GLOBAL ENVIRONMENT FACILITY
INVESTING IN OUR PLANET

WORLD BANK GROUP
Development Finance

GEF/R.8/02/Rev.01

April 6, 2021

First Meeting for the Eight Replenishment of the GEF Trust Fund
April 22-23, 2021

Strategic Positioning and Programming Directions
(PREPARED BY THE GEF Secretariat)

TABLE OF CONTENTS

PATHWAYS TO AN EQUITABLE, NATURE-POSITIVE AND CARBON NEUTRAL WORLD BEYOND COVID-19

I. STRATEGIC POSITIONING OF THE GEF IN A POST COVID-19 WORLD

A. Introduction

1. The Global Environment Facility (GEF) is the largest and most experienced multilateral fund dedicated to addressing environmental threats to the planet. The GEF's role is to support developing countries to prioritize environmental action that delivers global environmental benefits. The GEF is the only entity whose mandate embraces all facets of a healthy environment, from biodiversity, to climate change, to land degradation, to international waters, and including chemicals and waste.[1] Established on the eve of the 1992 Rio Earth Summit to help tackle our planet's most pressing environmental problems, the GEF's core mission is to help ensure the protection and sustainable use nature, upon which all life depends.

2. The GEF operates in 4-year funding cycles, and since its inception, it has provided more than $21.1 billion in grants and mobilized an additional $114 billion in co-financing for more than 5,000 projects in 170 countries. Through its Small Grants Programme, the GEF has provided support to more than 25,000 civil society and community initiatives in 133 countries. Since its inception, the GEF has supported the creation and/or management of over 3,300 protected areas totalling more than 860 million ha of globally significant biodiversity value. GEF investments have also resulted in more than 8 billion tons of GHG emissions avoided.

3. The GEF-6 cycle introduced the Integrated Approach Pilot (IAP) programs and other larger-scale systemic investments.. In GEF-7, the Impact Programs were launched to promote large, integrated, and impactful programs across more sectors and address multiple drivers of environmental change. Much learning is emerging that can be used to ensure the most effective and efficient use of GEF resources while at the same time delivering longer-term and more durable global environmental outcomes (see Box 1). Also, emerging findings from the OPS-7 study on Innovation supports the integrated approach as being more conducive to the incorporation of innovation in multiple sectors as part of GEF's business model.[2]

4. Environmental threats from climate change, biodiversity loss, chemical pollution, and pressure on forests, oceans, landscapes, and wildlife, are negatively impacting human development, livelihoods, and social justice. Against such mounting stressors on the health of the planet, the GEF-8 strategic planning is also having to address the challenges presented by the greatest health and economic crisis in a generation: the COVID-19 pandemic. The pandemic has been a stark reminder that the world is on the wrong track, with conflict between nature and economic systems causing a global zoonotic disease outbreak. The resulting toll on our society

[1] Early findings from the IEO's ongoing evaluation on "The GEF's comparative advantage in supporting a greener future" show strong evidence of the GEF's strategic role in this space. GEF IEO, 2021 "Highlights: Evaluation Findings 2018-2021"

[2] GEF IEO, 2021 "Highlights: Evaluation Findings 2018-2021"

will inevitably influence how countries transform their economies over the coming decade. Hence, the GEF-8 cycle will seek to promote a green, blue, and resilient recovery, and creating pathways to an equitable, nature-positive, and carbon neutral world.[3]

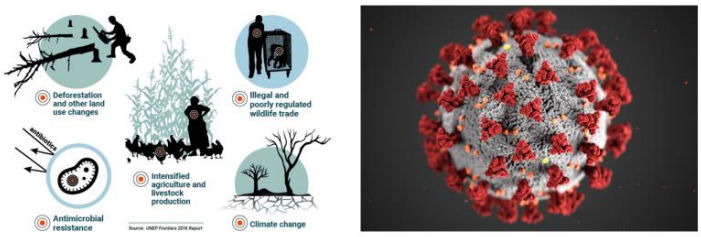
B. Context and background for the GEF-8 Replenishment

5. The proposed strategy for GEF-8 is framed against the backdrop of three inter-related challenges facing the global environment: the COVID-19 pandemic, mounting stressors on natural systems, and the urgency for robust financing and a transformative agenda. This section describes the nature of these challenges and implications for positioning the GEF as the financial mechanism for the global environment.

B.1 COVID-19 and the not-so-Black Swan: Breakdown of the Human System-Natural System Nexus

6. The last 12 months have witnessed the emergence of the most serious pandemic in the past 100 years. While COVID-19 was broadly anticipated by scientists, the alarm signals were largely ignored. The globalized nature of the existing market system helped to spread a zoonotic disease that proved to have widespread impact on the structure of societies and economies, including triggering dramatic loss of jobs and livelihoods, while being especially damaging to women and girls. Still far from being contained, the pandemic is forcing humankind to confront the devastating effects of the unrelenting degradation of nature (Figure 1)..

Figure 1. The emergence of SARS-CoV-2 and the pandemic have been a wake-up call



7. We can say with confidence that COVID-19, at its core, is a result of the direct collision between natural systems and human systems. The remarkable economic growth experienced during the last half century has disrupted ecosystems through unplanned urbanization and expansion of human settlements resulting in rampant deforestation and widespread land

[3] Early findings from the IEO's ongoing evaluation on "The GEF's comparative advantage in supporting a greener future" highlight the GEF's adaptability to emergent environmental challenges and trends. GEF IEO, 2021 "Highlights: Evaluation Findings 2018-2021"

degradation. With this disruption, people can more closely interact with wildlife, consequently leading to the creation of zoonosis hotbeds. What we are experiencing should not have come as a surprise. Experts armed with a solid body of science-based evidence have long warned that an epidemic on the scale of COVID-19 was due to happen; it was a question not of "if" but of "when." Hence, COVID-19 was not at all a Black Swan (an unforeseen event with significant consequences) but rather an expected outcome of growing exposure of people to wildife.

8. With the understanding that the fundamental root cause of zoonotic diseases resides in the weakening of the services that ecosystems have provided for humanity over thousands of years, the only lasting solution to COVID-19 and other such diseases is to promote transformational change to the human systems, be they energy, cities, food, and production / consumption, so that a balance between natural systems and human systems be restored within the planet's safe operating space.

9. The pandemic has also taught us that massive changes in human (as well as government and business) behavior are possible in short time frames. Entire countries were put on lockdown or adopted social distancing measures. The crisis has also provided the world with an opportunity for a global reset of our social and economic systems, by infusing true sustainable policies and regulations into the economic reboot (build back greener) and forcing businesses to rethink their operations with a special focus on green and sustainable supply chains.

10. Many countries have pledged to build back greener as the world emerges from the COVID-19 pandemic by committing to the allocation of funds for cleaner energy, greener cities, and expanded marine protected areas, among many other measures. But the t transitions leading to lasting transformation can only be achieved by the adoption of a sustainable, inclusive, resilient, low-carbon, low-polluting, nature-positive, and circular economy-based pathway for society, one that can withstand future shocks coming from climate change, natural and manmade disasters, and other global challenges. Unfortunately, according to the Finance for Biodiversity Initiative,[4] up to 70 percent of the economic stimulus packages studied are not building back greener.

11. The GEF recognized the seriousness of the pandemic. Immediately after the onset of COVID-19, a GEF COVID-19 Task force was created to assess the impacts and the opportunities created by the pandemic on the work of the GEF[5]. A report by the Task Force has reinforced the central role of the GEF in ensuring a healthy planet that can help prevent future pandemics and other disruptions expected from the current environmental degradation.[6] More

[4] Greeness of Stimulus Index, Finance for Biodiversity Initiative, Feb. 2021.
[5] GEF/C.58/Inf.07/May 16, 2020
[6] This is also underscored by early findings from the IEO's ongoing evaluation on "The GEF's comparative advantage in supporting a greener future", which show that the GEF is well positioned to play a pivotal role in "building back greener" after the COVID-19 pandemic. GEF IEO, 2021 "Highlights: Evaluation Findings 2018-2021"

specifically, by addressing factors underlying the increasing number of zoonotic diseases, such as the global wildlife trade and natural ecosystem degradation and destruction, the GEF can play an important role in restoring a better balance between people and nature. The Task Force Report noted that through programs like the Good Growth Platform, the Sustainable Cities Impact Program, the Food, Land Use, and Restoration Impact Program, and the Wildlife Conservation for Development Program, the GEF is working to help build an economy and a society that will thrive despite the inevitable shocks that will come through climate change and future pandemics.

B.2 Mounting Stressors on the Health of the Planet

12. Recent global assessments on the state of biodiversity, ecosystems, climate change and oceans unfortunately all point to continued deteriorating trends, despite some positive gains over the last few years. Syntheses of the latest scientific reports ("The State of the Planet") by the GEF Scientific and Technical Advisory Panel (STAP) suggests that many indicators of planetary health are still going in the wrong direction. Extinction rates are now tens to hundreds of times higher than the average of the past 10 million years, resulting in a homogenization of ecosystems, with a reduction in resilience.[7] GHG emissions that drive climate change are at their highest levels ever registered (Figure 2). Worrying trends are emerging with faster-than-expected increases in the frequency of attributable climate extremes, more arctic warming than anticipated[8] and repeated indications that icecap melting is accelerating irreversibly on human timeframes.[9,10,11,12]

[7] Future Earth. Our Future on Earth 2020. www.futureearth.org/publications/our-future-on-earth

[8] J.E. Overland, E. Dunlea, J.E. Box, R. Corell, M. Forsius, V. Kattsov, et al. The urgency of Arctic change Polar Science (2019), 10.1016/j.polar.2018.11.008

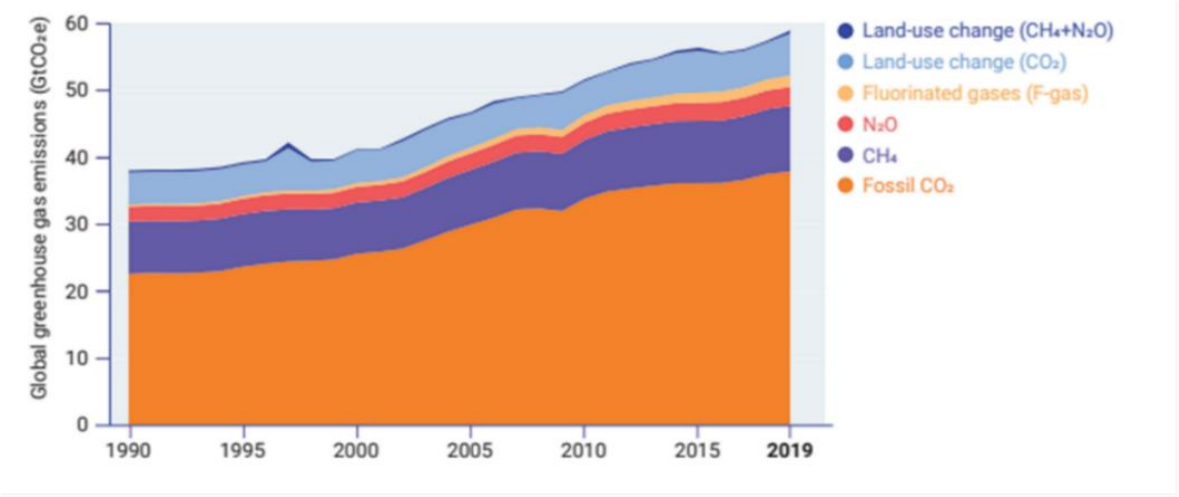
[9]Briner, J.P., Cuzzone, J.K., Badgeley, J.A. et al. Rate of mass loss from the Greenland Ice Sheet will exceed Holocene values this century. Nature 586, 70–74 (2020). https://doi.org/10.1038/s41586-020-2742-6

[10] Garbe, J., Albrecht, T., Levermann, A. et al. The hysteresis of the Antarctic Ice Sheet. Nature 585, 538–544 (2020). https://doi.org/10.1038/s41586-020-2727-5

[11] The IMBIE Team., Shepherd, A., Ivins, E. et al. Mass balance of the Greenland Ice Sheet from 1992 to 2018. Nature 579, 233–239 (2020). https://doi.org/10.1038/s41586-019-1855-2

[12] Shepherd, A. et al. Trends in Antarctic Ice Sheet Elevation and Mass. 16 May 2019. Geophysical Research Letters, Volume46, Issue14. https://doi.org/10.1029/2019GL082182

Figure 2. Global GHG emissions are at the highest level ever recorded



Source: UNEP Emission Gap Report

13. Furthermore, approximately 20 percent of the Earth's vegetated surface shows persistent declining trends in productivity, mainly as a result of land and water use and management practices.[13,14] The loss of biodiversity (Figure 3) and its associated ecosystem services has not been reversed and threatens human well-being in many ways. The oceans are under increasing threat from climate change and associated acidification, loss of coral reefs, overfishing, and pollution, requiring more substantial efforts than have been deployed to date (Figure 4). Transboundary freshwater systems that underpin and connect ecosystems, human health, and key economic sectors are being depleted rapidly, threatening livelihoods and triggering conflicts. In addition, harmful chemicals that include persistent organic pollutants, ozone depleting substances, mercury, and highly hazardous pesticides remain significant threat to human health, ecosystems, and biodiversity.

[13] Shukla et al., (editors). Climate Change and Land: An IPCC special report on climate change, desertification, land degradation, sustainable land management, food security, and greenhouse gas fluxes in terrestrial ecosystems. IPCC (2019)

[14] United Nations Convention to Combat Desertification. 2017. The Global Land Outlook, first edition. Bonn, Germany

Figure 3. Biodiversity loss in different regions

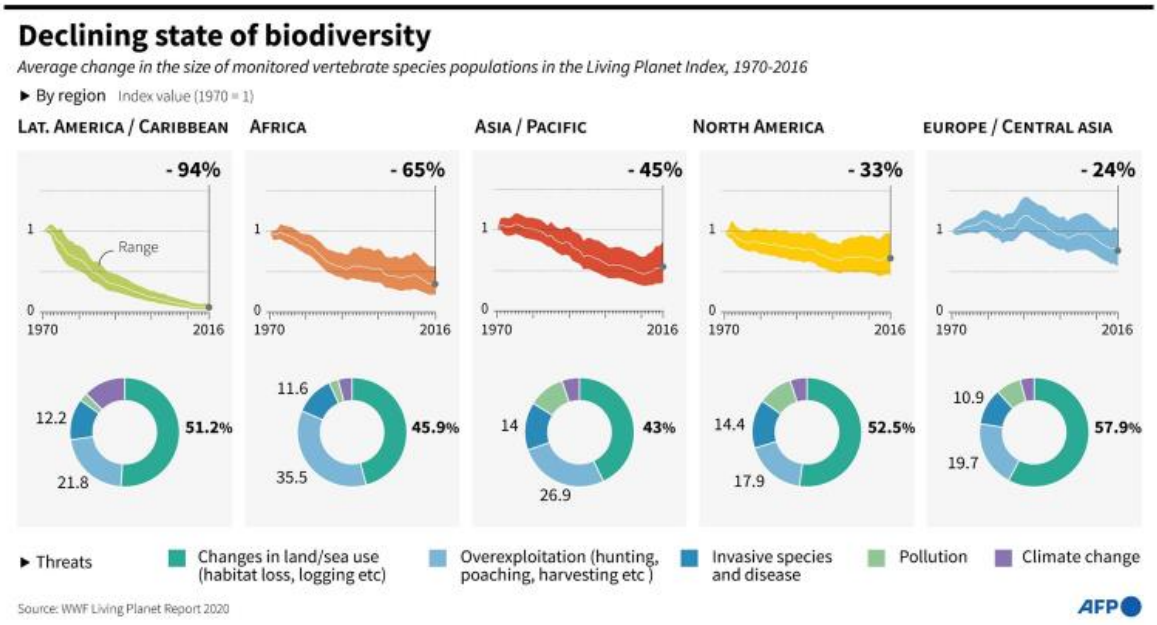
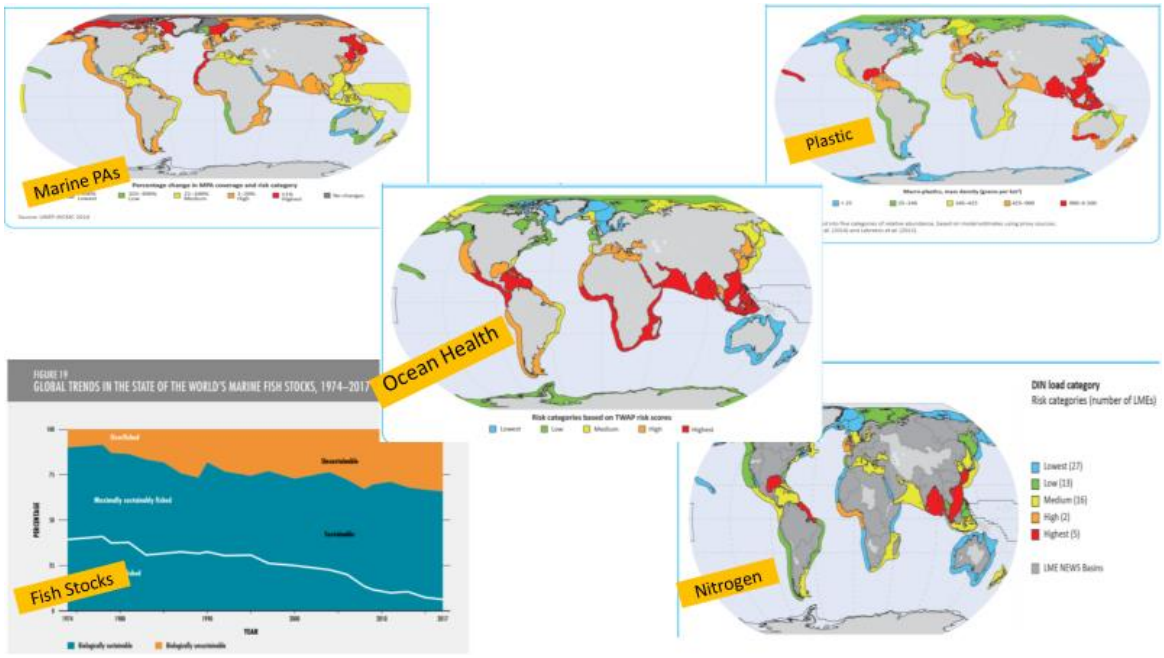


Figure 4. Declining ocean health across various metrics



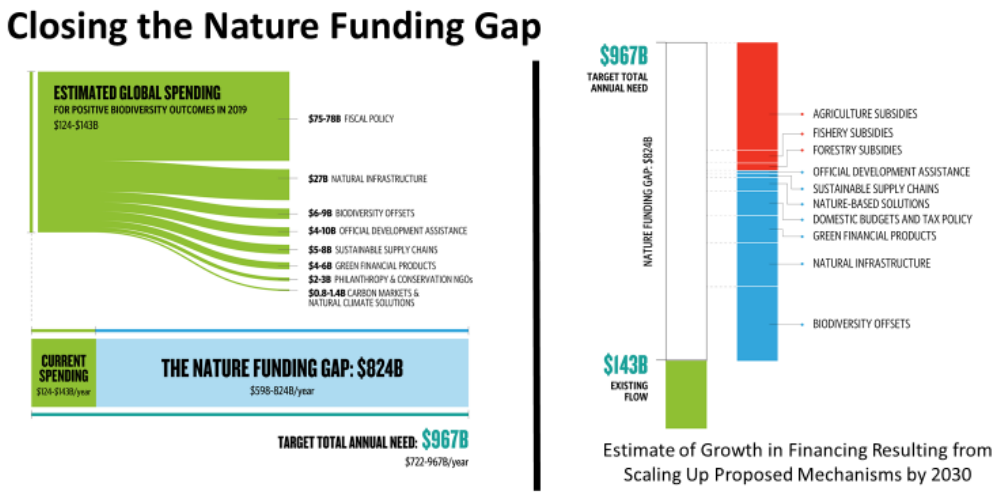
14. Science no longer supports the view that the environment is one of many facets of sustainable development. Actually, the direct value of nature to people has been revealed and quantified in great detail by the Dasgupta Review, and makes the case that economies and livelihoods are intertwined and dependent on the goods and services that nature provides. The continued deterioration of nature and its ability to provide essential services to people will progressively undermine the achievement of the Sustainable Development Goals (SDGs) and quality of life as we know it today. The GEF embraces the conclusions of the Dasgupta Review and borrows the logic of the proposed solutions in its strategic directions.

B.3 Funding Levels Commensurate with a Rising Ambition for Transformative Change

15. As the GEF contemplates the delivery of its mission during this decade, it is important to improve the levels of financing and strategic investments that are required to help realize the global commitments made by countries and the international community up to 2030. In recognition of the unique value of the GEF in the stewardship of the global environment, its mandate has expanded significantly through successive replenishment cycles, while its funding has remained largely unchanged. The growth in co-financing of GEF-funded projects has helped to alleviate the funding gaps to a certain extent, but the issue of adequate financing will need to be resolved in the upcoming replenishment cycles.

16. With the growing realization that the mandate of the GEF is foundational to sustainable development and essential to prevent setbacks to the gains that countries and the development community have made in reducing poverty and improving livelihoods, it is critical that official development assistance (ODA) is increased to more appropriate levels required for the GEF (e.g. multiples of past replenishment cycle funding levels) to be a major driver of change and as effective as possible in deploying resources for impact at scale (Figure 5).

Figure 5. Nature Funding Gap



Source: Paulson Institute and TNC 2020. Financing Nature

17. Additionally, without the active participation of private capital, markets and their agents, the mission of the GEF will not be accomplished. Happily, in December, 2020 the GEF Council approved a Private Sector Engagement Plan[15] that should facilitate the insertion of this sector into GEF-funded initiatives and support the transformative agendas of key economic systems. Another entry point will be to expand the non-grant instruments (NGI) designed to unlock and scale-up private financing. The GEF's early experience with private sector engagement and blended finance will serve as a springboard for expanded work in GEF-8 with the private sector and the financial sector. Recent findings of the Independent Evaluation Office (IEO) report that projects involving the private sector tend to deliver greater value added and are also most likely to lead to transformational change.[16]

18. The third and perhaps most important piece of the finance equation is largely in the hands of the developed and developing countries themselves. Building on the recommendations of the Dasgupta Review, if adequately financed, the GEF could start to more directly assist developing countries that are committed to internalize the value of their natural capital in national and state plans and budgets, promote enabling policy environments for expanded domestic resource mobilization making use of innovative finance mechanisms, and address perverse subsidies and other financial drivers of environmental degradation across the dimensions of biodiversity, climate change, land, and oceans, along with toxic chemicals and pollution. This point is also

[15] GEF/C.59/Inf.18
[16] GEF IEO, 2021 "Highlights: Evaluation Findings 2018-2021"

made in other recent reports including *The Little Book on Investing in Nature*,[17] the *World Economic Forum Global Risks Report*,[18] and *Financing Nature: Closing the global biodiversity financing gap* from the Paulson Institute.[19] To this effect, the GEF could be working much more effectively with its recipient countries on sustainable finance platforms with the aim of mobilizing private domestic resources and phasing out credit and public investment lines that undermine sustainable development goals.

19. The GEF's mandate to support developing countries is key to reaching the long-term goals of the multilateral environmental agreements (MEAs) it serves. For instance, while most of the world's biodiversity is located in developing countries, only 22 percent of nature spending takes place there. Despite a growing mandate on the environment front, available funding for the GEF has remained limited (e.g <0.5% of global spending on nature conservation, and less still on climate change). And while ODA funds are highly strategic, they will never fill the huge gaps identified for global environment financing.

20. Against this backdrop, increased and effective domestic resource mobilization is needed. Developing countries should recognize that it is in their self-interest to mobilize public expenditures more efficiently and that the GEF strategic financial support can be made more strategic to help narrow the domestic financial gap. One area where major positives strides can be made is in the reduction and/or elimination the many perverse incentives that exist at all scales and support the mainstreaming of sustainability considerations in the financial sector.

21. Since the start of the GEF-7 cycle (July 2018), many international commitments have arisen or are in the process of being negotiated and agreed (Figure 6). Therefore, it makes sense to develop a strategy for the GEF that is relevant all the way to the end of this decade. Among these are the proposed draft post-2020 CBD Global Biodiversity Framework, commitments by 50 countries to protect at least 30 percent of the world's land and ocean by 2030[20], the Bonn Challenge to bring 350 million hectares of degraded and deforested landscapes into restoration by 2030, the post-2020 Global Apex Goal for nature and people, commitments for the UN Decade on Ecosystem Restoration, and Our Ocean commitments for significant and meaningful actions towards a clean, healthy, and productive ocean.

[17] Tobin-de la Puente, J. and Mitchell, A.W. (eds.), 2021. The Little Book of Investing in Nature, Global Canopy: Oxford.

[18] The Global Risks Report 2021, 16th Edition, is published by the World Economic Forum

[19] Deutz, A., Heal, G. M., Niu, R., Swanson, E., Townshend, T., Zhu, L., Delmar, A., Meghji, A., Sethi, S. A., and Tobinde la Puente, J. 2020. Financing Nature: Closing the global biodiversity financing gap. The Paulson Institute, The Nature Conservancy, and the Cornell Atkinson Center for Sustainability.

[20] This reference is included here and elsewhere in the document to demonstrate that there is an increased level of ambition globally to achieve higher levels of protection of land and ocean. We acknowledge that this is a negotiation position within the CBD process that is not yet agreed by the COP and for which we recognize there exists a diversity of opinions from a wide array of stakeholders including IPLCs. The inclusion of this statement does not infer GEF's support for this or any other negotiation position.

Figure 6. List of international commitments for nature

22. These agreements and commitments are expected to mobilize global, national, and community action and raise the level of ambition for the MEAs. They will also contribute towards the achievement of the 2030 Agenda for Sustainable Development, with the SDGs, and other targets and plans for the coming decade that the international community is expected to agree to in 2021. In this sense, the GEF-8 replenishment is an opportunity to position the GEF as a leader, and a critical player in supporting and delivering on this set of ambitious existing and emerging goals.

23. One additional point of consideration is the proper placement of the GEF within the international environmental finance architecture. External finance for sustainable development amounted to $2 trillion in 2018, according to the OECD. Fifteen percent of this amount, or $0.31 trillion, was attributed to official development finance, including support through multilateral development banks (MDBs) and bilateral sources. The financing gap for the Sustainable Development Goals (SDGs) has widened significantly due to the COVID pandemic, and could increase by 70 percent, from $2.5 trillion to $4.2 trillion (OECD, 2021).

24. This background underscores the importance of GEF's role in the global financing architecture for sustainable development, based on its role of a/the Financial Mechanism for five multilateral environmental agreements (MEAs). The GEF is making multi-faced contributions as a catalyzer of partnerships, promoter of policy coherence, supporter of national reports, Convention obligations, and transparency in all countries, as well as a mobilizer of finance.

25. In the climate finance landscape, the GEF has been working with major funds, such as the Green Climate Fund (GCF), Climate Investment Funds (CIF), and Adaptation Fund, to help facilitate coordination. With the GCF, such collaboration has become increasingly relevant for a wide range of themes and entry points: the GCF results areas, such as forests and land use, and ecosystem and ecosystem services, health, food, and water security, encompass themes that are addressed across the GEF portfolio beyond climate change. Recognizing opportunities for enhanced complementarity and coordination, the two funds are in the process of developing a Long-Term Vision of Complementarity, to be announced at UNFCCC COP 26 and reported to the respective governing bodies of the funds. The Long-Term Vision seeks to define specific areas of cooperation, where complementarity of action may be more efficient and effective, and possible modalities to generate long-lasting outcomes and outputs.

C. Framing the GEF-8 Strategy

26. The challenges outlined in the previous section calls for the GEF to evolve a compelling vision and strategy that is consistent with global aspirations for transforming systems, helps countries achieve a green and blue post-COVID-19 recovery, and harness the GEF's comparative advantage as "integrator" across multiple dimensions.[21] This section addresses each of these priorities in detail and concludes with an emphasis on gender responsiveness as a key principle underpinning the GEF-8 strategy.

C.1 Vision and a Theory of Change GEF-8 and Beyond

27. The vision for GEF-8 is the achievement of a healthy, productive, and resilient planet that underpins the health and well-being of human societies. (Figure 7). In order to achieve this vision, we need to restore the health of the planet to ensure social and economic health by promoting transformational change to key economic systems (Figure 7). This in turn will help to implement lasting solutions to COVID-19 and other such emerging infectious diseases. This link between nature and human health has been promoted and embraced over the past decade by several groups around the concept of One Health.[22] The CBD also recognizes this link and the importance of the health of the planet for people.[23] Concurrently, a similar concept of Planetary Health[24] includes many more aspects of human health linkage to nature. The mandate and scope of the work of the GEF encompasses both of these concepts , but there are several areas of the GEF's environmental work that do not fit neatly within either one.

[21] Early findings from the IEO's ongoing evaluation on "The GEF's comparative advantage in supporting a greener future" highlight the GEF's ability to foster multi-stakeholder alliances as one of the top three areas of comparative advantage of the GEF. GEF IEO, 2021 "Highlights: Evaluation Findings 2018-2021"

[22] https://www.oie.int/en/for-the-media/onehealth/

[23] https://www.cbd.int/abs/

[24] https://www.planetaryhealthalliance.org/

28. For this reason, a more comprehensive Healthy Planet, Healthy People framework would be well suited to the work of the GEF. Healthy Planet, Healthy People expresses the broad dependency of human health and well-being on all aspects of a healthy environment and planet. This overarching definition includes linkages between biodiversity and ecosystem services; with food security and human health; between abundant and clean freshwater and human health;the maintenance of a stable and livable climate and human health; a clean and harmful chemical free environment and human health; and healthy oceans that can provide sustainable and resilient livelihoods and food security for all people, , among others. With this in mind, the work of the GEF is more critical than ever in restoring the health of the environment that can and needs to underpin the health and well-being of human societies at local, national and global levels.

29. This logic, as reflected in the proposed GEF-8 Theory of Change, has been at the core of the GEF's strategy for many years. The COVID-19 pandemic simply reinforces and further validates this approach and encourages acceleration of the transformation process. To reinforce this focus, the GEF-8 strategy identifies five cross-cutting themes as priority for programming: *gender responsiveness, private sector engagement, nature-based solutions, circular economy,* and *resilience.* In addition, the strategy also targets four specific levers as critical for creating desired transformations in the target systems: *governance and policies, financial leverage, innovation,* and *multi-stakeholder dialogues*.

30. An enduring, just, and equitable transformation can only be achieved by adopting development pathways that are sustainable, inclusive, resilient, low-carbon, low-polluting, nature-positive, and circular economy-based - in essence, through a blue and green recovery. What is transformational in practice will depend on context and will be made explicit in each area of GEF's program architecture. To be enduring, such transformation must be resilient to future shocks coming from climate change, natural and humanmade disasters, migration, conflict, economics and other global challenges. Durability also requires that gains made in one place are not lost in others ('leakage'); the GEF will address this and the issue of perverse incentives through the levers, particularly Governance and Policies. The GEF recognizes that there are barriers, opportunities and solutions that must be addressed in developing a robust and compelling strategy (Figure 7). Governments, development partners, civil society and the private sector are all vital for forging pathways through programming that embraces important cross-cutting priorities and transformative levers (Figure 7). Hence, using an integrated and coordinated approach is key to ensuring impactful outcomes at scale.

31. This transformation will need to rely increasingly and significantly on the integration of Nature-based Solutions. Nature-based solutions (NbS) are defined by the IUCN as *"Actions to protect, sustainably manage, and restore natural and modified ecosystems that address societal challenges, effectively and adaptively, simultaneously providing human well-being and biodiversity benefits*".

32. The framing of NbS to address multiple societal challenges has gained political currency and broad-based awareness. The contribution of the GEF to this momentum is not insignificant and should increase according to the recent report from the STAP.[25] The inseparability of nature and human well-being is fully embodied in IPLCs' tradition and practice. Likewise, the recent 2018 World Water Assessment Report[26] and the 2019 UN Climate Action Summit were instrumental in raising political momentum for NbS.

33. The biodiversity community, as part of a Post-2020 Biodiversity Framework, and the Presidency of the upcoming Climate COP26 in Glasgow, have included among their top priorities, a focus on "*Nature, safeguarding ecosystems, protecting natural habitats.*"

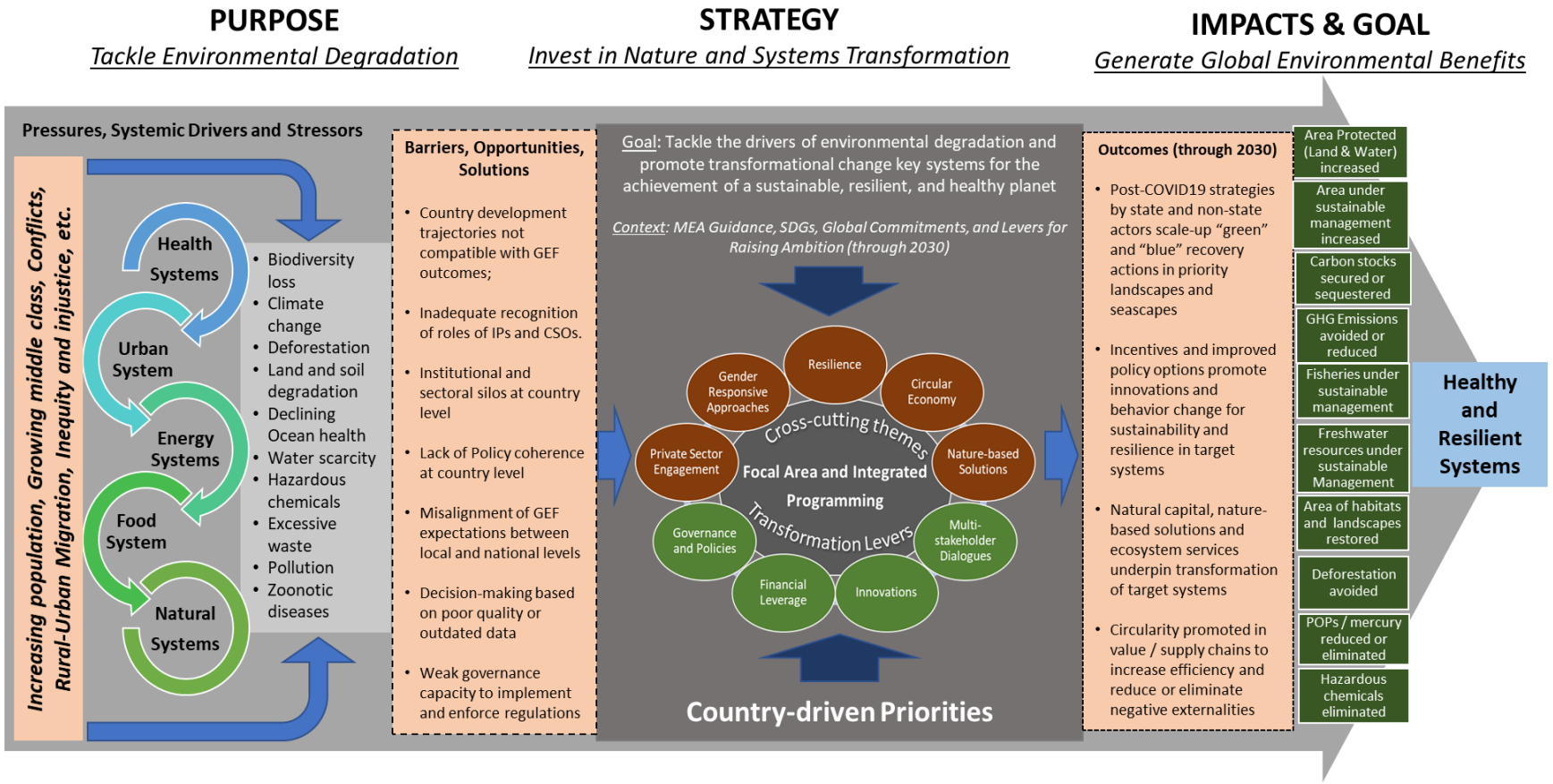
34. In the global context, the GEF will play a critical role in advancing the Healthy Planet, Healthy People approach by embedding it into efforts to build back greener and bluer economies.By integrating NbS into the framework, the GEF can help deliver co-benefits to other sectors, particularly human health, traditionally viewed as outside the GEF's sphere of influence. This vision will also build on the growing efforts by the GEF to "mainstream" environmental priorities into all public and private sector activities to ensure that nature underpins all socio-economic actions. There must also be a growing emphasis to promote regional collaboration for shared ecosystems as well as addressing common linked threats across national borders, as well as paying special attention to fragile and conflict-affected states.[27] Finally, this vision will also embrace the growing opportunity for harnessing technological innovations, and the critical need for mobilizing youth through entrepreneurship.

C.2 Raising the Ambition of the GEF

35. A healthy environment is the foundation for economic and social development. This foundation is now facing interrelated threats and nearing key tipping points that require urgent attention and action before negative trajectories get locked in. Without a healthy environment, human health and well-being will be inevitably compromised. The GEF's mandate and expertise make it uniquely well-suited to pursue the most ambitious goals that have been recently embraced by countries, the international community, the private sector, and CSOs. The next two GEF investment cycles, from 2022-2026 (GEF-8) and 2026-2030 (GEF-9) will be critical to the achievement of global environmental ambitions and needs over the coming decade, with a focus on systems change and environmental restoration at scale.

[25] https://www.thegef.org/sites/default/files/council-meeting-documents/EN_GEF.C.59.STAP_.Inf_.06_Natured_Based_Solution_GEF.pdf
[26] http://www.unesco.org/new/en/natural-sciences/environment/water/wwap/wwdr/2018-nature-based-solutions
[27] GEF/E/C.59/01, Evaluation of GEF Support in Fragile and Conflict-Affected Situations, https://www.thegef.org/sites/default/files/council-meeting-documents/EN_GEF.E_C59_01_Evaluation_of_GEF_Support_in_Fragile_and_Conflict-Affected_Situations_Nov_2020_0.pdf

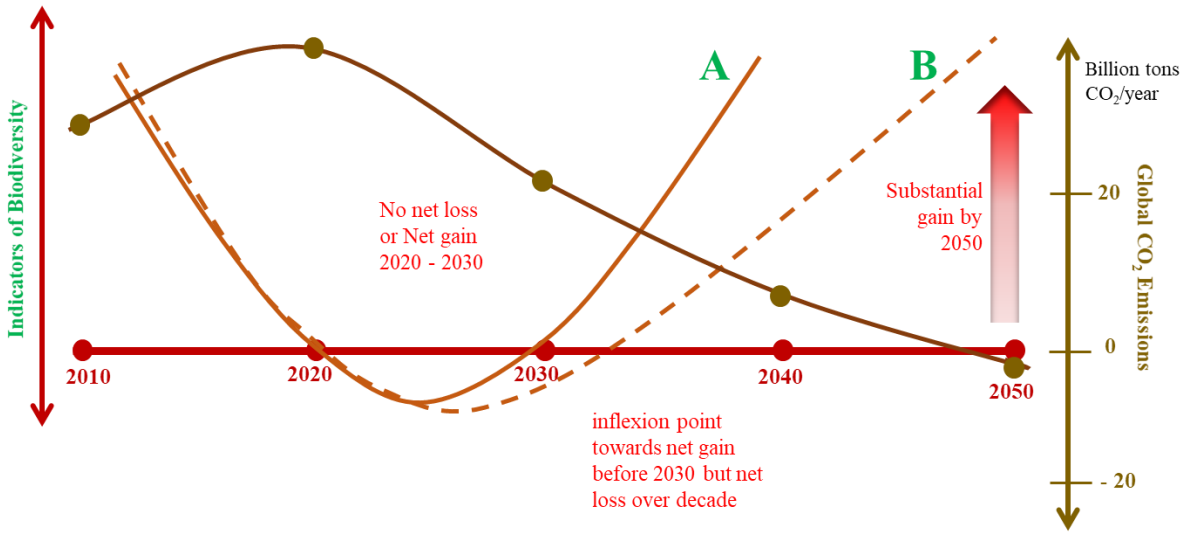
Figure 7. Theory of change for GEF-8



36. There is a growing consensus among scientists that this decade represents our last chance to turn to reverse the worrisome trends seen in Figure 8. In raising the ambition for the GEF, the end goal should be to halt nature loss and to ensure a nature-positive pathway by the end of the decade, but with a vision for substantial gains by 2050 (Figure 8).

Figure 8. Raising ambition to bend the curve for biodiversity loss and GHG emissions

(*Note: This schematic is a slightly modified version of one under discussion and included in the CBD SBSTTA paper from 5th Feb 2021*)



37. Raising the ambition of the GEF will require a significant increase in environmental action and funding levels, as documented in all Conventions' obligations and strategies. Raising the GEF's ambition will also require a strong focus on transformational change of key economic systems, as the GEF has started to do in GEF-7. And finally, adopting a clear overarching framework of Healthy Planet, Healthy People can firmly root the central role of a healthy planet as a necessary condition to human well-being. This will ensure that the stewardship of the natural world is not seen as a luxury and a "nice to have" goal, but one that must be achieved if we are to also ensure a prosperous and equitable sustainable development pathway for society. The table below highlights some key improvements proposed for the GEF-8 toward expectations for a Healthy Planet, Healthy People approach.

Table 1. How the GEF will evolve under a Healthy Planet, Healthy People Approach

Strategy	Business-as-Usual	Approach for GEF-8
STAR	• STAR structure (indices, weights, floors and ceilings) as well as flexibility rules remain unchanged.	• Increasing flexibility to further facilitate the mainstreaming of integrated programming principles • Adjusting the STAR structure to increase support to vulnerable countries • Updating the data layers, at country level, to further enhance incentives to improve policy coherence • Finding ways to encourage the use of blended finance options to narrow the financing gap • Creating a competitive space to increase effectiveness and efficiency and maximize the impact of limited resources
Results	• Core indicators and targets remain unchanged	• Updated targets for Core indicators in line with the level of ambition for GEF-8 • The GEF-8 results measurement framework monitors the durability of systems transformation • Enhanced tracking of how GEF investments improve people's well being and strengthening analysis of the impact of GEF investments on the economy • Sharing emerging lessons of transformative changes in GEF investment
Focal Area Programming	• Responsive to MEA guidance	• Responsive to MEA guidance • Proportionally allocated between single focal area and integrated programs • Explicit links to 2030 targets and commitments by State and non-state actors

Integrated programming	• Limited to programmatic approaches only • Incentive mechanisms for countries maintained at 1:2 ratio	• Principles of integrated programming mainstreamed in GEF portfolio • Both Programmatic approaches and stand-alone full-sized projects • Incentive mechanisms diversified
Private Sector Engagement and Investment	• New private sector engagement strategy approved • Blended finance attracted investment in frontier areas such as biodiversity and nature- based solutions	• Increase emphasis on multi-stakeholder platforms to understand incentives and pathways to behavioral change that will drive systems change, including private sector engagement in Integrated Programs • Expand and streamline blended finance to support innovation and attract private sector investment at scale

C.3 GEF as the Uber-Integrator

38. The Leaders' Pledge for Nature, endorsed by close to 90 countries, has called on the world to "*…re-double our efforts to end traditional silo thinking and to address the interrelated and interdependent challenges of biodiversity loss, land, freshwater and ocean degradation, deforestation, desertification, pollution and climate change in an integrated and coherent way, ensuring accountability and robust and effective review mechanisms, and lead by example through actions in our own countries."*

39. The GEF's unique mandate across multiple MEAs enables it to bring an integrated approach to most of its work. The GEF has a formal mandate as a financing mechanism under CBD, UNCCD, UNFCCC, the Minamata Convention, and the Stockholm Convention, and it supports countries with economies in transition in their implementation of the Montreal Protocol. GEF support has been critical in allowing parties to translate these agreements into national action, and in ensuring transparency of action through effective reporting from countries to conferences of the parties.

40. GEF's broad responsibilities under various MEAs are numerous but are often mutually supportive. A growing body of recent GEF guidance coming from various MEA COPs requests the GEF to foster integration as well as promote synergies among actions and strategies, and with

the GEF's role supporting SDG planning and implementation as recognized in multiple conventions, reflecting the integrated and indivisible nature of the SDGs.

41. In the post-COVID world, the full spectrum of GEF's mandate–from biodiversity, climate change, land, and oceans, along with pollution and toxic chemicals—is more relevant than ever, as is the GEF's science-based approach to every stage of its work. Sustainable development is also integral to the GEF's mission, and the GEF has a critical role to play in implementing Agenda 2030. The GEF's role in supporting sustainable development is recognized in its founding instrument, but the SDGs represent the first internationally agreed framework that makes explicit the linkages between efforts to safeguard the global environment, on the one hand, and the pursuit of sustainable development at the national level, on the other . As a result, at least three of the SDGs are part of the GEF's mandate : Goal 13 on climate change; Goal 14 on oceans and marine resources; and Goal 15 on terrestrial ecosystems, forests, biodiversity, and land degradation.

42. In addition, the GEF will continue with its progress in helping to transform the social and economic systems that threaten the stability and resilience of the Earth system. This will require active participation in new and existing collaborative efforts to promote more sustainable cities, affordable and clean energy, food security, water and sanitation, and sustainable production and consumption. Accordingly, the GEF can and will play an important role in the implementation of Agenda 2030 in GEF-8 and beyond. It should embrace this role, seek to monitor its contributions, and align its efforts with the multitude of other actors that have committed their support towards this transformational agenda.

C.4 Improving GEF's operational efficiency and stakeholder engagement

43. The GEF will continue to work with our partners to implement a coherent set of policies adopted in GEF-7 and earlier. Altogether, they raise our standards of delivery by increasing the speed and quality of project preparation and implementation for greater results.[28] They also ensure projects adhere to high fiduciary standards and integrity. The partnership enables the GEF to tap this knowledge and strengthen capacity for effective delivery of global environment benefits. The GEF is steadily increasing its co-financing across GEF phases.

44. The GEF Partnership has also taken decisive actions to strengthen its core policies and delivery modalities to support the GEF's program and enlist the full power of the partnership toward transformative results. The updated GEF policy and results-oriented framework[29] reflects

[28] These ongoing efforts to improve efficiency also address one of the areas for improvement identified by the MOPAN Assessment of the GEF - *MOPAN 2017-18 Assessments, Global Environment Facility*, http://www.mopanonline.org/assessments/gef2017-18/

[29] These include updated Policies on Stakeholder Engagement, Gender Equality, Environmental and Social Safeguards, Project Operations, Monitoring, Asessing Agency Compliance and Fiduciary Risk.

the values and priorities of the partnership, and has provided a critical foundation to enhance efficiency. The GEF Country Support Program provides a powerful platform to build capacity and advance cooperation across the partnership. The GEF Small Grants Programme further supports thousands of smaller-scale actions within the broader GEF strategic framework, with meaningful results for people and nature.

45. Furthermore, as part of bridging the financing challenge and to help countries in their domestic resource mobilization efforts, the GEF could also build upon its Country Support Program to reinforce country efforts to enhance enabling environments, and ensure that investments in nature are not counteracted by other destructive activities. This would complement similar actions in projects and programs, to amplify their scope and impact in support of country priorities and the global environment.

46. From its inception, the GEF has been committed to ensuring transparency and inclusion, as reflected in the evolution of its policies and guidelines encompassing stakeholder engagement and civil society participation. In GEF-7, the GEF scaled up its efforts to provide stakeholders such as civil society, IPLCs, women, youth, and other non-state actors with the means to engage throughout the program and project cycle and to access relevant information.

47. Finally, the GEF-8 agenda will also maintain and advance GEF's core commitments to transparency, integrity, and accountability in its work. The updated policies on Fiduciary Standards and Monitoring Agency Compliance with GEF Policies will be applied fully, and the Secretariat will continue its work to monitor and report on a key metrics of progress and issues that arise during project implementation. Building on the foundations already in place, and those that may be decided during the course of this replenishment, there will be a laser-like focus on all of these factors - - and more generally, the "how" of the work of the GEF, so that it is done efficiently and faster, with full integrity, for highest and best results.[30]

C.5 Gender responsiveness for inclusive and sustainable impacts

48. Gender is deeply embedded in the socio-economic systems that the GEF needs to transform to effectively support countries in their efforts to build back bluer and greener (including health, food, energy, urban, and production/consumption systems).

49. Despite promising political commitments and policy reforms, gender inequalities and gaps continue to hamper equal opportunities for women to contribute and benefit from environmental policies and programs. Women in much of the world still do not have the same control over natural resources as men, and they commonly face more barriers than men to accessing markets, capital, training, and technologies, and remain unrepresented in natural resource governance and decision-making at all levels. Addressing these inequalities and more

[30] These elements will also be detailed in a subsequent document for the Replenishment discussions.

effectively engaging women to increase opportunities to benefit and contribute, has the transformative potential to address the complex drivers of pressures on environmental resources and improving long-term environmental sustainability globally, nationally, and locally.[31,32,33,34,35] It will also help include the unique skills, knowledge, and experiences of women that can change the causal chain of environmental degradation, including their involvement in public and private sector governance, their role in productive sectors, their choices as consumers, and the investment choices they make.

50. Evidence and lessons learned from mainstreaming gender and addressing gender gaps in environmental policy, financing, and projects can be important as countries around the world are pledging to build back better from the COVID-19 pandemic. The pandemic, threatening to roll back decades of development successes and impeding SDG achievement, has not only exposed the human pressure on nature and natural systems but also revealed and exacerbated vulnerabilities and inequalities within and among countries. As the immediate health crisis gradually abates, attention will turn to preparing policy and investment measures to trigger social and economic recovery and safeguard prosperity for the longer term. The GEF can play a central role in helping countries to restore a healthy environment and to ensure a people-centered and gender-responsive recovery that focuses on human well-being, improving inclusiveness, and reducing inequality.

51. The opportunity and the need for the GEF to more strategically promote gender equality and inclusion as well as demonstrating social and economic benefits is perhaps more urgent now. The GEF-8 programming direction will build on progress and lessons learned in GEF-7 addressing gender gaps and women's empowerment. Specifically, all GEF-8 Integrated Programs and related projects will include gender analyses and provisions for gender responsive approaches, including:

- Supporting women's improved access, use, and control of resources, including land, water, forest, and fisheries;
- Enhancing women's meaningful participation and role in natural resources governance and decision-making processes at all levels (i.e., promoting women's equal voice and leadership in community, rural, and urban planning processes and supporting women as innovators and agents of change);

[31] UNEP (2021). Making Peace with Nature: A scientific blueprint to tackle the climate, biodiversity and pollution emergencies (https://www.unep.org/resources/making-peace-nature)
[32] Ghasemi, et al (2021) The mediation effect of rural women empowerment between social factors and environment conservation (https://link.springer.com/article/10.1007/s10668-021-01237-y)
[33] Collantes et al (2018) Moving towards a twin-agenda: Gender equality and land degradation **ne**utrality (https://www.sciencedirect.com/science/article/pii/S1462901118306713)
[34] Cela, B., I. Dankelman, and J. Stern, eds. (2013). Powerful Synergies: Gender Equality, Economic Development and Environmental Sustainability. New York: United Nations Development Programme.
[35] Food and Agriculture Organization of the United Nations (2011). The State of Food and Agriculture 2010-2011: Women in Agriculture — Closing the Gender Gap for Development. Rome

- Targeting women as specific beneficiaries by supporting activities that support women's sustainable livelihoods, income-generation, entrepreneurial opportunities in the blue and green recovery, and access to finance; and
- Investing in women's skills and capacity by supporting capacity development of different groups, including women's organizations, and government officials at the national and subnational levels.

52. The subsequent sections in this document elaborate on the proposed programming directions for GEF-8, including the Integrated Programs, the Focal Area strategies, the global programs, and the private sector engagement plan.

II. GEF-8 PROGRAMMING DIRECTIONS FRAMEWORK

A. GEF-8 Architecture

53. The GEF is mandated with delivering Global Environmental Benefits (GEBs) that respond to national and international commitments made within the realm of the Multilateral Environmental Agreements (MEAs) and their associated protocols. Additionally, ensuring that these GEBs serve as the basis for achieving several of the fundamental Sustainable Development Goals (SDGs) that underpin the health of the biosphere and on which most other SDGs depend on, is crucial. One of the GEF's defining characteristics (and its comparative advantage) lies in the fact that it is the financial mechanism for the three Rio Conventions (CBD, UNFCCC, and UNFCCC) and two Chemical Conventions (Stockholm and Minamata), along with acting in other global environmental areas such as International Waters and Forests. Science, environmental practice, and economic information are indicating that the integration of environmental actions towards addressing common drivers of degradation is a necessary condition to restoring the health of the planet and ensuring equitable and prosperous sustainable development.

54. The GEF-8 programming directions framework builds on the successful dual approach in GEF-7 of investing in integrated programming and associated focal area commitments. In GEF-8, we intend to encourage countries to move more of their programming through large-scale, integrated programs that address most of the major environmental needs of the planet for which the GEF has a mandate. This will be complemented with more targeted GEF-8 investments along focal area specific entry points to ensure that all Convention commitments are also addressed.

55. The first axis of GEF-8 programming represents a key set of integrated program concepts that can really "move-the-needle" towards systems transformations. These topics were all validated during the recent Technical Advisory Group meetings that generated solid scientific and technical input coming from over 450 scientists and practitioners from academia, GEF agencies, Convention Secretariats, CSOs and Indigenous Peoples. This framework positions the GEF well in its work to help developing countries pursue holistic and integrated approaches directed at transformational change in key systems, and in line with their national development priorities. The focused set of integrated country-driven priorities hold the potential to enhance synergies and impact of GEF investments, and to promote a more effective use of resources and crowd-in private sector funding.

56. The proposed integrated programs collectively address major drivers of environmental degradation and/or deliver multiple benefits across the many thematic dimensions the GEF is mandated to deliver. Many of the priorities are also making use of increasingly more relevant global or regional platforms that are attracting a multitude of stakeholders and resources in response to political commitments. Integrated programs also allow the GEF to better crowd-in

other stakeholders, including the private sector, enhance knowledge sharing and learning, and ensure a more effective use of GEF resources.

57. The second programming axis encompasses focal area-specific investments that also respond to specific guidance from the different multilateral environmental agreements. While the integrated programs will deliver substantial global benefits across the different focal areas of the GEF (Figure 9), some elements of guidance from conventions can be best dealt with through distinct focal area complementary investments directed at objectives not fully reflected within the set of proposed integrated programs. These investments are presented in detail within the individual Focal Area Investment Frameworks for Biodiversity, Climate Change, Land Degradation, International Waters, and Chemicals and Waste.

58. The GEF supports climate change adaptation through the Least Developed Countries Fund (LDCF) and the Special Climate Change Fund (SCCF), both of which serve the Paris Agreement. These two voluntary funds are separate from the GEF Trust Fund, and will commence on their own programming strategy development from June 2021. Opportunities to address climate change adaptation synergistically with proposed GEF-8 programming will be elaborated once the LDCF/SCCF programming strategy development is underway. These will be informed by successful multi-trust fund programming examples from the GEF-7 period, as well as experience in mainstream climate resilience and climate change adaptation.

Figure 9. GEF-8 Programming Architecture

B. A Framework to Assess and Enhance the GEF's Positive Environmental Impact

59. Tracking the impact of GEF-financed projects and programs is not easy because the dynamics of environmental change are complex. It is also difficult to attribute large scale transformation to GEF activities and to grasp how GEBs help improve people's well-being. However, this will be pursued in the context of clear theories of change for interventions that identify and follow the role that the GEF and others aim to plan, and that outline how innovation will be scaled.

60. To help us address these challenges, we track a set of Core Indicators offering a comprehensive picture of GEF's effectiveness in delivering GEBs. These indicators also provide GEF management and partners with a tool to assess progress in implementing corporate priorities more effectively and efficiently. The Portfolio Scorecard, a tracking framework focused on operational effectiveness and efficiency, helps ensure projects and programs deliver quality results on the ground, on time.[36]

61. Just measuring the positive impact on the environment of GEF investments is not enough: the world's needs are urgent, so we need to constantly increase our impact in overcoming environmental degradation. To increase its impact on the environment, the GEF is aiming to achieve major actions within the scope of this replenishment:

- *Improving the tracking of the GEF's contribution to system change.* The GEF needs a results framework that promotes transformative impact in the systems it is targeting. That's why we will place renewed emphasis on tracking progress in ensuring that projects and programs use the right levers for change, as a pre-requisite for system change; and work with countries and the MEAs to put these changes in the wide context to track net improvements in the relevant GEBs. This will be tracked as the GEF continues to build stronger conceptual linkages between systems and the GEF's actions to address them.

- *Better measuring co-benefits of GEF investments in improving human well-being.* As the relationship between the environment and society is continuing to become ever more important, it is instrumental for GEF projects to explicitly consider social and economic co-benefits, especially those that are pre-requisite to achieving and scaling the enduring GEBs being sought. Building on progress in capturing project beneficiaries, the GEF will continue to improve the way it measures and expands its impact in delivering co-benefits, including gender equality.

[36] These ongoing initiatives in Monitoring and Reporting also address one of the areas identified for improvement by the MOPAN Assessment of the GEF - MOPAN 2017-18 Assessments, Global Environment Facility, http://www.mopanonline.org/assessments/gef2017-18/

- *Deepening the assessment of GEF operations' impact on the economy.* While the GEF is effective at tracking GEBs, these account for only part of the total outcomes. To this end the GEF will analyze its impact in generating additional gross domestic product and jobs in countries. It will consider using tested methodologies that trace the impact of investments as they flow through an economy.

- *Strengthening the quality of project monitoring and evaluation frameworks.* High-impact projects require a robust results framework and monitoring and evaluation plan. The GEF recently introduced monitoring and evaluation requirements that promote good design and functioning data collection and reporting systems, leading to the use of performance data for decision-making. We will work to ensure projects uphold these standards, so they keep a strong focus on results throughout implementation.

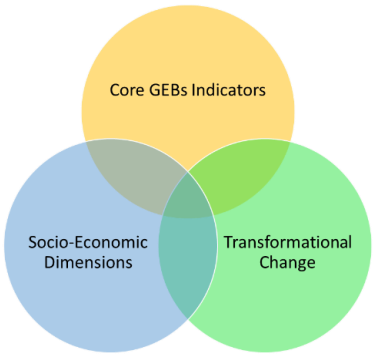
- *Supporting the implementation of the GEF's delivery model.* The GEF tracks progress against the key drivers of operational performance in its recently introduced Portfolio Scorecard—a select set of indicators that provide a picture of how well implementation is taking place. This framework provides a consistent approach to reporting progress over time, with comparability across agencies. The Scorecard will continue to evolve and improve as the GEF's ability to track progress expands.

62. To achieve these goals, the GEF will take actions beyond the immediate scope of Core Indicators. The Monitoring Report will continue to strengthen reporting on results indicators and gauge the part played by GEF investments in addressing environmental trends. This report will also continue to look at the performance of the portfolio of projects and programs under implementation.

63. A set of Core Indicators will continue to build on the GEF-6 and GEF-7 experience in setting ambitious and realistic targets for delivering on programming directions. This experience will help achieve the level of ambition for GEF-8, and the GEF Corporate Scorecard will monitor progress.

64. Building on progress and achievements over the GEF-6 and GEF-7 replenishment cycles, the GEF will continue tracking Core Indicators and expand its results framework to include assessment of socio-economic co-benefits and monitoring levers of transformational change in key economic systems driving environmental degradation. In the proposed Theory of Change, five systems have been identified for transformation to significantly reduce the threats and risks of environmental degradation: *natural systems, food systems, energy systems, urban systems,* and *health systems*. By targeting these systems, the GEF is creating much needed space for alignment and engagement with recipient countries on the most important areas for advancing a green and blue recovery.

Figure 10. Components of the proposed GEF-8 Monitoring Framework



a) The core indicators for Global Environmental Benefits (GEBs)

65. During the GEF-7 replenishment, the GEF established a core set of common indicators to capture contributions from investments in systems transformation toward delivering GEBs.[37] This framework has been successfully operationalized during the GEF-7 cycle[38] and is now a part of the GEF's systematic measurement and reporting.[39]

Core Indicators:

- Terrestrial protected areas created or under improved management
- Marine protected areas or under improved management
- Area of land restored
- Area of landscapes under improved practices
- Area of marine habitat under improved practices
- Greenhouse gas emissions mitigated
- Number of shared water ecosystems under new or improved management
- Globally over-exploited marine fisheries moved to more sustainable levels
- Reduction, disposal/destruction, phase out, elimination, and avoidance of chemicals of global concern
- Reduction, avoidance of emissions of POPS

66. The GEF-6 and GEF-7 cycles have taught us a lot about defining clear and robust GEBs, designing indicators that can be tracked and reported on, as well as setting ambitious yet realistic corporate targets for these GEBs. As we continue to move into more integrated programming and delivery mechanisms in the next replenishment, a simple, unified set of GEBs can and

[37] GEF/C.54/11/Rev.02, Updated Results Architecture for GEF-7, https://www.thegef.org/sites/default/files/council-meeting-documents/EN_GEF.C.54.11.Rev_.02_Results.pdf
[38] : ME/GN/02, Guidelines on Core Indicators and Sub-Indicators, https://www.thegef.org/sites/default/files/documents/Results_Guidelines.pdf
[39] GEF/C.59/Inf.06, GEF Corporate Scorecard, December 2020, https://www.thegef.org/sites/default/files/council-meeting-documents/EN_GEF.C.59.Inf_.06_GEF_Corporate_Scorecard_December_2020.pdf

should be developed to represent the numerous benefits along the variety of environmental axes that the GEF operates on with each MEA. The figure below presents the alignment of the integrated programs with the focal area strategies and their delivery of GEBs.

b) The socio-economic co-benefits from investing in GEBs

67. Tracking socio-economic co-benefits at the GEF is not new. The Results Architecture set for GEF-7 introduced the tracking of the number of direct beneficiaries, disaggregated by gender. This enables us to know the number of men and women benefiting from project interventions. In addition, project results frameworks track socio-economic benefits through custom indicators specific to their own project context.

68. As GEF-8 programming directions evolve, consideration will be put on identifying new metrics that help assess the contribution to improving the well-being of the people across the portfolio of projects to be programmed. This includes identifying metrics detailing the socio-economic characteristics of these beneficiaries. They could relate to aspects such as livelihoods, jobs, and health.

69. Furthermore, programs will identify metrics specific to their area of intervention. This could include elements linked to the Healthy Planet, Healthy People framework that help track the complex links between development, population health, and the environment, and promote a healthier environment. Reporting on these indicators over the life of the programs can shed light on the applicability of the Healthy Planet, Healthy People concept to the work of the GEF.

c) Levers for Monitoring Systems Transformation

70. The programming strategy is clustered around integrated programs that are collectively focused on addressing major drivers of environmental degradation while creating opportunities for multiple global environmental and development benefits and on complementary focal area investments to respond to guidance from the different MEAs served by the GEF. The overall framing will enable the GEF to pursue a more effective, responsive, and agile delivery model that will reduce fragmentation of GEF resources and interventions, strengthen its results focus, and enhance upstream engagement on strategic programming with a broad set of stakeholders, including the private sector.

Figure 11. Integrated Programs and their contribution to a set of GEBs[40]

[40] Some of the GEB core indicators such as "area protected in seascapes" are also delivered by more than one focal area, in this case International Waters and Biodiversity.

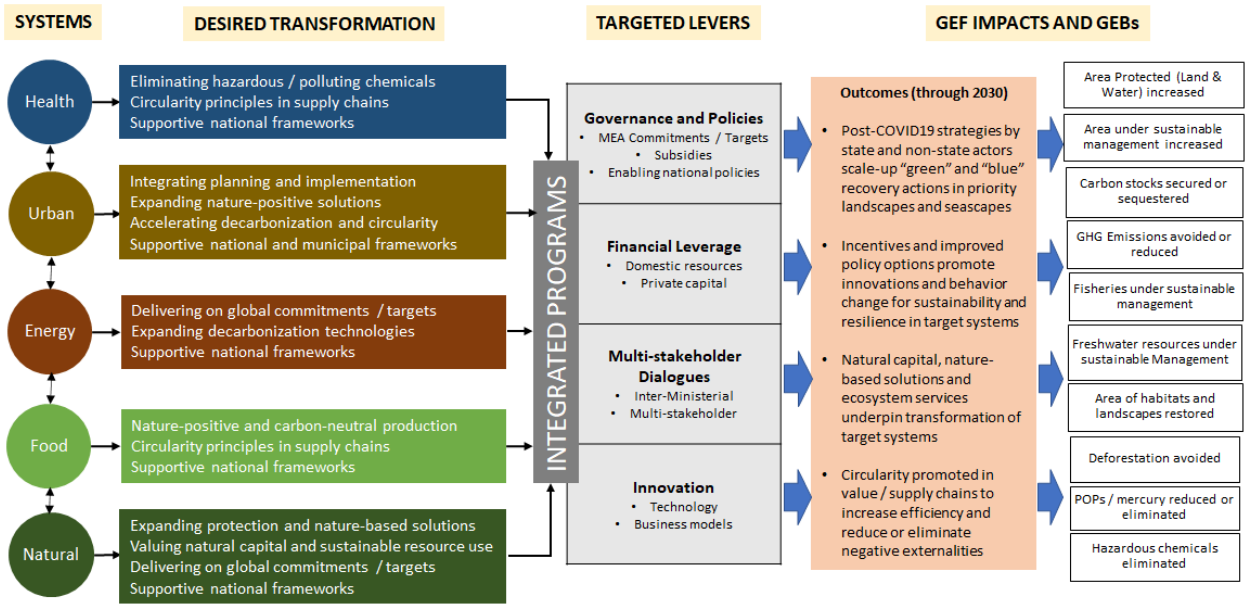
71. Systems transformation depends on specific entry points and levers that drive decision-making and actions by stakeholders. For example, in relation to the 2030 SDGs, six entry points have been identified as offering the most promise for achieving systems transformations at the necessary scale and speed.[41] The framework also included four levers that can be coherently deployed through each entry point to bring about the necessary transformations. While each lever can contribute to systemic change, only through their context-dependent combinations will it be possible to bring about the transformations necessary for restoring balance across the dimensions of sustainable development and achieving the 2030 Agenda.

72. The proposed GEF-8 integrated programs will serve as entry points and means for the five priority systems. Each program is expected to reflect specific features of the relevant systems targeted, including cross-cutting priorities such as gender responsiveness and private sector engagement, for which the GEF already has explicit strategies, polices, and guidelines in place. Other cross-cutting themes such as Nature-based Solutions, resilience, behavior change, gender, and application of circular economy principles will also be considered based on their critical role in achieving enduring global environmental benefits.

73. For the GEF-8 cycle, the GEF is proposing to pilot a new framework for monitoring and assessment of systems transformation. The proposed framework focuses on the four specific levers identified in the Theory of Change as critical for creating desired transformations: *governance and policies, financial leverage, innovation and learning,* and *multi-stakeholder dialogues*. Building on GEF experience with programming in developing countries, these four levers will undoubtedly play an invaluable role for the post-COVID-19 agenda on a green and blue recovery. The GEF-8 programming directions will therefore prioritize these levers across all investments to support achievement of outcomes (through 2030) and GEBs (Figure 12) at scale. The levers will not be treated in isolation, but rather taken together as a package that will be defined by and applicable to each of the GEF-8 integrated programs.

[41] Independent Group of Scientists appointed by the Secretary-General, Global Sustainable Development Report 2019: The Future is Now – Science for Achieving Sustainable Development, (United Nations, New York, 2019). https://www.un.org/development/desa/publications/global-sustainable-development-report-2019.html

Figure 12. Proposed Framework for Monitoring Systems Transformation



Governance and Policies: For the GEF to proactively influence and support recipient countries as they embark on a green and blue recovery from the COVID-19 pandemic, it is critical that the programs and projects be anchored in a whole-of-government framework as well as on key transboundary governance models for the global environment. This will create opportunities to foster coherence and cross-sectoral institutional integration in formulating policies and ensure that environmental priorities are mainstreamed at all levels. Three key dimensions will be considered for monitoring this lever: a) commitments and targets relevant to MEAs served by the GEF; b) eliminating, reducing or repurposing subsidies that negatively impact GEBs, and promoting subsidies that speed the transition to nature-positive solutions; and c) enabling policies to attract investments that benefit the global environment. All Integrated Programs submitted to the GEF will be required to provide detailed assessments of each of these components relative to the systems targeted, which will then be used as basis for monitoring.

Financial leverage: Evidence from co-financing provided to GEF projects and several recent reports on biodiversity finance suggests that countries have considerable capacity to mobilize financing for investment in initiatives that generate GEBs. The GEF is also aware that the potential for such resource mobilization is considerably higher than is being realized through projects alone. However, mobilizing resources at scale requires systemic change, which will be influenced through the set of transformational levers targeted for GEF-8. Financial leverage will be tracked on two dimensions: a) domestic resources mobilized through national planning budgets and public development investments; and b) private capital catalyzed from businesses, financial institutions, and

foundations. Through this lever, the GEF will promote natural capital accounting, green procurement practices, Nature-based Solutions as a requirement in government tenders, and financing tools such as Conservation Trust Funds, Payment for Ecosystem Services (PES), and blended finance. With COVID-19 generating a severe debt crisis, the GEF will also consider the possibility of greening likely upcoming sovereign-debt relief packages (e.g., green sovereign debt relief facility).

***Innovation and Learning*:** As previously noted by STAP, incremental progress is inadequate to deliver transformational change.[42] By targeting innovation as a lever for systems transformation, the GEF will explicitly push for new opportunities and options that deliver much needed shifts. STAP also noted that although this entails risk and the possibility of poorer outcomes or even failure, falling back on trusted solutions that have been proven to work will not deliver transformational change. The GEF-8 strategy will consider three additional dimensions of innovation and its scaling for monitoring: a) technology options that are potential game-changers; b) business models that require multi-stakeholder collaboration, including between public and private sectors and that speed the transition to nature-positive solutions; and c) institutional innovations that shift consumer behaviors or societal norms, increase capacity for implementation (including among public, civil society, and private sector actors) or create new coalitions for change. All Integrated Programs and projects submitted to the GEF will be required to demonstrate how innovation based on these two priorities is reflected in the proposed approach, including metrics for monitoring and assessment of progress. This will be underscored by ongoing efforts in knowledge and learning, both at the Partnership level through the development of a knowledge management strategy[43], and through the knowledge platforms and initiatives that are critical program components.[44]

Multi-Stakeholder Dialogues. Enduring, transformational change will require consideration of new stakeholders, new partnerships, and multi-stakeholder platforms in order to build coalitions for change.[45] As defined by STAP, *multi-stakeholder dialogues*

[42] Toth, F., 2018. Innovation and the GEF: Scientific and Technical Advisory Panel to the Global Environment Facility. Washington, DC. https://www.thegef.org/sites/default/files/council-meeting-documents/EN_GEF.STAP_.C.55.Inf_.03_STAP_Innovation.pdf

[43] The development of a partnership-wide knowledge management strategy follows one of the recommendations of the IEO's recent Knowledge Management evaluation, GEF/E/C.59/04, *Evaluation of Knowledge Management in the GEF (2020)*, https://www.thegef.org/sites/default/files/council-meeting-documents/EN_GEF.E_C59_04_evaluation_of_KM_GEF_2020.pdf

[44] These knowledge management activities address one of the areas of improvement identified by the MOPAN Assessment of the GEF - MOPAN 2017-18 Assessments, Global Environment Facility, http://www.mopanonline.org/assessments/gef2017-18/

[45] Suggested citation: Ratner, B.D. and Stafford Smith, M. 2020. Multi-stakeholder dialogue for transformational change. Scientific and Technical Advisory Panel to the Global Environment Facility. Washington, DC. https://www.thegef.org/sites/default/files/council-meeting-documents/EN_GEF.STAP_.C.58.Inf_.02_Multi_Stakeholder_Dialogue_For_Transformational_Change_0.pdf

refer to the processes and platforms that can be built to bring together different groups of stakeholders into an arena with a shared goal and distinct responsibilities. The GEF has increasing experience of the principles of multi-stakeholder processes and platforms. The GEF also continues to enhance the enabling environment for engagement with stakeholders through a series of key policies and strategies. Multi-stakeholder dialogues will be considered on two dimensions: a) national level policy design and implementation, involving relevant line ministries within countries as well as other policy stakeholders; and b) cross-scale coalitions engaging government, private sector, civil society across different scales as appropriate to pursue the goals of programs or projects. All Integrated Programs and projects submitted to the GEF will be required to explicitly describe planned strategies and processes for such dialogues.

III. INTEGRATED PROGRAMS

74. Findings of the GEF-6 and GEF-7 programming cycles indicate that addressing the drivers of environmental degradation in an integrated and large-scale fashion results in more impact per investment unit as well as creating the conditions for systems transformation. Many examples now exist through our major programs that the model advanced over the past two replenishment phases following the GEF 2020 vision is in fact producing much of the expected results and impact. This is also underscored by the recent MOPAN Assessment of the GEF which highlighted the need for the GEF to continue to use its limited resources in the pursuit of transformational change, and assessed integrated programming to be more relevant to the type and complexity of global environmental challenges.[46]

75. The integrated approach programming will be further strengthened and build on progress made in GEF-6 and GEF-7 (see Box 1). In GEF-8, we propose to continue to "mainstream" the integration of GEF investments as the main delivery mechanism to ensure the most impactful and efficient use of GEF resources. For the purpose of GEF-8, integrated programs are defined by sharing several of the following characteristics:

- Integration of actions across sectors (e.g. agriculture and conservation); or
- Integration of resources across GEF focal areas; or
- Integration across supply chains; and
- Deliver multiple GEBs; and
- Addressing drivers of environmental degradation at global or regional scales; and
- Complementing country-level investments with transboundary action and impact at regional or global scales; and
- Mobilizing diverse coalition of stakeholders from relevant sectors for system transformation; and
- Promoting greater private sector engagement; and
- Fostering knowledge sharing and learning.

76. A central feature of integrated programming is to deliver GEBs across several GEF focal areas in a more impactful and efficient manner. These approaches also focus on the drivers of environmental degradation, rather than dealing with the symptoms of degradation itself. Through integrated programs, the GEF is better positioned to help countries pursue holistic and integrated approaches to promote transformational change in key economic systems in line with countries' national development priorities. Integrated programs also allow the GEF to better

[46] MOPAN 2017-18 Assessments, Global Environment Facility, http://www.mopanonline.org/assessments/gef2017-18/

crowd-in other stakeholders, including the private sector, enhance knowledge sharing and learning, and ensure a more effective use of GEF resources.

77. The GEF-8 architecture relies on integrated programs contributing to systems change which in turn meets multiple convention goals and will be a central component of each focal area strategy. Through the integrated programs, the GEF will be better positioned to help countries pursue holistic and integrated approaches for transformational change in the economic systems, and in line with their national development priorities. The focused set of country-driven priorities holds the potential to enhance integration among GEF investments, and crowd-in private sector funding.

78. The complexity of the international policy and finance landscape, the opportunities that are unfolding there and the increasing clarity of individual countries in their commitments before the MEAs and the 2030 framework, should serve to better guide the investments of the GEF in the upcoming replenishment cycle. To address these groundbreaking opportunities, a series of Integrated Programs are being proposed that will contribute to systems transformation and lasting environmental outcomes.

79. The GEF proposes the following 11 Integrated Program concepts as part of GEF-8 programming directions:

- Food Systems
- Landscape Restoration
- Sustainable Cities
- Amazon, Congo, and Critical Forest Biomes
- Circular Solutions to Plastic Pollution
- Blue and Green Islands
- Net-Zero Accelerator
- Blue Economies and Healthy Oceans
- Eliminating Harmful Chemicals from Supply Chains
- Wildlife Conservation for Development
- Greening Infrastructure Development

Box 1. Evolution of Integrated Programming in the GEF

GEF invests in projects designed by countries to address specific focal area objectives, which are developed in accordance with guidance from the relevant conventions that the GEF serves as financial mechanism. Depending on country-specific needs reflected in the design of projects and programs, the use of GEF grants has evolved over the years from multi-focal area to integrated approaches. The evolution largely reflects the increasing need for GEF resources to harness better integration and opportunities for generating multiple global environmental benefits (GEBs).

Multi-focal Area (MFA) Programming

Multi-focal area (MFA) programming involves the use of GEF financing from more than one GEF focal area to address a combination of GEF objectives and outcomes under each of the focal area involved. MFA projects have increased over the years, accounting for 13% of GEF funding GEF-4 and 28% in GEF-5. MFA programming presents a myriad of opportunities for countries to harness GEF financing based on their own needs and priorities for generating GEBs. MFA programming was also key to advancing the SFM program, which was designed to incentivize countries toward harnessing cross-focal area synergies for safeguarding globally important forest landscapes. A major limitation of MFA programming is the inherent expectation that GEBs from projects will be proportional to the amount of focal area resources invested. This is not only difficult to establish, but also undermines the potential for harnessing synergies and avoiding negative tradeoffs.

Integrated Approach Programs

The "integrated approach" was formally launched as a programming option during GEF-6 with three pilot programs that were structured around major emerging drivers of global environmental challenges: two were global programs on urbanization (Sustainable Cities) and commodity-driven deforestation (Commodities), and the third on sustainability and resilience for food security in the drylands of Sub-Saharan Africa. GEF financing for the programs was not "siloed" by focal area, but rather invested in a coherent manner to promote the sustained flow of multiple GEBs, while ensuring that progress in any dimension of the global environment does not negatively affect other related objectives. The integration therefore creates opportunities for projects to harness synergies and avoid negative tradeoffs. Because of the direct link with sectoral priorities underpinning economic growth and development in the countries, the prospect for multi-stakeholder engagement was greatly enhanced by the programs.

Impact Programs

Building on the GEF-6 experiences, a set of Impact Programs were introduced in GEF-7 to promote transformational shift in key economic systems. that in turn meet multiple convention goals and form an integral component of each focal area strategy. GEF financing closely matched key objectives and guidance received from the conventions and are complemented by priorities that can best be delivered as separate investments under each of the focal areas. This is consistent with the Leaders' Pledge for Nature which calls for better integration across the multi-lateral agreements. Through impact programs is helping countries pursue holistic and integrated approaches that deliver impactful outcomes, and in line with their national development priorities. The focused set of country-driven priorities enhances integration among GEF investments and creates opportunity to crowd-in private sector financing.

A. Advancing Systems Transformation through the Integrated Programs

80. The COVID-19 pandemic has reinforced the urgency for transformation of key systems that are sources and drivers of global environmental degradation. Since GEF-6, the GEF has focused on demonstrating the importance of systems transformation as a powerful approach for delivering GEBs by promoting integration across GEF focal areas. The Integrated Approach Pilot (IAP) programs launched in GEF-6 were designed to proactively address the underlying drivers of global environmental degradation through committed multi-stakeholder coalitions. The three programs continue to play a critical role in positioning the GEF as a strategic partner in helping countries implement the integrated approach for deforestation-free commodities, sustainable cities, and fostering sustainability and resilience in smallholder agriculture across drylands in Africa.

81. The GEF-7 programming further emphasized tackling major drivers of environmental degradation to achieve systems change, with three Impact Programs (IPs): sustainable cities, expanding the global city coverage and innovations; food systems, land use and restoration covering all major commodities and important staples; and sustainable forest management covering the Amazon, Congo Basin, and important Dryland landscapes. Building on experience with the IAP programs, the IPs were designed to help countries pursue holistic and integrated approaches for transformational change in the food, urban, and natural (forest) systems in line with countries' national development priorities. As a result, the GEF is demonstrating the potential for integrating focal area and convention priorities into a broader set of policies, strategies, programs, and actions.[47]

82. Through the programs, the GEF is using a variety of influencing models towards delivering results across multiple geographies, sectors, and markets. In addition to responding to country-specific needs, the programs also enabled the GEF to better crowd-in other stakeholders, including the private sector, enhance knowledge sharing and learning, south-south knowledge exchange, and ensure a more effective use of GEF resources. Experience from both GEF-6 and GEF-7 also showed strong country demand for the GEF to offer platforms where countries can come together around common challenges. These platforms, which were considered as innovative features of the IAP programs by the Formative Review conducted by the IEO,[48] provide a variety of services, from knowledge sharing, to lessons learned, to technology transfer, to name a few. These platforms also bring together expertise from within the network of participating countries and agencies, as well as from the wider community of practice in a specific technical area relevant to the program.

[47] Early findings from the IEO's ongoing evaluation on "The GEF's comparative advantage in supporting a greener future" highlights the ability of the GEF to address the drivers of environmental degradation through synergies across focal areas, and the Impact Programs as best designed to enable transformative change at the global, regional and local level. GEF IEO, 2021 "Highlights: Evaluation Findings 2018-2021"

[48] GEF IEO (2017). OPS6 Formative Review of the Integrated Approach Pilot (IAP) programs. https://www.gefieo.org/signposts/formative-review-integrated-approach-pilot-iap-programs

83. The GEF-8 strategy will build on this experience to support and influence transformational change in the five systems targeted, including links to the proposed integrated programs that will serve as "entry points" for the investments (Figure 13). The overall framework for GEF-8 will be fully integrated and coherent to maximize potential for impactful outcomes, in line with country priorities for a green and blue recovery from the COVID-19 pandemic. Below is a brief description of how transformational change in each of the systems will be supported through the integrated programs.

Figure 13. GEF-8 Integrated Programs for Transforming Key Systems

84. *Natural Systems.* It is now well established that the COVID-19 pandemic is a result of human impacts on nature, which is reflected in the growing threats to biodiversity, forests, and oceans. Biodiversity in all its forms plays a critical role in supporting the well-being of humanity and provides goods and services that are the foundations of our economies. Oceans and forests are vital for regulating the climate, maintaining biodiversity, and for global food security. More than 3 billion people depend on marine and coastal areas for their livelihoods and subsistence. Securing these natural systems is the core of GEF's mandate as the financial mechanism for the global environment and reflected through three decades of investing in the creation and effective management of protected areas around the world. But the scale and magnitude of challenges facing the planet calls for radical shifts in how natural capital is factored into decision-making

processes by governments and business. As noted in the Dasgupta Review[49], such a shift is necessary to protect and avoid degradation of nature, a key priority for preventing future emergence of infectious diseases and pandemics. Since natural systems are interlinked, solutions must be integrated: supporting restoration through habitat management, rewilding, allowing natural regeneration and creating sustainably productive lands and seas. The GEF-8 strategy will address this through the proposed integrated programs on Amazon, Congo, and Critical Forest biomes, Wildlife Conservation for Development, Blue Economies and Healthy Oceans, Landscape Restoration, Net-Zero Accelerator, and Blue and Green Islands.

85. *Food Systems.* Food systems globally are a major driver of environmental degradation, including loss of forests and biodiversity, degradation of lands, depletion of freshwater resources, agricultural nutrient pollution, and GHG emissions. With expectations that global food production must increase by 70% by 2050 to feed a rapidly growing population, these threats will be exacerbated unless there is a major shift in the current system. During the GEF-6 and GEF-7 cycles, the GEF took important steps to support ongoing efforts by countries in transforming agriculture through investments in sustainable practices for safeguarding natural capital (land, soil, water, and biodiversity), promoting deforestation-free supply chains for globally important commodities, and reduction of negative externalities (GHG emissions and nutrient pollution). The GEF-8 strategy includes a dedicated, integrated program on food systems that will build on this experience, with explicit focus on sustainable, regenerative, nature-positive production systems and efficient value / supply chains covering food crops, commercial commodities, livestock, and aquaculture. Additional priorities will be addressed through the integrated programs on Blue Economies and Healthy Oceans, Sustainable Cities, Net-Zero Accelerator, and Blue and Green Islands.

86. *Urban Systems.* Cities are global drivers of economic growth, contributing an estimated 80% of global GDP. Yet, urbanization in most countries is also a major driver of global environmental degradation including loss of natural habitats, 70% of global GHG emissions, and coastal pollution from solid waste (including plastics). The COVID-19 pandemic has greatly impacted cities around the world, and existing environmental stressors became compounded by the economic, social, and health consequences of lockdowns and restrictions. With more than two-thirds of the world's population projected to be in urban areas by 2050, cities must evolve new ways of addressing myriad challenges for ensuring inclusiveness, livability, and sustainability. As countries work toward a green and blue recovery from the COVID-19 pandemic, transformation of urban systems will be front and center. City leadership is helping to lay foundations for the systems approach in urban development. The GEF launched the Sustainable Cities program in GEF-6 and further expanded it in GEF-7 to strengthen potential for investing in GEBs through integrated urban planning and implementation as our societies become more urban. The program has now created space for GEF to crowd-in diverse entities

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

including international financial institutions, city-based organizations, and technology providers that are well-placed to provide expertise, technical assistance, investment, and knowledge resources to cities aspiring for transformational change leading to net zero carbon, nature positive, resilient and inclusive cities. The GEF-8 strategy will build on this experience with a dedicated Sustainable Cities Integrated Program, with potential links to other Integrated Programs on Food Systems, Blue Economies and Healthy Oceans, Circular Solutions to Plastics Pollution, Net-Zero Accelerator, Sustainable Infrastructure, and Blue and Green Islands.

87. *Energy Systems.* Globally, the production and consumption of energy account for an estimated 78% of GHG emissions and have a large impact on biodiversity, which includes use of fossil fuel in transportation, non-renewable electricity production, oil and gas production, and heating and cooling of buildings. Transformation of the energy system therefore represents a major challenge for climate change mitigation, requiring changes across multiple dimensions including governance, policies, institutions, technologies, and markets. Since its inception, the GEF has supported diverse projects in the energy space, focusing on GHG benefits from both development of renewable sources and options for increasing efficiency across different sectors. The growing momentum around "net-zero" calls for a transformational change in the energy systems that will maximize GHG mitigation gains. The GEF-8 strategy therefore includes an integrated program to accelerate action towards net-zero targets that includes an explicit focus on decarbonization in the energy sector and aligning diverse sectoral policies towards a unified vision to reach net-zero by mid-century. The focus on net-zero will also extend to other Integrated Programs where energy is critical, including Sustainable Infrastructure, Food Systems, Sustainable Cities, and Blue and Green Islands.

88. *Health Systems.* According to the World Health Organization, a health system comprises "all activities whose primary purpose is to promote, restore, and maintain health."[50] With the Healthy Planet, Healthy People approach as priority for framing the GEF-8 strategy, the GEF is well-positioned to influence transformation in health systems by targeting initiatives that incorporate the shared costs and benefits of integrating human and environmental (natural and built) health. This approach will create opportunites for countries to effectively and efficiently use GEF resources toward green and blue recovery efforts in the context of generating GEBs. In this regard, the Healthy Planet, Healthy People approach offers the following value-add for GEF programming:

- Addressing the root causes and drivers of the surrounding issues to avoid threats, and avoid reduce future risks;
- Linking across scales and across sectors to foster collaborative action;
- Addressing health at upstream stages before problems occur or become widespread, and considering both infectious diseases and pollution-related diseases;

[50]WHO (2020) Key components of a well-functioning Health System
https://www.who.int/healthsystems/EN_HSSkeycomponents.pdf?ua=1

- Alleviating the health issues associated with many pollutants that form the mandate of the GEF;

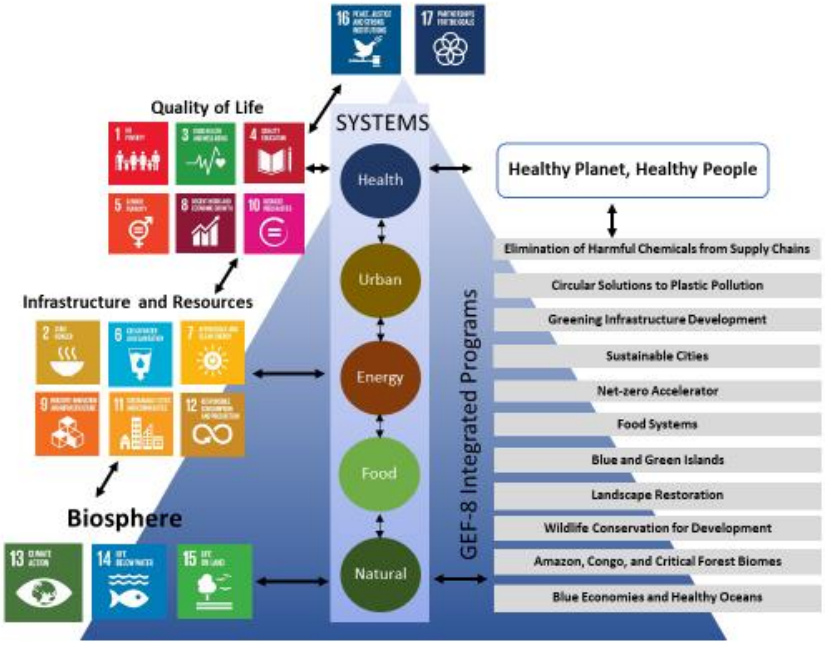
89. The integrated programs on Eliminating Harmful Chemicals from Supply Chains and Circular Solutions to Plastic Pollution will contribute directly to improvements in human and environmental health by tackling hazardous chemicals, pollutants, and waste. Additional support will be provided through the integrated programs on Amazon, Congo, and Critical Forest Biomes, Wildlife Conservation for Development, Landscape Restoration, Food Systems, Blue Economies and Healthy Oceans, and Sustainable Cities.

B. Alignment with the Sustainable Development Goals

90. The GEF has previously articulated how investments in the global environment support the SDGs.[51] The proposed GEF-8 strategy reflects a strong alignment with the SDGs, including clear links between targeted systems and integrated programs (Figure 14). The focus on natural systems is aligned with the SDGs for climate action (13), life below water (14), and life on land (15) that are critical for securing the biosphere, and will be directly supported through the integrated programs on Amazon, Congo, and Critical Forest Biomes, Blue Economies and Healthy Oceans, Wildlife Conservation for Development, Landscape Restoration, and Blue and Green Islands. The SDGs targeting "infrastructure and resources"—zero hunger (2), clean water and sanitation (6), affordable and clean energy (7), industry, innovation and infrastructure, sustainable cities (11), and sustainable production and consumption (12)—are all linked with integrated programs focused on transformational change in food, energy, urban, and health systems. With the Healthy Planet, Healthy People approach, GEF investments through the integrated programs will underpin human health and prosperity, contributing to the SDGs for "quality of life," including poverty reduction (1), good health and wellbeing (3), gender equality (5), decent work and economic growth (8), and reduced inequality (10).

[51] GEF (2015). The GEF and Sustainable Development Goals. http://www.thegef.org/publications/gef-and-sustainable-development-goals

Figure 14. Alignment of GEF-8 strategy with the SDGs



Food Systems Integrated Program

Introduction

Environmental Impacts of the Global Food System

91. Agricultural systems are essential for the nutrition and economic well-being of the globe. While there are many forms of agriculture that can contribute to healthy people and a healthy planet, it is now well established that the global food system is no longer sustainable and is a key contributor to the breaching of several Planetary Boundaries.[52] Agriculture occupies about 37% of the world's total land area,[53] and agricultural expansion has resulted in significant loss of forests and biodiversity, land and soil degradation, and significant greenhouse gas (GHG) emissions. As shown in figure 15 below, current global land use for agriculture is largely driven by the nature of dietary demands, with cropland for animal feed and pastures accounting for an estimated 3.43 billion hectares. Further, a rising global population and changes in consumption patterns towards more carbon-intensive diets are expected to increase the strain on global land-use systems. This dominant role of diets and nutrition as driver of agricultural land use reinforces the urgency for a holistic and integrated supply chain approach in transforming food systems.

92. Unsustainable agriculture is responsible for widespread declines in biodiversity, with around 25% of animal and plant species now threatened with extinction.[54] Expansion of agriculture leads to soil erosion, impoverishment of soil biodiversity, loss of genetic diversity, contamination of soil and water, and emergence of new pests and diseases.[55] The uniformity of monocultures and industrial scale livestock rearing leave these systems vulnerable to economic, climate-induced and natural disaster shocks that result in significant economic losses and large-scale suffering of rural communities.

93. Land-use change, predominantly from agriculture, has affected nearly three quarters of the world's terrestrial surface. Furthermore, the IPCC estimates that 23% of global anthropogenic emissions came from agriculture and land use between 2007 and 2016.[56] While agriculture is a significant driver of climate change, climate change itself further stresses land systems, worsening existing risks of land degradation and biodiversity loss.[57]

[52] Rockström, J. et al. Planet-proofing the global food system. Nat Food 1, 3–5 (2020). https://doi.org/10.1038/s43016-019-0010-4

[53] Secretariat of the Convention on Biological Diversity (2020) Global Biodiversity Outlook 5. Montreal.

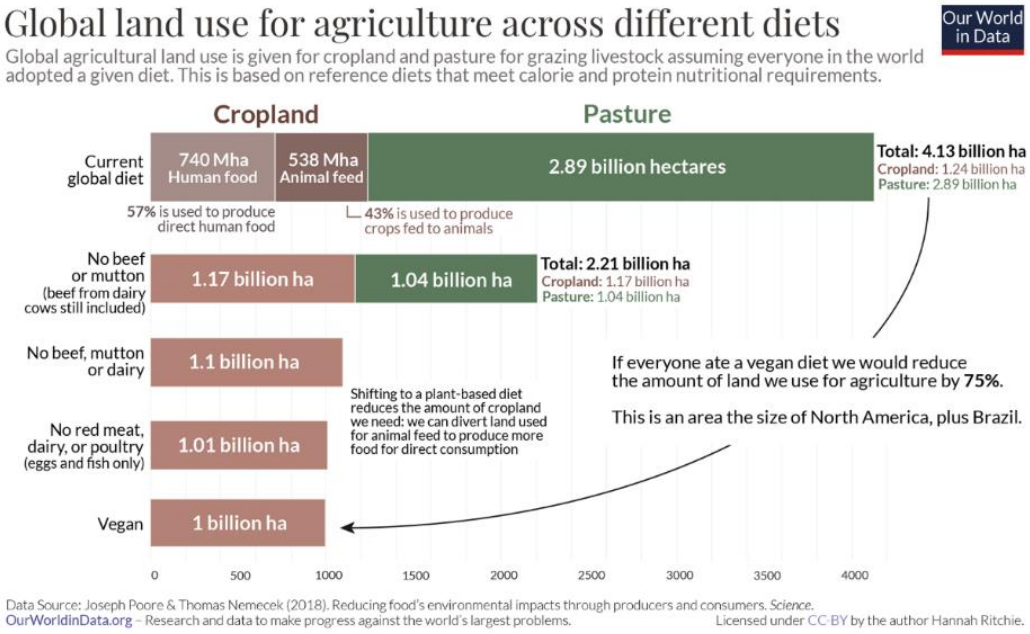
[54] Ibid

[55] Ibid

[56] IPCC Special Report on Climate Change, Desertification, Land Degradation, Sustainable Land Management, Food Security, and Greenhouse Gas Fluxes in Terrestrial Ecosystems (IPCC, 2019).

[57] WWF (2020) Living Planet Report 2020 - Bending the curve of biodiversity loss. Almond, R.E.A., Grooten M. and Petersen, T. (Eds). WWF, Gland, Switzerland.

Figure 15. Global Land Use for Agriculture



94. Agriculture accounts for 70% of freshwater use and drivers linked to food production cause 70% of terrestrial and 50% of freshwater biodiversity loss. In addition, agriculture is responsible for up to 80% of global deforestation.[58] A large share of agricultural produce is then wasted or discarded as a result of post-harvest losses.[59]

95. Recent analysis by WRI shows that just seven agricultural commodities — cattle, oil palm, soy, cocoa, rubber, coffee and plantation wood fiber — replaced 71.9 million hectares of forest from 2001 to 2015, an area of land more than twice the size of Germany.[60] The majority of this tree cover loss associated with the expansion of farms and plantations happensin the tropics—where 91% of the deforestation happens[61]—a troubling trend considering the vast carbon stocks and biodiversity held in rainforests.[62]

96. The consequences of unsustainable food systems extends into ocean systems . Globally, fish provide 17% of animal protein consumed globally,[63] an even more in some countries of the

[58] Ibid.
[59] Ibid.
[60] WRI Blog. (2021). Just 7 Commodities Replaced an Area of Forest Twice the Size of Germany Between 2001 and 2015.
[61] FRA 2020
[62] WRI Blog. (2021).
[63] Michigan State University. "Scientists to global policymakers: Treat fish as food to help solve world hunger: Sustainable seafood central to strengthening food security if viewed as more than just a natural resource." ScienceDaily. ScienceDaily, 19 January 2021. www.sciencedaily.com/releases/2021/01/210119122051.htm .

south. In addition to effects of land-based pollution to aquatic systems, threats include overfishing, invasive non-native species, climate change and the disruption of river ecologies.

97. So called 'Blue Foods' (e.g. edible aquatic organisms including fish, shellfish and aquatic plants) are situated within the food system like any other major commodity. Despite this, they are largely missing from key food policy dialogues. For example, SDG 2 (Zero Hunger) includes a focus on production systems but targets do not mention fisheries.

Food Systems and Global Health Risks

98. As a result of the rise of the global Covid-19 pandemic, the role of food production is being recognized as one potential cause of, as well as offering possible solutions to, future human health threats. Expansion of agriculture promotes encroachment into wildlife habitats, bringing humans and livestock into closer proximity to wildlife and creating the conditions for viruses to emerge and spread. Zoonotic spillover occurs as a result of complex dynamics linking human and natural ecosystems, with spillover events running the risk of becoming an outbreak, and an outbreak an epidemic or pandemic.[64]

99. Clearing land for cattle raising was responsible for 16% of global total tree cover loss from 2001-20015, and the destruction of the forest by this and other commercial commodities, such as oil palm (10.5 million hectares), soy (nearly 8 million hectares) cocoa and coffee (2 million hectares each), thins forest fringes and increases the likelihood of wildlife interaction with human settlements.[65]

100. Nonpoint–source pollution from agriculture, including nutrients from fertilizers, animal waste, pesticides and herbicides, and other hazardous substances, can have profound impacts on both people and freshwater biodiversity. [66]

101. Production of meat is associated with a high environmental impact and is contributing to climate change and biodiversity loss. For these reasons, the growing call for shifting away from consumption of animal products to plant-based alternatives has become central to the debate on sustainable diets and nutrition.[67]

102. Additionally, the intensiveness of livestock production in some countries further amplifies the risks of diseases emerging and spreading. The confinement of a large numbers of

[64] Jones, et. al., 2013. Zoonosis emergence linked to agricultural intensification and environmental change. PNAS
[65] WRI 2021.
[66] Tickner, D. et al., Bending the Curve of Global Freshwater Biodiversity Loss: An Emergency Recovery Plan, BioScience, Volume 70, Issue 4, April 2020, Pages 330–342, https://doi.org/10.1093/biosci/biaa002
[67] Macdiarmid, JI. et al., Eating like there's no tomorrow: Public awareness of the environmental impact of food and reluctance to eat less meat as part of a sustainable diet, Appetite, Volume 96, 2016,

animals in small spaces, narrowed genetic diversity, fast animal turnover, and habitat fragmentation increases the probability of outbreaks of high-impact animal diseases.[68]

103. The impact of animal diseases on human health is magnified further by increasing levels of resistance in bacteria, parasites, viruses and fungi to antimicrobial drugs, such as antibiotics, antifungals, antivirals, and antimalarials.[69]

GEF-8 Integrated Program

104. The COVID-19 pandemic has laid bare the massive vulnerabilities of global food systems to shocks of this nature. Food supply challenges in Latin America, Africa, and Asia resulting from broken global supply chains seriously affected small and medium-sized enterprises (SMEs) and created food insecurity. Unsustainable dynamics continue to be locked in along the whole food chain.[70.]

105. The global pandemic and its impacts have demonstrated that a paradigm shift from conventional or industrial agriculture to sustainable and regenerative production systems is now more urgent than ever. Clear actions are also required that target the most affected: poor producers—including many women—and consumers without social safety nets. A focus on domestic and regional markets that shorten supply chains is necessary to enhance access to fresh food, ensure greater value goes to the farmer, and reduce vulnerability to disruptions on international markets.[71]

106. Furthermore, the current crisis is a clarion call to transform food systems governance at all levels. The UN World Food Systems Summit in 2021 is a timely response to this call and it is expected that recommendations from this and other relevant global agreements would help to put in place the tools and enabling policies to accelerate food systems transformation.[72]

107. The GEF-8 Food Systems Integrated Program will recognize the centrality of food systems to reducing negative environmental externalities, with a specific focus on "green" and "blue" recovery to generate GEBs: sequestering greenhouse gases, protecting forests and biodiversity, restoring productive lands, and ensuring supply of clean water. Policy options will be harnessed to reduce such externalities.

108. The programming will learn from and build on experiences of the GEF's integrated approaches from GEF-6 (Food Security in Africa and Taking Deforestation out of Commodity Supply Chains) and GEF-7 (Food Systems, Land Use and Restoration Impact Program).

[68] COVID-19 and the crisis in food systems: Symptoms, causes, and potential solutions, Communiqué by IPES-Food, April 2020.
[69] FAO. 2017. The future of food and agriculture – Trends and challenges. Rome
[70] Communiqué by IPES-Food, April 2020.
[71] Ibid.
[72] Ibid

109. Efforts will be targeted at farm-level, but, as with previous GEF integrated approach programs, also toward actors in global supply chain. This is because land use decisions related to agriculture are increasingly driven by external factors, including corporations involved in their trade and retailing,[73] financiers bankrolling their production, and shifts in dietary and nutritional demands. These global drivers are difficult to address with approaches at the national or local levels solely targeted at the producer or supply-side of agricultural commodities.[74]

110. The GEF already addresses the role of diets and nutrition as a driver by promoting engagement with relevant stakeholders from production (supply) to consumption (demand) and aligning its mandate with those of other diverse platforms and programs focused on dietary shifts and nutrition. This approach enables the GEF to crowd-in expertise and financing (public and private) that is focused specifically on health and nutrition dimensions of food systems.

111. Today, approximately 30% of farms worldwide (160 million plus) are practicing some form of sustainable intensification on more than 450 million hectares of agricultural land,[75] and much inland-water aquaculture is also considered sustainable. Building upon practices of sustainable farming is the concept of regenerative food systems, which calls for production of food in ways that actively restore habitat, reduce GHG emissions, increase soil carbon and protect biodiversity.[76] Regenerative agriculture in this context involves the specific focus of moving agriculture from being "non-degrading" to being "nature-positive" and "climate-efficient."[77, 78]

112. Regenerative agriculture includes diverse practices that have been shown to demonstrate positive impacts in terms of increased soil carbon and on-farm biodiversity due to improved crop cover, reduced cultivation, and the addition of soil conditioners.[79] The biodiversity benefits are derived from an increased diversity of crops, reduced cultivation, and decreased use of pesticides and herbicides.[80]

113. In order to transform food systems, sustainable practice must move from boutique to taking place at scale. Sustainable and regenerative approaches require a shift from a narrow focus on production landscapes to the entire food systems. These practices should build around a principle of enhancing diversity and integration, linking across spatial and vertical (demand) dimensions for the food system.[81]

---

[73] Lambin E.F. et al., Effectiveness and synergies of policy instruments for land use governance in tropical regions. Global Environmental Change 28 (2014)
[74] Henders, S. et al, Do national strategies under the UN biodiversity and climate conventions address agricultural commodity consumption as deforestation driver?, Land Use Policy, 2018.
[75] Secretariat of the Convention on Biological Diversity (2020).
[76] TNC Blog (2020). Beyond Sustainability: A Food System to Restore the Planet.
[77] Burgess PJ, Harris J, Graves AR, Deeks LK (2019) Regenerative Agriculture: Identifying the Impact; Enabling the Potential. Report for SYSTEMIQ. 17 May 2019. Bedfordshire, UK: Cranfield University.
[78] Giller et al. (2021). Regenerative Agriculture: An agronomic perspective. Outlook on Agriculture, 1-13.
[79] Burgess et al. (2019).
[80] Ibid
[81] Jeffries, N. (2019). Regenerative agriculture: how it works on the ground. Circulate (Ellen MacArthur Foundation)

114. A critical component of this will be to support national governments to fully engage across public agencies in incorporating nature-positive production systems into their national strategies for climate, biodiversity, and land degradation. This will require strengthening multi-stakeholder partnerships to overcome sectoral silos for integrated action across multiple scales. In parallel, policy changes should shift financial flows away from perverse subsidies and nature-degrading investments toward nature positive investments, including landscape level payment for ecosystem services (PES) and other forms of financial compensation for good practice.

115. Aquaculture has been responsible for the continuing growth in the supply of fish protein for human and animal consumption and may play a key role in the recovery of capture fisheries. Sustainable intensification of yields from aquaculture, while simultaneously sparing and restoring natural habitat, offers potential for people to meet escalating food demand with the least harm to other species,[82] both in coastal marine and freshwater environments.

116. Given the impacts of the current pandemic and the threat of future zoonotic disease spread, transforming food systems will need to be tackled in the context of the Healthy Planet, Healthy People approach. Working across sectors is necessary to mitigate the risk of disease emergence, as is recognizing the inherent links between people and animals, and their shared environment.

117. More sustainable food systems requires a focus on the vital role women play in the global food system as producers and consumers. Women are responsible for some 60% to 80% of food production in developing countries, particularly through rearing small livestock and growing food crops. Women also have a critical economic stake and role in demand and investment, controlling 64% of consumer spending, and their global earnings are in the trillions of dollars[83]. By unleashing the power of women as full participants and shareholders, the agriculture sector can catalyze greater productivity and sustainability and hence greater financial flows.[84]

Objectives, Key Interventions, and Selection Criteria

118. The overall objective of the proposed Food Systems Integrated Program is to catalyze the transformation to *sustainable and regenerative food systems that are nature positive, climate resilient and nutrient pollution-free*. The IP will seek to reduce environmental degradation and negative externalities in food production systems (food crops, commercial commodities, livestock, and aquaculture) and across supply chains. This should not only generate Global Environmental Benefits for climate change mitigation, biodiversity conservation, land degradation and water resources, but also contribute to food security, livelihood resilience, and health.

[82] Phalan B. et al., Green R.E. (2011) - Reconciling Food Production and Biodiversity Conservation: Land Sharing and Land Sparing Compared. Science 333, 1289; DOI: 10.1126/science.1208742.
[83] GGP Knowledge Product. (2019) How can gender mainstreaming in global agricultural supply chains accelerate good growth? What works and for whom? UNDP https://bit.ly/3caD38l
[84] Ibid

119. The need for transformation in food systems has been the focus of extensive research and synthesis,[85] all of which call for urgency to shift production and supply chain practices toward nature-positive, low emission and chemical-free pathways. While the GEF as a financial mechanism of the global environment has a critical role to play in advancing this transformation, such efforts cannot be done in isolation with other food system priorities including health, diets, and nutrition. Hence the GEF approach is to mobilize and engage diverse stakeholders involved with different dimensions of food systems, in order to create synergies and minimize negative tradeoffs from actions and investments.

120. To maximize potential for transformative change, the program will operate at two levels—global and country—and take into consideration the proposed "levers" for advancing systems transformation (governance and policies, financial leverage, multi-stakeholder dialogues, and innovation and learning). Globally, the program will establish links with relevant platforms and initiatives that foster multi-stakeholder dialogue and collective action to transform food systems. Key interventions at global level will include:

- Leveraging Private and Financial Sectors: The program will encourage concrete actions by actors from smallholders/SMEs to global corporates– e.g., traders, manufacturers, commodity buyers and retailers – toward use and expansion of sustainability standards and commitments to environmental and socially responsible sourcing. The program will also engage a spectrum of financiers to shift investment screening practices toward environmental sustainability. It will also work to mobilize additional and larger scale financing, including through blended finance mechanisms, in order to maximize country outcomes and increase the program's impact and contribution to transformational change.
- Cross-scale support: This will catalyze access to knowledge, technical expertise and capacity development on issues that represent common challenges across multiple countries or specific geographical regions. It will support efforts to influence public policy and private actions toward sustainable food systems, shifting production and landscape management practices, building effective multi-stakeholder dialogue, and promoting multi-country or regional planning and coordination to improve implementation.
- Scaling impact: While individual countries will deliver substantial benefits through their nationally focused projects, the potential for global transformation will require that such impacts be amplified beyond national boundaries. This will be achieved by catalyzing new opportunities across spatial (landscapes) or vertical (supply chain) dimensions to help maximize potential for impact. Fostering decision making across scales is likely to

[85] Lilliana S. et. al., Food System Outcomes: An Overview and the Contribution to Food Systems Transformation, Frontiers in Sustainable Food Systems, volume 4, 2020. www.frontiersin.org/article/10.3389/fsufs.2020.546167

induce effective adaptation to social and ecological change because feedback loops can relay information between levels and foster improved decision-making.[86]

121. At country level, the program will draw on the proposed global level framework to develop innovative projects that demonstrate a holistic and systemic approach to food systems, including commitment to addressing the proposed "levers" for transformation, integrating cross-cutting priorities including private sector engagement, Nature-based Solutions, gender responsiveness, and resilience. Specific interventions for GEF support include the following:

- Sustainable and Regenerative agriculture: Creating enabling environment for countries and industries to shift agricultural food production towards sustainability *through a diversity of approaches* including: agroecology, regenerative farming, avoiding deforestation from commercial commodities, rehabilitating and restoring of lands providing ecosystem benefits to the productive landscape, improving watershed management, and promoting sustainable soil management. The primary crops of focus will include commodities that are causing significant deforestation in the tropics (soy, palm, coffee and cocoa) as well as globally important food crops (rice, wheat and maize) whose production results in a range of negative environmental externalities (e.g., GHG emissions, nutrient runoff, sediment flows , biodiversity loss, etc). Additional scope will be allowed to integrate other crops into the program if a compelling case can be made on how they lead to systems transformation through nature positive production, and contribute to shifting away from intensive monocultures to more diversified systems.

- Livestock Management: Reducing livestock's impact on the environment, particularly forest degradation and clearing for pastureland could come through such means as improving productivity on existing pastureland, supporting integrated crop-livestock systems, restoration of degraded and extensive pastures into richer, more productive environments with trees and shrubs interspersed with grasses, and fodder crops. Identifying, introducing and supporting incentives and policies required to encourage ranchers of adopt better practices[87] will also be key, as will improving disease prevention and control in animal production systems is also critical in reducing the likelihood of exposure of domesticated animals to/from wild populations and the likelihood of zoonotic spillover events. Finally, finding ways to decrease the consumption of livestock products as part of a strategy to adopt healthier and environmentally friendly diets[88] by diversifying and integrating systems to include production of alternative protein sources, should be sought as a means to diversify diets.

[86] van Bers, C. et al. Advancing the research agenda on food systems governance and transformation. Current Opinion in Environmental Sustainability 39 (2019): 94-102.
[87] Cerri, C. et al. Reducing Amazon Deforestation through Agricultural Intensification in the Cerrado for Advancing Food Security and Mitigating Climate Change. Sustainability 2018, 10, 989. https://doi.org/10.3390/su10040989
[88] Drivers of diet change. Nat Sustain 2, 645 (2019). https://doi.org/10.1038/s41893-019-0366-3

- Sustainable Aquaculture: Expanding investment in sustainable aquaculture management that is explicitly linked to land-based practices impacting freshwater and coastal marine ecosystems. Aquaculture has been responsible for the continued growth in the supply of fish protein for human and animal consumption and may play a key role in the recovery of capture fisheries. Blue foods also have an important role to play in the transition to healthy and more sustainable diets and can serve as an alternative to more destructive protein production. The program will position nature at the core of the sectors delivery of affordable and low-footprint fish protein and human health improvements, while allowing catch fisheries to recover. Blue food interventions could include farming of freshwater fish in pond systems, offshore cultivation of aquatic plants (e.g., seaweed and algae), and shellfish culturing. These will foster "landscape to seascape." The role that this blue food can plan as an alternative protein source to reduce the reliance on highly land intensive livestock rearing should be recognized.

Selection Criteria

122. The Food Systems Integrated Program will consider all recipient countries seeking to catalyze systemic change by delivering integrated solutions that lead to multiple benefits at national, subnational and global scales. The GEF will, however, prioritize countries that demonstrate potential for achieving transformational change based on the following criteria:

- The country strategy must be underpinned by science with clear long-term pathways for how the country's food systems will meet national development needs and contribute to global Food Systems transformation;
- The program must demonstrate strong buy-in from public sector entities. The enabling policy and regulatory environment should be conducive to generating positive results through implementation of the program, including clear opportunities to generate cross-ministerial support (e.g. environment, agriculture, finance, economy, trade, etc.) necessary to address challenges through a 'whole of government' means. This will create opportunities to foster coherence and cross-institutional integration in formulating policies and ensure that environmental priorities are mainstreamed at all levels;
- The program must engage with private sector entities with the ability to have on-the-ground impact, including companies and SMEs involved in various stages of the supply chain (producers, aggregators, processors). In addition, partnerships should be sought on the demand side with multi-national companies, including traders, manufacturers and consumer facing companies, as well as those financing food production;
- Promotion of sustainable and effective agricultural production in the program must better support women as farmers and their rights to the land they cultivate. Inputs to trade, market and finance policy development should advocate inclusion of women. Finally, the program must strengthen of the voices of women at all levels of the food system,

including, for example, supporting women smallholder and IPLC women farmers organizations, business networks, workers unions, and consumer organizations;

- A clearly identified approach is required for converting sustainability results from smallholder, farm and landscape into larger scale impact at subnational and national levels. Also important to this scaling is financing mobilized and number of actors influenced along the supply and value chains. These will be necessary for results to both generate significant global environmental benefits and contribute in a clearly attributed way to global food systems transformation;
- Strong safeguards must be developed to ensure that any of the diversity of sustainable and regenerative techniques applied do not lead to a likelihood of negative environmental impacts;
- Adoption of value chain approaches that recognize the risks of environmental impacts and pathogen transmission, particularly from livestock production, in order to mitigate and manage Healthy Planet, Healthy People risks and reduce environmental impacts;
- Approaches must consider crop and systems resilience, and loss and waste along the length of the value chain.

Existing Platforms and Potential Partners

123. Strong engagement with platforms engaging financial institutions, food companies and agribusiness multi-national and Small and Medium Enterprises in the proposed program is necessary to create opportunities for scaling-up best practices and resilient options across entire food value chains. Among the coalitions and initiatives to engage with are the following:

- Global Agribusiness Action on Equitable Livelihoods Project (GAA-EL), an private sector platform of agricultural supply-side only companies for harnessing the collective strengths of the global agri-business sector to tackle environmental, social and sustainability challenges to improve the well-beingof farmers across the world.
- Tropical Forest Alliance, a partnership dedicated to achieving zero deforestation supply chains for palm oil, beef, soy, and timber.
- Cocoa & Forests Initiative, which has generated commitment by world's top cocoa and chocolate producers to achieve zero deforestation in cocoa supply.
- The Sustainable Rice Platform, a multi-stakeholder platform made up of a mix of research (IRRI), Development (UNEP, FAO, GIZ), and private sector actors (Olam and others) working with governments to promote resource efficiency and sustainability in trade flows, production and consumption operations, and supply chains in the global rice sector.
- The Global Aquaculture Alliance, which engages stakeholders worldwide who are dedicated to advancing environmentally and socially responsible aquaculture practices, and is the leading standards-setting organization for aquaculture seafood.

- The Consultative Group on International Agricultural Research (CGIAR) for ongoing scientific work on assessment of ecosystem services (e.g. land and soil health, agrobiodiversity) and GHG mitigation in crop and livestock systems;

Contributions of this Program to MEAs and Related Global Environmental Benefits

124. The improved landscape management and sustainable practices resulting from the Food Systems IP will help to maximize the generation of GEBs, as is already being seen with current GEF integrated approaches. The GEF-6 Good Growth Partnership, for example, with a year left in the program has improved the enabling environment for producers to adopt sustainable practices in Indonesia, Paraguay, and Liberia that has led to better land management and generated more than 5.8 million hectares to benefit biodiversity. The GEF's $344m investment in the FOLUR program has garnered commitments of nearly $2.7bln in co-financing, which will undoubtedly amplify the capture of BD, LD and GHG GEBs. Similarly, improved landscape and seascape management through the Food Systems IP will contribute to meeting climate goals under the Paris Agreement, and is essential for meeting several of the Aichi Biodiversity Targets under the UN Convention on Biological Diversity (CBD), and Land Degradation Neutrality targets under the UNCCD, with multiple targets of these conventions explicitly referring to sustainable agriculture and forestry. The IP will also contribute to meeting SDG 6 on ensuring clean water,[89] and will deliver to targets of the GEF International Waters Focal Area, including GEBs from aquaculture activities that will be measured via nutrient pollution reduction, marine habitat under improved practices to benefit biodiversity, and land restored.

Role of the private sector in supporting this program

125. Private sector engagement will be critical to attuning policies and practice necessary to achieve the innovation and transformational change in land use sought by the Food Systems Integrated Program. GEF financing will contribute to leveling of the playing field for progressive companies and investors through changes to national policies and regulations that improve the enabling conditions for sustainable food production. Efforts to engage with subnational governments at the landscape, watershed or jurisdictional levels will be critical for translating national policy into nature positive change on the ground.

126. Investing in smallholder capacity building, including supporting national extension and other support services targeting smallholders and SMEs, will help to scale improved sustainability of these critical actors in the supply chain. The 2021 GEF IEO review[90] into private sector engagement with MSMEs showed that capacities and access to resources are lower among small and micro enterprises. Livelihood and crop diversification inherent to many sustainable and regenerative agriculture approaches will increase resilience of vulnerable communities when natural disasters, market or other shocks inevitably jolt the system.

[89] OECD 2020.

[90] GEF IEO, 2021 "Highlights: Evaluation Findings 2018-2021"

127. Promoting innovative financial mechanisms (including micro-finance for SMEs) and blended finance for investments will be critical to scale nature-positive production and achieve landscape regeneration. Agricultural PES approaches that recognize and reward ecosystem service delivery through activities of farmers and compensates them accordingly[91] is one such mechanism. PES projects in agriculture may fall under several ecosystem services, including but not limited to water regulation, the maintenance of soil fertility and health, carbon sequestration, maintenance of natural genetic diversity, and the conservation of natural habitat.[92]

128. Efforts will be made to incentivize actions by national governments to promote private sector investment, such as through policy options for scaling-up existing technologies and good practices that reduce negative externalities along food value chains, and for promoting access by land users to input and markets for products that drive sustainable production at scale.

[91] Rodríguez-Ortega T. et al. A novel management-based system of payments for ecosystem services for targeted agri-environmental policy, Ecosystem Services, Volume 34, Part A, 2018,

[92] Chen, Y. et al. Analyzing Farmers' Perceptions of Ecosystem Services and PES Schemes within Agricultural Landscapes in Mengyin County, China: Transforming Trade-Offs into Synergies. Sustainability 2017, 9, 1459.

Landscape Restoration Integrated Program

Introduction

129. There has never been a more urgent need to restore and heal ecosystems than now. The healthier our ecosystems are, the healthier the planet – and its people.[93] Restoration is a key nature-based solution and an elementary activity for green recovery as it stimulates investments and creates jobs primarily in rural areas and helps to secure livelihoods of local communities. The United Nations General Assembly proclaimed 2021–2030 to be the United Nations Decade on Ecosystem Restoration, with the primary vision that *the relationship between humans and nature has been restored, where the area of healthy ecosystems is increasing, and where ecosystem loss, fragmentation and degradation has been ended.*[94]

130. Landscape restoration makes economic sense and generates a huge variety of benefits[95]. These include ecological benefits such as safeguarding ecosystem services- soil protection, pollination, nutrient cycling and soil water-holding capacity, which are crucial for both short- and long-term agricultural productivity,[96] biodiversity benefits such as avoided species extinctions[97] as well as climate change mitigation benefits through carbon sequestration.[98] Measures to restore land and improve its management, contribute to food and water security, improved livelihoods, jobs, and to the avoidance of conflict and migration[99].

131. The strong value proposition of restoration has resulted in commitments submitted by countries across the international conventions on climate change, biodiversity and desertification as well as voluntary initiatives, such as the Bonn Challenge. A total of 115 countries have committed to restore between 765 million and 1 billion hectares, and approximately half of the world's restoration potential is now tied directly to the UNCCD's LDN national voluntary targets (approximately 450 million hectares). In addition, in the NDCs to the UNFCCC, about 250 million hectares are committed.[100] To reach the 2050 Vision for the Post-2020 Global Biodiversity Framework, a significant net increase in both area and integrity of natural ecosystems is needed. A viable pathway towards this outcome requires that net gain, or at minimum no net loss, be achieved by 2030.[101]

---

[93] UN Decade on Restoration https://www.decadeonrestoration.org/

[94] Strategy for the UN Decade on Restoration, 2020

[95] See for example Ding, H. et al. (2017): Roots of Prosperity: The Economics and Finance of Restoring Land.

[96] Tripathi V et.al 2017. Biotechnological Advances for Restoring Degraded Land for Sustainable Development.

[97] Strassburg B et.al 2019. Strategic approaches to restoring ecosystems can triple conservation gains and halve costs.

[98] Cook-Patton S et al. 2020. Mapping carbon accumulation potential from global natural forest regrowth.

[99] http://www.fao.org/3/i7896e/i7896e.pdf

[100] Sewell et.al, PBL Netherlands Environmental Assessment Agency 2020, Goals and Commitments for the Restoration Decade

[101] Post-2020 Global Biodiversity Framework: Scientific and Technical Information to Support the Review of the Updated Goals and Targets and Related Indicators and Baselines, SBSTTA, 2021

132. Inadequate land use and soil management practices are negatively impacting ecosystems, biodiversity, land productivity and carbon stocks. Degradation affects agricultural systems and urban areas, forests, rangelands and wetlands.[102] Climate change exacerbates land degradation mainly by affecting water availability[103]. Global estimates suggest that nearly 2 billion ha of agricultural land, pasture, forest and woodland are degraded.[104] This has negative impacts on ecosystem services, including the provision of freshwater, food, fuel and fiber, air and water purification, climate regulation, and on habitats for wildlife.

133. Degradation of landscapes weakens governance and institutional frameworks and exacerbates income inequality and human migration since the negative impacts fall disproportionately on vulnerable people depending on the land for their livelihoods, including women, IPLCs, and lower income groups.[105] This can trigger competition for scarce resources, resulting in local and regional conflicts.

134. Integrating gender considerations into restoration efforts is desirable from a human rights and gender equality perspective and promotes the efficiency and effectiveness of restoration work. Recent evidence points to the importance of women as land owners[106] for secure access to land and decision making power on how land is used and restored. Restoration has the potential improve gender equality (Sendzimir et al., 2011) and general economic equity (Liyama et al., 2014).

GEF-8 Integrated Program

135. The Integrated Program supports the global commitments towards restoration by mobilizing a diverse coalition of stakeholders from all relevant sectors, catalyzing finance, and fostering global cooperation. It provides a much demanded window for financial, technical, and policy support for countries to meet their restoration targets, based on multi-stakeholder involvement and multi-objective selection criteria that will ensure investments in landscapes with high potential for multiple global environmental benefits.

136. The Program draws on a decade of GEF experience, through projects that included restoration as a cross-cutting issue and dedicated programs such as The Restoration Initiative (TRI) in support of the Bonn Challenge, the Sahel and West Africa Program (SAWAP) in support of the Great Green Wall Initiative (GGWI), and the Dryland Sustainable Landscapes (DSL) Impact Program. The Program will make use of GEF's comparative advantage with proven business practices and multi-stakeholder engagement to bring impactful investments to the ground quickly.

[102] IPBES Assessment Report on Land Degradation and Restoration, 2018
[103] https://www.ipcc.ch/srccl/chapter/chapter-4/
[104] Gibbs and Salmon, 2015, Mapping the world's degraded lands
[105] Ibid
[106] https://climate-xchange.org/2020/07/21/to-solve-the-climate-crisis-women-must-own-more-of-the-worlds-land/

137. Restoration is forward-looking and dynamic, focussing on strengthening the resilience of landscapes and creating future options to adjust and further optimise ecosystem goods and services as societal needs change or new challenges arise[107]. Ecological restoration is defined as the process of assisting the recovery of landscapes that have been degraded, damaged, or destroyed[108]. Ecosystem restoration encompasses a wide continuum of activities that contribute to protecting intact ecosystems and repairing degraded ecosystems.[109] In this sense, restoration can range from rehabilitating and improving systems that are under intensive human use and management towards restoring disturbed natural ecosystems to their natural state.

138. Conventional planning and policy decisions for natural resource management at landscape level are still siloed in different ministries and discussed with different stakeholders.[110] The Program will apply comprehensive land use planning approaches to promote cross-sectoral coordination, including the harmonization of policies and financing streams. It will address the interactions, competition and trade-offs between different land uses and thereby avoiding further degradation of land, ecosystems and forests. Restoration planning at landscape level will fit within a land management strategy that applies the LDN hierarchy: avoid, reduce, reverse[111].

139. Access to adequate finance is still a key constraint to achieve restoration at scale. The Program will therefore help to create the enabling conditions to catalyze and leverage the needed investments for restoration at scale. To enhance impact, the Program will work with the existing global platforms to promote cooperation and global exchanges and engagement with policy partners and funding opportunities. In this context, linkages to the global REDD+ process and locally to Payment for Environmental Servces (PES) schemes will be sought.

140. Focusing GEF interventions at selected landscapes either regional, transboundary, or subnational in scope will allow for an integrated and programmatic approach to work across multiple sectors and complement other GEF Integrated Programs on Food Systems, Amazon, Congo, and Critical Forest Biomes, Sustainable Cities, and Blue and Green Islands.

Objectives, Key Interventions, and Selection Criteria

141. The main objective of the Program is to generate multiple environmental and socio-economic benefits by applying integrated landscape approaches for restoration of degraded land and ecosystems. This objective contributes to GEF's overarching goal to achieve healthy and

[107] See Global Partnership of Forest and Landscape Restroation (GPFLR) principles: https://www.iucn.org/theme/forests/our-work/forest-landscape-restoration
[108] Gann et al. 2019. International principles and standards for the practice of ecological restoration. Second edition. Restoration Ecology DOI:10.1111/rec.13035. See https://www.ser.org/page/SERStandards/International-Standards-for-the-Practice-of-Ecological-Restoration.
[109] ibid
[110] International Resource Panel (2019): Land Restoration for Achieving the Sustainable Development Goals.
[111] Cowie, A. et al. 2018. Land in balance: The scientific conceptual framework for Land Degradation Neutrality

resilient ecosystems and will foster green recovery and secure livelihoods within the Healthy Planet, Healthy People framework.

142. The programmatic approach will complement biophysical and technical interventions with instruments focused on policies, governance, institutional, financial, and social structures to bring countries and all relevant stakeholders together in a global movement for transformational impact on reversing environmental degradation. Support will be provided in the following areas:

- at global/regional level:
    - Strengthening international restoration networks and platforms, including their promotion through a common message and access to actionable knowledge;
    - Promoting policy coherence at global level, including the elimination of perverse incentives and contradictory policies that hamper restoration or lead to further degradation;
    - Catalyzing and influencing global financing streams, mobilizing domestic funding, crowding-in private sector investments in land restoration using financial incentives such as blended finance that can reduce the risk of investors and helping to create financial viability of restoration in the long-run;
    - Engaging the private sector strategically on themes and markets that go beyond national boundaries as further described below;
    - Developing a knowledge brokering framework**112** for lessons learning, knowledge exchange, and south-south cooperation within regions.
    - Forstering innovation by developing and applying digital technologies (e.g. Earth observation, GIS-based spatial modelling) and models (e.g. land optimization, scenario planning).
- at national and sub-national level:
    - Promoting policy coherence and providing advisory support for sectoral integration at national level, including the elimination of harmful subsidies in the agricultural sector;
    - Integrating planning for restoration into the existing planning frameworks (e.g. NBSAP, NAP, NDC, etc.) and participatory land-use planning over a range of

[112] McGonigle, D. et al (2020): A knowledge brokering framework for integrated landscape management. Frontiers in Sustainable Food Systems 4 (2020):13

governance models to meaningfully involve local governments, IPLCs, and women into the restoration work. This will include assessments of land potential and resilience to focus restoration activities where success is most likely;

- Community mobilization and CSO involvement, promoting a meaningful stakeholder involvement (including vulnerable groups, women, youth, IPLCs) in all aspects of program implementation from the planning stage to implementation and monitoring;

- Building capacity to restore and maintain functional landscapes,and making decision support tools widely available. This will include promoting the integration theme through a common message and actionable knowledge;

- Developing monitoring and information systems and targeted research on impacts, trade-offs, and costs-benefit analysis of restoration;

- Resolving land tenure and use rights issues that are barriers to achieve restoration objectives and promoting good governance in view of land rights and access to natural resources, gender equality, and securing livelihoods of smallholders;

- Implementing restoration activities on the ground, in particular by involving smallholders, IPLCs through gender responsive community based approaches.

143. The Program focuses on restoration in a landscape approach underpinned by integrated spatial land use planning and will generate multiple benefits in three main land categories:

- Degraded agricultural land (formerly productive land), through investments in sustainable land management, including agro-silvo-pastoral models and agro-ecological intensification and diversification, and rangeland restoration.

- Degraded forest landscapes, drylands, grasslands and natural pastures, applying a range of best practices and focusing mainly on cost-effective interventions such as natural regeneration and assisted natural regeneration to restore ecosystem functions and services.

- Converted or degraded habitats in various ecosystem types in mosaic landscapes, such as wetlands, peatlands, headwaters and watersheds, estuaries, riverine forests, woodlands, shrub and grasslands, stepping stone habitats and corridors, using best practices for ecological restoration.

144. The nature of restoration will vary across a landscape, with different approaches used in different locations, depending on specific objectives and socio-economic needs, and socio-cultural

context. Along the restorative continuum[113], it can range from activities repairing ecosystem functions in, for example agricultural landscapes, to fully restoring native ecosystems. Coupling the concept of the restorative continuum with the LDN response hierarchy will ensure the selection of restoration activities within socio-ecological landscapes.

145. The contribution to generating multiple GEBs, including the desired outcomes for ecosystems, species and genetic diversity, as well as cost-effectiveness, can be enhanced by evidence-based prioritization of the areas to be restored. For example, restoring 15 per cent of converted lands in priority areas could avoid over 60 per cent of expected extinctions[114].

146. Selection criteria for targeted landscapes will consider drivers of degradation, the potential for restoration, including soil properties, landscape features, and climate stressors and risks. It will consider the prospects for multiple benefits in biodiversity, sustainable land management, climate change mitigation and adaptation to support sustainable developments and secure livelihoods, as well as the potential for private sector engagement and for scaling up. Investments will be based on existing voluntary LDN targets and will require strong baselines for success such as established relevant multi-stakeholder platforms and partnerships, potential leverage of public and private sector funding, engagement opportunities with the private sector, gender equality and women's empowerment, and potential for scaling up. Cost-efficiency will be an important selection criterion in order to make best use of available GEF funding. In this context, the use of a multi-objective and mulit-criteria approach will help to identify priority areas for restoration and estimate their benefits and costs.

Existing Platforms and Potential Partners

147. In order to achieve the programmatic objectives, working with and through existing platforms is paramount to create the global cooperation and synergies needed for transformational change and scaling[115]. The following platforms are considered important in these efforts.

148. The UN Decade on Ecosystem Restoration (2021 – 2030)[116] is a platform that is led by UNEP and FAO and presently includes 85 members from 32 different institutions. It has task forces on best practices, finance, monitoring, science and youth, as well as its own communications strategy. The UN Decade provides an umbrella for the many platforms and commitments. Joining and closely working with this platform will ensure better integration between the Rio conventions and implementation of restoration towards achieving the SDGs.

[113] SER 2019. International Principles and Standards for the Practice of Ecological Restoration, 2nd edition.
[114] Post-2020 Global Biodiversity Framework: Scientific and Technical Information to Support the Review of the Updated Goals and Targets and Related Indicators and Baselines, SBSTTA, 2021
[115] A Theory of Change for scaling the program's impacts will be developed in partnership with existing platforms and potential partners during detailed program design.
[116] https://undocs.org/A/RES/73/284

149. The Bonn Challenge, supported by Germany, Norway, IUCN, and WRI is an important platform not only collecting the pledges made by countries, sub-national government, and companies but also supporting and monitoring its implementation. The Bonn Challenge is steered by the actions of the Global Partnership on Forest Landscape Restoration (GPFLR), a worldwide network of restoration practitioners, scientists, policymakers and key supporters from government, international and non-governmental organizations and businesses.

150. A particularly important partnership platform is the Great Green Wall Initiative (GGWI) in the Sahel, which has landscape restoration at its core, and the GEF has over the last decade supported the GGWI to promote innovative practices for sustainable land management. The GGWI aligns very well with an integrated approach to generate multiple environmental benefits and support of rural development. The initiative has grown beyond its original geographic scope to over 20 dryland countries across North, West and the Horn of Africa. More importantly, the GGWI has now evolved into a comprehensive sustainable development initiative that contributes directly to the 2030 global agenda of the SDGs. It has become a country-driven platform that engages diverse partners for advancing integrated responses to the effects of climate change, biodiversity loss, desertification and land degradation, in the context of promoting socio-economic development and resilience across the Sahel. With the recent pledge of $14 billion in funding[117] over the next 5 years from a coalition of the Green Climate Fund (GCF), international development banks and governments, the GGWI platform is poised to profoundly scale-up and accelerate efforts to sustain livelihoods, conserve biodiversity, and combat desertification and climate change[118]. The GEF experience and achievements with SLM over the years offers an appropriate anchor for countries to harness this opportunity in a holistic and coherent manner, which will be critical for building back better and green recovery.

151. The 14 international organizations of the Collaborative Partnership on Forests (CPF) are providing significant support to implement the 2017 – 2030 UN Strategic Plan for Forests and are helping implement restoration commitments through policy support, research, technical and financial assistance. CPF's recent contributions include a special study on forest degradation, and outreach activities and information exchange through the Global Landscapes Forum (GLF), which has become one of the most important outreach and communication platform in this context.

152. Several platforms connect the public with the private sector and foster innovation, such as the (i) the Trillion Tree Initiative (1t.org) as part of the World Economic Forum's efforts to accelerate Nature-based Solutions, which aims at mobilizing the private sector, facilitating multi-stakeholder partnerships in key regions, and supporting innovation and entrepreneurship on the ground; (ii) the Land Accelerator network for entrepreneurs who restore degraded forests and farmland, contributing to efforts to restore land through the African Forest Landscape Restoration

[117] https://www.unccd.int/news-events/great-green-wall-receives-over-14-billion-regreen-sahel-france-world-bank-listed-0
[118] https://www.ifad.org/en/web/latest/news-detail/asset/42264232

Initiative AFR100, Initiative 20×20 in Latin America, and the Bonn Challenge; and (iii) Terra Match, a global platform that pairs funders' preferences, with vetted projects on planting trees.

Contributions of this Program to MEAs and Related Global Environmental Benefits

153. The Integrated Program provides a vehicle to meet the many of the restoration targets that countries have incorporated within their MEAs and other international commitments.

154. Under the UNCCD, 127 countries set LDN targets, of which 90 countries have set approximately 450 million hectares of restoration targets. The Restoration Program will thus contribute to the commitments of countries under the Convention and the UNCCD Strategy (2018-2030), by helping to avoid and reduce desertification and land degradation and restoring the productivity of degraded land to achieve LDN.

155. Restoration of land and reduction of deforestation is vital for protection of global biodiversity. The Program will contribute to the Post 2020-CBD Framework and the implementation of the NBSAPs assisting countries to meet the goal to increase area, connectivity and integrity of natural ecosystems supporting healthy and resilient populations of all species.

156. With about 250 million hectares committed to restoration under the Nationally Determined Contributions to the UNFCCC, the program can contribute to mitigation actions under the agriculture, forestry and other land use (AFOLU) sector. The Program also contributes to Article 5 of the Paris Agreement on carbon sinks and REDD+[119] and Article 7.1 on climate adaptation.[120]

157. The benefits of restoration of land, ecosystems and forests extend well beyond an increase in vegetation cover, or the mere number of hectares accomplished. Through the application of an integrated approach, restoration will contribute significantly to the achievement of all 17 SDGs.[121]

Role of the private sector in supporting this program

158. The Program will specifically focus on the business case for restoration in order to enable private sector involvement. Given the enormous investments needed to implement global targets on restoration, a concerted effort of the public and private sector is necessary, including viable financing models, with public sector finance serving to de-risk investment from the private sector. This will link with GEF's Blended Finance Program and include private sector initiatives such as

[119] Parties should take action to conserve and enhance, as appropriate, sinks and reservoirs of greenhouse gases' and 'reducing emissions from deforestation and forest degradation, and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks.'

[120] 'Enhancing adaptive capacity, strengthening resilience and reducing vulnerability to climate change, with the view to contributing to sustainable development and ensuring adequate adaptation response in the context of the temperature goal.'

[121] https://www.resourcepanel.org/reports/land-restoration-achieving-sustainable-development-goals

the Sustainable Banking Initiative, the Sustainable Trade Initiative (IDH), and "smart finance" innovations that include national banks and innovate through PPPs working at the interface of the public and private sector across farmer support, finance, development planning, policy reform, and implementation. The Program will also benefit from the outcomes of the GEF funded initiative "Green Finance for Sustainable Landscapes" led by UNEP and CIFOR under the CPF.

159. The integrated approach to restoration offers a wide suite of entry points for the private sector, and may well include significant landscape actors with interests in natural resources, certain extractive industries, infrastructure development, tourism and water resources management. These entry points will be explored through regional multi-stakeholder dialogues to determine alignment with the overall goals of the program and opportunity to extend the delivery of GEBs.

160. In line with the GEF PSES modalities of engagement beyond finance, the following themes will be explored for private sector engagement: (i) technical assistance and capacity building, e.g. through farmers fied schools, seed banks, and nursery development; (ii) value chain development for various products arising from restoration (e.g. bamboo, honey, livestock prooducts, bio-energy); (iii) helping smallholders and communities to access carbon finance including domestic carbon markets and certification schemes; (iv) the use of digital technology for data collection, optimization on where to prioritize investments, to monitor and track the progress of restoration investments, and to capture and repackage knowledge that is generated by the projects.

Sustainable Cities Integrated Program

Introduction

161. The speed and scale of urbanization in recent decades have brought a number of challenges for the environment and human well-being. While cities are key drivers of economic growth with contribution to nearly 80% of global GDP, unplanned urbanization and unsustainable resource consumption in cities have led to 70% of global greenhouse gas emissions[122] and could lead to loss of 290,000 sq. km. of natural habitat by 2030.[123] Expansion of urban land which is outpacing population growth by 50%[124], is leading to unsustainable urban sprawl causing degradation of land, loss of biodiversity, unsustainable food system, toxic waste generation, pollution and increased vulnerability to impacts of climate change such as flooding, heat waves and other climate extremes. Cities also consume 80% of global food production which is likely to expand further with rapid urbanization and could result in 38% of total urban GHG emissions by 2050[125]. The UN International Resource Panel further estimates that material consumption in cities will more than double by 2050 from 2010 level with severe implication on resources and environmental impacts of urbanization.

162. Cities are also at the frontline of the global COVID-19 pandemic which has led to economic, social and health crises simultaneously, on top of environmental crises. Millions of jobs are at risk, infrastructure investments are in jeopardy and inequalities have been compounded.[126] While scientific studies and evidence clearly indicate that density is not directly correlated to the spread of infection and its advantages outweigh the risks[127], there is a misleading negative perception now causing further urban sprawl.[128] All this have challenged urban governance systems and there is a need to support cities towards a transformational path to advance dense, clean, and inclusive growth that ensures efficiency of infrastructure and urban services to deliver benefits for people and the environment.

163. This decade is critical for transformative action to achieve global ambitions including Paris Climate Goals, SDGs and ecosystem restoration goals by 2030. Cities are at the center of the movement towards net zero emissions with integrated solutions backed up by ambitious policies and urban planning[129]. Cities offer opportunities of nearly $29.4 trillion in cumulative climate-smart investments in six key sectors by 2030, including green buildings, public transportation, electric vehicles, waste, water and renewable energy[130], and offer decisive

[122]World Bank, 2020, Urban Development Overview
[123]TNC, 2018 Nature in the urban century
[124] World Bank, 2020, Urban Development Overview
[125] https://eatforum.org/initiatives/cities/
[126] ILO, OECD, 2020, The impact of the COVID-19 pandemic on jobs and incomes in G20 economies
[127] UN, 2020, Policy Brief: COVID-19 in an Urban World
[128] World Economic Forum, 2021, COVID-19 is pushing Americans out of cities and into the country
[129] https://www.weforum.org/agenda/2021/02/cities-are-at-the-heart-of-our-journey-to-net-zero/
[130] https://www.weforum.org/agenda/2019/01/why-greening-cities-is-good-for-the-private-sector-as-well-as-the-planet/

leadership and innovation ability to deploy sustainability solutions with global impact. Many cities globally are adopting sustainability pathways to check environmental degradation and have become instrumental to achieve national and global environmental and sustainability goals. It is imperative that they continue to accelerate on the same path, to ensure that the progress is not lost while recovering from the COVID-19 pandemic. This needs to be replicated at a much larger global scale, particularly in the Global South where COVID-19 impact and environmental degradation is high, and the relative capacity to tackle these challenges is low.

164. The GEF-8 sustainable cities integrated program will respond to this and build on the momentum of urban climate and nature action and strengthen partnership with cities and other urban actors to catalyze transformative action to build net zero carbon, nature positive, resilient and inclusive cities and deliver large scale global environmental and human well-being benefits while contributing to global green recovery.

GEF-8 Integrated Program

165. The GEF-8 Sustainable Cities Integrated Program will advance the integrated urban and territorial planning approach with a focus on developing innovative sustainability solutions and creating an enabling environment to deliver large scale climate, biodiversity, resilience and inclusion benefits. The integration approach is more crucial than ever to address multi-faceted challenges exacerbated by COVID-19 and contribute to global green recovery.

166. While keeping cities as central actors of the transformation process, the program will also take a regional/territorial approach and support cross-jurisdictional planning including peri-urban areas and surrounding ecosystems, support land degradation neutrality, promote livable density, integrate urban infrastructure systems and support circular economy approaches for resource efficient development. It will work with strategic cities, sub-national and national governments and urban actors to plan and implement spatially integrated sustainability solutions across energy, buildings, transport, food, waste, nature based infrastructure sectors.

167. The program will strengthen leadership and ambition of city leaders and build multi-stakeholder partnerships especially with the private sector to co-create and finance urban sustainability solutions. The program will take a people centric approach with integration of gender, health and inclusion perspectives while delivering environmental benefits of decarbonization, biodiversity conservation, reduced land degradation and reduction of chemical waste and plastics pollution.

168. The Integrated Program will adopt a two-fold approach with global and country specific investments in selected cities, building on the two previous cycles of GEF investment in sustainable cities. The program will combine a number of strategic city-based projects to deliver multiple environmental benefits which will then be amplified through the global project. The program will promote action across a number of entry points in the urban system in an integrated

manner at multiple levels. Such an integrated approach will allow GEF to influence urban actors to address systemic environmental degradation challenges rooted in governance, planning, finance, policies, technology and knowledge gap for developing global sustainability solutions.

Objectives, Key Interventions, and Selection Criteria

169. This IP will target common drivers of environmental degradation, collectively adopt integration approaches, create a scale to leverage financing and engage private sector and ultimately strengthen voice and role of cities in developing countries to meet GEF 8 transformational goals. The Sustainable Cities IP will expand GEF's partnership to foster collaboration with a diverse set of actors in the urban space to develop innovative sustainability solutions and create systemic institutional capacity for implementation and move towards building net zero carbon, nature positive, inclusive, healthy and resilient cities. The program will have the following global functions to deliver large scale environmental benefits and contribute to GEF-8 transformation objectives:

a) *Catalyze shared and collaborative city action to scale up integrated urban planning approaches and sustainability investments:* By supporting a cohort of ambitious and motivated cities and utilizing their global influence, the program will extend outreach and create a significant scale and impact of the integrated approaches to contribute to global climate and nature ambitions. The portfolio of cities and the global project of the integrated program will strengthen the evidence base for integration approaches, showcase quality investments and leverage financing for transformative outcomes globally in the urban system.

b) *Support knowledge exchange and city-to-city learning on sustainability approaches:* The program will enable cities to collaborate and build mutual capacities at global level through a global platform by facilitating dialogues and knowledge exchange. Through this global exchange of knowledge, the program will drive best sustainability practices, unleash innovation, and attract investments at a larger scale for common global urban challenges. For adopting net zero carbon pathways, circularity approaches and Nature-based Solutions, cities particularly in the global South will benefit from the collaborative advantage to achieve higher level ambitions.[131] The program will benefit from the previously built relationship with city networks such as C40 and ICLEI and expand further with other networks including UCLG and Global Compact of Mayors to facilitate further cooperation and collaboration for implementation of sustainability solutions.

c) *Promote a harmonized portfolio of innovative sustainability solutions at global scale:* With a focus on systemic drivers of environmental degradation, the program will target investments that will yield long term benefits for 'One Health One Planet' and build green, inclusive and resilient cities. It will focus on themes of global importance

[131] https://www.researchgate.net/publication/24087798_Exploring_the_Potential_Benefits_of_City_Collaboration

including technology innovation, policy options and governance models for net zero emissions in the built environment, urban Nature-based Solutions, models for circularity pathways and spatial data and digital technology applications. The portfolio of cities supported through the program will result in a mix of private sector and community engagement models, prototypes of technology and infrastructure solutions, policies, scientific approaches, governance frameworks and business models, that will collectively tackle systemic urban sustainability challenges and deliver multiple and large scale global environmental benefits.

d) *Strengthen multi-stakeholder coalitions for higher ambition and collective action:* The program will foster multiple stakeholder partnerships between national governments, sub-national governments, cities, private sector, investors and civil society to address inter-linked urban challenges, co-create solutions and raise ambitions on climate, nature and green recovery. The program will strengthen engagement with city networks, global forums such as World Economic Forum, WBCSD and OECD and forums in the global South for collective action. The program will also partner with complementary platforms in the food system, energy system, infrastructure, gender, and biodiversity for systemic impact. In particular, the program will engage with global campaigns on climate such as race to zero, race to resilience, leader's pledge for nature, etc. to directly align with goals of multilateral environmental agreements.

170. With the above key global programmatic functions, the sustainable cities program will work with partner cities and stakeholders on the following strategic entry points to support urban transformation while ensuring green recovery:

a) *Advancing integrated and systems-based interventions:* Adopt an integrated approach for systems level transformation through integration in three key dimensions 1) Spatial integration with a regional/territorial aspect, 2) Institutional integration across department and jurisdictions, and 3) Putting people at the center. The approach will be underpinned by policies and regulations that incentivize integration and reduce perverse incentives that encourage siloed action, carbon intensive investments and degradation of nature. *Spatial integration* takes a regional/territorial approach to holistically be able to tackle the drivers of environmental degradation in and around cities, recognizing the importance of urban-rural integration; *Institutional integration* both though vertical integration between national, sub-national and local governments to enhance the capacity and leadership of cities, and through horizontal integration between department at all levels to break sectoral silos in cities; *Putting people at the center* is key to urban inclusion and environmental justice for a fair green urban recovery, as cities offer opportunities to address societal aspects such as inequality, poverty, gender discrimination, distress migration, climate vulnerability of slums and various issues related to environmental justice that have been exacerbated by COVID-19.

b) *Integrating nature in cities:* Advance the integration of Nature-based Solutions (NbS) and urban biodiversity in urban and peri-urban areas to generate multiple global environmental benefits, such as climate change mitigation, biodiversity enhancement, land restoration and climate change adaptation. As cities expand and build infrastructure to meet increased demand on urban services, they provide a great space for scaling up NbS as an alternative to complement grey infrastructure. Better ecological planning that integrates ecosystem services and their economic value is also an important foundation for healthy cities, contributing to the Healthy Planet, Healthy People approach. In addition, integrating nature present many other social and economic benefits such as new jobs, diversified livelihood opportunities, food security and human wellbeing, which can contribute to a green recovery and enhanced resilience to a wide range of shocks. The program will adopt a wider regional approach including peri-urban, adjacent rural/forest regions, key biodiversity areas, etc, to consider nature *for* cities as well as nature *in* cities.

c) *Decarbonizing the built environment:* Support development of plans, policies and strategies needed to design and implement solutions to decarbonize urban infrastructure, including buildings, energy and transportation systems. The program will focus specifically on promoting livable density through compact land use planning, mass and clean transport, and accelerated waste management, which have direct links with green recovery. The program will engage with city, sub-national and national governments, and the private sector to develop technical and financial solutions to deploy zero or low carbon solutions in cities.

d) *Adopting circular economy approaches:* Cities also offer unique opportunity to adopt circularity approach for economic growth and reduce resource "weight of cities"[132]. The program will support development of policies and physical infrastructure targeting strategic entry points for circularity including infrastructure materials, the urban food system value chain (including production, packaging, transportation and consumption patterns), the plastic value chain (production, consumption, disposal), and the built environment. Circularity can also be promoted through sustainable production, consumption, and waste management practices, as well as water treatment and reuse to support urban freshwater security. Cities will also be supported to consider solutions for shared economies and services products that make built environment more circular. These solutions offer large scale climate and material efficiency benefits.

e) *Promoting innovative financing:* To advance the solutions-based approach, the program will catalyze flow of finance to cities to meet the sustainability financing gap in collaboration with global financial institutions e.g. MDBs, RDBs, bilateral FIs, private sector and other institutional investors. A key aspect will be the leveraging of financial resources to achieve transformative impact. To achieve this, the program will support

[132] IRP (2018). The Weight of Cities: Resource Requirements of Future Urbanization. Swilling, M., Hajer, M., et al. A Report by the International Resource Panel. United Nations Environment Programme, Nairobi, Kenya

cities in building their capacity related to financial maturity, urban planning, reliable revenue streams, creditworthiness and developing investment pipeline. The program will also work with national and sub-national governments in strengthening national policy and fiscal frameworks to enable flow of finance including stimulus funding to cities for green investments. A key element of financing workstream will be to develop innovative financing mechanisms and business cases for built and Nature-based Solutions, to accelerate investment from diverse sources both public and private sector.

f) *Enhancing the use of digital technologies, tools, data and science in decision-making:* The program will support application of innovative digital tools for integrated planning and urban data management systems that enable cities to track results and impact. In particular, the program will accelerate application of geospatial data and mapping for urban planning, support development of digital technology applications for collection, access and dissemination of data, promote analytical tools to understand overall city level systems, and design methodologies and indicators to learn and assess transformation progress. Digital tools can also enable inclusion of vulnerable groups, such as youth, women and disabled, in the urban planning process.

171. The program will contribute to gender-inclusive cities and the empowerment of women across urban sectors. Women are becoming the majority in urban areas, and many people live in female-headed households. However, urban environments provide great challenges, inequities and insecurities for women[133, 134, 135] , and compared to men they have with less access to decent work opportunities, financial assets, housing security, urban services and public governance engagement.[136,137] COVID-19 has exacerbated existing inequalities, further exposing women to risks related to utility shutdowns, evictions, safety and lost livelihoods[138]. The importance of including gender dimensions within city policies and plans is not only to address social inequities, but also to unlock the potential of both women and men to successfully address environmental issues such as land degradation, biodiversity loss and climate change. Against this background, the Sustainable Cities IP will:

- Promote women's voice in decision-making and policy in city planning and governance;
- Promote the use of gender-responsive approaches to urban climate policy, including gender assessments, gender budgeting, and capacity development;
- Promote gender-inclusive design and use of urban spaces, infrastructure and services and support women's livelihood opportunities and economic contribution in cities.

[133] Reichlin L. & Shaw E. (2015) https://www.ndi.org/Gender-Urbanization-and-Democratic-Governance-whitepaper
[134] Evans, A. (2015a) https://oxfamblogs.org/fp2p/support-for-gender-equality-is-growing-but-whyis-this-mostly-in-urban-areas/
[135] Evans, A. (2015b) http://www.geog.cam.ac.uk/people/evans/
[136] Chant S. & McIlwaine C. (2016) Cities, Slums and Gender in the Global South. Abingdon, Oxon: Routledge
[137] Moser, C. (2016) https://journals.sagepub.com/doi/10.1177/0956247816662573
[138] https://unhabitat.org/sites/default/files/2021/03/key_messages_-_cities_and_pandemic_chapter_2.pdf

172. The program will identify potential entry points, indicators and targets to ensure that the gender dimension is included in all projects, and to be able to track integration of gender issues as a part of the systematic change that the program aims to deliver.

173. *Selection criteria:* The program will adopt a dual approach with a global project and country specific investments in selected cities. It will build on the existing program governance structure of GEF 6 and GEF 7 with a clear value-added proposition to scale up impact in the GEF 8 period and beyond.

- The program will aim to add new cities as well provide additional support to existing countries with diverse urbanization and environmental degradation challenges.
- The selection of cities will factor in geographical distribution targeting regions with mega urban trends related to urban expansion and environmental degradation. The selection will also factor in socio-economic impact of COVID-19 and climate vulnerabilities of cities with an aim to support green and resilient recovery.
- Sustainability leadership of cities, sub-national and national governments will be a fundamental consideration with clear evidence of national-local government alignment, commitment and willingness to upscale and invest in sustainability solutions that lead to green, resilient and inclusive recovery.
- The program will focus on rapidly urbanizing regions which include secondary cities and strategic mega cities with major environmental degradation challenges. It will also aim to support cities through national or regional urban programs which may need support through national-local interventions.
- The program will support cities which clearly demonstrate integrated, systems based and innovative approaches as outlined under the key entry points in the program strategy.

Existing Platforms and Potential Partners

174. The Sustainable Cities IP will engage with various global urban platforms, networks, and alliances to strengthen collaboration between urban actors and bring together diverse expertise to tackle systemic environmental, social, economic, and public health challenges that cities face. It will promote new partnerships for co-creating sustainability solutions, co-sharing finances, distributing risks and influencing collective responsibilities to strengthen cities in achieving global environmental goals, SDGs, and a green recovery. A key feature of the global partnership will be to engage with non-state actors including the private sector, business associations, economic forums, civil society organization and non-profit organizations, including urban women's and youth's groups, microfinance/ insurance institutions, and faith-based organizations. Recognizing that policy leadership of cities will be critical to achieve global net zero ambitions, the program will also aim to mobilize their political will to join global climate and nature action such as the Race to Zero and Race to Resilience campaigns.

175. The program will build on partnerships established in previous phases of the GEF's Sustainable Cities program with existing global urban platforms and networks including ICLEI, C40, UCLG, and specific city led initiatives such as WRI's Cities4Forests initiative, IUCN Urban Alliance, FAO's Green Cities Initiative and Resilient Cities Network supported by World Bank and Rockefeller Foundation. In addition, the program will collaborate with forums and institutions advancing private sector and city collaborations including the World Business Council for Sustainable Development, World Economic Forum, CDP and the Three Percent Club, a partnership for city energy efficiency.

176. Through engagement with scientific, research and academic institutions and networks such as the UNEP's International Resource Panel, Science Based Targets Network and WWF's One Planet City Challenge, the Sustainable Cities IP will strengthen the application of science in urban sustainability planning. The program will coordinate with other GEF integrated programs and engage with various sectoral platforms that link with urban sustainability, such as e-mobility, energy efficiency, sustainable transport, food system, plastics waste management (e.g. Global Plastics Action Partnership) and circular economy (e.g. Partnership to Accelerate Circular Economy). It will also develop effective partnership with multilateral and bilateral urban sustainability programs including those of MDBs (WB, AfDB, IADB, ADB), GCF, specialized institutions such as the European Space Agency and philanthropic organizations including Rockefeller Foundation, Bloomberg Philanthropies and Ellen Macarthur Foundation.

Contributions of this Program to MEAs and Related Global Environmental Benefits

177. Cities offer decisive leadership for integrated action, spatial scale for economic viability, networks for innovation and behavior change, and a vibrant private sector to catalyze action. MEAs are increasingly recognizing the role of cities both as drivers of environment degradation and as key players in addressing Convention objectives. By taking a systems-based approach, the program will create an enabling policy environment and build cities' capacity to catalyze investments to contribute to MEAs. The program will focus on key sectoral entry points including land, energy, transport, waste, food, water, and buildings, which offer large scale multiple global environmental benefits with a sound economic case. Hence, cities offer opportunities for cross-sectoral investments for benefits across all three Rio Conventions (UNFCCC, CBD, UNCCD).

178. *UNFCCC (Climate):* The UNFCCC recognizes that urban areas are responsible for 71-76% of global CO2 emissions and 67-76% of global energy use[139],[140] and states that directing infrastructure investment towards low-emission options should be ensured as it offers significant mitigation potential. Furthermore, urban buildings and transportation account for around 20% of

[139] https://unfccc.int/resource/climateaction2020/media/1308/Urban_Environment_17.pdf
[140] https://www.ipcc.ch/pdf/assessment-report/ar5/wg3/ipcc_wg3_ar5_chapter12.pdf.

the global greenhouse gas emission caused by human activity.[141] UNFCCC also highlights the importance of alignment of urban investment with the NDCs of countries[142]. The program will directly contribute to climate change mitigation and climate change adaptation through integrated approaches.

179. *CBD (Biodiversity):* In preparation for the 2021 Convention on Biological Diversity (CBD) COP, the Zero Draft of the Global Biodiversity Framework[143] (GBF) contains 20 action-oriented targets for 2030 which are directly linked to the achievement of sustainable urbanization and supports sustainable infrastructure, increased resource-efficiency and environmentally sound technologies. In particular through Target 11 which states that by 2030, increase benefits from biodiversity and green/blue spaces for human health and well-being, including the proportion of people with access to such spaces by at least [100%], especially for urban dwellers. Furthermore, it is anticipated that COP 15 will update the CBD Plan of Action on Subnational Governments, Cities and Other Local Authorities for Biodiversity for the period 2021-2030[144].

180. *UNCCD (Land Degradation Neutrality):* The UNCCD recognizes the importance of local and regional governments, and the necessity of rural and urban integrated land use planning for sustainable management of land and water resources to limit the excessive consumption of natural resources – one of the leading causes of land degradation. It also acknowledges the importance of circular economy approaches in urban management and nurturing the synergies between agricultural production and urban-based enterprises to bolster vibrant local economies and local food production chains. The UNCCD together with its parties is supporting the urban and rural communities to work together and take action.

181. Cities also produce significant amount of hazardous chemical wastes and most plastic waste affecting water bodies. The circularity and integrated approaches for urban industries, food system and waste management will therefore deliver additional environmental benefits related to chemical and plastic waste reduction. Sustainably managed cities will adopt a nexus approach to the way freshwater resources is used, to ensure that there is water enough to support essential provisions for food, energy and water, while ensuring adequate quantity and quality of water to support the integrity of shared freshwater ecosystem and marine ecosystems. Finally, the program will also contribute directly to SDG 11 targets on sustainable cities and communities.

[141] Creutzig F, Agoston P, Minx JC, Canadell JG, Andrew RM, Quéré CL, Peters GP, Sharifi A, Yamagata Y and Dhakal S. 2016. Urban infrastructure choices structure climate solutions. Nature Climate Change. 6(12): pp.1054–1056.

[142] https://unfccc.int/sites/default/files/resource/SCF%20Forum%202019%20report_final.pdf

[143] https://www.cbd.int/sbstta/sbstta-24/post-2020-sdg-linkages-en.pdf

[144] CBD: draft recommendation submitted to the third meeting of the Subsidiary Body on Implementation.

Role of the private sector in supporting this program

182. Cities are characterized by the presence of a dynamic private sector providing innovative solutions and bringing expertise and finance to deliver urban services. Therefore, private sector is an important actor to innovate, finance and scale up urban sustainability action in cities. The Sustainable Cities program will engage with the private sector with an objective of co-creating sustainability solutions and developing long term partnerships for joint action. In this context, cities will be supported to be play as an orchestrator to foster co-creation and not to consider the private sector solely as the large companies but the network of potential that exists within cities and their innovation ecosystems.

183. The Sustainable Cities IP is well positioned to amplify the work undertaken through the UN Race to Zero initiative which brings the non-state actors such as cities, CSOs and the private sector together under the common goal of net-zero emissions. The Sustainable Cities IP can be a global partner of initiatives and effect private sector commitments into results at the city scale through the entry point of climate change and deliver outcomes across multiple focal areas, including with strong human health outcomes related to cleaner air, more open space and reduced levels of extreme heat.

184. In line with GEF's PSES, all scales and typologies for the private sector are included in the consideration of such networks. To ensure sustainability and replication of city-business partnerships, the IP will focus on developing mechanisms of private sector engagement across multiple levels i.e. at global, national and city levels.

185. The partnership with private sector will be facilitated through a number of entry points at different levels.

- *Global level:* Taking a multi-sectoral approach for global engagement though multi-stakeholder platforms such as C40, WBCSD, CBCA and others that can create networks, bring new private actors on board and connect across institutions. A 'whole of portfolio approach' covering GEF-6-7-8 will be adopted to enhance the scale and depth of the program's private sector engagement to provide global companies more incentive to partner in the programs including for big data, digital solutions and 4IR technology collaborations to find a logical format for their development and deployment.
- *City level:* While working at cities level across different urbanized regions, the program will support innovative, agile approaches and small-scale opportunities, organically building ideas from smaller businesses, start-ups and tech companies to develop innovative, cutting edge and tailored solutions for urban sustainability challenges. Private sector collaboration will be extended to universities and community-based organizations to bring in the youth and new ideas to develop solutions which are closer to citizens. This can include mentoring, idea competitions and calls for proposals, development of

innovation hubs and incubation centers that can demonstrate opportunities, trigger innovation, create increased confidence and be scaled up.

- *National – sub-national level:* In collaboration with national governments, sub-national governments and private sector, the program will advance public private partnership models and partnerships for low carbon built infrastructure and also for Nature-based Solutions. In this context, the program will work with governments and companies to create enabling environment including country-city policy cohesion and standards for green procurement and resilient infrastructure.

Amazon, Congo, and Critical Forest Biomes Integrated Program

Introduction

186. Forests still cover around 30% of Earth's land area. They provide critical ecosystem goods and services such as food, fiber, water, shelter, and nutrient cycling among others. Forests play a fundamental role for biodiversity: they are host of over half of the world's known terrestrial plant and animal species and they contain 80% of terrestrial biomass. In addition, around 300 million of the world's poorest people depend almost entirely for their subsistence and survival on forests, including 60 million indigenous peoples and a further 1 billion people depend on for their livelihood[145]. Forests are also critical for climate change mitigation as they stock around 662 Gt C[146] of which 2.2 Gt C is released in the atmosphere each year because of deforestation and other disturbances[147]. Tropical forest ecosystems, where most of the deforestation occur, have a biomass carbon stock estimated to be 247 Gt C (193 Gt C stored aboveground and 54 Gt C stored belowground in roots) in Latin America (49%), sub-Saharan Africa (25%), and Southeast Asia (26%)[148]. It has become clear that the goals of the Paris Agreement will not be met without fully functioning Amazon and Congo Basin systems, representing the two largest blocks of tropical forests in the world.

187. An intact forest landscape (IFL) [149] is a seamless mosaic of forest and naturally treeless ecosystems with few signs of habitat degradation and a minimum area of 500 km^2. IFLs are critical for stabilizing terrestrial carbon storage, harboring biodiversity, regulating hydrological regimes, and providing other ecosystem functions. Although the remaining IFLs comprise only 20% of tropical forest area, they account for 40% of the total aboveground tropical forest carbon. They are also home to millions of IPLCs whose livelihoods, culture and traditional stewardship is tightly intertwined with the ecosystem. Among these, the Amazon and the Congo Basin are globally critical for biodiversity and carbon storage, provide livelihoods and subsistence to communities that rely on forests and agriculture for their survival. Beyond the large intact biomes, some regions are also home to smaller forests that are vital as biodiversity refugia and can serve as cornerstone for ecological restoration efforts in fragmented landscapes.

188. The principal mitigation value of IFLs is often considered by their stored carbon stocks. However, recent science found that intact forests are removing carbon from the atmosphere in far greater quantities than previously expected. It is estimated that forest ecosystems soak up to 30%

[145] FAO & UNEP (2020). The State of the World's Forests 2020. http://www.fao.org/3/ca8642en/online/ca8642en.html
[146] Global Forest Resources Assessment (2020). http://www.fao.org/3/I8661EN/i8661en.pdf
[147] Harris N. L. et al. (2021). Global maps of twenty-first century forest carbon fluxes (Nature Climate Change, 2021)
[148] Saatchi et al. (2011). Benchmark map of forest carbon stocks in tropical regions across three continents. PNAS 108 (24) 9899-9904; https://doi.org/10.1073/pnas.1019576108
[149] Potapov et al. (2017). The last frontiers of wilderness: Tracking loss of intact forest landscapes from 2000 to 2013. Science Advances, 2017; 3:e1600821

of the anthropogenic GHG emissions, 84% coming from old and primary forests[150,151]. So, when such forests are cleared, not only their carbon stock is released but also the significant carbon "subsidy" they provide in the future is lost.

189. Since 1990, it is estimated that some 420 million hectares of forest have been lost through conversion to other land uses. In this context, the accelerating loss of primary forests is particularly alarming as they contain important carbon stocks (much higher in primary forests than in degraded forests or plantations), key globally significant biodiversity, and play a role in local, regional, and global hydrological cycles. Conservative estimates are that primary forests worldwide have decreased by over 80 million hectares in thirty years. These changes have led to move the agriculture-forest and logging frontiers to the detriment of intact forests, contributing to increasing net GHG emissions, loss of natural ecosystems, and declining biodiversity[152]. Loss of these globally important ecosystems is also increasing the risks of zoonotic diseases and spillovers. Protection of IFLs and forests with globally significant biodiversity is therefore a major imperative for advancing this integrated program through the Healthy Planet, Healthy People Approach (HPHP). This will reinforce the critical importance of forests as natural climate solutions and for the health and well-being of humanity.

190. Many challenges still exist to reverse the trend of forest loss and degradation. Agriculture, including animal husbandry, is the main proximate driver of deforestation worldwide while logging is the biggest single driver for forest degradation. In Africa, fuelwood for energy plays also a much larger role[153]. Market failures and perverse incentives still create the conditions of forest clearance to more "productive" uses such as agriculture. Governance at all scales and the rule of law including land tenure are often weak or non-existent. Current incentives for forest protection are insignificant compared to estimates of the need. And competing land uses, especially for food production to feed a growing global population is exacerbating the pressure of the remaining standing forest[154]. Poorly managed forests and basins add to the risks of flood, droughts and can impact various infrastructures. Finally, poverty and lack of economic alternatives also put pressure on land use change and deforestation.

191. Achieving a global net-zero goal for CO_2 emissions is critical for the health of the planet, the stability of ecosystems, including forests, and to ensure safe conditions for future generations[155]. Ambitious policies that prioritize the maintaining of forest integrity, especially in

[150] Harris N. L. et al. (2021). Global maps of twenty-first century forest carbon fluxes (Nature Climate Change, 2021)
[151] Funk J. M. et al. (2019). Securing the climate benefits of stable forests. https://www.tandfonline.com/doi/full/10.1080/14693062.2019.1598838
[152] Shukla P.R. et al. (2019). IPCC special report on climate change, desertification, land degradation, sustainable land management, food security, and greenhouse gas fluxes in terrestrial ecosystems. https://www.ipcc.ch/srccl/
[153] Curtis et al. (2018). https://science.sciencemag.org/content/361/6407/1108
[154] Pendrill F. et al. (2019). https://www.sciencedirect.com/science/article/pii/S0959378018314365
[155]https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/962785/The_Economics_of_Biodiversity_The_Dasgupta_Review_Full_Report.pdf

the threatened primary forests, are now urgently needed alongside current efforts aimed at halting deforestation and restoring the integrity of forests globally. Strategies and policies to safeguard tropical forests must explicitly consider both carbon stocks and biodiversity[156].

192. IPLCs are well known to play a key role to impede deforestation, forest degradation, fragmentation, and associated greenhouse gas emissions and biodiversity loss[157]. Recent research indicates that protecting IPLC lands not only is important for human rights, but is a cost-effective way to preserve forests[158, 159]. These contributions can be greatly enhanced through policies that recognize land tenure, access and resource rights, the application of free, prior and informed consent, fair and equitable sharing of benefits, and transparent co-management strategies with IPLCs with considerations of the different roles and responsibilities of IPLC women, youth, and men.

193. The GEF has to-date played an important role in safeguarding forests globally. Targeted investments have included the creation and effective management of protected areas, sustainable forest management, and integrated approaches to tackle drivers of deforestation. Through these efforts, the GEF has been promoting innovative approaches to deliver impactful outcomes for biodiversity and climate change with co-benefits for sustainable livelihoods. But recent trends in deforestation from anthropogenic sources (e.g. fires in the Amazon) and emerging lessons from the COVID-19 pandemic reveal the need for more transformative actions to safeguard tropical forests. As countries work toward a "green" recovery from the pandemic, the Amazon, Congo, and Critical Forest Biomes Integrated Program will focus on increasing protection and effective governance of the major IFLs to maintain their integrity and resilience for people and the planet. Beyond the protected areas, and in the context of a jurisdictional or landscape approach to tackle the drivers of deforestation and forest degradation, it will be important to consider other effective area-based conservation measures (OECMs)[160]. This program will also support PES, corridors and also coordinated management with neighboring countries to improve connectivity at transboundary or regional level.

[156] Sullivan M. Talbot et al. (2017). Diversity and carbon storage across the tropical forest biome. Sci Rep 7, 39102. https://doi.org/10.1038/srep39102

[157] Walker W. et al. (2020). https://www.researchgate.net/publication/338858779_The_role_of_forest_conversion_degradation_and_disturbance_in_the_carbon_dynamics_of_Amazon_indigenous_territories_and_protected_areas

[158] Bradbury R. et al. (2021). https://www.nature.com/articles/s41893-021-00692-9

[159] Baragwanathand K. & Bayi E. (2020); Pnas: Collective Property Rights Reduce Deforestation In The Brazilian Amazon, HTTPS://DOI.ORG/10.1073/PNAS.1917874117

[160] The CBD has defined "OECMs" as "A geographically defined area other than a Protected Area, which is governed and managed in ways that achieve positive and sustained long-term outcomes for the in situ conservation of biodiversity with associated ecosystem functions and services and where applicable, cultural, spiritual, socio–economic, and other locally relevant values" (CBD Decision 14/8).

GEF-8 Integrated Program

194. The Amazon, Congo, and Critical Forest Biomes Integrated Program aims to increase and strengthen the protection and governance of IFLs and maintain the integrity of the last and globally important intact tropical forests. The program, building on previous investments in both biomes, will catalyze stakeholder engagement at different levels -global, regional, national, and local- to enable transformational changes in governance models, policies, financial frameworks, information, and social systems and reconcile social, economic, and environmental objectives. The role of IPLCs and marginalized groups, including women, will be central. Gender equality will be mainstreamed in the approach.

195. This program will address the drivers of forest loss and degradation through strategies aimed at creating a better enabling environment for forest governance; supporting rational and sub-national land use planning across mixed-use landscapes; strengthening of protected areas; clarifying land tenure and other relevant policies; supporting the sustainable management of commercial and subsistence agriculture lands to reduce pressure on adjoining forests; and utilizing financial mechanisms and incentives for sustainable forest utilization such as markets, REDD+ and other PES. If sustainably managed, success in these areas can serve as models on addressing the nexus between generating global environment benefits, poverty alleviation, and improved economic development.

196. Maintaining ecosystem integrity and resilience is fully aligned with a Healthy Planet, Healthy People approach. Healthy natural ecosystems, and especially primary forests, are providing a safety net for people depending on forests and mitigate the risk of future pandemics for humanity. We must act rapidly as the ability of terrestrial ecosystems to continue to absorb GHG emissions will be compromised by ongoing climate change and land degradation.

Objectives, Key Interventions, and Selection Criteria

197. The objective of this program is to invest in the protection and effective governance of critical forest biomes that sustain the health of the planet and flow of vital ecosystem services that underpin human well-being. The program will focus specifically on the Amazon and Congo Basin, but target other biologically important regions such as Indo-Malaya, Meso-America, and Western Africa where forest protection will generate significant benefits for global biodiversity, climate, and people.

198. Key Interventions include the following:

- Expand the coverage of protected areas to safeguard globally significant biodiversity, carbon stocks, and improve ecological connectivity conservation in the forest biomes (national, sub-national, transboundary);

- Strengthen the management of existing protected areas and national protected area systems;
- Promote Other Effective Area-Based Conservation Measures (OECMs) to achieve conservation outside the protected areas, and various Nature-based Solutions;
- Develop integrated land-use planning, including information and monitoring systems to prevent large-scale exploitation and improve management of ecosystem service flows;
- Improve the sustainability of the "productive" sectors to ensure that they are compatible with the conservation of primary forests, they can be accommodated within a zero-deforestation goal and prevent "leakage" into primary forests elsewhere;
- Develop financial and other incentives for forest protection while eliminating perverse incentives that increase the pressure on primary forest:
- Strengthen multi-scale governance and law enforcement for increased policy coherence on incentives and mechanisms to protect forests and eliminate perverse subsidies;
- Improve land tenure rights and policies especially the legal recognition of the customary rights and tenure security of IPLCs (e.g. free, prior and informed consent processes and Indigenous and Community Conserved Areas);
- Promote regional cooperation: South-South learning, technical exchanges, intergovernmental cooperation, knowledge management, and communication strategies, notably at the scale of river basins or shared ecosystems.
- Contribute to the the implementation of the international development agenda related to financial incentives to protect and restore primary forests, including REDD+ improved approaches, voluntary carbon markets, nature-positive trade policies that reward forest protection and restoration.
- Improve resource mobilization for the future financing architecture for addressing climate change, biodiversity loss (including long-term financing of protected area systems), and land degradation.

199. As well, regional interventions will focus on:

- *Biome Connectivity:* Actions will focus on connectivity of the freshwater ecosystems and aquatic resources in each biome on which local livelihoods depend on for food security, transport, and water.

- *Capacity Building and Regional Cooperation:* In each forest biome, actions will be designed to complement the national projects and maximize the efficiency of the broader approach. The component will provide opportunities for south-south learning, foster intergovernmental cooperation, use M&E tools and geospatial services, apply best practices and peer review and develop portfolio-wide training and communication strategies.

200. The Amazon and Congo Basins will be prioritized for this program by virtue of their global importance as IFLs, which creates opportunity for direct engagement and cooperation with all riparian countries. Forests in other regions will be considered based on the following criteria: evidence of globally important biodiversity, potential for restoring ecosystem integrity at the regional scale, and high carbon storage and removal capacity. Potential targets include the following regions:

- Indo-Malaya
- Guinean forests of West Africa
- Mesoamerica

Existing Platforms and Potential Partners

201. At the global level

- The Convention on Biological Diversity (CBD) and the UN Framework Convention on Climate Change (UNFCCC) are natural relevant global platforms, as well as the Collaborative Partnership on Forests and the UN Forum on Forests (UNFF). The proposed IFL approach is very compatible with guidance from the UN Convention to Combat Desertification (UNCCD) and particularly the LDN framework.
- International Climate Initiative (IKI)[161]; The Legacy Landscapes Fund[162]
- The Global Agribusiness Alliance, Grow Asia, and sustainable commodity initiatives, such as the Roundtable for Sustainable Palm Oil (RSPO).
- The Coalition for Private Investment in Conservation (CPIC) initiative.
- Green Gigaton Challenge dedicated to bringing REDD+ to scale.
- International NGOs: African Parks, African Wildlife Foundation, Birdlife International IUCN, Conservation International, Rainforest Alliance, TNC, WCS, WWF, ZSL.
- Research Centers, such as the CGIARs (CIFOR, ICRAF).

202. At the regional level

[161] https://www.international-climate-initiative.com/en/about-iki/iki-funding-instrument
[162] https://legacylandscapes.org/

- Amazon: Knowledge Platform of the Amazon Sustainable Landscape Impact Program (ASL), Alliances and initiatives involved in the implementation of the Leticia Pact[163], ACTO, REDPARQUES[164];
- Congo: Regional Platform of the Congo Impact Program, Congo Basin Forest Partnership (CBFP), Economic Community of Central African States (ECCAS), Central Africa Forest Initiative (CAFI), Central African Forests Commission (COMIFAC), specialized networks (Network of IPLCs for the sustainable management of forest ecosystems in Central Africa, REPALEAC, and Conference on Dense and Moist Forest Ecosystems of Central Africa, CEFDHAC);
- Asia Pacific: ASEAN (Asean Regional Network on Forest and Climate Change), regional programs from multi, bilateral, and NGOs;
- Central American Commission for Environment and Development (CCAD) for the "5 Great Forests Initiative", The Dry Corridor Initiative.
- Guinean Forests of West Africa: Critical Ecosystem Partnership Fund (CEPF), Transboundary Tai-Grebo-Krahn-Sapo Forest, Gola Transboundary Forest Landscape, Cross River-Korup-Takamanda Transboundary Initiative, private sector (Sao Tome and Principe).

Contributions of this Program to MEAs and Related Global Environmental Benefits

203. The Amazon, Congo, and Critical Forest Biomes Integrated Program responds to multiple MEA's guidance and will also promote better integration between them.

204. By focusing on IFLs, the Amazon, Congo, and Critical Forest Biomes Integrated Program aims to provide a significant and efficient contribution to the net zero decarbonization goal by 2050. The focus on tropical forests will potentially secure IFLs in biomes that account for two-thirds of all terrestrial species on the planet, including the vast array of invertebrate species and microbes that underpin the productivity and stability of forest ecosystems.

205. The primary forests still represent around 1/3 of the world forests[165]. In 2019, 3.75 million hectares of primary forests were lost, releasing in the atmosphere the equivalent of 1.84 Gt CO2e in only one year[166]. Being high carbon ecosystems, their protection is recommended as an optimal solution from the IPCC special report on climate change and land to avoid large

[163] https://www.reuters.com/article/us-brazil-environment-amazon-summit/amazon-countries-sign-forest-pact-promising-to-coordinate-disaster-response-idUSKCN1VR2B1
[164] ACTO: Amazon Cooperation Treaty Organization; REDPARQUES: the Latin America Network for Technical Cooperation in National Parks, other Protected Areas, Wild Flora and Fauna.
[165] Kormos et al. (2017). Primary Forests: Definition, Primary Forests: Definition, Status and Future Prospects for Global Conservation. Global Forest Resources Assessment, 2020. http://www.fao.org/3/CA8753EN/CA8753EN.pdf
[166] Global Forest Watch. https://www.globalforestwatch.org/

carbon losses and long pay-back times[167]. The conservation of "healthy, biologically diverse, and resilient forests" is emphasized in the Ministerial Katowice Forests for Climate Declaration, as well as in the article 5.1 of the Paris Agreement, as a key mean to achieve the goal of limiting the temperature increase to 1.5°C above pre-industrial levels. Protecting primary forests will constitute a major contribution to the "+" of REDD+, a subject that has only obtained a limited attention from donors. Promoting adequate framework to increase the resource mobilization, the Program will also contribute to the implementation of the Articles 5 and 6 of the Paris Agreement.

206. The proposed Integrated Program will respond to the decision adopted by the Convention on Biological Diversity (CBD) highlighting the "exceptional importance of primary forest for biodiversity conservation" and "the urgent necessity to avoid major fragmentation, damage to and loss of, primary forests of the planet…" (COP 14/30[168]). The proposed interventions will constitute significant contributions to the draft post-2020 global biodiversity framework[169], prioritizing the value of ecosystem integrity and the most intact areas.

207. The overall approach is aligned with several elements from the UN Convention to Combat Desertification (UNCCD), and especially the LDN response hierarchy of avoiding, protecting, and reversing land degradation.

208. The program also contributes to the achievement of the UN Strategic Plan for Forests 2017-2030 under the UNFF and its six Global Forest Goals, notably through reversing the loss of forest cover, improving the livelihoods of forest dependent people, increasing the area of protected forest, mobilizing additional financial resources, promoting adequate governance frameworks and enhance cooperation, coordination, coherence and synergies worldwide[170].

209. Beyond the Rio Conventions, stopping small-scale artisanal gold mining[171] and finding alternatives in IFLs will generate benefits potentially accountable under the Minamata Convention. Transboundary and regional water agreements will finally provide the framework for complementary interventions on freshwater and connectivity of aquatic resources.

---

[167] IPCC (2019). IPCC Special Report on Climate Change, Desertification, Land Degradation, Sustainable Land Management, Food Security, and Greenhouse Gas Fluxes in Terrestrial Ecosystems.

[168]] https://www.cbd.int/doc/decisions/cop-14/cop-14-dec-30-en.pdf

[169] CBD (2019), Synthesis of the Views of the Parties and Observers on the Scope and Content of the Post-2020 Global Biodiversity Framework, Convention on Biological Diversity, Montreal

[170] https://www.un.org/esa/forests/documents/un-strategic-plan-for-forests-2030/index.html

[171] This is responsive to one of the recommendations of the recent ASGM Evaluation that the GEF should seek opportunities for multi-focal area ASGM interventions due to the cross-sectoral linkages of the ASGM sector. GEF/E/C.59/02, Evaluation of GEF Interventions in the Artisanal and Small-Scale Gold Sector, https://www.thegef.org/sites/default/files/council-meeting-documents/EN_GEF_.E_C59_02_ASGM_Evaluation_Nov_2020.pdf

Role of the private sector in supporting this program

210. The globalization of trade in agriculture and other commodities has created complex interactions between geographically distant actors and actions at the local level to the global level. The ultimate drivers of environmental and social change can be far from the places where many adverse impacts happen and where decisions on investment and resource allocation are made. The action at the local level is one critical aspect and will remain a priority in GEF8. However, concerted action at the global level to drive planet-positive environmental and social changes is also needed. There is a growing interest in the private sector community for promoting sustainability along the value chains (responsible sourcing[172], gold mining for instance[173]). More than 190 companies, governments, and CSOs have signed the New York Declaration on Forests to end natural forest loss by 2030 and reduce deforestation by 50% by 2020; these engagements also being connected to the SDGs to ensure sustainable consumption and production patterns[174, 175]. While these commitments go in the right direction, we can unfortunately note that enabling conditions are missing and the targets are not met.

211. This IP will connect with different global platforms to improve cooperation, information sharing, and transparency. Articulation with the implementation of the article 6 of the Paris Agreement will be sought sought as well as opportunities to link the relevant NDCs, both for adaptation and mitigation, with investment from the private sector. Such investments could include allocations made under Nature-based Solutions such as highlighted in Section VI on private sector engagement. The GEF could contribute to the development of metrics framework for sustainability performance, beyond climate considerations, as the LandScale (LS), a shared initiative of the Climate Community, Biodiversity Alliance, the Rainforest Alliance and Verra. In terms of innovation and technology, the Integrated Approach could also contribute to new indicators to reflect of the ecological integrity of primary forests and IFLs. The proposed private sector technology platform for GEF-8 could also provide valuable support for the development and deployment of advanced monitoring and observation systems to inform decision making and resource allocation. The GEF may also provide support for innovative finance using the blended instrument (or Non-Grant Instrument), including to IPLCs, through microfinancing institutions or the insurance sector. Privaget sector led multi-stakeholder initiatives such as the Fire-Free Village program (FFVP)[176] have the scaling potential to avoid millions of tons of GHG emissions from the burning of forests and peatlands and further support efforts to strengthen sustainable value chains in deforestation risk commodities.

---

[172] Cisco C. & Chorn B. (2009). https://www.bsr.org/reports/BSR_Responsible_Sourcing__KPIs_Summary.pdf
[173] Van der Brink et al. (2019). https://www.sciencedirect.com/science/article/pii/S092134491930103X
[174] https://datatopics.worldbank.org/world-development-indicators/wdi-and-the-sustainable-development-goals.html
[175] https://sdg-tracker.org/sustainable-consumption-production
[176] The Fire Free Village program is an initiative led by major forestry and agribusiness with incentives to not use fire and take action to prevent and stop fires. Launched in 2015, the initiative has resulted in a 90% reduction in forest fires. https://www.aprildialog.com/en/?s=FFVP

Circular Solutions to Plastic Pollution Integrated Program

Introduction

212. The exponential increase in plastic production, consumption and waste is impacting marine, freshwater and terrestrialecosystems as well as contributing to greenhouse gas and harmful chemical emissions with implications for human health, economies and social wellbeing around the world[177]. These adverse impacts are expected to escalate as plastic production has increased annually ~9% since 1950 outpacing any other manufactured material[178]. Most recently, during COVID-19 single-use plastic consumption has surged raising further alarm worldwide[179, 180, 181]. The increasing complexity of plastic products combined with the low price of recycled plastics further complicates the situation.

213. Tackling plastic pollution through circular solutions will contribute to multiple Global Environmental Benefits tied to Biodiversity, International Waters, Chemicals and Waste and Climate Change Mitigation focal areas. In terms of marine and freshwater transboundary ecosystems, currently 8-12 million tonnes of plastic enter the ocean annually resulting in over >150 million tonnes in the ocean, including over 5 trillion plastic particles[182]. The resulting cumulative hazards and direct impacts to marine ecosystem services cost an estimated global loss of $500-$2500B/year[183]. With plastic waste flowing through multi-national rivers to the oceans[184] and found as remote as the Mariana's Trench[185], this is truly a transboundary water issue.

214. The biodiversity impacts of marine plastic pollution are evident in the images of entangled seals and sea turtles, dead albatross and whales with bellies full of plastic waste and the viral video of the sea turtle with a plastic straw stuck up its nostril[186]. These deadly effects are evident across the full breadth of marine life with 17% of affected species listed as threatened or near threatened on the IUCN Red List[187].The adverse effects are also experienced at the ecosystem level with plastic pollution identified as the second biggest threat to the future of coral reefs as it increases disease outbreaks by more than 20 times[188].

---

177 https://www.thegef.org/sites/default/files/publications/PLASTICS%20for%20posting.pdf
178 https://advances.sciencemag.org/content/3/7/e1700782
179 https://www.economist.com/international/2020/06/22/covid-19-has-led-to-a-pandemic-of-plastic-pollution
180 https://www.forbes.com/sites/lauratenenbaum/2020/04/25/plastic-waste-during-the-time-of-covid-19/?sh=ed6e7e67e484
181 https://www.weforum.org/agenda/2020/05/plastic-pollution-waste-pandemic-covid19-coronavirus-recycling-sustainability
182 https://science.sciencemag.org/content/347/6223/768
183 https://enb.iisd.org/media/spbf-2021-feb-19-jacqueline-mcglade-unep-video
184 https://www.scientificamerican.com/article/stemming-the-plastic-tide-10-rivers-contribute-most-of-the-plastic-in-the-oceans/
185 https://www.nationalgeographic.org/article/plastic-bag-found-bottom-worlds-deepest-ocean-trench/
186 https://www.youtube.com/watch?v=d2J2qdOrW44
187 https://www.sciencedirect.com/science/article/abs/pii/S0025326X14008571?via%3Dihub
188 https://science.sciencemag.org/content/359/6374/460

215. Tackling plastic pollution by reducing production, consumption and disposal will also reduce carbon emissions since GHGs are emitted at every stage of the plastic lifecycle. Conventional plastic production depends on virgin fossil feedstocks. The basic building block for plastic,ethylene, is produced from natural gas and crude oil, which is an energy intensive process. The most commonly used plastics produce greenhouse gases when exposed to sunlight[189] and once disposed, if incinerated, release CO_2. These adverse impacts are expected to rise. In 2014, 6% of oil production went toward plastic, which is expected to increase to 20% by 2050[190] as the oil and gas industry move out of the energy sector. Plastics, which contributed 1% of the global carbon budget in 2014, are expected to contribute 15% of carbon budget by 2050[191].

216. Further, in terms of chemical and waste concerns burning plastics during incineration releases POPs, a priority concern under the Stockholm Convention[192]. One of the main sources of concern, plastic packaging materials (bags, bottles, caps, etc), are made of PET, LPDE, and PP, which, when burned, emit uPOPs. Burning of plastic wastes increases the risk of heart disease, aggravates respiratory ailments such as asthma and emphysema and cause rashes, nausea or headaches, and damages the nervous system[193].

217. Plastic pollution is even more relevant to the GEF given our mandate to focus in developing countries, which are centers for plastic production[194, 195], are growing consumers of single-use plastic items (e.g. plastic bags, sachets), often the recipients of plastic waste from developed countries and are unable to manage waste adequately[196][197]. Given the prominence of women and children as waste pickers in the informal sector in developing countries, there is particular concern for poor labor conditions and the adverse health effects from waste[198]. Following documentation of Asia as the hotspot for plastic entering rivers and ocean[199, 200] and as the major producer of plastics (including 31% from China[201]) Asia has been a priority region for

[189] https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0200574
[190] https://www.ellenmacarthurfoundation.org/assets/downloads/The-New-Plastics-Economy-Rethinking-the-Future-of-Plastics.pdf
[191] https://www.ellenmacarthurfoundation.org/assets/downloads/The-New-Plastics-Economy-Rethinking-the-Future-of-Plastics.pdf
[192] http://www.pops.int
[193] https://www.annualreviews.org/doi/10.1146/annurev-environ-102016-060700#:~:text=When%20released%20into%20the%20environment,complex%20toxicology%20of%20micrometer%2D%20to
[194] https://www.nytimes.com/2020/08/30/climate/oil-kenya-africa-plastics-trade.html
[195] https://www.plasticseurope.org/en/resources/publications/4312-plastics-facts-2020
[196] https://ourworldindata.org/plastic-pollution
[197] Licciardello, F. 2017. Packaging, blessing in disguise. Review on its diverse contribution to food sustainability.
[198] https://learn.tearfund.org/-/media/learn/resources/reports/2019-tearfund-consortium-no-time-to-waste-en.pdf
[199] https://science.sciencemag.org/content/347/6223/768
[200] https://pubs.acs.org/doi/10.1021/acs.est.7b02368
[201] https://www.plasticseurope.org/en/resources/publications/4312-plastics-facts-2020

investment; however, with growing urbanization in Africa and Latin America, these regions are also priorities for addressing expected increases[202].

218. Packaging (e.g. bags, lids, bottles) is the primary use of plastic (30%) with single-use plastic constituting over half of plastic waste[203, 204]. The food and beverage industry is a particular concern due to the high volume of single use packaging. Nine out of 10 of the most common beach clean-up items are tied to the food and beverage sector[205] and the top brands tied to plastic pollution are associated with the food and beverage industry[206]. This concern is prevalent in developing countries as indicated by analyses of Viet Nam, Thailand, South Africa, Mozambique, and Kenya where packaging is the dominant category of plastic waste, particularly from the food and beverage industry, including bags, lids, caps, bottles, and food containers[207].

219. Packaging nevertheless plays a key role in enhancing the efficiency of food systems preserving food quality, ensuring food safety by preventing food-borne diseases and food chemical contamination, driving convenience, and facilitating ease-of-use and sustainability. To evaluate the total environmental burden of food packaging adequately, the environmental footprint of the losses or waste that are avoided by using it, as well as the potential for reuse, refill or recycling the packaging, must be considered.

GEF-8 Integrated Program

220. Tackling plastic pollution requires a circular economy approach through interventions across the entire plastic value chain from production to consumption to disposal (Fig. 15). Such a holistic approach is critical given the interlinkages across the processes and sectors contributing to plastic pollution. Historically the focus has been on downstream actions related to disposal (i.e. collection, recycling, waste-to-energy, incineration, landfill); however, just as mopping up an overflowing bathtub is a short-term solution, halting plastic pollution requires turning off the flow of plastic goods by targeting production and consumption. The solution requires eliminating problematic and unnecessary plastics, promoting innovative solutions, and fostering circular systems. These solutions require addressing the entire plastic value cycle: material engineering; product and process design; consumer use and behavior; and collection systems and

[202] https://www.unep.org/resources/report/mapping-global-plastics-value-chain-and-plastics-losses-environment-particular
[203] https://www.unep.org/resources/report/mapping-global-plastics-value-chain-and-plastics-losses-environment-particular
[204] https://www.unep.org/interactive/beat-plastic-pollution/
[205] https://oceanconservancy.org/wp-content/uploads/2019/09/Final-2019-ICC-Report_EMBARGOED-UNTIL-9.3.19.pdf
[206] https://www.breakfreefromplastic.org/globalbrandauditreport2020/
[207] https://plastichotspotting.lifecycleinitiative.org/pilots/

recycling[208,209,210]. At a global scale such a system change is predicted to cut government costs $70 billion and save businesses $1.3 trillion dollars compared to the current business as usual trajectory while creating more jobs, dramatically cutting down on ocean pollution and reducing projected plastic-related greenhouse gas and harmful chemical emissions[211,212].

Figure 16. The circular economy value chain

221. Moving toward a circular economy approach in the food and beverage industry necessitates enhancing the efficiency of the food and packaging system for the reduction and greater re-use of packaging across the food system; upgrading recycling infrastructure for packaging waste and developing and/or adopting business models that promote the re-use and recycling of food packaging. This approach will require systemic change in the way producers, processors, retailers, distributors and consumers operate, and will necessitate a high level of cross-collaborative engagement through the development of circular partnerships[213]. Consumer education on the household use of plastics linked to food will also be required toward shifting mindsets and behaviours toward food waste linked to plastics.

222. Women are expected to play a particularly strong role in addressing plastic pollution given their prevalence throughout the plastic value chain. Women are often the major decision-makers regarding household consumption, are a high portion of social entrepreneurs and are also

[208]https://www.newplasticseconomy.org/#:~:text=In%20a%20new%20plastics%20economy%2C%20plastic%20never%20becomes%20waste%20or%20pollution.&text=Eliminate%20all%20problematic%20and%20unnecessary,reusable%2C%20recyclable%2C%20or%20compostable.
[209] https://www.pewtrusts.org/en/research-and-analysis/articles/2020/07/23/breaking-the-plastic-wave-top-findings
[210] https://gefmarineplastics.org/publications/addressing-marine-plastics-a-roadmap-to-a-circular-economy
[211] https://www.thegef.org/sites/default/files/publications/PLASTICS%20for%20posting.pdf
[212] https://www.pewtrusts.org/en/research-and-analysis/articles/2020/07/23/breaking-the-plastic-wave-top-findings
[213] Rolle, R.S. 2021. Packaging-linked Food Loss and Waste across the Agri-Food Value Chain: Moving toward circular and sustainable systems. Forthcoming publication.

prevalent in the waste management industry as waste pickers[214,215]. Consequently, women can be the engines of the circular economy on all levels from households and communities to businesses and politics.

223. Through the proposed Circular Solutions to Plastic Pollution Integrated Program, the GEF will catalyze circular economy approaches to reduce plastic production, consumption and waste. Packaging, particularly single-use related to the food and beverage sector, will be the priority for the Plastic IP since it is the main source of plastic waste in developing countries. As plastic pollution efforts tend to focus on waste collection, recycling and clean-ups, the GEF will prioritize actions early in the plastic value chain, i.e. production and consumption. By aligning with existing the waste management efforts, the full value chain will be addressed. Consequently, this program will support initiatives that:

- eliminate the production and use of problematic and unnecessary plastic products (e.g. single use plastic packaging) and phase out plastic products containing harmful chemicals;

- design for circularity through increased reusability, recyclability and composability of products; innovate better reuse, repair, remanufacturing and recycling business models, including service as product; and reengineer products toward materials that are made from recycled materials, are recyclable and are ocean-safe if they leak into the ocean;

- circulate products by shifting consumer behavior and by fostering markets for recycled material; and,

- create cross-cutting enabling conditions by strengthening collaboration and coordination along the plastic value chain, creating harmonized visions, fostering knowledge sharing, establishing national baselines and global standards, and increasing investment in innovative solutions.

224. As noted, these actions will be aligned with efforts to improve collection, recycling and treatment facilities, which are typically beyond the scope of GEF investments.

Objectives, Key Interventions, and Selection Criteria

225. This IP will primarily invest in national and city-level initiatives; however, given the global nature of the value chain and given that many countries are only beginning to tackle plastic pollution, limited global-level investments will be pursued as well.

[214] https://www.forbes.com/sites/bridgetbrennan/2015/01/21/top-10-things-everyone-should-know-about-women-consumers/?sh=4bef67366a8b
[215] https://learn.tearfund.org/-/media/learn/resources/reports/2019-tearfund-consortium-no-time-to-waste-en.pdf

Global Investments

226. The global investments will focus on:

- Sharing best practices and lessons learned among the cities, including through regional centers of excellence;
- Establishing guidance on what constitutes “circular products and services” , international benchmarks and standards to foster recyclability of traded plastic products;
- Providing monitoring and evaluation guidance to governments and businesses to evaluate progress along the value chain toward achieving circular solutions to reduce plastic pollution as well as to assess GHG emissions, harmful chemicals and ecosystem impacts and guidance on green accounting to incorporate plastic footprints into decision-making ;
- Advising global corporations how to achieve their circular goals, connecting these corporations with circular innovations (e.g. ocean-friendly packaging) and connecting them with national initiatives to ensure their products are designed for circularity in the recipient importing countries;
- Establishing transparent tracking mechanisms for the global trade (import of consumer goods, export of waste) of plastic products from production to consumption to waste to foster reuse, recyclability and composability at end of life; and,
- Raising public and stakeholder awareness of the circular economy concept, promoting circular solutions actions, and fostering a culture of circularity by infusing circular concepts and solutions into mainstream media and high-profile outreach campaigns.

National and City Investments

227. Investments in city initiatives within the context of national initiatives will depend on, and help strengthen collaborative, public-private partnerships that encompass stakeholders throughout the plastic value chain and set a common vision with ambitious targets.

228. Given the significant role of women in consumption, waste and circular enterprises, their engagement will be prioritized . At the same time, the IP will work toward connecting the informal sector of often marganized waste-pickers with the formal sector with attention to labor and health conditions.

229. Building on these collaborations, Plastic IP investments will support national and city action plans, including actions targeting governments, businesses and the public. This program will help foster several national and city government roles:

- Creating the enabling policy environment for circular solutions by establishing regulations and incentives that eliminate unnecessary and problematic plastics (e.g. product import recyclability requirements, bans and fines on disposables), innovate circular designs (e.g. taxes on virgin plastic, subsidies or microgrants for reuse/refill systems), and circulate products (e.g. requiring restaurants serve on reusable dishware, pay as you throw, require repair services for retail) while removing barriers to adoption (e.g. bans on reusable systems);

- Building circular infrastructure (e.g. collection for refill and reuse systems, repair stations), retrofitting existing infrastructure for greater circularity (e.g. improved recycling sorting efficiencies and accuracies), ensuring public access (e.g. olastic banks for recyclable items) and promoting shared economy systems (e.g. carshare, bikeshare systems);

- Establishing public procurement policies that support circular systems (e.g. requiring food services be plastic-free) to help drive market demand, test products and services and de-risk scaling-up; and,
- Raising awareness on the need for, and economic opportunity associated with, circular solutions within government agencies that engage in the food and beverage industry, such as city planning, tourism, and health departments.

230. Building on these governments strategies, particularly the regulations and incentives, the program will foster circularity within the private sector, specifically throughout the food and beverage industry by:

- Encouraging the use of recycled material, including promoting safety standards for the food and beverage industry, and fostering the production of sustainable, ocean-safe alternatives to plastics devoid of harmful chemicals and;

- Innovating circular product designs that are reusable, refillable, modular or recyclable (e.g. reusable food packaging);

- Catalyzing business models that extend the life of products through repair, shared systems (e.g. rent toys, clothes), resale (e.g. consignment stores), and service as product (e.g. buying lighting instead of light bulbs);

- Incentivizing companies that create circular systems (e.g. reuseable food container systems for food delivery);

- Promoting recycling technologies and initiatives that change the type of plastics that enters the economy and the environment to ensure that they are not harmful and can be reused and recycled.

- Helping circular SMEs innovators (e.g. reusable food delivery systems) bridge to commercialization (i.e. move from concept to proof of concept to pilot to mass market) through innovation prizes, incubators, accelerators and other mechanisms and,

- Promoting extended producer responsibility schemes by companies (e.g. buy back bottles) as well as their adoption of circular solutions.

- Promoting recycling standards that allow recycled plastics to be used in a safe manner in the food and beverage industry.
- Increasing awareness within the industry (e.g. grocers, restaurateurs) of circular solutions (e.g. bulk food dispensers, reusable bags) and making the business case for adoption, including the economic cost-benefits and available resources to overcome financial and operational barriers;

231. Finally, this program will foster a cultural paradigm shift by consumers, particularly youth, toward a circular economy that will help galvanize political and private sector action by:

- Ensuring plastic reducing solutions (e.g. reusable to-go coffee cups) are accessible and affordable to the public;Developing transparent, harmonized systems and standards so the public can easily discern which products and services are sustainable and, through collective action, drive market demand for circular products and services; and,

- Fostering social acceptability of plastic reducing circular solutions and eco-innovations, such as reusable dishware.

232. Selection of countries, including cities, will be based on the state of plastic pollution, including high and escalating levels of production, consumption and/or disposal. The ecological and socioeconomic impacts will be considered as well as the extent to which the public and private sectors have committed to tackle plastic pollution, such as through a common vision and national or city action plans. Countries positioned and committed to serve as centers of excellence to share best practices and to play catalytic roles in their regions will also be prioritized. The Plastic IP will coordinate with the Sustainable Cities IP given the mutual interests in sustainable production, consumption and waste and the focus on the urban environment.

Existing Platforms and Potential Partners

233. The program will benefit from, and partner with, the wealth of global initiatives and alliances that have emerged to tackle plastic pollution. In terms of national and city action plans, the program will continue the GEF-7 alignment with the Global Plastic Action Partnership (GPAP) through country-level investments. The Plastic IP will also align country investments

with the New Plastic Economy led by the Ellen MacArthur Foundation and UNEP and with the Alliance to End Plastic Waste on global corporate and country initiatives.

234. The program will also work with the Break Free from Plastics[216] movement to bring in CSOs to ensure national and city partnerships include community interests and at a global scale to help infuse circular thinking into mainstream media.

235. There are many other global, regional and national initiatives that will play a role in Plastic IP investments depending on needs. These initiatives include (among others) the International Resource Panel, One Planet Network, Urban Ocean, Trash Free Seas, Plastic Pollution Coalition and WBCSD as well as work undertaken by GEF Agencies, including by UNEP Marine Litter & Consumption and Production, IUCN Close the Plastic Tap , WWF, UNIDO, UNDP, ADB, and WB.

Contributions of this Program to MEAs and Related Global Environmental Benefits

236. The program is unique in delivering global environmental benefits across nearly all the focal areas – Chemicals and Waste, International Waters, Climate Change Mitigation, and Biodiversity – and supporting several MEAs and SDGs. Reducing the production and disposal of plastics will reduce the emission of GHGs in support of the Paris Agreement and will reduce the emission of harmful chemicals, including uPOPs, in support of the Stockholm Convention. Reducing plastics from entering rivers and the ocean will maintain the health of these ecosystems, including the threatened species affected by entanglement and ingestion, in support of the CBD. As plastic represents a transboundary pollutant in both riverine and marine systems, the program will contribute to the objective of the International Waters focal area via the reduction of transboundary pollution.

237. This program will also contribute to socioeconomic co-benefits, including diversified livelihoods and economic growth through the innovative, circular solutions, improved labor conditions for the informal sector, women empowerment and improved human health through potable water and uncontaminated food.

238. Through these GEBs and socioeconomic co-benefits, this program will contribute to several SDGs: Good Health and Well-being (3), Clean Water and Sanitation (6), Decent Work and Economic Growth (8), Industry, Innovation and Infrastructure (9), Sustainable Cities and Communities (11), Responsible Consumption and Production (12), Climate Action (13), and Life Below Water (14).

[216] https://www.breakfreefromplastic.org/

Role of the private sector in supporting this program

239. Engagement of the private sector is a central tenant of this program as moving to a circular economy requires transforming business operations. At the global scale, the IP will pursue establishing behchmarks and standards, advising businesses on moving toward circular practices through innovation, sharing best practices and raising awareness of circular ecology opportunities and the business case for adopting circular practices. To achieve these objectives, the IP will closely partner with the World Economic Forum hosted Global Plastic Action Partnership, the Alliance to End Plastic Waste, whose members are predominantly corporations, and the New Plastic Economy, which is working with over 450 businesses and other organizations, such as WRAP, to meet the Global Commitment to 100% reusable, recyclable, and compostable products.

240. At the national and city levels this program will foster circularity within the food and beverage industry by increasing awareness within the industry of circular solutions and making the business case for adoption, fostering circular SME innovators to get to market and scale through grants, loans, tax incentives, incubation, accelerators, prizes, and challenges; and, promoting extended producer responsibility schemes by companies as well as their adoption of circular solutions through grants, loans and tax incentives.

241. Such engagement at the national and city level will require collaborative, public-private partnerships that encompass stakeholders throughout the plastic value chain. Multi-stakeholder collaboration ensures the various parties (e.g. plastic producers, food and beverage suppliers, restaurants, grocery stores, governments, recyclers etc.) coordinate to ensure a functioning, circular system . Through such partnerships, businesses can work with policy-makers to establish policies that will catalyze change (e.g. requiring eateries to serve on reusable dishware) and to design infrastructure that will foster circular systems (e.g. collection systems for reusable food delivery containers). Business-to-business communication channels are also important to fostering circularity, such as waste management facilities advising manufacturers on how to increase the recyclability of their products and manufactures sourcing recycled plastic from waste management facilities.

Blue and Green Islands Integrated Program

Introduction

242. Nowhere is the interconnection between nature and people's livelihoods and well-being more obvious than in Small Island Developing States (SIDS). Although countries worldwide are faced with accelerating change and environmental challenges to their economies and societies, for SIDS the experience tends to be even more intense and rapidly felt because of their small physical scale, geographic isolation, remoteness from international markets and small economies which rely on a limited resource base including unique biodiversity.[217] At the same time, many SIDS face a variety of socio-economic challenges: urban density, food and water insecurity, vulnerability to climate change, and high cost of energy. They are also heavily indebted with limited access to and options for financial mechanisms that can place nature at the center of their development. While there are many commonalities, SIDS are also not a homogenous group of countries, with each of the geographical sub-regions of the SIDS [the Caribbean, the Pacific, and the Atlantic, Indian Ocean and South China Sea (AIS)] having different challenges as well as variations in size, capacity, gross domestic product (GDP), and connectivity.

243. There are multiple anthropogenic drivers of ecosystems degradation affecting the SIDS, in particular related to key economic sectors including tourism, food (both agriculture and fisheries), and rising urban development. These key sectors, which are the main contributors to GDP[218] in most SIDS, rely heavily on the use of natural resources and ecosystem services, often in an unsustainable manner.

244. Land resources in the SIDS are limited but vital. However, land use change and conversion[219] as well as unsustainable practices on productive landscapes for agriculture and forests is widespread[220] and has led to diminished soil health, loss of forests and vegetative cover, and loss of other key biodiversity, particularly in areas of high endemism. This puts the related ecosystem services – provisioning, regulating, supporting[221] -- at risk. As well, island species make up 75% of recorded terrestrial vertebrate extinctions[222]. Land and forest degradation processes also further threaten livelihoods, well-being, food and water security, and

[217] CBD 2014, Island Biodiversity — Island Bright Spots in Conservation & Sustainability, Convention on Biological Diversity
[218] In the Seychelles, for example, ecotourism indirectly accounts for more than 50% of GDP (UN-OHRLLS 2017, Small Island Developing States in Numbers: Biodiversity & Oceans)
[219] Driven by agriculture and increased food demand, mining, illegal logging and urban development.
[220] For example, in Mauritius, the total annual cost of land degradation is estimated at USD 16 million – this is equal to 0.2% of the country's GDP. A considerable share of the costs of land degradation (37%) is due to the decline in ecosystem services (such as food security, water supply, etc.), which has a significant impact on the population of the country.
[221] Provisioning (e.g. food and fuel for livelihoods), regulating (e.g. reducing greenhouse gas emissions, erosion control) and supporting (soil protection and habitat for biodiversity)
[222] Tershy, B. R., Shen, K., Newton, K. M., Holmes, N. D. & Croll, D. A. The importance of islands for the protection of biological and linguistic diversity. Bioscience 1–6 (2015).

increase vulnerability to climate change of SIDS, for example by contributing to landslide risk during high-intensity rainfall events.

245. In terms of the marine environment, the Exclusive Economic Zone (EEZ) is, on average, 28 times the country's land mass[223] in SIDS and supports many livelihoods reliant on fisheries, aquaculture, shipping, and tourism. Marine resources and ecosystems such as coral reefs and mangroves are also impacted by land-based sectors such as agriculture and urban development. Unsustainable practices in these sectors have led to a variety of environmental problems including marine species loss, destruction of ecosystems, and increased land-based pollution in marine areas threatening ocean health, and the ecosystem services that these resources provide.

246. SIDS also suffer from water quality and quantity stress due to contamination by human and livestock wastes, deforestation, chemical and other forms of pollution from industrial and agricultural activities.. Furthermore, adequate freshwater is important for the continued growth of the tourism, agriculture and other sectors of the SIDS economies.[224]

247. High vulnerability to climate change compounds these challenges. SIDS are already facing the impacts of climate variability and will continue to face a range of challenges including frequent and extreme weather events, freshwater stress, changes in fish migratory patterns, sea level rise and related issues with salinization, flooding, permanent inundation, erosion and pressure on ecosystems, changes in precipitation patterns, and drought sensitivity.[225]

248. These challenges are also hindering the achievement of the SDGs, the Paris Agreement, and land neutrality targets being set by parties to the UNCCD and are an important consideration for achieving the Post 2020 Global Biodiversity Framework.

249. SIDS economies and livelihoods have been significantly affected by the global COVID pandemic, in particular in the tourism, agriculture and fisheries sectors. SIDS' GDP dropped by 6.9% compared to 4.8% in all other developing countries[226].

250. Challenges also exist in terms of environmental policies and governance, such as poor land use and marine spatial planning and governance; policy incoherence; inadequate financial frameworks and financial mechanisms to apply Nature-based Solutions (to development and societal challenges); and poor or absent engagement of the private sector. It is also important to recognize the varied gender dynamics amongst the SIDS regions, and how this may differentially

[223] UN-OHRLLS 2017, Small Island Developing States In Numbers: Biodiversity & Oceans
[224] CBD 2014, Island Biodiversity — Island Bright Spots in Conservation & Sustainability, Convention on Biological Diversity
[225] IPCC 2018, Special Report Global Warming of 1.5ºC
[226] OECD. January 2021. COVID-19 pandemic: Towards a blue recovery in small island developing states. https://www.oecd-ilibrary.org/social-issues-migration-health/covid-19-pandemic-towards-a-blue-recovery-in-small-island-developing-states_241271b7-en

affect societal resilience as well as influence institutional decision making, use of resources/ecosystems and access to benefits from these resources.

251. There is wide recognition of the crucial importance of natural resources to livelihoods in many SIDS communities, compared with other parts of the world. The value and critical role of ecosystem services to key economic sectors and systems in SIDS – pertaining to both the green and blue economy – is also evident; however, this needs to be applied at scale.

252. The Dasgupta review makes the case that the solution starts with understanding and accepting a simple truth: our economies are embedded within Nature, not external to it[227]. This is paramount in the SIDS context.

GEF-8 Integrated Program

253. SIDS have the opportunity to lead the world in demonstrating the transformational potential of incorporating the value of nature into decision-making and using innovative Nature-based Solutions (NbS)[228] to achieve development goals and address humanity's greatest challenges, such as food security and climate change mitigation and adaptation.

254. Nature-based Solutions are actions to address societal challenges through the protection, sustainable management and restoration of ecosystems, benefiting both biodiversity and human well-being, including the creation of livelihoods.[229]

255. Given the high degree of interconnectivity among marine and terrestrial ecosystems, economic sectors and livelihoods, the SIDS are uniquely positioned to pioneer a NbS approach. Simultaneously, the GEF is also uniquely equipped to support the Blue and Green Islands program, that provides the integrated approach needed to address these interconnected environmental challenges driven by key sectors—tourism, food (agriculture, fisheries) and urban development—which also impact each other. This approach responds directly to the recent SIDS Evaluation by the GEF IEO, which emphasizes the need for more integrated interventions [230, 231]

[227] Dasgupta, P. (2021), The Economics of Biodiversity: The Dasgupta Review. (London: HM Treasury)
[228] The recent SIDS Evaluation by the GEF's Independent Evaluation Office underscored the importance of supporting innovative approaches in the SIDS, even if there may be a higher risk involved. https://www.thegef.org/sites/default/files/council-meeting-documents/EN_GEF.ME_C57_02_IEO_SCCE_SIDS_Dec_2019_F.pdf
[229] Dasgupta 2020, Final Report of the Independent Review on the Economics of Biodiversity Dasgupta Review
[230] GEF/ME/C.57/02, Strategic Country Cluster Evaluation of The Small Island Developing States, https://www.thegef.org/sites/default/files/council-meeting-documents/EN_GEF.ME_C57_02_IEO_SCCE_SIDS_Dec_2019_F.pdf.
[231] This also addresses emerging findings from the OPS-7 study on "Innovation in the GEF" that highlight the challenges of scale in the promotion, feasibility and piloting of innovation in smaller countries. GEF IEO, 2021 "Highlights: Evaluation Findings 2018-2021"

256. Previous GEF investments in SIDS, through initiatives such as the GEF-5 Ridge to Reef program in the Pacific, and Integrating Water, Land and Ecosystems Management (IWECO) in the Caribbean, have demonstrated the linkage between environmental health and human well-being. Building on this, a more comprehensive nature-based development model can lead to more sustainable outcomes for nature and people.

257. This program will encourage SIDS to fully integrate natural capital valuation into relevant economic sectors so that nature and its assets can support healthy societal growth that is durable.

Objectives, Key Interventions, and Selection Criteria

258. The objective of the Blue and Green Islands Integrated Program is to apply Nature-based Solutions in key ecosystems that support socio-economic development in SIDS countries. This will place nature at the center of human well-being and generate multiple global and local environmental and societal benefits. This program will contribute to the GEF's overarching goal to create healthy and resilient ecosystems.

259. Two key features of the program— *integration* and the *centrality of nature* —will be demonstrated by:

i) Addressing cross-cutting upstream challenges related to accounting and valuing of ecosystems, policy coherence, and domestic public and private sector resource mobilization, among other areas;

ii) Addressing landscape level challenges related to 3 key sectors for the SIDS context (tourism, food-fisheries/agriculture, urban development).

260. Integration will be applied at different scales, including i) across the countries involved in the program (e.g, through sub-regional initiatives, both intra and inter); ii) at the national level (horizontally) across sectors; iii) vertically across different levels of governance, and iv) across groups of stakeholders including private sector, government, NGOs, and vulnerable groups including women and IPLCs, etc.

261. A global coordination function of the program will provide technical support, capacity, learning, tools, guidance, and action on: enabling environment interventions such as natural capital accounting and valuing ecosystems; improvement of national financial frameworks and development of blended financemechanisms and solutions for the public and private sector; coordinating and leveraging (as a block of countries) external funding opportunities for impact at scale across multiple benefits; meaningful engagement of private sector (both local and international) for innovative NbS specific to the SIDS context; engagement with existing sub-regional governance platforms/bodies to help to embed Nature-based Solutions in regional level

institutional and policy frameworks. South-South learning, knowledge exchange, and collaboration will be a key aspect of the program.[232]

Interventions for enhancing the enabling environment

262. These interventions will benefit from support through the global program and will also require action in country.

263. *Natural Capital Accounting (NCA)[233] and Valuation* – This activity will be undertaken on key natural resources and ecosystems including, forests, coastal, marine, freshwater, etc. This activity could support: i) valuation under different frameworks related to ecosystems, agriculture/forests/fisheries, land, water to identify the links between an ecosystem and the economy in both physical and monetary terms and to identify trade-offs among different land uses; and ii) standardization of data and modelling approaches to embed natural capital accounting in national economic accounts.[234]

264. *Integrated and Comprehensive Planning* – Policy coherence through integrated and comprehensive planning will be needed and will require collaboration across relevant Ministries such as Finance/Economic Development/Planning, Agriculture, Environment, Urban/Housing, Tourism, and Trade. This intervention will utilize the data provided from the valuation of natural capital to engage in integrated land use and marine spatial planning. There could also be opportunities to facilitate integrated sectoral policies at the national and sub-regional level.

265. *Enhancing Financing Options from the Public and Local Private Sector* – Facilitating and supporting domestic resource mobilization in SIDS in support of NbS is a necessary enabling factor to achieving multiple and lasting benefits. Utilizing the information from NCA and valuation, and supporting the integrated planning, this intervention may include: strengthening of the relevant financial and lending policies to discourage investments that lead to degradation ecosystems, channeling public and private funding to activities that enhance natural assets and ecosystem services, testing incentive mechanisms such as payment for ecosystem services (linked to water, forests or other ecosystems), and developing blended finance mechanisms specific to the needs of the SIDS context.

[232] This is line with the recent SIDS Evaluation by the GEF's Independent Evaluation Office, which recommended that regional programs should encourage a transfer of knowledge to the poorest SIDS through a South-South capacity-building approach.GEF/ME/C.57/02, *Strategic Country Cluster Evaluation of The Small Island Developing States*, https://www.thegef.org/sites/default/files/council-meeting-documents/EN_GEF.ME_C57_02_IEO_SCCE_SIDS_Dec_2019_F.pdf

[233] NCA covers accounting for individual environmental assets or resources, both biotic and abiotic (such as water, minerals, energy, timber, fish), as well as accounting for ecosystem assets (e.g. forests; wetlands), biodiversity and ecosystem services. UN System of Environmental-Economic Accounting (SEEA)

[234] Dasgupta 2020, Final Report of the Independent Review on the Economics of Biodiversity Dasgupta Review

266. *Knowledge Management, Awareness and Collaborative Engagement*[235] – Opportunities to capture, recycle, repackage and utilize knowledge specific to the SIDS context in relation to NbS, NCA and valuation will be included, as well as building the capacity to do the same. This will include knowledge within countries, and within and across regions. Operational mechanisms such as multi-stakeholder platforms and dialogues will also be explored at the national, sub-regional and inter-regional level, for cross-learning, and to crowd in international private sector engagement and additional financing for Nature-based Solutions targeting the tourism, food and urban sectors.

Interventions in country in implementing NbS in key economic sectors

267. In addition to the targeted, upstream activities, national activities will also be expected to implement landscape and seascape level innovative Nature-based Solutions tied to one or more of the key sectors. Innovation will be prioritized both in the type of activities undertaken and/or in the financial mechanisms used to make them possible.

268. *Tourism* – Tourism represents over 30% of export GDP in SIDS and 98% and 88% of export GDP in St Lucia and Palau respectively. It also contributes heavily to employment, generating 27% in Caribbean islands, 24% in AIS and 20% in the Pacific. Women comprise 54% of global tourism employment[236]. Countries choosing to work on this theme could undertake activities that support holistic sustainability planning and decision making for tourism development; marine and terrestrial protected areas management; engaging tourism enterprises in the care and restoration of nature; and coral reef insurance. The activities will deliver substantial benefits for terrestrial and marine protected areas and help to maintain the ecosystem services areas associated with them.

269. *Food Sector (agriculture and fisheries)* – Caribbean and Pacific SIDS import 60% of their food, with half importing more than 80%. Women make up 52% of the agricultural workforce, but have less access to land, resources, and credit than men.[237] Countries may: receive technical support for small farmers and fishers to move towards more sustainable practices; engage in activities to maintain, improve and restore agro-ecosystems in support of food production and livelihoods; engage in restorative agriculture and integrated pest management to reduce agrochemical use; apply NbS to curb sources of land-based pollutants; building robust and sustainable supply chains and strengthen farmer and fisher organizations; and improve community-based fisheries management, commercial fisheries management,

[235] The recent SIDS Evaluation by the GEF's Independent Evaluation Office emphasized the promotion of knowledge exchange among SIDS. GEF/ME/C.57/02, *Strategic Country Cluster Evaluation of The Small Island Developing States*, https://www.thegef.org/sites/default/files/council-meeting-documents/EN_GEF.ME_C57_02_IEO_SCCE_SIDS_Dec_2019_F.pdf

[236] UNDP. 2020. https://www.undp.org/content/undp/en/home/blog/2020/how-can-small-islands-reimagine-tourism-for-a-green-recovery.html

[237] FAO. 2019. FAO's Work with Small Island Developing States. http://www.fao.org/3/ca5170en/ca5170en.pdf

aquaculture and/or marine and terrestrial protected areas management. These activities will enhance people's well-being through improved nutrition, health, and livelihoods , as well as the protective and buffering services of healthier ecosystems.

270. *Urban* – Approximately 60 percent of SIDS populations live in urban settlements.[238] Limited available land means that people are living at high densities even if population numbers do not appear to be large. Ecosystems supporting and impacted by urban activities include forests, mangroves, coral reefs. For example, poor wastewater management leads to poor coastal water quality, impacting high-biodiversity coral reefs. Countries choosing to work in this sector may focus on innovative Nature-based Solutions to wastewater management, water security, urban flooding, renewable energy, and/or solid waste management; and restoration of degraded productive landscapes in peri-urban and rural areas to improve the ecosystem services they provide in urban areas. The solutions would ideally take place in ecosystems that support urban spaces such as forests and coastal areas and can deliver benefits in terms of ecosystem services – provisioning and regulating – as well as generate resilience benefits for these highly vulnerable populations.

271. *Inclusive and gender responsive approaches* – Gender is embedded in all economic sectors, addressed in this program.,. The program will include gender analyses to define the context specific gender dynamics linked to the sectors and include provisions to apply gender-responsive approaches. Projects should strive to include IPLCs particularly women and youth, such as through support for and strengthening systems of: territorial and natural resource management; traditional foods and agricultural practices; sustainable tourism related livelihoods and benefits sharing.

272. Given the potential adaptation benefits of the program, opportunities to collaborate with the GEF's adaptation funds (LDCF/SCCF) will also be explored.

273. All GEF-eligible SIDS may participate in the program, with each country applying upstream activities to address cross-cutting challenges and downstream activities specific to one or more of the sectors that are dominant in their specific contexts. Selection of countries will take into account the level of ecosystem degradation linked to the key sectors and the potential for multiple environment and societal benefits (biodiversity, land degradation, climate change mitigation, and adaptation and resilience, to support sustainable development and secure livelihoods). Countries will need to demonstrate strong political will across key ministries, have baselines upon which to build activities related to NCA, valuation and Nature-based Solutions, opportunities for private sector engagement and potential to leverage public and private sector funding. The program will strongly encourage participation from all SIDS sub-regions. Selection

[238] UN-Habitat. 2015. Urbanization and Climate Change in Small Island Developing States. https://sustainabledevelopment.un.org/content/documents/2169(UN-Habitat,%202015)%20SIDS_Urbanization.pdf

will also be based on innovation and potential to drive transformational change of proposed activities.

Existing Platforms and Potential Partners

274. The program will seek to engage and build on the work of existing bodies such as the Alliance of Small Island States (AOSIS) and support the implementation of global frameworks such as the Small Island Developing States Accelerated Modalities of Action (SAMOA) Pathway.

275. Potential partners (at the national and regonal level) could include i) the existing funding mechanisms such as the Caribbean Biodiversity Fund, Micronesia Conservation Trust, Global Fund for Coral Reefs and multilateral and regional financial institutions which can provide opportunities to incoporate blended finance; ii) sub-regional governance partners such as CARICOM, SPREP, SPC, which would be useful to embed NbS approaches in regional level policy frameworks; ; iii) private sector partners such as AXA[239] to develop innovative NbS leverage finance and pilot PES mechanisms; iv) and global SIDS partners such as SIDSDOCK and other regional bodies such as the Caribbean Community Climate Change Centre to leverage and share knowledge.

276. Potential platforms and coalitions to collaborate with related to the private sector and finance, include the SIDS Global Business Network (SIDS-GBN), the Ocean Risk and Resilience Action Alliance (ORRAA), as well as those platforms which may not yet have a SIDS presence such as Taskforce on Nature-related Financial Disclosures. Platforms that may be useful in relation to policy coherence and accessing finance could also include trade related platforms given the link to the economic sectors of focus.

Contributions of this Program to MEAs and Related Global Environmental Benefits

277. The integrated nature of the program and the Nature-based Solutions approach will provide an avenue to support countries to meet their commitments and targets under all of the MEAs simultaneously. In the context of the 2030 targets and beyond, supporting a coalition of SIDS to set ambitious targets for 2030 will simultaneously cut across various GEF mandates and priorities.

278. This program will directly address Targets 1, 6, 7, 8, 9, 10, 13, 19, and 20 of the proposed draft Global Biodiversity Framework (GBF) and will also yield benefits in addressing major threats to biodiversity. It will support the valuing of protected areas and natural ecosystems, increasing finance for protected areas, and mainstreaming biodiversity conservation in agriculture and fisheries. It will also seek to address causes of habitat degradation and other

[239] AXA XL is working with multiple science partners to develop a ground-breaking Coastal Risk Index (CRI) that integrates the protective benefits of coastal ecosystems into insurance risk models.

drivers of biodiversity loss. For instance, many of the lines of intervention will reduce land-based sources of pollution for coastal waters including sedimentation from poor agriculture, forestry, and land management practices (Target 6 in the GBF). Poor water quality stresses already-challenged coral reefs, seagrasses and mangroves, making them less resilient to bleaching and acidification.

279. Globally, 250 million hectares are committed to restoration under the Nationally Determined Contributions (NDCs) to the UNFCCC[240]. With updated NDCs capturing both adaptation commitments (e.g. in Marshall Islands) and forest and land use commitments (e.g. in Jamaica) the program can contribute to mitigation actions under the agriculture, forestry and other land use (AFOLU) sectors. The Program also contributes to Article 5 of the Paris Agreement on carbon sinks and REDD+[241] and Article 7.1 on climate adaptation.[242]

280. Under the UNCCD, as 23 SIDS have committed to voluntarily set LDN targets, the Blue and Green Islands Integrated Program can contribute to their commitments under the Convention and the UNCCD Strategy (2018-2030). The response hierarchy of the LDN – to avoid and reduce desertification and land degradation and to reverse degraded land – aligns well with the Nature-based Solutions approach, in particular the focus on restoration.

281. The program will also complement other GEF Integrated Programs on Food Systems, Landscape Restoration, Sustainable Cities, Blue Economies and Healthy Oceans and the Net-Zero Accelerator Programs.

Role of the private sector in supporting this program

282. Engaging the private sector at the national, sub-regional and global level will be necessary for the success of this program. The private sector has a significant presence across all three economic sectors and can provide opportunities for developing financial mechanisms to deliver NbS as well as innovative solutions for the SIDS context. These may include IDB's Compete Caribbean or WRI's Land Accelerator initiative. The private sector will also be an essential partner in upstream activities to collaborate and provide inputs on strengthening of financial frameworks that integrate nature and at the downstream level for piloting of mechanisms such as PES and strengthening supply chains (including for high value products).

283. The private sector plays a critical logistics role in SIDS which can be leveraged i) to support the aggregation of smallholder commodities (high value cash commodities such as

[240] Sewell et.al, PBL Netherlands Environmental Assessment Agency 2020, Goals and Commitments for the Restoration Decade

[241] Parties should take action to conserve and enhance, as appropriate, sinks and reservoirs of greenhouse gases' and 'reducing emissions from deforestation and forest degradation, and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks.'

[242] 'Enhancing adaptive capacity, strengthening resilience and reducing vulnerability to climate change, with the view to contributing to sustainable development and ensuring adequate adaptation response in the context of the temperature goal.'

vetiver and vanilla); and ii) to provide a more robust source of regional food and nutrition security that can reduce the need for emissions intensive and low nutritionimports. The global project will also work to engage larger private sector entities (such as cruise and shipping companies), who may be difficult to negotiate with as a single country.

284. As the awareness of the impacts and dependencies on natural capital, grows among the private sector, the Blue and Green Islands program will provide investment pathways (based on the Natural and Social Capital Protocols), which can both reduce the negative externalities of sectors such as tourism and build the resilience of the ecosystems that underpin these economic activities.

285. There is an opportunity to explore private sector support on knowledge aspects using innovations in digital technology. Digital interventions can be used for data collection and monitoring, decision support tools that optimize the outcome of investments that deliver GEBs, to monitor and track the progress of investments, and to capture and repackage knowledge that is generated by the projects.

Blue Economies and Healthy Oceans Integrated Program

Introduction

286. A sustainable managed ocean is essential to ensure the economic, social and ecological services that it provides. The ocean is currently providing the world economy with values conservatively estimated at US$2.5 trillion each year to the world economy in market goods and services and many times that in non-market amenities[243]. Services provided by marine ecosystems include food security, climate stability, tourism opportunities, carbon sequestration and coastal protection. Therefore, we need the ocean to be thriving with balanced use, an abundance of fauna and flora in the coastal zones, ensuring that the ocean can continue to be the stabilizing factor for mankind's activities, while being the pivotal centerpiece that provides cultural identity, livelihoods and social structures to local communities, nations and regions.

287. In most coastal countries of the world the story is the same, near-shore ecosystems have been destroyed or their functionality sincerely impaired with the resultant loss of biodiversity and ecological goods and services, including fish habitat and wave attenuation . Coastal pollution has been the primary culprit, since municipal wastewater and agricultural run-off is released into the marine environment untreated. While access to appropriate sanitation is increasing globally, the collection and treatment rates are still extremely low. Untreated wastewater and agricultural run-off being poured straight into our shared ocean, leads directly to eutrophication. In coastal waters, oxygen declines are caused by increased levels of nitrogen, phosphorus and organic matter from agriculture and sewage, causing eutrophication. Oxygen is essential for life in the oceans, but alarmingly, the levels of oxygen in our oceans have been declining dramatically over the past 50 years, leading to more than 500 euthropic/deadzones, covering an area roughly the size the the European Union.

288. It will not be possible to experience healthy resilient blue economies prevail across the world, unless the issue of coastal pollution is addressed. Coastal waters are often a repository of a wide range of urban, agricultural, and industrial wastes. Coastal pollution caused by land-based activities is one of the most serious threats to the world's coastal ecosystems, directly affecting, human health and economic prosperity. Today, 44% of the world's population live within 150 km of a coastline, and two-thirds of the planet's largest cities are located in low-lying coastal areas. Assuming that the current pace of urbanization and demographic trends continue, the impact on coastal ecosystems will increase dramatically leading to more dead zones. On top of these trends, wastewater from agricultural and municipal sources is given nearly zero political attention, negatively impacting the amount of public investment being earmarked to treatment of these pollution sources. This means that today only ~1/5 of wastewater is treated and most of this only to a level that does not stem flows of nitrogen, phosphorous, organic matter,

[243] Hoegh-Guldberg, O. et al. 2015. Reviving the Ocean Economy: the case for action - 2015. WWF International, Gland, Switzerland., Geneva, 60 pp.

pharmaceuticals, endocrine disruptors, vira and bacteria like E.coli, Salmonella typhi and SARS-CoV-2.

289. Considering the multiple economic, environmental, social, cultural and societal benefits from investments in secondary or tertiary wastewater treatment[244] [245], the global community can simply not afford to not invest heavily in wastewater management and treatment. In return, a suite of benefits will be realized, some of which will have lasting impacts towards securing a healthy ecosystem and improving livelihoods for local communities. Among these are; long-term improved health benefits on fauna and humans by removing water-borne viruses, bacteria, endocrine disruptors, microplastic particles, nitrogen, phosphorous and other chemical compounds; improved economic opportunities; increased societal well-being; reduction in water-borne vira and bacterial diseases, improved reef and ecosystem services, improved health of blue forests ecosystems (mangroves, salt marshes, seagrasses, kelp and seaweed forests and reefs) and the fauna within them.

290. Wastewater from agriculture and municipal settlements is a major threat to coastal ecosystem health and integrity. Excessive amounts of nitrogen, phosphorous and organic matter will lead to algae blooms and hypoxic zones, which will push living organisms out of the ecosystem and ultimately lead to dead zones. On top of these devastating effects, that leaves the coastal ecosystems fragile to climate induced impacts and bared from resources to support economic development and human basic needs, untreated wastewater bring vira and bacteria to the coastal zones, such as E.coli and SARS-CoV-2.[246] In the midst of the global pandemic, the case for why wastewater treatment is essential, is clearer than ever before. If we want to get a handle on the current pandemic and avoid future similar devastating developments, wastewater treatment investments need to be part of the short- and long-term investment strategies. Currently, somewhere between 70-80% of the global wastewater, is being transported untreated into the ocean, via rivers or directly discharged. Of the remaining 20-30% treated wastewater, most is only given primary treatment, that only removes large particles, and hence do not deal with nutrients, microplastics, pesticides or bacteria. Investing in wastewater infrastructure combined with Nature-based Solutions to treat wastewater, is in line with the global calls for building back greener/bluer, and will target a serious issue impacting ocean ecosystem and human health and well-being. The problem of ocean pollution starts on land but has detrimental effects on the opportunity for healthy blue economic development.

291. Treatment of wastewater to atleast secondary level, but preferably tertiary level, will have direct and clearly quantifiable effects on the status of environment of the receiving waters and

[244] Costello, C., L. Cao, S. Gelcich et al. 2019. “The Future of Food from the Sea.” Washington, DC: World Resources Institute. https://www.oceanpanel.org/blue-papers/future-food-sea; IEA and ETP. 2017. “International Energy Agency, Energy Technology Perspectives 2017.” www.iea.org/etp2017.
[245] . Hoegh-Guldberg, O., et al. 2019. “The Ocean as a Solution to Climate Change: Five Opportunities for Action.” Washington, DC: World Resources Institute. https://oceanpanel.org/sites/default/files/2019-10/HLP_Report_Ocean_Solution_Climate_Change_final.pdf.
[246] Tran et al 2021: SARS-CoV-2 coronavirus in water and wastewater: A critical review about presence and concern.

the ecosystems that they are a part of. Investments in wastewater treatment, will not only benefit the global human population, but also curb potential infection of marine species by SARS-CoV-2[247] and shellfish infection from Salmonella typhi[248]. Proper treatment of municipal wastewater will not only directly curb pollution that has detrimental effects to freshwater and ultimately marine ecosystems, but also break one of the pathways for bacteria and vira to spread.

GEF-8 Integrated Program

292. Curbing land-based pollution entry into the ultimate sink, namely the world's ocean, will demand action across multiple sectors, for example between public and private sector actors to inform policy formulation and foster direct action that directly will limit agriculture, municipal pollution to the ocean ecosystem. Securing a healthy vibrant coastal ecosystem, will not be possible unless countries stop fertilizer incentive schemes, change cultivation methods to minimize run-off and ensure proper treatment of municipal sewerage before discharging it to receiving waters. Pollution of the ocean has a devastating impact on local and distant ocean ecosystems and the ocean's resilience to curb with increasing human activity and climate induced changes.

293. Building back to a bluer, greener and healthier world, post the current pandemic, there is no doubt that investing in both grey and green infrastructure, to target flows of point and non-point pollution from land-based activities, will be the investment that will directly benefit human health and support healthy vibrant blue ecosystems. Surely such investments cannot stand alone to ensure a healthy blue ocean, but it will be an important first step, that built essential resilience in the ocean ecosystems.

294. The multitude of point and non-point sources of pollution, being carried by tides and currents into neighboring countries' EEZ, indeed makes this a transboundary issue, which is complex to management. The GEF recognizes that efforts targeted at prevention, reduction, and control of coastal pollution caused by land-based activities are crucial to maintaining the ecological, social, and economic well-being of countries situated along the coasts of the world's Large Marine Ecossytems (LMEs)[249]. The linkages between LMEs and river basins have long been realized, among others through the concept of Source to Sea interlinkages, as explored by GEF STAP[250].

295. To ensure a strong anchoring and the most optimal foundation for successful implementation of the program, it will be imperative that the investments recognize the

[247] Mathavarajaha et al 2021: Pandemic danger to the deep: The risk of marine mammals contracting SARS-CoV-2 from wastewater
[248] WHO 2021: Typhiod Fever https://www.who.int/ith/diseases/typhoidfever/en/
[249] Sherman K, 1991: The Large Marine Ecosystem Concept: Research and Management Strategy for Living Marine Resources. Ecological Applications Vol. 1, No. 4 (Nov., 1991), pp. 350-360
[250] GEF STAP 2016: a conceptual framework for governing and managing key flows in a source-to-sea continiuum - A summary and policy recommendations for the GEF Partnership. 1GEF/STAP/C.50/Inf.05/Rev.01

importance of inclusion of all the human capital that exists locally, nationally and regionally. This approach recognizes the important women play key roles in generating and sustaining change. Women play a prominent role in the productive use and management water and marine resources. Therefore, gender issues and mainstreaming of gender considerations into all processes and investments will be required. GEF-8 International Waters investments will require a gender assessment within each social analysis during project preparation, differentiated reporting of output indicators and additional measures based on the GEF's Gender Action Plan.

Objectives, Key Interventions, and Selection Criteria

296. The Integrated Program will be supporting healthy blue economic development by curbing coastal pollution from agricultural and municipal sources through infrastructure investments combined with Nature-based Solutions. By limiting inflow of untreated wastewater into the coastal zone, the coastal ecosystem will become richer in biodiversity, both flora and fauna, which will lead to expansion of the local livelihood opportunities ,as coastal ecosystem integrity and resilience increases. The potential of deploying NbS for wastewater treatment will provide entry points for local anchoring, engagement and economic opportunities. In order to ensure local uptake, it is important that local stakeholders and community leaders feel a responsibility for the success of the investments. That will only happen if the impacts of successful implementation and management is perceived as directly contributing to local healthy blue economies.

297. Addressing this global challenge through an IP will deliver a range of impacts that single investments would not be able to achieve. Among these are:

1) A concerted effort on industrial, municipal and agricultural runoff into the coastal zone, will renew the global attention to the topic. There has, over the last years, been a tendency to merely associate coastal pollution with plastic debris, that is a more visible problem. It is essential that the local, national and global discourse get to include the less visible marine pollution sources, if we are to secure local economic opportunities and human health.
2) Inform and incentivize national coordinated policy formulation process, that will link policy reforms with needed financing and implementation on the ground.
3) Integration at different scales, including regionally between countries, nationally through Inter ministerial committees, public and private entities as well as through communities of practice on specific technical or innovative approaches.
4) Leveraging of substantial infrastructure funding and technical skills. By addressing this issue through an IP, the IP will stimulate and inform investment portfolios nationally as well as with IFIs. Previous investment portfolios in GEF that has targeted agricultural and municipal pollution, has been able to generate substantial co-financing. It is believed that this IP, will generate considerable co-financing too.

5) The IP will support a global coordination function that will strengthen the national, regional and global resource base. This will be done through facilitating knowledge management and sharing lessons learned between national and global stakeholders. The format of such knowledge sharing tools are to be further elaborated on, but it may make sense to use the simple format of Results Notes and Experience Notes that has been developed, tested and finetuned through IWLEARN. Furthermore, the global coordination efforts will also include development of "how to" guides, that will focus either on policy formulation or on different technical solutions as well as ecosystem health indicators to be able to measure the impact of the interventions and tabulate these at program level.

298. Stopping inflow from the agricultural and municipal sectors into the ocean, should be done through a combination of upstream infrastructure investments and adjustments to management practices in both sectors, combined with policy formulation to support these measures. One of the central pathways towards succeeding in anchoring larger structural investments to local livelihood, can be realized by supporting a range of different Nature-based Solutions. Such approaches offer long-term economic savings for local and national authorities, compared to relying strictly on grey infrastructure and important entry points for supporting local blue economic developments in the coastal zone. Further, if managed and cleaned properly, wastewater from the agricultural and municipal sector can be reused directly for irrigation, aquifer recharging etc.

299. Below is listed a few examples on possible interventions that may be considered under this IP. Please note this list is not exhaustive, but merely included to provide some indication of what the IP may entail:

- Funding Nature-based Solutions to be combined with new or existing grey wastewater infrastructure for secondary or tertiary treatment of industrial, municipal effluents and agricultural non-point/point run off.
- Funding of low-cost, innovative Nature-based Solutions in coastal areas. Large-scale wastewater treatment systems may not be an appropriate option for treating agricultural and urban wastewater.
- Testing of innovative nutrient recycling tools and modalities
- Catalyze deployment of decentralized NBS wastewater treatment systems, such as constructed wetlands, activated sludge systems, sand and other filter systems
- Ensure coastal pollution efforts are coordinated between municipalities and between countries, to avoid efforts being diluted by lack of action of others,
- Incentivize management strategies such as implementing riparian buffers to curb nutrient pollution from agricultural sources.
- Development of innovative solutions to curb different sources of wastewater

300. A major barrier to improved wastewater management is the low levels of public political attention and therefore investment. As a natural effect of the current pandemic, the need for improved wastewater management globally is crystal clear. Utilizing the renewed attention this IP will bring, to direct investments in flexible, functional wastewater treatment systems, will lead to transformational environmental status changes. These changes will benefit human and ocean health, and lead to positive shifts in the health and sustainability of rivers, landscapes, aquifers and thereby ensuring that infection of potable water sources will be minimized too. This approach will facilitate political coordination and planning, and foster joint efforts of collaboration between the environmental health agencies.

301. The proposed integrated program will link directly to the International Waters Focal area, where the IP investments will be supported through activities in both Objective 1 and Objective 3. Furthermore, this program will have clear linkages to investments C&W, BD and LD Focal areas as well as to Integrated Programs; Food Systems, Sustainable Cities, Circular Solutions to Plastic Pollution, Blue and Green Islands, Elimination of Harmful Chemicals from Supply Chains, and Landscape Restoration.

Existing Platforms and Potential Partners

302. The Blue Economies and Healthy Oceans Integrated Program will offer a unique entry point for the GEF and its partners to leverage substantial financing from IFIs, pension funds and private banking operations. On top of these financial actors, there are a number of NGO, CSO and private sector able to support knowledge generation through its investments. A substantially financed IP, like this one, will be essential in raising the importance of proper wastewater treatment in the global discourse. Finally, there may be good opportunities for partnering and leveraging lessons learned through the Global Wastewater Initiative (GW^2I), The International Water Association (IWA) and Global Programme of Action for the Protection of the Marine Environment from Land-based Activity (GPA), Horizon 2020 and the partners around the Sustainable Blue Economy Finance Principles.

Contributions of this Program to MEAs and Related Global Environmental Benefits

303. All global and regional MEAs and many NDCs note the importance of a healthy and vibrant ocean ecosystem to ensure a healthy planet that will support humanity. Regional economic commissions, global and regional investment banks have dedicated large funding envelopes to address the devastating impact of wastewater and agricultural run-off into the ocean, due to the recognized impact on social, economic and cultural development opportunities in society.

Role of the Private Sector in Supporting this Program

304. The Blue Economies and Healthy Oceans Integrated Program will offer multiple entry points for private sector actors, from financial institutions on testing new financial tools, over knowledge and solutions providers, to SMEs and large conglomerates for testing and deploying new technologies and innovations:

- Development and deployment of new financial tools and products to stimulate private sector banking and pension funds to invest in grey and green pollution reduction facilities. Wastewater is a resource and hence there are economic value associated with treating it through tariffs as well as selling some of the by-products at the end of the treatment process. Therefore, the suite of investments under this IP, will offer an outstanding opportunity to showcase, at scale, different financial tools and products being utilized to support curbing pollution to the ocean ecosystem. The IP would among others draw on lessons from GEF investments such as the CREW and CREW+ and blue and green bonds modalities that currently are being developed and deployed globally.
- Stimulate innovation and technology development through eg moonshots and other innovation platforms among technology and solution providers from SMEs and large conglomerates.
- Through leveraging organizations like The International Water Association (IWA), Coalition for Private Investment in Conservation (CPIC), World Business Council for Sustainable Development and the CEO Water Mandate the IP will stimulate wastewater and agricultural runoff sector development, that directly will open engagement opportunities for private sector investors and service providers.

Greening Infrastructure Development Integrated Program

Introduction

305. Infrastructure development is essential to meet humanity's social and economic needs, including ramping up a global energy transition to meet net zero targets. This is especially true in developing economies where millions of people continue to lack access to basic services like water, energy, transportation, and telecommunications. It has been estimated that $95 trillion in new infrastructure is needed by 2040 alone to meet demand—twice what existed in 2012.[251, 252]

306. This much infrastructure development will have profound social and environmental consequences unless significant challenges in infrastructure planning and development are overcome; including biodiversity loss, deforestation and GHG emissions, to name a few. Anticipated investments in transportation and energy sectors are expected to be particularly impactful. More than 25 million km of new roads are anticipated by 2050, 90% in developing countries.[253] New roads will drive further deforestation in the last remaining old-growth forests, increasing already elevated risks for zoonotic disease spillover. Ninety-five percent of deforestation in the Amazon, for example, occurs within 5 km of a road.[254]

307. Existing transportation infrastructure already has significant costs for people and wildlife: for instance, animal-vehicle collisions are a leading source of mortality in many wildlife populations. Freshwater and coastal ecosystems fare no better, with hydropower dams already fragmenting 67% of long rivers. More than 3,700 dams are planned in the coming years and decades, reducing connectivity for aquatic species by as much as 40%. Already more than half of coastal wetlands have been lost as cities and infrastructure have expanded along coastlines.[255,256,257]

---

[251] Oxford Economics. 2017. Global Infrastructure Outlook. Global Infrastructure Hub. https://www.oxfordeconomics.com/recent-releases/Global-Infrastructure-Outlook

[252] Bhattacharya, A., Oppenheim, J. & Stern, N. 2015. Driving Sustainable Development through Better Infrastructure: Key Elements of a Transformation Program. Brookings Institution, The New Climate Economy and Grantham Research Institute, Washington, DC, USA.

[253] Alamgir M., M.J. Campbell, S. Sloan, M. Goosem, G. R. Clements, M.I. Mahmoud, W. F. Laurance. 2017. Economic, Socio-Political and Environmental Risks of Road Development in the Tropics. Curr Biol. 27(20):R1130-R1140.

[254] Barber, C.P., M. A. Cochrane, C. M. Souza, W. F. Laurance. 2014. Roads, deforestation, and the mitigating effect of protected areas in the Amazon. Biological Conservation 177: 203-209

[255] Grill, G., B. Lehner, M. Thieme, B. Geenen, D. Tickner, F. Antonelli, S. Babu, P. Borrelli, L. Cheng, H. Crochetiere, H. Ehalt Macedo, R. Filgueiras, M. Goichot, J. Higgins, Z. Hogan, B. Lip, M. E. McClain, J. Meng, M. Mulligan, C. Nilsson, J. D. Olden, J. J. Opperman, P. Petry, C. Reidy Liermann, L. Sáenz, S. Salinas-Rodríguez, P. Schelle, R. J. P. Schmitt, J. Snider, F. Tan, K. Tockner, P. H. Valdujo, A. van Soesbergen, and C. Zarfl. 2019. Mapping the world's free-flowing rivers. Nature 569:215-221.

[256] Barbarossa, V., R. Schmitt, Mark. Huijbregts, C. Zarfl, H. King, and A. Schipper. 2020. Impacts of current and future large dams on the geographic range connectivity of freshwater fish worldwide. Proceedings of the National Academy of Sciences Feb 2020, 117: 3648-3655.

[257] Li, X., R. Bellerby, C. Craft, and S. Widney. 2018. Coastal wetland loss, consequences, and challenges for restoration. Anthr. Coasts 1, 1–15.

308. There are two important drivers of these impacts. First is the development of infrastructure based on an insufficiently holistic understanding of true investment risks and environmental costs and benefits. Recent definitions of 'sustainable' infrastructure have more clearly articulated a comprehensive approach across the full life cycle of a project to ensure economic and financial, social, environmental (including climate), and institutional sustainability.[258] In addition, private sector investors have shown an increasing interest in environment, social and governance (ESG) considerations. Yet application of the environmental factors in decision making remains uneven. Mitigating greenhouse gas emissions is getting increasing attention but nature: biodiversity, land degradation, water management and ecosystem services, remains the least integrated factor. One cited reason for this lag is that available key performance indicators are not readily translated into a quantifiable financial impact, leaving biodiversity to be considered only during the latter due diligence stages of the process.[259]

309. Investors rely on environmental impact assessment and other institutional safeguards to try to limit environmental damage only, but these measures are applied too late. Employed on a project-by-project basis, they preclude community consultation at land/seascape scales upstream of detailed designs and financing arrangements, fail to consider systems-scale cumulative dynamics and impacts across sectors, make mitigation measures seem like costly add-ons, and do not promote nature gains. Project-level design also rarely sufficiently considers well-researched forecasts of future infrastructure service needs based on socioeconomic trends or climate scenarios.

310. Second, decision makers are not realizing the full potential of nature-based infrastructure solutions. While ecosystem services are increasingly valued, their benefits are rarely incorporated into infrastructure sector plans because current cost-benefit analysis standards and practices do not sufficiently consider the true negative costs of built assets or the positive benefits of these solutions. Nature-based infrastructure solutions are fundamentally disadvantaged compared to built infrastructure in both policy and practice, rarely classified as a comparable or substitute solution for service delivery due to the lack of guidance and engineering know-how.

311. These two overarching challenges in current infrastructure development practice are resulting in negative impacts on wildlife, climate, and deforestation and land degradation, regardless of project-level sustainability. Simply stated, without significant change in this status quo, the $95 trillion in anticipated additional infrastructure development investment in the coming decades will make meeting the goals of the UNFCCC, CBD, and UNCCD impossible.

[258] IDB. 2018. What is Sustainable Infrastructure? A Framework to Guide Sustainability Across the Project Cycle.
[259] Oliver Wyman and WWF. 2020. Incorporating Sustainability into Infrastructure.

GEF-8 Integrated Program

312. This program will deliver Global Environmental Benefits by enabling countries to meet infrastructure needs and the attendant economic and social benefits, critical to achieving meeting the SDGs and Paris Agreement goals, while securing nature and nature's services. It will do this by 1) avoiding the placement of infrastructure in globally important and particularly sensitive ecological areas, thus significantly reducing negative impacts to ecosystems from essential infrastructure development; 2) enabling countries to recognize ecological services as infrastructure (nature-based infrastructure solutions) and put in place the necessary protections for nature to continue to provide these functions; and 3) striking a balance between investment in new infrastructure and maintaining existing assets to meet sustainable infrastructure service delivery requirements.

313. It will do this by improving planning, regulatory, financial, and institutional and management frameworks geared to the differential needs of countries and landscape specificities. Whole life costs, holistic investment, skills retention, net-zero, resilience, flexibility, and multi-use design are all important criteria and are essential for a well-operating infrastructure industry and more importantly for embedding sustainability into infrastructure operations.

314. By redirecting the investment trajectory of some of the trillions of dollars aimed at infrastructure development toward low and zero-carbon, efficient, resilient, and biodiversity-positive options, the Impact Program will mobilize a new source of funding for conservation. Funds supporting new infrastructure options can serve to protect and secure significant blocks of intact habitat by avoiding negative infrastructure encroachment and building back and securing natural infrastructure services. Alongside retrofitting, upgrading, and maintaining existing built assets for improved energy and materials efficiencies, restored ecosystems can similarly provide infrastructure service benefits. The UN Decade of Restoration beginning this year, clearly demonstrates the essential role of large-scale ecosystem restoration. Building on existing geospatial tools to support the Restoration Decade objectives, this program promotes an integrated approach to strategically designing connected, multi-functional nature-based infrastructure solutions that deliver multiple services and co-benefits, either in concert with or in lieu of engineering.[260]

315. Shifting infrastructure investment in this manner will positively impact the environmental quality of long stretches of rivers, mitigate and sequester millions of tons of CO2, and improve the status of millions of protected areas in line with an individual country's commitments to the CBD, UNFCCC, and SDGs. Key priority landscapes will be targeted for integrated planning approaches and investments to prioritize nature-based infrastructure solutions and reduce habitat

[260] Estreguil, C., Dige, G., Kleeschulte, S., Carrao, H., Raynal, J. and Teller, A. 2019. Strategic Green Infrastructure and Ecosystem Restoration; Geospatial methods, data and tools. European Environment Agency, the European Topic Centre on Urban, Land, and Soil Systems, and DG Environment.

fragmentation caused by major energy and transportation infrastructure development. The program's innovative approach is to develop more robust investments in nature as part of sustainable infrastructure to complement the continued principal focus on decarbonization. Rather than seeing nature only as a due diligence issue, the program shows how it is a significant and integral part of the infrastructure that countries will need to achieve their development goals.

Objectives, Key Interventions, and Selection Criteria

316. The objective of the program is to enable countries to develop integrated portfolios of nature-based infrastructure solutions and sustainably engineered infrastructure projects at national or land/seascape levels that will deliver needed infrastructure services sustainably.

317. While Nature-based Solutions for infrastructure hold much promise, they are in the early stages of global uptake. Successful scaling of Nature-based Solutions for infrastructure will require overcoming several challenges. These include the current lack of a robust and geographically diverse evidence base of the cost-effectiveness of Nature-based Solutions relative to more traditional alternatives[261], and the need for enabling policies and incentives that ensure that these solutions are ecologically appropriate[262] and tailored to local governance and socio-cultural contexts.[263]

318. It is similarly essential that Nature-based Solutions for adaptation, employed either in lieu of or complementary to engineered approaches, are locally tailored – for example, when addressing the more frequent coastal storm surges and flooding due to climate change. The science shows that Nature-based Solutions for adaptation will not address the full magnitude of these risks, particularly in urban areas where Nature-based Solutions would most likely not deliver sufficient protection benefits at the necessary scale. Yet it is increasingly clear that more effective strategies will incorporate a combination of engineered and natural system management approaches. Scale and connectivity are particularly essential components to delivering nature-based infrastructure solutions where small, isolated patches will not cost-effectively deliver the necessary benefits, compared to larger scale, intact ecosystems or networks of hybrid green-grey solutions.[264]"

319. With the accelerating pace of infrastructure investment, proven approaches to securing global environmental benefits while delivering infrastructure are needed. Efficiency benefits will

[261] Chausson, A, Turner, B, Seddon, D, et al. 2020. Mapping the effectiveness of Nature-based Solutions for climate change adaptation. Global Change Biology. 26: 6134– 6155.
[262] Seddon N, Chausson A, Berry P, Girardin CAJ, Smith A, Turner B. 2020. Understanding the value and limits of Nature-based Solutions to climate change and other global challenges. Phil. Trans. R. Soc. B375: 20190120.
[263] Lechner, A., R. Gomes, L. Rodrigues, et al. 2020. Challenges and considerations of applying Nature-based Solutions in low- and middle-income countries in Southeast and East Asia. *Blue-Green Systems* 2: 331–351.
[264] Calliari, E., Staccione, A. & Mysiak, J. An assessment framework for climate-proof Nature-based Solutions. Sci. Total Environ. 656, 691–700 (2019).

accrue if multiple countries apply and share experience with such proven approaches. At the country and landscape/seascape scale, the program will simultaneously target three key areas:

1. Improve the policy enabling environment for decision-making and investing in the delivery of infrastructure services through nature-based and sustainable engineered approaches via:

    - Transparency and equity of participation requirements, including IPLCs, in planning and design under the principle of free, prior, informed consent."
    - Regulations requiring integrated planning for any/all infrastructure investments; and
    - Procurement incentives to require incorporation of nature-based infrastructure and to advantage sustainable, biodiversity-positive, and nature-based infrastructure solutions.

2. Strengthen integrated, multisectoral, and participatory upstream planning and design. The GEF will support countries to create and apply systems for multisectoral, stakeholder-based upstream planning to identify infrastructure service needs at the national and sub-national landscape/seascape scale and over long-term horizons, along with priority areas of investment in nature, to deliver such services and drive integrated, land/seascape and river basin management. Such information will be made available to sectoral ministries and project developers to establish a common understanding of key environmental parameters and drive down the costs of project-level analysis and risks of investing. Integrated assessments will cover:

    - Current and future climate change impacts and risks;
    - Spatial analysis and valuation of ecosystem services and biodiversity, including those delivering infrastructure services (nature-based infrastructure solutions);
    - Socioeconomic development needs and priorities based on population growth, energy transition needs and other relevant long-term socio-economic trends; and
    - Necessary technical design solutions to support delivery of nature and biodiversity-positive infrastructure, including, for example, linear infrastructure adaptations that maintain ecosystem connectivity or changes to wind turbine operations to reduce migrating bird mortality (as undertaken in the GEF-funded Migratory Soaring Birds Project.[265])

[265] UNDP, Birdlife and GEF. Migratory Soaring Birds Project. https://migratorysoaringbirds.birdlife.org/en/about-project#gsc.tab=0, accessed February 21, 2021.

3. Enhance financing and de-risking mechanisms for delivery of nature-based and sustainable built approaches to providing infrastructure services. Building conservation considerations and Nature-based Solutions into infrastructure service delivery represents a massive and often unrecognized opportunity, but it requires considerable coordination among governments, companies, public and private financial institutions, and local stakeholders. The program will support the development of approaches to the allocation of infrastructure financing to complement existing infrastructure project preparation and project delivery vehicles and facilitate nature-based infrastructure investments by:

    - Enhancing the development and standardization of biodiversity targets for both traditional (grey) and nature-based infrastructure alternatives (green);

    - Expanding access to pipelines of bankable projects that can help demonstrate the value of incorporating nature-based infrastructure into services delivery;

    - De-risking investment opportunities through the provision of early stage (pre-feasibility/feasibility) financing and/or creating or strengthening linkages to risk-reduction products (insurance, guarantees, viability gap financing, etc.); and

    - Sourcing and matching blended capital from diverse sources to support creation of integrated portfolios of nature-based infrastructure solutions and sustainably engineered infrastructure projects.

320. At the global level, a platform will be created for information exchange and learning across participating countries. This will provide a means for optimizing the contributions of each project and associated partners, based on knowledge and experience gained. Coordination and reporting at the program level will also be handled through the platform. The program will compliment and explore synergies with other GEF programs that may not have the capacities and capabilities to address these challenges. Potential areas to be addressed through the knowledge management elements of the platform include the following, based on the experience and demand of participating countries:

- Assessing and promoting the true environmental costs of traditional infrastructure and the value of integrated, multi-sectoral sustainable infrastructure planning and development, including nature-based infrastructure solutions;

- Learning around the design of nature-based infrastructure solutions; and

- Shared understanding of innovative approaches to facilitating the financing of sustainable infrastructure.

321. To maximize global environmental benefits, the program will focus on built infrastructure likely to create the greatest harm—or nature-based infrastructure solutions with the greatest potential benefit—in areas of high biodiversity and potential for greenhouse gas emission reductions and/or contributions to climate resilience, and threat of land degradation, based on the latest global science. Priority infrastructure investments for attention under the program will include roads, rail, ports, hydropower, renewable energy, and power transmission. Interest is expected from countries that have:

- Desire and political will to apply the approach;
- Large-scale infrastructure investment aspirations in the sectors of greatest impact; and
- Intact habitats providing high biodiversity and/or climate benefits.

Existing Platforms and Potential Partners

322. In the past two years key policy decisions by international platforms have sent powerful signals to the infrastructure community and provided incentives for catalyzing enabling environments for more sustainable infrastructure around the world. Even though COVID-19 economic recovery plans may surface poorly designed infrastructure projects in response to stimulus demands, the recent G20 agreement on Quality Infrastructure Investment (QII) Principles and the European Union Taxonomy may put a brake on highly unsustainable options. Public and private sector investors are heeding these calls for the integration of environmental considerations, including ecosystems, biodiversity, and climate change mitigation and adaptation, in all infrastructure investments to meet national and international environmental goals.

323. Several platforms are emerging to help facilitate alignment across the infrastructure sector and expand attention to nature-based infrastructure solutions, including Finance to Accelerate the Sustainable Transition – Infrastructure (FAST-Infra), a private finance-led platform to facilitate sustainable infrastructure investing in developing and emerging markets, and the G20's Global Infrastructure Hub, supporting global sustainable infrastructure investing. They and others are in the process of honing the accountability frameworks needed to enable investors to demonstrate nature-positive and Paris Agreement-aligned outcomes. Coalitions such as the UNEP-hosted Sustainable Infrastructure Partnership (SIP), launched in 2018 with GEF funding, are supporting knowledge sharing and research to help clarify the actions needed to enable integrated approaches. The Coalition for Climate-Resilient Investment (CCRI) has brought together private companies, governments, inter-governmental bodies, and investment managers overseeing more than $10 trillion in assets to help ensure that

infrastructure investments properly assess physical risks to existing and new infrastructure from climate change impacts. Likewise, Friends of Ecosystem Based Adaptation (FEBA) is a collective of 80+ organizations and agencies working jointly to share learning and knowledge to improve implementation of EbA and Nature-based Solutions.

324. However, while beginning to enhance sustainability in a range of infrastructure sectors or in relation to certain technical fields, these platforms do not address the entirety of the collective action failures outlined above. The GEF partnership is uniquely positioned to leverage the expertise within those GEF agencies with capabilities in this arena and to conduct comprehensive policy and investment program dialogues with GEF-eligible countries on infrastructure.

Contributions of this Program to MEAs and Related Global Environmental Benefits

325. This program will help deliver Global Environmental Benefits by a) avoiding or reducing negative impacts to ecosystems from infrastructure development, and b) incentivizing conservation of healthy ecosystems by creating enabling conditions for nature-based infrastructure solutions to be mainstreamed into national infrastructure portfolios[266]. Key contributions to generating Global Environmental Benefits will include:

- *Biodiversity conservation through conservation of key habitats, maintenance of ecological connectivity, and reduction of negative impacts, including wildlife mortality from roads and energy installations.*

326. Infrastructure is a leading driver of biodiversity loss globally[267]. Key species impacts provide strong indicators: across Asia, linear infrastructure, including roads and railways, poses significant threats to the persistence of wild tigers and their prey[268]. A population of blue cranes (*Anthropoides paradiseus*) in the Western Cape of South Africa is estimated to be falling by 12% annually due to power line collisions alone[269]. In Mongolia[270], wild ungulates avoid crossing fenced railways, disrupting their long-distance migration and access to foraging areas – increasing their winter mortality due to starvation. Water-related infrastructure is also a key

[266] Inter-American Development bank and Acclimatise. 2020. Increasing Infrastructure Resilience with Nature-based Solutions (NbS): A 12-step technical guidance document for project developers. Inter-American Development Bank, Washington, DC, USA.
[267] Ana Benítez-López, Rob Alkemade, Pita A. Verweij, The impacts of roads and other infrastructure on mammal and bird populations: A meta-analysis, Biological Conservation, Volume 143, Issue 6, 2010, Pages 1307-1316.
[268] WWF and Dalberg. 2016. Protecting tigers from Asia's infrastructure development boom. WWF International, Gland, Switzerland.
[269]Shaw, J., Jenkins, A., Smallie, J. and Ryan, P. 2010. Modelling power-line collision risk for the Blue Crane *Anthropoides paradiseus* in South Africa. Ibis, 152: 590-599.
[270] Ito T., B. Lhagvasuren, A. Tsunekawa, M. Shinoda, S. Takatsuki S, B. Buuveibaatar, and B. Chimeddorj. 2013. Fragmentation of the Habitat of Wild Ungulates by Anthropogenic Barriers in Mongolia. PLOS ONE 8(2): e569955

driver of biodiversity loss in freshwater ecosystems and in North America, for example, where rivers are highly fragmented, fish extinction rates are 100 times higher than their natural rates.[271]

327. Nature-based planning would avoid placing built infrastructure in areas critical for maintaining biodiversity, and where avoidance is not entirely possible, ensure that critical habitats and ecosystem connectivity are maintained.

- *Reducing loss and degradation of forests, wetlands, deltas, rivers and other ecosystems caused by poor planning and siting of infrastructure and advancing the conservation of these ecosystems by developing Nature-based Solutions for infrastructure.*

328. Poorly planned infrastructure can drive environmental degradation through changes in land, ocean and water use and expansion into pristine habitats – contributing to declines in the health and well-being of humans, wildlife populations and ecosystems. Roads are the principal cause of global terrestrial ecosystems fragmentation [272]. Similarly, dams are the principal cause of global river fragmentation.[273] Nature-based infrastructure development could help conserve these sensitive ecosystems while providing some of the infrastructure services countries need.

- *Reducing GHG emissions linked to land degradation and deforestation and unsustainable building materials and practices.*

329. Existing infrastructure is associated with 60% of global greenhouse gas (GHG) emissions.[274] Eight percent of global greenhouse gas emissions are caused by the production of cement alone, a key input in construction.[275] By alleviating deforestation and land degradation, better planned built infrastructure combined with investments in nature-based infrastructure solutions will reduce associated GHG emissions, while also reducing the demand for built infrastructure and associated building materials.

[271] Dias, M. S., P. A. Tedesco, B. Hugueny, C. Jézéquel, O. Beauchard, S. Brosse, and T. Oberdorff. 2017. Anthropogenic stressors and riverine fish extinctions. Ecological Indicators 79:37-46

[272] Ibisch, P.L., Monika T. Hoffmann, Stefan Kreft, Guy Pe'er, Vassiliki Kati, Lisa Biber-Freudenberger, Dominick A. DellaSala, Mariana M. Vale, Peter R. Hobson, Nuria Selva. 2016. A global map of roadless areas and their conservation status. Science 354, no. 6318: 1423–2.

[273] Grill, G., B. Lehner, M. Thieme, B. Geenen, D. Tickner, F. Antonelli, S. Babu, P. Borrelli, L. Cheng, H. Crochetiere, H. Ehalt Macedo, R. Filgueiras, M. Goichot, J. Higgins, Z. Hogan, B. Lip, M. E. McClain, J. Meng, M. Mulligan, C. Nilsson, J. D. Olden, J. J. Opperman, P. Petry, C. Reidy Liermann, L. Sáenz, S. Salinas-Rodríguez, P. Schelle, R. J. P. Schmitt, J. Snider, F. Tan, K. Tockner, P. H. Valdujo, A. van Soesbergen, and C. Zarfl. 2019. Mapping the world's free-flowing rivers. Nature 569:215-221.

[274] The Global Commission on the Economy and Climate. 2016. The sustainable infrastructure imperative: financing for better growth and development: key messages and executive summary, page 4. New Climate Economy.

[275] WWF Germany. 2019. Climate protection in the concrete and cement industry: Background and possible courses of action.

330. A rapid and deep decarbonization of power supply worldwide is required to limit global warming to well below 2 °C. Beyond greenhouse gas emissions, the power sector is also responsible for numerous other environmental impacts. While many decarbonization pathways yield major environmental co-benefits, the scale of co-benefits as well as profiles of adverse side-effects depend strongly on technology choice. Energy diversity helps to maintain a sustainable supply of fuels for electricity generation that protects consumers from potential price spikes or shortages. In addition, valuing baseload power is viewed as a key element in meeting demand effectively. Strategies to integrate appropriate baseload generation options with lagging storage technologies (e.g., pumped storage, battery storage, etc.), and manage demand (through energy efficiency programs) while maintaining or enhancing ecosystem health, will undoubtedly present the most significant challenges and opportunities for approaches to developing sustainable infrastructure pathways.

- *Maintaining the integrity of international waters, specifically, free-flowing rivers shared across international boundaries.*

331. Dams, irrigation systems and other water infrastructure investments have produced enormous human benefits, but they have also fragmented the world's rivers, with only one-third of long rivers remaining free flowing – severely disrupting the natural services that they provide.[276] Systems-based infrastructure planning will reduce the need for hydropower development while meetings countries' energy needs through portfolios that include appropriately sited wind, solar, and other renewable energy options.

332. The program will contribute to helping countries meet their commitments under multilateral environment agreements in a variety of ways, including:

- Achieving targets to be set under the post-2020 Global Biodiversity Framework of the Convention of Biological Diversity;

- Contributing to agreed actions toward achieving land degradation neutrality under the UN Convention to Combat Desertification [277]; and

- Meeting UN Framework Convention on Climate Change ambitions for climate mitigation and adaptation expressed through Nationally Determined Contributions to the Paris Agreement.

[276] Grill, G., B. Lehner, M. Thieme, B. Geenen, D. Tickner, F. Antonelli, S. Babu, P. Borrelli, L. Cheng, H. Crochetiere, H. Ehalt Macedo, R. Filgueiras, M. Goichot, J. Higgins, Z. Hogan, B. Lip, M. E. McClain, J. Meng, M. Mulligan, C. Nilsson, J. D. Olden, J. J. Opperman, P. Petry, C. Reidy Liermann, L. Sáenz, S. Salinas-Rodríguez, P. Schelle, R. J. P. Schmitt, J. Snider, F. Tan, K. Tockner, P. H. Valdujo, A. van Soesbergen, and C. Zarfl. 2019. Mapping the world's free-flowing rivers. Nature 569:215-221.

[277] United Nations Convention to Combat Desertification. Achieving Land Degradation Neutrality. https://www.unccd.int/actions/achieving-land-degradation-neutrality, accessed February 24, 2021.

Role of the Private Sector in Supporting this Program

333. Infrastructure investments for provision of public services generally follow from a government-led process that produces an associated plan, program, or policy. While financing is mostly public, such infrastructure investments are increasingly implemented through public-private partnerships. The role of private sector financing for infrastructure is expanding, as such investments are increasingly seen by asset managers as a defined asset class alongside traditional fixed income investments.

334. There is specific private investor interest in supporting "sustainable infrastructure", as evidenced, for example, by the recent rapid growth of green bonds as an emerging financing instrument. Rising demand for sustainable investments means that private capital may be attracted to infrastructure investments that meet sustainability criteria, especially if these are coupled with government incentives such as access to environmental data, preferential financing terms for pro-nature and pro-climate infrastructure designs, or other enabling conditions.

335. Environmental bonds adhere to recognized norms, such as the Green Bond Principles or the Climate Bonds Initiative, but these do not require upstream multi-sectoral, stakeholder-based planning conducted at the stage when the overall aims of infrastructure investment plans, programs or policies are set. When applied properly to infrastructure design above the project level, such planning can identify opportunities to avoid or reverse biodiversity loss, land degradation, greenhouse gas emissions, or threats to human welfare from changes in environmental quality or reduced climate resiliency. Both governments and the private sector can ensure that infrastructure investments do not undermine the global environmental benefits provided by healthy ecosystems and can actually enhance them by drawing upon the services they provide as cost-effective alternatives to traditional built infrastructure.

Net-Zero Accelerator Integrated Program

Introduction

336. According to the IPCC, holding the global temperature increase to 1.5°C above pre-industrial levels, as aspired to in the Paris Agreement, will require a 45% carbon dioxide emissions reduction by 2030, compared to 2010 levels, and reaching net-zero emissions globally by 2050.[278] Even this, will only grant us a 50% chance to achieve that goal, and deeper efforts would be needed for higher certainty.

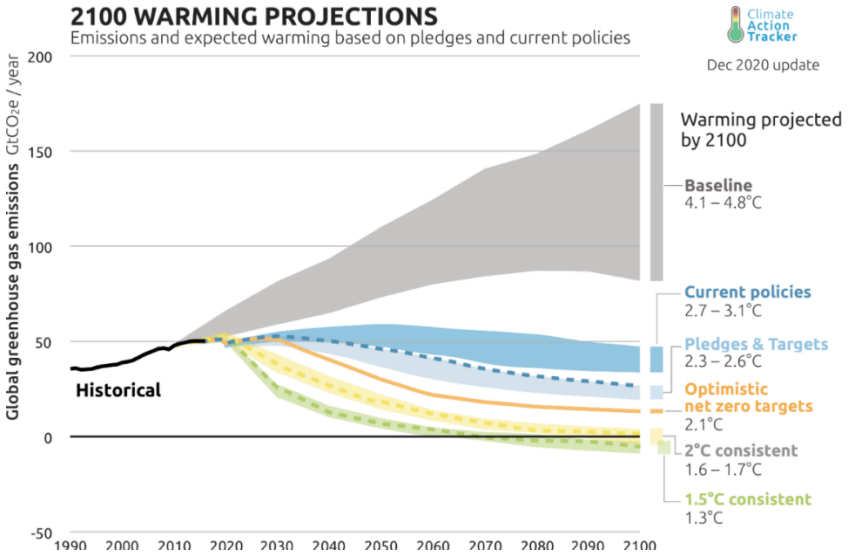
337. To put the global community on the path to carbon neutrality by 2050, we urgently need to embark on a *race to zero* emissions. This will require raising the ambition of medium-term national policies and long-term deep decarbonization plans across sectors. At a global level, in the power sector, this will mean increasing the penetration of renewable energy six times by 2030 and phasing out unabated coal five times faster than it is currently happening.[279] In the built environment, all actors will need to step up decarbonization actions by a factor a five for the sector to align with net-zero targets by 2050.[280] The rate of adoption of electric vehicles will need to increase twelve times compared to current global sales rates by 2030.[281] Tree cover gains will need to increase five times while deforestation will have to come to a complete halt by 2030.[282] Significant regeneration of organic content in soils will be necessary for agriculture productivity to keep up with rapid population growth and it will need to be coupled with substantial changes in dietary and consumption patterns.

338. The latest data, however, shows that we are still far from being on the right track.[283] As of February 2021, 43 countries, plus the EU 27, had submitted new NDCs,[284] and 28 countries plus the EU 27 had submitted long-term low-emissions development strategies (LTSs) to the UNFCCC.[285] Taken together, current national policies and commitments are only enough to limit global average temperature increase to 3°C by 2100, while the 1.5°C threshold would be reached as soon as 2040.[286] The Initial NDC Synthesis Report highlighted that while the majority of countries have increased the ambition of their emission reduction pledges, the combined impact of NDCs submitted up to the end of 2020 would only result in a 1% reduction by 2030, over 2010 emission levels.[287]

---

[279] WRI (2020), State of Climate Action: Assessing Progress toward 2030 and 2050.
[280] United Nations Environment Programme (2020). 2020 Global Status Report for Buildings and Construction: Towards a Zero-emission, Efficient and Resilient Buildings and Construction Sector. Nairobi.
[281] WRI (2020), *State of Climate Action: Assessing Progress toward 2030 and 2050.*
[282] ibidem
[283] United Nations Environment Programme (2020). Emissions Gap Report 2020. Nairobi
[284] https://climateactiontracker.org/climate-target-update-tracker/
[285] https://unfccc.int/process/the-paris-agreement/long-term-strategies
[286] United Nations Environment Programme (2021). Making Peace with Nature: A scientific blueprint to tackle the climate, biodiversity and pollution emergencies. Nairobi.
[287] UNFCCC (2021), Initial NDC Synthesis Report. Bonn.

Figure 17. 2100 Warming Projections.[288]



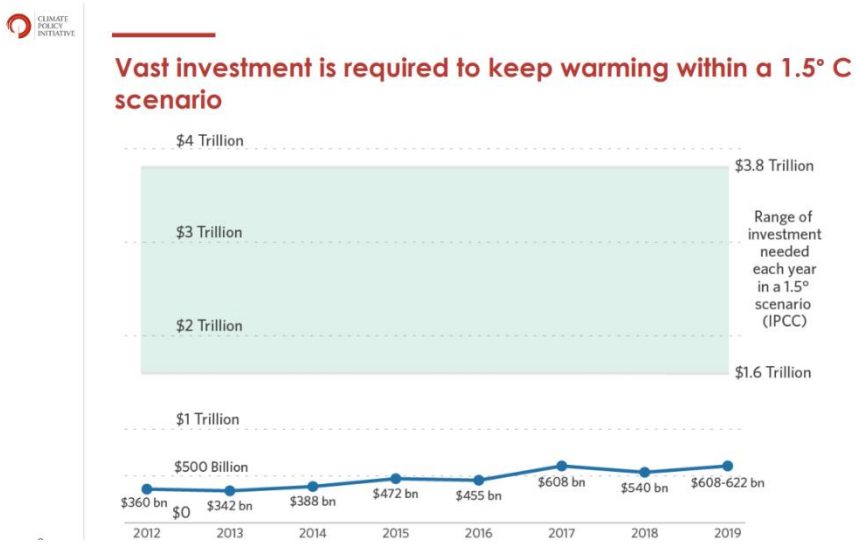
339. The transition to net-zero is technically feasible and can bring substantial economic and development opportunities.[289,290] Carbon neutrality efforts offer significant opportunities for shaping healthy environments and can contribute substantially to the post-pandemic economic recovery by supporting the alignment of domestic stimulus packages and international climate finance flows to the principles of the *build back greener* agenda. In the short-term, economic recovery measures will likely focus on job creation and stimulating the economy, which if properly aligned with deep decarbonization efforts, can lead to job creation and economic gains, while supporting greater stability in the long-term through the proper consideration of future climate change and transition-related risks.

340. However, the financial resources needed to support Paris-aligned decarbonization efforts are very significant. The World Bank estimates the additional investment needed to support the implementation of the commitments under current NDCs exceeds US$ 1 trillion,[291] while achieving net-zero targets by 2050 is likely to require much more than that, with estimates

[288] Climate Action Tracker (2020), Warming Projections Global Update December 2020.
[289] IDB and DDPLAC (2019). Getting to Net-Zero Emissions: Lessons from Latin America and the Caribbean. Inter-American Development Bank, Washington D.C
[290] For a descriprion of the implications relative to the sourcing and management of technology-critical materials and elements which will be needed to implement net-zero roadmaps, please refer to a recent STAP paper: Ali, S. and Katima, J. 2020. Technology Critical Elements and their Relevance to the Global Environment Facility. A STAP Background Document. Scientific and Technical Advisory Panel to the Global Environment Facility. Washington, DC.
[291] World Bank Outlook 2050: Strategic Directions Note. Supporting Countries to Meet Long-term Goals of Decarbonization. World Bank, Washington, DC.
https://openknowledge.worldbank.org/bitstream/handle/10986/33958/149871.pdf?sequence=3&isAllowed=y

reaching US$ 50 trillion.[292] The IPCC estimated that investments in the energy supply side will need to average US$ 1.6 to 3.8 trillion per year to 2050, while halting all new investments in unabated coal by 2030.[293]

Figure 18. Investment gap for a 1.5°C scenario.



341. Current volumes of climate mitigation finance flows averaged US$ 336 billion in 2017 and 2018.[294] By comparison, according to an OECD-IEA analysis of 77 economies, government support for the production and consumption of fossil fuels amounted to US$ 478 billion in 2019. To maximize effectiveness of international climate finance flows, ensuring that the domestic regulatory frameworks and fiscal spending are also aligned with long-term climate and development goals will be crucial.

342. Without an alignment of financial flows, countries will not be able to leverage the resources necessary to support deep decarbonization efforts and will risk higher levels of spending in the future as a result of stranded assets and economic losses from worsening climate change impacts. Further, the global community will not be able to make the necessary progress to avoid the worst impacts of climate change, which will disproportionately impact the poorest and most vulnerable.

343. The time window for enhanced action is rapidly closing. Support is needed to help developing countries prepare NDCs and LTSs that are consistent with a 1.5°C goal, translate them into short- and medium-term targets coupled with coherent and enforceable policies, and move swiftly from planning to implementation. The systems transitions required will necessitate

[292] Morgan Stanley. 2019. "Decarbonization: The Race to Zero Emissions." New York. https://www.morganstanley.com/ideas/investing-indecarbonization.
[293] IPCC, 2018: Global Warming of 1.5°C. IPCC Special Report
[294] CPI, 2020. Updated View of the Global Landscape of Climate Finance 2019. Climate Policy Initiative, London.

a people-centered approach, built on wide and inclusive stakeholder engagement and incorporating social equity and gender-responsive considerations.

The GEF-8 Integrated Program

344. The Net-Zero Accelerator Integrated Program (NZA IP) will support countries to develop a clear and milestone-driven pathway to reach the Paris Agreement's carbon neutrality goal. The Program will leverage existing (and define new where needed) methodologies to support transformational changes towards carbon neutrality at a national level and will complement bottom-up processes with top-down support, contributing to an enhancement of the level of collective ambition of global climate efforts.

345. Depending on the level of readiness of participating countries, the Program will seek to: (i) enable cross ministerial dialogues to define and/or operationalize net-zero LTSs; (ii) provide support to analyze technical and institutional capacity needs and fill information gaps on the socio-economic cost-benefits of deep decarbonization plans, feasibility of technologies, and options for addressing harmful subsidies; (iii) support the development of enforceable and goal-driven policy reform packages; (iv) provide resources to develop investment plans and pipelines; and (v) finance specific pilot projects at sectoral or cross-sectoral level to leverage domestic and international financing, both from the public and private sectors.

346. Projects selected under the Program will have an integrated, whole-of-economy approach that will aim to leverage synergies and align sectoral policies relevant for deep decarbonization efforts. Participation will require commitment to a higher level of ambition, being guided by the net-zero by 2050 lens, and to generating outcomes under additional focal areas beyond climate change. Key system transformations that will be targeted to achieve carbon neutrality will depend on the specific context and emission profiles of the recipient country and will cover one or more of the following areas: energy, mobility, built environment, industry, and Nature-based Solutions.

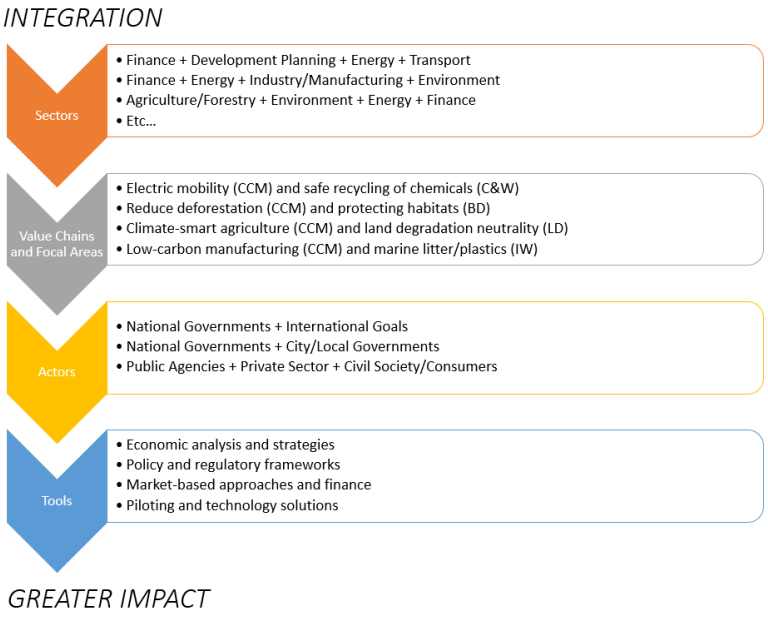
347. The integrated nature of this program will allow for a more ambitious and impactful programming of resources. Integration will take place at several levels. First, across sectors, as it will require a systems approach and the participation of the ministries relevant to decarbonization efforts throughout the economy, including ministries of finance, environment, energy, transport, agriculture and forestry, industry/mining, housing/planning, tourism, etc.

348. Second, action will have to take place across different value chains, providing an opportunity for seeking synergies with other GEF focal areas as well, including land degradation, biodiversity, and chemicals and waste. For example, interventions along the value chain for electric mobility would have to include considerations for sustainable and safe material extraction, use, re-use, recycling and disposal of resources. Interventions that aim to protect and enhance carbon sinks through jurisdictional approaches and protection of high carbon

ecosystems will seek to leverage more integration with the land degradation and biodiversity agendas.

349. Third, integration will be sought across levels of governance, between national government priorities and international commitments, between national government plans and those of city or local governments, as well as across actors central to climate action, from the public sector, to the private sector and civil society.

Figure 19. Integrated nature of the NZA Program.



Objectives, Key Interventions, and Selection Criteria

350. The overarching objective of the NZA IP is to accelerate implementation of net-zero pathways in developing countries, pushing the ambition beyond that of existing NDCs and contributing to closing the emissions gap to meet the aspirational 1.5°C goal of the Paris Agreement.

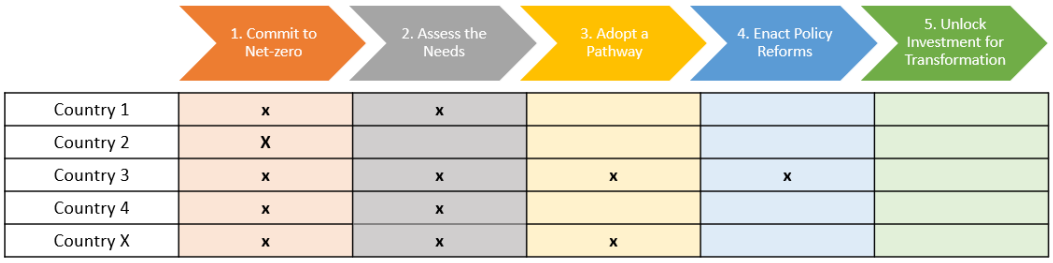
National-Level Interventions

351. Specific objectives, depending on the country context, will include:

- Establishing functioning coordination and dialogue platforms across sectors and actors for the adoption of net-zero commitments;

- In countries where long-term net-zero strategies do not yet exist, supporting their preparation through socio-economic and technical analysis, capacity building and stakeholder engagement and coordination;
- Based on the (new or existing) net-zero strategy, develop and adopt a coherent and enforceable framework of policy reforms to meet net-zero targets by 2050;
- Develop net-zero-aligned pipelines of projects and finance pilot interventions aligned with the net-zero goals, moving from planning to implementation.

Figure 20. Baseline screening and NZA IP entry points.



352. Each national project will have a high-level component and one or more downstream components. The high-level component will include the provision of support for inter-sectorial coordination, development of LTSs where missing, and activities needed to translate long-term net-zero strategies into enforceable domestic policies at the national level. Such policies would have to consider short- and medium-term actions, synergies and tradeoffs, taking an economy-wide approach to decarbonizing development, minimizing the potential for stranded assets and allowing for a just transition for affected workers and communities, lifting market and regulatory barriers, and unlocking necessary investments.

353. Where needed and appropriate, the Program will support cost-benefit analyses of implementation options of net-zero plans, in order to highlight the broad societal benefits of the systems transformation across emitting sectors. A clear understanding of the trade-offs and net socio-economic benefits linked to long-term deep decarbonization is crucial to generate support from economic and political stakeholders and ensure the sustainablily of the adopted policy reform packages.

354. Policy coherence and elimination of subsidies to non-Paris aligned technologies or practices will be central to these efforts. This includes support for the econometric analyses of scenarios to reform fiscal spending and subsidies in the energy, transport, and agriculture sectors. In the context of the fiscal pressure and exacerbated debt constraints posed by COVID-19, unlocking of resources earmarked for unsustainable subsidies may generate fiscal space and allow for new strategic spending in climate-compatible development and just transition arrangements. Leapfrogging policies, technologies and business models that have long-term

potential to constitute sustainable solutions will be supported. Transition technologies, policies or approaches that do not fit well with the systemic transformations needed for a net-zero world will not be considered.

355. Institutional reforms that may be supported include fiscal, budgetary, financial, regulatory, organizational and governance reforms. Specific examples may include addressing fossil fuel subsidies, taxing emissions, introducing carbon pricing mechanisms, requiring disclosure of emissions data for publicly listed companies, setting up regulatory schemes to cut emissions, adopting green government procurement programs, mandating all infrastructure and urban projects to take into account lowest emissions options, mandating building or factory permit applications to select lowest emissions alternatives including in construction materials, etc.

356. In addition to the high-level component, one or more downstream components will be directly supported in participating countries, depending on national circumstances, including potential interventions in the following priority areas:

- Zero-carbon energy systems transformation: The Program will support pipeline interventions in the context of the energy sector carbon neutrality plan, which may include integrated resource planning analyses to realign the sector with net-zero targets and incorporate climate resilience considerations. Innovative interventions aimed at accelerating the penetration rate of renewable energy on the power grid will be supported, such as energy storage and grid modernization solutions, as well as energy demand-side management and smart metering. Possible interventions may also include further integration of energy-intensive sectors, such as industry, manufacturing or electrified transport with zero-carbon energy solutions. Interventions aimed at facilitating the decommissioning of fossil fuel power generation assets will be also supported, where feasible. Finally, the program will support social dialogue, analysis and adoption of specific policies to minimize and address negative social impacts from energy decarbonization policies and to ensure a just energy transition.

- Zero-carbon built environments: The Program will support the development of standards and protocols to incentivize the development of zero-emission buildings as well as the adoption of specific deep decarbonization targets for the buildings sector. Capitalizing on the learning from the GEF-6 and GEF-7 collaboration with Sustainable Energy for All (SEforALL) on energy efficiency accelerators, the program will also support platforms to bring together private sector solution providers with urban and infrastructure planners to promote and develop ways to incentivize the use of carbon neutral construction materials with the view to start tackling embodied carbon. The program will also explore and finance solutions to develop self-supply

energy generation options and energy-efficient district heating and cooling opportunities.

- Zero-carbon mobility: In this sector, the Program will support the development and implementation of integrated zero-carbon mobility plans at national and local level, which may include avoid/reduce, shift and improve approaches (A-S-I) and further promote transport electrification, including through green hydrogen options, and direct integration of renewable energy with charging infrastructure for electric vehicles. The Program will also support policy reforms aimed at addressing imports of used ICE vehicles and the fiscal impacts of the projected reduction in income from gasoline taxation on infrastructure financing. Social dialogue, analysis and adoption of specific policies to address negative social impacts and re-skilling of workers to support new EV domestic industries will also be supported. Where relevant, leveraging its global coordination platform, the Program may also explore support for decarbonization efforts in the maritime and air transport sectors.

- Zero-carbon industry: The Program will support interventions in the industry sector to support clean manufacturing of heavy and light commodities, shifting processes towards electricity/green hydrogen, substitution of zero carbon-intensive products, and incorporating a circular economy approach. This component will target a broad range of sectors including steel, cement, aluminum, metals and mining, chemicals and plastics, and textile/apparel, providing an opportunity for integration with priorities in other GEF focal areas, particularly Chemicals and Waste. While each of these sectors have very different value chains and emission footprints, their deep decarbonization in countries where they represent a major sector of the economy will generally require demonstration and commercialization of breakthrough technologies, development of product standards, mandates and procurement commitments, increased disclosure and transparency across supply chains of embodied and operational emissions, and demand-side levers, as well as support for just transitions initiatives for workforces and communities.

- Nature-based solutions (NbS) for carbon neutrality: NbS solutions can contribute significantly to reducing the atmospheric concentrations of carbon dioxide by enhancing natural carbon sinks in forests, productive landscapes, wetlands and coastal ecosystems. NZA IP support for NbS interventions will be necessary as any of the likely 2050 net-zero pathways rely, at least in part, on atmospheric carbon removals.[295] In this sector, the Program will support innovative interventions that encourage investments at scale in NbS such as by reorienting policies, subsidies and public investments towards conservation and maximization of carbon sinks,

[295] IPCC, 2018: Global Warming of 1.5°C. IPCC Special Report

increasing awareness of the value of nature, mainstreaming NbS in national strategies and improving the enabling conditions that facilitate the participation of the private sector (including through market-based approaches and adequate pricing). Actions facilitating the implementation of the Article 6 of the Paris Agreement will be considered. The Program will also support preparation and implementation arrangements of REDD+ schemes where needed and appropriate, building on pre-existing efforts and prioritizing jurisdictional approaches. Such interventions will be designed to ensure their compatibility with biodiversity, water, food and health security, and will seek to further build policy coherence across these sectors.

Global Coordination and Knowledge

357. The global nature of this Program will allow for two flows of information to take place. First, key elements of success, methodologies, tools and lessons learned from national experiences will be captured and consolidated from the country level to the global platform, contributing to the growing repository of global knowledge on how to design, plan and implement economy-wide, long-term carbon neutrality strategies. Second, consolidated lessons and tools at global level will be downscaled within and beyond participating countries to promote South-South cross pollination and accelerate the pace of systemic change.

358. Considering the current ambition gap of national decarbonization plans, as clearly highlighted by the UNFCCC's Initial NDC Synthesis Report, a concerted global effort is urgently needed to complement bottom-up processes with top-down support, if we are to raise significantly the level of collective ambition. Some countries with significant systems-based transformation and decarbonization potential in certain sectors may not prioritize action, or their action may not be informed by global best practices. There is also a unique opportunity to enhance the global support for NbS and conservation efforts, considering their huge short-term climate mitigation potential. In addition, there is clear need to identify best practices and work with developing country champions as sector or system influencers and early adopters, setting global benchmarks and encouraging alignment by others. The Program will address the needs highlighted above through its global coordination component.

359. Specific South-South exchanges and learning experiences will be facilitated and supported by the Program. This may include organizing trainings for public officials on specific aspects of sectoral and cross-sectoral decarbonization strategies. With regards to key value chains or sectors, the Program will also leverage existing GEF-funded knowledge platforms such as those on food commodities, electric mobility, and sustainable cities.

360. In addition, the Program will support the development of certification schemes and standards that will be needed to define zero-carbon origin and/or value chains of carbon-intensive commodities that are subject to international trade considerations and for which

decarbonization actions would need to be discussed and coordinated in super-national venues. Examples of such high mitigation potential commodities could include cement, steel, aluminum, etc. Green hydrogen could also be considered.

Selection Criteria

361. Countries committed to net-zero targets willing to engage at the highest level of policy decision-making within ministries of finance and planning, industry, energy, and agriculture, among others, will be supported. Countries will be expected to demonstrate participation of multiple ministries, relevant to long-term planning for carbon neutrality outcomes, including the ministries of environment and finance (or equivalent).

362. Additional selection criteria will include the requirement to ensure as broad as possible a stakeholder consultation at national level to ensure broad acceptance and sustainability of the proposed interventions. Reform packages should consider how to address likely negative distributional impacts of their implementation and should incorporate gender considerations in areas likely to impact disproportionately the lives of women and girls. Consideration of measures to promote behavioral change compatible with carbon neutrality goals, including on dietary and mobility habits, will also be encouraged.

- Key principles for the preparation of a long-term net-zero strategy, which will be used to guide the selection of program interventions, include at a minimum the following ones:[296] (i) be based on a net-zero emissions target in line with the Paris Agreement; (ii) cover long-term timeframe and define intermediate milestones that inform NDC updates and immediate actions; (iii) support the development of a roadmap of policy reforms and public investments needed to enable the transition; (iv) be supported by a strong country ownership with a clear mandate; (v) include all key emitting sectors/systems to capture their interlinkages and interdependencies; (vi) address the costs and social impacts, including gender, youth and IPLCs considerations, of the low-carbon transition; (vii) be linked to other SDGs to maximize socio-economic benefits and consider long-term climate vulnerabilities to manage climate risks; (viii) ensure inclusive stakeholder engagement processes; (ix) allow for regular updates, based on implementation progress and new data.

Existing Platforms and Potential Partners

363. The growing awareness around the need to reach net-zero emissions by mid-century has sparked action and brought together actors from both the public and private sectors. Key initiatives and potential partners this program will aim to engage and coordinate with include:

[296] IDB and DDPLAC (2019). Getting to Net-Zero Emissions: Lessons from Latin America and the Caribbean. Inter-American Development Bank, Washington D.C

- The UN Race To Zero Campaign, whose additional commitments and announcements from COP 26 can strengthen and amplify success stories in GEF countries, and support the replication of successful experiences.[297]

- The Deep Decarbonization Pathways Initiative (DDPi), funded with support from Germany, and the Institute for Sustainable Development and International Relations (IDDRI) who have developed methodologies which can be adapted to the extent possible to the local circumstances of participating countries.[298]

- The World Bank's Climate Support Facility, which in December 2020 launched a Green Recovery Initiative (GRI), aimed at supporting countries advancing a low-carbon and climate-resilient recovery from COVID-19.

- The InterAmerican Development Bank (IDB), which has worked on the decarbonization strategy for Costa Rica and has also partnered with the DDPi on the decarbonization pathways for Latin America and the Caribbean (DDPLAC) project, co-financed by the Agence Française de Développement (AFD).[299]

- The United Nation Development Programme (UNDP), which has experience in supporting the preparation of NDCs and LTSs through the "Climate Promise" initiative, and the "NDC Support Programme."

- The International Renewable Energy Agency (IRENA), which hosts the Long-Term Scenario for Energy Transitions campaign that "aims to promote the wider adoption and improved use of long-term model-based energy scenarios to support and accelerate the energy transition among Clean Energy Ministerial (CEM) countries."

- Additional key partners may include the Coalition of Finance Ministers for Climate Action, the International Energy Agency (IEA), the OECD's International Transport Forum (OECD-ITF), the Climate Policy Initiative (CPI), other Multilateral Development Banks, WRI, SE4All, and the Rocky Mountain Institute (RMI).

Contributions of this Program to MEAs and Related Global Environmental Benefits

364. UNFCCC: The NZA IP responds directly to the need to speed up the pace of decarbonization efforts and is directly linked to the ultimate goal of the Paris Agreement. The

[297] https://unfccc.int/climate-action/race-to-zero-campaign

[298] Climate Works Australia (2020), Growth Through Transformation: an Investment Vision Guide for Climate and Development.

[299] IDB and DDPLAC (2019). Getting to Net-Zero Emissions: Lessons from Latin America and the Caribbean. Inter-American Development Bank, Washington D.C

key areas of intervention proposed for this Program cumulatively represent the great majority of global emissions, including the energy, transportation and land use systems.

365. UNCBD and UNCCD: The NZA IP has significant potential to contribute to generate GEBs towards biodiversity and land degradation focal area targets as it will support activities aimed at preserving and enhancing carbon sinks in natural ecosystems, including forests and agroforestry systems, coastal areas with large carbon stocks such as mangrove forests.

366. Stockholm and Minamata Conventions: this Program will create opportunities to achieve multiple goals of the Stockholm Convention on persistent organic pollutants (POPs) and the Minamata Convention. Particular attention will be given to the sourcing, use and recycling of components of batteries used for chemical energy storage and ensuring they are managed on accordance with relevant Basel Convention guidelines for management of hazardous waste.

367. SDGs: The NZA IP is fully aligned with several SDGs, including: SDG13 on climate action and SGD7, which focuses on ensuring universal access to modern energy services, doubling the rate of improvement in energy efficiency; and doubling the share of renewable energy in the global energy mix. It is also well aligned with SDG11 on sustainable cities, SDG15 on life on land, and SDG12 responsible consumption and production.

Role of the private sector in supporting this program

368. At global level, the Program will leverage existing and establish new coordination arrangements for the private sector to provide practical inputs to the Program's long-term decarbonization toolkits. The toolkits will house examples of successful policies and actions being implemented worldwide to achieve deep decarbonization in first mover countries worldwide. At national level, participation of the private sector will be essential both as input providers in the preparation of national decarbonization plans and of the specific implementation policies, as well as providers of carbon neutrality solutions and finance.

369. The Program will work closely with private sector coalitions and organizations to galvanize private sector engagement and further increase likelihood of adoption of private sector commitments to carbon neutrality. To do this, The Program will maintain close coordination with the World Economic Forum (WEF), the World Business Council for Sustainable Development (WBCSD), the Science Based Targets Initiative (SBTi), and the Carbon Disclosure Project (CDP), along with additional private sector partners.

Wildlife Conservation for Development Integrated Program

Introduction

370. The COVID-19 pandemic has had far reaching and cascading impacts on wildlife, wild places and the people who depend on these resources for their livelihoods. It has also highlighted the interconnectedness of our and other species via zoonotic disease spillover; shown us the vulnerability of economies and protected areas dependent on international tourism market; and made obvious the value of diversification, resilience and an integrated approach that takes into account the health of ecosystems, health of wildlife and well-being of people. We also learned that the costs of prevention, or reduction of pandemic risk is dwarfed the enormous toll, including loss of life and financial, taken by COVID-19. The cost of prevention, for a ten-year period is a mere 2% of the cost of the COVID-19 pandemic-estimated at anywhere from $8-15 trillion globally.[300]

371. The pandemic is a symptom of the imbalance of humans' relationship with nature, that has also resulted in the species extinction crisis with more species now threatened with global extinction than ever before, driven by human actions. The Red List Index shows that there has been no reduction in the rate at which species are moving towards extinctions as a result of human impacts, including growing threats to species and the Key Biodiversity Areas and wider landscapes and seascapes they depend upon.[301]

372. A complex set of drivers including the conversion of grasslands, savannahs, forests and wetlands, the overexploitation of species, climate change, and alien species are behind these declines. Although there are regional and sub-regional differences, the overexploitation of wildlife and destruction of habitat is driven by: illegal and unsustainable wildlife trade and the underlying demand for wildlife and wildlife products; undervaluation of natural resources and perverse incentives; lack of viable economic alternatives; and poor resource governance at the local, national and global scales. Despite some recent policy progress, including the elevation of the pangolin to CITES Appendix I, wildlife crime continues to be a lucrative global business, with high demand driving high prices, and with low risk of apprehension. Nearly 6,000 species of fauna and flora have been seized between 1999 and 2018, with nearly every country in the

[300] Ecology and economics for pandemic prevention By Andrew P. Dobson, Stuart L. Pimm, Lee Hannah, Les Kaufman, Jorge A. Ahumada, Amy Ando, Aaron Vernstein, Jonah Busch, Peter Daszak, Jens Englemann, Margaret F Kinnaird, Binbin V. Li, Ted Loch-Temezlides, Thomas Lovejoy, Kararzyna Nowak, Patrick R Roehrdanz, Mariana M. Vale. SCIENCE24 JUL 2020 : 379-381.

[301] IPBES (2019): Summary for policymakers of the global assessment report on biodiversity and ecosystem services of the Intergovernmental. Science-Policy Platform on Biodiversity and Ecosystem Services. S. Díaz, J. Settele, E. S. Brondízio E.S., H. T. Ngo, M. Guèze, J. Agard, A. Arneth, P. Balvanera, K. A. Brauman, S. H. M. Butchart, K. M. A. Chan, L. A. Garibaldi, K. Ichii, J. Liu, S. M. Subramanian, G. F. Midgley, P. Miloslavich, Z. Molnár, D. Obura, A. Pfaff, S. Polasky, A. Purvis, J. Razzaque, B. Reyers, R. Roy Chowdhury, Y. J. Shin, I. J. Visseren-Hamakers, K. J. Willis, and C. N. Zayas (eds.). IPBES secretariat, Bonn, Germany. 56 pages. And Sustainable Development Goals Report, UN 2019.

world playing a role in the illegal wildlife trade.[302]

373. The impacts of the pandemic have resulted in a mixed set of conditions for endangered species. In some cases—such as giant ibis in Southeast Asia, rhinos and elephants in Africa—they are further endangered by increases in illegal killing. And the collapse in tourism have allowed for the expansion of rhino and elephant poaching syndicates into areas where there are normally too many wildlife-viewing tourists for them to operate undetected. Further, the return of many migrant workers or refugees from cities to rural settings is expected to increase pressure on wild resources. Similarly, loss of income or livelihoods from labor or agriculture may cause rural families themselves to increase their illegal harvest of wild species.[303,304]

374. The collapse of the nature-based tourism sector is having social, economic and ecological impacts. The tourism sector is a major source of employment, revenue and foreign exchange revenue and projections declines of 58% to 78% putting at risk 100 to 120 million direct tourism jobs. In Africa over a third of all direct tourism in 2018 was attributable to wildlife. Brazil's loss of protected area visitors is predicted to result in a total loss of US$575 million in total GDP. Loss of this tourism has resulted in mixed impacts with reported increases in wildlife crime but also some declines where lockdowns have reduced transportation.[305]

375. Although the loss of wildlife and habitat is persisting and worsening by most measures, the news is not all bad. A decade ago the slaughter of African elephants and rhinos gained global public recognition as a crisis due to dramatic uptick in the poaching, international trafficking and consumption of ivory and rhino horn. Since then, there has been significant public and private investment in wildlife and habitat conservation (approximately USD 261 million of international donor funding per year in tackling illegal wildlife trade in Africa and

[302] UNODC, World Wildlife Crime Report 2020: Trafficking in Protected Species.
[303] Poole, C. (2020). COVID-19 threatens endangered species in Southeast Asia. Scientific American. 21 May, 2020. Pinder, A.C., Raghavan, R., ZBritton, J.R. and Cooke, S.J. (2020). COVID-19 and biodiversity: the paradox of cleaner rivers and elevated extinction risk to iconic fish species. *Aquatic Conservation*: *Marine and Freshwater Ecosystems* 30: 1061-1062; Bittel, J. (2020). Experts urge people all over the world to stop killing bats out of fears of coronavirus. NRDC. June 02, 2020; Olival, K.J., Cryan, P.M., Amman, B.R. (2020). Possibility for reverse zoonotic transmission of SARS-CoV-2 to free-ranging wildlife: a case study of bats. PLOS Pathogens. 16: e1008758; Gibbons, A. (2020). Primatologists work to keep great apes safe from coronavirus. *Science* May 1, 2020. science.abc5635.
[304] Text derived from White Paper on a GEF COVID-19 Response Strategy, November 17, 2020 GEF/C.59/Inf 14.
[305] UNCTAD. (2020). COVID-19 and tourism. Assessing the economic consequences; World Tourism Organization. (2020). Impact assessment of the COVID-19 outbreak on international tourism. May 2020. Shaban, R.Z., Sotomayor-Castillo, C. F., Malik, J. and Li, C. (2020). Global commercial passenger airlines and travel health information regarding infection control and the prevention of infectious disease: What's in a website? *Travel Medicine and Infectious Disease 33*: 101528; Tatem, A. J., Hay, S. I. and Rogers, D. J. (2006). Global traffic and disease vector dispersal. *Proceedings of the National Academy of Sciences 103*: 6242–6247; European Commission. (2020). Spotlight on COVID-19 and Africa's protected area tourism. Spenceley, A. (2020). Presentation to GEF Task Force on post-COVID action. 1 September, 2020.

Asia alone[306]), increased political will[307] and accountability, the advent of creative financing options applied to wildlife conservation,[308] a significant drop in rhino horn and ivory prices,[309] domestic bans on rhino horn and ivory trade, and an increasing understanding of the potential negative impacts of policy measures on wildlife consumption on livelihoods (including for IPLCs), food security and biodiversity[310, 311] and the need for nuanced, risk-based, context-specific actions.

376. Although the exact point-and potential intermediary-of the zoonotic spillover of SARS-CoV2 remain unclear,[312] there is evidence that preserving the extent, connectivity and intactness of natural habitats[313] reduces the risk of diseases spilling over from wildlife[314] and can provide broader, resilient human well-being benefits. Investments in the conservation of wildlife and critical landscapes can become the engine of a green recovery for many countries by providing sources of income through a recovering ecotourism industry and private sector engagement and deliver increased ecosystem services, and improved wildlife and human health.

377. Although we are still gauging what the pandemic shock has meant for key indicators of wildlife and landscapes the GEF-6 & 7 investments through the Global Wildlife Program have been essential in these positive signs, buffering wildlife, ecosystems and the people they depend on from even graver impacts and preparing a greener recovery through collective action at the national, regional and global levels. The GEF-8 WCD IP will build on this strong foundation.

GEF-8 Integrated Program

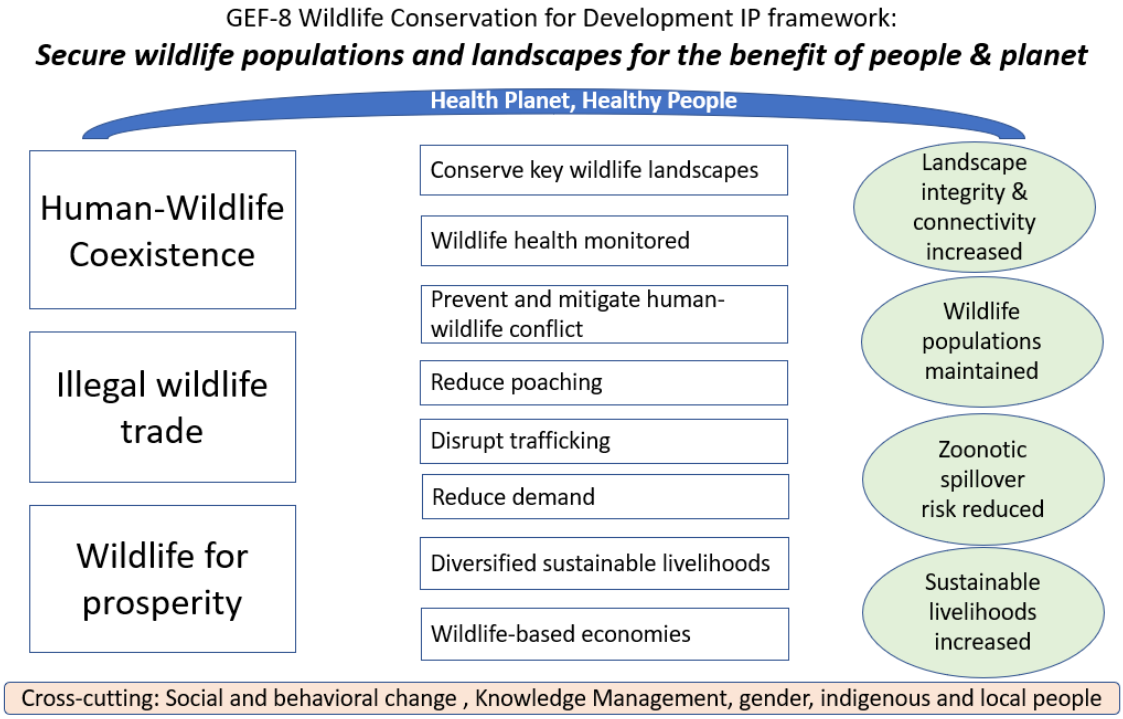
378. The GEF-8 Wildlife Conservation for Development Integrated Program (WCD IP) will support countries to secure terrestrial and aquatic wildlife[315] populations and key landscapes through an integrated approach to transforming the drivers of species loss and ensure that countries and communities are benefiting from these natural assets (depicted in Figure 21). The

[306] World Bank Analysis of International Funding to Tackle Illegal Wildlife Trade 2016.
[307] London Conference on the Illegal Wildlife Trade (2014 and 2018) and London Declaration with follow-up summits in Kasane (2015) and Hanoi (2016) with coinciding high level-statements.
[308] GEF support to Rhino and Wildlife bonds in GEF-5 and GEF-7.
[309] UNODC, World Wildlife Crime Report 2020: Trafficking in Protected Species.
[310] Possible negative consequences of a wildlife trade ban, Dilys Roe and Tien Ming Lee. Comment in Nature. 19 January 2021.
[311] Booth et al., Investigating the risks of removing wild meat from global food systems, Current Biology (2021).
[312] The origin of SARS-CoV-2.Talha Burki. The Lancet, News desk. Vol 20 August 2020
[313] Hilty, J., Worboys, G.L., Keeley, A., Woodley, S., Lausche, B., Locke, H., Carr, M., Pulsford I., Pittock, J., White, J.W., Theobald, D.M., Levine, J., Reuling, M., Watson, J.E.M., Ament, R., and Tabor, G.M. (2020). Guidelines for conserving connectivity through ecological networks and corridors. Best Practice Protected Area Guidelines Series No. 30. Gland, Switzerland: IUCN.
[314] Land use-induced spillover: priority actions for protected and conserved area managers: https://parksjournal.com/wp-content/uploads/2021/03/Reaser_et_al10.2305-IUCN.CH_.2021.PARKS-27-SIJKR.en_-1.pdf
[315] Includes marine, freshwater and terrestrial wildlife, excludes IUU fishing and timber/plants.

IP will support countries to generate benefits through wildlife and habitat conservation through the diversified, sustainable livelihoods while assisting the recovery and growth of nature-based tourism. Rather than taking a narrow species-based approach, the IP will combat the illegal and high-risk[316] trade in terrestrial and aquatic wildlife by addressing key elements of the supply chain (poaching, trafficking and demand); and it will support strategies for the coexistence of human and wildlife populations through landscape-level conservation and by mitigating human-wildlife conflict, while incorporating a new focus on zoonotic spillover risk reduction.

379. Building on the significant progress made through GWP in GEF-6 and GEF-7, the WCD IP will make important contributions by taking a Healthy Planet, Healthy People approach, considering the interconnectedness of ecosystem, wildlife and human health to deliver multiple benefits, by addressing multiple drivers of the loss of wildlife and wildlife habitat. These national actions will be supported by strategic actions, interdisciplinary partnerships and sound analytics and knowledge management at the global level with regional level coordination and engagement. This will result in *increased connectivity and integrity of wildlife landscapes; increased wildlife populations; reduced risk of zoonotic spillover; and increased sustainable benefits from wildlife and landscapes*.

Figure 21. Components of the Integrated Program



[316] High-risk from a zoonotic transmission perspective, could be legal or illegally traded wildlife species.

Objectives, Key Interventions, and Selection Criteria

380. The objective of the WCD IP is to conserve wildlife and landscapes by transforming the drivers of species loss and ensuring that countries and communities are benefiting from these natural assets. Achieving this requires an approach with both global and national dimensions. A global reach is critical to success given the loss of wildlife in one place can be driven by forces with roots in international demand and illegal wildlife supply chains and global trafficking networks, and on the other hand strong incentives for wildlife conservation are often tied to international industries including tourism. Not all drivers nor solutions are global though, and distinctly national and local level approaches and actions will benefit from a globally integrated program to support information exchange, capacity building and networking.

381. The global program will include targeted activities in areas that national projects have a challenging time addressing, such as: i) international trafficking and transboundary issues; ii) behavior change for demand reduction (including an incentive mechanism focused specifically in high-zoonotic risk and internationally traded illegal wildlife and products); iii) support for One Health approaches to reducing zoonotic spillover risks; and iv) global and regional donor coordination and knowledge management, with emphasis in South-South collaboration. The three WCD IP components for national projects will work together and investments in each reinforce one another with support of a global platform and targeted regional coordination and engagement.

382. The first component, *Human Wildlife Coexistence,* will support countries to conserve the extent, integrity and connectivity of key wildlife landscapes, including anchor protected areas, IPLCs, and OECMs in those landscapes; deploy explicit actions to reduce spillover from wildlife to humans; with complementary activities that avoid and mitigate human wildlife conflict, including sustainable measures to reduce depredation and wildlife-livestock contact to further reduce zoonotic risk. Potential activities under this component include: Protected area management; Integrated landscape management; Community-based management including efforts to increase security of local resource access, rights and land tenure; Monitoring high-zoonotic risk wildlife and ecosystems; Education and behavior change; Actions to reduce high-risk wildlife encounters; Innovative agricultural (including livestock) approaches; Wildlife damage insurance options; and Measures to increase sustainability and decrease health risk of legal, local wildlife trade and consumption, including bushmeat.

383. The second component, combating *Illegal Wildlife Trade* (IWT) takes a s supply-chain approach to curbing poaching, disrupting trafficking, and reducing demand for illegal and high zoonotic-risk wildlife within and between countries.[317] This builds directly on significant GWP advances in this area to more broadly address the threat that illegal wildlife trade poses to a wide

[7] Targeted grant set-aside will be available through the global platform to support behavior change approaches to reducing demand for trafficked wildlife, in addition to a mainstreamed approach to domestic.

range of species and to human health. GEF investments will strengthen legal and regulatory frameworks for trade, use and consumption of wildlife; enhance efforts to regulate domestic markets and prevent the laundering of illegal wildlife products through legal supply chains; support improvement in national-level governance to combat wildlife crimes; broaden education and outreach to stimulate behavior change to reduce potential health risks from wildlife trade and consumption; and support approaches in wildlife and landscape management to decrease the risks of new pathogen spillovers from wildlife to humans.

384. Potential activities under this component include: (i) Site-based anti-poaching; (ii)Community-based-monitoring and engagement;; (iii) Reform and enforcement of national wildlife laws; (iv) Mainstreaming wildlife into law enforcement and prosecution; (v) Information and intelligence and enforcement coordination within and between countries; (vi) Application of tools and technology; (vii) Cutting-edge analytics to help invest to reduce risks of emerging infectious diseases; (iix) Capacity building and technical assistance; and (ix) social and behavior change communications.

385. The third component *Wildlife for Prosperity* strives to ensure that local communities and governments value, invest-in and benefit from wildlife and habitat conservation including the recovery of nature-based tourism, and a diversified, resilient approach sustainable livelihoods and private sector engagement moving towards non-consumptive wildlife economies. Potential activities under this component include: Diversified enterprise development; Public-private partnerships (enterprises, concessions, technology, etc); Nature-based tourism recovery; Enabling policy environment including increasing and clarifying community and IPLC rights to manage and use resources; and innovative insurance and financing products.

386. WCD IP will support global transformation through a global platform, incorporating and building on GWP-6/7 Global Coordination grants to bolster, support and supplement national projects focused on Components 1-3 and include a new a set-aside granting window to achieve sustained reductions in demand for internationally traded illegal wildlife including 'high-zoonotic risk' wildlife through applied social and behavioral science approaches. This element explicitly addresses the high importance of transforming the social, cultural and economic dimensions of the demand for illegal and high-risk wildlife and the significant *global benefits* of doing so.

387. The global platform will provide: i) Targeted support to national projects on behavioral and social science approaches; ii) Engage and form interdisciplinary partnerships to support wildlife conservation and human health; iii) Knowledge management and learning, including application of innovative and appropriate technology; iv) Capacity building to increase technical capabilities and strengthen local institutions; v) Critical analytics and natural capital assessments; vi) Monitoring and evaluation for the entire program; and vii) Fostering stronger

interagency, intersectoral, and international collaboration including increasing transparency and data sharing.

388. WCD IP will consist of a set of national projects that will work across the IP components depending on the in-country conditions and national-priorities. The global platform will work at a global, regional or transnational level and include a set-aside grant window to support social and behavioral sciences approaches to demand reduction for internationally trafficked and high-risk species, noting that demand reduction behavior change efforts aimed at domestic markets should be mainstreamed through the approach of national projects as well.

389. The program will adopt a dual approach with a global project and country specific investments in selected landscapes. It will build on the existing program governance structure of GEF 6 and GEF 7 with a clear value-added proposition to scale up impact in the GEF 8 period and beyond. The program will include the following criteria for financing:

- Role of the country in IWT supply chains for globally significant, and high zoonotic risk wildlife species;
- Presence of high poaching risk at sites of global significance for biodiversity;
- Increasing/emerging threat of illegal trade including shifting consumer demand;
- Potential benefits for conservation and livelihoods from wildlife-based economies;
- Potential to cooperate with other countries to address threats to wildlife and habitats;
- Opportunity for strong multi-focal area, interventions producing multiple benefits while contributing to GEF focal area objectives; and
- Testing and scaling innovations for wildlife management, human wildlife confilict, sustainable livelihoods, wildlife monitoring, enforcement, and zoonotic survellience etc.

390. The WCD IP investments will also emphasize the application of a gender-responsive approach covering the differential vulnerabilities and capacities of women and men, and gender differences and potential inequalities and opportunities for project impact, effectiveness and sustainability. Projects under WCD IP should include measures to improve the participation and decision-making of women in natural resource governance and target socio-economic benefits and services for women. Projects will also include gender analyses, using sex as part of the design and development of wildlife management interventions, as well as during monitoring and evaluation.

391. This IP will be transformational given it will be bolstering a strong set of economic incentives for wildlife conservation, landscape-level conservation and mangement approaches that benefit both wildlife and livelihoods. Also this IP will be taking a systems-approach to strengtehning the institutions and enabling environment that are critical to adressing IWT and the

drivers of IWT accross the board, rather than taking a narrowly-focused species approach to the issue.

Existing Platforms and Potential Partners

392. The Wildlife Conservation for Development IP will engage with various global and regional platforms and alliances to strengthen collaboration between wildlife related actors to address multifaceted environmental, social, economic and public health challenges facing wildlife conservation and sustainable management. In addition, working across a variety of land and resource rights regimes will mean engagement with IPLCs and institutions including indigenous associations, resource user groups, and conservancies, in addition to public and private sector entities. Under the GWP 6 and 7, the global coordination project has successfully established a coordination and knowledge platform (KP) that provides technical resources and enables the exchange of lessons learned to help project teams with the implementation of their activities on combating IWT and conserving wildlife and habitats and reducing demand.

393. The GWP steering committee includes GEF implementing agencies for the program (ADB, IUCN, UNDP, UNEP, World Bank and WWF) and some of the leading international NGOs and intergovernmental organizations engaged in combating IWT. The Program is also engaged with the major bilateral and multilateral donors on combating IWT, such as the United States, Germany, United Kingdom and European Union.

394. The enormous global impacts of zoonotic disease pathogens (i.e. SARS-CoV-2) have propelled multi-stakeholder coalitions to expedite collaboration in order to fortify environmental services, biodiversity, and health. Although the zoonotic source of SARS-CoV-2 is still unknown, understanding potential links to wildlife is a key consideration. The pandemic is shining a spotlight on the illicit wildlife market and it represents an opportunity to engage with the Healthy Planet, Healthy People approach partners (WHO, EcoHealth Alliance, and others) to build new and strengthen existing partnerships to reduce global and domestic consumption and trade of wildlife.

395. In addition, various NGOs (including TRAFFIC, WildAid, WWF, IFAW, WCS, and Change Wildlife Consumers[318]) have created an extensive program working across Asia on behavior change initiatives. WCD IP collaboration will mainstream social and behavior change approaches for demand reduction and increase public understanding and visibility of the scale and impacts of illegal wildlife trade on biodiversity, livelihoods, human health, and links to organized crime.

[318] http://www.changewildlifeconsumers.org/

396. WCD IP will also strengthen existing and build new coalitions such as the strong coordination with the International Consortium on Combating Wildlife Crime (ICCWC).[319] This collaborative effort of five inter-governmental organizations working to bring coordinated support to the national wildlife law enforcement agencies and to the sub-regional and regional networks that act in defense of natural resources. The partner agencies to ICCWC are the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) Secretariat, INTERPOL, the United Nations Office on Drugs and Crime (UNODC), the World Bank and the World Customs Organization (WCO).

Contributions of this Program to MEAs and Related Global Environmental Benefits

397. The WCD IP embodies an integrated approach to deliver global environment benefits across the GEF focal areas and MEAs in a more impactful and efficient manner. The program is structured to contribute directly to achieving the following *CBD Global Biodiversity Framework zero draft targets*:

- **Target 2**. By 2030, protect and conserve through well connected and effective system of protected areas and other effective area-based conservation measures at least 30 per cent of the planet with the focus on areas particularly important for biodiversity.
- **Target 3.** By 2030, ensure active management actions to enable wild species of fauna and flora recovery and conservation, and reduce human-wildlife conflict by [X%].
- **Target 4.** By 2030, ensure that the harvesting, trade and use of wild species of fauna and flora is legal, at sustainable levels and safe.
- **Target 8**. By 2030, ensure benefits, including nutrition, food security, livelihoods, health and well-being, for people, especially for the most vulnerable through sustainable management of wild species of fauna and flora.

398. Although the GEF is not the financial mechanism for CITES and thus will not directly support countries' CITES implementation activities, this program will make meaningful contributions to addressing the drivers of illegal wildlife trade and overexploitation of wildlife. For instance by: building the capacity of those public institutions responsible for the enforcement and prosecution of wildlife laws; supporting regional networks and cooperation to combat wildlife trafficking; and addressing the consumer demand for wildlife species and products that drive the international trade.

399. The WCD IP will produce considerable, integrated GEBs for biodiversity, climate change mitigation and land degradation. Increasing integrity of wildlife populations and landscapes and providing more diversified and resilient economies through generating value from wildlife and its habitats will reduce biodiversity loss and enhance human wellbeing. Alternative livelihoods can allow IPLCs to not only depend on agriculture but also on wildlife-based and other

[319] https://cites.org/eng/prog/iccwc_new.php

diversified sources of livelihood can help to reduce the stress of unsustainable agriculture practices, exploitation of resources from conservation areas and also contribute to reforestation/restoration goals.

400. The IP will include activities aimed at preserving and enhancing carbon sinks in natural ecosystems, including forests and agroforestry systems, and also strengthening the climate-resilience of IPLCs and ecosystems. Further, the WCD IP will complement and benefit from several other IPs including: Landscape Restoration; Amazon, Congo and Critical Forest Biomes; Blue Economies and Healthy Oceans; and Greening Infrastructure Development.

401. The WCD IP is fully aligned with several SDGs, including: SDG15 life on land, for which it provides direct solutions to protect, restore and promote sustainable use of terrestrial ecosystems and halt biodiversity loss, and SGD13, which focuses on climate action. It is also well aligned with SDG3 on good health and well-being and SDG12 on life responsible consumption and production, through the program's activities for reducing risks of zoonotic spillovers and stimulating behavior change to sustainably reduce wildlife consumption, respectively.

402. Although the GEF is not the financial mechanism for CITES and thus will not directly support countries' CITES implementation activities, this program will make meaningful contributions to addressing the drivers of illegal wildlife trade and overexploitation of wildlife. For instance by: building the capacity of those public institutions responsible for the enforcement and prosecution of wildlife laws; supporting regional networks and cooperation to combat wildlife trafficking; and addressing the consumer demand for wildlife species and products that drive the international trade.

Role of the private sector in supporting this program

403. Private sector engagement is essential to achieve the innovation and transformational change in wildlife conservation and sustainable livelihoods. GEF financing will incentivize actions by national governments to promote the tourism sector to develop and expand nature-based tourism opportunities and wildlife-based value chains to generate sustainable livelihood opportunities that reduce conflicts between communities and wildlife. The private sector can also play an important role in protected area management models. The travel, restaurant and retail sectors will be engaged to address the trade and consumption of illegal wildlife and wildlife products. Technology and IT companies will be engaged to support the development of innovative solutions that help address IWT, monitor zoonotic diseases, influence demand reduction and consumption of wildlife and wildlife products.

404. Technology and IT companies will be engaged to support the development of innovative solutions that help address IWT, monitor zoonotic diseases, influence demand reduction and consumption of wildlife and wildlife products. With the goal of developing more flexibility and fostering innovation, more emphasis will be put on innovation/tech/development grants/prizes that allow for private sector engagement at all levels including for remote patrolling and surveillance technology solutions.

405. Development and deployment of new financial solutions is also important to achieve conservation and development outcomes. WCD IP will explore opportunities to engage new investor groups/asset classes to support innovative financial solutions and work with the financial sector to curb wildlife trafficking. For the development of small and medium-sized enterprises (SMEs) there is also the possibility of blended finance or outside sources of concessional finance, and grant funding for technical assistance. The Program will actively engage with private sector actors, through individual national projects and through strategic partnerships at the program level.

406. The private sector commitments to Corporate Social Responsibility (CSR) frameworks represent an opportunity for channeling resources to target protected areas/landscapes and livelihood activities. CSR remains voluntary including companies interested in reducing their carbon footprints through reforestation/restoration commitments.

Elimination of Harmful Chemicals from Supply Chains Integrated Program

Introduction

407. Globally significant supply chains extend over national borders and have multiple environmental impacts across all focal areas of the GEF. The environmental damage and pollution from these supply chains have significant impacts on planetary and human health.[320]

408. Existing work to green these supply chains focus primarily on climate change and increasingly on biodiversity. There is however little evidence that significant progress is made on eliminating harmful chemicals and materials that would be critical to facilitating circularity.

409. There is growing evidence that the following supply chains contribute to significant environmental degradation: [321], [322], [323]

a. Fashion –textiles (natural and synthetic), leather, metals, natural and synthetic accessories, cosmetics and beauty products

b. Construction –metals, timber, cement, paint, additives, and others

410. These supply chains are characterized by being:

a. Complex, as they combine several supply chains

b. Lack of transparency along the supply chain resulting in poor behavior as responsibility for environmental responsibility can be shifted.

Construction

411. The construction sector accounts for 39% of global greenhouse gas (GHG) emissions[324].

412. The construction sector is a major contributor to the emissions of mercury from the production of cement and the production of polyvinyl chloride (PVC). The UNEP 2108 Global

[320] UN Environment Programme (2020). Sustainability and Circularity in the Textile Value Chain - Global Stocktaking. Nairobi, Kenya.
[321] Global Chemicals Outlook II - From Legacies to Innovative Solutions: Implementing the 2030 Agenda for Sustainable Development
[322] Box 4.4, pg. 116, Dasgupta, P. (2021), The Economics of Biodiversity: The Dasgupta Review. (London: HM Treasury)
[323] Kozlowski A, Bardecki M, Searcy C. Environmental Impacts in the Fashion Industry: A Life-cycle and Stakeholder Framework. Journal of Corporate Citizenship. 2012;(45):17-36
[324] United Nations Environment Programme (2021). Catalysing Science-based Policy action on Sustainable Consumption and Production – The value-chain approach & its application to food, construction and textiles. Nairobi.

Mercury Assessment[325] places the cement industry as the third largest source of mercury emissions after artisanal and small-scale gold mining and coal.

413. The construction industry drives the PVC sector which is expected to grow to nearly 60 million metric tons in 2025[326]. The manufacture of PVC emits dioxins. PVC is difficult to recycle and is often burned as a means of disposal, which emits dioxins. The construction uses POPs such as brominated flame retardants and short-chain chlorinated paraffins (SCCPs) as well as paints, solvents, metals, cement and timber. People are exposed to chemicals in buildings[327] resulting in health risks.

414. UV-328[328] is proposed for listing under the SC which is used as a UV absorber in PVC to protect it from deteriorating when exposed to UV light.

415. PVC[329] are widely used in PVC tubes, pipes, fittings, plastic PVC profiles, cables, etc.

416. The demolition of buildings and structures contributes to future waste and as many of the materials cannot be recovered or recycled so every building and structure that exists today represents future hazardous waste.

Fashion

417. The United Nations Alliance for Sustainable Fashion estimates that the industry accounts for 8% to 10% of the world's greenhouse gas emissions and 20% of the world's industrial wastewater[330]. On average, producing 1 kg of textiles requires 0.58kg of various chemicals[331].

418. According to the World Economic Forum, in 2014, on average, people bought 60% more garments than they did in 2000 and clothing production has roughly doubled since 2000.

419. UNEP 2020[332] notes that over 8,000 chemicals are used in the various textile manufacturing processes. 750 were found to be hazardous to human health. 440 substances were found to be environmentally hazardous[333].

---

[325] UN Environment, 2019, Global Mercury Assessment 2018, UN Environment Programme, Chemicals and Health Branch Geneva, Switzerland
[326] Global PVC production volume 2018 & 2025, Published by Ian Tiseo, Jan 27, 2021
[327] Erin M. Kollitz, Christopher D. Kassotis, Kate Hoffman, P. Lee Ferguson, Julie Ann Sosa, and Heather M. Stapleton
Environmental Science & Technology 2018 *52* (20), 11857-11864
[328] UNEP-POPS-POPRC.16-4.English (3).pdf
[329] Polyvinyl Chloride (PVC): 2021 World Market Outlook and Forecast up to 2030
[330] UN Alliance for Sustainable Fashion; Retrieved from https://unfashionalliance.org/
[331] Ellen MacArthur Foundation. 2017. A New Textiles Economy: Redesigning Fashion's Future.
[332] UN Environment Programme (2020). Sustainability and Circularity in the Textile Value Chain - Global Stocktaking. Nairobi, Kenya.
[333] KEMI. 2014. Chemicals in Textiles. Risks to Human Health and the Environment.

420. UNEP, 2016[334] notes women make up 70% of the 3 million people employed in garment factories in Bangladesh, and Mexico and Cambodia. Women's jobs are in the "bottom tier" of textile production systems exposing them to the highest risks of occupational injuries and exposure to hazardous chemicals (UNEP, 2016)[335]. Furthermore, women are particularly susceptible to the health risks from chemicals used in the wet processing of textiles (UNEP, 2016)[336]. As a result, improvements in this sector will significantly reduce the harmful impacts of chemicals on women employed in this sector.

GEF-8 Integrated Program

421. Existing work in these supply chains largely focus on one issue at a time, such as energy efficiency in buildings, or water use in textile processing. This approach has not significantly made an improvement and as such this IP is aimed at creating a policy and regulatory framework that is harmonized along the value chain and accelerate green by design for sustainable materials production rather than through any single focal area.

422. This IP proposes building on existing initiatives and convene and harmonize efforts in these sectors.

423. For the fashion and construction sectors to become sustainable, circular approaches along with behavioral change of consumers and businesses combined with green and cleaner production will be required. To achieve this eliminating harmful chemicals and materials is critical to transforming these supply chains

424. The IP will also facilitate global coordination along these supply chains to ensure actions are coordinated.

Objectives, Key Interventions, and Selection Criteria

425. The program's objective is to prevent chemical pollution from the supply chains of fashion and construction as well as significantly improve the sustainability of these sectors. The program also seeks to create circular and closed loop supply chains in fashion and construction as follows:

Objective 1: Globally Harmonized Policy Environment for the Management of Sustainable Supply Chains

426. Supporting harmonized regulatory systems and environmental standards across countries to allow for more uniform management of supply chains to prevent release of hazardous

[334] UNEP. 2016. Global Gender and Environment Outlook.
[335] UNEP. 2016. Global Gender and Environment Outlook.
[336] UNEP. 2016. Global Gender and Environment Outlook.

chemicals at all stages of the life cycle. This allows regulatory certainty that facilitates private sector innovation within a stable regulatory environment leading to the creation of green business to business (B2B) partnerships. Actions include inter alia:

- Mapping the supply chain to understand materials flows and points of contamination and reviewing effectiveness of existing legislation
- Harmonizing policy incentives to drive innovation across the supply chain and that support business to business partnerships and financial incentives.
- Green industry standards and certification schemes on products and materials that build upon existing industry standards.
- Strict standards for exporting, importing, and trading materials and products that contain toxic chemicals in conformity with the WTO's Technical Barriers to Trade (TBT) Agreement.
- Transparency of environmental reporting of products and materials in supply chains.
- Block chain and other tools to ensure traceability and certification.
- Regenerative design of products and materials, which will facilitate removal of harmful chemicals from supply chains of materials and products and facilitate more closed loop and circular supply chains.
- Reverse logistics and supply chains to enable recovery of materials and products for reuse, thereby preventing them for building up in the environment.
- Green procurement to facilitate elimination of products and materials that contain or can contribute to the emission of harmful chemicals and a buildup of material that contains harmful chemicals.

Objective 2: Green by Design

427. Ensuring there is a supply to meet responsible sourcing within supply chains design of materials and products will be critical. The following areas can be supported:

- Green and sustainable chemistry, 3Rs (Reduce, Reuse and Recycle) circularity and Nature-based Solutions for redesign of materials and products used in the fashion industry.
- Chemical free agriculture where possible.

- Efficient materials recovery from fashion products, including fiber recovery and materials recovery from buildings and another built environment.

- Designing out harmful materials including microplastics from supply chains.

428. The selection criteria will focus on:

- Countries must be major contributors or users of inputs or outputs of the supply chains of fashion or construction.

- Supply chains that have the highest percentage of harmful chemicals will be prioritized.

- Projects must at a minimum have global environmental benefits for chemicals and waste and also meet multiple global environmental benefits.

- Projects/program that can bring together the major private sector partners that are engaged in the supply chain or sub-supply chain.

- Projects and programs that use regenerative design, implement reverse logistics and green procurement as a base component to transform the supply chains.

- Projects and programs that can influence behavioral changes in consumer, private sector and government to facilitate responsible sourcing of materials and products.

Existing Platforms and Potential Partners

429. The Elimination of Harmful Chemicals from Supply Chains IP will engage with various global and regional platforms initiatives and alliances to strengthen collaboration, cooperation and coordination with them.

Fashion:

430. In the Fashion sector the various platforms, initiatives and alliances can be grouped into four groups that align with the objective of green by design in this IP.

431. Better production and sourcing of materials – Several initiatives are ongoing in this area including the Better Cotton Initiative (BGI)[337] and Cotton 2040[338] are multi-stakeholder initiatives to increase the use of sustainable cotton internationally, bringing together international brands and retailers, sustainable cotton standards, existing industry initiatives and other

[337] https://bettercotton.org/
[338] http://cottonupguide.org

stakeholders across the value chain. Working with this group will facilitate access to best practices and lessons learned that can be further scaled through the work in the IP.

432. Product labels, certifications, benchmarks, pledges and agreements – Certification and agreements plays an important role in creating transparency in the supply chain and facilitating responsible sourcing. Working with these platforms will allow for more broadly deploying the regulatory frameworks and policy environment to create harmonization across national jurisdictions so that traceability can be ensured from end to end. the Fashion Pact[339] and the Fashion Industry Charter for Climate Action[340] under the UNFCCC, work on climate change and biodiversity targets, while Bluesign[341] certifies textiles consumer products that are responsibly and sustainably manufactured include the use of chemicals.

433. Production of more sustainable materials –Existing work can be leveraged and further built and scaled across a wider range of geographies. The stakeholders engaged in this category work on reduction of chemicals, implementing clean and sustainable technology and increasing circularity. The Zero Discharge of Harmful Chemicals (ZDHC)[342] foundation, sets out a roadmap for eliminating harmful chemicals from textiles. DyeCoo[343] is technology that provides waterless and chemical free textile processing and Repreve[344] which produces fibers for athletic and fashion apparel from recycled plastic bottles.

434. Platforms that are working specifically on sustainability in textiles - More well know platforms such as Clean by Design[345,] UN Alliance for Sustainable Fashion[346] and the Sustainable Apparel Coalition[347] will be necessary to leverage their large networks to identify both contributors and partners to the work in the IP.

Construction:

435. For the construction sector the primary focus on sustainable building initiatives currently is based on climate change considerations.

339 https://thefashionpact.org
340 https://unfccc.int/climate- action/sectoral-engagement/global-climate- action-in-fashion/about-the-fashion-industry-charter-for-climate-action
341 https://www.bluesign.com/en
342 https://www.roadmaptozero.com/?locale=en
343 http://www.dyecoo.com/
344 https://repreve.com/
345 https://www.nrdc.org/resources/clean-design-apparel-manufacturing-and-pollution
346 https://unfashionalliance.org/
347 https://apparelcoalition.org/

436. Excellence in Design for Greater Efficiencies (EDGE)[348] which is an International Finance Corporation (IFC) certification program on green buildings. This can be further expanded to chemicals standards and hazard content of materials being used in buildings.

437. The World Green Building Council (WorldGBC)[349] is a global action network comprised of around 70 Green Building Councils globally that are working on transforming the building and construction sector. Working with these to expand to other countries and incorporate chemicals standards and hazard content of materials being used in buildings which allow for the switch to more circular building practices.

438. The Global Alliance for Buildings and Construction (GlobalABC)[350], launched at the 21st Conference of Parties (COP21), is a voluntary partnership of national and local governments, inter-governmental organizations, businesses, associations, networks and think thanks committed to a common vision: A zero-emission, efficient and resilient buildings and construction sector. The Global ABC network currently includes over 130 members, among which are 30 countries.

Contributions of this Program to MEAs and Related Global Environmental Benefits

439. Fashion – As stated above the fashion sector produces GHGs higher than the entire global transport sector and textiles alone by volume uses over 50% by weight in chemicals. In addition to this, the textiles sector alone contributes to 8% of global GHG emissions, uses over 215 trillion liters of water and contributes 9% of microplastics to the ocean along with impacts on wastewater, biodiversity loss, loss of land cover among others. Work in this sector is therefore expected to have GEBs for all the Rio Conventions, IW and the Stockholm Convention, Minamata Convention and SAICM.

440. Construction – This sector alone accounts for 39% of global GHG emissions and is driving the global PVC sector. The sector also has significant impacts on land, biodiversity loss, air, water and land pollution as seen in the previous table. Work in this sector is therefore expected to have GEBs for all the Rio Conventions, IW and the Stockholm Convention, Minamata Convention and SAICM.

Role of the private sector in supporting this program

441. As part of the overall strategy to sufficiently cover such a large and diverse industry, the IP will focus its private sector engagement through multi-stakeholder platforms that can address the concerns of the marketplace, investors and policy makers at the scale required to support systemic transformation. Such platforms include the GEF Gold initiative, the Sustainable Tire Industry Project, the renewable bioeconomy platforms of the WBCSD and the WEF, and GEF's

[348] https://edgebuildings.com/
[349] https://www.worldgbc.org/
[350] https://globalabc.org/).

own opportunities to catalyze or consolidate platforms to better address the marketplace opportunities for better chemicals and waste outcomes.

442. These supply chains will require engagement and participation by the private sector at all points along them including agriculture, textile mills, recycling, manufacturing, plastics, chemical industry, fashion brands. The tables above illustrate the engagement of the private sector and work in this program will help to coordinate these actors to achieve reduction of the environmental impact of these supply chains. The private sector will need to be both an instrument of change and a beneficiary of change.

443. A detailed mapping of each supply chain will be required to identify the best entry points for GEF action and partnerships such as the Fashion PACT will help in this work. There will be opportunities to create new enterprises, including women led and owned businesses in each supply chain that adhere to a green/sustainable business model.

IV. DELIVERY PATHWAYS OF INTEGRATED PROGRAMS TO BLUE AND GREEN RECOVERY

444. As noted in the introduction, significant opportunities and pathways exist for the GEF to support and enhance investments that are being made by governments worldwide to stimulate economic recovery in the post-COVID world. The Integrated Programs offer a rich set of entry points for governments to match critical environmental conservation and restoration with urgently needed economic activity.

445. All GEF focal areas lend themselves to investments that can boost the blue and green recovery, and IPs in particular are well suited to deliver in multiple areas of recovery in a more efficient and impactful manner. These include efforts to protect and restore natural systems and their ecological functionality while also limiting forest fragmentation and in particular in high-risk areas based on what we know of potential future pandemics. Focusing investment in production landscapes and land use practices within them can also decrease the risk of human/nature conflicts. The GEF can also promote circular solutions to reduce unsustainable resource extraction and environmental degradation. And the GEF can promote low carbon solutions for climate mitigation that maximize the delivery of socio-economic co-benefits, such as job creation and reduction of public spending for the purchase of polluting fuels or technologies.

446. By investing in these options and approaches for a green and blue recovery, the IPs will directly support transformation of the key systems toward a healthy and resilient planet.

447. The following table summarizes the numerous areas where the IPs can contribute significantly to the blue and green recovery and hopefully lead to a more healthy future for nature and people.

Table 2. Supporting a Green and Blue Recovery through the Integrated Programs

GEF-8 Integrated Programs	Options and Approaches
Food Systems	• Sustainable and nature-positive production • Renewable Energy and Energy Efficiency technologies • Circularity in and shorter supply chains engage more local stakeholders • Food loss / waste management improved • Internalizing environmental costs of production including positive incentives • Shifting diets and reduced risks of zoonotic spillovers and further hardship on people

Sustainable Cities	• Urban biodiversity and Nature-based solutions • Supply chain and waste management • Renewable Energy and Energy Efficiency technologies (Public transport and e-mobility) • Management of hazardous chemicals and waste • Green Spaces and quality of life
Amazon, Congo, and Critical Forest Biomes	• Protection of biodiversity and carbon stocks • Deforestation-free commodities • Avoiding deforestation from energy infrastructure • Securing tree-based and forest ecosystem services and the creation of positive incentives • Local livelihoods linked to nature-based economy • Reducing risks of zoonotic spillovers
Wildlife Conservation for Development	• Reducing wildlife overexploitation, illegal trade and habitat loss • Reducing dependency on and consumption of wildlife • Preventing threats from energy infrastructure • Eliminating demand for wildlife • Wildlife-based economy and local livelihoods • Reducing risks of zoonotic spillovers
Blue Economies and Healthy Oceans	• Protection of marine and freshwater ecosystems • Reducing impacts of agricultural point and non-point nutrient pollution • Renewable Energy and Energy Efficiency technologies • Reducing wastewater pollution and micro plastics • Reducing risks from pollutants, particularly viruses, bacteria and dead zone impacts
Landscape Restoration	• Forest landscape and ecosystem restoration work at the local level • Regenerative production practices • Renewable Energy and Energy Efficiency technologies • Innovative solutions for restoring degraded lands • Restoration for healthy and resilient ecosystems to support people
Blue and Green Islands	• Protection of terrestrial and marine ecosystems; Valuing nature • Sustainable production in agriculture and fisheries

	• Innovative Nature-based Renewable Energy and Energy Efficiency technologies • Nature-based solutions for green and resilient cities • Local livelihoods linked to nature-based economy • Reducing water pollutants
Net-zero Accelerator	• Natural climate solutions • Renewable Energy and Energy Efficiency technologies in Transport, Buildings and Construction sector • Innovation and employment generator
Elimination of Harmful Chemicals from Supply Chains	• Reduce or eliminate hazardous chemicals • Alternatives to hazardous agro-chemicals • Renewable Energy and Energy Efficiency technologies • Reducing exposure to hazardous chemicals and improving human health
Circular Solutions to Plastic Pollution	• Reducing pollution from plastic waste • Plastic alternatives in the food supply chain • Renewable Energy and Energy Efficiency technologies • Circularity and efficient waste management and innovative technologies • Reducing exposure to plastic pollutants
Greening Infrastructure Development	• Nature-based "infrastructure" solutions and local employment opportunities • Reducing impacts on critical production systems • Preventing threats from energy infrastructure development • Reducing threats from built infrastructure and decarbonization • Reducing exposure to risks of degradation • Cost-effective technology delivering multiple benefits

V. FOCAL AREA STRATEGIES

Biodiversity Focal Area

Global Context of Biodiversity

448. The Convention on Biological Diversity (CBD) defines biodiversity as "the variability among living organisms from all sources including, inter alia, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, between species, and of ecosystems."

449. Numerous analyses and studies over the last 15 years have advanced our understanding of biodiversity beyond its intrinsic value as an expression of nature to include a recognition that biodiversity is a societal asset that makes significant contributions to advance economic development and human well-being. [351] [352] The recently released Dasgupta Review reiterated with even greater economic clarity the dependency of our economy, livelihoods, and well-being on Nature.[353]

450. While our scientific understanding of biodiversity as a provider of goods (food, water, materials) and ecosystems services (climate regulation, pollination, disaster protection, etc.) to advance human well-being has grown more nuanced and comprehensive, our management of biodiversity has not been sufficient to ensure its long-term persistence as recent global studies on biodiversity loss have noted.[354,355] The recent IPBES report solidified our understanding, first established by the Millennium Assessment in 2005, that the five main direct drivers of biodiversity loss and declines in nature are: land/sea use change, direct exploitation, climate change, pollution and invasive alien species (particularly in island ecosystems), climate change, and pollution. Increasingly, the expansion of infrastructure is being recognized as one of the most critical direct drivers of land use change in the immediate future. In the next 10 years, predicted infrastructure investment of US$90 trillion would lead to 70% more built infrastructure on Earth than we have today.[356] Poorly planned infrastructure is associated with 60% of global

[351] Millennium Ecosystem Assessment 2005, Ecosystems and Human Well-being: Synthesis, Island Press, Washington DC; TEEB (2010) The Economics of Ecosystems and Biodiversity: Mainstreaming the Economics of Nature: A synthesis of the approach, conclusions and recommendations of TEEB.

[352] IPBES (2019): Summary for policymakers of the global assessment report on biodiversity and ecosystem services of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services. S. Díaz, J. Settele, E. S. Brondízio E.S., H. T. Ngo, M. Guèze, J. Agard, A. Arneth, P. Balvanera, K. A. Brauman, S. H. M. Butchart, K. M. A. Chan, L. A. Garibaldi, K. Ichii, J. Liu, S. M. Subramanian, G. F. Midgley, P. Miloslavich, Z. Molnár, D. Obura, A. Pfaff, S. Polasky, A. Purvis, J. Razzaque, B. Reyers, R. Roy Chowdhury, Y. J. Shin, I. J. Visseren-Hamakers, K. J. Willis, and C. N. Zayas (eds.). IPBES secretariat, Bonn, Germany. 56 pages.

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

[354] IPBES (2019): Summary for policymakers of the global assessment report on biodiversity and ecosystem services of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services

[355] Secretariat of the Convention on Biological Diversity (2020) Global Biodiversity Outlook 5 – Summary for Policy Makers. Montréal.

[356] The Global Commission on the Economy and Climate. 2018. Unlocking the inclusive growth story of the 21st Century: Accelerating climate action in urgent times: key findings and executive summary, page 2. New Climate Economy.

greenhouse gas (GHG) emissions and can drive environmental degradation through changes in land, ocean and water use and expansion into pristine habitats – contributing to declines in the health and well-being of humans, wildlife populations and ecosystems.[357]

451. The Global Biodiversity Outlook 5 analyzed national reports on progress against all 20 of the Aichi Biodiversity Targets that were established to monitor implementation of the Strategic Plan for Biodiversity, 2011-2020. At the global level none of the 20 targets have been fully achieved, though six targets have been partially achieved (Targets 9, 11, 16, 17, 19 and 20).[358]

452. Finally, a recent IPBES workshop report on biodiversity and pandemics reaffirmed the clear link between pandemics and the biodiversity and climate crisis[359]. The same forces that are increasing zoonotic spillovers (including of SARS CoV-2) are the driving forces behind the loss of biodiversity on a global scale: increased changes in land use, the expansion and intensification of agriculture and the trade and consumption of wildlife, which has contributed to fragmentation of ecosystems, and an increase in proximity between humans and wildlife, livestock and humans and thus with the pathogens they carry . Hence, the current formulation of the GEF-8 biodiversity strategy and its increased emphasis on integrated landscape/seascape approaches as well as GEF's Wildlife Conservation for Development Integrated Program can also be seen as investments in reducing the risk of zoonotic disease spillover that will be much more cost-effective than reacting to a pandemic.

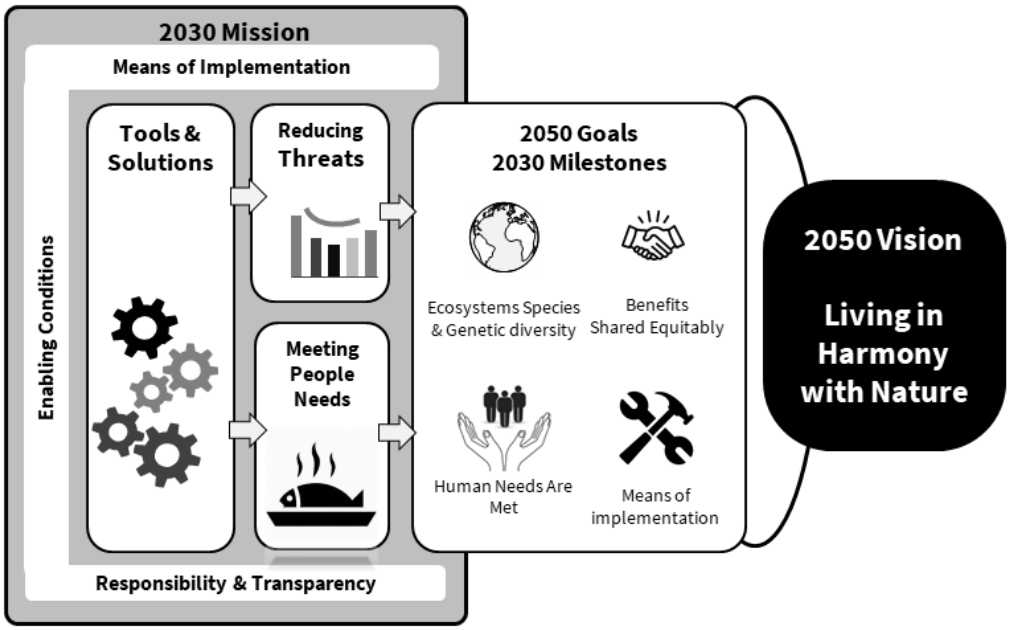
<u>The Zero Draft of the Post 2020 Global Biodiversity Framework</u>[360]

453. The zero draft of the Post 2020 Global Biodiversity Framework (GBF) has outlined a renewed approach to biodiversity conservation and sustainable use that emphasizes nature's benefits to human development. The framework is based on a theory of change (see figure 22) that proposes to bend the curve of biodiversity loss by 2030 and achieve the Convention's vision of "living in harmony with nature by 2050" the following actions are required: (a) put in place tools and solutions for implementation and mainstreaming, (b) reduce the threats to biodiversity, and (c) ensure that biodiversity is used sustainably in order to meet people's needs. These actions are to be supported by enabling conditions, and adequate means of implementation,

[357] The Global Commission on the Economy and Climate. 2016. The sustainable infrastructure imperative: financing for better growth and development: key messages and executive summary, page 4. New Climate Economy.
[358] Secretariat of the Convention on Biological Diversity (2020) Global Biodiversity Outlook 5.
[359] IPBES (2020) Workshop Report on Biodiversity and Pandemics of the Intergovernmental Platform on Biodiversity and Ecosystem Services. Daszak, P., das Neves, C., Amuasi, J., Hayman, D., Kuiken, T., Roche, B., Zambrana-Torrelio, C., Buss, P., Dundarova, H., Feferholtz, Y., Foldvari, G., Igbinosa, E., Junglen, S., Liu, Q., Suzan, G., Uhart, M., Wannous, C., Woolaston, K., Mosig Reidl, P., O'Brien, K., Pascual, U., Stoett, P., Li, H., Ngo, H. T., IPBES secretariat, Bonn, Germany, DOI:10.5281/zenodo.4147317
[360] Update of the zero draft of the post-2020 global biodiversity framework, CBD/POST2020/PREP/2/1 17 August 2020.

including financial resources, capacity, and technology. The Zero Draft includes a set of four goals and 20 Action targets.

Figure 22. Theory of Change of the Zero Draft of the Post 2020 Global Biodiversity Framework



454. The draft GBF recognizes that gender equality, women's empowerment, youth, and gender-responsive approaches and the full and effective participation of IPLCs are necessary elements for successful implementation of the framework. A new gender plan of action for the post-2020 period is also under development proposing three overarching goals in the current draft. [361] Finally, partnership involving organizations at global, national, and local level will be required for successful implementation of the GBF. It also assumes that a whole-of government and society approach is required to achieve the 2030 draft goals and the 2050 Vision.

455. The presentation of the GEF-8 Strategy demonstrates the relationship of the GEF strategy to the four goals and 20 action targets of the Zero Draft of the Post 2020 Global Biodiversity Framework as well as its theory of change, cognizant that these may change. The four goals of the zero draft of the GBF are:

[361] CBD/SBI/3/4/ADD2, Draft outline of a post-2020 gender plan of action (https://www.cbd.int/doc/c/1037/0c47/974ee71c8778acceb3813a95/sbi-03-04-add2-en.pdf)

- Goal A: The area, connectivity and integrity of natural ecosystems increased by at least [X%] supporting healthy and resilient populations of all species while reducing the number of species that are threatened by [X%] and maintaining genetic diversity;

- Goal B: Nature's contributions to people have been valued, maintained or enhanced through conservation and sustainable use supporting global development agenda for the benefit of all people;

- Goal C: The benefits, from the utilization of genetic resources are shared fairly and equitably;

- Goal D: Means of implementation are available to achieve all goals and targets in the framework.

GEF-8 Biodiversity Focal Area Investments and Associated Programming

456. The GEF-8 Biodiversity focal area investments and associated programming is predicated on the following assumptions: 1) biodiversity is a shared societal asset that requires a management approach that is multi-sectoral in nature and that acknowledges the importance of Nature to human well-being; and 2) any solution to the biodiversity crisis requires the participation of all stakeholders in society most notably IPLCs, women, youth, as well as the private sector.

457. Gender can strongly influence people's relationship to nature, dependence upon it, and access to the benefits it provides. Gender roles affect economic, political, social and ecological opportunities and constraints faced by both men and women. Recognizing women's roles as primary land and resource managers and differences in access to resources is central to the success of biodiversity policy. Gender considerations are not solely a women's issue; instead, this approach yields advantages for whole communities and benefit all people. For these reasons, all GEF biodiversity investments must incorporate gender dimensions into how projects propose to achieve biodiversity conservation, sustainable use and the equitable sharing of benefits. GEF-8 gender-responsive approaches will seek to contribute to the goals that are eventually agreed in the post-2020 Gender Plan of Action.

458. The GEF-8 Biodiversity focal area strategy responds to the objectives of the CBD and its Protocols and the evolving draft of the Global Biodiversity Framework as well as to certain objectives of biodiversity-related conventions.[362]

[362] The Convention Concerning the Protection of the World Cultural and Natural Heritage (World Heritage Convention), Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), Convention on the Conservation of Migratory Species of Wild Animals (CMS), Convention on Wetlands of

459. The goal of the GEF-8 Biodiversity focal area strategy is: *globally significant biodiversity conserved, sustainably used, and restored.*

460. To achieve this goal, the GEF Biodiversity focal area will support the following three objectives:

1) To improve conservation, sustainable use and restoration of natural ecosystems;

2) To effectively implement the Cartagena and Nagoya protocols; and

3) To increase mobilization of domestic resources for biodiversity.

Objective 1. To improve conservation, sustainable use and restoration of natural ecosystems (GOALS A, B and C of the Zero Draft of the GBF)

Rationale

461. GEF-8 marks a shift in the GEF strategy from investing in landscapes and seascapes through the two distinct entry points of protected areas and production landscapes/seascapes to an area-based investment strategy that has one entry point and sees landscapes and seascapes as they are: complex systems of land and marine use where protected area management approaches are embedded within other land- and marine-use types in a mosaic of human activity that relies on nature and biodiversity.

462. Protected areas around the world do not exist as isolated islands of tranquility where centuries of evolutionary processes continue uninterrupted by humans. Rather, they are often found in mixed-use landscapes where natural resources are intensively managed for satisfying human needs such as food, water, fuel, and wood. Protected area administrations are thus challenged to manage protected areas to achieve their conservation objectives while land-use and management actions taken outside the park borders can often work at cross-purposes to their conservation goals, in some cases resulting in downgrading, downsizing, and degazettement of protected areas, known as PADDD. [363] By recognizing the bio-physical and socio-economic milieu that protected areas are part of, the strategy is seeking to turn a potential management problem into an opportunity to sustain protected areas for the long-term.

International Importance Especially as Waterfowl Habitat (Convention on Wetlands or Ramsar Convention), International Plant Protection Convention (IPPC), International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA), and International Whaling Commission.

[363] Qin, S., Golden Kroner, R.E., Cook, C., Tesfaw, A.T., Braybrook, R., Rodriguez, C.M., Poelking, C. and Mascia, M.B. (2019), Protected area downgrading, downsizing, and degazettement as a threat to iconic protected areas. Conservation Biology, 33: 1275-1285.

463. The strategy proposes a concept that moves beyond the concept of "conservation corridors" ---which are mostly defined by biological considerations-- and encompasses a more fluid and organic understanding of landscape-level ecosystem processes and management requirements within and beyond the protected areas themselves. In the context of the GEF-8 strategy, land and marine-use mosaics are defined as "networks of protected areas and complementary landscapes/seascapes that include combinations of national parks, OECMs, sustainable use areas, production landscapes and seascapes, and IPLC managed lands and waters".[364] Ideally, GEF investments will build upon existing social and institutional arrangements to ensure that conservation, production, and local benefit objectives are all met in a way that can be socially and economically sustained. As a management approach, the strategy will emphasize the interdependence of meeting the objectives of national parks, other natural resource management strategies, and local economic development and depend on multi-stakeholder approaches, cross-ministry collaboration, and policy coherence.

464. The strategy assumes that a more integrated and complimentary approach to protected areas and production landscape/seascape investment reflects the realities of most of GEF recipient countries and is likely to achieve more durable results in conservation, sustainable use, and restoration. The sustainability of protected areas is directly related to and reliant on the activities in the surrounding landscapes and seascapes, while production landscapes and seascapes and human settlements are often dependent on the ecosystem services provided by protected areas and other conservation-based land/ocean management strategies. This strategic shift also reflects the evolution of the GEF portfolio where countries are already blending these approaches in the context of large-scale investments in biodiversity conservation, sustainable use, and restoration at the scale of landscape and seascape mosaics.

465. Therefore, GEF-8 will blend the previously discrete investment strategies to support protected area management and biodiversity mainstreaming to support integrated management approaches that use multiple tools and strategies to respond to the drivers of biodiversity loss within large landscape and seascape mosaics.[365]

466. Given that the GBF and the global community are orientating the biodiversity agenda towards better reflecting nature's benefits for people, the question of what biodiversity to protect and manage within these landscapes and seascapes becomes critical within the context of GEF's mandate. Consistent with the GEF mandate to generate global environmental benefits, these

[364] Landscapes include all freshwater and aquatic biodiversity therein.

[365] Integrated landscape management and landscape approaches have no universally agreed definition. For GEF, support to integrated landscape/seascape management refers to an investment strategy that provides tools for allocating and managing terrestrial and marine ecosystems to most effectively achieve GEF's mandate to deliver global biodiversity benefits while supporting important social, economic, and environmental co-benefits in areas where agriculture, fisheries, mining, forestry, etc. compete with biodiversity goals. This approach is fully consistent with the ecosystem approach long espoused by the CBD and the landscape approach discussed at SBSTTA 15 and within the recommended guiding principles for landscape level approaches (UNEP/CBD/SBSTTA/15/13)

landscapes and seascapes will contain globally important biodiversity. Recognizing that there is no internationally agreed definition of globally important biodiversity, project proponents will demonstrate on a case-by-case basis, the global importance of the project's anticipated biodiversity benefits. Most of the time it will involve justifying the project`s contribution to the persistence of some biodiversity components - genes, species, or ecosystems - in relation to their worldwide extent or population size. Proponents will be invited to use criteria commonly used to identify areas for biodiversity conservation[366] but other well-justified criteria will be accepted. The specific project context and data availability challenges will be considered.

467. However, high biodiversity sites may not always coincide with sites that are highly beneficial for people in terms of the ecosystem goods and services that they provide. At the same time, a strategy that only protects and manages for a selected set of ecosystem goods and services would have limited effect in turning the tide of biodiversity loss in the Anthropocene. Under objective one, GEF recognizes the need for countries to embrace a variety of management strategies that will help expand areas under protection and/or sustainable use and that at times this expansion may be based on a mix of globally significant biodiversity criteria and ecosystem goods and services criteria.

468. GEF will continue to support the expansion and improved management of protected areas and sustainability of protected area systems but within this broader and more comprehensive context of integrated landscape/seascape management that includes traditional protected areas (all IUCN categories), sustainable use areas, OECMs[367], supportive enabling conditions, and biodiversity mainstreaming activities with a variety of production and national policy sectors, including an increased emphasis on infrastructure (and complemented by the Greening Infrastructure Development Integrated Program).

469. In addition, within these integrated approaches opportunities to restore areas to ensure the persistence of globally significant biodiversity will be supported. Recent research indicates that using multiple criteria to identify the areas to be restored is important for achieving multiple benefits for biodiversity and climate change mitigation in the most cost-effective. This approach to spatial optimization of site selection was shown to be more cost-effective than prioritizing one criterion over another.[368] Furthermore, restoration gains are most marked if coupled with

[366] A recent review (Asaad et al. 2017) identified 8 commonly used criteria: (1) habitat rarity or uniqueness; (2) habitat fragility/sensitivity; (3) ecological integrity; (4) habitat representativity; (5) presence of species of conservation concern; (6) occurrence of restricted range species; (7) species richness; and (8) importance for life history stage Asaad, I., Lundquist, C. J., Erdmann, M. V., & Costello, M. J. (2017). Ecological criteria to identify areas for biodiversity conservation. Biological Conservation, 213, 309-316.

[367] As defined by the CBD and OECM is: "A geographically defined area other than a Protected Area, which is governed and managed in ways that achieve positive and sustained long-term outcomes for the in situ conservation of biodiversity, with associated ecosystem functions and services and where applicable, cultural, spiritual, socio–economic, and other locally relevant values."

[368] Strassburg, B.B.N., Iribarrem, A., Beyer, H.L. et al. Global priority areas for ecosystem restoration. Nature 586, 724–729 (2020). https://doi.org/10.1038/s41586-020-2784-9

strategies for retaining natural ecosystems within landscape approaches that integrate conservation, restoration and improved use of agricultural lands.[369] Complementing GEF investments in the Landscape Restoration IP and the Amazon, Congo, and Critical Forest Biomes IP, the Biodiversity focal area strategy will fund cost-effective restoration activities that improve the status of biodiversity and are part of integrated landscape management approaches.

470. An integrated landscape/seascape management approach to support the persistence of biodiversity will by necessity include a broader array of stakeholders and intervention strategies than GEF supports when protected area management and biodiversity mainstreaming are addressed separately. This will also help foster a multi-sectoral approach across government ministries and all-of-government engagement.

471. Embedded as a fundamental element in this new approach is the central role of IPLC managed lands and waters and their contribution to improved biodiversity conservation and sustainable use and critical socio-economic benefits at local and national levels. GEF will support the contribution and engagement of IPLCs within the context of this integrated approach.

Project Support

472. Projects in GEF-8 can use a wide array of tools and approaches to achieve this objective. Projects must present a clear theory of change that demonstrates that the proposed investment effectively addresses the drivers of biodiversity loss in the targeted landscape/seascape. The various management strategies that can be supported in an integrated landscape/seascape intervention under this objective are presented below.

Improving Financial Sustainability, Effective Management, and Ecosystem Coverage of Protected Areas

473. GEF support will continue to focus on strengthening three elements of a sustainable protected area system: 1) effective protection of ecologically viable and climate-resilient representative samples of the country's ecosystems and adequate coverage of threatened species at a sufficient scale to ensure their long term persistence; 2) sufficient and predictable financial resources available, including external funding, to support protected area management costs at the site and system-level; and 3) sustained individual and institutional capacity to manage protected areas such that they achieve their conservation objectives.[370]

474. GEF support will contribute to the achievement of the global target to be agreed as part of the Global Biodiversity Framework to protect and conserve a significant percentage of the planet's terrestrial and marine ecosystems. We will encourage that new protected areas

[369] Ibid.

[370] A protected area system could include a national system, a sub-system of a national system, a municipal-level system, or a local level system or a combination of these.

established with GEF support be globally significant including as defined by the Key Biodiversity Area (KBA) standard. Proposals will be considered on a case by case basis when compliance with the KBA standard cannot be demonstrated by the project. GEF will notably support the protection of areas recognized by the CBD as ecologically or biologically significant marine areas (EBSAs).[371]

475. GEF-supported interventions on protected area finance will use tools and revenue mechanisms that are responsive to specific country situations (e.g., conservation trust funds, systems of payments for environmental services, debt-for-nature swaps, economic valuation of protected area goods and services, access and benefit sharing agreements, "Project for Finance Permanence" approaches, etc.) and draw on accepted practices developed by GEF and others. GEF will also encourage national policy reform and incentives to engage the private sector (concessions, private reserves, etc.) and other stakeholders to improve protected area financial sustainability and management. Activities implemented under objective three on domestic resource mobilization may also uncover other strategies and revenue sources to support protected area management costs.

476. GEF will continue to promote the empowerment, participation, and capacity building of IPLCs, especially women, in the design, implementation, and management of protected area projects including Indigenous and Community Conserved Areas.[372] GEF will also promote protected area co-management between government and IPLCs where such management models are appropriate and activities that support the recognition and realization of the rights of IPLCs to control and manage their lands and territories.

Biodiversity Mainstreaming in Priority Sectors

477. 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." GEF's approach to biodiversity mainstreaming has three main entry points: 1.) spatial/land/marine-use planning; 2.) shifting production practices; and 3.) policy frameworks-incentives and subsidies within the construct of integrated landscape and seascape management. In addition, GEF-8 will include policy reform and creation to support landscape/seascape interventions and to advance and strengthen policy and institutional coherence for conservation.

- GEF will continue to focus primarily on supporting the following suite of activities to advance biodiversity mainstreaming:

[371] https://www.cbd.int/ebsa

[372] Indigenous and Community Conserved Areas are natural sites, resources and species' habitats conserved in voluntary and self-directed ways by IPLCs.

- Spatial and land-use planning to ensure that land and marine resource use is appropriately situated to optimize production without undermining or degrading biodiversity. A review of GEF experience in supporting biodiversity mainstreaming identified investments in spatial and land use planning to be a critical first step that sets the stage for future more comprehensive mainstreaming investments in production landscapes and seascapes.

- Improving and changing production practices to be more biodiversity-positive with a focus on sectors that have significant biodiversity impacts (agriculture, forestry, fisheries, tourism, extractive industries (gas, oil, and mining) and infrastructure development) through technical capacity building and implementation of financial mechanisms (certification, payment for environmental services, biodiversity offsets etc.) that incentivize actors to change current practices that may be degrading biodiversity. GEF support to the sustainable use of plant and animal genetic resources would continue under this element of biodiversity mainstreaming including support to establish protection for Crop Wild Relatives (CWR) in-situ through CWR Reserves; in-situ conservation and sustainable use, through farmer management, of plant genetic resources in Vavilov Centers of Diversity and other globally important diversity centers; and conservation and sustainable use of animal genetic resources and actions to conserve the wild relatives of domesticated livestock, not solely focusing on breeds[373].

- 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**.** Supported activities will include, but are not limited to, institutional changes to enable biodiversity mainstreaming across sectors and in national agendas, including the creation and strengthening of cross-sectoral coordination mechanisms; the reinforcement of regulatory frameworks and enforcement capacities for the application of the mitigation hierarchy; the integration of biodiversity considerations into procurement policies; and the adjustment of the enabling or regulatory environment to promote the assessment and disclosure of biodiversity and nature impacts, dependencies and risks into the financial sector and business models, operations and practices.

478. Under this entry point, the GEF will also support Natural Assessment and Accounting (NCAA) exercises designed to respond to specific target decisions or policy questions. Recognizing that all countries have not yet developed the capacities to carry out NCAA at national scale, local applications with demonstrated practical relevance will be supported. This

[373] Results from these investments may also generate important co-benefits for the International Treaty on Plant Genetic Resources for Food and Agriculture.

responds to many of the recommendations made by the IEO in its evaluation on *GEF's Support to Mainstreaming Biodiversity*.[374]

479. This element of GEF's mainstreaming work will also be supported by Objective 3 and the global program on domestic resource mobilization and we envision that elements of expenditure reviews and natural capital assessment and accounting will inform the development of policy and regulatory frameworks to be eventually supported by the GEF. This also responds directly to a recommendation of the IEO in the same study which states '*design mainstreaming interventions with a longer-term perspective and a resource envelope to ensure sustainability*".[372]

Prevention, Control and Management of Invasive Alien Species

480. Invasive alien species (IAS) are non-native organisms that cause or have the potential to cause harm to the environment, economy and human health. Islands are particularly susceptible to the impacts of IAS. Islands have exceptionally high numbers of endemic species, with 15% of bird, reptile and plant species on only 3% of the world's land area. The conservation significance of islands is highlighted by global analyses showing that 67% of the centers of marine endemism and 70% of coral reef hotspots are centered on islands.

481. GEF-8 will continue to focus support on addressing IAS in island ecosystems within the context of integrated landscape management supported under this objective. This focus is driven not only by programming demand, but by an ecological imperative: IAS are the primary cause of species extinctions on island ecosystems and if not controlled can degrade critical ecosystem services on islands such as the provision of water. The focus also responds to the opportunity offered by the stronger interest to advance IAS management on the part of island states and countries with island archipelagos and the opportunity that island ecosystems provide to demonstrate success in addressing the problem of IAS. Such success may in turn generate greater attention and interest in the comprehensive pathways management approach being promoted through these investments.

482. GEF will support the implementation of comprehensive prevention, early detection, control and management frameworks that emphasize a risk management approach by focusing on the highest risk invasion pathways. As with objective one of the GEF-8 strategy, this comprehensive approach to IAS management will require a whole-of-government approach that cuts across numerous ministries and government responsibilities. In addition, collaboration with the private sector will be required to ensure sustained implementation of a pathways approach. Targeted eradication will be supported in specific circumstances where proven, low-cost, and effective eradication would result in the extermination of the IAS and the survival of globally

[374] GEF/ME/C.55/inf. 02, Evaluation of GEF's Support to Mainstreaming Biodiversity, https://www.thegef.org/sites/default/files/council-meeting-documents/EN_GEF.ME_C.55.inf_.02_Biodiversity_Mainstreaming_Evaluation_Synthesis_Report%20Nov_2018.pdf

significant species and/or ecosystems. While GEF will maintain a focus on island ecosystems and strongly engage with island states to advance this agenda, projects submitted by continental countries that address IAS management through the comprehensive pathways approach outlined above will also be supported.

Objective 2. To effectively implement the Cartagena and Nagoya protocols (GOALS A, B and C of the Zero Draft of the GBF)

The Cartagena Protocol on Biosafety

Rationale

483. GEF's strategy to build capacity to implement the CPB prioritizes the implementation of activities that are identified in country stock-taking analyses and in the COP guidance to the GEF, in particular the key elements in the framework and action plan for capacity building for effective implementation of the CPB at the sixth COP serving as the Meeting of the Parties to the CPB (COP-MOP 6) and the Strategic Plan for Biosafety, 2011-2020 agreed at COP-MOP 6.

484. Currently, a draft implementation plan and a capacity-building action plan are contained in CBD/SBI/3/18 which will be discussed at SBI 3 for submission to COP-15. The draft plans include a range of goals to be achieved under "Implementation Areas" and "Enabling Environment". GEF project support listed below will be updated to reflect the final agreement of the draft implementation and capacity-building action plan.

Project Support

485. The GEF will support the ratification of the Protocol by the countries that have not done so and support the implementation of National Biosafety Frameworks in these remaining countries. The aim of GEF investment is to build capacity to ensure that countries have functional national biosafety frameworks and are in full compliance with the requirements of the Protocol, and that they have mobilized adequate resources to support implementation of the Protocol. Parties will be supported to implement the provisions of the Protocol, including capacity-building related to risk assessment and risk management in the context of country-driven projects, and enhancing public awareness, education and participation concerning the safe transfer, handling and use of living modified organisms. In addition, GEF will support the updating and revision of existing NBFs to allow countries to adapt to the regulation and safe use of new biotechnologies and synthetic biology consistent with the provisions of the protocol.

486. The GEF will support thematic projects addressing some of the specific provisions of the Cartagena Protocol. The thematic projects will also address the integration of the Protocol into the Convention as anticipated into the approach adopted in the Post 2020 global biodiversity framework and the Post 2020 implementation plan and capacity building action plan. These projects should be developed at the regional or sub-regional level and built on a common set of

targets and opportunities to implement the Protocol beyond the development and implementation of NBFs.

487. The GEF will also provide support for the ratification and implementation of the Nagoya-Kuala Lumpur Supplementary Protocol on Liability and Redress to the CPB. There will also be a specific focus on capacity building and regional cooperation to support the effective implementation of the supplementary Protocol.

The Nagoya Protocol on Access and Benefit Sharing

Rationale

488. The Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization provides a legal framework for the effective implementation of the third objective of the Convention on Biodiversity (CBD). The Protocol was adopted by the Conference of the Parties to the Convention on Biological Diversity at its tenth meeting on 29 October 2010 in Nagoya, Japan, entered into force on 12 October 2014, and 129 parties have ratified the Protocol to date. The successful implementation of ABS at the national level has the potential to make considerable contributions to biodiversity conservation and sustainable use.

Project Support

489. GEF will support national and regional implementation of the Nagoya Protocol and, if still required in specific countries, targeted capacity building to facilitate ratification of the Protocol. As such, the GEF will support the following core activities to comply with the provisions of the Nagoya Protocol and promote its implementation:

- Stocktaking and assessment. GEF will support gap analysis of ABS provisions in existing policies, laws and regulations, stakeholder identification, user rights and intellectual property rights, and assess institutional capacity including research organizations;

- Development (or revision) and implementation of national ABS frameworks. This could include the policy, legal, and regulatory frameworks governing ABS, National Focal Point, Competent National Authority, Institutional agreements, administrative procedures for Free and Prior Informed Consent (FPIC) and Mutually Agreed Terms (MAT), monitoring of use of genetic resources, compliance and enforcement with legislation and cooperation on transboundary issues. GEF will continue financing capacity development to ensure that countries develop clear ABS requirements and permitting systems, including biocultural community protocols for IPLCs. Under this area, the GEF will support the training of negotiators of benefit-sharing agreements so that they understand

the range of potential benefits derived from the use of genetic resources by all industries that use genetic resources.

- Development (or revision) of national laws and policies that promote scientific research and development and national investments on the use of genetic resources under national ABS frameworks. These include Bioeconomy and Scientific Development policies that provide policy and economic incentives to foster scientific research and investments on genetic resources for the development and use of ABS products.

- Capacity-building to add value to genetic resources for benefit-sharing, biodiversity conservation, and sustainable use. In countries with national ABS policies, the GEF will support capacity-building and training for domestic users of genetic resources to add value to genetic resources. This will include not only training on scientific Research & Development procedures but also biodiversity-friendly practices for value chains needed for the development of ABS products for industries that use genetic resources. Countries may consider institutional capacity-building to carry out research and development to add value to their own genetic resources and traditional knowledge associated with genetic resources. The GEF will also support efforts of IPLCs concerning their traditional knowledge associated to genetic resources including the cultivation of source biological species and marketing of ABS products.

- Building trust between users and providers of genetic resources requires open and fluent communication and a frank exchange of views and ideas between ABS stakeholders. An ABS Community of Practice or Platform will be established with funding from the Biodiversity Focal Area set-aside to provide a knowledge-sharing space for governments, IPLCs, research and academic institutions, private sector entities, and other stakeholders. The objective would be to increase the level of trust by sharing knowledge on ABS trends, clarifying complex ABS concepts, and facilitating a better understanding of the business models of the biotechnology, agriculture, pharmaceutical, cosmetics, botanical, and food/beverage sectors that use genetic resources which is essential for the negotiation of fair benefit-sharing agreements. This community of practice or platform would also provide a space for IPLCs to clarify ABS concepts and strengthen their bio cultural community protocols for Prior Informed Consent and Mutually Agreed Terms.

- The GEF will also build trust and increase the capacity of users of genetic resources by supporting an ABS Business Facility[375] to bring together international and national users and providers of genetic resources willing to identify opportunities to access genetic resources, share benefits and add value to genetic resources in selected countries. This Facility could also increase the capacity of local scientists and practitioners to ensure that

[375] Proposal for the ABS Business Facility can be found in Annex 1.

value chains needed for the development of ABS products are biodiversity-friendly and that they add value to genetic resources and create the foundation for international ABS partnerships. The ABS Business Facility would contribute to the implementation of the GEF Private Sector Engagement Strategy.

490. The GEF will also enhance national implementation of the Nagoya Protocol through regional collaboration. Regional collaboration will help build capacity of countries to add value to their own genetic resources and traditional knowledge associated with genetic resources and avoid duplication of regulatory mechanisms while encouraging intra-regional collaboration. Regional collaboration can also address the financial and human resource constraints faced by small or least developed countries through sharing regulatory and scientific resources.

491. In recognition of the importance of genetic resources for food and agriculture and in achieving food security worldwide, the GEF will consider projects for the mutually supportive implementation of the Nagoya Protocol and the International Treaty on Plant Genetic Resources for Food and Agriculture.

Objective 3. To increase mobilization of domestic resources for biodiversity (contribution to GOAL D of the Zero Draft of the GBF)

Rationale

492. CBD COP 14 affirmed that resource mobilization would be an integral part of the post-2020 GBF[376]. Based on the goals and targets of the GBF's latest draft[377], the framework can be expected to encompass a dedicated Goal "Means of implementation are available to achieve all goals and targets of the Framework", with two milestones, 2022 and 2030. Two 2030 Action Targets related to incentives harmful for biodiversity (target 17) and the increase of financial resources from all international and domestic sources (target 18) are also proposed. Section F "Implementation support mechanisms" of the draft post -2020 GBF further describes a strategic approach to resource mobilization with five components: enhanced financial mechanism that delivers resources for developing countries; reduction or redirection of resources causing harm; generation of additional financial and non-financial resources from all source; enhancing effectiveness and efficiency and national finance plans.

493. According to the most comprehensive estimates to date, the global biodiversity funding gap between total annual capital flows toward global biodiversity conservation and the total amount of funds needed for conservation and sustainable use may be as high as $598–824 billion

[376] Decision COP XIV/22

[377] CBD/POST2020/PREP/2/1 – 17 August 2020 – Update of the zero draft of the post-2020 Global Biodiversity Framework

per year by 2030[378]. While recognizing the role all societal actors have to play and that ODA is a major funding source for biodiversity in many countries, 73–82% of the $124–143 billion currently spent on biodiversity per year are derived from the domestic public sector. Current international public biodiversity finance ($3.9 to 9.3 billion per year[379]) represents 0.5-1.6% of the anticipated 2030 gap. While it is acknowledged that ODA will have to increase for a global biodiversity goal to be achieved, domestic resource mobilization (DRM) is bound to continue to play a central role for biodiversity.

494. The GEF is uniquely positioned to help interested countries in leveraging DRM work under the CBD to synergistically deliver on multiple global environmental goals. The need to strengthen DRM indeed pervades the entire sustainable development agenda as recognized in the Addis Ababa Action Agenda, which includes a commitment to further strengthening the mobilization and effective use of domestic resources.

495. One crucial area within DRM for biodiversity that can also generate stronger integration across MEAs is the reduction or redirection of harmful financial flows. Given the content of many COVID-19 recovery packages[380], supporting countries in this respect has become an even higher priority. It includes most notably rethinking subsidies to reward nature-positive outcomes. In 2019, an estimated $274–542 billion were spent on subsidies in agriculture, fisheries and forestry that are potentially harmful to biodiversity, dwarfing current biodiversity finance by a factor of two to four**Error! Bookmark not defined.**. In addition, according to OECD and IEA analysis of 77 economies, f ossil fuel production and consumption subsidies totaled $478 billion in 2019[381] or close to *ca*. $5 trillion once externalities are accounted for[382].

496. Franks et al. (2018)[383] provides a significant example of the potential of environmental DRM work to deliver for multiple goals. They demonstrated that the transition from negative carbon prices (fossil fuel subsidies) to positive levels compatible with a 2C pathway could generate substantial revenues to finance progress towards the Sustainable Development Goals, from more than 60% of the public financing needs in, e.g., Guyana, Senegal, the Republic of the Congo or India, to more than 100% in Bolivia, Egypt or Indonesia. Franks et al. however showed that subsidy reform is likely not a silver bullet, with carbon pricing yielding less than 10% of public financing

[378] Deutz, et al. 2020 Financing Nature: Closing the global biodiversity financing gap. The Paulson Institute, The Nature Conservancy, and the Cornell Atkinson Center for Sustainability

[379] OECD (2020) A Comprehensive Overview of Global Biodiversity Finance. https://www.oecd.org/environment/resources/biodiversity/report-a-comprehensive-overview-of-global-biodiversity-finance.pdf

[380] https://www.f4b-initiative.net/publications-1/fourth-edition-greenness-of-stimulus-index

[381]OECD, 2020, Rising fossil fuel support poses a threat to building a healthier and climate-safe future, available at https://www.oecd.org/fossil-fuels/.

[382] Coady, D., I. Parry, N.-P. Le, and B. Shang (2019), 'Global Fossil Fuel Subsidies Remain Large. An Update Based on Country-Level Estimates', *IMF Working Paper 19/89.*

[383] Franks et al. (2018) "Mobilizing domestic resources for the Agenda 2030 via carbon pricing." Nature Sustainability 1 (7): 350-357

needs for the SDGs in many African countries or Nepal. In line with the lessons learnt from the implementation of UNDP's Biodiversity Finance initiative (BIOFIN) in some 40 countries, a tailored approach, adapted to each national context, is needed for DRM and ultimately environmental action to be successful.[384]

Project Support

497. GEF will support a global program on Natural Capital and Domestic Resource Mobilization to help countries in creating the enabling conditions, including baseline diagnostics, capacity, institutional arrangements and planning, required to mobilize resources at scale to implement the post-2020 GBF. Embracing a broad definition of DRM, it will directly contribute to enhance effectiveness and efficiency in resource use. It will support countries to both reduce or redirect resources causing harm to the environment, including biodiversity, and to generate additional resources from all sources.

498. In line with the Dasgupta Review, which pointed out that "nature loss is not simply a market failure: it is a broader institutional failure"[385], the program will primarily focus on institutional and policy changes. It will target government budgets as well as the enabling environment for incorporating biodiversity and nature impacts, dependencies and risks into the financial sector and business models, operations and practices. It will operate under the premise that resource mobilization is ultimately about impact (e.g. reducing harmful expenditure is not necessarily about the amount of funds reduced, but the extent of harm to the environment that is reduced). While focused on the GBF, it will aim at leveraging synergies in DRM to support implementation across MEAs.

499. The program is meant to set up a transformative process for biodiversity finance, in all participating countries. It should be carried out in in parallel to the revision of NBSAPs that may arise out of the agreement on the Global Biodiversity Framework.

500. A key focus will be the establishment of the enabling conditions for countries to undertake harmful subsidy reform. GEF and BIOFIN's experiences have shown very limited uptake on the subsidy reform agenda, which suffers chiefly from a lack of political will rather than technical barriers. The program will thus help countries be equipped with the capacity, knowledge and strategy to seize political opportunity windows whenever they arise, including through MDB's policy-based loans.

501. As countries seek to mobilize resources for biodiversity, GEF will also explore the opportunities that Conservation Trust Funds (CTF), Payment for Ecosystem Services (PES), and other financing mechanisms provide to facilitate mobilization of resources that can be invested in

[384] UNDP (2018) The 2018 BIOFIN Workbook www.biodiversityfinance.net/sites/default/files/content/publications/workbook_2018

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

biodiversity conservation, sustainable use, and NbS. Versatile and durable, CTFs can play important roles as conduits and/or implementers of biodiversity offsets, compensation funds and other mechanisms for increasing funding opportunities for biodiversity. There has been a rapid expansion in the number of PES schemes and projects globally over the past 20 years, and many decision makers, from governments to NGOs, are considering either initial experimentation or continued expansion. PES approaches are not a panacea[386] in themselves but, as noted in the Dasgupta review, hold great potential if well designed and appropriately funded. The literature notably points to the need for strong regulatory frameworks; clear metrics and indicators; motivated buyers and sellers of services; recognition of pluralistic value systems alongside financial considerations; and consideration of distributional impacts**Error! Bookmark not defined.**. The G EF will notably seek to support PES schemes embedded in jurisdictional approaches, as they have the potential to limit selection bias, leakage, and poor enforcement of policies and regulations[387].

502. The program will have four complementary components: diagnostics and planning, early implementation, capacity building and institutional set-up for implementation and monitoring, and global knowledge platform.

1. Diagnostics and planning include:

    - a policy and institutional review analyzing the root causes of biodiversity loss. A specific effort will be dedicated to the identification and costing of harmful subsidies. This activity would include a capacity needs assessment.

    - an expenditure review assessing spending related to the biodiversity, across all sectors (e.g., energy, transport, infrastructure, agriculture, agriculture, forestry, fisheries, extractive industries);

    - an assessment of the financial needs to implement the post-2020 GBF

    - the development and adoption of national DRM plans that set out a coherent and comprehensive national approach to DRM for biodiversity, including a mix of priority finance solutions that can be either introduced or improved to provide more biodiversity benefits.

503. All these steps should be carried out with a lead role by the Ministry of Finance, while involving also key stakeholders, such as ministries and private sector actors from the aforementioned sectors involved in the biodiversity expenditure review, specific to each country situation. To facilitate uptake by the government and credibility by the finance ministries, the

[386] IPBES Global Assessment on Biodiversity and Ecosystem Services (2019) Chapter 6. Option for Decision Makers.
[387] von Essen, M., & Lambin, E. F. (2021). Jurisdictional approaches to sustainable resource use. Frontiers in Ecology and the Environment.

diagnostics and planning will be based on an agreed conceptual framework, e.g. integrated within the national statistical system or budgeting framework.

504. Countries that are most advanced in Natural Capital Accounting and Assessment approaches would thus be encouraged and supported to use such a framework, including the UN System of Environmental-Economic Accounting (SEEA), to develop their diagnostics, inform their planning and monitor its implementation.

2. Early implementation

505. While full implementation of national DRM plans would be out of the scope of the program, it is foreseen that early implementation will be supported, including the prototyping and piloting of priority measures or mechanisms identified in the DRM plans.

506. Countries will be encouraged to use the many possibilities offered in GEF-8 Programming Directions to implement their DRM priorities in full, such as the many biodiversity mainstreaming entry points to reduce or redirect financial flows harmful to biodiversity, or the development of PES, ABS, offset schemes or other relevant financing mechanisms to generate new resources.

3. Capacity building and institutional set-up for implementation and monitoring

507. The implementation of DRM plans requires strong political leadership, clearly defined roles and responsibilities within government, a well-designed sequence of implementation, internal systems that are fit-for-purpose and the development of capacity and expertise among civil servants. It should also be coherent with other budget initiatives in the countries, such as gender or SDG budgeting.

508. The program will thus engage high-level government officials, including from Finance Ministries, and support partnerships and platforms for policy coherence, whole-of-government approach and multi-stakeholder coordination. It will also support monitoring and reporting process for resource mobilization (e.g. green budget tagging), increasing transparency and accountability on environmental spending, including biodiversity spending (e.g. Green Budgeting Statement accompanying the budgets).

4. Global knowledge platform

509. The program will be supported by a global knowledge management component to expand more efficiently the knowledge base, from technical aspects to barriers to implementation and ways to overcome them. It will most notably promote peer-to-peer learning.

510. It is proposed that the program would be entirely funded through the biodiversity focal area set-aside. Potential partners include a) UNDP’s Biodiversity Finance Initiative (BIOFIN); b)

Natural Capital Assessment and Accounting initiatives, including the UN SEEA; c) The Capitals Coalition; d) the Natural Capital Project; and e) OECD. The program will seek to leverage synergies with UNCCD and UNFCC as appropriate.

Focal Area Set Aside

Enabling Activities

511. Enabling activity support will be provided to all GEF-eligible countries to revise their NBSAP, and to produce the National Report to the CBD as well as their national reporting obligations under the Cartagena Protocol and Nagoya Protocol that will be identified during upcoming COPs and COP-MOPs with submission dates to the CBD during the GEF-8 period**.**

Inclusive Conservation Initiative

512. Approximately 25% of the Earth's surface and ocean areas are managed by indigenous peoples and local communities (IPLCs), but it is estimated these areas hold 80% of the Earth's biodiversity. Most of the world's forests are found on communal lands[388] and in many places community forestry and management has been shown to be more effective than national parks in reducing deforestation[389,390]. Approximately 40 percent of land listed by governments as under conservation is managed by IPLCs[391], which means better engagement and empowerment of IPLCs is critical to reaching targets on the effective management of protected areas[392] and associated SDGs.

513. The vital role of IPLCs is underlined in the landmark IPBES report[393] released in May 2019, which recognizes, inter alia, that IPLCs are often better placed than scientists to provide detailed information on local biodiversity, environmental change and management practices, and are important contributors to the governance of biodiversity from local to global levels. IPLCs are also among the most threatened on Earth by the impacts of climate change and global development and are often highly dependent on biodiversity and ecosystem services.

514. IPLC land stewardship is also key in preventing climate change. IPLCs occupy areas that hold at least 24 percent (54,546 MtC) of the total carbon stored aboveground in tropical forests.

---

[388] Rights and Resources Initiative Annual Review 2015-2016. Closing the Gap: Strategies and scale needed to secure rights and save forests.

[389] Ricketts et al. 2010. Indigenous Lands, Protected Areas, and Slowing Climate Change. PLOS.

[390] Oldekop et al. 2019. Reductions in deforestation and poverty from decentralized forest management in Nepal. Nature Sustainability.

[391] Garnett et al. 2018. A spatial overview of the global importance of Indigenous lands for conservation. Nature Sustainability.

[392] Dasgupta 2020, Final Report of the Independent Review on the Economics of Biodiversity Dasgupta Review

[393] Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (2019) Summary of Policymakers of the global assessment report on biodiversity and ecosystem services of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services.

Working with IPLCs on land management is also a cost-effective strategy to mitigating climate change[394]. Yet, only 21 countries included clear commitments to implement land and resource tenure initiatives related to IPLCs in their Nationally Determined Contributions.

515. IPLCs have been stewards of vital biodiversity and carbon stocks for generations, but the larger forces of development are often undermining their ability to continue to do so. Over 2.5 billion people around the world depend on collectively held land for their livelihoods. A global review conducted by WRI showed how discrepancies in the resources required to formalize land rights between companies and communities provides significant advantages to companies seeking extractive or productive rights that conflict with traditional land management[395].

516. In GEF-7, the GEF supported a pilot initiative to provide support directly to IPLCs to lead activities that would conserve biodiversity and deliver other global environmental and development benefits. When a Call for Expressions of Interest was put out in March 2020 amidst the growing COVID pandemic, more than 400 expressions of interest were received. However, there were only resources to support nine expressions of interest. At the same time, while the PIF proposed that the Inclusive Conservation Initiative will protect or improve the management for biodiversity of 3.6 million hectares, based on the selected EoIs the project will support IPLC stewardship of over 9 million hectares in areas of high biodiversity importance. The project will also support the mitigation of 141 million megatons of CO_2 equivalent.

517. Given the great potential for biodiversity and other benefits through supporting IPLCs and strong demand for this support, GEF-8 there will be increased support for the Inclusive Conservation Initiative. The GEF's Independent Evaluation Office[396], STAP[397], and the GEF's Indigenous Peoples' Advisory Group have all made recommendations that larger volumes of GEF resources be made available for IPLCs to enable them to continue to realize their role as stewards of the global environment. While the Inclusive Conservation initiative will work in a diversity of geographies and contexts, the aim of the ICI will be to support a limited number of initiatives in different parts of the world to enable impact commensurate with the scale of the problem they are currently facing as their territories become progressively encroached by unsustainable activities. In contrast with existing small grants initiatives, such as GEF's SGP which continues to be one of the main points of entry for IPLCs, the ICI approach seeks more in-depth and substantial investments in a limited set of locations to scale-up impact.

[394] Ding et al 2016. Climate Benefits, Tenure Costs: The Economic Case For Securing Indigenous Land Rights in the Amazon. WRI.
[395] Notess et al. 2018. The Scramble for Land Rights: Reducing inequity between communities and companies. World Resources Institute.
[396] GEF IEO. Evaluation of GEF Engagement with Indigenous Peoples (April 2018)
[397] GEF STAP. Local commons for global benefits: indigenous and community-based management of wild species, forests and drylands (May 2019)

518. The lack of recognition and secure land rights for IPLCs is a major driver of environmental degradation. Without secure land rights, land users are encouraged to adopt unsustainable management practices that generate short term profits but damage long term productivity and lead to degradation of the land and biodiversity. At the same time, weak land rights and underpowered landholders create the conditions that allow illegal and/or corrupt land conversion for agriculture, logging, mining, and land grabbing. Therefore, in GEF-8 there will also be an expanded focus on addressing issues related to land tenure and natural resource rights and access.

519. The Inclusive Conservation Initiative will also focus on global knowledge management and exchange building upon the work done in GEF-7. The ICI will work with partners to leverage the GEF's global mandate and convening ability to collect and disseminate knowledge and demonstrate how supporting IPLCs is effective for protecting the global environment and realizing the SDGs.

520. The Inclusive Conservation Initiative will recognize the particular challenges faced by IPLC women and the vital role they play in the management of natural resources in all projects. The Inclusive Conservation Initiative is meant to be additional and complementary to the support for IPLC activities in the rest of the GEF portfolio.

Other Global Programs

521. The focal area set aside will also support the Global Program on Resource Mobilization described under objective three and the Access and Benefit Sharing Business Facility described in objective two of the strategy and in Annex 1.

Contributions of Integrated Programs to Biodiversity Outcomes

522. The GEF-8 biodiversity focal area strategy investments and associated programming strategies build on the integrated approaches to achieve biodiversity conservation and sustainable use outcomes implemented since GEF-6. Achieving the goal of the biodiversity focal area strategy requires a wide array of actions and while all are necessary none will be enough on their own. GEF's associated programming investments that are channeled through other focal areas and Integrated Programs (IPs) contribute complementary actions that help achieve the focal area strategy goal and objectives while supporting the draft Global Biodiversity Framework. These include:

- restoration of ecosystems including in production landscapes and seascapes (Landscape Restoration Integrated Program) (GBF Goal A);
- sustainable management of fisheries and marine protected areas (International Waters Focal Area and Blue Economies for Healthy Oceans Integrated Program) (GBF GOAL A and B);

- land-based climate change mitigation (Climate Change-Mitigation Focal Area) (GBF Goal A);
- targeted actions to reduce pollution (Chemicals and Waste Focal Area) (GBF Goal A);
- sustainable production of food (Food System Integrated Program) (GBF GOAL B);
- sustainable management of critical forest biomes within a Healthy Planet, Healthy People context (Amazon, Congo, and Critical Forest Biomes Integrated Program) (GBF Goal A);
- conservation and sustainable use of wildlife within a One-Health context (Wildlife Conservation for Development Integrated Program) (GBF GOAL A); and
- maintenance of connectivity and ecosystem integrity including in production landscapes and seascapes (Greening Infrastructure Development Integrated Program, Amazon, Congo, and Critical Forest Biomes Integrated Program, Blue Economies for Healthy Oceans Integrated Program) (GBF Goal A).

Role of the Private Sector in supporting Biodiversity Outcomes

523. The private sector is an important factor and stakeholder in the success of GEF's biodiversity strategy. When an individual, collective, or company's development activities across a wide array of sectors affect biodiversity negatively, the business faces potentially significant regulatory, financial, operational, and reputational risks. GEF provides support to governments to develop policies and regulatory framework to ensure that companies and developers take responsibility for such impacts and avoid or mitigate them. GEF also provides capacity building and technical training to help enterprises improve production practices to totally avoid causing negative impacts on biodiversity. Anticipating, avoiding, mitigating and compensating for adverse impacts on the project site and/or from the footprint of the business are the first steps in what is referred to as the "mitigation hierarchy". The ability of GEF's mainstreaming investments to influence the actions of the private sector will be critical for delivering on the strategy's biodiversity outcomes and the GEF-8 strategy will rely on a more robust engagement with the private sector under the framework of objective one's focus on integrated landscape management. In addition, the private sector will be a critical partner in implementing the Nagoya Protocol through the ABS business facility.

524. In recent years, we have witnessed a marked shift in the emphasis and prioritization that the private sector has placed on biodiversity. A growing level of awareness in the business community of their dependencies on natural capital as well as their impacts, the widely viewed findings of the 2019 IPBES Global Assessment Report[398], the Dasgupta review

[398] IPBES (2019): Global assessment report on biodiversity and ecosystem services of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services. S. Díaz, J. Settele, E. S. Brondízio E.S., H. T. Ngo, M. Guèze, J. Agard, A. Arneth, P. Balvanera, K. A. Brauman, S. H. M. Butchart, K. M. A. Chan, L. A. Garibaldi, K.

recommendations and the WEF Global Risks Report have all contributed to elevating biodiversity from a general concern among business leaders to a major factor in business planning, investing and resource allocation.

525. In response to these reports the business and investment community has launched a raft of new initiatives to raise the level of accountability among private sector actors including sectoral guides for natural capital accounting, the Taskforce for Climate-related Financial Disclosure and reporting protocols such as CDP.

526. In the lead up to CBD COP 15, and as part of the UN Decade of Restoration, several new business and multi-stakeholder platforms have been formed with the goal of raising business ambition and galvanizing commitments to biodiversity. These include Business for Nature's (BfN) and One Planet for Business and Biodiversity in which the GEF has played an active role. The period of GEF-8 now opens a critical window for private sector engagement in the GEF Partnership to build on the momentum that CBD COP 15 is expected to generate, with associated private sector goals and targets aligned to the post 2020 framework.

527. As part of the broad engagement with the private sector, the opportunities to leverage private sector support for knowledge resources, capacity development and information and data sharing through partnerships will be incorporated at all stages of the project cycle from planning, implementation and M&E. Digital tools, the use of geospatial information and other technologies of the Fourth Industrial Revolution will be specifically targeted to support countries and the private sector deliver GEBs. In addition, leveraging private sector investment in GEF projects to change production practices will be essential to achieve the scale of change required to achieve the goals of the Global Biodiversity Framework.

Contributions of the Biodiversity Strategy to the Blue and Green Recovery

528. The resources being spent on recovery and jobs represent opportunities to build back better in a way that advances economic development sustainably and the biodiversity agenda simultaneously, e.g., ecosystem restoration, sustainable tourism development and support, etc. GEF support to integrated landscape/seascape management will aim to demonstrate the multiple economic benefits and avoided biodiversity loss that a well-planned post-COVID job creation and economic recovery strategy can deliver with regards to nature protection and biodiversity provision of ecosystem goods and services (food/agriculture investment, water provision/energy infrastructure, etc.). Properly designed post-COVID development investments that embed these considerations will be more sustainable.

Ichii, J. Liu, S. M. Subramanian, G. F. Midgley, P. Miloslavich, Z. Molnár, D. Obura, A. Pfaff, S. Polasky, A. Purvis, J. Razzaque, B. Reyers, R. Roy Chowdhury, Y. J. Shin, I. J. Visseren-Hamakers, K. J. Willis, and C. N. Zayas (eds.). IPBES secretariat, Bonn, Germany.

Climate Change Focal Area

Global Context of Climate Change

529. Climate change is an urgent and growing threat to human and natural systems. Since the Paris Agreement was adopted in 2015, governments and non-state actors have mobilized to implement it through stronger and more ambitious climate action. However, recent assessments indicate that existing commitments and development pathways are insufficient to meet the goals of the Paris Agreement.[399]

530. According to IPCC, human activities have already caused approximately 1.0°C of global warming above pre-industrial levels, and GHG emissions and atmospheric concentrations continue to increase, interrupted only briefly by the pandemic-induced recession. This is already leading to climate change impacts that threaten countries' development, economic growth and stability, and will lead to long-term changes in the climate system. The IPCC has assessed the differences in climate-related risks associated with a 1.5°C and a 2.0°C of global warming to be robust with respect to climate and weather extremes, sea level rise, ocean temperature, impacts on biodiversity and ecosystems, and climate-related risks to health, livelihoods, food security, water supply, human security, and economic growth. [400]

531. In order to limit global warming to 1.5°C above pre-industrial levels, global net anthropogenic carbon dioxide (CO_2) emissions will have to decline by 45% from 2010 levels by 2030 and reach net zero by mid-century, compared to a reduction of 25% by 2030 and reaching net zero by around 2070 to meet the 2°C goal.[401] This will require rapid and profound transitions in energy, land, urban and infrastructure (including transport and buildings), and industrial systems.

532. Fortunately, mitigation options to enable the decarbonization of these sectors already exist and new technological, financial and policy solutions and innovations are driving down their cost, while increasing their feasibility for widespread adoption.

533. The urgency for rapid decarbonization to avoid the worst impacts of climate change, supported by the foundation of the Paris Agreement's cycle of ambition is leading to a growing momentum to establish net-zero commitments and LTSs. More than 110 countries, representing 65% of global CO_2 emissions and more than 70% of the world economy, have pledged carbon neutrality by 2050.[402] These are further supported by the new or updated NDCs communicated ahead of COP 26, showing that countries have set clear targets for climate action.

---

[399] United Nations Environment Programme (2020). Emissions Gap Report 2020. Nairobi.
[400] IPCC, 2018: Global Warming of 1.5°C. IPCC Special Report
[401] IPCC, 2018: Global Warming of 1.5°C. IPCC Special Report
[402] *"The race to zero emissions, and why the world depends on it".* UN. https://news.un.org/en/story/2020/12/1078612

534. The enhanced transparency framework for action and support of the Paris Agreement and the First Global Stocktake will be key to assess collective progress and build confidence that global efforts to address climate change are advancing with the speed, scale, and impact necessary. Already, the Initial NDC Synthesis Report prepared by the UNFCCC Secretariat, which considered about 40% of Parties to the Paris Agreement and 30% of global GHG emissions in 2017, shows that while countries have increased individual levels of ambition to reduce emissions, the combined impact is far from the emission reduction ranges necessary to meet the Paris Agreement goals.[403]

535. The focus must now be on scaled up and coherent implementation of climate mitigation action that minimizes tradeoffs and risks, and maximizes synergies with other government priorities, including post-pandemic recovery measures, and benefits for the people and the planet.

Conference of the Parties (COP) Guidance to the GEF

536. The Paris Agreement and associated COP decision affirmed the role of the GEF as part of the Financial Mechanism of the Convention. Article 9 of the Paris Agreement stated that the Financial Mechanism of the Convention, including its operating entities, shall serve as the Financial Mechanism of this Agreement including the Green Climate Fund (GCF) and the GEF, the Least Developed Countries Fund (LDCF) and the Special Climate Change Fund (SCCF), and the Adaptation Fund. Further, Article 13 establishes an enhanced transparency framework for action and support. The COP urged and requested the GEF to make arrangements to support the establishment and operation of a Capacity-building Initiative for Transparency (CBIT) during GEF-6 and future replenishment cycles.

537. The GEF-8 Climate Change strategy is structured to support climate action in developing countries in line with the GEF's role as an operating entity of the Financial Mechanism of the UNFCCC and responding to COP guidance. The GEF-8 period (2022-2026) is demarcated by the ambition mechanism of the Paris Agreement, with the communication of LTSs and of new or updated NDCs prior to the start of GEF-8, the First Global Stocktake that will take place in 2023, and the communication of the next round of NDCs towards the end of GEF-8.

538. Due to the postponement of COP 26 from 2020 to 2021 as a result of the COVID-19 pandemic, the most recent guidance was provided at COP 25 in Madrid, Spain in 2019. This included guidance from the Conference of the Parties as the meeting of the Parties to the Paris Agreement (CMA).

539. The COP welcomed the approval of several new policies and guidelines on gender equality, monitoring and evaluation, improved fiduciary standards, and anti-money laundering and

[403] UNFCCC. Conference of the Parties serving as the meeting of the Parties to the Paris Agreement (CMA). 2021. Nationally determined contributions under the Paris Agreement. Synthesis report by the secretariat. UNFCCC/PA/CMA/2021/2. Available at: https://unfccc.int/documents/268571

counterterrorism finance. The COP invited the GEF to continue its efforts to minimize the time for project approval and disbursement of funds. On technology transfer, the COP encouraged the GEF to promote the use of technology needs assessments (TNAs) to facilitate the financing and implementation of prioritized technology actions. On transparency, the COP requested the GEF to adequately support developing country Parties in preparing their first and subsequent biennial transparency reports (BTRs), and to support the operation of the CBIT as a priority reporting-related need.

540. Under the Koronivia Joint Work on Agriculture, while no guidance has been provided, the Subsidiary Body for Implementation (SBI) and the Subsidiary Body for Scientific and Technological Advice (SBSTA) have invited the operating entities to continue to contribute to the work under the Koronivia road map, which includes the evaluation of a set of identified interventions and areas contributing to climate change mitigation and adaptation.

541. At COP 25, Parties agreed to a five-year enhanced Lima work program on gender and its gender action plan, which sets out objectives and activities under five priority areas that aim to advance knowledge and understanding of gender-responsive climate action and its coherent mainstreaming in the implementation of the Convention. As an operating entity of the Financial Mechanism, the GEF has a role in providing financial and technical support for promoting the strengthening of gender integration into climate policies, plans, strategies and action, as appropriate, including good practices to facilitate access to climate finance for grassroots women's organizations and IPLCs.

542. Guidance from COP 24 in 2018 included reflections on the seventh replenishment. COP 24 welcomed the seventh replenishment of the GEF, but recognized with concern the decrease in allocation to the climate change focal area, including the STAR, compared with its sixth replenishment. The COP also acknowledged the increased integration of climate change priorities into other focal areas and the impact programs, as well as the increased focus on innovation and enhanced synergies with other focal areas, while highlighting the importance of enhancing country ownership in the impact programs.

GEF-8 Climate Change Focal Area Strategy and Associated Programming

543. The GEF-8 Climate Change focal area strategy aims to support developing countries to make transformational shifts towards net-zero GHG emissions and climate-resilient development pathways.

544. To achieve this goal, the strategy is organized around two pillars and seven objectives:

Pillar I: Promote innovation, technology transfer, and enabling policies for mitigation options with systemic impacts

1.1. Accelerate the efficient use of energy and materials

1.2. Enable the transition to decarbonized power systems

1.3. Scale up zero-emission mobility of people and goods

1.4. Enhance nature-based solutions with high mitigation potential

Pillar II: Foster enabling conditions to mainstream mitigation concerns into sustainable development strategies

2.1. Support capacity-building needs for transparency under the Paris Agreement through the CBIT

2.2. Support relevant Convention obligations and enabling activities

2.3. Support for carbon pricing schemes

Pillar I: Promote innovation, technology transfer, and enabling policies for mitigation options with systemic impacts

545. The GEF-8 climate change investments will focus on opportunities with a potential to trigger the transformation of key economic systems, including energy, transport, and land use. Interventions will combine technologies, financial mechanisms, policy and regulatory support, and best practices that support country-driven strategies towards rapid reductions in GHG emissions to reach carbon neutrality by mid-century, while integrating climate change risks considerations and resilience measures.

546. All projects supported by the climate change focal area will be required to demonstrate alignment to national climate strategies and plans, including NDCs and LTSs, as well as to develop and demonstrate innovative approaches that are sustainable beyond the project implementation period. The GEF support will prioritize interventions for transformative policies, technological solutions, and private sector engagement that have clear potential for replication and scale up and are complementary to efforts of other financial mechanisms, such as the GCF. Climate change projects will continue to ensure meaningful gender mainstreaming and the inclusion of gender-responsive approaches and results, in line with the relevant policy, strategy and guidance.

547. This pillar will be supported through four specific objectives, corresponding to key areas of intervention that have been identified as central to the systems transformation required to rapidly reduce GHG emissions over the next decade and achieve long-term carbon neutrality goals. However, these objectives are not mutually exclusive and single interventions may target multiple objectives where linkages and synergies exist.

548. An effective decarbonization of the energy system, which including transport represents nearly three quarters of the world's GHG emissions,[404] will need to include aggressive efficiency measures, massive expansion of renewable energy, electrification of end-use sectors, the replacement of fossil fuels with zero emission alternatives, such as green hydrogen, and a shift to low-carbon materials and circular economy approaches. In addition, significant progress is needed to achieve universal access to sustainable energy by 2030, as targeted by SDG7.

549. Agriculture, Forestry and Other Land Use (AFOLU) contribute to about 23% of the anthropogenic GHG emissions including through loss and degradation of forests and other ecosystems,[405] and such share is even higher for the subset of countries eligible for GEF financing. However, the sector can contribute about one third of the cost-effective climate mitigation needed by 2030 to limit the global warming below 2°C,[406] while also generating significant climate adaptation benefits, combatting deforestation, desertification and land degradation, and enhancing biodiversity, food security, and prosperity for farmers.

Objective 1.1: Accelerate the efficient use of energy and materials

550. The built environment accounts for 38% of the global energy use and carbon emissions.[407] Alignment to the Paris Agreement goals necessitates all new buildings to be net-zero on operational emissions and to reduce embodied carbon by 40%-50% by 2030. By 2050, all new and existing assets will need to be net-zero for both operational and embodied emissions, across their entire lifecycle.[408] While countries have mentioned building efficiency in their NDCs, adequate decarbonization policies are lacking: more than two thirds of projected new buildings by 2050 are in countries that currently do not have building energy codes.

551. The GEF will support the adoption of a new generation of energy efficiency policies and green building codes that are in line with updated NDCs and LTSs. The GEF will continue to support financial instruments, mechanisms and business models, including those promoting "energy as a service" approaches, that can scale up and aggregate demand for energy efficiency products and services. The GEF will also support roadmaps that propose an integrated approach to buildings, from materials, new building energy codes and performance, integration of renewable

[404] Climate Watch Historical GHG Emissions. 2020. Washington, DC: World Resources Institute. Available online at: https://www.climatewatchdata.org/ghg-emissions

[405] IPCC Special Report on Climate Change, Desertification, Land Degradation, Sustainable Land Management, Food Security, and Greenhouse Gas Fluxes in Terrestrial Ecosystems (IPCC, 2019)

[406] Griscom et al. (2017). Natural climate solutions. Proceedings of the National Academy of Sciences, 114(44), 11645. doi:https://doi.org/10.1073/pnas.1710465114

[407] United Nations Environment Programme (2020). 2020 Global Status Report for Buildings and Construction: Towards a Zero-emission, Efficient and Resilient Buildings and Construction Sector. Nairobi

[408] GlobalABC/IEA/UNEP (Global Alliance for Buildings and Construction, International Energy Agency, and the United
Nations Environment Programme) (2020): GlobalABC Roadmap for Buildings and Construction: Towards a zero-emission,
efficient and resilient buildings and construction sector, IEA, Paris.

energy, and net-zero building standards and demonstrations, with an enhanced focus on public buildings and social housing. This support would also include necessary capacity development for monitoring and enforcement of policies and green building codes. Approaches to leverage land use jurisdictions and building permits to provide incentives to use Nature-based Solutions that reduce building energy needs (e.g. green facades and roofs) and urban heat will also be supported.

552. On cooling, which accounts for almost 20% of the global electricity demand today and is expected to grow to 37% by 2050 under business as usual scenarios,[409] GEF support will focus on the wide adoption and implementation of new energy efficiency performance standards, and look for synergies with other programs focused on recovery of gases from older equipment. This may include grant schemes to subsidize the costs for early adopters and support for new technologies such as district cooling, super efficienct cooling appliances, deployment of digitalization and energy management systems, and innovation in cold chains with linkages to food security, water, and health.

553. System decarbonization requires not only a reduction in energy use, but also adequate considerations to the sourcing and use of materials. This can be achieved by applying circular economy strategies such as recover, reduce, reuse, redesign, regenerate and remanufacturing. Boosting circular economy approaches may also result in a reduction in energy use per unit of output. Support in this area will be focused on the development of low-carbon material pathways, including support for certifications and standards (e.g. green cement, steel, etc.), demonstrations through green public procurement, and the development of new business models.

554. In the manufacturing sector, industrial energy supply has traditionally depended on subsidized heavy fuels, and many micro, small and medium sized industrial & manufacturing enterprises (industrial MSMEs) are still inefficient in the use of heat and energy (boilers, furnaces, motors, etc.). The GEF will support mitigation measures in this sector including sectoral medium- and long-term roadmaps, electrification of heat uses and wider adoption of digital technologies, harmonized benchmarks for low- and zero-carbon products and associated certification schemes, aggregating demand for low- and zero-carbon products, and technology transfer of new innovations in this space. The GEF may consider supporting the demonstration of net-zero industrial parks or clusters through integrated zero-carbon technologies and application of circular economy practices.

555. Projects under this objective will take into account women's and men's differentiated knowledge of, access to, and use of energy-efficient technologies, as well as their attitudes towards the risks and benefits associated with adopting new technologies. Projects will also support the development of skills and training to promote women's participation in the development and deployment of energy efficient technologies and services and relevant decision-making processes.

[409] IEA, 2018, The Future of Cooling, Opportunities for Energy-Efficient Air Conditioning. Paris

556. Building on the successful experience working in collaboration with SE4All on the family of energy efficiency accelerators, the GEF may support a multi-country program under this objective focusing on the generation and dissemination of technical knowledge, standards and pilot investments for the development of zero-carbon buildings.

Objective 1.2: Enable the transition to decarbonized power systems

557. The clean energy market has seen rapid progress throughout the last decade. Significant technological advances and cost reductions have made renewable options cheaper in most locations than fossil fuel alternatives, even without financial incentives. However, the annual grow rate of renewables in the electricity generation mix would have to increase five-fold by 2030 and to triple between 2030 and 2050 to meet the Paris Agreement goals.[410] At the same time, policies for the phase out of coal and other fossil fuels are urgently needed to avoid lock-in of emissions.

558. In light of the significant technology cost reduction gains over the last decade, the most immediate priority is now increasing the pace of renewable energy growth and its integration to the grid, as well as the electrification of all end uses. The GEF will support long-term planning and modelling from a systems perspective and investments in smart-grids, demand-side management, energy storage, and grid modernization to enable the scaled-up integration of renewable energy, including flexibility and balancing needs of power systems, to bridge gaps in technical, policy and regulatory capacity. The GEF may also provide early support for green hydrogen—produced with renewable electricity through electrolysis—as an additional option for energy storage and potential to help decarbonize hard-to-abate sectors.

559. Support may also include innovative policy and market-based measures to incentivize the early decommissioning of fossil fuel plants, accompanied by just transition strategies. In this context, interventions that integrate considerations on how to ensure that negative distributional impacts of the green transition are minimized will be given special attention.

560. Energy access will remain a priority for the GEF. Latest data from the UN shows that 789 million people still lack access to modern and reliable energy.[411] Access to energy is essential for the provision of basic services, such as water purification, health care, cooking, lighting, heating, mechanical services and transportation, amongst others. The COVID-19 pandemic is impacting significantly current and future progress on energy access, further endangering the achievement of SDG7 by 2030. The GEF will support decentralized clean and affordable energy solutions, focusing on micro- and mini- grid systems in rural and peri urban areas. Support will target streamlined regulatory processes, integrating productive uses to drive demand, and other measures to scale up financing. In this area, the GEF may support the development of local supply chains

[410] Lebling, K., Ge, M., Levin, K., Waite, R., Friedrich, J., Elliott, C., Chan, C., Ross, K., Stolle, F., & Harris, N. 2020. "State of Climate Action: Assessing Progress toward 2030 and 2050". World Resources Institute, Washington, US.
[411] IEA, IRENA, UNSD, World Bank, WHO. 2020. Tracking SDG 7: The Energy Progress Report. World Bank, Washington DC.

and the promotion of entrepreneurship for sustainable/zero-carbon energy. Opportunities to link energy access with other priority GEF areas such as energy efficiency, agriculture and cooling will also be pursued.

561. Women play a critical role in the provision of energy in households, and are disproportionately affected by impacts on health, productivity, unpaid labor and employment burdens from a lack of access to affordable, reliable, sustainable and modern energy. Women are also underrepresented in the energy sector as workers and entrepreneurs, and face additional barriers including access to finance. Projects under this objective will aim to provide opportunities for training and skills development to promote the participation of women in technical and nontechnical roles in the sector, increase women's role in decision-making, and access to finance for energy access, as well as to produce positive health, economic and other development benefits.

562. Multi-country programs under this objective will be considered in three key areas considering their transformational potential: (i) A global platform to support market development for and pilot investments in green hydrogen, as a catalyst for decarbonization efforts in transport and other hard to abate sectors as well as an energy storage solution. (ii) Building on the GEF-7 Africa Mini-Grids Program, the GEF will also look to expand its programmatic support for the energy access space, focusing on innovative de-risking mechanisms with a specific focus on sub-Saharan Africa. (iii) Given the pivotal role that energy storage will have to play in the energy transition, by increasing grid flexibility and addressing the balancing needs of power systems in developing countries, the GEF may consider a multi-country program to support policies and investments for the grid integration of battery storage.

Objective 1.3: Scale up zero-emission mobility of people and goods

563. For the transport sector to align with the Paris Agreement, all transport modes will need to be zero-carbon by 2050. It is estimated that in road transport, 85% of the reductions will need to come from efficiency and electrification. The remaining 15% will have to come from behavioral changes, reduction of needs (e.g. telework) and distance of travels, modal shifts (more walking, cycling and mass transport) and land-use/urban planning (transport-oriented development).[412]

564. In many developing countries, key barriers prevent such transformations from taking place. Mass transit is still based largely on old and inefficient fleets, operated by small companies with very limited access to credit for efficiency upgrades and awareness and capacity to take advantage of new technologies. Electric drive vehicles (EVs), where available in local markets, still present higher upfront capital costs than traditional internal combustion engine (ICE) vehicles, and the lack of adequate charging infrastructure contributes to range anxiety. The unavailability of

[412] UNFCCC. 2020. Executive Summary. Climate Action Pathway: Transport. Available at: https://unfccc.int/sites/default/files/resource/Climate%20Action%20Pathway%20Transport.%20Executive%20Summary.pdf

servicing networks, local expertise and lack of well-designed charge-rate structures represent additional barriers. Finally, in many GEF countries the import of secondhand ICE vehicles from developed countries allows old, inefficient vehicles to remain on the road much longer than intended, locking in additional emissions.

565. Thus, the GEF will support integrated approaches to support the transition towards zero-emission mobility, including through financing of supportive policies and local capacity building to further the sector's electrification, recycling of lithium ion batteries and other critical materials, integration of EV electricity demand with the electric grid and direct coupling with renewable energy deployment, and fiscal considerations related to revenues from fuel taxes. The GEF, where feasible, will also support local manufacturing and market development and South-South cooperation.

566. The way transport is used by men and women is influenced by gender and social roles and norms and thus leads to differences in modes of transport, purposes for transport, and levels of access. Projects under this objective will ensure approaches, decision-making and policies are inclusive, gender-responsive, and responsive to these differences, and aim to promote women's participation in decision-making processes and transport services.

567. Building on the successful GEF-7 Global Program to Support the Shift to Electric Mobility, the GEF will consider additional investments to support developing countries which have not yet benefitted from programming towards the shift to electric mobility, as well as to further promote the integration of renewable energy sources with charging networks and advanced technologies such as Vehicle-to-Grid mechanisms (V2G).

Objective 1.4: Enhance Nature-based Solutions with high mitigation potential

568. To achieve the 2050 goal of net zero emissions, the emissions from deforestation and ecosystem degradation will have to be reduced by 95%, nearly becoming a net sink, and the emissions from the agriculture sector and food systems by 25%.[413] Natural ecosystems, and notably forests, simply constitute a compulsory piece of any climate change successful strategy for their carbon sink and capacity of carbon removal. The GEF will seek to support the most efficient investments to generate GHG mitigation benefits, in natural ecosystems and agriculture landscapes. The scope of proposed investments will support mitigation options in two priority areas: in high carbon ecosystems and in the agriculture sector, supporting actions aligned with the Koronivia process outcomes. The interventions supported by this objective are expected to generate significant co-benefits, notably in terms of climate adaptation and improved livelihoods

[413] UNFCCC. 2020. Executive Summary. Climate Action Pathway: Land Use. Available at: https://unfccc.int/sites/default/files/resource/ExecSumm_LandUse.pdf

for large numbers of farmers and rural communities, enhanced biodiversity and reduced land degradation.

569. Aligned with country climate strategies as stated in the NDC, the GEF will also support interventions in forest ecosystems with high mitigation potential, such as the intact forests that store twice more carbon than other forests.[414] In addition, wetlands, peatlands and coastal habitats such as mangroves, seagrass and marshes, are known to be important carbon sinks (primarily from sediments and soils) but at the same time, threatened by human activities and climate change. The GEF scope of interventions will also include the protection and restoration of these ecosystems. In the targeted areas, the activities supported will need to demonstrate a high potential in terms of reducing carbon loss and providing continued or enhanced natural CO_2 removal.

570. The Koronivia Joint Work on Agriculture launched by COP 23 identified issues related to agriculture which have a potential to contribute to the mitigation of climate change: improved soil carbon, improved nutrient use and manure management towards sustainable and resilient agricultural systems, and improved livestock management systems. Following the work and results of this ongoing process under UNFCCC, the GEF will support enabling frameworks, capacity development and investment activities with clear potential to result in cost-effective and high-impact climate mitigation outcomes in the agriculture sector.

571. This objective will also provide the possibility to support policy, institutional and regulatory reforms related to the AFOLU sector contributing to the implementation of the Article 6 of the Paris Agreement, through market and non-market mechanisms (carbon pricing and market infrastructure, accounting, voluntary cooperation, carbon tax, etc.). In particular, interventions contributing to create appropriate national conditions for the sustainable implementation of REDD+ national strategies at scale will be eligible.

572. Gender gaps in the access to and control of natural resources are further exacerbated by the impacts of climate change, which disproportionately affect the poor and most vulnerable, especially women. The design and implementation of projects under this objective will consider and respond to gender-specific differences in the access to resources, services, information and employment opportunities for the sustainable and productive use of natural resources, and in capacity for resilience to climate change. Projects will promote gender-responsive approaches and decision-making built on inclusive stakeholder consultations and aim to empower women in the implementation of Nature-based Solutions and in the promotion of sustainable income-generating opportunities.

Pillar II: Foster enabling conditions to mainstream mitigation concerns into sustainable development strategies

[414] Mawell et al. (2019). Degradation and forgone removals increase the carbon impact of intact forest loss by 626%. Science Advances.

573. The GEF continues to address the need for enabling conditions to mainstream climate change concerns into national planning and development agendas through its support for enabling activities, including Convention obligations and the CBIT, through sound data, analysis, and policy frameworks. As in prior GEF cycles, under the GEF-8 Climate Change focal area strategy countries will have access to resources intended for Convention obligations and CBIT support from set-asides that do not draw on country allocations. Country allocations will be available to deliver on other enabling activities. Activities under this pillar provide opportunities to recognize, build capacity, and develop actions that advance gender equality and women's empowerment in the preparation of climate change plans, strategies policies and reports.

Objective 2.1: Support capacity-building needs for transparency under the Paris Agreement through the CBIT

574. The GEF will continue to provide support for projects that build institutional and technical capacity to meet the provisions of the transparency framework of the Paris Agreement. The CBIT, as per paragraph 85 of the COP decision adopting the Paris Agreement, will aim:

- To strengthen national institutions for transparency-related activities in line with national priorities;
- To provide relevant tools, training and assistance for meeting the provisions stipulated in Article 13 of the Agreement;
- To assist in the improvement of transparency over time.

575. The Paris Agreement in Article 13 establishes an enhanced transparency framework for action and support, with built-in flexibility which takes into account Parties' different capacities and builds upon collective experience. The purpose of the framework for transparency is to provide clarity on support provided and received by relevant individual Parties, and, to the extent possible, to provide a full overview of aggregate financial support provided, to inform the global stocktake. The CBIT will support activities aligned with its aim at the national and regional/global levels building on the experience and results from CBIT projects supported in GEF-6 and GEF-7.

Objective 2.2 Support relevant Convention obligations and enabling activities

576. The CMA decided that Parties shall submit their first BTR and national inventory report, if submitted as a stand-alone report, in accordance with the adopted modalities, procedures and guidelines, at the latest by 31 December 2024 and that LDCs and SIDS may submit this information at their discretion.

577. All developing country Parties to the Paris Agreement are eligible to receive financing for the preparation of BTRs. Countries can access resources at full cost for the BTR preparations, from

the climate change focal area set-aside resources. If countries require additional resources, they can utilize resources from their respective STAR allocation.

578. Parties to the Paris Agreement may continue to report a separate national communication (NC) every four years, or may choose to submit a single BTR/NC report in the years a NC is submitted, following the modalities, procedures and guidelines for BTRs and include:

a) Supplemental chapters on research and systemic observation and on education, training and public awareness, in accordance with applicable guidelines in 17/CP.8 or 6/CP.25;

b) An additional chapter on adaptation for Parties that have not included this information in the BTR, in accordance with applicable guidelines in 17/CP.8 or 6/CP.25.

579. UNFCCC Parties eligible for GEF support that are not Parties to the Paris Agreement will continue to have access to financing from set-aside resources for the preparation of NCs and Biennial Update Reports, according to guidance.

580. Following COP guidance, support for TNAs will be made available under this objective for small island developing states and least developed countries which have not yet undertaken one and wish to do so. Other countries may use their country allocations for the preparation of TNAs. The GEF will also continue to make financial support available for the preparation of NDCs, following COP guidance. Countries may use country allocations for these activities.

Objective 2.3 Support for carbon pricing schemes

581. Carbon pricing schemes are part of the toolbox for decarbonizing economies. The term refers to initiatives that aim to assign an explicit price to GHG emissions, expressed as a dollar value per ton of carbon dioxide equivalent. They can include carbon taxes, emissions trading systems (ETSs), carbon crediting/offset mechanisms, results-based finance, as well as internal carbon pricing in business organizations. To lead to cost-effective climate mitigation outcomes, these schemes require careful planning and design, development of capacities in regulatory authorities, establishment of registries and protocols for monitoring, reporting and verification.

582. Article 6 under the Paris Agreement establishes a mechanism for the voluntary use of cooperative approaches through internationally transferred mitigation outcomes to achieve NDCs, and many countries have indicated in their NDCs their interest or consideration for market-based mechanisms to reduce emissions. Several countries have implemented or are considering implementing carbon taxes and ETSs. However, out of the more than 60 carbon pricing schemes analyzed by the World Bank, only 16 were found to be in developing countries, of which 9 in China and 2 in Mexico.[415]

[415] World Bank. 2020. State and Trends of Carbon Pricing 2020. Washington, DC: World Bank. Available at: https://openknowledge.worldbank.org/handle/10986/33809

583. Further, growing investor and consumer awareness of climate action has also led to an increased interest in the private sector for carbon credits, both domestic and international, particularly to tackle emissions in hard-to-abate sectors. This presents an important opportunity for additional resource mobilization for climate action, particularly for the forest sector in developing countries which generates a large portion of the supply of tradable credits.

584. The GEF will support countries that have articulated an interest in developing national or subnational policy packages and schemes for carbon pricing to support mitigation targets with the design, economic assessment, and implementation of such policy packages, and to build the capacity and readiness of countries for carbon markets and the relative accounting and transparency requirements.

Contributions of Integrated Programs to Climate Change Outcomes

Net Zero Accelerator

585. The NZA IP will significantly contribute to the generation of climate change mitigation outcomes by raising the level of ambition of climate mitigation plans and NDCs in participating countries to a level that aligns with the pathway needed to reach net zero emissions by 2050. It will support countries to prepare NDCs and LTSs that are consistent with a 1.5°C goal, translate them into short- and medium-term targets coupled with coherent and enforceable policies, and move swiftly from planning to implementation.

Food Systems

586. The Food Systems IP provides the opportunity to foster climate-smart agriculture and sustainable land management, while also increasing the prospects for food security for smallholders and communities that are dependent on farming for their livelihoods. Restoring agricultural productivity while also reducing GHG emissions is key for countries to jointly meet their NDC and SDG goals. It will also foster a sustainable supply chain with regard to production, processing, and demand for key agricultural products that are vital to long-term emissions reductions from agriculture including through avoided deforestation of tropical forests.

Sustainable Cities

587. The Sustainable Cities IP will be critical to address both short-term and long-term climate change challenges in the rapidly growing urban sector. It targets urban interventions with significant climate change mitigation potential to help cities shift towards low-emission and resilient urban development in an integrated manner. Cities must be empowered to effectively support the implementation of NDCs and low-carbon development pathways.

Amazon, Congo, and Critical Forest Biomes

588. The GEF's historic SFM investments have already demonstrated the significant climate change benefits available through integrated approaches on forests. In GEF-8, this IP will foster low-carbon strategies focusing on intact forest landscapes, such as the Amazon and the Congo Basin. The targeted ecosystems, which are key carbon sinks with high capacity of carbon removal, are increasingly threatened, and are therefore critical to halting the release of GHG emissions through avoided deforestation and by enhancing carbon stocks above and below ground.

Circular Solutions to Plastic Pollution

589. The Circular Solutions to Plastic Pollution IP will tackle plastic production, consumption and waste, which will reduce carbon emissions since GHGs are emitted at every stage of the plastic lifecycle. The IP will work toward eliminating problematic and unnecessary plastics, promoting innovative solutions, and fostering circular systems. By using resources more efficiently, reducing waste, and following cradle-to-grave design principles, GHG emissions can be significantly reduced.

Landscape Restoration

590. Soils play a crucial role in global climate processes through their regulation of CO_2, nitrous oxide, and methane. At the global scale, soils and the biomass they hold are the major terrestrial reservoir of carbon and therefore have a major influence on the concentration of GHG in the atmosphere, making the restoration of ecosystems crucial to global climate change mitigation efforts. The Landscape Restoration IP will work to restore carbon stocks and reservoirs in a variety of ecosystem types, including peatlands, and will produce significant climate adaptation and livelihood co-benefits for farmers and rural communities.

Role of the private sector in supporting Climate Change Outcomes

591. Supportive policies and strategies are fundamental to catalyze innovation and technology transfer for mitigation options and to enhance private sector investment. Resources from the GEF play a key role in piloting emerging innovative solutions, including technologies, management practices, supportive policies and strategies, and blended finance which foster private sector engagement for technology and innovation, and more importantly scaling up.

592. The private sector can be expected to play a key role in supporting the objectives of the Climate Change focal area strategy as innovators and entrepreneurs, technology and service providers, as manufacturers and producers of goods, and as financiers and investors. Key private sector actors will include SMEs, entrepreneurs, energy suppliers and distributors, vehicle manufacturers, industrial producers and manufacturers, farmers and producers, and financial institutions, among others.

593. The many net-zero commitments made by countries and private companies, provide an excellent opportunity to build alliances with the private sector and other non-state actors such as CSOs and cities, to deliver on their climate change ambitions. The Climate Change focal area will focus on translating these ambitions, including notably those from signatories of the UN campaign "Race to Zero," into real-economy emissions reductions. It will also connect the work of governments with the many voluntary and collaborative actions taken by cities, regions, businesses and investors through linkages to the Climate Champions Network as part of the UN-led Marrakesh Partnership. Multi-sectoral climate initiatives that align with the GEF-8 integration agenda will be supported to advance the achievement of the multiple key goals of the Rio Conventions through strengthened partnerships that bring together biodiversity and land degradation neutrality outcomes with climate change mitigation actions.

594. In addition, GEF investments in climate mitigation will look to engage and work with business committing to Science Based Targets (SBTi) and to provide pathways for private sector actors to align with deep decarbonization targets in key areas relevant for the transformation of energy, transport and land use systems. Focus will be given to supporting private sector with key metrics and reporting frameworks, including on potential use of market instruments under an operationalized Article 6 of the Paris Agreement, to better account and offset for their direct and indirect supply chain emissions.

595. A strategic goal for the Climate Change focal area is to use these ambition frameworks and science-based multi-stakeholder platforms to reach all scales of business and support the upstream investment into value chains where abatement has historically been hard to achieve, such as in agricultural commodities, in textiles and fashion, and in the fossil-fuel dependent economies and geographies, including in SIDS and LDCs.

Contributions of the Climate Change Strategy to the Blue and Green Recovery

596. The Climate Change focal area strategy will contribute to the blue and green recovery agenda by supporting measures aimed at stimulating the economy that simultaneously accelerate the decarbonization of economies, consistent with the goals of the Paris Agreement. In the short- to medium-term these measures may focus on job creation and economic stimulus, which can be supported by the objectives in the strategy, including the promotion of renewable energy, zero-carbon mobility, energy efficient built environment and industry, innovation and deployment of zero-emissions technologies, fiscal reforms of fossil fuel subsidies, and Nature-based Solutions.

597. In the long-term, support for policies and measures that are aligned with countries' LTSs will incorporate and seek to minimize socioeconomic and fiscal risks due to the transition of different sectors to net zero. Further, climate change mitigation actions can lead to health benefits that support the Blue and Green Recovery, by addressing air pollution related to mobility, supporting healthy built environments, and improving access to clean energy and services.

Land Degradation Focal Area

Global Context of Land Degradation

598. Land degradation is a challenge of a global dimension which aggravates economic, social and environmental problems such as poverty, poor health, lack of food security, biodiversity loss, water scarcity, reduced resilience to climate change impacts, and forced migration. Globally, land degradation negatively impacts 3.2 billion people especially rural communities, smallholder farmers, and the extremely poor and represents an economic loss of around 10% of annual global gross product.[416]

599. 70% of the world's poorest people live depend on agriculture for their livelihoods. At the same time, globally, 24% of the land is degrading and more than 1.5 billion people directly depend on these degraded lands.[417] Land degradation processes threaten the livelihoods, well-being, food, water and energy security and increase vulnerability of millions of people.

600. Agriculture and land use change is estimated to be the dominant driver for land degradation and deforestation worldwide, caused by the unsustainable management or over-exploitation of resources, such as vegetation clearance, nutrient depletion, overgrazing, inappropriate irrigation, and excessive use of agrochemicals. Urban sprawl, pollution, mining, and quarrying are additional drivers.[418] Agricultural land use reverberates across local ecosystem functions and dynamics to the global level, such as land-atmospheric interactions[419], and with cross-scale implications from local to global scales underlining the importance of land use, and land degradation, as a global driver of environmental degradation.

601. Pressures on the global land resource are still increasing mainly due to the following factors: (i) growing demand for food and agricultural commodities in terms of both quantity and quality for an expanding and more affluent world population; (ii) competition for productive land for biofuel, urban expansion and other non-productive uses; (iii) decrease or lack of growth in productivity due to decline in soil health indicated by lower nutrient status and organic matter, and other soil properties; (iv) weakened resilience of agricultural production systems on account of depleted biodiversity and the associated ecosystem services; and (v) natural factors such as climate variability and extreme weather events.

602. From a regional perspective, Global Land Outlook's scenarios predict that sub-Saharan Africa, South Asia, the Middle East, and North Africa will face the greatest challenges due to a mix of factors, including high population growth, low per capita GDP, limited options for

[416] The IPBES Assessment Report on Land Degradation and Restoration, 2018
[417] UNCCD Global Land Outlook Working Paper- Land Under Pressure Health Under Stress, 2019
[418] UNCCD, Global Land Outlook Report, 2017.
[419] Moore, J.C. The re-imagining of a framework for agricultural land use: A pathway for integrating agricultural practices into ecosystem services, planetary boundaries and sustainable development goals. Ambio, 2021.

agricultural expansion, increased water stress, and high biodiversity losses. The lack of economic and institutional means to cope with these factors will increase the risks of violent conflict and mass migration.

603. Dryland areas are particularly vulnerable to desertification, land degradation and drought (DLDD) issues. They make up 41% of the Earth's surface, with populations in drylands projected to increase by 43 per cent—from 2.7 billion in 2010 to 4.0 billion in 2050.[420] Drylands, the most extensive being in Africa and Asia, face governance challenges such as low human resource capacity (e.g. low education attainment), low investment of public resources, weak penetration of government services, and insecure land tenure and resource rights in particular for vulnerable populations such as women, IPLCs and youth.

604. Climate change exacerbates land degradation processes and leads to variations in yields and income from agriculture, threatening the resilience of agro-ecosystems and stability of food production systems. The population in the drylands exposed to various impacts related to water, energy, and land sectors (including water stress, drought intensity, habitat degradation) is project to significantly increase. Half of the vulnerable population is in South Asia, followed by Central Asia, West Africa, and East Asia. [421]

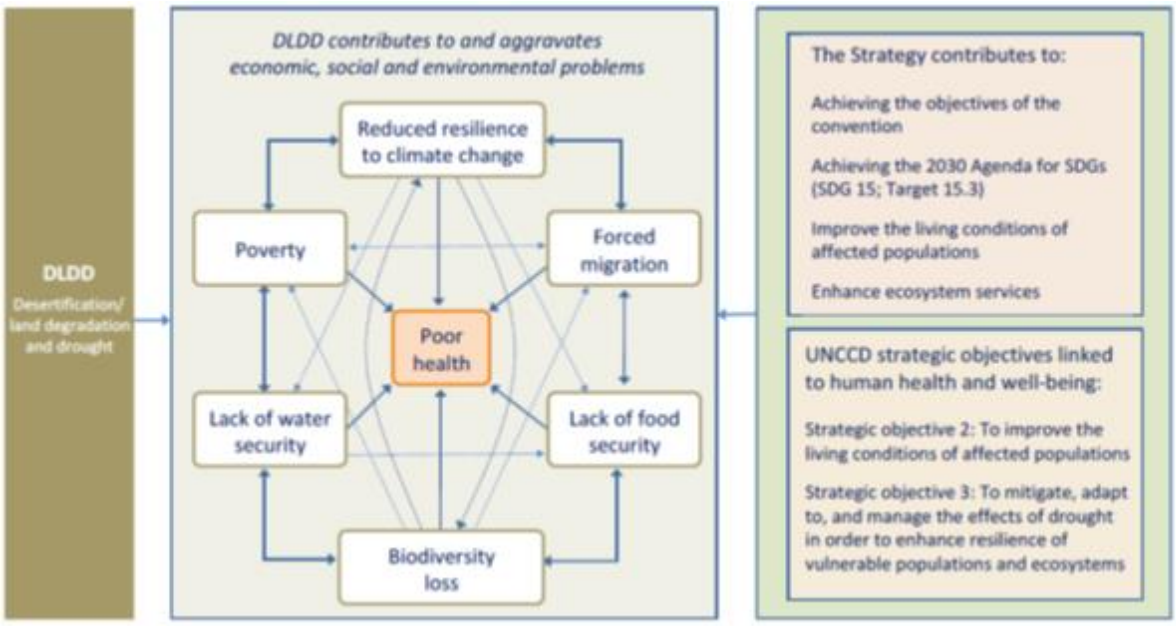
605. Drought is one of the major drivers of global food and water insecurity, affecting agricultural production and access to food and water. Drought can, in extreme cases, force people to abandon their land, resorting to migration as a last livelihood strategy.[422] Every year, 12 million hectares of land become unproductive due to desertification and drought and the livelihoods of more than 1 billion people in some 100 countries are threatened by desertification.[423]

606. Women's input, knowledge and guidance are indispensable to any productive, sustainable efforts to avoid, reduce and reverse degraded land. When women are empowered, entire families benefit, and these benefits often have an effect on future generations. However, gender inequality still plays a significant role in land-degradation related issues. Women farmers often have less access to land, decision making processes and leadership, credit, information, technology, and extension. Challenges remain in relation to the generation, availability, statistics and indicators of gender. In this context, the UNCCD Gender Action Plan[424] and the associated guidelines[425] represent a landmark opportunity to transform gender equality and human rights into action.

[420] The IPBES Assessment Report on Land Degradation and Restoration, 2018
[421] IPPC report on Climate and Land, 2019
[422] UNCCD Science Policy Interface, Land Management and Drought, 2019
[423] Ibid
[424] https://www.unccd.int/actions/gender-action-plan
[425] https://www.unccd.int/publications/manual-gender-responsive-land-degradation-neutrality-transformative-projects-and

607. With the recent pandemic and against the background of degradation significantly altering ecological systems worldwide, the link between i) land conversion and ii) agricultural and livestock intensification with the risk of emerging infectious disease is even more pronounced. The UNCCD Strategic Framework 2018-2030 provides a clear link between addressing DLDD and health (see Figure 23).

Figure 23: Schematic representation of the UNCCD Strategic Framework 2018-2030, from the point of view of health protection[426]



Conference of the Parties (COP) Decisions with relevance for the GEF

608. GEF's mandate to invest in global environmental benefits from production landscapes relates directly to its role as a financial mechanism of the UNCCD. The Land Degradation Focal Area (LDFA) provides the opportunity for eligible countries to utilize GEF resources for implementing the Convention and the UNCCD Strategy (2018-2030)[427], which is a comprehensive global commitment to avoid and reduce desertification and land degradation and to restore the productivity of degraded land to achieve Land Degradation Neutrality (LDN), improve the livelihoods of more than 1.3 billion people, and mitigate the impacts of drought on vulnerable populations.

609. LDN is the overarching concept of the UNCCD, defined as "a state whereby the amount and quality of land resources necessary to support ecosystem function and services and enhance

[426] UNCCD Global Land Outlook Working Paper- Land Under Pressure Health Under Stress, 2019
[427] https://www.unccd.int/sites/default/files/relevant-links/2018-08/cop21add1_SF_EN.pdf

food security remain stable or increase within specified temporal and spatial scales and ecosystems".[428] LDN allows to set measurable targets for sustainable land management, promoting a response hierarchy of measures to avoid and to reduce degradation of land combined with measures to reverse past degradation. The LDN concept encourages adoption of a broad range of measures to avoid or reduce land degradation through appropriate planning, regulation and sustainable land management practices, combined with actions to reverse past degradation, through land restoration and rehabilitation, to achieve a state of no net loss of healthy and productive land. As of February 2021, 127 countries have committed to set voluntary LDN targets.

610. The LDN concept is considered an accelerator of the SDGs and associated targets: 15.3 on LDN, SDG 1 to end poverty, SDG 2 to end hunger and malnutrition and promote sustainable food production systems, SDG 6 on clean water and sanitation, and SDG 13 on climate action, including strengthening resilience to climate-related hazards and integrating climate change measures in policy. LDN also promotes synergies and improves policy coherence across sectors and at all levels, including the national agendas relating to the Paris Agreement and the post-2020 Global Biodiversity Framework.

611. The most recent UNCCD COP decisons with relevance for the GEF were made during COP 14 held in India in September 2019 and are summarized in table 3 below.

Table 3. Convention Decisions with relevance for GEF-8 LDFA Investments

UNCCD decisions with relevance for GEF	**Delivery through Integrated Programs and FA Investments**
COP14 invites the GEF to continue its support for countries in programming GEF Land Degradation focal area resources to combat desertification/land degradation and drought and achieve their voluntary land degradation neutrality targets, including in the context of land degradation neutrality transformative projects and programs. COP14 invites the GEF, within its mandate, to support the implementation of relevant aspects of the national drought plans and other drought-related activities within the scope of the Convention. COP 14 Invites the GEF to continue supporting Parties to meet their reporting obligations under the Convention	**Integrated Programs:** Food Systems Landscape Restoration Amazon, Congo, and Critical Forest Biomes Net-zero Accelerator Blue and Green Islands **Land Degradation eligible investments** Sustainable Land Management (SLM)

[428] Cowie, A. et al. 2018. Land in balance: The scientific conceptual framework for Land Degradation Neutrality

and encourages the GEF to provide adequate financial resources in a timely manner. COP14 Encourages the GEF to continue and further enhance the means to harness opportunities for leveraging integration among the Rio conventions and other relevant environmental agreements, as well as the 2030 Agenda for Sustainable Development.	Restoration of agro-ecosystems Adress DLDD issues in drylands Improve the enabling policy and institutional framework for LDN UNCCD Enabling Activity Support

GEF-8 Land Degradation Focal Area Strategy and Associated Programming

612. The LDFA strategy in GEF-8 aligns with GEF's vision to achieve healthy and resilient ecosystems by addressing agro-ecosystems in production landscapes. The goal of the land degradation focal area, as per GEF Instrument, is to contribute to arresting and reversing current global trends in land degradation, primarily desertification and deforestation.

613. The LDFA strategy is in line with the UNCCD Strategic Framework 2018 – 2030 which has the vision "for a future that avoids, minimizes, and reverses desertification/land degradation and mitigates the effects of drought in affected areas at all levels and strive to achieve a land degradation-neutral world consistent with the 2030 Agenda for Sustainable Development, within the scope of the Convention", by supporting all five Strategic Objectives.

614. The LDFA strategy supports the implementation of voluntary LDN targets that 127 countries have set. It will apply the LDN concept by following the response hierarchy to avoid, reduce, and reverse land degradation, desertification, and deforestation. The Land Degradation Neutrality Transformative Projects and Programmes (LDN TPP) checklist[429] and the Operational Guidance for Country Support[430] will serve as general guidance for design and implementation of GEF Land Degradation focal area projects and programs in GEF-8.

615. GEF LDFA investments focus on addressing the drivers of land degradation in production landscapes where agricultural, forestry and rangeland management practices underpin the livelihoods of rural communities, smallholder farmers and pastoralists. It focuses on innovative interventions that can be scaled to maximize global benefits for the environment and simultaneously address the issues of local livelihoods. A specific emphasis in GEF-8 is placed on sustainable land management in drylands addressing, among other issues, drought-prone ecosystems and populations.

[429] https://knowledge.unccd.int/sites/default/files/2018-09/LDN%20TPP%20checklist%20final%20draft%20040918.pdf
[430] https://www.unccd.int/publications/land-degradation-neutrality-transformative-projects-and-programmes-operational

616. GEF will continue to apply a comprehensive landscape approach to address the broad multi-faceted nature of land degradation across the range of agro-ecological and climatic zones globally. The landscape approach is underpinned by integrated land use planning to maintain or increase land-based natural capital and to address the trade-off and conflicts between competing land uses, including tenure issues. The landscape approach promotes socio-ecological connectivity systems and maximizes the benefits for human well-being, which will be critical in efforts towards green recovery from the pandemic.

617. Building resilience of landscapes, people and the institutional systems to maintain or create healthy landscapes may need adaptive changes or radical transformational change to a completely different system. Understanding how to use resilience, adaptation or transformation to manage a system will enable systems to be more agile in dealing with shocks. LDFA investments support the design of projects and programs which can help to guide interlinked social and ecological systems into the future, informed by sound science, underpinned by a structured learning process to gather and analyse evidence, and followed by continual adjustment of actions based on what has been learned.

618. By adopting an integrated approach to natural resources management, the LDFA drives an agenda for multiple global environmental benefits, including those related to the conservation and sustainable use of biodiversity, climate change mitigation and adaptation, and the sustainable use of transboundary watersheds. In this regard, joint programming with other GEF focal areas will be actively pursued, especially in integrated programs. This effort will also consider opportunities to develop regional programmatic initiatives where they are likely to trigger transformational changes in the natural resource management sectors, such as the GGWI.

619. GEF-8 Land Degradation focal area strategy will continue to mainstream gender by applying the recent guidance note developed by UNCCD (2019)[431] and following the recommendations of Collantes et al (2018)[432] to (i) enhance understanding, and to advance gender-responsive LDN plans and programs, and (ii) include gender considerations in LDN assessments. Programming will give attention to practical gender needs such as improving the conditions of women through land ownership and access to resources, services and opportunities, and strategic gender interventions to foster women's participation and empowering women's representation in decision making bodies at all levels.

620. The LDFA strategy contributes to the goal of arresting and reversing current global trends in land degradation, primarily desertification and deforestation with four broad objectives as follows:

[431] https://www.unccd.int/publications/land-degradation-neutrality-interventions-foster-gender-equality
[432] Collantes V et al. 2018. Moving towards a twin-agenda: Gender equality and land degradation Neutrality.

Objective 1. Avoid and reduce land degradation through sustainable land management (SLM)

621. This objective promotes the wider application and scaling of SLM interventions that improve productivity and maintain or improve flow of agro-ecosytem services that underpin food production and livelihoods. SLM is broadly defined by the UN 1992 Rio Earth Summit as "the use of land resources, including soils, water, animals and plants, for the production of goods to meet changing human needs, while simultaneously ensuring the long-term productive potential of these resources and the maintenance of their environmental functions." GEF will provide support to a wide range of SLM practices such as:

- Agroecological intensification and diversification and other regenerative agriculture practices that rely on natural ecological processes to enhance yields and reduced agrochemical inputs for the benefit of the environment. Increasing species diversity in agricultural farms contributes to improved soil quality and increased crop yields, and improved flow of ecosystem services (Kremen, 2020) [433].

- Climate-smart agriculture (CSA) is an approach for transforming and reorienting agricultural systems to support food security responding to climate change trends in rainfall and temperature patterns, to food market disruptions, and to the need for avoiding GHG emissions and sequestering carbon in agricultural land use systems (Lipper et al., 2015) [434]. CSA also works towards increasing the adaptive capacity and resilience of farmers and improves resource use efficiency in agricultural production systems.

- Drought-smart land management (D-SLM) characterizes land-based interventions for drought mitigation (i.e., against drought impacts and vulnerability). Such D-SLM interventions improve the capacity of soil to accept, retain, release and transmit water and increase plant water use efficiency. They can do so by increasing the water supply where it is needed by living organisms (e.g. crop root systems) or by reducing water demand through drought-resistant crop varieties (UNCCD/Science-Policy Interface, 2019) [435].

622. GEF eligible investment in those SLM types above will focus on: (i) agro-ecological methods and approaches including conservation agriculture, agroforestry, and agro-silvo-pastoral practices; (ii) improving rangeland management and sustainable pastoralism, regulating livestock grazing pressure through sustainable intensification and rotational grazing systems, increasing

[433] Kremen C., 2020. Ecological intensification and diversification approaches to maintain biodiversity, ecosystem services and food production in a changing world. https://doi.org/10.1042/etls20190205
[434] https://www.nature.com/articles/nclimate2437
[435] UNCCD/Science-Policy Interface (2019). Land Management and Drought Mitigation. Science-Policy Brief No: 6. September 2019. United Nations Convention to Combat Desertification (UNCCD), Bonn, Germany

diversity of animal and grass species, and managing fire disturbance; (iii) strengthening community-based natural resource management, including legitimate tenure rights recognition and safeguards; (iv) integrated watershed management, including wetlands where SLM interventions can improve hydrological functions and services for agro-ecosystem productivity; and (v) implementing integrated pest management approaches to improve soil fertility and water management.

623. Investing in SLM to avoid and reduce land degradation in the wider landscape is an essential and cost-effective way to deliver multiple global environmental benefits related to agro-ecosystem functions such as: a) biodiversity conservation by reducing the conversion of natural habitats and safeguarding agro-biodiversity; b) improved soil health and reduced soil erosion, pollution risks and degradation of water resources to ensure sustainable flow for consumptive uses; c) reduced emission of greenhouse gasses by improving vegetation cover and accumulation of soil organic matter; and d) increasing sustainability and resilience of agro-ecosystem services. Investing in SLM also improves yields, and helps maximizing outputs and diversifying sources of income and livelihoods thus creating socio-economic benefits, including for nutrition and health.

Objective 2. Reverse land degradation through landscape restoration

624. This objective will support countries to (i) restore agro-ecosystem services in production landscapes, and (ii) avoiding forest loss and degradation and avoiding the reduction of trees and vegetative cover in production landscapes.

625. Restoration is forward-looking and dynamic, focussing on strengthening the resilience of landscapes and creating future options to adjust and further optimise ecosystem goods and services as societal needs change or new challenges arise[436]. It is the process of assisting the recovery of landscapes that have been degraded, damaged, destroyed, or modified to an extent that the land and/or agro-ecosystem cannot fulfil its ecological functions and/or fully deliver food production services. Agro-ecosystem restoration and bringing degraded agricultural lands back into production will create socio-economic benefits and improve livelihoods of IPLCs. At the same time, and in order to achieve LDN at the landscape level, it will be important to complement restoration activities with the sustainable management of forest resources, avoiding forest loss and degradation and avoiding the reduction of trees and vegetative cover in the production landscape.

626. Restoration activities under this objective may include activities to improve vegetative cover and its functionality, assisted natural regeneration of woodlands, planting of community woodlots, the establishment of shelterbelts, agro-forestry and agro-silvo-pastoral models,

[436] See Global Partnership of Forest and Landscape Restroation (GPFLR) principles: https://www.iucn.org/theme/forests/our-work/forest-landscape-restoration

practices to enhance soil and water conservation, erosion control, and ground water recharge. In addition, deforestation and forest degradation will be addressed as part of landscape restoration approaches through comprehensive land-use planning and protection measures and will ultimately lead to a net gain in forest and vegetation cover and the improvement of agro-ecosystem services such as provisioning (e.g. food and fuel for livelihoods), regulating (e.g. reducing greenhouse gas emissions, erosion control) and supporting (soil protection and habitat for biodiversity). Sustainable management of forest resources and trees will be mainly promoted through community-based management approaches.

Objective 3. Address desertification, land degradation, and drought (DLDD) issues in Drylands.

627. DLDD issues are especially prominent and, in many ways, specific to drylands. Land degradation processes are aggravating the effects of droughts and vice-versa. Avoiding, reducing and reversing land degradation is therefore an important mitigation measure for the effects of drought and can be addressed within the mandate of the GEF to create GEBs.

628. This objective will specifically support countries in dryland geographies to build resilience to mitigate the effects of droughts and to prevent the aggravating effects of land degradation through (i) comprehensive land-use planning taking drought risks into account; (ii) the use of drought databases and tools such as the UNCCD drought toolbox; and (iii) the implementation of drought-smart land management (D-SLM), including croplands, rangelands, dryland forests, and mixed land-uses. The focus of GEF investments is on the entire range of land uses in the production landscape aimed at creating GEBs and building resilience in production landscapes. Based on the specific context of projects and programs cropland management, dryland forest management, or rangeland restoration and management may be the focus of the interventions. Joint programming or synergies with adaptation projects funded by the LDCF will be particularly encouraged.

629. GEF interventions will support integrated and participatory land-use planning at all levels to to influence land-use patterns at the appropriate scale (jurisdiction or landscape). In dryland areas, where droughts aggravate land degradation processes by reduced water availability, they should be addressed as a priority in land-use plans. Proactive drought risk management is a more efficient way to reduce drought impacts on communities, economies and the environment. Data and information and participatory approach involving all stakeholders are needed to develop land use plans, identify and assess droughts risks, and define mitigation measure to be integrated in land-use and water use plans, including monitoring systems.

630. Good, effective and participatory land and water governance will be supported through the Land Degradation focal area programming as an important enabling environment for drought mitigation and the adoption and scaling up of D-SLM and its associated technologies. Such an environment requires, inter alia, effective institutions combined with the empowerment of

women (one of the majority groups among rural land and water users) and legal security (land tenure, water rights).

Objective 4. Improve the enabling policy and institutional framework for LDN

631. Under this objective GEF will support countries to (i) improve policy coherence and financing systems, (ii) further develop the institutional and regulatory framework and build capacity, and (iii) provide support to UNCCD enabling activities to help countries to fulfil planning and reporting obligations.

632. A key outcome under this objective will be to incorporate LDN into the existing national planning frameworks to meaningfully involve local governments, local communities, indigenous peoples, and women. Comprehensive and multi-sectoral land use planning will reduce pressures on natural resources from competing land uses and enable the large-scale application of good management practices. This will also facilitate synergies in the implementation of the MEAs and with programming of all other GEF focal areas at the national level. In this context, promoting good governance and the resolution of land tenure issues[437] that are obstacles to LDN objectives will be important considerations.

633. National policy frameworks can be made more coherent through cross-sectoral integration with a focus on harmonized sector policies and coordination between different institutions involved in various aspects of integrated landscape management. This may include harmonized government resource allocations within and among sectors, and/or at national and subnational levels of government, as well as assessments of the efficiency and effectiveness of those allocations in the context of the environmental management priorities.

634. In parallel, catalyzing and better targeting of national financing streams to mobilize domestic and private sector funding, and to address harmful subsidies in the agriculture sector are essential to improve financing systems towards instruments and mechanisms that provide incentives for reducing the pressures and competition between land use systems. Activities may also include targeted support for the re-orientation of private/public domestic financing through banks, credit unions, and microfinance that supports small and medium enterprises. Support for local incubators, associations, smallholders and small-scale food processing and marketing enterprises through special lending and extension systems will be considered.

635. Building capacity at all levels will be facilitated through provision of actionable knowledge and by making decision support tools widely available. Activities will include lessons learning, knowledge exchange, south-south cooperation within countries and regions, the

[437] Application of FAO's Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests in the Context of National Food Security will be encouraged.

development of innovation, monitoring and information systems on impacts, trade-offs, cost-benefit analyses, and identifying incremental synergies.

636. GEF support will include financing for UNCCD enabling activities to support the implementation of the UNCCD strategy in accordance with countries' obligations to the convention. Support will focus on reporting obligations and formulation of national strategies and plans in line with COP decisions and the UNCCD strategy.

Contributions of Integrated Programs to Land Degradation Outcomes

Food Systems

637. This Integrated Program provides the opportunity for an integrated approach to inter alia addressing land degradation challenges in production landscapes. The focus of the program on sustainable, regenerative and nature positive food productions systems (for globally important food crops, commercial commodities, and livestock) is in line with Land Degradation focal area objective 1, and will help countries to implement and scale-out SLM and regenerative farming approaches to increase the prospects for food security for smallholders and communities avoiding deforestation from commercial commodities. It will link smallholder producers and pastoralists, and small-scale food and agro-processing enterprises to markets and sustainable supply chains, assist with crop and systems resilience, and create stable revenues with agricultural commodities. The Program will also rehabilitate and restore degraded lands thereby providing ecosystem benefits in production landscapes. It will target countries seeking to incorporate nature-positive production systems into their national land degradation strategies and targets, while also creating opportunities to catalyze systemic change and deliver benefits at national, subnational and global scales. In addressing the challenges of the enabling environment, the Program will pursue policy changes to shift financial flows away from perverse subsidies and nature-degrading investments toward nature positive investments such as payment for environmental services (PES).

Landscape Restoration

638. This Integrated Program will work at landscape scale to generate multiple environmental benefits, create jobs and secure livelihoods through the restoration of degraded land and important ecosystems in selected landscapes. It will make a significant contribution to achieving LDN globally, and is fully in line with Land Degradation focal area objective 2. The Integrated Program complements and enhances efforts towards restoration under the Land Degradation focal area and vice versa. For example, the Program may include GGWI countries wishing to invest in restoration at scale through an integrated and programmatic approach working across multiple sectors and crosscutting themes. The integrated program will link countries in regional clusters for upscaling their project-based efforts through accessing platforms, knowledge products, and best practices. Connecting Land Degradation focal area project-based restoration

initiatives with the large-scale landscape restoration program will contribute to a coherent approach and a common message under the UN Decade for Ecosystem Restoration.

Amazon, Congo, and Critical Forest Biomes

639. The Integrated Program conserves globally important forest biomes through a Nature-based Solutions approach for climate, biodiversity and people. The Program strategy aims to halting deforestation and forest degradation in remaining primary tropical and subtropical forests by stopping agricultural encroachment and the logging frontier by promoting alternatives in these landscapes to create jobs and respond to the demand for food and livelihoods. These strategy calls for the engagement of multiple stakeholders at global, regional, national, and local levels accompanied by promoting good governance, enhanced policies and financial frameworks, and management information systems to reconcile social, economic, and environmental objectives. The program is therefore an important contribution to achieving LDN globally and in line with the Land Degradation focal area goal to avoid further land degradation and forest degradation.

Net-zero Accelerator

640. The Integrated Program will support Nature-based Solutions to help countries meet the net zero decarbonization goal by 2050. With a high ambition to reduce the GHG emissions and increase the carbon stocks in forests and productive landscapes, this Program will encourage investments at scale such as by reorienting policies, subsidies and public investments, increasing awareness of the value of nature, mainstreaming Nature-based Solutions in national strategies and improving the enabling conditions that facilitate the participation of the private sector. Complementary to Land Degradation focal area efforts and with an integrated whole-of-economy approach, this program will support a wide range of SLM activities and restore degraded lands in productive landscapes and protect protects. The approach enabling a more favorable policy framework and business environment for SLM will support the objectives of the Land Degradation focal area strategy. In the agriculture sector, important outputs will include improved soil carbon, soil health and soil fertility under grasslands and croplands; integrated systems, including water management, improved nutrient use and manure management towards sustainable and resilient agricultural systems, and improved livestock management systems.

Blue and Green Islands

641. Degradation of ecosystems tied to key economic sectors is evident in almost all landscapes in the 3 SIDS sub-regions (the Caribbean, the Pacific, and the Atlantic, Indian Ocean and South China Sea (AIS). Through the SIDS-Nature-based Solutions program, the tourism, urban and food sectors (agriculture and fisheries) will be targeted. The program will seek to address integrated upstream challenges linked to ecosystem degradation of agricultural lands and forests as well as implement downstream interventions to maintain, improve and restore the flow of agro-ecosystem services in support of food production and livelihoods. The program will

therefore contribute to achieving the LDN targets in SIDS and it directly aligns the Land Degradation focal area objectives to avoid, reduce and reverse land degradation.

Role of the private sector in supporting Land Degradation Outcomes

642. The Land Degradation focal area strategy will focus on three areas for private sector engagement: (i) farmer's and small-scale agribusiness enterprises access to credit, (ii) technical assistance and capacity building, and (iii) value chains for agricultural commodities (with a link to food systems).

643. Access to finance for smallholders and small businesses in most land sectors is a big challenge. GEF will therefore promote engagement with Micro, Small, and Medium Enterprises (MSMEs) and Microfinance institutions (MFIs) in Land Degradation focal area projects and programs to expand services to underserved MSMEs and small holder farmers for sustainable agriculture and restorative practices. MFIs are the primary providers of private capital to MSMEs, farmers and low-income populations in many developing regions. At the same time, MFIs are highly exposed to loan default because their low-income clients are directly impacted by climate change and environmental degradation. As a result, most MFIs are highly motivated to reduce their exposure to environmental risk by developing and offering lending products that account for climate and environmental risks. Civil society, with close connections to small holders and MSMEs, can facilitate new public/private partnerships and channels for investment.

644. In this context, the LDN Fund is an innovative private sector fund, which is invest in profit-generating sustainable land management and restoration projects worldwide. The GEF Land Degradation focal area will continue to cooperate with the LDN Fund through the LDN Fund Technical Assistance Facility[438] to bring public and private funding to transformative projects.

645. Private sector engagement will also be explored for technical assistance and capacity building for farmers through farmer field schools and eco-models.

646. Value chain development for agricultural commodities will be promoted in cooperation with the Food Systems Integrated Program and will expand in Land Degradation focal area projects and programs beyond globally important commodities to nationally and locally important commodities and products such as honey, olives, grapes, fruits, nuts, etc. and various species of livestock.

Contributions of the Land Degradation Strategy to the Blue and Green Recovery

647. As per the UNCCD, land is the key to building back better: avoiding future degradation, reducing current degradation and reversing harm from the past can accelerate the progress on all

[438] https://www.idhsustainabletrade.com/landscapes/ldn-taf/

17 SDGs in the face of both the COVID-19 pandemic and climate change. Efforts to avoid, reduce and reverse land degradation are necessary to sustain a healthy planet and to deliver opportunities and essential benefits in particular for women, youth and the rural poor.

648. By addressing DLDD issues in drylands, the resilience of livelihoods and ecosystems can be improved and more long-term benefits can be secured. Therefore, land can play key role in the prevention, preparedness, response, and recovery phases of the COVID-19 crisis simultaneously. Land Degradation focal area investments make essential contributions to green and blue recovery by:

- Investments in SLM in food insecure landscapes such as drylands to build resilience of food production systems for nutritional and health benefits and secure livelihoods, especially in areas where migrant workers return to rural areas in the wake of the pandemic;

- Restoration of ecosystems such as rangelands and forests can immediately bring investments down to the field level and create jobs in rural areas. In the medium term, restoration helps to improve the provision of ecosystems services and the resilience and health of the land on which vulnerable populations depend;

- Supporting the avoidance further degradation and conversion of land through comprehensive and integrated land use planning and enforcement, which can reduce incidences of exposure of humans to pathogens and lower the risk of spillover from wildlife;

- The Land Degradation focal area can also contribute to blue recovery through SLM and restoration efforts in coastal areas and through the application of a ridge-to-reef approach, which helps to improve water quality and pesticide and harmful chemical load; and

- Investments on land and in production and post-harvest manufacturing systems as well as innovative financing mechanisms can help to catalyze additional financing for land-based projects and programs. This can promote innovation in terms of domestic resource mobilization, job creation and livelihood protection to assist with effective recovery.

International Waters Focal Area

Global Context of International Waters

649. The health of our shared freshwater and marine ecosystems underpins social and economic aspirations at local, national and regional levels. The sustainability of these shared ecosystems is essential to reach global goals far beyond SDG 6 and 14. Hence, good governance of our shared ocean, river basins and their wider catchments is a foundation for building resilient systems that are robust enough to absorb impacts, such as those presented by COVID-19, and other negative anthropogenic impacts caused by poor management decisions that are driven by the opportunity to reap short-term benefits. Therefore, we need to ensure that our actions catalyze strong resilient transboundary marine and freshwater ecosystems, that will contribute to long-term human well-being and ability to recover faster from disasters, climate change impacts, and economic activities[439].

650. Many ecosystems have benefited from "anthropause", caused by the slow-down in human activities due to the COVID Pandemic[440] and experience improved ecosystem functioning. However, this is not a uniform development. Within the sectors of freshwater and marine fisheries some fisheries and geographies have seen positive effects, whereas others have experienced increased pressures caused by the current Pandemic[441,442, 443]. The current pandemic has made it crystal clear that water is an essential service that will enhance our ability to respond, recover and rebuild a post-COVID-19 world and provides an opportunity for us to rethink and reprioritize our interests, ambitions and resources[444].

651. Fisheries, whether capture fisheries in freshwater or marine ecosystems immediately needs enhanced coordination between local resource users, policy makers and commodity supply and value chains. With only 6.2 % of assessed fish stocks being "underfished" the world is nearing a point where many fish stocks may not recover[445]. This development will have

---

[439] Marian J. Neal (2020) COVID-19 and water resources management: reframing our priorities as a water sector, Water International, 45:5, 435-440, DOI:10.1080/02508060.2020.1773648

[440] Rutz, C., Loretto, MC., Bates, A.E. *et al.* COVID-19 lockdown allows researchers to quantify the effects of human activity on wildlife. *Nat Ecol Evol* **4,** 1156–1159 (2020). https://doi.org/10.1038/s41559-020-1237-z

[441] COVID-19 pandemic impacts on global inland fisheries Gretchen L. Stokes, Abigail J. Lynch, Benjamin S. Lowe, Simon Funge-Smith, John Valbo-Jørgensen, Samuel J. Smidt Proceedings of the National Academy of Sciences Nov 2020, 117 (47) 29419-29421; DOI: 10.1073/pnas.2014016117

[442] Nathan J. Bennett, Elena M. Finkbeiner, Natalie C. Ban, Dyhia Belhabib, Stacy D. Jupiter, John N. Kittinger, Sangeeta Mangubhai, Joeri Scholtens, David Gill & Patrick Christie (2020) The COVID-19 Pandemic, Small-Scale Fisheries and Coastal Fishing Communities, Coastal Management, 48:4, 336-347, DOI: 10.1080/08920753.2020.1766937

[443] Bianca Haas, Ruth Davis, Harriet Harden-Davies and Quentin Hanich, 2020. Regional fisheries management: Virtual decision making in a pandemic - Information Paper for 17th meeting of the Western Central Pacific Fisheries Commission.

[444] Marian J. Neal (2020) COVID-19 and water resources management: reframing our priorities as a water sector, Water International, 45:5, 435-440, DOI:10.1080/02508060.2020.1773648

[445] FAO. 2020. The State of World Fisheries and Aquaculture 2020 - Sustainability in action. Rome.

detrimental impacts on food security for the the 3.3 billion people, for which fish provide up to 20% of the animal protein of their daily diet. Wild capture freshwater fish account for 13% of the world's annual catch, totaling 12 million tonnes each year and are estimated to be worth over US$38 billion per year[446]. Further, improved management will be pivotal to efforts to restore and conserve fisheries habitats, such as river basins, lakes, deltas, wetlands, seagrass, mangroves and reefs, which are critical nursery and breeding habitats for many fish and crustacean species. Countries, therefore, need to step up national and regional actions safeguarding their marine and freshwater ecosystems to ensure continued growth, prosperity and unlock new economic opportunities. Simultaneous efforts on advancing sustainable aquaculture production and supply chains needs to be sped up. Wild caught stocks are under pressure and if marine and freshwater based protein is to support population growth and local economic opportunities, while allowing capture fisheries to recover, aquaculture holds a great potential that needs to be explored.

652. Wastewater from agriculture and municipal settlements is a major threat to freshwater and coastal ecosystems health and integrity. Excessive amounts of nitrogen, phosphorous and organic matter will lead to hypoxic zones which will push living organisms out of the ecosystem and ultimately lead to dead zones. On top of these devastating effects, that leaves the coastal ecosystems fragile to climate induced impacts and bared from resources to support economic development and human basic needs, untreated wastewater bring vira and bacteria to the coastal zones, such as E.coli and SARS-CoV-2[447]. Currently, somewhere between 70-80% of the global wastewater, is being sent untreated into the ocean, via rivers or directly discharged. Of the remaining 20-30% treated wastewater, most is only given primary treatment, that only removes large particles, and hence do not deal with nutrients, microplastics, pesticides or bacteria.

653. During the SARS-CoV-2 pandemic single-use plastic consumption has surged, which may lead to negative impacts on the biodiversity in the ocean and connected riverine ecosystems[448,449,450]. Tackling plastic pollution requires incentivizing a shift towards a circular economy approach through interventions across the entire plastic value chain including material engineering; product and process design; consumer use and behavior; and collection systems and recycling[451, 452]. At a global scale, such a system change is predicted to stimulate cost savings for

[446] WWF 2021: The World's Forgotten Fishes. WWF International pp1-48
[447] Tran et al 2021: SARS-CoV-2 coronavirus in water and wastewater: A critical review about presence and concern.
[448] https://www.economist.com/international/2020/06/22/covid-19-has-led-to-a-pandemic-of-plastic-pollution
[449] https://www.forbes.com/sites/lauratenenbaum/2020/04/25/plastic-waste-during-the-time-of-covid-19/?sh=ed6e7e67e484
[450] https://www.weforum.org/agenda/2020/05/plastic-pollution-waste-pandemic-covid19-coronavirus-recycling-sustainability/
[451]https://www.newplasticseconomy.org/#:~:text=In%20a%20new%20plastics%20economy%2C%20plastic%20never%20becomes%20waste%20or%20pollution.&text=Eliminate%20all%20problematic%20and%20unnecessary,reusable%2C%20recyclable%2C%20or%20compostable.
[452] https://www.pewtrusts.org/en/research-and-analysis/articles/2020/07/23/breaking-the-plastic-wave-top-findings

governments and private sector, support job creation, cut down on plastic ocean pollution and reducing projected plastic-related greenhouse gas and harmful chemical emissions[453,454].

654. Habitat destruction of marine and coastal ecosystems from coastal development, including tourism, commercial and residential construction, roadways and other infrastructure are also having a significant impact on marine and coastal ecosystems, including mangroves, seagrass, beaches and coral reefs. These ecosystems have tremendous biodiversity and highly valuable ecosystem services, including carbon sequestration, shoreline storm protection and fisheries nursery areas. Therefore, it is important to inform political priority setting through Marine Spatial Plans and utilize these plans to operationalize political priorities.

655. A sustainably managed ocean is essential to ensure the economic, social and ecological services that it provides. The ocean is currently providing the world economy values conservatively estimated at US$2.5 trillion each year to the world economy in market goods and services and many times that in non-market amenities[455]. Services provided by transboundary marine ecosystems include food security, tourism opportunities, carbon sequestration and coastal protection. Considering how mankind is normally treating something of great value, one should think that the ocean is in the best of conditions. Thriving with balanced use, an abundance of fauna and flora in the coastal zones, ensuring that the ocean can continue to be the stabilizing factor for mankind's activities, while being the pivotal centerpiece that provides cultural identity, livelihoods and social structures to local communities, nations and regions. Sadly, this is not the case.

656. The state of the ocean and its importance for enabling a sustainable development trajectory, has been enjoying an increased attention globally over the last years and most recently by the process spearheaded by the 14 heads of state that forms the High-Level Panel for a Sustainable Ocean Economy[456]. The ocean ecosystem is facing unparalleled stress from climate change, acidification, habitat loss, pollution, fishing, shipping, and a suite of land-based activities. There is no doubt that the world's population count on and need the services that the ocean provides. The world's Large Marine Ecosystems alone represent USD 12 trillion annually in market and nonmarket ecosystem goods and services[457]. However, unless we change our management strategy in and around the ocean, it will not be able to continue to deliver biodiversity and food security, climate regulation, shoreline storm protection, carbon

[453] https://www.thegef.org/sites/default/files/publications/PLASTICS%20for%20posting.pdf
[454] https://www.pewtrusts.org/en/research-and-analysis/articles/2020/07/23/breaking-the-plastic-wave-top-findings
[455] Hoegh-Guldberg, O. et al. 2015. Reviving the Ocean Economy: the case for action - 2015. WWF International, Gland, Switzerland., Geneva, 60 pp.
[456] Ocean Panel, 2020: Transformations for a Sustainable Ocean Economy A Vision for Protection, Production and Prosperity
[457] Costanza, R., d'Arge, R., de Groot, R., Farber, S., Grasso, M., Hannon, B., et al. (1997). The value of the world's ecosystem services and natural capital. Nature, 387(15 May 1997), 253-260.

sequestration, recreational opportunities, economic opportunities and cultural cohesion for billions of people.

657. A whole 64% of the world's ocean surface is designated the Areas Beyond National Jurisdiction, which has few governance mechanisms[458]. Due to the vast area the ABNJ covers, the lack of international agreements and data to support real-time management and enforcement is indirectly supporting a long range of harmful activities that is continuing to impact the integrity of the ecosystem and the biodiversity within. Some of the harmful activities include intensified fishing for highly migratory species, bottom trawling on seamounts, maritime transport, dumping and other stressors calling for the further consideration of the effectiveness of existing legal instruments and management systems. Extending the successful science-based LME approach into the ABNJ, may be a solution that will make it easier for countries to realize the importance of the ABNJ, while providing tools to improve resource management[459]. The most recent negotiations of the proposed UN Convention on Biodiversity Beyond National Jurisdiction, may indeed be what is needed to support priority setting, but most importantly raise political capacity to realize the values that the ABNJ is representing for the global community as well as national economies.

658. Freshwater ecosystems and especially transboundary river basins, lakes and aquifers has historically been and continues to be the pivotal point for development, the rise and fall of cultures, economic activities, societal and cultural cohesion. Predictability of available water resources and resilience to absorb climate change induced impacts diminish as water demand increases due to population growth, shifting diets and economic activities. It is estimated that current management approaches to freshwater in developing countries may have a much stronger effect on water stress than climate change, which may lead to more than 50% of the world's population living in regions with severe water stress within the next 30 years[460].

659. Water is a precondition for human and ecosystem survival, underpins many economic activities and is fundamental to achieving most of the SDGs. Increasing scarcity in many regions of the world along with pollution of these waters threatens human health and economic development. International and transboundary cooperation over shared water resources provides a unique opportunity to inform political decision making and investment priority setting through a participatory approach involving both public and private sectors. Such regional frameworks

[458] E.M. De Santo,*,Asgeirs dottir, A. Barros-Platiau, F. Biermann, J. Dryzeke,L.R. Gonçalves, R.E. Kimd, E. Mendenhall, R. Mitchell, E. Nymani, M. Scobie, K. Sunk,R. Tiller, D.G. Webster, O. Young, 2019: Protecting biodiversity in areas beyond national jurisdiction: An earth system governance perspective. Earth Observation Systems.

[459] IOC-UNESCO and UNEP (2016). Open Ocean: Status and Trends, Summary for Policy Makers. United Nations Environment Programme (UNEP), Nairobi.

[460] C. Adam Schlosser, Kenneth Strzepek, Xiang Gao, Charles Fant, Élodie Blanc, Sergey Paltsev, Henry Jacoby, John Reilly, Arthur Gueneau, 2014: The future of global water stress: An integrated assessment, in Earths Future, Volume 2, Issue 8, pp 341-361

will support a broader and longer-term vision on transboundary freshwater ecosystems, which in turn will be able to continue to provide essential ecosystem services. Building trust and agreeing on cooperative frameworks are particularly important, in fragile economies impacted by different forms of conflict, to keep communication open to support water sharing agreements, sectoral prioritization, and avoid deepening tensions between countries.

660. Scattered, uncoordinated action is simply not an option to secure the health and continued delivery of ecosystem services from transboundary marine and freshwater ecosystems. In order to curb and address current threats, scientifically informed management approaches, coupled with long-term investment frameworks are critical to the sustainability of these valuable ecosystems[461]. Experience demonstrate that sustainable environmental management of transboundary resources require a common understanding of what pressures the shared ecosystems are facing, coupled with national and regional investment plans. This transboundary cooperative approach provides the foundation for implementation of the regionally agreed national and regional-level actions to ensure the health of the shared water bodies and their valuable services.

661. Healthy transboundary marine and freshwater ecosystems are prioritized in many INDCs and NBSAPs and will be essential in supporting delivering towards CBD, UNFCCC and CCD targets. While the GEF is not the financial mechanism nor does it have any obligations to international conventions in relation to the transboundary mandate of International Waters, the GEF International Waters focal area investments will support actions to deliver against the UN Water Courses Convention and the UNECE Water Convention, the UN Convention on the Law of the Sea, the Ramsar Convention on Wetlands and to the CBD and the post-2020 global biodiversity framework as well as the ongoing developments on a potential BBNJ convention. Further, GEF investments will also assist countries in delivering towards a number of the SDGs, such as SDG 6 and 14. Finally, IWLEARN, the GEF funded cross-agency and multi-actor platform of knowledge exchange and capacity building, supports facilitating partnerships between a range of actors to stimulate conversation and capacity between, and beyond, GEF funded activities.

GEF-8 International Waters Focal Area Strategy and Associated Programming

662. The integrity of transboundary water ecosystems can only be achieved through cooperation over political borders and between sectors. The GEF through its International Waters focal area is supporting cooperation in shared marine and freshwater ecosystems, to achieve long term benefits. Complex transboundary water ecosystems deliver services to a wide

[461] Talaue McManus, L., R. Mahon, A. Aureli, J. Barbiére, M. Bertule, E. Bigagli, P. Bjørnsen, B. Combal, A. Dumont, L. Fanning, A. Fischer, P. Glennie, S. Grimes, S. Heileman, P. Lacroix, M. Lagod, M. Nakamura, G.-J. Nijsten, W. Rast, A. Sherbinin. (2016). Transboundary Water Systems - Status and Trends: Crosscutting Analysis. Volume 6. United Nations Environment Programme (UNEP), Nairobi.

variety of sectors that ultimately support societal cohesion and a healthy human development trajectory. Delivering ecosystem status changes in marine and freshwater systems, requires working at all scales, with a wide stakeholder group, in the public and private sectors and across the watershed from source-to-sea and beyond. The above will be delivered through the following three key objectives in GEF-8 International Waters investments: 1) Accelerate joint action to support Blue Economic Development; 2) Advance management in the Areas Beyond National Jurisdiction (ABNJ), and 3) Catalyzing Environmental and Transboundary Water Security.

663. These objectives will be realized through regional investments to support regional priority setting (TDAs) and national implementation of the regionally ministerial endorsed cooperative investment frameworks (e.g. SAPs). As well, select regional investments will be considered on a case by case basis as programmatic approaches if they advance the objectives of the International Waters focal area. The TDA/SAP process consists of a Transboundary Diagnostic Analysis in which common fact finding, and scientific analysis identifies the shared threats in a given transboundary ecosystem. This process leads naturally into the formulation of the Strategic Action Program, which is a politically endorsed document, that identifies the interventions needed to address the agreed threats in the region. To ensure a strong anchoring and the most optimal foundation for successful implementation of these investments, it will be imperative that the investments recognize the importance of inclusion of all the human capital that exists locally, nationally and regionally.

664. This approach recognizes the important women play key roles in generating and sustaining change. Women play a prominent role in the productive use and management water and marine resources. Therefore, it is imperative that women are properly represented in the formulation and implementation of legal, regulatory and institutional frameworks. Further, since women in many countries support knowledge management and undertake training and teaching of the next generation, it is important to ensure women have access to up-to-date knowledge and training products is important, if we are to ensure that women and men together can set targets and work towards implementing these for a prosperous future for all. Therefore, gender issues and mainstreaming of gender considerations into all processes and investments will be required. GEF-8 International Waters investments will require a gender assessment within each social analysis during project preparation, differentiated reporting of output indicators and additional measures based on the GEF's Gender Action Plan.

Objective 1. Accelerate joint action to support Blue Economic Development

665. Oceans are fundamental to life on earth covering 71% of its surface and providing livelihoods, food security, climate regulation, essential habitats, shoreline storm protection, carbon sequestration, recreational opportunities, social and cultural cohesion. In order to support a multisectoral cooperative approach, the GEF will continue its successful application of utilizing the Large Marine Ecosystem as the organizing principle. This will ensure that

investments are not happening in a vacuum, but are coordinated with land-based activities, and between multiple sectors. Moreover, the approach offers an opportunity for delivering towards regional priorities, through local action. Supporting nations to undertake actions that will sustain a trajectory towards a national healthy blue economy, which will deliver local and regional benefits, necessitates that local resource users, national administrators and policy makers has the proper understanding of the shared ecosystem that is being managed. Far too often, user rights to coastal and ocean resources are given without the needed reflection on transboundary and short-term versus long term cultural, social and economic impacts.

666. The GEF will assist countries in identifying sustainable public and private investments to accelerate joint action in support of Blue Economic Development. This will be done through funding of collective management of coastal and marine systems and implementation of the full range of integrated ocean policies, legal and institutional reforms. The GEF will catalyze regional processes, such as the Transboundary Diagnostic Analysis/Strategic Action Program (TDA/SAP) in order to build trust and set investment priorities, securing the health and resilience of the Large Marine Ecosystems. In GEF-8 the International Waters strategy will assist countries in addressing a suite of stressors such as overfishing, land-based sources of pollution, loss and damage of key coastal and marine ecosystem. The critical issue of land-based pollution will be addressed through the Integrated Program "Blue Economies and Healthy Oceans", where curbing of virus, bacteria, micro plastics and pollution from municipal wastewater and agricultural run-off will be in focus. Under the Objective 1, investments will be strengthening nations Blue Economy opportunities, through two areas of strategic action: 1) sustaining healthy blue ecosystems, and 2) advancing sustainable fisheries management.

Sustaining healthy blue ecosystems

667. The overall vision is to bring ocean ecosystems under balanced use, harboring an abundance of fauna and flora, and with resilient "blue forest ecosystems" (deltas, mangrove forests, seagrass meadows, saltwater marshes and corals). This vision will enable coastal ecosystems to absorb impacts from a changing climate and other anthropogenic and natural shocks, while being the pivotal centerpiece that provides cultural identity, decent livelihoods and social structures to local communities, nations and regions. The coastal and marine habitats can be restored through policy setting, improved management strategies, ensuring engagement of local users of the marine resources and deployment of different area-based management tools, including MPAs through. In addition, these ecosystems are also part of the world's 66 large marine ecosystems, which harbor a suite of essential natural ecosystems that are vital to support national blue economy opportunities that in turn will deliver towards regional targets.

668. Building Capacity to manage marine ecosystems benefits from an ecosystem approach, which must be rolled out via strong partnerships and cooperation locally, nationally, regionally and globally to inform policy formulation and investments that support the transformational

change needed to lead a blue recovery trajectory. This can only be achieved through stable and strong knowledge management across regions, and in between similar and different investments. This will among others further innovation, adoption rate and speed and a sense of community. The latter being central for a portfolio spread across the globe. Building capacity and mainstreaming climate change considerations will be essential to local, national and regional marine ecosystem management actions, including advancement of cost effective and strategic coral reef protection, effective use of scarce MPA and other area-based effective conservation measure resources and fish stocks. Fish stocks shifting to other geographies due to changing temperatures, acidity or other changes to local habitats will have tremendous impacts on local livelihoods, societal cohesion, socio economic dynamic and infrastructure needs.

669. Marine spatial planning is a critical tool to achieve Ecosystem Based Management via an integrated planning framework that moves away from sectoral management to address multiple objectives related to achieving economic and ecological sustainability and the need to reduce resource conflicts in marine environments. Marine Spatial Planning are geospatial plans that identify what spaces of the ocean are appropriate for different uses and activities, to advance economic and social development. MSPs are to inform political decision making and ultimately support the overarching goal of having 100% of the ocean under sustainable management. Moreover, MSP presents the cornerstone of the national blue economy plans as MSP illustrates the socio-economic opportunities, constraints and linkages to ocean resources and inform political decision making. Blue economy plans will discuss cost of tradeoffs, outline the national EEZ and identify areas for economic development, protection as well lay out specific services that are central to local and national social and cultural cohesion.

670. Under this objective, we will support actions that:

- Formulate and formalize cooperative legal and institutional frameworks built on TDAs/SAPs approach, towards addressing the multiple anthropogenic pressures, including climate related effects in the LMEs,
- Implementation of Strategic Action Programmes to support a healthy blue economic development by deployment of tools such as MSP, MPA, NBS and PES.
- Foster collaboration among LMEs, Regional Seas conventions and Regional Fisheries Management Organizations (RFMOs) to protect and restore these key habitats.
- Create multi-state cooperation frameworks in transboundary deltas including an integrated source-to-sea approach,
- Develop and update Marine Spatial Plans and Blue Economy Plans to inform policy decisions in the EEZ,

- Establish and support marine protected areas and other area-based conservation measures in key biodiversity hotspots and coastal habitats through regional investments under LME SAPs
- Restore degraded key habitats through deployment of Nature-based Solutions and Payment for Ecosystems Services demonstrations
- Mainstream marine area-based management and spatial tools in regional entities, to delivering towards global targets.
- Create multi-state cooperation frameworks in transboundary deltas including an integrated source-to-sea approach,
- Stimulate private sector engagement, through relevant industry sectoral roundtables and industry groups.

Advancing sustainable fisheries management.

671. Fish is an important source of protein for more than 3 billion of people. But according to FAO, only 6.2 % of assessed fish stocks are being "underfished" , hence there is limited potential for increasing production, which illustrates the importance of moving to improved management of fisheries, not only the wild caught marine fisheries, but also wild freshwater species as well as fish produced. The sustainability of marine fisheries, which among others will mean curbing Illegal Unreported Unregulated fisheries practices, and implementation of the Voluntary Guidelines for Securing Sustainable Small-Scale Fisheries in the Context of Food Security and Poverty Eradication (the SSF Guidelines) requires improved governance mechanisms to restore and conserve critical habitats to fisheries, coupled with deployment of a range of management tools. The ratification and implementation of the Port State Measurement Agreement may be one of the global tools to support a shift towards a more sustainable managed fisheries locally, nationally, regionally and globally. Objective 1 and 2 is mutually re-enforcing and coordination and integration at various levels will be factored into investments. Replace "according to FAO, 90 % of marine fish stocks have limited or no potential for increasing production" with: "there is clear evidence that where fisheries are intensively managed, the stocks are above target levels or rebuilding, while fisheries with poor management have a much worse status".

672. The seafood industry consists of capture fisheries and freshwater and marine aquaculture. Globally, outputs from the capture sub-sector are stagnant or declining with associated reductions in 1) biodiversity and ecological resilience, 2) quality and reliability of seafood supply and, 3) economic opportunities for poverty alleviation. Supporting a development towards returning stocks to sustainable stock sizes, will require a major reduction in capture fishing effort. To secure access to essential marine proteins for local and global markets, a substantial shift towards aquaculture fish production is needed. Aquaculture may play a key role in the recovery of capture fisheries. The challenge is to position nature at the core of the sectors

delivery of jobs, affordable and low carbon footprint fish protein, and human health improvements, while allowing catch fisheries to recover. Links between multi-level (local-global) long-term strategic partnerships and interventions are needed.

673. Therefore, under this objective the GEF will support:

- Formulation of (including updates to) Transboundary Diagnostic Analysis and Strategic Action Programmes.
- Policy and regulatory reforms to end IUU, overfishing and sustainably manage marine capture fisheries,
- Advancement of adoption and implementation of the Port State Measurement Agreement
- Strengthening and creating policy frameworks, including working with countries to eliminate harmful incentive structures,
- Implementation of market mechanisms to support sustainable fisheries value chains,
- Strengthening and creating policy frameworks, including working with countries to eliminate harmful incentive structures,
- Standard setting for sustainable aquaculture to enhance marine ecosystem health, livelihoods and improving food and nutrition security,
- Advancement of spatial zoning instruments (marine spatial plans) to define the boundaries over which aquaculture sustainability should be assessed,
- Development of sustainability indicators and monitoring systems in respect to the local ecological carrying capacities, **t**aking into account observed and projected impacts of climate change, biodiversity loss, natural disasters, overfishing and pollution
- Reliable data to inform policy and decision making, to inform ccapacity building, policy reform and piloting of innovation and best available tech,
- De-risking innovation through incremental finance and piloting innovative technologies

Objective 2 Advance management in the Areas Beyond National Jurisdiction (ABNJ)

674. The areas beyond national jurisdiction covers a total of 64% of the ocean or a 40% of the world's surface. The ABNJ is facing several drivers of degradation, such as over-fishing of iconic pelagic migratory species, maritime navigation, ocean energy facilities, bottom trawling on seamounts, pollution, extraction of minerals and hydrocarbons. There is an urgent need to

support international agreements that will make it easier to manage this vast area of the planet, in a way that will ensure that resources are utilized in a sustainable manner. One of the central pillars to increase local, national and global management capacity will be to have a central data and information center. Management of the "unknown" is nearly impossible, hence the need for continuous data (potentially obtained through combining satellite data with vessel tracking data) and information sets are crucial in order to enable local authorities to take proper action. This particularly relates to IUU in fisheries management of catches from the open ocean and port's ability to apply and enforce the port state measurement agreement. Further, the ongoing negotiations for the UN Convention on Biodiversity Beyond National Jurisdiction (BBNJ) have touched on the need to enhance national capacity and accession. The potential role of the GEF, if any, is under negotiation.

675. Ultimately, raising awareness of the ABNJ and the potential value that the ABNJ is representing for the global community as well as national economies, will be essential in a move towards improved management of the shared resources that the ABNJ represents.

676. Under objective 2, Advance management in the Areas Beyond National Jurisdiction, the GEF will support actions that:

- Improve Access to data and information to improve capacity to implement and enforce PSMA and thereby curb IUU.
- Support national ratification, implementation and adoption of the Port State Management Agreement
- Support regional/global efforts on Monitoring, Control and Surveillance of the ABNJ
- Coordinate science-based management of ABNJ by extending LMEs management structures.
- Advance global buy-in of industry standards and food safety protocols, as key drivers of ocean value chains
- Replicate best practices and lessons learned from regional constituencies, such as the parties to the Nauru agreement and the WCPFC

Objective 3: Enhance water security in freshwater ecosystems

677. Water is a prerequisite for human, ecosystems survival and directly underpin economic sectoral activities. Transboundary freshwater ecosystems such as iconic river basins, lakes and aquifers has historically been and continues to be the pivotal point for development, the rise and fall of cultures, economic activities, societal and cultural cohesion. Increasing issues related to

availability of the needed quantity and quality of water in many regions of the world threatens human prosperity and economic development. Particularly important in this context is the ability to set up conjunctive management structures that takes into account surface and groundwater resources. With a changing climate and poorly managed surface water bodies, communities and countries rely on groundwater abstraction in order to ensure food, water and ecosystem security which are key pillars in order to ensuring inclusion of the ecosystem dimension into the broader Nexus discourse, and thereby obtain societal stability.

678. Unfortunately, due to lack of data and knowledge of the connectivity between the water systems, the "hidden" groundwater resources are often thought of as "just there" or " an "infinite resource", which complicates management or in worst case scenarios will lead to deepening of the resource constraints experienced. As indicated access to data is a prerequisite for informing management and political decision making, especially for aquifer resources. Therefore, combining e.g. satellite information with management practices of water resources can lead to transformative changes in the way the shared water resources are managed while maximizing outputs simultaneously.

679. Security of water is essential for cities and towns, agricultural production, energy provision and delivery of a myriad of ecosystem services. Sudden water fluctuations, such as floods and droughts, increase the risk for destabilization of regions. Ensuring healthy transboundary water ecosystems, not only support sub-basins and local water needs, but support adequate water for provision of essential societal services. Traditional water infrastructure investments have been focusing on grey infrastructure, which is still prevailing in many countries and lending portfolios. However, due to impacts from a changing climate combined with other local, national and regional human induced stress, nature-based solutions coupled with infrastructure investments will be more sustainable and durable solutions.

680. Shared freshwater resources comprise a special case for cooperation with large potential spillover and global impacts. Transboundary river basins cover about 50% of the earth's land surface, therefore cooperation is essential to support water, food, energy, and ecosystem security. Strengthened governance of transboundary water systems to manage freshwater connectivity across borders need to be aligned with multi-sectoral and stakeholder-based upstream basin planning. Transboundary priority setting and associated Strategic Action Programmes is vital in the process of identifying key issues that affect national water related stress and how to deal with these stressors through actions in multiple countries at the same time. However, ensuring transboundary environmental and water security starts by strengthening management capacity at the most local level, which among others include land degradation management strategies, climate change impacts, adaptation and generally increasing the land-based activities.

681. Therefore, under this objective, the GEF will support:

- Formulation of, and updates to, Transboundary Diagnostic Analysis and Strategic Action Programmes.
- Implementation of SAP priorities through regional and national actions.
- Policy legal reforms and improved management strategies to address loss of connectivity and freshwater biodiversity and to support sustainably management of freshwater fisheries (including addressing IUU fishing) and aquaculture
- National reform of policies, strategies and regulations in accordance with regional agreements and MEA commitments
- Improved policy formulation processes, IWRM implementation and conjunctive management of surface and groundwater resources
- Build capacity to gather and synthesize scientific, local and people science and mainstream into decision making processes
- Establishment of flood and drought early warning systems and disaster risk management plans,
- Nature-based solutions to improve water quality, freshwater ecosystem health and curb floods, droughts, climate change impacts, river/lake shoreline deterioration and to further aquifer recharge
- Build capacity to gather and synthesize scientific, local and people science and mainstream into decision making processes
- Ensure the inclusion of the ecosystem dimension into the water, energy, food nexus, to further environmental and water security
- Testing Paying for Ecosystems Services in transboundary contexts and between ecosystems.
- Supply chain approaches for increased water efficiency and reduction of ecosystems pressures,
- Increase water efficiency, reuse, and reduce point and non-point sources of pollution addressing both primary and emerging pollutants, along the source-to-sea continuum
- De-risking innovation through incremental finance and piloting innovative technologies
- Support fragile and/or conflict affected countries, via a country-based pilot to fully engage in the transboundary process

Contributions of Integrated Programs to International Waters Outcomes

682. Shared freshwater and marine ecosystems weave through the different focal areas of the GEF and the Integrated Programs proposed for the GEF 8 Strategy. There will be multiple entry points for obtaining contributions from the IPs to the International Waters focal area, as well as vice versa. Whether it is related to Food Systems Integrated Program, Landscape Restoration Integrated Program, Sustainable Cities Integrated Program, Amazon, Congo, and Critical Forest Biomes Integrated Program, Circular Solutions to Plastic Pollution Integrated Program, Blue and

Green Islands Integrated Program, Blue Economies and Healthy Oceans Integrated Program, and Elimination of Harmful Chemicals from Supply Chains Integrated Program, there is a myriad of synergies and contributions that can and will be delivered towards the overall goals of the GEF 8 replenishment. This is indeed important, but more important is the fact the combinations of IPs with Focal Area investment strategies will further the opportunities for countries and people to curb environmental stress and expand the opportunities for a decent and healthy future.

Role of the private sector in supporting International Waters Outcomes

683. The engagement of both public and private sectors will be essential towards delivering sustainable, tangible results in transboundary marine and freshwater ecosystems. Therefore, the GEF International Waters Focal area will stimulate private sector engagement along the different supply chains to reduce impacts on the freshwater and marine ecosystem environments. These could entail working with large-scale commercial fishing fleets, development of marine spatial plans to identify investment opportunities for both private and public sector, advance private sector engagement to increase water, food, energy and environmental security, such as through multi-stakeholder platforms, industry roundtables and interest group and increase water efficiency, reuse, and reduce point and non-point sources of pollution addressing both primary and emerging pollutants, along the source to sea continuum. In short, the IW GEF 8 strategy will be able to support implementation of the GEFs private sector strategy. Moreover, through private sector engagement, the International Waters focal area will be de-risking innovative investments within the freshwater and marine sectors, through utilizing the advances that has been undertaken in the formulation of TDA/SAPs. This will be essential in de-risking investments, but also provide an essential cost-saving factor which will make such investments more viable and durable in the long-run.

Contributions of the International Waters Strategy to the Blue and Green Recovery

684. Water in all its forms cuts across political boundaries and natural landscapes, but also connects ecosystems, people and nations. The current pandemic has made it clear for all levels of society how important a role freshwater security and access to healthy marine ecosystems and the resources within is for cultural and societal cohesion, economic opportunities and human health. Therefore, it is hard to imagine building back greener or bluer, without improved management of our shared freshwater and marine ecosystems. Post-pandemic investments are an opportunity to “build back better” by ensuring that green and Nature-based Solutions are better integrated into development plans and implementation. The sustainability of these ecosystems is essential to reach global goals far beyond SDG 6 and 14. Therefore, we need to ensure that our actions catalyze strong resilient transboundary marine and freshwater ecosystems that will contribute to long-term human well-being and ability to recover faster from disasters, climate change impacts, and other disruptions of sustainable development, growth and human prosperity.

Chemicals and Waste Focal Area

Global Context of Chemicals and Waste

685. The GEF's mandate in the management of chemicals and wastes is derived from its role in the financial mechanism of the Stockholm Convention on Persistent Organic Pollutants, as defined by Articles 13 and 14[462], and from the Minamata Convention on Mercury as defined by Article 13[463]. The Stockholm Convention provides guidance on programming priorities to the GEF based on findings of the quadrennial reviews of the GEF and a needs assessment for the Convention. The Minamata Convention has so far provided initial guidance at the first COP that priorities for the Convention. In addition, in accordance with Article 9 (b) of the Instrument for the Establishment of the Restructured Global Environment Facility, 2019[464], the GEF provides funding to support the implementation of the Montreal Protocol on Substances that Deplete the Ozone Layer[465] and supports certain areas under the Strategic Approach to International Chemicals Management (SAICM) that require global action.

Economic Scope of the Global Chemicals Industry

686. The UNEP Global Chemicals Outlook II (GCO II) 2019[466], estimates that the global chemicals industry has a value of $5 trillion per year and is projected to double in size by 2030. The growth will occur primarily in the developing countries which already accounts for approximately 61% of the chemicals industry by GDP according to an industry report[467]. This report also confirms the UNEP GCO II data on the size of the industry.

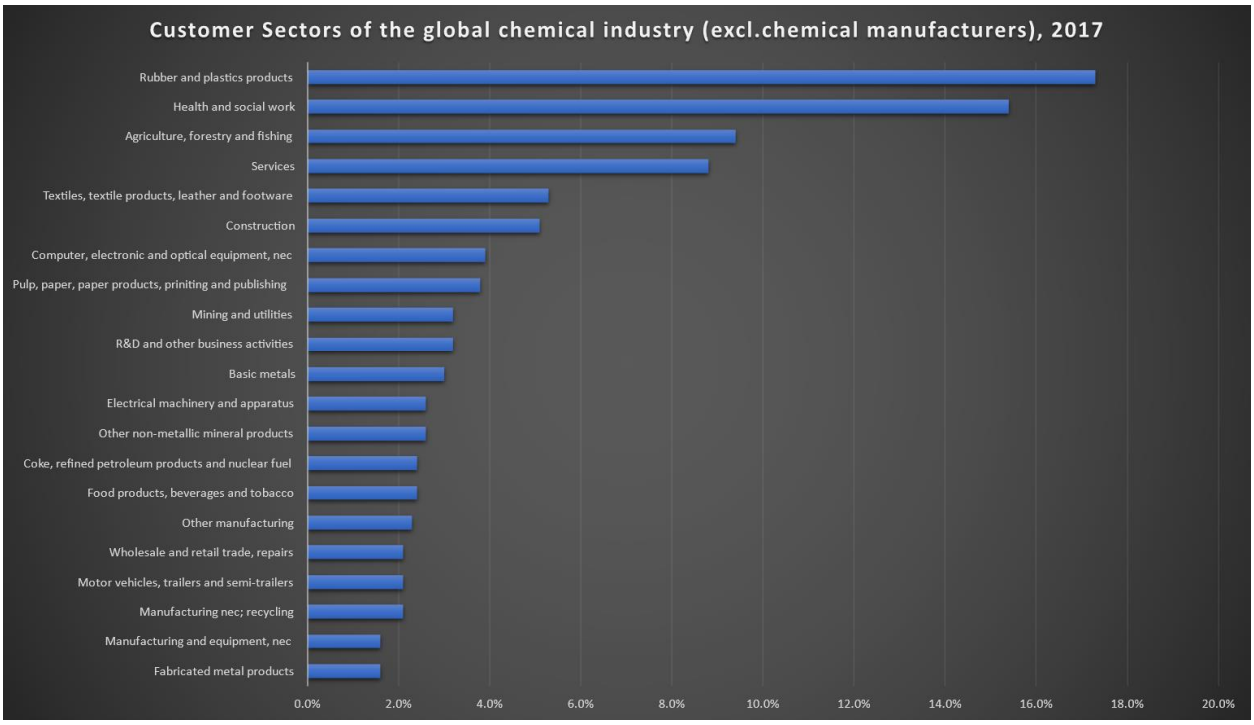
687. The economic contribution of the chemicals sector is equivalent to seven percent of the world's GDP that year (roughly equivalent to the combined GDP of India, Brazil and Mexico), while its employment contribution was is as large as the population of Mexico." The report further shows that Asia Pacific has the largest chemical industry by GDP and is twice as large as the next largest region, which is Europe. North America, Africa and the Middle East and Latin America follow.

688. The chemical industry touches the life of every person on the planet, through the products we use, the clothing we wear, the food and water we consume and the air we breathe. The majority of chemicals, when used responsibly, are beneficial for human development and are used in a wide range of sectors as illustrated below in figure 24.

---

462 Stockholm Convention on Persistent Organic Pollutants
463 Minamata Convention on Mercury
464 Instrument for the Establishment of the Restructured Global Environment Facility, 2019
465 In eligible countries with economies in transition
466 Global Chemicals Outlook II - From Legacies to Innovative Solutions: Implementing the 2030 Agenda for Sustainable Development
467 The Global Chemical Industry: Catalyzing Growth and Addressing Our World's Sustainability Challenges, Oxford Economics, 2019

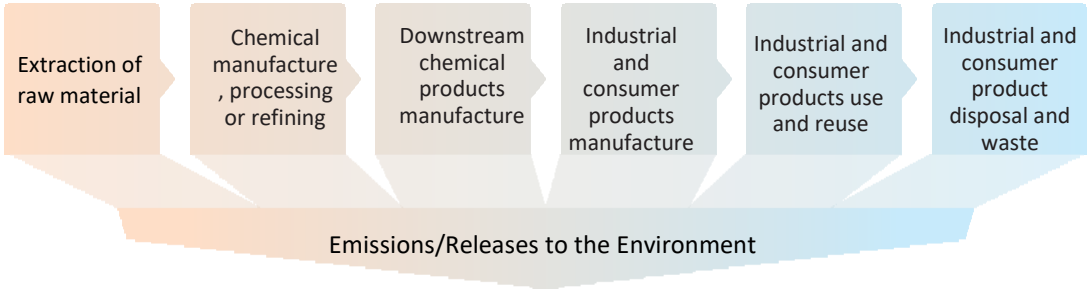
Figure 24: Customer Sector of the Global Chemical Industry[468]



Impact of chemicals on human and ecosystem health:

689. Throughout the supply chain of the chemicals industry there are releases to the environment as seen in Figure 25.

Figure 25. The value chain of the chemical industry, with emissions/releases to the environment[469]



[468] The Global Chemical Industry: Catalyzing Growth and Addressing Our World's Sustainability Challenges, Oxford Economics, 2019, Figure 6

[469] Source – Figure 5.1, Pg., 93, Global Chemicals Outlook II - From Legacies to Innovative Solutions: Implementing the 2030 Agenda for Sustainable Development

690. The UNEP GCO II concludes that growth in the industry is driven by global megatrends and by chemical intensive industry sectors including fashion, construction, agriculture and electronics. The report further concludes that hazardous chemicals and other pollutants such as plastics and pharmaceutical pollutants continue to be released into the global environment in large quantities.

691. The Dasgupta review[470] indicates that "Pharmaceuticals such as antibiotics and fashion products such as cosmetics contaminate the soils and water bodies." The review also points out that the use of harmful chemicals, particularly agriculture has severe impacts on biodiversity as the chemicals not only harm pollinators but also reduce soil biodiversity and disrupt biological processes occurring in soil. Further the Stockholm Convention and Minamata Convention in their preamble highlights the harm to human health caused by the chemicals covered by them.

692. Extensive studies, including several recent studies[471,472,473] and the need to negotiate the chemicals MEAs have confirmed the adverse impacts of harmful chemicals including pesticides, endocrine disrupting chemicals, mercury and other chemicals on ecosystem health and on human health.

693. The Stockholm Convention initially listed twelve chemicals that had documented evidence, including the harmful impacts of a group of persistent made-man chemicals on wildlife[474]. Subsequent studies have confirmed links to adverse impacts on human health including chronic health impacts[475]. The Stockholm Convention has since added an additional eighteen chemicals with several[476] under consideration for future listing, based on the research and scientific studies which continue today. Of the recently listed chemicals it should be noted that the listing of PFOS for example is not the listing of a single chemical but of a group of chemicals that number over one thousand distinct chemicals or formulations. The list of banned

[470] Dasgupta, P. (2021), The Economics of Biodiversity: The Dasgupta Review. (London: HM Treasury)
[471] Valery E. Forbes, Steve Railsback, Chiara Accolla, Bjorn Birnir, Randall J.F. Bruins, Virginie Ducrot, Nika Galic, Kristina Garber, Bret C. Harvey, Henriette I. Jager, Andrew Kanarek, Robert Pastorok, Richard Rebarber, Pernille Thorbek, Chris J. Salice, Predicting impacts of chemicals from organisms to ecosystem service delivery: A case study of endocrine disruptor effects on trout, Science of The Total Environment, Volume 649, 2019, Pages 949-959
[472] Ann M. Vuong, Kimberly Yolton, Changchun Xie, Kim N. Dietrich, Joseph M. Braun, Glenys M. Webster, Antonia M. Calafat, Bruce P. Lanphear, Aimin Chen, Prenatal and childhood exposure to poly- and perfluoroalkyl substances (PFAS) and cognitive development in children at age 8 years, Environmental Research, Volume 172, 2019, Pages 242-248
[473] Ito HC, Shiraishi H, Nakagawa M, Takamura N (2020) Combined impact of pesticides and other environmental stressors on animal diversity in irrigation ponds.
[474] Aaron T. Fisk, Cynthia A. de Wit, Mark Wayland, Zou Zou Kuzyk, Neil Burgess, Robert Letcher, Birgit Braune, Ross Norstrom, Susan Polischuk Blum, Courtney Sandau, Elisabeth Lie, Hans Jørgen S. Larsen, Janneche Utne Skaare, Derek C.G. Muir, An assessment of the toxicological significance of anthropogenic contaminants in Canadian arctic wildlife, Science of The Total Environment, Volumes 351–352, 2005, Pages 57-93
[475] Preambular text of the Stockholm Convention on Persistent Organic Pollutants
[476] Chemicals proposed for listing by the Stockholm Convention

chemicals is likely to continue to increase as scientific studies shed new light on impacts from chemicals on human health and the environment.

694. In the risk profiles presented for chemicals listed by the Stockholm Convention, there is one prevailing factor; these chemicals have significant impacts to ecosystem and species health and as such threaten and can undermine efforts to preserve nature. In addition, they are creating an increasing chronic health issue in humans. Exposure to these chemicals can be traced to prenatal and neonatal exposure from contaminated breast milk. Such early and subsequent prolonged chronic exposure can significantly impact the health and productivity of all modern humans which will ultimately have implications to economic development. Chronic exposure can result in a reduction in cognitive function, will de facto result in less productive people and will add an economic burden caused by chronic disease, lower life expectancy and increased morbidity.

695. Taken as a whole, harmful chemicals controlled by the chemicals Conventions and those of global concern create an economic and environmental burden. The UNEP Global Chemicals Outlook II indicates that the benefits of action to minimize adverse impacts have been estimated in the high tens of billions of United States dollars annually and the World Health Organization estimated the burden of disease from selected chemicals at 1.6 million lives in 2016 (this is likely to be an underestimate according to the report). Further to this, the Stockholm Convention's last needs assessment in 2017[477] estimated that 5.2 billion was needed in the period 2018 -2022 to meet the needs of developing country Parties, and the early findings of the 2022-2026 assessment suggest that similar amounts will be required.

696. While previous GEF strategies have made significant progress in addressing chemical pollution, most recently noted in the effectiveness evaluation decision at the eighth COP of the Stockholm Convention[478], several gaps need to be addressed as a matter of priority if the upward trend of harmful chemical pollution is to be reversed to ensure a healthy people and planet including: legislation and technical capacity in developing countries, improving access to knowledge, science and technology, the need for new and innovative financing, lack of awareness of sustainable solutions, lack of consumer demand for sustainable and green solutions, and lack of market penetration of the introduction of sustainable supply chain management.

Role of the Multilateral Environmental Agreements in Addressing Chemicals Pollution

697. The chemicals controlled by the multilateral environmental agreements require global cooperation. To support implementation these conventions have financial mechanisms which are

[477] UNEP/POPS/COP.8/INF/32 – Report on the assessment of funding needs of Parties that are developing countries or countries with economies in transition to implement the Stockholm Convention for the period
[478] SC-8/18: Effectiveness evaluation of the Stockholm Convention

set up to "support developing country Parties and Parties with economies in transition in implementing their obligations."

698. The GEF operates under the guidance of, and is accountable to, the Conference of the Parties (COP) of the Minamata Convention on Mercury[479] and functions under the authority, as appropriate, and guidance of and is accountable to the Conference of the Parties of the Stockholm Convention on Persistent Organic Pollutants[480].

699. Each COP provides guidance on overall strategies, policy, program priorities and eligibility for access to, and utilization of, financial resources. This is managed in accordance with the respective memorandum of understanding between the GEF Council and the Conference of the Parties of the Stockholm Convention[481] and the Minamata Convention[482]. The Minamata Convention additionally provides guidance on an indicative list of categories of activities that could receive support from the GEF Trust Fund, which it did at COP 1[483] in September 2017.

700. In regard to programming, both Conventions have provided guidance on priority areas which primarily refer to legally binding obligations and enabling activities.

701. The Stockholm Convention has provided initial guidance at COP 1 and updated guidance to the GEF since then at each COP based on the findings of the quadrennial review of the GEF and the needs assessment. Guidance on programming priorities include inter alia:

- reiterate ongoing relevant guidance such as prioritization of meeting the 2025 and 2028 deadlines for PCB,
- phase out and elimination of chemicals listed in Annex A of the Convention,
- management and where possible phase out and elimination of chemicals listed in Annex B of the Convention and,
- reduction and as far as possible elimination of chemicals listed under Annex C of the Convention,
- Support legal and regulatory frameworks,
- Support of updating of national implementation plans.

[479] Article 13, Para 7, Minamata Convention on Mercury
[480] Article 13, Para 6, Stockholm Convention on Persistent Organic Pollutants
[481] SC-1/11: Memorandum of understanding between the Conference of the Parties of the Stockholm Convention and the Council of the Global Environment Facility
[482] Memorandum of understanding between the Conference of the Parties of the Minamata Convention and the Council of the Global Environment Facility
[483] Decision MC-1/5 and annex to Decision MC-1/5

702. The Stockholm Convention has also provided guidance of a policy nature including engagement of regional centers of the Convention in programming, increase in private sector engagement in the implementation of the Convention and facilitate synergy among the chemicals and waste Conventions and with other focal areas and impact programs of the GEF.

703. The Minamata Convention has provided guidance that prioritizes activities for funding and a list of indicative activities to be funded which is overall guided by paragraph 8 of Article 13 of the Minamata Convention which directs the GEF to "take into account the potential mercury reductions of a proposed activity relative to its costs."

704. In addition to the legally binding chemicals conventions, the International Conference on Chemicals Management (ICCM) has over four meetings requested the GEF to include elements of SAICM into GEF programming which has facilitated early action on areas such as e-waste, plastics, chemicals of concern including pesticides, pharmaceuticals and chemicals from other sectors.

705. While the GEF does not receive guidance from the Montreal Protocol, through a memorandum of understanding between the respective Secretariats of the GEF and the Multilateral Fund for the Implementation of the Montreal Protocol, the GEF follows the policy and programming priorities of the Executive Committee of the Multilateral Fund Secretariat.

GEF-8 Chemicals and Waste Focal Area Programming Strategy

706. As noted in the "Report on the Seventh Replenishment of the GEF Trust Fund[484] in the chemicals and waste strategy paragraphs 213 – 218, there is a need to shift from a chemical by chemical-based approach to a sector-based approach. The GEF 7 strategy has yielded significant advances in the work of the focal area which has: facilitated holistic approaches to managing chemicals and waste in SIDS and LDCs, started addressing chemicals in major supply chains including textiles, advancing engagement on the gold supply chain and plastics and brought in significant engagement of the private sector into supporting implementation of the Conventions, for example the ISLANDS program, the GOLD+ program and the Africa LDC project.

707. GEF 8 will be structured along four program areas. This builds on the experience from GEF 7 and prior focal area strategies and guidance on programming priorities from the COPs of the Stockholm Convention, the Minamata Convention and the International Conference on Chemicals Management. It also builds on the growing and converging understanding that supply chains and mega trends are the primary drivers of chemical pollution which have severe consequences for human and planetary health as highlighted in the recommendations from the UNEP Global Chemicals Outlook II and the Dasgupta review.

[484] GEF/A.6/05/Rev.01 - Report on the Seventh Replenishment of the GEF Trust Fund, 2018

708. Programs 1 – 3 below apply to the Stockholm Convention, the Minamata Convention, relevant objectives for SAICM and the Montreal Protocol.

709. In programming resources to address chemicals and waste priorities, the following principles, in no intentional sequence, will be used in determining the choice of projects in the focal area:

- Potential to generate multiple global environmental benefits and socioeconomic benefits including facilitating equal access of women and men to financial services and productive assets to boost their livelihoods, e.g., supporting income generating activities for women-owned businesses working in the management of chemicals and waste.

- Facilitates women's participation and decision-making opportunities.

- Facilitates gender sensitive awareness raising and communication.

- Cost Effectiveness - the potential chemicals reductions of a proposed activity relative to its costs will be a major factor in consideration of funding.

- Sustainability – all projects should at a minimum incorporate a pathway to ensure sustainability of the activities as well as contribute to sustained sound management of chemicals and waste. In this regard the proposals will need to demonstrate how the interventions will change the behavior of the private and public sector to ensure sustainability of the intervention.

- Innovation – Projects should seek to develop and scale locally developed technologies and practices particularly in the context of the LDCs and SIDS[485] including in the design of financial mechanisms at the sub-national, national and regional levels.

- Private Sector Engagement – Projects should seek to create or improve the enabling environments in which the private sector can engage to reduce the use of harmful chemicals and to prevent the emission of harmful waste.

- Programs/Programs that promote/lead to Resource Efficiency and sustainable consumption and production approaches, like circular economy or sustainable material management.

[485] The promotion of innovation in SIDS is highlighted by the recent SIDS Evaluation by the GEF's Independent Evaluation Office https://www.thegef.org/sites/default/files/council-meeting-documents/EN_GEF.ME_C57_02_IEO_SCCE_SIDS_Dec_2019_F.pdf

- Prioritized in National Implementation Plans, Minamata Initial Assessments, and ASGM National Action Plans in respect of the foucs of the project/program.

- Builds on or uses existing networks, regional, national and sub-national institutions including regional centers set up under the chemicals and waste conventions; and

- Supports the objectives of the Integrated Programs and of other Focal Area strategies.

Objective 1: Creation, strengthening and supporting the enabling environment to transform the manufacture, use and sound management of chemicals and to eliminate waste and chemical pollution.

710. Work under this objective will support the development, strengthening of the enabling conditions and environment for the phase out of harmful chemicals and waste. The work in this objective will also support the elimination of existing chemicals and waste in the environment and put in place the policy, regulatory environment and institutional capacity to prevent future buildup of chemicals and waste, including through the development and implementation of financial instruments and mechanisms at nation level. In order to achieve this, countries will be supported to develop legislation and policies, based on a review and assessment of existing policy/legislation. These reviews will allow deregulating or amend policies and legislation that do not foster a shift towards elimination of harmful chemicals and waste and waste streams containing or that can emit harmful chemicals as a result of mismanagement.

711. Activities can include policy, legislation and capacity and institutional strengthening of the public sector, private sector, CSOs and others to facilitate activities including, but not limited to:

- Investments to eliminate harmful chemicals from both the public and private sector,

- Access to, and transparency of chemical information in products and materials.

- Reverse logistics and supply chains to enable recovery of materials and products for reuse, thereby preventing them from building up in the environment.

- Regenerative design of products and materials, which will facilitate removal of harmful chemicals from supply chains of materials and products and facilitate more closed loop and circular supply chains.

- Green and sustainable approaches, practices and safer alternatives to harmful chemicals.

- Green approaches to managing waste that contains harmful chemicals, or can emit harmful chemicals if improperly managed, including supporting enterprises to do this responsibly.

- Green procurement to facilitate elimination of products and materials that contain or can contribute to the emission of harmful chemicals and a build-up of material that contains harmful chemicals,

- Participation and incentivization of women in businesses that work in management of chemicals and waste.

- Support of financial mechanisms and instruments for innovation in clean and regenerative design of products and materials, particularly those that are developed using IPLC knowledge.

- Support to develop and implement financial instruments and mechanisms at national level to allow for access to finance for business to sustain and scale project and program results.

- Policy, legislation and technical capacity to manage products, materials and chemicals containing harmful chemicals at the end of life.

- Enabling activities under the Stockholm Convention and Minamata Convention including, national implementation plans and national implementation plan updates, national action plans for the artisanal and small-scale gold mining and Minamata Initial Assessments[486]

- Global Monitoring Plans as, and when guided by, the COPs of the Stockholm Convention and Minamata Conventions.

Objective 2: Prevention of future buildup of harmful chemicals and waste in the environment

712. Under this objective investment will be made to eliminate harmful chemicals in use and to safeguard against future regrettable alternatives. Work under this objective will seek as far as possible to leapfrog to green/sustainable alternatives to harmful chemicals, use regenerative

[486] The 44th GEF Council in June 2013[486] "authorized the use of up to $10 million for the funding of an early action pre-ratification program for the Minamata Convention to be programed during the remainder of GEF-5, upon request by eligible signatory countries. Requested the GEF Secretariat to develop initial guidelines consistent with the final resolutions of the diplomatic Conference for enabling activities and pre-ratification projects, in consultation with the interim Secretariat of the Minamata Convention, and present this as an information document at the 45th Council Meeting." These guidelines[486] result in the creation of an additional enabling activity for the Minamata Convention that are eligible to GEF funding and has been included in the eligible activities provided at COP 1 of the Minamata Convention

design of products and materials that both eliminate the use harmful chemicals, and reduce/ eliminate as far as possible the emissions of harmful chemicals to the environment. This will be achieved by supporting changes in manufacturing, while recognizing that many chemicals will still be in use and in commerce and will require sound management of a traditional, regulatory nature.

713. This area of work will endeavor to support an increase in the market share of industry and enterprises that adopt sustainable and regenerative supply chains. The following priorities will be supported:

- Introduction and use of best available techniques and best environmental practices to minimize and ultimately eliminate releases of unintentionally produced POPs and mercury from major source categories included in the Stockholm and Minamata Conventions.

- Reduction and elimination of mercury from the artisanal and small-scale gold mining sector.

- Elimination of primary mercury mining and associated trade, along with controls on use of mercury from primary mining.

- Phase out and eventual elimination of mercury or mercury compounds used in manufacturing processes contained in Annex B of the Minamata Convention.

- Elimination of the use of mercury and POPs in products (Including brominated flame retardants, PFOS, PFOA, PFHxS and short chain paraffins) and in sectors that use and emit these chemicals as well as the use of mercury in products (as specified in Annex A of the Minamata Convention) by phasing out manufacturing of the pure chemicals and the introduction of alternatives in the products with a preference for non-toxic chemicals or non-chemical substitutions.

- Phase out of substances controlled by the Montreal Protocol for countries with economies in transition.

- Management of chemicals and issues of concern that require global and coordinated approaches.

- Improvement of environmental profiles of supply chains.

Objective 3: Elimination of harmful chemicals and waste containing or that can emit harmful chemicals from the environment.

714. Currently there are stockpiles of waste/obsolete chemicals and products and materials that contain POPs, chemicals of concern, HCFCs and HFC and mercury including buildings, electronics, automobiles and other consumer and industrial products. Additionally, materials, buildings, products among others that are in use today will become waste in the future and can be therefore considered as being stored in commodities that are currently in use.

715. There are limited options for materials already in landfills, however there are opportunities to implement environmentally sound management technologies and techniques for chemicals that exist in products and materials in a wide range of sectors.

716. Work under this objective will support implementation of environmentally sound management of stockpiles of waste/obsolete chemicals and products and material that contain or can emit POPs, chemicals of concern, HCFCs and HFC and mercury.

717. The following will be supported inter alia:

- Elimination of the use of polychlorinated biphenyls (PCBs) in equipment by 2025.
- Environmentally sound waste management/disposal of mercury/mercury containing waste or persistent organic pollutants including liquids containing PCBs and equipment contaminated with PCBs having a PCB content above 0.005%, in accordance with paragraph 1 of Article 6 and part II of Annex A of the Convention, as soon as possible and no later than 2028; and
- Prevention of waste/products containing persistent organic pollutants or mercury from entering material recovery supply chains.
- Non-combustion, including green technologies to disposal of materials and products containing POPs, mercury and chemicals of concern.

Contributions of Integrated Programs to Chemicals and Waste Outcomes

718. With little exception the majority of the chemicals listed by the Stockholm Convention and Minamata Convention are used in, or emitted from one or more supply chains, including fashion, particularly textiles, electronics, plastics (certain classes), building materials and in major economic sectors including tourism, health care, industrial production and manufacturing, mining and agriculture. In this regard the chemicals and waste focal area will accrue global environmental benefits and positive outcomes from the following Integrated Programs:

<u>Elimination of Harmful Chemicals from Supply Chains.</u>

719. In this IP, the elimination of chemicals pollution from the supply chains of fashion and construction will significantly reduce POPs, mercury and chemicals of concern.

720. The chemicals industry and the sectors that use chemicals include the largest global companies with extensive reach into almost every aspect of our lives. As indicated earlier, the size of the chemicals sector in GEF recipient regions is larger than the non-recipient regions. The chemicals and waste strategy specifically will need to build on the major initiatives in the front-runner enterprises that are seeking to build sustainable and green supply chains as well as partner with private sector entities engaged in major chemical use sectors including textiles, construction and electronics in addition to sectors that contribute significantly to waste such as tourism.

721. As part of the overall strategy to sufficiently cover such a large and diverse industry, the IP will focus its private sector engagement through multi-stakeholder platforms that can address the concerns of the market place, investors and policy makers at the scale required to support systemic transformation. Such platforms include the GEF Gold initiative, the Sustainable Tire Industry Project, the renewable bioeconomy platforms of the WBCSD and the WEF, and GEF's own opportunities to catalyze or consolidate platforms to better address the market place opportunities for better chemicals and waste outcomes.

722. The focal area will also help identify, incubate and accelerate businesses in developing countries that contribute to each of the programs 1-3, particularly those that are led by women and other underrepresented communities including IPLCs.

Circular Solutions to Plastic Pollution

723. Recovery of materials to re-enter supply and value chains cannot be done sustainably if harmful POPs are contained in them. Certain plastics, particularly those used in the electronics sector and synthetic fibers used in textiles can contain POPs, and for these materials to achieve true circularity the plastics have to be designed along regenerative principles and have in place reverse logistics to enable recovery of materials. This IP can achieve some of the outcomes for the chemicals and waste focal area in selected plastic value chains as defined in the integrated program on Elimination of Chemical Pollution and Environmental Degradation in Supply Chains of Global Significance

Sustainable Cities

724. The infrastructure of cities uses significant amounts of chemicals and generates waste both during the life of city infrastructure and processes, and also at the end of life of products, equipment, materials and the buildings and structures themselves. If the sustainable cities IP supports development of building and material standards that require that inputs do not include harmful chemicals and require green molecules or other means to replace harmful chemicals, this IP can contribute to the outcomes of the chemicals and wastes focal area. Also, if municipal and urban industrial waste management strategies under the sustainable cities IP include reduction of hazardous chemicals and waste as co-benefits, it can complement chemicals and waste focal area

objectives. These two entry points for chemicals and waste reduction will likely be part of the integrated and circular economy approach of the Sustainable Cities IPs.

Amazon, Congo, and Critical Forest Biomes

725. Compared to other land use such as agriculture, pasture, and logging, mining (and especially artisanal and small-scale gold mining) was often considered a small-scale cause of deforestation. Recent research in Amazon and Congo show that the effects of entire mining operations are much broader than the areas cleared for the pit with a cascade of effects responsible for deforestation and forest degradation: creation of transport infrastructures, demand for meat and food, new access to farmers and hunters, in addition to the eventual use of mercury to extract gold from the ore. In these biomes, stopping gold mining in primary forests, particularly those that use mercury, or finding alternative livelihoods for gold miners, will have benefits to the Minamata Convention. Any activity in this direction will need to be articulated to the national action plan for the artisanal and small-scale gold mining sector of the participating countries.

Green and Blue Islands

726. The use of chemicals in key economic sectors in SIDS has had impacts on key ecosystems. Through the SIDS-Nature-based Solutions program, the tourism, urban and food sectors (agriculture and fisheries) will be targeted. Under the food sector the program will seek to address integrated upstream challenges and implement downstream interventions to reduce agrochemical use on agricultural land and utilize Nature-based Solutions to curb sources of land-based harmful chemicals. This will deliver land-based benefits related to resilience of ecosystems dependent on soil health as well as reduce levels of pollution in marine ecosystems.

Food Systems

727. The use of chemicals in food systems, particularly in agriculture in the form of pesticides, has severe impacts on the soil biodiversity which greatly reduces productivity in food systems and . Phase out of harmful pesticides and a shift to non-chemical approaches such as restorative agriculture will both eliminate harmful chemicals and improve productivity per hectare of food systems so that LDN targets can be achieved.

Role of the private sector in supporting Chemicals and Waste Outcomes

728. The chemicals industry and the sectors that use chemicals include the largest global companies with extensive reach into almost every aspect of our lives. As indicated earlier, the size of the chemicals sector in GEF recipient regions is larger than the non-recipient regions. The chemicals and waste strategy specifically will need to build on the major initiatives in the front-runner enterprises that are seeking to build sustainable and green supply chains as well as

partner with private sector entities engaged in major chemical use sectors including textiles, construction and electronics in addition to sectors that contribute significantly to waste such as tourism.

729. As part of the overall strategy to sufficiently cover such a large and diverse industry, the IP will focus its private sector engagement through multi-stakeholder platforms that can address the goals of the Conventions, concerns of the market place, investor mandates and policy makers at the scale required to support systemic transformation. Such platforms can include the GEF Gold initiative, the Sustainable Tire Industry Project, the renewable bioeconomy platforms of the WBCSD and the WEF, and GEF's own opportunities to catalyze or consolidate platforms to better address the market place opportunities for better chemicals and waste outcomes.

730. The 2020 GEF Private Sector Engagement strategy further outlines the modalities of the engagement for the private sector to support the delivery of GEBs in the Chemicals and Waste focal area.

731. The focal area will also help identify, incubate and accelerate businesses in developing countries that contribute to each of the programs 1-3, particularly those that are led by women and other underrepresented communities including IPLCs.

Contributions of the Chemicals and Waste Strategy to the Blue and Green Recovery

732. Gaps in several areas that prevent transformation of the use and environmentally sound management of chemicals and waste, including legislation and capacity in developing countries, the need for new and innovative financing, lack of awareness of sustainable solutions and lack of consumer demand for sustainable and green solutions, and lack of market penetration of the introduction of sustainable supply chain management, need to be addressed if the upward trend of increasing levels of harmful chemical pollution is to be reversed to ensure a healthy people and planet.

733. As part of the work of the focal area, creation of jobs in green chemicals and alternatives, creation and/or adaptation of businesses to manage chemicals and materials at the end of life and in safe recovery of materials will contribute to a green recovery. By shifting to low or non-chemicals systems, the pollution of land and water can begin to decline which will in part, over time, facilitate the increased resilience of ecosystems and species and the improved productivity of humans by a reduction of the disease burden caused by chemicals pollution.

VI. GLOBAL PROGRAMS

A. Mobilizing the Financial Sector for Environmental Goals through Blended Finance (Non-Grant Instruments)

734. To rapidly scale up investment in the environment and meet the unfolding environmental crises and tipping points, global leaders, the private sector, the financial sector, and CSOs are converging in their calls for action. The financial sector is key to effectively redirect financial flows from environmentally harmful investments to environmentally positive actions. Recent trends in the financial industry are encouraging: ESG investment soared in the last two years and according to research by PwC, by 2025 ESG European funds could experience a more than threefold jump reaching EUR 7.6 trillion in assets (USD 9.2 trillion). [487] Green bonds are proliferating and reached a new record in 2020 with more than USD 300 billion in new issuances. Nevertheless, most of the financing remains in the "green" classification and focuses on climate change mitigation investments.

735. The interest in investing in nature is also growing. Several natural capital multi-million funds were launched in 2020: the HSBC-Pollination USD 1 billion natural capital fund[488] or Credit Suisse's Ocean Engagement Fund[489] are some examples. In the report Unearthing Investor Action on Biodiversity (2021) by Credit Suisse, IUCN, Zoological Society of London (ZSL), and the Nature Conservancy (TNC), 55% of investors surveyed believe that biodiversity is a major issue, which needs to be addressed within the next two years. Despite these positive trends, attracting private capital and natural resources management into emerging sectors like biodiversity requires breaking down investment barriers and originating bankable projects that create sustainable and inclusive opportunities for investors, both private and public. The most important barriers are consistently identified as the lack of cash flows generated by investments in natural capital, the lack of liquidity (i.e., limited exit options for investments) as well as the need for financial mechanisms to aggregate multiple small sized projects. Additionally, investors continually seek for a reduction in complexity and streamlining of structures to reduce preparation time.Companies' dependence on natural capital is now a factor in the investment decisions of many mainstream asset owners, such as pension funds and insurance companies, as well as specialist "impact" investors. In the TNC survey, the biggest single factor cited by investors for driving them to address natural capital is "resilience against climate change". [490] However, the gap in financing nature is still large.

---

[487] Financial Times. (2020). ESG funds forecast to outnumber conventional funds by 2025. https://www.ft.com/content/5cd6e923-81e0-4557-8cff-a02fb5e01d42

[488] IISD. (2020). Natural Capital: HSBC and Pollination create large investment venture. https://www.iisd.org/sustainable-recovery/news/natural-capital-hsbc-and-pollination-create-large-investment-venture/

[489] Credit Suisse. (2020). Shareholder engagement for ocean sustainability. https://www.credit-suisse.com/about-us-news/en/articles/news-and-expertise/shareholder-engagement-for-ocean-sustainability-202009.html.

[490] Ibid.

736. Disclosure, metrics, and measurement remain key challenges for investment in the environment at scale. The GEF participation in the working group for the creation of the Taskforce for Nature-related Financial Disclosures (TNFD) supports transparent, harmonized disclosure of nature-related risks and impacts by financial institutions as a necessary first step towards redirecting financial flows to environmental positive actions. More support to the standardization of metrics and financial disclosure requirements will be key to future growth.

Blended Finance is Growing But Not Fast Enough

737. Blended Finance is a structuring approach that allows organizations with different objectives to invest alongside each other while achieving their own objectives: financial return, environmental/social impact, or a blend of both. The different types of financing "blend" to achieve attractive financial terms for private sector investment. Blended finance is therefore an effective tool for resource mobilization since it offers a variety of financial structures in which different investors with different investment priorities can participate.[491]

738. According to a recent report from IFC, the co-financing ratio achieved in their Blended Finance portfolio is very high and varies from 1:6 and 1:30 on average.[492] In line with these findings, the GEF NGI co-financing ratio is high, more than doubling the average co-financing ratio of the GEF portfolio and ensuring higher participation of private sector co-financing -which is more than three times the average private sector co-financing ratio in general GEF grant programs/projects in GEF-6 and GEF-7.

739. GEF and its partner Agencies were among the first international financial institutions (IFIs) to pioneer Blended Finance models for climate change mitigation, validating numerous business models still in use today; the blending of concessional finance from multiple sources helped achieve risk/return profiles that were acceptable for private investors and created a track record of "investable" clean energy and energy efficiency technologies.[493] The Blended Finance structures that helped build these track records in climate change investable projects should be tested in areas beyond large-scale climate change projects, most precisely in frontier areas where financing needs are still unmet including agriculture: most precisely in Life below Water, (SDG 14), and Life on Land (SDG 15).[494]

[491] Convergence. (2020). Blended Finance. https://www.convergence.finance/blended-finance
[492] IFC. (2021). Using Blended Concessional Finance to invest in Challenging Markets. https://www.ifc.org/wps/wcm/connect/publications_ext_content/ifc_external_publication_site/publications_listing_page/using+blended+concessional+finance+to+invest+in+challenging+markets
[493] Meltzer, J. P. (2018). Blending Climate Funds to finance low-carbon, climate resilient infrastructure. https://www.brookings.edu/wp-content/uploads/2018/06/Climate-Finance_Working-Paper.pdf
[494] Convergence. (2020). State of Blended Finance. https://www.convergence.finance/resource/1qEM02yBQxLftPVs4bWmMX/view

740. A recent report on market trends shows that the Blended Finance market has experienced a consistent number of transactions year on year, with 45 launched in 2019.[495] Annual financing has remained consistent, averaging USD 11 billion per year throughout 2014-2019; though, this value has varied because of several large-scale, billion-dollar initiatives.[496] The report shows that climate change mitigation projects in clean and affordable energy (SDG 7) still dominates, while investments in SDG 14 and SDG 15 are less than 1%. With less than 50 Blended Finance transactions annually in these thematic areas, the GEF Blended Finance program, with an average of 4 projects per year, is playing a critical role in blended finance designed for global environmental benefits.[497]

741. Despite the success of Blended Finance from GEF and many other IFIs, Blended Finance is still a small portion of total global investment, demonstrating the complexity of attracting private sector investment. Reflecting a variety of risk factors, LDCs continue to receive the lowest share of private finance mobilized by Blended Finance. Between 2012 and 2018 about USD 13.4 billion was mobilized in LDCs, only 6% of the total. This compares with over USD 84 billion (41%) in upper-middle-income countries and USD 68 billion (33%) in low- and middle-income countries.[498]

742. GEF is well placed to foster innovation in financing structures for Nature-based Solutions and geographies underserved. In the last two GEF cycles, the GEF Non-Grant Pilot (GEF-6) and the GEF Non-Grant Instrument Program (GEF-7) have invested two-thirds of the portfolio in Land Degradation/Biodiversity/ International Waters/Chemicals and Waste focal areas in developing countries. Given the critical need to mobilize the financial sector for environmental goals, and GEF's leadership role in innovating financial structures for nature, GEF's Blended Finance Program should expand significantly in GEF-8 while using lessons learned from prior cycles to enhance impact, streamline processes, and expand private sector investment.

743. Further, the COVID crisis has validated that small, local, green investment creates resilient systems which enhance stewardship, and those investment needs are increasing rapidly. Smallholder farmers and micro, small and medium enterprises (MSMEs) and women-owned enterprises, hit hard by the crisis, are underserved financially and struggle to get investment.

---

[495] Ibid.

[496] Ibid.

[497] A new report describes a broader set of blended finance investments by the Development Finance Institutions. The investments, roughly USD 10 billion in 2019, emphasize conventional infrastructure and banking/finance interventions for which concessional finance is beneficial. A large portion do include climate mitigation goals through the CIF and GCF but blended finance targeted specifically for global environmental benefits represents a small portion of the overall DFI reporting. DFI Working Group on Blended Concessional Finance for Private Sector Projects, Joint Report, December 2020 Update. GEF blended finance investments through the DFIs are included in the report.

[498] OECD/UNCDF. (2020). Blended Finance in LDCs: supporting a resilient post COVID-19 recovery. https://doi.org/10.1787/57620d04-en

744. GEF's STAP recommends a renewed effort in GEF-8 to seek coordinate public and private investment flows, including demonstrating new financing options and the viability of investments, to crowd much greater investment in Global Environmental Benefits (GEBs). STAP recommends GEF seek partners where it can apply its particular integrating leverage between environmental and financial capital systems to greatly magnify total investment across the GEBs.[499] Further, STAP acknowledges the gender aspects of small businesses, encouraging GEF to "foster 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."[500]

GEF-7 Blended Finance Lessons Learned.

745. GEF-7 Programming Directions identified several key priorities for improving the Blended Finance Program[501] which was implemented in the GEF-7 Non-Grant Instrument Program (NGI Program), approved by Council November 2018.[502] Among these, the GEF designed a selection process with multiple calls for proposals with clear selection criteria that has enhanced transparency for the program, a key goal of GEF-7. Through December 2020, the GEF Council has approved 8 projects for USD 110.2 million (out of a total amount of USD 136 M for the NGI Program) with a co-financing of USD 1.5 billion for a co-financing ratio of 1:14.8.

746. The calls for proposals helped the GEF test private investors' appetite in frontier areas; in the four calls for proposals closed during GEF-7, GEF received 41 project proposals for more than USD 606 million - more than four times higher than the available amount in the Blended Finance envelope.

747. GEF's comparative advantages include our reputation for fostering innovation of environmental solutions, our Agencies track record on ESG and financial safeguards, our integrated approaches, our Country-based champions, and our ability to offer flexible terms.

GEF-7 NGI Program Highlights
· The Wildlife Conservation Bond (GEF ID 10330) combines the use of public, private, and philanthropic resources to create a new type of structured bond that pays the coupon if the black Rhino population in two parks of South Africa increases.
· Livelihoods Carbon Fund 3 (LCF3) (GEFID 10497). This project will build an innovative investment model that invests in community-based solutions to restore natural

[499] GEF/STAP/C.59/Inf.07. STAP's Initial Perspective on GEF-8. https://www.thegef.org/council-meeting-documents/staps-initial-perspective-gef-8
[500] Ibid.
[501] GEF/R.7/19. GEF-7. Replenishment Programming Directions. para 413, p. 135. https://www.thegef.org/council-meeting-documents/gef-7-programming-directions
[502] GEF/C.55/12. GEF-7 Non-Grant Instrument Program. http://www.thegef.org/sites/default/files/council-meeting-documents/EN_GEF.C.55.12_NGI.pdf

ecosystems and establishes agroforestry and regenerative agriculture systems in developing countries, with a view of generating high quality, cost-effective certified carbon offsets for climate responsible corporates.
· The GEF-IFC Green Shipping Initiative (GEF ID 10501) will establish a financing platform aiming to accelerate the retrofit of fleets to increase fuel efficiency. This has the potential to transform one of the most carbon intensive industries towards a sustainable, low-carbon future.

748. Lessons learned from GEF's Blended Finance investments include:

- Investment in "frontier" areas has been increasing, from zero in early GEF cycles to about 60% in GEF-6 and GEF-7 which demonstrates increasing interest of investors to integrate environmental areas such as land degradation, international waters, or biodiversity. This integration helps deliver multiple GEBs and combine multiple sources of revenue from the different investments in focal areas, which in turn, helps reduce investment risk for investors by increasing cashflows sources.

- Many projects presented multiple opportunities across GEF trust funds by combining concepts such as land degradation, climate change, resilience, adaptation, and Nature-based Solutions.

- Co-financing for GEF investments more than doubles the average co-financing ratio for the GEF portfolio, and participation of private sector co-financing is more than three times higher than general GEF grant programs/projects in GEF-6 and GEF-7.

- Flexible financial conditions and risk appetite of the GEF proved to be key to attracting compelling projects; this ability to offer the right financial tool in response to geographical and investor needs remains a comparative advantage of the GEF financing versus other climate funds.

- Innovation is most needed for firstofa-kind projects, frontier areas, and applying working models from climate change to other environmental priorities. De-risking continues to be a valuable approach to address frontier investments in LDCs and SIDS, which are underserved by private sector finance. These countries also need support in developing a pipeline of bankable projects and increase investments in MSMEs and women-owned enterprises.[503]

- GEF investment can be beneficial at different stages of a project lifetime; for example, projects benefiting from GEF grant investment or equity investment in early stages may

[503] OECD/UNCDF (2020), Blended Finance in the Least Developed Countries 2020: Supporting a Resilient COVID-19 Recovery, OECD Publishing, Paris, https://doi.org/10.1787/57620d04-en.)

produce a pipeline of bankable projects that can then be funded through follow-on investments from GEF, other IFIs, or commercial investors.[504]

- Financial structures aimed at the aggregation of projects to reach scale through the capital markets may require grant support to cover structuring costs.

- GEF's monitoring measures for GEBs in areas where metrics are far from being standardized (LD, BD, IW, CW) are a critical element for educating and incentivizing private sector partners on the importance of impact measures.

- The standard GEF project cycle and procedures discourage many private sector project developers from applying. Overall, private investment is sensitive to market conditions, more so when seeking to mobilize financial resources from asset owners and financial intermediaries in the post-COVID 19 recovery which requires fast execution and disbursements. GEF approval process for the NGI process seems too long and slow for several project developers.

- More targeted project development can address the need to support women entrepreneurs who have novel ideas but lower access to finance.

- Only a subset of GEF agencies has the financial expertise to design complex financial structures or analyze and manage financial products required in Blended Finance projects.

- Many project developers who need the grant and technical assistance must find other donors for that portion of the project.

- Many projects required "convertible grants" and performance-based grants as a new financial product which indicates expanding the list of financial instruments to include such modality.

Growing Blended Finance for GEF-8

749. During the pandemic, projects in clean energy, sustainable agriculture, forestry, and conservation are getting recognized for support, both from public and private investment since they are aimed at increasing the resilience of economies and societies for the future crisis. However, not all investments in these key areas can generate enough cash flows and financial returns for private investment alone to take place. Blended Finance is a structuring approach that can help address these barriers and create track records of investable projects.

[504] Willdlife Conservation Bond (GEF ID 10330) is a follow-on investment of the GEF Biodiversity project Rhino Impact Investment Project GEF ID 5721.

750. The GEF-8 Blended Finance window should focus on strengthening and streamlining the initiative to better contribute to the transformative themes of GEF-8 in the context of post-pandemic recovery, increase investment in solutions to multiple environmental crises, and solidify non-grant instruments as a tool to expand private sector engagement in all GEF investments.

751. Under the Blended Finance window, the GEF should continue to target investments with the potential to transform industries, create novel financial products, or test innovative solutions that are important to the future of the planet yet are challenged for financing without GEF support. In that sense, the GEF should continue to be at the forefront of investments in nature: biodiversity, land degradation neutrality, sustainable agriculture, and food systems, while integrating resilience, Nature-based Solutions, and adaptation.

752. The Blended Finance global program could also support countries in the funding of thematic platforms or dedicated financial vehicles that invest in projects aiming at generating GEBs. Several countries have tested dedicated platforms for green infrastructure (such as the SDG Indonesia One investment platform) and could use the same investment approach to invest in natural capital.[505] The GEF could also support countries through financing facilities that can help issue sovereign debt linked to nature and/or climate (e.g green sovereign debt relief facility).[506] GEF's NGI could support larger investment vehicles to attract larger investors to invest in Nature-based Solutions. Likewise, if member Countries choose to use non-grant instruments for projects funded under STAR, earnings generated by these investments would be retained in the Country and can be recycled in long-term sustainable mechanisms.

753. One challenge for investments in natural capital is that most externalities are not reflected in current financial systems. Another challenge is the lack of cash flow-positive business models and track records that can help investors assess risk and return of investments. If assets are to be aggregated and combined with other income generating activities (as demonstrated in integrated investments that combine several focal areas), asset ownership and setting up of dedicated vehicles will be essential for cashflow allocation. In these areas, although scalability is highly desirable, innovation with small-sized projects should be a priority. Support for small-sized projects could be achieved through local partners such as NGOs, and MFIs which usually have a mission to support sustainability and are gender inclusive, and also through new technologies such as fintech and crowdfunding. Once business models are validated, replication and scaling can be pursued when sufficient resources are available or through a partnership with other funds.

[505] SDG Indonesia One https://ptsmi.co.id/sdg-indonesia-one/.

[506] Finance for Biodiversity (2021), Greening Sovereign Debt: Building a Nature and Climate Sovereign Bond Facility

Enhancing Impact of GEF Blended Finance

754. To enhance impact, the most important step is to increase the resources allocated to Blended Finance. Expert stakeholders suggest that GEF's resource allocation should increase to USD 500 million to begin the financing request. At this resource level, expected co-financing from private sector investment could reach USD 4-5 billion, replicating the entire GEF-7 replenishment but with private sector funding.

755. A resource envelope of this scale would also allow the GEF to consider one or more individual projects and investment platforms of significant scale (e.g., USD-50-75 million) that will enable projects such as aggregation platforms, securitizations, and other vehicles to mobilize investors through capital markets. Platforms also offer GEF Agencies opportunities for streamlining approval of investments.

756. Prior GEF blended finance has been successful in serving MSMEs through innovative funding mechanisms in areas such as sustainable fishing; agriculture; and biodiversity. As MSMEs continue to be underserved, GEF proposes to identify mechanisms to enroll financial intermediaries such as local Microfinance Institutions (MFIs) as executing partners who can expand services to underserved MSMEs/smallholder farmers on the front lines of environmental change. GEF blended finance investment can be very effective in partnership with local banks, micro finance institutions (MFIs) and public development finance institutions. Working with GEF Agencies, opportunities to expand partnerships with local financial (public and private) institutions, MFIs to address frontier areas and underserved MSMEs and communities will be pursued.

757. Based on GEF-7 feedback, GEF should maintain flexibility in the selection of financial instruments and establish financial terms and conditions on a transaction-by-transaction basis. Convertible and performance-based grants should be added as a category of financial instruments to be used under the Blended Finance Global Program.

758. The combination of grant funding and non-grant instruments in truly "bleeding edge" projects are often requested and could be beneficial for achieving innovation or replication of projects at scale. GEF will work with Agencies to identify multiple options for including technical assistance grants within the Blended Finance program and to cover project structuring costs and technical assistance.

759. Additionally, GEF will explore the use of thematic calls for proposals to attract more proposals in priority areas of investment and look for opportunities in GEF multi-trust fund projects that will deliver expanded private sector engagement for adaptation, Nature-based Solutions, and resilience.

Streamlining

760. The scale of the environmental challenge, and the need for private sector partners to operate at "the speed of business" point to some opportunities for streamlining GEF processes and reducing the amount of time for Blended Finance projects to be reviewed, approved, and implemented. These include:

- Streamline call for proposals to reduce complexity, shortening the time for applications and approval process.
- Working with agencies that have proven technical capacity for sound management of non-grant instruments and seeking to create incentives for agencies to cut the time for CEO endorsement by 50% through streamlining internal agency processes.
- Invite GEF agencies to solicit innovative proposals from novel executing partners, civil society, Microfinance Institutions, local banks, entrepreneurs, and the growing blended finance community.
- Consider increasing number of MSP submissions since they have demonstrated potential for innovation according to the GEF IEO.[507]
- Use the Blended finance Global Program to invest in dedicated financing vehicles established by countries for environmental purposes.
- Enhance awareness and understanding of the GEF Blended Finance program through additional publications and communication efforts, including outreach to institutional investors and the impact investment community.
- Work with the subset of agencies that have the technical capacity, and internal procedures to structure Blended Finance projects for sound management of GEF investments with non-grant instruments.
- Build the capacity of recipient countries to exercise the option, as appropriate, of utilizing portions of their STAR allocations in blended finance structures that have the potential for reflows that in turn can be retained in the country and recycled into on-going project activities.

[507] This speaks to the IEO's recent evaluation on the MSP Modality, which recommended that "The MSP should continue to be primarily used for developing innovative projects". GEF/E/C.59/03, Evaluation of the Role of Medium-Sized Projects in the GEF Partnership, https://www.thegef.org/sites/default/files/council-meeting-documents/EN_GEF.E_C59_03_IEO_MSP_Evaluation_Nov_2020_0.pdf

Contributions to Global Environmental Benefits and MEAs

761. All investments in the GEF's Blended Finance initiative should align with GEF programming directions and the Council-approved Adaptation Strategy, with the expectation that they will deliver against approved performance measures. Achieving adequate levels of GEBs or adaptation benefits constitute key selection criteria for successful project applicants. Applications under all MEAs served by the GEF will be encouraged.

762. The application of GEF's methodologies and monitoring of GEBs is a comparative advantage for GEF and its Agencies within the Blended Finance sector. The majority of investors do not disclose environmental impacts; as many lack the tools to do so. Even among investors aiming to increase ESG investments, the lack of impact measures and appropriate risk models is a barrier. As private sector investors looking to increase investments in the environment and sustainability, they will need these tools to assess risk and benefits, and GEF's proven methodologies can be beneficial.

763. GEF has supported research activities on natural capital accounting, quantification, monitoring, and reporting of environmental benefits including the Science Based Targets initiative (SBTi), TNFD, as well as various initiatives at the national level. This is critical to expanded blended finance for SDG 14 and 15.

764. In GEF-8, the GEF should continue to seek innovative proposals aligned with GEF's priorities in all Integrated Programs and focal areas.

B. Contribution of Local Actions and the GEF Small Grants Programme (SGP) to GEF-8's Ambition

The value of local action

765. Local actions conceived and executed by civil society (CSOs) and community-based organizations (CBOs), have the potential to provide Nature-based Solutions that generate durable positive impacts for nature and climate, while supporting livelihoods and human well-being. As the world faces the devastating consequences that the COVID 19 pandemic has exerted on humans and the economy, the need to engage local stakeholders becomes even more critical, particularly in the efforts to *build back better*. Local actions mobilized and delivered by the GEF Small Grants Programme at the landscape and seascape scale, will play a pivotal role in GEF's contribution to a green and blue recovery and a healthier, more productive and resilient planet.

The Small Grants Programme (SGP)

766. Established in 1992, the GEF Small Grants Programme (SGP) is a unique GEF Corporate Program that provides financing and capacity development to CSOs and CBOs through projects that contribute to global environmental benefits while supporting local sustainable development and livelihoods. One of the main features of the SGP is its ability to function as a demand-driven mechanism, "thereby engendering community/country ownership"[508] and to target the poorest and most vulnerable local populations, who typically lack the technical and institutional capacity to address environmental challenges and access and manage external financial resources. To date, the SGP has financed over 25,000 grants to CSOs and CBOs in 133 developing countries and economies in transition. The 2007 Joint Evaluation of the SGP conducted by the GEF and UNDP Independent Evaluation Offices concluded that the Programme had very high sustainability rate, and contributed to numerous institutional reforms and policy changes in the recipient countries to address global environmental issues.[509] The subsequent 2015 Joint Evaluation concluded that the SGP "continues to support communities with projects that are effective, efficient, and relevant in achieving global environmental benefits while addressing livelihoods and poverty as well as promoting gender equality and empowering women. It also found evidence of strong replication, scaling-up, and mainstreaming of activities."[510] The preliminary findings of the Third Joint Evaluation reaffirm that SGP "grants

[508] Global Environment Facility Independent Evaluation Office (GEF IEO), OPS6 Final Report: The GEF in the Changing Environmental Finance Landscape. Washington, DC: GEF IEO, 2018. (page 94)
[509] Joint Evaluation of the GEF Small Grants Programme, June 2008, GEF and UNDP Independent Evaluation Offices, p. 7
[510] Joint Evaluation of the Small Grants Programme, March 2015, GEF and UNDP Independent Evaluation Offices, Executive Summary p. 24

continue to support projects that have high levels of success in securing global environmental benefits…"[511] .

SGP's ambition for GEF-8

767. Building on the lessons learned from more than 25 years of financing local actions and on the Programme's impressive record of achievements, there is a case to expand the *scale and scope* of the SGP and, along with a renewed level of ambition to mobilize increased financing, potentially help CSOs and CBOs to achieve greater impact and contribute to a healthier planet from the ground-up.

768. The SDGs as well as guidance from the MEAs call for local actions, based on social inclusion and the broader participation of CSOs and IPLC, women, and youth as key actors in delivering tangible results with respect to the global environment and driving sustainable development. To enhance the contributions of local action to the UN Decade on Ecosystem Restoration, SGP would foster partnerships with GEF Agencies and other actors to drive integrated local actions that support countries' commitments to the Paris Agreement, the Post-2020 Global Biodiversity Framework, Land Degradation Neutrality targets, and other relevant global agreements.

769. Hence, in GEF-8, SGP would sharpen its triple approach encompassing greater impact, innovation, and inclusion to promote community investments that identify, nurture, and replicate scalable local solutions to contribute to global environmental benefits. Through these iterative actions, the SGP will also strengthen landscape and seascape-based initiatives aimed at ensuring inclusion of the most vulnerable groups (women, children, youth, IPLCs and persons with disabilities), and reducing inequality and gender disparities.

Proposed Strategic Directions for the SGP in GEF-8

Objective, Principles and Approaches

770. The proposed overall objective of the SGP for GEF-8 is to *contribute to GEF's ambition for a Healthy Planet-Heathy People, through financing and support to local actions that address global environmental issues while promoting sustainable development and improved livelihoods.*

771. In GEF-8, it's proposed that the SGP adopts or strengthens the following principles and approaches:

- *Providing Universal Access:* following the GEF-7 Council decision[512] regarding access to the Programme, SGP would continue to expand its coverage to include

[511] Third Joint GEF-UNDP Small Grants Programme Evaluation, (forthcoming) .
[512] GEF/C.54/05/Rev.01, GEF Small Grants Programme: Implementation Arrangements for GEF-7

eligible and interested countries. At present, there are 19 eligible countries that are not currently part of the Programme.[513]

- *Maximizing funding to grants executed by CSOs and CBOs:* the proportion of financial resources of the SGP directly flowing to civil society and community-based organizations should be defined upfront and approved by the Council, with the goal to maximize the participation of CSO and CBO in project execution.

- *Promoting innovation, scaling up and replication:* based on SGP's ability to finance *proof of concept* projects that introduce and test innovative concepts, tools and methods at the local level -- thereby lowering inherent risks--, the Programme's results have the potential to be replicated at a bigger scale, in collaboration with other GEF projects and partners. Through monitoring and further analysis of the factors that facilitate scaling up, and adaptative management resulting from lessons-learned, the SGP would contribute towards broader adoption and systems change[514].

- *Supporting the most vulnerable-whole society approach,* by prioritizing support to LDCs and SIDS and to local communities and groups who are affected the most by the impacts of environmental degradation and the effects of the COVID19 pandemic, including indigenous peoples, women, youth and persons with disabilities.

- *Enhancing partnerships and multi-stakeholder alliances,* through promoting SGP's synergies with other initiatives that support CSOs and CBOs at the global, regional, and local levels and contributing to other GEF programs and Full-Sized and Medium-Sized projects. SGP can complement GEF's investments and co-financing, by leveraging local action and CSO and CBO engagement for bigger impact.

SGP Strategic Programs for GEF-8

772. During GEF-8, as an overarching strategy, SGP would continue to adopt and strengthen its *Landscape and Seascape Approach* that focuses its programming on globally recognized priority landscapes and seascapes. The Third Joint Evaluation of the SGP has recognized the value of this approach to grantmaking. In GEF-8 SGP would continue to enhance the capacities of decentralized

[513] At the onset of GEF-7, there were 23 eligible countries that were not receiving funds from the SGP, of which only two (Nicaragua and Chile), had ever received SGP funds previously. As of today, SGP is operational in 129 countries, of which 113 countries are supported by the *core* allocation under the SGP Global Programme, and 16 are SGP upgraded country programmes (UCP) financed solely by allocations from the respective countries' STAR. Malaysia is in the process of transitioning to UCP, while Angola, Bangladesh, Eswatini and Gabon joined as new country programmes under the SGP core/ Global Programme in GEF-7. Pakistan and Thailand are UCPs that have not received any STAR funding in GEF7.

[514] " ...successful innovative projects that have benefited from small-scale support through the SGP can then be replicated, or scaled up by government and other donors, who are usually risk averse…." Third Joint GEF-UNDP Small Grants Programme Evaluation. Draft February 2021

Country Programmes to strategically invest in key landscapes and seascapes in alignment with initiatives such as the UN Decade on Ecosystem Restoration.

773. Under the *Landscape and Seascape Approach*, SGP proposes to strengthen, and refine and integrate the following strategic programs and cross-cutting initiatives:

774. *Community-based management of threatened ecosystems and species:* SGP grants would support conservation and sustainable use, including engaging and supporting local CSOs and CBOs in the management of protected areas and corridors, integrated river-basins, and large marine ecosystems, as well as mainstreaming biodiversity in key production sectors[515]. This would include support to territories and areas conserved by indigenous peoples and local communities-(ICCAs) and to CSOs and CBOs in the management and co-management of other private and public protected areas, including ecological and fisheries protection zones.

775. *Sustainable agriculture and fisheries, and food security:* the SGP would continue to support community-driven initiatives working on landscape and community level production systems to enhance the sustainability and productivity of priority socio-ecological production landscapes and seascapes. These initiatives include the application of agroecology and biodiversity friendly principles and practices based on traditional knowledge and agronomic science. SGP would also continue supporting community-based efforts to achieve national and local Land Degradation Neutrality targets.

776. *Low-Carbon Energy Access Co-Benefits:* Building on its experience in supporting affordable clean energy in remote areas and vulnerable communities, SGP would scale-up low-carbon transformation by de-risking private sector investment and supporting innovation and adoption of innovation and adoption of cutting-edge technologies that are relevant to community context, including energy access for health services and digital technologies.

777. *Local to Global Coalitions for Chemicals and Waste Management:* SGP would support actions to benefit local communities in rural and urban areas enduring threats from chemicals and waste either as users or consumers, through innovative, affordable and practical solutions to chemicals and waste management, including plastics and e-waste management, supported by existing multi-stakeholder platforms and partners.

778. *Catalyzing Sustainable Urban Solutions:* SGP would continue to pilot activities to target vulnerable people and communities in the urban context, promoting an integrated management approach through public-private partnerships[516].

[515] Forestry, fisheries and insfrastructure

[516] This would include support towards low-emission and resilient urban development such as waste and chemical management, energy, transport, watershed protection in rural hinterlands through ecosystem services arrangements restoration corridors, and biodiversity conservation.

779. *Micro-financing:* SGP would continue to promote sustainable livelihoods, including through collaboration with local micro-financing entities the creation and support of micro, small and medium enterprises at the local and community level that contribute to sustainable resource use, generate local benefits, and promote innovative and entrepreneurial approaches to environmental degradation. Building on experiences with micro-credit in a number of SGP Country Programmes[517], in addition to the conventional grant modality, appropriate and context-specific opportunities would be explored as a pilot initiative in a limited scale, partnering with existing programs and supporting relevant CSOs and institutions that provide soft loans to small-scale initiatives.

780. *CSO-Government-Private Sector Policy Dialogues:* SGP would support community voices and participation in the global and national strategy development related to global environment and sustainable development issues. During GEF-8, SGP would expand its Dialogue Platforms towards a greater engagement of the private sector to leverage its potential to support sustainability at the local level, and provide opportunities for local communities to engage in policy dialogues with national and local governments.

781. *Capacity Development and knowledge and learning:* SGP would continue to test and ground-truth appropriate community technologies, methods, and approaches, and promote uptake and scale up through further strengthening and improving existing platforms such as the Digital Knowledge Library and South-South Cooperation Platform for knowledge sharing of community innovations. The SGP would also support local and national CSOs in the design of capacity development and Knowledge and Learning (K&L) components of the SGP Country Programmes and would explore opportunities for these CSOs to serve as direct co-executors of those components.

Results

782. In GEF-7, the Programme's indicators were established and its methodology adjusted to monitor, measure and report its contribution in alignment with 5 of the 11 most relevant GEF-7 Core Indicators. In GEF-8, the SGP's monitoring framework and methodology will continue to be aligned to capture and report results within the GEF's Results- Based Framework, with an emphasis on community-based methodologies. In addition, continued refinements would be made to measure other important socio-economic indicators to account for the full scope of SGP's results and impacts on local populations and communities. Finally, a system to monitor lessons-learned, the sustainability of projects and the efficiency and impact of capacity development and K&L activities described in the paragraph above would be established, including the definition and capture of appropriate indicators.

[517] Between 2016-2020, SGP provided grants to CSO and CBO in projects that benefitted from micro-credit schemes (in 13 countries) and revolving funds (in 66 countries).

Long-term Vision, Governance and Modalities of the SGP

783. Following the recommendations of the Third Joint Evaluation of the Programme, during GEF-8 the GEF will take stock of the results and experiences of the past 25 years and will work with partners and stakeholders to define a long-term vision for the SGP.

784. In addition, the SGP would strengthen its governance structure to reflect the corporate nature of the Programme and its character as a decentralized delivery mechanism that serves CSOs and CBOs in multiple countries around the world. The Steering Committee of the SGP, chaired by the GEF Secretariat with representatives of UNDP and the GEF CSO Network, will continue providing strategic directions to the Programme. At the country level, the role of the National Steering Committees will be reinforced to continue serving as a majority non-governmental decision-making body that ensures a transparent and impartial selection of grants to CSOs and CBOs.

785. Finally, regarding considerations on the process of upgrading[518], the GEF Secretariat will take stock of the recommendations of the Second and Third Joint Evaluations and, together with UNDP, will assess the benefits and challenges of upgrading. The objectives and criteria of any upgrading policy would be refined and presented to Council for consideration at the beginning of GEF-8.

[518] In GEF-5 the Council approved an upgrading policy for the SGP, to address the challenges posed by rapid growth and the "need for mature countries to expand and take on greater responsibilities while liberating core funds for new countries to access the Programme"(GEF/C.36/4, Small Grants Programme: Execution Arrangements and Upgrading Policy for GEF-5. October 9, 2009).

C. Contribution of the Country Support Programme (CSP) to GEF-8's ambition

Moving to GEF-8

786. This section illustrates how the Country Support Program plans to sharpen its strategic focus in order to meet the ambitions of countries, with more targeted activities and engagement in select environmental areas. It also shows how the CSP has transformed its delivery modalities to deliver large scale and high impact virtual events, as it contributes to shaping a green and blue recovery. Drawing from this experience and evaluative evidence from an IEO evaluation under finalization, the CSP in GEF-8 will strengthen country capacity further to deliver projects more effectively and timely, targeting better outcomes and positive impact on the environment.

Recent Evolution of CSP in GEF-7

787. Core GEF corporate program. Established in its current format in 2010, the Country Support Programme (CSP) is one of two corporate programs administered by the GEF Secretariat. The goals of the CSP are "(i) to provide flexible support to countries, particularly their Focal Points, to build capacity to work with the GEF Agencies and Secretariat in order to set priorities and to program GEF resources, and (ii) to enhance inclusive dialogue and improve coordination between ministries and stakeholders at the national level and to facilitate input from key non-governmental stakeholders".

788. As GEF's primary outreach vehicle to recipient countries, the CSP has brought together a broad range of stakeholder groups in line with the GEF principles and policies for inclusiveness, transparency and accountability. The key delivery mechanisms of the CSP are stakeholder meetings and events aimed at building capacity for the recipient countries to prepare and implement GEF projects on the ground and to align their project proposals with GEF strategies and policy directions. A dedicated country relations team drives the organization of these meetings, continuously informed by demand and feedback from countries. CSP events are held to prepare the GEF Replenishment process and the GEF Council preparation cycle, with targeted information sharing, updates on GEF policies and coordination among key stakeholders benefitting Operational Focal Points, Convention Focal Points, Agency representatives and representatives from Civil Society Organizations (CSOs) as well as Convention Secretariats. CSP activities have been organized in Expanded Constituency Workshops, Constituency Meetings, National Dialogue meetings, other project and program related workshops, meetings of recipient Council Members and an annual Introduction Seminar. Since 2011, the CSP has organized 320 events with 15,585 participants and has provided support for 75 NPFEs in GEF-5 and GEF-6.

Adapting the CSP Business Model to the Pandemic Context

789. As of March 2021, the Country Support Programme held 97 events in GEF-7. These include 33 events held since the suspension of global travel and the shift to virtual meetings in

March 2020. With COVID-19 unfolding, the CSP has adapted its operating model and facilitated over 20 National Dialogues and Constituency Meetings in virtual mode in South Asia, the Pacific, Latin America and the Caribbean, Central Europe, and Africa; it has held an Introduction Seminar attended by more than 500 members of the Partnership, as well as knowledge and learning activities especially tailored to CSOs. In addition, since COVID hit, the CSP has introduced a new virtual Stakeholder Empowerment Series (SES) promoting South-South cooperation around GEF policies and operational management areas. The series has so far brought together Operational Focal Points, government officials and Civil Society Organizations from every continent to exchange on specific operational experiences.

Empowering Countries With Data on Project Progress

790. Over the past year, the CSP has strengthened its support to countries by fostering greater accountability and ownership of GEF with a new tool: the Country Factsheet, a one-page summary with an overview of progress in utilizing new resources and in the country portfolio of projects under implementation, progress data on STAR utilization, as well as portfolio efficiency measures, co-financing, agency partnerships, SGP resources and LDCF and SCCF resources. Country Factsheets have been introduced in support of bilateral meetings during the Kenya ECW in February 2020 and they have since been rolled out across country and regional events, including for example to inform OFPs in Asia and the Pacific. Country Factsheets and bilateral interactions with countries have marked, in GEF-7, a new direction for engagement between the GEFSEC and recipient countries.

Listening to Stakeholders in GEF-7

791. CSP GEF-7 Survey. In May 2020, the CSP team launched a survey that polled 1300 participants in CSP activities during the GEF-7 period. Survey results show that respondents are overwhelmingly satisfied with the support they receive from CSP activities and how knowledge sharing has impacted their capacities to program new GEF activities. In particular, the CSP is recognized for contributing to building stronger ownership, more inclusive processes, better domestic advisory capacity and improved coordination with Agencies; participants from Europe and Central Asia in particular indicated more than other regions the adoption of good practices in managing results and co-financing, while there was general recognition of the contribution of CSP events to help include better knowledge around project development, GEF programming priorities, policies and guidelines, as well as evaluation.

792. Consultations on the impact of COVID-19. Recent consultations with OFPs from the different regional constituencies have influenced the directions proposed for the GEF-8 CSP. Feedback revealed a strong demand for enhanced technical, organizational and financial support to government teams involved in overseeing GEF portfolios. Recommendations include bringing greater focus to inter-regional knowledge sharing and exchanges, expanding the network by involving private sector among civil society organizations and encouraging or facilitating more

regular collaboration between agencies and OFPs in specific countries. In addition, CSOs have identified the need for targeted capacity development activities to access GEF resources and to effectively participate in the GEF, as well as the need for more facilitated South South exchanges related to Knowledge and Learning in projects and good practices for Stakeholder Engagement.

793. Evaluation of the CSP prepared by the Independent Evaluation Office (IEO). The IEO is conducting an evaluation of the CSP as part of its overall evaluation of GEF-7 policies and programs. The evaluation provides valuable and timely guidance to bring the CSP to scale at a time when it is expanding its reach and adapting its tools to stakeholders demands. Preliminary conclusions emphasize the significant contribution of the CSP to the GEF Partnership, in particular to sharing knowledge with stakeholders and contributing to increasing the capacity of the countries to apply for GEF funding in a strategic and coordinated manner. The evaluation further acknowledges that the CSP indirectly contributes to assisting countries with greater access to GEF resources and it notes how the CSP has positively contributed to country ownership of the GEF process, although results are higher with countries level of income and capacity.

794. The IEO evaluation also provides a range of relevant recommendations and it stresses the timeliness of refocusing the CSP Strategy, aligning it with a commensurate budget and resource envelope; the opportunity of strong support from all stakeholders to organize CSP activities in line with strategy and to take full advantage of available budgetary resources, while further expanding the breadth of stakeholders involved in the planning of CSP activities, inclusiveness and diversity of participants in CSP events across countries, constituencies and events; and to apply a more customized approach to events based on the specific capacity needs of countries and stakeholder groups.

Proposed Strategic Directions for the CSP in GEF-8

795. A new business model. Quickly adapting to the ongoing global pandemic, the CSP has shifted its business model from a region-based, in -person program, to the systematic facilitation of information sharing to ensure continued updating on GEF policies and South-South cooperation and knowledge and learning. National Dialogues and Constituency Meetings continued to be held virtually, while ECWs were temporarily replaced with virtual events that are global in nature but focused on specific technical issues, such as: Updated GEF Operational Guidelines; Art of Knowledge Exchange for CSOs; and Gender and the Environment. Consultations of stakeholders have revealed a strong demand for technical content, improved sharing of partnership knowledge, case studies and lessons learned from experience.

Constraints and Opportunities

796. The ongoing COVID-19 pandemic challenges governments and agencies capacities in their efforts to implement GEF programs; at the same time, it offers an opportunity to bring

sustainable development and Nature's contribution in greater focus in economic and policy decision making. In the new context of GEF-8, the CSP can provide a critical contribution in gathering and networking forces of change within governmental and non-governmental organizations, around GEF-8 main strategic directions. In particular, it can contribute to enhancing existing capacities and promoting policy coherence for sustainable post-COVID recovery models. In the Fall of 2020, the CSP launched an online survey and convened an open forum with all OFPs to gather feedback on operational challenges related to the pandemic. The survey results have enabled the GEF secretariat and GEF Agencies to introduce operational flexibility measures in support of governments and implementing agencies. These were subsequently adopted by the Council. Facilitating supportive relationships among the key partners, the CSP will continue to serve as the main convening vehicle for a sustainable post-COVID recovery, including project beneficiaries, donors, private sector and groups most affected by the crisis.

Objective for GEF-8

797. Building on its evolving business model, the objective of the CSP in GEF-8 will be to build capacities and promote mutual learning across the GEF Partnership, in a broader sense than before, to accompany and serve the implementation of the GEF-8 strategic directions.

798. Ultimately, this means contributing to the GEF's vision of a Healthy Planet-Healthy People, by facilitating South-South cooperation among stakeholders with a tailored set of knowledge sharing programs adapted to the capacity enhancement needs of different stakeholders, including in particular OFPs and CFPs, agency Staff and CSOs.

Principles and Activities

799. Activities will be designed around the core principles of (i) fostering and enhancing knowledge sharing; (ii) delivering strong technical content; (iii) sharing lessons learned and experiences, and (iv) ensuring inclusive participation of all stakeholders. CSP activities will adapt their content to contribute reaching key results: facilitating access to GEF resources to program high quality projects; strengthen country portfolio oversight; and engage countries and stakeholders around environmental themes and policy areas.

800. Delivery modalities of CSP activities will include a mix of virtual and, when possible, face-to-face modules. Meetings with counterparts will be tailored around key thematic areas based on demands from the different stakeholders around specific operational issues (co-financing; operational impact of Covid-19; etc). In addition to its event-centric approach, the CSP will ensure the sharing of knowledge and good practices in a more continuous manner. This will involve leveraging existing tools such as the Good Practice Briefs and making available guidance on policies in an easy-to-digest format on demand.

Governance and Resources

801. The governance of the CSP will remain anchored in the strong coordinating function of the GEF Secretariat, which will continue to operate in full compliance with the requirements of WBG systems and Trust Fund management.

802. Savings accumulated during the pandemic and resulting from efficient resource utilization over previous GEF cycles will immediately support the investment needed to invest in delivering its proposed lines of business including: (1) aiming at directly supporting and building capacity of key stakeholders in areas of GEF programs, policies, and business processes; (2) fostering improved portfolio management and organizational and system support in recipient countries; (3) enhancing country ownership at a time when governments need long-term strategic directions and policy coherence to transition to rebuilding better

803. To deliver on its more ambitious objective and to enhance transparency and accountability, in GEF-8 the CSP will commit to define explicitly its strategy and monitor specific learning outcomes, share the planning tools developed during GEF-7 to enhance visibility, and introduce detailed expenditure reporting to be annexed to the annual budget reporting exercise. Investing in the development of new activities and offering a larger suite of learning opportunities will directly impact staffing needs. To deliver on its ambition for GEF-8, the CSP will fully utilize resources available and remained unutilized from previous cycles. It is expected, therefore, that the sustained efficiency contribution of virtual program delivery can make the transition to the new GEF-8 CSP budget neutral.

VII. PRIVATE SECTOR ENGAGEMENT

The Private Sector Engagement Imperative

804. As documented in the succession of WEF Global Risks Reports[519], environmental risk has been well acknowledged by political and business leaders with the level of concern rising steadily throughout the last two decades. In 2021, the WEF Global Risks Report showed that the highest ranked global risks by impact and by likelihood were all environmental, including extreme weather events, human-made environmental damage and disasters and major biodiversity loss.

805. The reality of these risks was made starkly evident through the COVID-19 pandemic, which represented the embodiment of the collision between our natural systems and human systems. The pandemic and the movement to "build back better" fundamentally requires durable solutions rooted in the changes needed to the main human economic systems and drives us to accelerate the pace and scale of systems transformation, which in turn, requires the collaboration of all stakeholders, with the private sector at the forefront.

806. All key scientific reports in the lead up to 2020, such as the IPCC 1.5 Degree Report[520] and the IPBES Global Assessment Report on Biodiversity and Ecosystem Services[521], pointed to the conclusive fact that we are indeed in an environmental crisis. The need for urgent economic systems change was made loud and clear by a chorus of global voices.

807. There is no doubt that systems change will not take place without the private sector. It requires broad coalitions of governments, both national and sub-national, the private sector at all scales, citizens (as consumers and investors) and academia. Such multi-stakeholder coalitions played a critical role in raising collective ambition towards achieving an agreement in Paris 2015 and have continued to flourish since.

808. Business responses following the "Super Year 2020/1" and the COVID 19 pandemic are driving action in the "Decade of Delivery" and the UN Decade of Ecosystem restoration and to realize these goals, the private sector has joined or developed many new initiatives and commitments:

- Net zero commitments
- Land, forest and ecosystem restoration targets (Bonn Challenge)
- Biodiversity targets (30x30, post 2020 biodiversity framework)

[519] https://www.weforum.org/reports/the-global-risks-report-2020
[520] https://www.ipcc.ch/sr15/
[521] https://ipbes.net/global-assessment

- Reporting against key SDG goals and targets
- Creating circular systems, a renewables based bioeconomy and reducing plastic pollution
- A reduction in the use of harmful chemicals (textiles initiatives)
- Water use efficiency and water stewardship
- Certification, standards, traceability and reporting protocols
- Build back greener/better
- Food Systems Summit Action Track goals and actions
- Healthy Planet, Healthy People (WBCSD Vision 2050)

809. The collective message of these global initiatives points to the need for systems transformation be it what we eat and how food is produced (food systems), how we live (city systems), how we move and power the economy (energy transition), and how we produce and consume goods and services (circular economy) and manage water and biodiversity (natural systems).

810. The GEF seeks to work with the private sector as an essential agent of systemic transformation. The transformative agenda requires broad coalitions of government, both national and sub-national, the private sector at all scales, citizens (as consumers and investors), CSOs, NGOs, and academia. Such multi-stakeholder coalitions take center stage in the GEF's strategy for private sector engagement, recognizing the critical role they have play in raising private sector ambition and driving the systemic transformation we need to accelerate in GEF-8 and beyond.

811. No company or industry group can work in isolation if we are to achieve the scale needed for systemic change. The markets for sustainably produced goods and services and the full suite of specific solutions from value chain actors engaged upstream to the level of their production must work under a shared and coordinated vision if meaningful and durable changes to economic systems can be realized.

812. The GEF places high priority on the need effectively engage with the private sector if we are to succeed in our mission and deliver lasting global environmental benefits at a faster rate, with a broader scale, and more efficiently than could be achieved without partnerships with the private sector. Actions under GEF-8 programming directions support a vision in which the GEF acts as a catalyst and enables the private sector, at all scales, to tackle the key drivers of

environmental degradation, to reverse unsustainable global trends and to extend the delivery of global environmental benefits so that they:

- Occur faster and at a larger scale;
- Are delivered more efficiently; and,
- Are more durable than could otherwise be achieved.

813. From disclosures, transparency and integrated reporting, the private sector faces unprecedented requirements from governments, investors, customers, suppliers, shareholders and employees to improve internal processes that incorporate hidden costs and benefits as they relate to environmental, social and governance (ESG) issues. Such examples include theThe Task Force on Climate Related Financial Disclosures (TCFD)[522]which stipulates climate-related disclosures that could promote more informed investment, credit, and insurance underwriting decisions and the Task Force on Nature Related Financial Disclosures (TNFD)[523] which provides a framework to assess, manage and report on their dependencies and impacts on nature.

814. It is against this background that the private sector is driven to act, invest and ultimately transform economic systems that reward sustainability performance.

815. Measures to engage the private sector, through the Integrated Programs, blended finance and other entry points to the GEF portfolio, must take into account the longer-term vision championed by private sector leaders and provide pathways for engagement that are compatible with a long-term vision.

816. Many private sector focused initiatives set targets for 2030 or 2050 goals. The WBCSD Vision 2050[524] (Version I in 2011, Version II 2021) outlines societal must-haves for a sustainable world operating within the planetary boundaries, the SDGs set targets and metrics for 2030, Net Zero commitments that align to the Paris Agreement posit a 2050 timeline, as does the CBD 2050 Vision for Biodiversity.

817. GEF-8 should be considered as a foundation to enable longer term systemic transformation with consideration and planning for private sector engagement that incorporates concomitant time horizons, which can also build robust and durable project outcomes into the next two GEF investment rounds, from 2022-2026 (GEF-8) and 2026-2030 (GEF-9) and beyond the GEF funding horizons.

[522] https://www.fsb-tcfd.org/about/
[523] https://tnfd.info/
[524] https://www.wbcsd.org/Overview/About-us/Vision2050

GEF-8 Strategy – Integration to Support Transformation

818. The defining feature of the GEF-8 private sector engagement is the opportunity to leverage Private Sector integrated approaches.[525] Systemic transformation is best addressed through integrated approaches that deliver global environmental benefits across a range of focal areas relevant to each geography and IP context.

819. Each IP incorporates its own set of private sector objectives, identifying the major platforms for engagement, key entry points the and expected modalities of engagement that can optimize the contribution made by the private sector to integrated approaches in delivering durable GEBs beyond the GEF-8 cycle.

820. In the 2021 review of GEF-6 Integrated Approach Pilot (IAP) Programs , the private sector, as an actor in the transformation of markets, is noted as a critical stakeholder group across all three IAP programs:

"Across all three programs, the integrated approach created opportunities for a range of options to crowd-in the private sector, from co-financing and parallel financing to the creation of institutional platforms for catalyzing change. The IAP program design activities involved a wide range of private sector entities at national, regional and global levels. "

821. The review also found that IAP programs demonstrated a higher level of private sector engagement by operating at global, regional and local scales thus providing multiple entry points for the private sector with solutions and contributions relevant at each level. This approach supports more systemic transformation across sectors and reaches into markets and demand centers.

822. As identified in GEF IEO OPS6, the dominant focal areas for private sector engagement has been in Climate Change and in Chemicals and Waste. In GEF-8, the contribution of the private sector will be better leveraged through integrated approaches across multiple focal areas with a predicted strong rise in support for biodiversity outcomes coupled to land, forest and ecosystem restoration.

823. As new initiatives that support integrated approaches emerge such as Business for Nature (BfN), One Planet for Business and Biodiversity (OP2B), concepts such as post COVID-19 Build Back Better/Greener, the linkages between human and planetary health under the Healthy

[525] As recognized by the recent MOPAN Assessment of the GEF, engagement with the private sector as a key actor is a recognised priority for influencing transformational change - *MOPAN 2017-18 Assessments, Global Environment Facility*, http://www.mopanonline.org/assessments/gef2017-18/

Planet, Healthy People[526] philosophy and Nature-based Solutions (NbS) build the links across focal areas. It is through positioning the GEF as the "hub for integration" that the private sector can be best engaged.

824. Strengthening the integration between the Rio Conventionsthrough approaches to tackling biodiversity loss, climate change and land degradation in conjunction will also prove a valuable contribution to raising the ambition of non-state actors and the formation of new partnerships.

Working with Multi-stakeholder Platforms

825. GEF needs to maximize its engagement with the broad range of private sector actors that are critical for systems change. In line with the proposed programming directions for GEF-8 and GEF's revised PSES, the GEF will develop extensive and broad-based engagement across relevant stakeholder groups, including the private sector and CSOs, with a view to building, strengthening and catalyzing diverse coalitions of actors that can meaningfully contribute towards transforming the key economic systems that threaten the global environment.

826. Multi-stakeholder platforms for sustainability provide the GEF with the opportunity to scale private sector partnerships vertically, comprehensively through value chains and horizontally, through landscapes, cities, countries and regions. This horizontal and vertical interconnectivity offered through platforms can extend the reach and influence of GEF funding well beyond specific geographies and bring a wider range of resources and solutions from all levels of the private sector.

827. The Good Growth Partnership, the FOLUR and Sustainable Cities Impact Programs, GEF Planet GOLD, GPAP, E-waste, EE Accelerators, the 3% Club and E-Mobility are all prime examples of multi-stakeholder platform effectiveness championed by the GEF.

828. Each IP will engage existing leading platforms or co-create with the private sector a multi stakeholder platform to drive the systemic changes needed across the networks of actors in economic sectors and support the delivery of environmental benefits on-the ground in an integrated manner.

829. To foster engagement of the private sector, the IPs will convene private sector working groups as needed to support the development of initiatives, to make program adjustments in response to changing conditions and to maintain connectivity with the leading private sector actors to foster a collaborative working environment and exchange of ideas.

[526] Wildlife Conservation Society, Berlin Principles of One Health https://c532f75abb9c1c021b8c-e46e473f8aadb72cf2a8ea564b4e6a76.ssl.cf5.rackcdn.com/2020/02/11/74ik3zxtxp_The_Berlin_Principles_on_One_Health_.pdf

830. In line with the GEF PSES goal to support the engagement of entrepreneurs and MSMEs, each IP will include flexible approaches that can target specific desired outcomes or address key systemic challenges within the societal or geographic context. These flexible approaches may include challenge programs, competitions and coopertitions, innovation hubs and awards that do not require extended planning periods or complex administration that could deter this segment of the private sector from participation.

The Private Sector as a Partner of Choice

831. The GEF seeks to become a partner of choice for the private sector, however in OPS6[527], less than half (43%) of the private sector respondents interviewed agreed that GEF's ability to engage the private sector was a comparative advantage and highlighted a lack of awareness in the broader engagement opportunities with the private sector beyond financing.

832. There is a need for greater understanding of the respective roles of both the private and the public sectors in the actions of delivery and modalities of engagement. GEF-8 will support approaches that define where the public and private sectors can best work collaboratively in the pursuit of global environmental benefits. The capacities of the private sector, above and beyond financial resources, include:

- Innovation, expertise, and capabilities which businesses can bring through technologies, entrepreneurship; market-based solutions, distribution networks;
- Investment capacity, and managerial and operational expertise, including risk-management;
- The private sector's extensive networks and operations which provide distribution channels to inclusively reach value chain actors ranging from SMEs to retailers and consumers;
- The private sector's vast financial resources and expertise in market-based solutions that have the potential for achieving scale and sustainability in tackling systemic environmental challenges;
- Extended investment horizons based on asset lifespans, typically in excess of 20 years, that can provide the foundation for durable partnerships beyond short-term GEF funding cycles;

[527] GEF IEO (GEF Independent Evaluation Office) 2017, Sixth Comprehensive Evaluation of the GEF (OPS6): The GEF in the Changing Environmental Finance Landscape; and GEF/ME/C.52/Inf.04, Evaluation of GEF's Engagement with the Private Sector

- Policy support and the capability to deliver what in-country governments seek to achieve, such as improved service-delivery, resilience to climate change and human health gives businesses a strong, knowledgeable voice to inform policy that supports transparent, inclusive sustainable development.

833. The wider range of engagement modalities that optimize the contributions of the private sector to the transformational agenda is documented in the 2020 GEF Private Sector Engagement Strategy528, table 1, page17.

Recognizing the Contribution of the Private Sector

834. The GEF will permit private sector actors that are actively engaged in GEF programmes to use the GEF logo for marketing and awareness purposes subject to prior written approval from GEF communications with expressly defined and timebound usage parameters. The application of the GEF logo may feature on company websites, annual integrated and sustainability reporting, social media and events banners which have a direct reference to the company's partnership activities in the GEF IPs. Private sector actors engaged in the GEF partnership will be invited to GEF events, such as the private sector COP days, to the GEF Assembly and other relevant meetings to highlight the impact and benefit of private sector engagement and to raise awareness of GEF's private sector engagement.

Investing in Integrated Approaches

835. There are several approaches for the private sector to support the goals of systemic transformation and integration in GEF-8. These have been identified as part of the IP development and TAG process with private sector and multi-stakeholder groups.

<u>Valuing and Monetizing Nature-based Solutions (NbS).</u>

836. Through new NbS financial instruments and blended finance, additional private sector investments can bolster the country STAR allocations, driving more market-based finance into countries with the potential to well exceed current GEF-7 investment levels. In March 2021, the . The SEEA Ecosystem Accounting (SEEA EA) constitutes an integrated and comprehensive statistical framework for organizing data about habitats and landscapes, measuring the ecosystem services, tracking changes in ecosystem assets, and linking this information to economic and other human activity. The private sector, through leading companies and participation in coalitions for natural capital accounting, can readily adopt approaches that align with the SEEA Ecosystem Accounting method. This would further facilitate investment in ecosystems stocks

528 GEF/C.59/07/Rev.01 December 2020

and flows from the private sector and create new ways to value companies, measure performance and drive investment into the most sustainable companies.

837. In 2019, US$45 billion was raised through carbon pricing revenues and more than 14,500 crediting projects have been registered, generating almost 4 billion tCO2e of cumulative carbon credits with the forestry sector credits representing 42% of all credits issued in last five years. Modelling from IETA estimates the value of NDC investment through NbS at US$ 250 billion.

838. Countries could be funded to develop the enabling environment for such investments and to develop policies, targets and institutional arrangements that facilitate large-scale investment in line with the San Jose principles.

839. A NbS policy-to-finance facilitation platform will work to support countries in their endeavors to access finance and that the relevant IPs will work to address through the structural and technical challenges in the countries where they operate. Relevant IPs will aim at building national capacity for countries to undertake NbS where the private sector is increasingly recognizing that by including NbS in their decisions and investments, they can create greater value for themselves and protect the natural capital upon which they are dependent. In addition, investments undertaken at national and regional levels will provide the opportunity to share best practice and information between the public and private sector and harmonize their NbS approaches and to further facilitate private sector finance.

840. A corollary of the Net Zero commitments made by both the private sector and 127 countries is the investment interest in NbS (Nature-based Solutions) that can provide both GHG mitigation and climate adaptation benefits from natural systems, notably agricultural soils, peatlands, forests, seagrasses and wetlands.

841. The WEF report *Nature and Net Zero* identifies opportunities to realize Net Zero and other corporate commitments on the ground through GEF projects. The GEF, as the "hub of integration" is well positioned to direct investment into national level priorities through the NbS approach.In line with the GEF PSES to work with multi-stakeholder platforms, the Taskforce on Scaling Voluntary Carbon Markets (TSVCM) can be engaged to support these processes and align private sector interests with the country level priorities.

842. While about 130 Nationally Determined Contributions (NDCs) include the use of nature for climate mitigation and adaptation purposes further work is needed to translate commitment into policy certainty for investors and project proponents. Through the IP portfolio, opportunities for the private sector to invest upstream in countries meeting their Nationally Determined Contributions, targets under the post 2020 framework and land degradation neutrality ambitions can be facilitated by investments in the enabling environment and national level capacity.

GEF Digital Platform - Creating the Digital to Environmental Dividend.

843. The technologies of the Forth Industrial Revolution (4IR) offer the opportunity to create wide-reaching environmental benefits through the application of data, the connectivity of the IoT, artificial intelligence and machine learning.

844. The scale and cost effectiveness of these technologies can help countries move away from manual, labor intensive analog processes to automated and real-time digital applications that save time and money while supporting the delivery of GEBs.

845. While the private sector is active across the deployment of 4IR in the global North, closing the digital divide with recipient countries in the global South can also support a wide range of environmental benefits delivered through systems improvements with more equitable access to economic opportunities, socio-economic benefits and jobs creation.

846. A new GEF Digital to Environmental Dividend (D2ED) program will support countries develop their capacity through direct engagement with the private sector across four main thematic areas that have been identified as needs in the IP portfolio.

Monitoring and evaluation

847. Where Earth observations through remote sensing and satellite data can be deployed to assess and monitor areas of many millions of hectares that would otherwise be impossible to manage with manual or land-based systems. Machine learning and artificial intelligence can be used to augment observations and link data sets to refine spatial planning and modelling in key IPs:

- In the Land Restoration IP, the use of Trends Earth for both defining and monitoring land restoration activities funded under GEF-8 and linked to spatially explicit, geo-referenced LDN targets and related implementation efforts. This would benefit future monitoring and national reporting of both LDN and landscape restoration efforts to implement UNCCD at national level.

- In the Circular Solutions to Plastic Pollution IP machine learning can be used to identify plastic production and consumption patterns and prioritize key intervention points. For example, machine learning and block chain can also be used to connect businesses along the plastics value chain from manufacturers to consumers to recycling facilities. These insights could also power passive cleanup systems to help remove plastic that is already impacting our marine ecosystems.

- In the Wildlife Conservation for Development IP cloud computing can automatically identify animals in videos, making it easier, more affordable, and faster for researchers and conservationists to study camera trap footage.

- In the International Waters focal area satellite data and machine learning capabilities can develop approaches that include both field-scale and watershed-scale data to make recommendations based on program goals such as reducing groundwater demand, improving irrigation, reducing nutrient runoff, or building vegetation buffers. The result is both a region-wide and field-specific plan that identifies specific actions, ranked in order of cost-efficiency for achieving conservation goals.

Climate, water and biodiversity fintech

848. Climate, water and biodiversity fintech approaches use digital financial technology to catalyze decarbonization and boost biodiversity through big data, deep learning and artificial intelligence. GEF's support for climate, water and biodiversity fintech will explore how 4IR technologies such as AI and blockchain can help intermediaries mobilize capital towards decarbonization and investments that are net positives for biodiversity. Financial sector requirements under TCFD and TNFD create a supportive development environment to achieve scale and impact. Importantly, banks and investors can use these technologies to drive scope III emissions reductions into their customers' supply chains.

On-the-ground environmental performance using the Internet of Things (IOT)

849. From waste sorting, to crop protection, the management of renewable energy systems, soil carbon measurements and water monitoring, the use of connected robots and the IOT to increase both automation and precision is a valuable tool in delivering a reduction in the use of chemicals, more efficient water allocations (environmental flows, water trading) and the optimal distribution or storage of renewable energy. Decision-making support and planning

850. Both the quality and the volume of accurate data needed to make decisions on resource allocation and environmental planning can be bolstered through big data, AI and deep learning. Through networks of advanced sensors and observations in land, climate, oceans and embedded with software, network connectivity and computing capability, decision makers can collect and exchange data over the internet and enable automated solutions to multiple problem sets. Such access to information can also build more resilience into landscape action plans and optimally direct investment to maximize GEBs.

851. The GEF digital consortium will co-create or strengthen technology platforms comprised of leading firms and ICT providers to accelerate efforts across GEF's Integrated Programs to deliver GEBs. GEF will provide support for shared, open-access and standardized systems that can be readily deployed in the context of the recipient countries. The creation of a digital fabric as a common thread throughout the GEF Impact Programs will further support integration and scale in line with the GEF vision for private sector engagement outcomes.

852. In addition to the GEBs, significant co-benefits aligned to the SDG targets could also be expected, including better access and use of technologies that support gender equality, reductions in child labor, enhanced livelihoods, improved worker safety, reduced exposure to chemicals and improvements in skills and training.

853. The GEF will build on the efforts in existing platforms (WEF Fourth Industrial Revolution for the Earth Initiative, Harnessing the Fourth Industrial Revolution for Oceans and Harnessing the Fourth Industrial Revolution for Sustainable Emerging Cities) and advance the solutions selected and developed through the Innovation Cross-Cutting theme of the Food Systems Summit with interventions at the global, regional, and country level. Proposed interventions include:

- The GEF will use its convening power to co-create or support coalitions and platforms with private sector partners that seek to develop and deploy technology that can deliver the environmental dividend, close the digital divide and help countries achieve their MEA objectives. Private sector engagement from global technology leaders in platforms will be critical, along with other stakeholders, CSOs and NGOs.

- Build country capacity for digital engagement (environmental, telecommunications, education and planning ministries). Countries must have expanded capacity, training, and expertise to benefit from the full suite of opportunities under the 4IR. The GEF will support specific country projects, guided by global coordination and best practices, with a focus on countries that risk missing out due to a digital divide. Regional hubs of best practice will also be considered to achieve scale and optimize data use.

- Engage with private sector actors that are already leaders in sustainability and technology to further accelerate adoption through knowledge exchanges and development hubs. Leading developers that seek to support agile approaches into project design will be encouraged to join the initiative and develop new opportunities in new markets.

- Build and advance tools for methodologies, tracking, and reporting. The coalition of willing partners will work on both voluntary and regulatory standards, backstopped by stakeholder consultations and strong analysis.

854. Dialogues and partnerships that bring technology developers and providers together with environmental experts to co-develop these innovations will ensure they are developed for the public good, to maximize GEBs while minimizing risks of unintended social or environmental consequences.

Resourcing and Supporting Private Sector Engagement in GEF-8

855. The broad implementation of GEF-8 private sector engagement will require additional resourcing to maximally benefit from the engagement with the private sector and to service the growing requirements for knowledge resources, reporting and coordination.
Each Agency should appoint a lead for private sector engagement that will also be the representative on the GEF Agency Private Sector Working Group.

856. In GEF-7, many Agencies created specific roles as part of their programs dedicated to supporting the engagement of the private sector, including at the country-project level to drive local private sector engagement. Where needed, Agencies should consider project support with dedicated resources assigned to private sector with responsibilities for convening, planning, sharing information, developing knowledge resources and applying reporting metrics.

857. As a continuation of the activities under the PSES, the GEF Agency private sector working group will function under member-determined priorities with agenda points and actions that can support the effectiveness of private sector engagement across the portfolio, foster knowledge exchange and the development of resources. The working group will meet four times per annum, once in a face-to-face or hybrid setting aligned to the GEF Agency retreat.

858. As part of Integrated Program implementation planning, especially in working in the formative stages of programme design where important decisions on co-finance, modalities of engagement, partnership formation and platform engagement are made, an allocation for technical assistance can be made to Agencies under prescribed criteria to enhance the overall effectiveness of the IP's work with the private sector.

859. GEF Secretariat resources will be bolstered to include a resource dedicated to the management of information, reporting and knowledge resources and the further development and use of the Management Information System across the GEF Partnership.
860. As part of the overall deepening of private sector participation in the GEF, private sector secondments and interns can be engaged to support both overall and targeted engagement in IPs and enhance the understanding of GEF's operating environment among the private sector.

Private Sector and Gender equality and Inclusivity

861. As an agent of transformative change, the private sector can play a critical role in supporting gender equality and through fostering inclusive approaches, especially working through the private sector in the decision making processes and resources allocations that can improve women's access, use, and control of resources, including land, water, forest, and fisheries.

862. Women make up a large percentage of participation in many key industries relevant to the GEF-8 portfolio, especially in agriculture and textiles, and specific private sector programs can be developed that support womens' private sector activities, economic empowerment and the delivery of global environmental benefits.

Metrics and Reporting

863. Metrics developed through the actions documented in the GEF PSES implementation plan will be further tested and refined to create a more complete picture of the GEF's work with the private sector, including metrics for integration (Healthy Planet, Healthy People metrics) and private sector additionality.

The Private Sector Advisory Group

864. The Council, at its 54th meeting, recommended the formation of a Private Sector Advisory Group (PSAG), which was empaneled and convened during 2019 according to the Terms of Reference approved by Council in Da Nang, Viet Nam, 26 June 2018.

865. At the 57th GEF Council Meeting, The Council invited the PSAG it to continue dispensing its duties, until the end of the GEF-7 replenishment cycle.

866. The PSAG will continue to operate under GEF-8, with a revised TOR, to support the GEF partnership and advise the GEF Partnership on strategic direction, to provide feedback to the GEF processes and support the development of private sector focused initiatives.

867. The GEF partnership needs to strengthen other forms of ongoing awareness raising, training and knowledge exchange opportunities with private sector partners. Ad-hoc private sector advisory groups will be convened for specific issues and guidance related to optimizing the private sector's contribution to the GEBs. These groups will be informal and will function without attribution to foster a free and open exchange of ideas, consultation and feedback.

868. Finally, drawing on emerging experiences of other similar institutions (CIF) and existing arrangements for CSO participation, the GEF will consider inviting private sector representatives to engage as observers in GEF Council Meetings, thus directly informing GEF governance and decision-making.

VIII. REVIEWING THE STAR ALLOCATION FRAMEWORK

869. The proposed programming directions for GEF-8 demonstrates a higher ambition through an increasingly targeted focus on measurable impact, which drives the need to revisit the STAR formulation. This discussion therefore sets the scene for potential evolution of the STAR system within this context. Recognizing that discussions remain at a very early stage, this section is not intended as a detailed roadmap. Rather, this suggests preliminary directions for evolution that can be explored moving forward.

870. There are several possible entry points for a closer alignment of the allocation system with the GEF-8 Programming Strategy. Since the introduction in GEF-4 of a country allocation mechanism (at the time called the Resource Allocation Framework or RAF), every replenishment process has offered the opportunity to review the system for structural evolution in accordance with global context, programming priorities, evaluative evidence, and operational experience, whilst retaining a set of core principles. With GEF-8 the functional needs of the proposed programming strategy drive the following directions of evolution:

- Increasing flexibility to further facilitate the mainstreaming of integrated programming principles
- Adjusting the STAR structure to increase support to vulnerable countries
- Updating the data layers, at country level, to further enhance incentives to improve policy coherence
- Finding ways to encourage the use of blended finance options to narrow the financing gap
- Creating a competitive space to increase effectiveness, efficiency and maximize the impact of limited resources

871. The flexibility of STAR resources has been a core feature of the allocation system. Every successive GEF cycle has seen increasing amounts of STAR resources being subject to flexibility: 16% in GEF-5, 20% in GEF-6 and 30% in GEF-7. This increasing flexibility has been accompanied by increasing demand and usage by recipient countries, as flexibility enables countries to enact greater strategic coherence in the programming of their GEF resources. This, in turn, allows them to focus on topics and entry points where they can maximize positive impacts on the global environment.

872. The GEF-8 STAR model proposes to move to full flexibility to facilitate and mainstream integration, which is a core principle in the proposed GEF-8 programming strategy. Simultaneously, GEF-8 programming will retain a meaningful financial footprint in each of the three STAR focal areas and continue to achieve ambitious focal area targets through the articulated results framework of multiple benefits. In line with the GEF-7 replenishment process, the

Secretariat will also by December 2021 conduct a review of the experiences and learning of the GEF-7 increase in flexibility, with a view to informing GEF-8 replenishment deliberations on this matter.

873. GEF programming has always paid special attention to the needs of "vulnerable" countries. The importance of distributing resources to LDCs and SIDS has been an ongoing theme of GEF programming since the development of the RAF in GEF-4, and has been a point of discussion across all successive replenishments. Since GEF-5, the shares of STAR resources to SIDS and LDCs have been steadily increasing in each GEF-cycle; in GEF-7, 33% of the total GEF-7 STAR resources were allocated to countries classified as either SIDS or LDCs.[529]

874. The current STAR structure addresses "vulnerability" through two factors: (i) the GDP Index, and (ii) the allocation floors. During the replenishment discussions surrounding the development of the GEF-5 STAR model, it was suggested that the GEF Secretariat consider adding a social and economic component to its resource allocation, intended to help distribute resources to poorer countries to build their capacities in implementing GEF projects. This was the source of the introduction of the GDP Index in GEF-5, which was described as "*a premium to take into account country capacity and vulnerability*".[530] Along these lines of distribution and equity, the GEF-5 STAR model also included and extensively modified the "floors" (and "ceilings") structure that were first introduced in the RAF Model to ensure minimum and maximum allocation amounts. Over the intervening replenishment periods, these parameters have been successively modified for greater allocation impact on vulnerable countries.

875. The work on the GEF-8 STAR model will explore potential enhancements aimed at an increased distribution of resources to SIDS and LDCs.[531] This is in line with the objectives of the GEF-8 programming, one of which is to assist vulnerable countries in the ongoing effort to tackle the major drivers of environmental degradation to achieve systems change. This will include the exploration of new formulations and datasets such as the Human Development Index[532] and others. It should be noted that STAR is but one of several avenues through which vulnerability continues to be addressed in GEF programming: the two non-STAR focal areas of International Waters and Chemicals and Waste are characterized by significant programming and/or dedicated programming windows to some of these countries, while the LDCF/SCCF also continues to be a significant provider of resources in this regard.

---

[529] In GEF-7, the STAR allocation system covered 38 Small Island Developing States and 47 Least Developed Countries, with 9 of these countries classified as both SIDS and LDCs.

[530] GEF/C.36/6, *System for a Transparent Allocation of Resources (STAR): Options and Scenarios*, https://www.thegef.org/sites/default/files/council-meeting-documents/C.36.6_STAR.FInal__4.pdf

[531] As in previous STAR models, the UN Categories of LDCs and SIDS will be used, as available here: https://www.un.org/development/desa/dpad/wp-content/uploads/sites/45/publication/ldc_list.pdf and here: https://sustainabledevelopment.un.org/topics/sids/list. The LDCs that are set to graduate during the GEF-8 cycle (1 July 2022 – 30 June 2026) will be considered LDCs in the GEF-8 STAR Model.

[532] UNDP, *Human Development Report 2020*, http://hdr.undp.org/en/2020-report/download

876. GEF-8 programming is designed to a large extent to support the enhancement of policy coherence. This is an essential dimension of domestic resource mobilization towards closing the financing gap between the funding provided and the funding needed to achieve critical environmental goals. Improving policy coherence requires the elimination of national policies that either drive negative investments or enter into contradiction with sustainability-inspired policies. Insufficient policy coherence stalls progress and can lead to environmental decline even as GEF-financed projects bring positive impact.

877. The GEF-8 STAR model can potentially play a role to improving policy coherence at the national level. The STAR formula could give a stronger signal to recipient countries with regard to their national environmental performance. This signaling incentive operates through the Country Performance Index, which therefore serves two related goals: (i) to assess countries' ability to deliver on the potential global environmental benefits that are calculated by the respective Benefits Indices (as per its original intention) and (ii) to encourage improved environmental performance at both the national level and in the arena of their global commitments. The feasibility of updating the Country Performance Index with respect to impacting policy coherence at the national level will be explored as part of the work done on the STAR model in view of GEF-8.

878. A critical dimension to closing the financing gap is the active participation of the private sector. As discussed in the accompanying programming strategy, the GEF has the means to unlock and expand private financing through a number of blended finance options. While the bulk of GEF blended finance has operated to date under set-aside funding, all GEF projects are eligible and countries can make the choice of using blended finance tools (i.e., non-grant instruments) while deploying their STAR resources. Before GEF allocation systems came into being, non-grant instruments were in fact a frequent tool in early GEF cycles, where many projects proposed simple revolving loan funds, contingent grants, and performance grants. In GEF-5, there was a special effort to encourage the use of non-grant instruments within STAR; these projects were designed to promote private sector engagement and resulted in high levels of co-financing.

879. For GEF-8, blended finance using STAR will be actively encouraged. While projects using the blended finance set-aside are expected to have reflows to the GEF Trust Fund and the project funding is considered concessional finance, projects using STAR allocations that are designed with the use of non-grant instruments are not expected to have reflows. Earnings on these non-grant investments are retained in-country, to be recycled into on-going project activities and to be re-invested at project completion for purposes aligned with the original project goals. This can help catalyze private sector engagement, foster capacity building for local financial institutions, and create sustainable funding mechanisms within-country that can continue to produce global environmental benefits long after the initial project is completed.

880. The GEF-8 STAR model can give a more targeted focus to countries with higher capacities. GEF's successive replenishment negotiations have demonstrated sustained attachment to the idea

that the GEF should continue to serve all recipient countries, catering appropriately for different needs, capabilities, and contexts, as times evolve. Two decision dimensions have channeled that thinking in previous replenishments: (1) a focus on the share of resources provided to LDCs and SIDS; and (2) a focus on resource flows to countries with higher capacities. Since GEF-5, middle-income countries retain a large component of STAR funds (albeit with a downward trend); in GEF-7, nine of the top ten STAR recipients are middle-income countries, accounting for 32% of GEF-7 STAR resources.

881. To this end, options may be explored for the introduction of an element of competition into the GEF-8 STAR model. The GEF may wish to further harness the potential of countries with higher capacities for greater effectiveness, efficiency and impact in the use, leverage, and mobilization of investments in the global environment. One potential avenue is the introduction of a competitive element for a subset of countries within the allocation model. Competition within the allocation system is not a new concept for the GEF, as this was a feature of the GEF-4 RAF system. Building on the learnings from the RAF model, the feasibility of a competitive element will be explored.

882. In the context of the GEF-8 programming strategy, the potential therefore exists for some enhancements in the GEF's resource allocation framework, along a number of key dimensions. These are presented here as preliminary opportunities only, which will be explored and informed further as the discussion develops. Beyond these dimensions, all existing index formulations in the STAR structure will also be assessed relative to corporate priorities, the latest scientific thinking, current global dialogues, and available datasets, as is routine practice in every replenishment cycle. Finally, it should also be recognized that many of the directions articulated here relate to GEF partnership principles that extend beyond the structure of the STAR allocation model itself and, as such, can also effectively find simultaneous/alternative entry points into other aspects of the GEF's programming and policy architecture.

Annex 1. Access and Benefit Sharing (ABS) Business Facility

Introduction

ABS has the potential to deliver significant economic, social, and environmental benefits to society through employment and ABS products generated by the pharmaceutical, cosmetics, agricultural, food and many other industries that use genetic resources. Today, private and public organizations from countries that already have national ABS laws or policies are actively using genetic resources for the development of ABS products. While some of the users are private or public research domestic organizations, including IPLCs, others are foreign entities willing to partner with local organizations.

Some users are aware of national ABS regulations, including the need to deliver biodiversity conservation and sustainable use objectives associated with the use of genetic resources and others need support to navigate these requirements. Most of these organizations need financial support and know-how for Research and Development (R&D), including access to traditional knowledge to add value to genetic resources. The common denominator of these users and providers of genetic resources is that *they all need financial and technical support to realize their ABS goals.*

Overview of some industries that use genetic resources

Genetic resources have been traditionally used by private and public researchers and private companies for the development of products for the pharmaceutical, food/beverage, agricultural, crop-protection, horticultural, cosmetic, biotechnological, and botanical industries. The market size and main trends/characteristics of some of these industries are:

The Pharmaceutical industry (US$955.5 m per year) consists mostly of large European and American based companies, with manufacturing in emerging markets, where domestic companies are also on the rise. Companies collaborate on R&D as budgets stall. Natural product programs are found in small companies, government programs and universities. There is some collection of microorganism and marine organism from biodiversity-rich regions. Only, small quantities of material needed. Domestic biodiversity and companies' collections are first choice. A high degree of science and technology (e.g. genomics) allows faster and deeper screening especially on microorganisms. There is a possibility to cultivate micro-organisms ex-situ and overcome supply issue.

The biotechnology industry is focusing on enzymes and metabolites from microorganisms (US$75 m per year) that can endure heat and pressure conditions required for the development of products by the manufacturing and crop-protection industries. Investments in this area are less costly and risky than those associated to R&D in the pharmaceutical industry. Some companies are collecting extremophiles (e.g. organisms that live in extreme environments) for the manufacturing industry but most companies collect these organisms from existing ex-situ collections or domestic genetic resources. Other companies are collecting fungi that have shown potential to control diseases in major agricultural crops such as coffee and bananas.

The food and beverage industry (US$11.6 to 15 trillion per year) has a low level of R&D (i.e., process improvement) but some sub sectors are starting to rely on innovation for the production of beverages and food with health benefits (e.g. weight, energy, etc). It focuses on functional food, natural (e.g., additive free). The industry is also interested on crop protection, wild plants for domestication and plant and animal breeding. Commodities dominate - use of large volumes – and reliability of supply is key. Increasing integration of food with other sectors and increasing consumer interest in natural products suggest an increasing trend of the use of genetic resources (relevance for ABS). Some companies are modifying natural plant colorants so that they can be used in the cereal and juice segments of the industry.

The natural cosmetics industry (US$ 26.3 billion per year) focuses on oils, fats, waxes, essential oils, oleoresins and plants extracts that are used in 'pure natural' and in conventional cosmetics (very small quantities). Major companies focus on brand strategies and intermediaries do intensive research. R&D investments differ from minimal processing of raw material to advance research. Most ingredients are cultivated to master quality, secure supply and reduce costs. Cosmetics include active principle or ingredients. There is interest in genetic resources from biodiversity-rich countries and in traditional knowledge to guide research and development.

Objectives

The main objective of the **ABS Business Facility (ABF)** will be to ensure that users and providers of genetic resources willing to comply with national ABS regulations have access to financial and technical support for the development of ABS products (Figure 26). Specific objectives of the ABF include:

1. *Identify users and providers of genetic resources:* This includes not only developing a database of organizations per industry that use genetic resources and their role in the value chain, but also mapping ABS projects, users, and providers of genetic resources from biodiversity-rich countries.
2. *Provide honest broker services matching needs and objectives of users and providers of genetic resources:* Providing and instilling trust between the parties in the "honest broker" role is essential due to potential confidentiality issues. ABF will assist users and providers of genetic resources in assessing their needs and opportunities. For example, the supply chain supporting ABS initiatives may need strengthening, particularly in ensuring that biological resources needed for the development of ABS products are sourced in a sustainable manner and taking into account biodiversity-friendly practices.
3. *Mobilize financial support from financial institutions for R&D, biodiversity conservation and sustainable use:* ABF will work with global and national financial institutions such as national banks and investment funds to identify financial instruments tailored to the needs of the clients that contribute to benefit-sharing, biodiversity conservation and sustainable use. The Facility will carry out financial assessments, identify viable business models, and perform market analysis, amongst other services. These services may be useful for users of genetic resources to scale up production of the ABS product or to cover the cost of additional tests and experiments needed to ensure the safety of products for consumers, amongst other needs.

4. *Provide technical and legal advice to navigate national ABS frameworks and negotiate benefit-sharing agreements under national ABS regulations*: ABF will be available to clarify national access procedures, permitting systems and intellectual property rights requirements and implications. ABF, as an honest broker, will also support users and providers of genetic resources with the negotiation of benefit-sharing agreements.
5. *Identify opportunities and make arrangements for technical and scientific training to add value to genetic resources and ensure that value chains for the development of ABS products are biodiversity-friendly.* The development of international biodiscovery partnerships or projects will provide opportunities for capacity-building not only for scientists from biodiversity-rich countries but also for IPLCs willing to share their traditional knowledge and expand it through scientific concepts and methods. merge their traditional partnerships.
6. *Change behavior and attitudes towards ABS and its business potential.* The facility will include a social behavioral change/communications unit to showcase and disseminate the role of ABS efforts in the development of ABS products and the stewardship of natural resources and ecosystems. ABF could influence governments and businesses (change behavior and investment policy reform) by applying economic scenario analysis to assess the financial, economic, social, and environmental impact of expanding ABS schemes.

Figure 26. ABS Business Facility