Box 9: South-South Knowledge Exchange (SKKE)

South-South cooperation describes the collaboration and sharing of knowledge, skills, and successful initiatives in specific areas such as agricultural development, human rights, urbanization, health, and climate change *between* countries in the South, as a complement to North-South exchange. South-South cooperation creates a partnership among equals that is based on shared experiences and sympathies. Reciprocal knowledge sharing among peers who face similar challenges can speed up learning and capacity building. South-South knowledge exchange is important to scaling impacts, and GEF has been funding exchange through the **Small Grants Programme** since 2016.

GEF could enhance the sharing of best practices through a more consistent implementation of the South-South Knowledge Exchange. This could include establishing an SSKE Platform modeled on the South-South Innovation Exchange Platform under the Small Grants Programme. This platform could curate knowledge created through GEF projects and require new projects to access and build on previous work, particularly by direct exchange of experiences with lodging entities from the South. It should learn from monitoring success indicators (e.g. the World Bank's).

Other examples are:

The **Good Growth Partnership** (IAP) promotes sustainability in commodity supply chains, and inter alia supports the Green Commodities Community which shares knowledge and experience among participating countries. The Community's current program includes 20 virtual workshops and ongoing exchanges on practical approaches to conduct multi-stakeholder dialogue, engage the private sector, and strengthen forest governance among other themes.

This **Sustainable Cities** (IP) builds on the preceding IAP to promote investment in more integrated sustainable cities, with a knowledge sharing and learning platform, and to secure commitments and implement integrated solutions in 24 new cities in 9 countries (Argentina, Brazil, China, Costa Rica, India, Indonesia, Morocco, Rwanda, and Sierra Leone). The IP will support countries' knowledge exchange, learning, and the fostering of partnerships to raise ambition for on-the-ground action, to build a global movement around integrated urban planning approaches by organizing global, and regional dialogues among the participating countries.

The **Science Panel for the Amazon** (SPA) the main goal of which is to provide a comprehensive, objective, open, and transparent platform to systematize information for a rigorous scientific assessment of the state of Amazon's ecosystems. This includes knowledge on the biodiversity, ecosystem functioning, and services that the Amazon biome provides to local, regional, and global communities, to the Planet, and the analysis of tipping points that must be avoided to conserve terrestrial and aquatic Amazonian ecosystems. Based on this information, the SPA will examine trends and implications for the long-term well-being of the region, as well as explore opportunities and policy-relevant options for conservation and sustainable development of the Amazon.

World Bank South-South Facility (SSF) was launched in 2008 as a multi-donor trust fund administered by the World Bank to address development challenges and implementation bottlenecks. The SSF funds knowledge exchanges based on demand from knowledge-requesting countries and offers stand-alone (just-in-time/short-term) and programmatic (long-term/multi-country) exchange programs.

IEO evaluations have identified a number of examples of regional South-South cooperation, for example, "Mitigating the Threats of Invasive Alien Species in the Insular Caribbean" which covered five Caribbean countries, and "Combating Living Resource Depletion and Coastal Area Degradation in the Guinea Current large marine ecosystem through Ecosystem-based Regional Actions" implemented in 16 West African countries. The "Integrating Watershed and Coastal Area Management in the Small Island Developing States of the Caribbean" project used South-South capacity building with support from the regional Program Management Unit and national agencies in 13 countries, and disseminated information and experiences between governments and pilot projects.

References

- Abson DJ**, Fischer J, Leventon J, Newig J, Schomerus T, Vilsmaier U, von Wehrden H, Abernethy P, Ives CD, Jager NW and others. (2017) Leverage points for sustainability transformation. *Ambio* 46(1):30-39. DOI 10.1007/s13280-016-0800-y. url: <Go to ISI>://WOS:000392285300003
- Ali SH**. 2019. A Casualty of Peace? Lessons on De-Militarizing Conservation in the Cordillera Del Condor Corridor. In: Lookingbill TR, Smallwood PD (ed). *Collateral Values: The Natural Capital Created by Landscapes of War*. Springer International Publishing, Cham. p 177-188.
- Ali, S.**, 2020 How the current coronavirus pandemic links to questions of ecological sustainability in the anthropocene, Springer Nature Sustainability Community
- Barra R, Leonard SA, Whaley C, Bierbaum R.** (2018) *Plastics and the circular economy*. Scientific and Technical Advisory Panel to the Global Environment Facility, Washington, DC. 28 p.
- Basel Committee on Banking Supervision.** (2015) *Guidelines: Corporate Governance Principles for Banks*. Bank for International Settlements.
- Bierbaum, R., Leonard, S.A., Rejeski, D., Whaley, C., Barra, R.O.& Libre, C.** 2019 Novel entities and technologies: Environmental benefits and risks. *Environmental Science & Policy*.
- Carr ER.** (2019) Properties and projects: Reconciling resilience and transformation for adaptation and development. *World Development* 122:70-84. DOI
- Dabelko GD, Herzer L, Null S, Parker M, Sticklor R, editors.** 2013. *Backdraft: The Conflict Potential of Climate Change*. (Environmental Change & Security Program Report Vol. 14, Issue 2). Washington, DC: Woodrow Wilson International Center for Scholars.
- Di Marco, M., Baker, M.L., Daszak, P., De Barro, P., Eskew, E.A., Godde, C.M., Harwood, T.D., Herrero, M., Hoskins, A.J., Johnson, E., Karesh, W.B., Machalaba, C., Garcia, J.N., Pains, D., Pirzl, R., Stafford Smith, M., Zambrana-Torrel, C.& Ferrier, S.** 2020 Opinion: Sustainable development must account for pandemic risk. *Proceedings of the National Academy of Sciences* **117**, 3888-3892.
- Folke C,** Carpenter SR, Walker B, Scheffer M, Chapin T, Rockstrom J. (2010) Resilience Thinking: Integrating Resilience, Adaptability and Transformability. *Ecol Soc* 15(4). DOI, <Go to ISI>://WOS:000285917100034 url: <Go to ISI>://WOS:000285917100034
- Garnett, S.T., Burgess, N.D., Fa, J.E., Fernández-Llamazares, Á., Molnár, Z., Robinson, C.J., Watson, J.E.M., Zander, K.K., Austin, B., Brondizio, E.S., Collier, N.F., Duncan, T., Ellis, E., Geyle, H., Jackson, M.V., Jonas, H., Malmer, P., McGowan, B., Sivongxay, A.& Leiper, I.** 2018 A spatial overview of the global importance of Indigenous lands for conservation. *Nature Sustainability* **1**, 369-374.
- Gaupp, F.** 2020 Extreme Events in a Globalized Food System. *One Earth* **2**, 518-521.

Liu J, Dou Y, Batistella M, Challies E, Connor T, Friis C, Millington JDA, Parish E, Romulo CL, Silva RFB and others. (2018) Spillover systems in a telecoupled Anthropocene: typology, methods, and governance for global sustainability. *Current Opinion in Environmental Sustainability* 33:58-69. DOI <https://doi.org/10.1016/j.cosust.2018.04.009>. url: <http://www.sciencedirect.com/science/article/pii/S187734351730283X>

Mach KJ, Kraan CM, Adger WN, Buhaug H, Burke M, Fearon JD, Field CB, Hendrix CS, Maystadt J-F, O'Loughlin J and others. (2019) Climate as a risk factor for armed conflict. *Nature* 571(7764):193-197. DOI 10.1038/s41586-019-1300-6.

Matin N, Forrester J, Ensor J. (2018) What is equitable resilience? *World Development* 109:197-205.

Pelling M, Garschagen M. (2019) Put equity first in climate adaptation. *Nature* 569(7756):327-329. DOI 10.1038/d41586-019-01497-9.

Ratner BD. (2018) Environmental security: dimensions and priorities. Scientific and Technical Advisory Panel to the Global Environment Facility, Washington, DC. 20 p.

Sims R, Bierbaum R, Leonard SA, Whaley C. (2018) A future food system for healthy human beings and a healthy planet. Scientific and Technical Advisory Panel to the Global Environment Facility, Washington, DC. 24 p.

Swain A, Öjendal J, editors. 2018. *Routledge Handbook of Environmental Conflict and Peacebuilding*: Routledge.

UNEP & ILRI 2020 *Preventing the Next Pandemic: Zoonotic diseases and how to break the chain of transmission*. United Nations Environment Programme & International Livestock Research Institute, Nairobi, Kenya.

Walker B. (2019) *Finding Resilience*. CSIRO Publishing, Melbourne. 168 p.

Walker, B.H. 2020 Resilience: what it is and is not. *Ecology and Society* **25**.