GLOBAL ENVIRONMENT FACILITY
INVESTING IN OUR PLANET

GEF/R.6/13
Draft, August 13, 2013

Second Meeting for the Sixth Replenishment of the GEF Trust Fund
September 10-11, 2013
New Delhi, India

DRAFT GEF-6 PROGRAMING DIRECTIONS

Part I

(Prepared by GEF Secretariat)

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

INTRODUCTION

1. At the First Meeting for the Sixth Replenishment of the GEF Trust Fund, held in Paris, France, during April 3- 4, 2013, participants discussed Draft GEF-6 Programming Directions,[1] covering, inter-alia: (i) focal area strategies; (ii) corporate program strategy; and (iii) signature programs. Based on feedback received on that document, the Secretariat has prepared this revised document, GEF/R.6/13, Draft GEF-6 Programming Directions, detailing programs and activities for the four years covering July 1, 2014 to June 30, 2018 for discussion at the September 10-11, 2013, replenishment meeting. The programming strategies are built on work undertaken by the Technical Advisory Groups (TAGs)[2] and on feedback received from the GEF Agencies and other stakeholders.

Programming for GEF-6

2. Ecosystems are being pushed to their limit. Human demands imply that key ecosystems are now increasingly exceeding their carrying capacity to the extent that abrupt changes—which may be prohibitively costly or simply impossible to reverse—can no longer be ruled out. The pressure on resources is set to increase in the coming decades as the result of three global megatrends, including a 2 billion increase in global population by 2050, accompanied by a rapid increase in the global middle class by 3 billion in just the next two decades, almost all of whom are likely to live in cities. The megatrends influence various indirect drivers as the world needs to meet a doubling in demand for food, energy, human habitat, transportation, etc., that create direct pressures on the global environment

3. By adopting a programming approach with a stronger focus on the drivers that lead to unsustainable usage of resources, while building on GEF's accumulated experiences and achievements, the GEF will better be able to tackle the "root-causes" of environmental degradation, which will be critical to slow and eventually reverse environmental trends.

4. This document contains focal area strategies covering: (i) biodiversity; (ii) climate change mitigation; (iii) chemicals; (iv) international waters; and (v) land degradation; and strategies for: (i) sustainable forest management; and (ii) corporate programs.

5. The document also provides details regarding the five signature programs: (i) Taking Deforestation out of the Commodities Supply Chain; (ii) Rebuilding Global Fisheries; (iii) Sustainable Cities – Harnessing Local Action for Global Commons; (iv) Fostering Sustainability and Resilience of Food Production Systems in Africa; and (v) A New Development Path for the Amazon Basin.

Resource Envelopes for GEF-6

6. Following a restructuring in 1994, the GEF Trust Fund was replenished (GEF-1, 1994-1998) at $2.0 billion for a 4-year period. In 1998, the Trust Fund was replenished at $2.75 billion (GEF-2, 1998-2002); in 2002, donors committed $3 billion to GEF-3 (2002-2006); in

[1] GEF/R.6/07.

[2] The TAGs are comprised of experts selected by the Secretariat from research institutions and NGOs, STAP panel members, and representatives of the various conventions.

2006, donors committed $3.135 billion to GEF-4 (2006-2010); and in 2010, committed $4.25 billion (2010-2014).

7. Programming scenarios for GEF-6 are presented for two sets of resource envelopes, viz: (i) $4.25 billion, which is "status quo;" and (ii) $5.32 billion, which represents a 25 percent increase over the GEF-5 level.[3]

Status-quo Scenario

8. The "status-quo" scenario, within the same envelope as the GEF-5, aims at rebalancing of resources among focal areas in responding to emerging priorities that have been expressed during the replenishment discussions so far. It presents an increased allocation to the chemicals area in response to the invitation from the International Negotiating Committee (INC) for the GEF to serve as a key financial mechanism to the mercury convention.[4] It presents a modest reduction in the climate change focal area given the emergence of new financial mechanisms, including the Green Climate Fund. The scenario also depicts the programming contributions from each of the focal areas for the signature programs totaling $425 million and for sustainable forest management totaling $250 million

9. The "status-quo" scenario is in no way a "satisfactory" scenario. The demand for resources for the GEF to meet its core mandate far outstrips what is being made available through replenishments, emphasized by Evaluation Office in its draft OPS-5. For example, the "status quo" scenario barely provides for any increase for Biodiversity while a decision at the Biodiversity COP11 called for doubling of the total biodiversity-related international financial resource flows to developing countries by 2015.

Enhanced Impact Scenario

10. Given the context that the resource demands for global environmental management vastly outstrip availability, the enhanced impact scenario aims for an overall increase of 25 percent compared to GEF-5. Such an increase would allow for a substantial increase to the biodiversity focal area and the chemicals focal area, while accommodating modest increases in other GEF areas.

[3] In formulating the specific indicative target amounts to program for each focal area and theme, it is important to take into account the following: (i) any reserves for foreign exchange and investment income volatility implemented by the Trustee; (ii) the likelihood of unfulfilled GEF-6 pledges; and (iii) the risk of non-payment of GEF-6 Instruments or Commitment or Qualified Instruments of Commitment (i.e., new arrears). Each of these events impacts the actual programming capacity during a replenishment period. Consequently, the GEF-6 resource allocation has to be adjusted on an ongoing basis to reflect each of these three factors. The Trustee and the Secretariat will coordinate in order to reflect the required adjustments in the Corporate GEF Business Plans presented for Council review during the GEF-6 period.

[4] The 5th session of the INC agreed to the text of the global legally binding instrument on mercury on January 19, 2013, including Article 13 on financial resources and mechanism. The Mechanism shall include: a) The GEF Trust Fund; and b) A specific international Programme to support capacity-building and technical assistance. The text of the Convention will be adopted and opened for signature at the Diplomatic Conference (Conference of Plenipotentiaries), which will be held in Minamata and Kumamoto, Japan, from 9 to 11 October, 2013.

Table 1: Proposed Indicative Resource Envelopes for GEF-6

Focal Areas/Themes	**GEF-5 Programming Targets ($ million)**	**GEF-6 Programming Targets ($ million)**			
		Status Quo	Increase over GEF-5	Enhanced Impact	Increase over GEF-5
BIODIVERSITY					
Focal Area Strategic Priorities	1,080	960		1395	
Contribution to Sustainable Forest Management	130	130		155	
Contribution to Signature Programs	0	140		140	
Total - Biodiversity	**1,210**	**1230**	**2%**	**1690**	**40%**
CLIMATE CHANGE					
Focal Area Strategic Priorities	1,260	1000		1300	
Contribution to Sustainable Forest Management	100	100		120	
Contribution to Signature Programs	0	120		120	
Total - Climate Change	**1,360**	**1220**	**-10%**	**1540**	**13%**
INTERNATIONAL WATERS					
Focal Area Strategic Priorities	440	390		470	
Contribution to Signature Programs	0	60		60	
Total - International Waters	**440**	**450**	**2%**	**530**	**20%**
LAND DEGRADATION					
Focal Area Strategic Priorities	385	335		410	
Contribution to Sustainable Forest Management	20	20		25	
Contribution to Signature Programs	0	60		60	
Total - Land Degradation	**405**	**415**	**2%**	**495**	**22%**
CHEMICALS					
Focal Area Strategic Priorities	425	500		575	
Contribution to Signature Programs	0	25		25	
Total - Chemicals	**425**	**525**	**24%**	**600**	**41%**
Total- Focal Areas/Themes	**3,840**	**3840**		**4855**	
Corporate Programs	70	50		70	
Small Grants Program	140	140		155	
Contribution to Signature Programs	0	20		20	
Total - Corporate Programs	***210***	**210**	**0%**	**245**	**17%**
Outreach to the Private Sector	80	70		80	
Corporate Budget	120	130		140	
TOTAL GEF Replenishment	**4,250**	**4250**	**0%**	**5320**	**25%**
Sustainable Forest Management	**250**	**250**		**300**	
Signature Programs	**0**	**425**		**425**	

FOCAL AREA STRATEGIES

BIODIVERSITY FOCAL AREA STRATEGY

Background

Biodiversity Status

1. 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." [1]

2. The Millennium Ecosystem Assessment and TEEB (The Economics of Ecosystems and Biodiversity) demonstrated that biodiversity underpins ecosystem goods and services that are required for the survival of human societies and for the future of all life on the planet and have considerable economic value: food, water, materials, climate regulation, pollination, disaster protection, and nutrient cycling.[23]Among the global environmental problems facing the world today, biodiversity has the greatest likelihood of being irreversible.

3. Governments, NGOs, the private sector, local and indigenous communities, and others have made some progress in sustainably managing biodiversity and ecosystems at local and national levels, but it has not been at the scale necessary to stem the ongoing tide of biodiversity loss globally. Current estimates indicate that species loss is occurring at 1,000 to 10,000 times the natural background rate.

4. The global target set for 2010 by the CBD "to achieve by 2010 a significant reduction of the current rate of biodiversity loss at the global, regional and national level as a contribution to poverty alleviation and to the benefit of all life on Earth" was not met as indicated in the Global Biodiversity Outlook 3, which reported the following sobering analysis:

- Species that have been assessed for extinction risk are on average moving closer to extinction. Amphibians face the greatest risk, and coral species are deteriorating most rapidly in status. Nearly a quarter of plant species are estimated to be threatened with extinction.
- The abundance of vertebrate species, based on assessed populations, fell on average by nearly a third between 1970 and 2006, and continues to fall globally, with especially severe declines in the tropics and among freshwater species.
- Natural habitats in most parts of the world continue to decline in extent and integrity, although the rate of loss for tropical forests and mangroves has slowed significantly in some regions. Freshwater wetlands, sea ice habitats, salt marshes, coral reefs, seagrass beds, and shellfish reefs are all showing serious declines.
- Extensive fragmentation and degradation of forests, rivers and other ecosystems

[1] Convention on Biological Diversity, UNEP/CBD/94/1.
[2] Millennium Ecosystem Assessment 2005, Ecosystems and Human Well-being: Synthesis, Island Press, Washington DC.
[3] TEEB (2010) The Economics of Ecosystems and Biodiversity: Mainstreaming the Economics of Nature: A synthesis of the approach, conclusions and recommendations of TEEB.

have also led to loss of biodiversity and ecosystem services.

- Crop and livestock genetic diversity continues to decline in agricultural systems.[4]

Drivers of Biodiversity Loss

5. The Millennium Ecosystem Assessment established that the five main direct drivers of biodiversity loss are habitat change, overexploitation or unsustainable use, invasive alien species (particularly in island ecosystems), climate change, and pollution.[5] More recent analyses, including the Global Biodiversity Outlook 3, reported that these five drivers remain the principal causes of biodiversity loss and are either constant or increasing in intensity. An analysis of the proportion of threatened species on the IUCN Red List (mammals, birds, amphibians) affected by each driver showed that more than 80% are under threat from habitat loss, 70% from overexploitation and unsustainable use, and almost 30% from invasive alien species. Although climate change is an emerging driver, less that 20% of threatened species are known to be affected by climate change and only 10% by pollution.[6]

Conference of the Parties (COP) Guidance to the GEF

6. The guidance to the GEF from COP-11 covering GEF-6 (2014-2018) directed the GEF to support the implementation of the Strategic Plan of the CBD, including the new Strategic Plan for biosafety and the first set of guidance provided to the GEF from the Open- ended Ad Hoc Intergovernmental Committee for the Nagoya Protocol on Access and Benefit-sharing (ICNP).[7] However, the COP did not prioritize the elements of the Strategic Plan or the Aichi Targets that GEF should support during GEF-6.

7. The Strategic Plan defined by the COP and the guidance provide to the GEF is ambitious, comprehensive, and potentially expensive to implement. At COP-11, an estimate of the resources required to implement the strategic plan and achieve the Aichi Targets within GEF-eligible countries was presented by an external expert group. The estimate of the amount of resources required for the GEF-6 period ranged from $ 35-87 billion in total for GEF-eligible countries, and, after applying various co-financing ratios, the GEF incremental amount ranged from $5 to $29 billion.[8]

Rationale and Approach

8. The GEF-6 strategy does not address all direct or indirect drivers of biodiversity loss. The strategy instead target the three principal direct drivers — habitat loss, overexploitation, and invasive alien species — which remain the most critical and are largely responsible for current trends of biodiversity loss and ecosystem degradation. This approach will enable GEF to best exploit the intersection of GEF's mandate and the CBD Strategic Plan and the associated Aichi

[4] Secretariat of the Convention on Biological Diversity (2010) Global Biodiversity Outlook 3. Montréal, 94 pages.
[5] Millennium Ecosystem Assessment 2005, Ecosystems and Human Well-being: Synthesis, Island Press, Washington DC.
[6] H. M. Pereira, L. M. Navarro, and I. S. Martins, "Global Biodiversity Change: The Bad, the Good, and the Unknown," Annual Review of Environment and Resources, vol. 37, no. 1, pp. 25–50, Jan. 2012.
[7] UNEP/CBD/COP/DEC/XI/4.
[8] UNEP/CBD/COP/11/INF/35.

Targets, and will ensure that GEF investments achieve impact at scale while delivering global environmental benefits.

9. The current drivers of biodiversity loss require a multi-pronged strategy to sustain biodiversity through a combination of protection, sustainable use, and biodiversity mainstreaming. GEF's response recognizes effectively managed protected area systems—a cornerstone of conservation for more than 100 years - as a significant contribution to achieving many of the Aichi Targets. Protected area systems provide economically valuable ecosystem goods and services and hence are core elements of a country's ecological infrastructure. At the same time, development and resource use external to the protected area estate often degrades biodiversity and ecosystem goods and services. Targeted threat reduction and the promotion of the sustainable use of biodiversity can address this dynamic and help secure the protected areas themselves while contributing to the sustainable management and climate-resiliency of the surrounding landscapes and seascapes.

10. The set of actions known as biodiversity mainstreaming internalize the goals of biodiversity conservation and sustainable use into economic development and production sectors that impact biodiversity. Such actions embed biodiversity conservation and sustainable use in decision making at all levels of society, including that of the private sector, and can enable biodiversity to persist across the entirety of the landscape and seascape. However, the societal failure to adequately price the economic value of biodiversity and the ecosystem services it provides has undermined the long-term sustainability of attempts to mainstream biodiversity, which have often focused too narrowly on threat mitigation and palliative attempts to offset biodiversity loss. Hence, GEF's support to biodiversity mainstreaming actions that addresses these systemic failures is paramount.

11. A contributing element for promoting sustainability of biodiversity is opportunistic engagement with the private sector. In the past, the GEF biodiversity focal area has supported numerous projects that demonstrate successful private sector engagement and have attracted significant private sector co-financing. Consistent with the GEF-6 private sector strategy, this focal area will encourage the use of a range of intervention models, including support for enabling policy environments, corporate alliances, and capacity building/incubation for innovation as appropriate to advance the objectives of the CBD. As identified in the private sector strategy, each model may be used in different ways across several categories of private sector players, including capital providers, financial intermediaries, and other key partners (large corporations, small and medium enterprises, resource user groups, cooperatives, and individuals). Within that context, the biodiversity focal area will support projects that propose innovative engagement with the private sector and that aim to complement rather than replace public sector support.

Goal and Objectives

12. The goal of the biodiversity focal area strategy is to maintain globally significant biodiversity and the ecosystem goods and services that it provides to society. To achieve this goal, the strategy encompasses four objectives:

(a) improve sustainability of protected area systems;
(b) reduce threats to biodiversity;
(c) sustainably use biodiversity; and
(d) mainstream conservation and sustainable use of biodiversity into production landscapes/seascapes and sectors.

13. The GEF-6 biodiversity strategy is composed of 10 programs that directly contribute to implementing the CBD Strategic Plan and achieving the Aichi Targets through a continuum of measures that address the most critical drivers of biodiversity loss across the entire landscape and seascape. Hence, the programs address habitat loss, overexploitation, and invasive alien species through a combination of direct conservation, threat-reduction, sustainable use, and mainstreaming interventions. Although climate change is not the dominant driver of biodiversity loss, GEF will continue to support activities that are operationally feasible and help strengthen ecosystem resilience and maintain biodiversity in the face of climate change. This would include, for example, support to improving protected area system and site design, and sustainable use strategies that incorporate climate change considerations. Furthermore, the biodiversity strategy seeks to maintain biodiverse landscapes and seascapes at sufficient scale to strengthen terrestrial and oceanic ecosystem integrity and the significant role these ecosystems play in the global carbon cycle, allowing these ecosystems to serve as major carbon stores and sinks. Securing ecosystem integrity also maintains essential ecosystem services that help people cope with changes in water supplies, fisheries, incidence of disease, and agricultural productivity caused by climate change. Each program provides a response to threats that are spatially and thematically specific, i.e., providing a focused response to the threats to biodiversity in a specific ecosystem or location in a landscape or seascape. In addition, the strategy addresses the most critical underlying driver of biodiversity loss; the failure to account for and price the full economic value of ecosystems and biodiversity, through systemic biodiversity mainstreaming approaches that have high potential for far-reaching and sustained impact.

14. In addition to the 10 programs presented in the strategy, GEF will also provide support to countries to produce the 6th National Report to the CBD. The overwhelming majority of GEF-eligible countries (95%) have received support during GEF-5 to revise their National Biodiversity Strategy and Action Plan (NBSAP) to be aligned with the CBD Strategic Plan and the Aichi Targets. However, countries that have not been able to submit a project proposal will remain eligible for support to revise their NBSAP during GEF-6. Consistent with past practice and the GEF project review criteria, projects submitted for funding in GEF-6 will have to demonstrate that the thematic areas addressed within the project have been prioritized within the NBSAP and are appropriately aligned with the CBD Strategic Plan and the Aichi Targets.

15. In order to provide greater return on investment, the strategy prioritizes a series of Programs that meaningfully contribute to 14 of the 20 Aichi Targets and that have the greatest potential for a "knock-on" effect to help achieve other Aichi Targets. Although not explicitly highlighted in the Aichi Targets, the strategy also incorporates elements of the new Strategic Plan on Biosafety, with a focus on implementation of National Biosafety Frameworks (NBF) as this remains unfinished business from previous GEF phases.

16. It is important to note that while Aichi Targets 1,8,17, 18, 19 and 20 are not supported through a targeted and specific program, they will still receive direct and indirect support during GEF-6. First, awareness-raising as identified in Target 1 will be supported as an element of GEF projects and programs as appropriate, but not as a stand-alone activity as experience from GEF's biodiversity portfolio has demonstrated that investments in awareness-raising are not effective unless linked with an actual project intervention on biodiversity management or policy development. Second, contributions to Target 8 will be made both directly and indirectly through the implementation of the International Waters, Chemicals, and Land Degradation Focal Area strategies. Third, GEF will have fully funded the development of revised NBSAPs during GEF-5 and the implementation of priority actions within each country's NBSAP will be supported through the entirety of the GEF-6 biodiversity strategy and specific GEF-6 Signature Programs, thus contributing to Target 17.[9] Fourth, both Targets 18 and 19 are deemed as operational means to an end and their integration into the project design and implementation process will be encouraged as relevant to specific project designs. With regards to Target 20, GEF will track the total amount of co-financing leveraged through GEF biodiversity projects and actively encourage and promote such leverage, including through multi-focal area projects and other GEF projects that contribute directly and indirectly to the Aichi Targets. In sum, the breadth of the GEF-6 strategy provides ample opportunity for countries to prioritize GEF-supported investments, as defined in the revised NBSAP, to achieve the Aichi Targets.

17. The four objectives of the GEF strategy respond directly to the four goals of the Strategic Plan, but do so in a targeted way to help ensure that the GEF contribution to each goal and the associated targets will have the greatest impact per dollar invested. Table One below demonstrates the contribution of the objectives and programs of the GEF biodiversity strategy to the goals of the Strategic Plan and the associated Aichi Targets.

BD Table 1 - Relationship between CBD Strategic Plan and GEF Biodiversity (BD) Objectives and Programs

Strategic Plan Goals and Associated Aichi Targets	**GEF Biodiversity Objectives and Program Alignment**	**Other Aichi Targets Impacted[10]**
Goal A. Address underlying causes	*GEF objective 4: Mainstream biodiversity*	
1. Raise awareness of biodiversity values	BD Programs 1-10 (integration into project design and implementation as appropriate and useful)	All targets
2. Integrate biodiversity and development	BD Programs 3 and 10	All targets
3. Address incentives harmful to biodiversity	BD Program 10	1,2,4,5,6,7,8,9,10,11,12
4. Sustainable production and consumption	BD Program 3	1,2,4,5,6,7,8,9,10,11,12,1314, 15

[9] The GEF-6 Signature Programs are distinct from the biodiversity strategy, and are described separately in the Programing Document.

[10] Report of the High Level Panel on Global Assessment of Resources for Implementing the Strategic Plan for Biodiversity 2011-2020, UNEP/CBD/COP/11/14/Add2*

Strategic Plan Goals and Associated Aichi Targets	**GEF Biodiversity Objectives and Program Alignment**	**Other Aichi Targets Impacted[10]**
Goal B. Reduce direct pressures	*GEF objective 2: Reduce threats to biodiversity*	
5. Halve rate of habitat loss	BD Programs 1, 2, and 3	6,7,8,11,12,13,14,15,16
6. Achieving sustainable fisheries	BD Program 2 and 7	4,5,7,8,10,11,12,14
7. Sustainable agriculture, aquaculture, forestry	BD Program 3 and 8	4,5,6,8,9,10,11,12,13,14,15,16,18
8. Reduce pollution to safe levels		4,5,6,7,10,11,12,14,15
9. Achieve effective IAS management	BD Program 5	5,6,7,9,10,11,12,13,14 , 15
10. Minimize pressures on reefs and other vulnerable ecosystems	BD Program 2 and 7	6,12,13
Goal C. Enhance state of biodiversity	*GEF Objective 1: Sustainable Protected Area Systems* *GEF Objective 3: Sustainable Use of Biodiversity*	
11. Expansion of Protected Area Networks and Effective Management	BD Programs 1,2,3,4 and 7	1,2,5,6,7,8,10,12,14,15
12. Prevent extinctions and improve status of threatened species	BD Programs 1, 2, 3,4 and 5	5,11, 13
13. Maintain gene pool of plant and animal genetic resources	BD Programs 1 and 8	2,7,12
Goal D. Enhance benefits of ecosystem services	*GEF Objectives 1,2,3, and 4*	
14. Restore and safeguard essential ecosystem services	BD Programs 2 and 3	5,10,11,12,13
15. Enhance ecosystem resilience and carbon stocks	BD Programs 1, 2, 3 and 10	5,11,12,13
16. Achieve entry into force of ABS Protocol	BD Program 9	1,2,4,5, 10, 11, 12, 13, 18, 19
Goal E: Enhance implementation	*Integrated throughout GEF Programming*	
17. Implementation of revised NBSAPs	NBSAP development funded during GEF-5. Implementation supported by all GEF-6 BD programs.	All targets
18. Traditional knowledge	Integrated into project design and implementation as appropriate in all GEF-6 BD programs.	7,13,14,15,16,19
19. Knowledge-base and science applied	Integrated into project design and implementation as appropriate in all GEF-6 BD programs.	All targets
20. Resource mobilization	GEF will identify, make use of, and report on all financing leveraged through GEF BD programs and signature programs	All targets

18. Due to the comprehensive nature of the CBD Strategic Plan, four of the five signature programs will also make significant contributions to the Aichi Targets, as will other GEF focal areas. Contributions of each Signature Program and other GEF focal area strategies are presented in Table Two below.

BD Table 2 - Contributions to Achieving the CBD Strategic Plan from the GEF Signature Programs and other GEF Focal Areas

Strategic Plan Goals and Targets	GEF Signature Programs, and Focal Area Alignment	Other Aichi Targets Impacted
Goal A. Address underlying causes		
2. Integrate biodiversity and development	Signature Program Amazon Basin	5, 10, 12, 14, 15
3. Address incentives harmful to biodiversity	Signature Program on Global Commodities	1,2,4,5,6,7,8,9,10,11,12
4. Sustainable production and consumption	Signature Program on Global Commodities	1,2,4,5,6,7,8,9,10,11,12,13,14,15
Goal B. Reduce direct pressures		
5. Halve rate of habitat loss	Signature Program on Global Commodities Sustainable Forest Management Program	6,7,8,11,12,13,14,15,16
6. Achieving sustainable fisheries	Signature Program on Sustainable Fisheries	4,5,7,8,10,11,12,14
7. Sustainable agriculture, aquaculture, forestry	Sustainable Forest Management Program Signature Program Amazon Basin	4,5,6,8,9,10,11,12,13,14,15,16, 18
8. Reduce pollution to safe levels	Chemicals, International Waters, and Land Degradation Focal Area	4,5,6,7,10,11,12,14,15
10. Minimize pressures on reefs and other vulnerable ecosystems	International Waters Focal Area	6,12 and 13
Goal C. Enhance state of biodiversity		
11. Expansion of Protected Area Networks and Effective Management	Signature Program Amazon Basin	1,2,5,6,7,8,10,12,14,15
12. Prevent extinctions and improve status of threatened species	Signature Program Amazon Basin	5,11, 13
Goal D. Enhance benefits of ecosystem services		
14. Restore and safeguard essential ecosystem services	Sustainable Forest Management Program Signature Program Amazon Basin Signature Program on Global Commodities	5,10,11,12,13
15. Enhance ecosystem resilience and carbon stocks	Sustainable Forest Management Program Signature Program Amazon Basin Signature Program on Global Commodities	5,11,12,13

Strategic Plan Goals and Targets	GEF Signature Programs, and Focal Area Alignment	Other Aichi Targets Impacted
Goal E: Enhance implementation		
17. Implementation of revised NBSAPs	Forest-related implementation support by the SFM program.	All targets
18.Traditional knowledge	Integrated into project design and implementation as appropriate in the SFM program.	Targets 7,13,14,15,16,19
19. Knowledge-base and science applied	Sustainable Forest Management Program	All targets
20. Resource mobilization	GEF will identify, make use of, and report on all financing leveraged through GEF SFM program and signature programs	All targets

19. The GEF Signature Programs targeting the Amazon Basin and the production of Global Commodities will make significant contributions to the achievement of the Aichi Targets and can be seen as complementary inputs to the achievement of the objectives GEF biodiversity strategy. The Amazon Signature Program, through its comprehensive approach to sustainable management of the Amazon basin forest ecosystem and mainstreaming of biodiversity considerations into the actions of the productive sector, will advance all objectives of GEF's biodiversity strategy as well as Goals A, B, C, and D of the CBD Strategic Plan. The Global Commodities Signature Program, through its focus on taking deforestation out of the supply chain of soy, beef, and palm oil, will have an almost equal level of influence advancing objectives two and four of the GEF biodiversity strategy, and Goals A, B, and D of the CBD Strategic Plan.

Objectives and Programs

BD 1: Improve Sustainability of Protected Area Systems

20. GEF support to the establishment and management of protected areas has arguably been GEF's greatest achievement during the last 20 years. Support to protected areas is not only a sound investment in biodiversity conservation and sustainable use, but also provides significant additional economic and environmental benefits beyond the existence value of globally significant biodiversity. For example:

(a) Protected areas contain 15% of the global carbon terrestrial stock;
(b) Thirty-three of the world's 105 largest cities derive their drinking water from catchments within forest protected areas; and
(c) Hundreds of protected areas act as natural reservoirs for agriculturally important biodiversity including crop wild relatives, pollinators, and pest control. Protected areas in drylands include the sites of origin for important food crops such as barley, sorghum, and other cereals.[11]

[11] N. Lopoukhine, et al., « Protected areas: providing natural solutions to 21st Century challenges », S.A.P.I.EN.S [Online], 5.2 2012, Online since 10 August 2012, Connection on 04 February 2013. URL : http://sapiens.revues.org/1254

21. The GEF defines a sustainable protected area system as one that: a) effectively protects ecologically viable representative samples of the country's ecosystems and provides adequate coverage of threatened species at a sufficient scale to ensure their long term persistence; b) has sufficient and predictable financial resources available, including external funding, to support protected area management costs; and c) retains adequate individual and institutional capacity to manage protected areas such that they achieve their conservation objectives.12 GEF support will strengthen these fundamental aspects of protected area systems, with particular emphasis on reducing external threats to the conservation objectives of protected areas. GEF will continue to promote the participation and capacity building of indigenous and local communities in the design, implementation, and management of protected area projects through established frameworks such as indigenous and community conserved areas.13 GEF will also promote protected area co-management between government and indigenous and local communities where such management models are appropriate.

22. Developing climate-resilient protected area systems remains a challenge because the scientific understanding and technical basis for informed decision-making on adaptation or resiliency measures is in its nascent stages; therefore, GEF will support the development and integration of adaptation and resilience management measures as part of protected area management projects.

23. During GEF-4 and GEF-5 considerable progress has been made in implementing GEF's protected area strategy. However, the application of the strategy has been uneven with regards to: a) the systematic closing of the financing gap at the national level and ensuring that increased revenues are being directed towards globally significant habitat; and b) ensuring that filling the ecosystem and threatened species coverage gap is always being directed to areas of the highest global significance. Therefore in GEF-6, a more targeted strategy will be implemented to ensure that investments in protected area finance and expansion achieve their desired results. In addition, two new programs are introduced which focus on threat reduction in the broader landscapes and seascapes where protected areas are located.

Program 1: Sustainable Financing of the National Ecological Infrastructure

24. GEF has supported basic protected area management capacity building for more than 20 years. While individual protected area management capacity has increased globally through extensive investment by GEF and other donors, the lack of financial resources remains a critical barrier and persistent limiting factor to effective management of protected areas.

25. Restricted government budgets in many countries have reduced the financial support for protected area management and many are chronically underfunded and understaffed. Thus, new financing strategies for protected area systems are critical to reduce existing funding gaps. Furthermore, protected area agencies and administrations are often ill-equipped to respond to the commercial opportunities that protected areas provide through the sustainable use of

[12] 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.

[13] Indigenous and Community Conserved Areas are natural sites, resources and species' habitats conserved in voluntary and self-directed ways by indigenous peoples and local communities.

biodiversity. Hence targeted capacity building is also required. GEF began to invest in improving financial sustainability of protected area systems in GEF-4, but chronic, system-wide funding gaps remain at the national level in many GEF-eligible countries. An independent assessment estimated that between $23-50 billion would be required to advance achievement of Target 11 in GEF-eligible countries during the GEF-6 period.[14]

26. GEF-supported interventions 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, 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. The GEF-6 strategy prioritizes the development and implementation of comprehensive, system-level financing solutions. Previous GEF projects have too often been focused on business plans and strategy development, with minimal project resources or time dedicated to actual implementation of the financing strategies.

27. Projects supported under this program will be required to identify where and how increased revenues will be directed to support management of globally significant protected areas within the national system (see criteria in Table 3 below). Previous GEF strategies have embodied an approach that any incremental reduction in the system-level funding gap would by default benefit globally significant protected areas to some degree or another. During GEF-6, project designs will identify the protected areas to which increased funding will be directed as a result of the GEF investment while recognizing that a proportion of the increase will be absorbed by system-level administration and management costs.

Program 2: Nature's Last Stand: Expanding the Reach of the Global Protected Area Estate

28. TEEB (The Economics of Ecosystems and Biodiversity) noted that the value of ecosystem services that protected areas provide often exceed the costs, including the opportunity costs, of setting up and managing those areas. Nevertheless, the time window for expansion of the protected area estate to bring under-represented ecosystems and threatened species under protection is limited and a sense of urgency remains as land-use pressure increases and populations expand.[15] In many countries, opportunities for expansion of the protected area estate may lie in IUCN categories IV-VI, thus placing increasing importance of using protected areas to promote sustainable use of biodiversity.

29. This program will contribute to the achievement of the new targets of 17% and 10% coverage for terrestrial and marine areas respectively; however, the program will require that protected areas that are established with GEF support must be globally significant, as defined by the criteria in Table 3 below. Given the limited amount of resources available for this program, the focus of these interventions will be on expansion of the estate, not management of these new

[14] UNEP/CBD/COP/11/INF/35.

[15] TEEB (2010) The Economics of Ecosystems and Biodiversity: Mainstreaming the Economics of Nature: Asynthesis of the approach, conclusions and recommendations of TEEB.

sites. Program 1 will focus on generating resources for the management of globally significant protected areas such as those that may be established under Program Two.

BD Table 3 - Summary of GEF Criteria for Defining Globally Significant Sites for Biodiversity Conservation

Criterion	Sub-criteria	Provisional Thresholds for GEF Support
Vulnerability Regular occurrence of a globally threatened species (according to the IUCN Red List) at the site	Not applicable	Critically Endangered (CR) and Endangered (EN) Species Vulnerable Species (VU)
Irreplaceability Site holds X% of a species' global population at any stage of the species' lifecycle	Restricted-range species	Species with a global range less than50,000 square kilometers 5% of global population at site
	Species with large but clumped distributions	5% of global population at site
	Globally significant congregations	1% of global population seasonally at site
	Globally significant source populations	Site is responsible for maintaining 1% of global population
	Bio-regionally restricted assemblages	To be defined

30. Only about 2.35 million km^2, 0.65% of the world's oceans and 1.6% of the total marine area within Exclusive Economic Zones, are currently protected.[16] The GEF will continue to redress this disparity through investments to increase the representation of globally significant marine ecosystems in protected area systems. GEF will support efforts to address the marine ecosystem coverage gap within national level systems through the creation and effective management of coastal and near shore protected area networks, including no-take zones, to conserve and sustainably use marine biodiversity. As per Program 9, a particular focus of expanding marine area coverage will be to increase the area of coral reefs within Marine Protected Areas (MPAs) thus making a direct contribution to the achievement of Aichi Target 10. The identification and establishment of MPA networks or of large MPAs whose management will help reduce pressures on coral reefs will be targeted.

31. Many countries have also identified gaps at the national level in the coverage of terrestrial ecosystems and threatened species, which coincide with existing global level representation gaps. GEF will support the creation of new protected areas to expand terrestrial and inland water ecosystem representation within protected area systems. Conserving habitat for landraces and wild crop relatives of species of economic importance may also be included as part of this effort to reduce representation gaps as referenced in Program 8. GEF will also support the creation of new protected areas that extend the coverage of threatened species in protected area systems and improve the coverage of their spatial range.

[16] Assessing progress towards global marine protection targets: shortfalls in information and action. Louisa J. Wood, Fish Lucy, Laughren Josh, Pauly Daniel, 2008, Volume: 42, Oryx.

BD 2: Reduce Threats to Globally Significant Biodiversity

Program 3: Managing the Human-Biodiversity Interface

32. Protected areas do not exist as isolated islands of tranquility where evolutionary processes continue uninterrupted by humans. Rather, they are often found in mixed-use landscapes and seascapes where natural resources are intensively managed for satisfying human needs such as food, water, fuel, and wood. Protected area administrations are thus challenged to achieve their conservation objectives while land-use decisions and development taking place outside the park borders often work at cross-purposes to their conservation goals.

33. Program 3 will complement Programs 1 and 2 by focusing on the management of existing protected areas, but with a focus on reducing threats to protected areas that primarily originate in their surrounding landscapes and seascapes, either directly adjacent to the protected areas themselves or in the broader landscape or seascape.

34. Strengthening natural resources management in the bio-physical and socio-economic milieu that protected areas are part of enables protected area administrations and other stakeholders to turn a potential management problem into an opportunity to sustain protected areas for the long-term. This approach moves beyond the mechanical consideration of biological corridors to encompass a more fluid and integrated understanding of landscape/seascape-level ecosystem processes and management requirements within and beyond protected areas themselves.

35. Therefore, Program 3 will support investments that reduce external threats in the adjacent and broader landscapes/seascapes of protected areas. The program will support implementation of landscape/seascape level natural resource management and/or threat reduction strategies that strengthen protected area integrity and directly and indirectly support the conservation objectives of globally important protected areas (see Table 3). These approaches include spatial- and land-use planning and appropriate zoning, the use of Payment for Ecosystem Services schemes, the promotion of positive incentives such as biodiversity-friendly certification for sustainable agriculture, forestry, and fisheries production, the development of policy and regulatory frameworks supportive of biodiversity conservation and sustainable use, etc. Within this program, it will be essential to engage with a wide array of stakeholders, including, resource-user groups, cooperatives, other private sector partners, and local and indigenous communities, etc., given their respective footprints within these geographies. Support will also be provided for ecosystem restoration under this program in specific locations where restoration will ensure the persistence of globally important biodiversity in adjacent protected areas.

Program 4: Reducing Widespread Poaching of African Elephants and Rhinos and Illegal Trafficking of Elephant Tusks and Rhino Horns

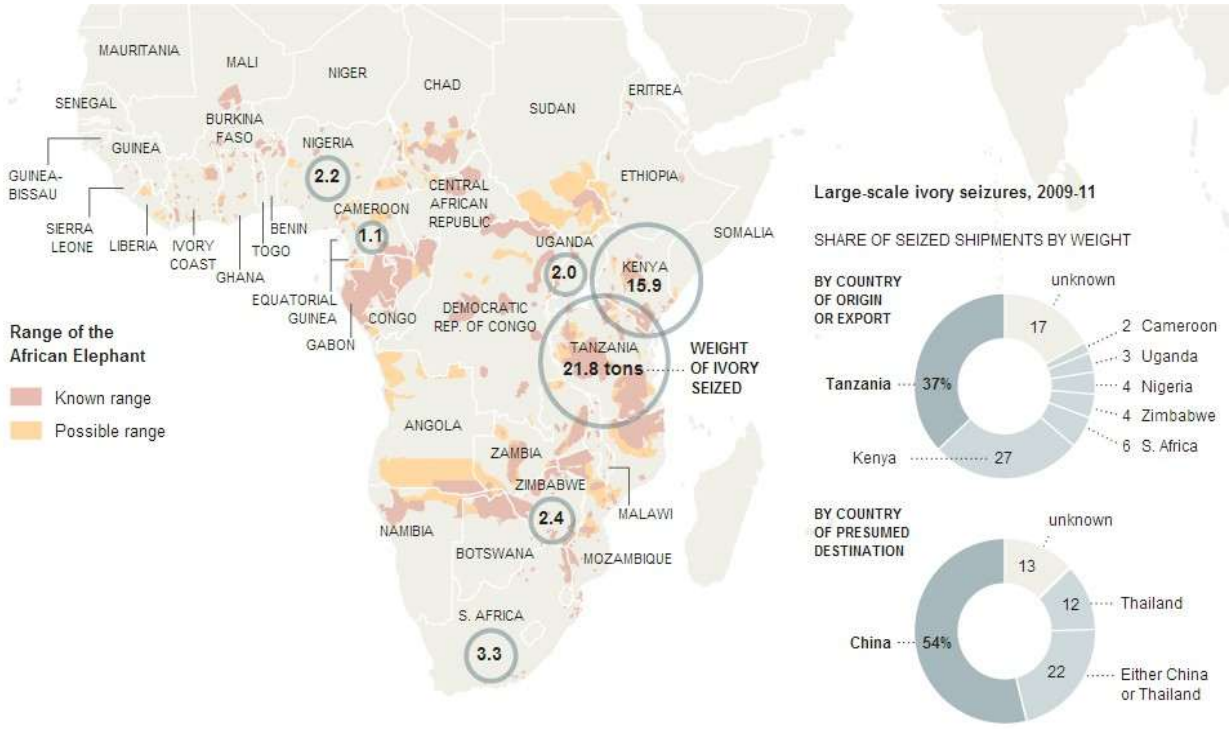
36. Illegal trade in wildlife and wildlife parts is an emerging driver of biodiversity loss. This problem is particularly acute in Africa, where iconic mammals of the African continent are under siege. Over the past several years, elephant and rhino populations have fallen as poachers

slaughter them for their tusks and horns that are sold on the black market, mainly in Asia (see Figure 1). The impact of the loss of the largest terrestrial mega-vertebrates still roaming the planet goes beyond their enormous intrinsic value. First, protected areas devoid of elephants and rhinos will face increased opportunity costs brought about by reduced tourism revenue and result in greater pressure to convert protected areas to alternative land-uses that are not supportive of biodiversity. Second, poaching is an insidious activity, further weakening institutions and governance systems that are essential for effectively managed protected area systems. In addition, poaching at the current scale undermines the rule of law and economic development generally. Third, elephants and rhinos play key roles as a keystone species in maintaining the balance of other species in the ecological community. The richest wildlife communities in Africa are found neither in pure woodland nor in pure savanna ecosystems, but in areas where the two general types of habitat meet and become interspersed with each other. Elephants in particular are one of the most important agents influencing the dynamics of that mixture, and their activities generally increase the overall biological diversity of their habitat. While rhinos are not as robust environmental engineers as elephants, they also play an important role in opening up pathways and seed dispersal avenues in dense thickets that are otherwise impenetrable to antelope and other species. In addition, rhino can add significantly to the heterogeneity of the system and increase biodiversity by making available new ecological niches, such as grazing areas.[17] Finally, the program responds to a request of the GEF Council to identify opportunities within the GEF-6 strategy, and under the umbrella of the CBD Strategic Plan and the Aichi Targets, to address concerns of the other biodiversity-related conventions. As such, this program addresses a priority of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES).

37. Armed militias are using increasingly sophisticated communication technologies, weapons, and transport that are overwhelming the capacity of Governments to stop them. Sharp increases in the incidences of poaching have resulted in a call by national and international organizations to increase efforts to stop poachers that threaten not only wildlife but also humans while undermining the economic development that wildlife-based tourism brings to rural communities and national governments. Of equal importance is the need to tackle the illegal trafficking of, demand for, and consumer behavior regarding these natural products in the markets of Asia and elsewhere, including local markets.

[17] Waldram, M. 2005. "The Ecological Effects of Grazing by the White Rhino at a landscape scale.", University of Capetown, 224 p.

BD Figure 1 - Large Scale Ivory Seizures, 2009-2011



The map appeared in the New York Times, September 13, 2012. Sources of information: Elephant Status Report, Convention on International Trade of Endangered Species (CITES) and Elephant Trade Information Systems (ETIS)

38. This program will address both supply and demand aspects of this phenomenon with the aim of building monitoring and enforcement capacity at the source and using social media, education and awareness-raising to staunch the demand for these products and pressure Governments to improve enforcement of existing laws.

39. The GEF will support strengthening decision making processes, strategic planning, and national agencies in Africa engaged in reducing poaching and illegal trade of tusks, horns, and associated by-products. Supports include building the capacity of environmental law enforcement agencies and the judiciary in their activities against environmental crime. Border enforcement through cross-sectoral collaboration and public-private-community partnerships may be important. GEF will also support the preparation of action plans where governments commit to an adequate budget for the implementation of strategies, effectively contributing to the sustainability of these activities.

40. The GEF will support joint operations, and law-enforcement actions to reduce poaching in and out of the protected area system. It is necessary to allocate adequate manpower to field protection, and rhino and elephant monitoring with adequate communications and GPS equipment. Efforts should be made to review and strengthen the relevant legislations and its implementation, including ensuring the successful arrest, conviction, and sentencing of poachers,

illegal traders, and crime syndicates operating locally (e.g., at protected area level), nationally, regionally, and internationally. GEF will also target trans-continental trafficking by supporting efforts to increase cooperation within and between law enforcement agencies and relevant international organizations, and to mobilize political support for environmental law enforcement

41. Perhaps most importantly, efforts must be made to reduce consumer demand for illegally traded wildlife by raising awareness of the scale and impacts of illegal wildlife trade on biodiversity and the environment, livelihoods, and human health, its links to organized crime, and the availability of sustainable alternatives. GEF will support activities to catalyze high-level political will to fight wildlife trafficking, and secure the shared commitment of government (at national and local levels), private land owners, local communities and international stakeholders.

42. Wildlife poaching and illegal trade in Eurasia, including Asia, Russia, and Central Asia, is also increasing dramatically. The demand for high-value wildlife products in Asian markets has helped fuel a dramatic upsurge of poaching of Asian elephants and rhinos, as well as other wildlife. If resources allow, the GEF will complement work undertaken in Africa to reduce poaching through a similar array of interventions at source sites for rhino and elephants in Asia including: 1) strengthening national legislation, institutions, and law enforcement to reduce poaching; 2) strengthening science-based wildlife monitoring, education and awareness; 3) reducing demand for illegal wildlife products.

43. This program will be developed and implemented as a pilot to best evaluate how the GEF can engage with the relevant stakeholders, forge new partnerships, and deliver financial resources and the technical assistance required when addressing illegal trade of wildlife and other species. The program will build on a limited number of GEF-5 projects targeting illegal trade, e.g. "Strengthening Wildlife Forensic Capabilities to Combat Wildlife Crime for Conservation and Sustainable Use of Species (Rhinoceros)" in South Africa, and "Fighting Against Wildlife Poaching and Illegal Trade in Africa: The Case of African Elephants". Lessons learned from Program Four will provide insights for future GEF investments addressing illegal trade in endangered and other species.

Program 5: Avoiding Imminent Extinction in Island Ecosystems: A Time-sensitive Agenda

44. Invasive alien species (IAS) are non-native organisms that cause, or have the potential to cause harm to the environment, economy and human health, and they have been identified as one of the five principal direct drivers of biodiversity loss. The globalization of trade, travel, and transport is greatly increasing the rate at which IAS move around the world, as well as the diversity and number of species being moved.

45. IAS can exert a heavy economic toll on national governments, industries, and the private sector. For example, the estimated damage from invasive species worldwide totals more than $1.4 trillion or five percent of the global economy.[18] IAS can impact human health through

[18] Pimentel, D., McNair, S., Janecka, J., Wightman, J., Simmonds, C., O'Connell, C., Wong, E., Russel, L., Zern, J., Aquino, T. and Tsomondo, T. 2001. Economic and environmental threats of alien plant, animal, and microbe invasions. Agriculture, Ecosystems and Environment 84: 1-20.

disease epidemics, and pathogens and parasites may themselves be invasive alien species or may be introduced by invasive vectors.

46. Despite the various COP decisions identifying the need for Parties to address IAS as a priority biodiversity management problem, only 11 projects focused on IAS have been submitted for funding to the GEF in the past 20 years and only one project in the first three years of GEF-5. These national and regional projects have benefited 30 countries, including 20 island states and two continental countries that invested in IAS management in island archipelagos under their jurisdiction. Therefore, given the stronger interest to advance IAS management on the part of island states and countries with island archipelagos, coupled with the fact that invasive alien species 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, this program will primarily focus on island ecosystems. This focus is driven not only by programming demand, but by an ecological imperative 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 under this program.

47. Islands are particularly susceptible to the impacts of IAS. Islands are recognized as having 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, and that 47% of Endemic Bird Areas, 25% of the terrestrial Global 200 Ecoregions, 30% of the biodiversity hostpots and 40% of Alliance for Zero Extinction sites are islands.

48. The isolated nature of islands can also provide some advantages in efforts to minimize the spread and impact of IAS and to manage IAS pathways in a cost-efficient manner. Terrestrial and freshwater IAS have difficulty colonizing islands on their own accord. Furthermore, the contained nature and relatively small size of islands enables the implementation of cost-effective response measures to prevent introductions, and to control and manage IAS that do become established.

49. During GEF-6, given threat that IAS pose to islands and the potential global biodiversity return on investment, support to the implementation of IAS management frameworks will focus primarily on island states and islands. 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. 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 significant species and/or ecosystems. While the program will focus on island ecosystems and will strongly engage with island states to advance this agenda in a targeted and strategic way, continental countries may present projects that address IAS management through the comprehensive pathways approach outlined above.

Program 6: Implement the Cartagena Protocol on Biosafety

50. The Cartagena Protocol on Biosafety (CPB) seeks to ensure an adequate level of protection in the field of the safe transfer, handling, and use of living modified organisms resulting from modern biotechnology that may have adverse effects on biological diversity. While rooted in the precautionary approach, the CPB recognizes modern biotechnology as having great potential for the promotion of human well-being, particularly in meeting critical needs for food, agriculture and health care. The Protocol sets the parameters to maximize the benefit that biotechnology has to offer, while minimizing the possible risks to the environment and to human health.

51. 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 recently adopted 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 recently adopted Strategic Plan for Biosafety, 2011-2020 agreed at COP-MOP 6. By the end of GEF-5, as many as 64 countries will have received support for implementation of their National Biosafety Frameworks (NBFs); however, another 71 eligible countries have yet to request support to implement their NBFs. GEF-6 will provide the opportunity for these countries to seek support for these initial phases of basic capacity building to implement the CPB.

52. The implementation of National Biosafety Frameworks in these remaining countries will be undertaken when the characteristics of the eligible country, as assessed in the stock-taking analysis, recommend a national approach for the implementation of the CPB in that country. Providing support to eligible countries through regional or sub-regional projects will be pursued when there are opportunities for cost-effective sharing of limited resources and for coordination between biosafety frameworks to support CPB implementation. These kinds of approaches will be pursued where stock-taking assessments support the potential for coordinating biosafety frameworks, interchange of regional expertise, and capacity building in common priority or thematic areas to develop the capacities of groups of countries lacking competences in relevant fields.

53. The GEF will support thematic projects addressing some of the specific provisions of the Cartagena Protocol. 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.

54. The GEF will support the ratification and implementation of the Nagoya-Kuala Lumpur Supplementary Protocol on Liability and Redress to the CPB for those parties where the NBF has been implemented and is fully operational.

BD 3: Sustainably Use Biodiversity

Program 7: Ridge to Reef+: Maintaining Integrity and Function of Globally Significant Coral Reef Ecosystems

55. Coral reefs cover only 0.2% of the ocean's floor, but they contain 25% of all marine species. For many countries, coral reef ecosystems are a critical mainstay in supporting fisheries, tourism, and coastal protection, and offer opportunities for other kinds of exploitation such as bio-prospecting, fish aquaria, and jewelry. TEEB estimated that coral reef ecosystems provide society with living resources and services worth about $375 billion each year.

56. Despite their economic value, coral reef ecosystems are threatened by large disturbances. The most recent survey (2008) conducted by the Global Coral Reef Monitoring Network concluded that 19% of global coral reefs are unlikely to recover, 15% are in a critical stage (e.g., suffered a bleaching event, some mortality), and 20% are threatened by local activity. The combination of local (e.g., over-exploitation, physical damage), regional (e.g. pollution and sedimentation runoff from the adjacent watersheds), and global threats (e.g., ocean warming and acidification), make coral reef ecosystems increasingly susceptible to disturbance or damage.

57. Of the local pressures, overfishing is the most important threat, affecting more than 55% of the world's coral reef ecosystem; coastal development and watershed-based pollution each threaten about 25%; and marine-based pollution and damage from ships threaten about 10%.

58. Table 4 provides an overview of the status of coral reef ecosystems and threats in each of five major coral reef regions.

BD Table 4 - Regional Coverage and Threat Status of Coral Reef Ecosystems

Region	% of world coral reef	% of Coral Reef threatened	Major threats
Caribbean Region	10% High level of endemism	75%	Disease, Overfishing, Tourism, Land-based pollution, Shipping
Indian Ocean	13%	65%	Overfishing ,Tourism, Land based pollution
Pacific (including Eastern part of the Coral Triangle)	25%	50%	Overfishing, Tourism, Land-based pollution
Middle East	6% High level of endemism	70%	Shipping, Marine based pollution, Tourism industry
South East Asia (including Western half of the Coral Triangle)	28% Most extensive and diverse coral reef of the world	95%	Overfishing, Unregulated aquaculture, Land based pollution

59. Because coral reef resilience to bleaching and other stressors can be improved by a balanced biological and functional diversity with sufficient species interactions, the program will prioritize working in coral reef ecosystems that fulfill the following criteria:

(a) Globally significant source population (site is responsible for the persistence of a significant proportion of global population of coral reef); and
(b) Bioregionally restricted coral reef (site is responsible for persistence of a significant proportion of rare coral reef species or important for life history of coral reef ecosystem).

60. This program will support the development of the three inter-dependent components outlined below that are focused on threat reduction and sustainable use and that complement the investments in Marine Protected Areas under Program One and Two.

61. The GEF will support increasing the area of coral reefs situated within MPAs. An important spatial factor for coral reef resilience is the connectivity among and within coral reefs. Therefore, the development of MPA networks or of large MPAs will be targeted. Programs 1 and 2 will prioritize this expansion and secure resources for the management of these new areas.

62. GEF will support the development, adoption and enforcement of policy and regulatory frameworks and legislation to mitigate marine-based pollution and damage to coral reef ecosystems. GEF will also support national and international trade regulations for reef products, e.g., aquarium fish, corals, shells. This could include support to capacity building and encouraging certification and monitoring systems.

63. GEF will support the implementation of integrated coastal management that better addresses local marine pressures on coral reef ecosystems. This will include support for the development of rights-based management areas at the boundaries of MPAs. There are many different types of systems of property rights and different ways in which these are used to manage fisheries because the way in which these combinations are characterized in terms of their security (or quality of title), durability (permanence), transferability, and exclusivity, which vary greatly depending on the situation. In addition, holders of property rights can also vary. The legal empowerment that comes with rights based approaches to fisheries management is a function of four key characteristics: security, durability, transferability, and exclusivity. Under the GEF strategy, Fisheries Right Based Management refers to any system of allocating fishing rights to fishermen, fishing vessels, enterprises, cooperatives or fishing communities; which ensures the sustainable management of the targeted marine resource and its ecosystem. The income generated by the payment for access to the rights-based management areas will be used to promote coral reef ecosystem conservation and sustainable use.

64. Both within and outside rights-based management areas, GEF will focus on those actions that enhance coral reef health and resilience at the boundaries of the MPAs, including the application of fisheries management tools (restriction of fishing gear, regulations of fishing grounds and fishing seasons), the implementation of regulations for tourism (zoning, infrastructure development), and shipping (discharge from ships, shipping lanes, infrastructure development).

65. This targeted support to Integrated Coastal Management will address direct pressures on coral reefs (the "+" of the Program), and therefore complement current GEF-funded Ridge to Reef projects which primarily aim to reduce land-based pollution and promote Integrated Water Resources Management.

Program 8: Securing Agriculture's Future: Sustainable Use of Plant and Animal Genetic Resources

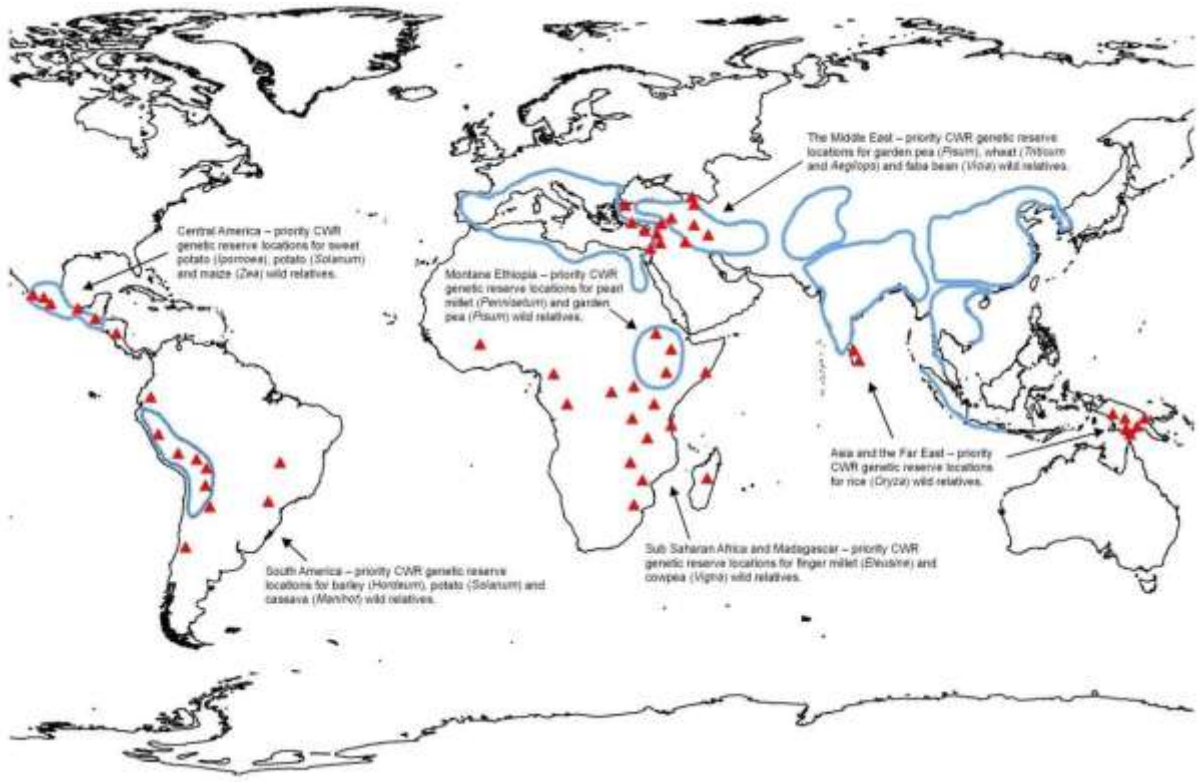
66. The conservation and sustainable use of the genetic diversity of cultivated plants, domesticated animals, of their wild relatives and of other socio-economically and culturally valuable species is central to achieving food security and nutrition of a growing world population, improving rural livelihoods, developing more sustainable agriculture practices, and improving ecosystem function and the provision of ecosystem services in production landscapes. As climates and production environments change, in often unpredictable ways, genetic diversity is also essential to providing the necessary adaptability and resilience.

67. There has been significant genetic erosion of crop and animal genetic diversity in many production systems. Threats to genetic diversity are associated with the continuing use of unsustainable approaches that drive excessive use of fertilizers and pesticides, pollution of aquifers and waterways, declining levels of groundwater and mismanagement of soils.

68. Land use changes and fragmentation threaten wild relatives of domestic plants and animals. There has also been significant loss of crop wild relatives (genetic and species diversity) from productive and other ecosystems. Program 2 of the biodiversity strategy will provide support to establish protection for Crop Wild Relatives (CWR) in-situ through CWR Reserves and Program 1 may generate revenues to support active management of CWR in existing protected areas. Figure 2 below identifies priority genetic reserve locations for wild relatives for 14 major global food crops (finger millet, barely, sweet potato, cassava, banana/plantain, rice, pearl millet, garden pea, potato, sorghum, wheat, faba bean, cowpea and maize).[19] The centers of crop genetic diversity indicated by the enclosed lines are likely to contain other priority sites for other crop gene pools. GEF investment in CWR reserves would focus on these areas primarily; however, support to managing priority CWR reserves mapped and identified at national level that complement global level assessments undertaken by FAO and others would also be eligible if the CWR in question were of global significance.[20]

[19] Second State of the World's Plant Genetic Resources for Food and Agriculture. 2009 FAO, Rome.
[20] A global approach to crop wild relative conservation: securing the gene pool for food and agriculture, 2010, Kew Bulletin, Vol. 65: 561-576. Maxted, Nigel et. al.

BD Figure 2 - Global Priorities for Genetic Reserve Locations



69. Ex-situ and in-situ conservation are complementary strategies to allow for the different genetic characteristics of a species to continue to exist over time. Significant progress has been made in the ex-situ conservation of crops. Gaps and limitations with this conservation approach need to be confronted, including the fact that the static approach of ex-situ conservation precludes continuing evolution and adaptation. In addition, many minor (but locally important) crops as well as crop and animal wild relatives are inadequately conserved ex-situ and many are difficult to conserve this way.

70. In-situ conservation, through farmer management, allows continuing evolution and adaptation of cultivated plants and domesticated animals. It meets the needs of rural communities, including indigenous and local communities, who often depend on agricultural biodiversity for their livelihoods through its contribution to food security and nutrition, medicines, fodder, building materials and other provisioning services as well through support for ecosystem function. In-situ conservation in production landscapes helps improve sustainability and resilience. A recent analysis confirmed that agricultural biodiversity played a central role in the strategies adopted by rural communities adapting to climate change (Mijatovic et al 2012[21]).

[21] Dunja Mijatovic, Frederik Van Oudenhoven, Pablo Eyzaguirre, and Toby Hodgkin. 2012, The role of agricultural biodiversity in strengthening resilience to climate change: towards an analytical framework. International Journal of Agricultural Sustainability.

71. GEF will concentrate it support on the sustainable use of plant genetic resources in Vavilov centers of diversity, especially in those that tend to be less favored by criteria that are based on total biological diversity (e.g. central Asia, the Caucasus, and North Africa). GEF will also support holistic responses to in-situ and on-farm management of globally significant crop genetic diversity in other geographic areas.

72. GEF will support conservation and sustainable use of plant and animal genetic resources by working with communities and smallholder organizations, as well as government and other stakeholders, including local and indigenous communities, to adopt or develop innovations to current production systems and practices. GEF will focus on innovations that:

(a) Maintain and strengthen different production systems and their elements, including agriculture practices based on local and traditional knowledge, that allow continued evolution and adaptation (adequate population sizes, seed systems, movement of useful materials, local institutions, and access to ex-situ materials).
(b) Link genetic diversity maintenance to improved food security and economic returns for rural communities and farmers (including local market access and market regulations)
(c) Develop policies, strategies, legislation, and regulations that shift the balance in agricultural production in favor of diversity rich approaches. These include support for the adoption of appropriate fiscal and market incentives to promote or conserve diversity on-farm and across the production landscape
(d) Strengthen capacity of the agricultural development, extension and research communities and institutions that are needed for in-situ conservation, so that agricultural biodiversity is embedded in sustainable intensification and adaptation to climate change; and
(e) Strengthen the capacities of community and smallholder organizations, and farmers (both men and women) to participate in the identification, development, and implementation of solutions.

Program 9: Implement the Nagoya Protocol on Access and Benefit Sharing

73. The Nagoya Protocol on Access and Benefit Sharing (ABS) provides a legal framework for the effective implementation of the third objective of the Convention on Biodiversity (CBD): "…the fair and equitable sharing of benefits arising from the utilization of genetic resources". This legally binding Protocol will allow users and providers of genetic resources around the world to engage in agreements to make use of the full potential of genetic resources in drug discovery, biotechnology applications, the development of natural personal care and cosmetic products, botanicals, flavors, and fragrances, among others.

74. Ninety-two (92) parties have signed and eighteen have ratified the Nagoya Protocol.[22] The Protocol will enter into force on the ninetieth day after the date of deposit of the 50th instrument of ratification, acceptance, approval or accession.

[22] The Nagoya Protocol was adopted by the Parties of the Convention of Biodiversity at the 11th meeting of the Parties on 29th October, 2010 in Nagoya, Japan.

75. The GEF will support implementation of the Nagoya Protocol using resources from the GEF Trust Fund (GEF TF) and the Nagoya Protocol Implementation Fund (NPIF). The successful implementation of ABS at the national level has the potential to make considerable contributions to biodiversity conservation and sustainable use, and thus is relevant to all Aichi Targets and nearly all of the GEF programs presented in the GEF biodiversity strategy. However, given the incipient nature of the thematic area, and the importance that the COP has placed on ABS both in the way guidance is presented to the GEF and the strong emphasis that has been given on capacity building at this stage, this program is presented as a discrete an important element of the GEF biodiversity strategy and thus merits its own program of support.

GEF Trust Fund Support

76. Projects funded under the GEF Trust Fund will support national and regional implementation of the Nagoya Protocol, build capacity among stakeholders, and enhance the value of genetic resources. GEF will also continue to support targeted capacity building, if still required, to facilitate ratification and entry into force of the Protocol.

National and Regional Implementation

77. The GEF will provide financial resources to support the following core activities to comply with the provisions of the Nagoya Protocol:

(a) 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 adding value to genetic resources (i.e. bio-prospecting).
(b) Development and implementation of a strategy and action plan for the implementation of ABS measures (i.e. policy, legal, and regulatory frameworks governing ABS, National Focal Point, Competent National Authority, Institutional agreements, administrative procedures for ABS Agreements with proper Prior Informed Consent, Mutually Agreed Terms, and Benefit Sharing, monitoring of use of genetic resources, compliance with legislation and cooperation on trans-boundary issues); and
(c) Building capacity among stakeholders (including indigenous peoples and local communities) to negotiate ABS agreements, including domestic protocols, model contractual clauses, and minimum requirements to secure the fair and equitable sharing of benefits. Countries may consider institutional capacity-building to carry out research and development associated with the valorization of genetic resources (bio-prospecting). The GEF would support the development, or updating of existing tools to facilitate the negotiation and implementation of ABS agreements.

78. The GEF will also support properly justified initiatives, to enhance national implementation of the Nagoya Protocol through regional collaboration. The objective of regional collaboration would be to promote research and development on species found within regions and to avoid duplication of regulatory mechanisms while encouraging intra-regional collaboration and adding value through research. Regional agreements can also address the

financial and human resource constraints faced by small or least developed countries through sharing regulatory and scientific resources.

Building capacity

79. The GEF will support efforts to address the needs and priorities of indigenous peoples, local communities, and other stakeholders. The GEF will support activities to build the capacity of Parties to negotiate ABS agreements under the provisions of the Nagoya Protocol of Prior Informed Consent (PIC), Mutually Agreed Terms (MAT), and Benefit Sharing. Activities could include participation in policy, legal and decision- making processes, and development of domestic protocols, model contractual clauses, and minimum requirements to secure the fair and equitable sharing of benefits. The GEF will also support the participation in the ABS Clearing-House mechanism as soon as it is operational. Support will also be considered for communications and for raising-awareness.

Valuation of genetic resources

80. GEF investments should result in increased capacity of research centers and national universities to carry out the scientific research needed to bring new uses of genetic resources or derivatives into markets. Increased research and development capacities will increase the opportunities for screening for active compounds, testing for toxicity and safety, and quality control. Since many of the current provider countries are becoming users as well, investments in the valorization of genetic resource will generate additional interest and incentives for countries making use of these investments. The GEF will support activities leading to the identification of commercial value of biodiversity and genetic resources, the opening of market opportunities in the relevant sectors, and to value creation and economic development for providers of genetic resources, including indigenous peoples and local communities.

Nagoya Protocol Implementation Fund (NPIF) Support

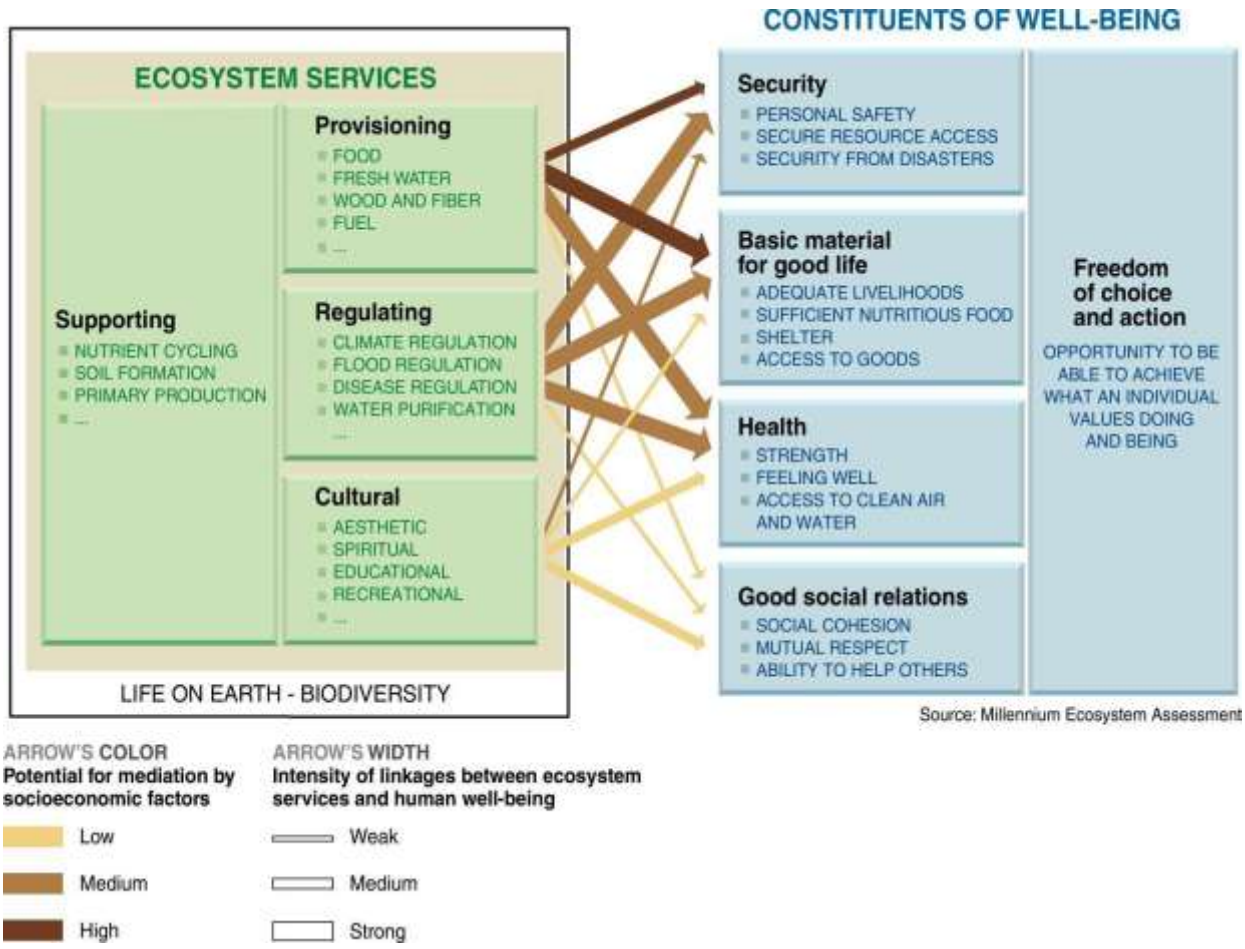
81. Projects funded through the NPIF will support the development and implementation of ABS agreements between providers and users of genetic resources that include the three core key elements of the Nagoya Protocol on ABS: PIC, MAT, and Benefit Sharing Providers. It would include Parties to the CBD as well as those stakeholders providing access to resources on the ground, including indigenous and local communities. Users can include Parties of the CBD as well as those interested in the resources including, for example, sectors like the pharmaceutical industry, biotechnology, ornamental horticulture, and natural personal care and cosmetics.

BD 4: Mainstream Biodiversity Conservation and Sustainable Use into Production Landscapes/Seascapes and Sectors

Program 10: Integration of the Valuation of Biodiversity and Ecosystem Services into Development & Finance Planning

82. The Millennium Ecosystem Assessment provided a conceptual framework that facilitated a comprehensive understanding of the values of biodiversity to society beyond its mere existence value.

BD Figure 3 - Linkages between Ecosystem Services and Human Well-Being



83. Numerous organizations and projects have used this conceptual framework to estimate the value of biodiversity to society through the goods and services it provides, including the Wealth Accounting and the Valuation of Ecosystem Services (WAVES) partnership, The Natural Capital Project, The Economics of Ecosystems and Biodiversity (TEEB), the LAC Biodiversity Superpower initiative and numerous GEF-funded projects. In addition, the CBD Strategic Plan identifies Aichi Target 2, to which this program will make a considerable contribution, as a critical target to achieve in order to address a key underlying driver of biodiversity loss.

84. Although a number of approaches are currently being used to recognize, demonstrate, and capture the value of biodiversity and ecosystem services, a mismatch remains between valuation and development policy and financing. Valuation is not leading to the development of policy reforms needed to mitigate the drivers of biodiversity loss, nor is it triggering an increase in public and private finance flows on the scale necessary to address threats. There is a need for valuation to be accompanied by policy and finance reforms such that the finance and development decisions that impact natural ecosystems and the associated biodiversity therein

include appropriate incentives and price signals resulting in more cost effective and sustained management of ecosystems and biodiversity.

85. This program will pilot national-level interventions that close the circle between theory and practice and link biodiversity valuation and economic analysis with development policy and finance planning. The outcome from these projects will be biodiversity valuation that informs the application of economically informed policy instruments and fiscal reforms designed to mitigate perverse incentives leading to biodiversity loss. These may be linked to larger policy reforms being undertaken as part of the development policy dialogue, development policy operations or other means. It will also include specific support to reform finance flows, for instance through public expenditure reviews, and to operationalize innovative finance mechanisms such as payments for ecosystem services, habitat banking, aggregate offsets, and tradable development rights and quotas.

Biodiversity Focal Area Set-Aside

86. Countries will be able to access the focal area set-aside funds (FAS) to implement enabling activities. Enabling activity support could be provided for all GEF-eligible countries to produce the 6th National Report and for the few remaining countries that have not accessed resources during GEF-5 to revise the National Biodiversity Strategies and Action Plans (NBSAPs) in line with the Strategic Plan of the CBD.

87. The remaining funds in FAS will be used to address supra-national strategic priorities or to incentivize countries to make substantive changes in the state of biodiversity at the national level through participation in global, regional or multi-country projects. Projects supported with FAS funds will meet some or all of the following criteria: (i) relevant to the objectives and programs of GEF's biodiversity strategy; (ii) support priorities identified by the COP of the CBD and in particular the Strategic Plan and the Aichi Targets; (iii) high likelihood that the project will have a broad and positive impact on biodiversity; (iv) potential for replication; (v) global demonstration value; (vi) potential to catalyze private sector investment in biodiversity conservation and sustainable use; and (vii) contribute to global conservation knowledge through formal experimental or quasi-experimental designs that test and evaluate the hypotheses embedded in project interventions. An incentive system would operate for all regional and multi-country projects whereby participating countries would receive resources from the FAS proportionate with the amount of resources dedicated to a project from their national allocation.

88. The Intergovernmental Platform on Biodiversity and Ecosystem Services (IPBES) was established in April 2012, as an independent intergovernmental body open to all member countries of the United Nations. The members are committed to building IPBES as the leading intergovernmental body for assessing the state of the planet's biodiversity, its ecosystems, and the essential services they provide to society. IPBES provides a mechanism recognized by both the scientific and policy communities to synthesize, review, assess and critically evaluate relevant information and knowledge generated worldwide by governments, academia, scientific organizations, non-governmental organizations and indigenous communities. IPBES is unique in that it will aim to strengthen capacity for the effective and transparent use of science in decision-making at all levels. IPBES will also aim to address the needs of Multilateral Environmental

Agreements that are related to biodiversity and ecosystem services, and build on existing processes ensuring synergy and complementarities in each other's work. Supporting elements of this emerging initiative could be undertaken through a contribution from the FAS.

Results Framework

Goal:

- Maintain globally significant biodiversity and the ecosystem goods and services it provides to society.

Impacts:

- Biodiversity conserved and habitat maintained in national protected area systems.
- Conservation and sustainable use of biodiversity in production landscapes and seascapes.

Impact Indicators*:*

- Intact vegetative cover and degree of fragmentation in national protected area systems measured in hectares as recorded by remote sensing.
- Intact vegetative cover and degree of fragmentation in production landscapes measured in hectares as recorded by remote sensing.
- Coastal zone habitat (coral reef, mangroves, etc.) intact in marine protected areas and productive seascapes measured in hectares as recorded by remote sensing and, where possible, supported by visual or other verification methods.

BD Table 5 - Results Framework

Objectives	Programs and Expected Outcomes and Indicators	Outcome targets[27]	Core Outputs	Status Quo Scenario	Enhanced Impact Scenario
Focal Area Set Aside				**$50 million**	**$150 million**
BD 1: Improve sustainability of protected area systems	Program 1: Sustainable Financing of the National Ecological Infrastructure Outcome 1.1. Increased revenue for protected area systems to meet total expenditures required for management. *Indicator 1.1: Funding gap for management of protected*	1.1 80% of projects meet or exceed their target for reducing the protected area management funding gap at the systems and site level.	Output 1.1 Sustainable financing plans under full implementation (number). Output 1.2 Total revenue increase (US$) at level of protected area system and individual sites.	$155 million	$200 million

[27] When operationally feasible, outcome and output indicators developed by the Ad Hoc Technical Expert Group on Indicators for the Strategic Plan for Biodiversity 2011-2020 have been included in the portfolio results framework for GEF-6.

Objectives	Programs and Expected Outcomes and Indicators	Outcome targets[27]	Core Outputs	Status Quo Scenario	Enhanced Impact Scenario
	area systems as recorded by protected area financing scorecards. Outcome 1.2. Increased revenue invested in PA management of globally significant protected areas. *Indicator 1.2: Funding gap for management of globally significant protected areas as recorded by protected area financing scorecards.*				
BD1: Improve sustainability of protected area systems	Program 2: Nature's Last Stand: Expanding the Reach of the Global Protected Area Estate Outcome 2.1 Increase in hectares of terrestrial and marine ecosystems of global significance and increase in threatened species of global significance under protection. *Indicator 2.1 Hectares of terrestrial and marine ecosystems and number of threatened species.*	2.1 % increase in hectares of globally significant ecosystems protected and% increase in globally significant species protected.	Output 2.1. New protected areas (number) and coverage (hectares) of unprotected globally significant ecosystems and unprotected threatened species (number).	$125 million	$150 million
BD 1: Improve sustainability of protected area systems	Program 3: Managing the Human-Biodiversity Interface Outcome 3.1: Improved management effectiveness of existing protected areas. *Indicator 3.1: Protected area management*	3.1 Eighty-percent (80%) of projects meet or exceed their: 1) protected area management effectiveness targets covering "X" million hectares of existing protected areas;	Output 3.1 Sustainable use practices, land-use plans, spatial planning, PES schemes, etc in landscapes/seascapes (number of plans, practices, etc).	$150 million	$225 million

Objectives	Programs and Expected Outcomes and Indicators	Outcome targets[27]	Core Outputs	Status Quo Scenario	Enhanced Impact Scenario
	effectiveness score of hectares as recorded by Management Effectiveness Tracking Tool.	2) threat reduction targets; and 3) policy change targets.			
	Outcome 3.2 Threats reduced in the landscapes and seascapes adjacent protected areas. *Indicator 3.2 Measure of threat reduction (specific to each threat).*	3.2 Decrease in fragmentation of natural habitats in the project area 3.3 Increase in area of certified landscapes	Output 3.2 Extent of restored ecosystems and ecosystem services generated.		
	Outcome 3.3 Increase in sustainably managed landscapes and seascapes that integrate biodiversity conservation. *Indicator 3.3 Landscapes and seascapes certified by internationally or nationally recognized environmental standards that incorporate biodiversity considerations (e.g. FSC, MSC) measured in hectarea.*		Output 3.3 Certified production landscapes and seascapes (hectares) Output 3.4 Policies and regulatory frameworks (number) for production sectors.		
	Outcome 3.4 Measures to conserve and sustainably use biodiversity incorporated in policy and regulatory frameworks. *Indicator 3.4 Policies and regulations governing sectoral activities that integrate biodiversity conservation as recorded by the GEF tracking tool*.				

Objectives	Programs and Expected Outcomes and Indicators	Outcome targets[27]	Core Outputs	Status Quo Scenario	Enhanced Impact Scenario
BD 2: **Reduce threats to globally significant biodiversity**	Program 4: Reducing Widespread Poaching of African Elephants and Rhinos and Illegal Trafficking of Elephant Tusks and Rhino Horns Outcome 4.1: Reduction in rates of poaching of rhinos and elephants and increase in arrests and convictions. *Indicator 4.1: Rates of poaching incidents and arrests and convictions.*	4.1 Significant reduction in poaching incidence of rhinos and elephants in Africa and significant increase in arrests and convictions.	Output 4.1 Anti-poaching and illegal trade legislation effectively applied inkey supply countries and consumer countries (number of policies and legislation).	$130 million	$200 million
BD 2: **Reduce threats to globally significant biodiversity**	Program 5: Avoiding Imminent Extinction in Island Ecosystems Outcome 5.1 Improved management frameworks to prevent, control, and manage invasive alien species. *Indicator 5.1: IAS management framework operational score as recorded by the GEF tracking tool.* Outcome 5.2 Species extinction avoided as a result of IAS management. Indicator 5.2 Sustainable populations of critically threatened species.	5.1 Eighty-percent (80%) of projects meet or exceed their target for: 1) fully operational & effective IAS management framework (includes policy responses, legislation, and pathways management plans) 2) species extinctions avoided; and 3) Reduction in numbers of invasive alien species	Output 5.1 Comprehensive IAS management frameworks (number) Output 5.2 IAS threatening species survival eradicated (number)	$50 million	$100 million

Objectives	Programs and Expected Outcomes and Indicators	Outcome targets[27]	Core Outputs	Status Quo Scenario	Enhanced Impact Scenario
BD 2: Reduce threats to globally significant biodiversity	Program 6: Implement the Cartagena Protocol on Biosafety (CPB) Outcome 6.1 Potential risks of living modified organisms to biodiversity are identified and evaluated in a scientifically sound and transparent manner. *Indicator 6.1: National biosafety decision-making systems operational score as recorded by the GEF tracking tool.*	6.1 Eighty-percent (80%) of projects meet or exceed their target for a fully operational and effective biosafety framework.	Output 6.1 National biosafety decision-making systems in place.	$50 million	$50 million
BD 3: Sustainably use biodiversity	Program 7: Ridge to Reef+: Maintaining Integrity and Function of Coral Reef Ecosystems Outcome 7.1. Integrity and functioning of coral reef ecosystems maintained. *Indicator 7.1 Area of coral reef ecosystems that maintain or increase integrity and function.*	7.1a Eighty-percent (80%) of projects meet or exceed their protected area management effectiveness targets covering "X" million hectares of coral reef ecosystems. 7.1b Increase in area of coral reef ecosystems that maintain integrity and function as measured by number of coral species and abundance both outside and inside MPAs.	Output 7.1 New MPAs or expanded MPAs to include coral reef ecosystems (number) and sustainable use and rights based management practices employed at the boundaries of MPAs (number).	$105 million	$150 million

Objectives	Programs and Expected Outcomes and Indicators	Outcome targets[27]	Core Outputs	Status Quo Scenario	Enhanced Impact Scenario
BD 3: Sustainably use biodiversity	Program 8: Securing Agriculture's Future: Sustainable Use of Plant and Animal Genetic Resources Outcome 8.1 Increased genetic diversity of globally significant cultivated plants and domesticated animals that are sustainably used within production systems. Indicator 8. 1. Diversity status of target species.	8.1 Significant increase in genetic diversity status of target species over baseline.	Output 8.1 Agro-ecosystems comprised of globally significant cultivated plants and domesticated animals that are sustainably used (area). Output 8.2 Policy mechanisms implemented to reduce genetic erosion and safeguard genetic diversity related to plant and animal genetic resources.	$100 million	$100 million
BD 3: Sustainably use biodiversity	Program 9: Implement the Nagoya Protocol on ABS Outcome 9.1: Legal and regulatory frameworks, and administrative procedures established that enable access to genetic resources and benefit sharing in accordance with the CBD provisions *Indicator 9.1: National ABS frameworks operational score as recorded by the GEF tracking tool.*	9.1 Eighty-percent (80%) of projects result in a fully operational and effective ABS framework.	Output 9.1. ABS frameworks in place and operational and access & benefit-sharing agreements that recognize PIC and MAT (number).	$75 million	$75 million
BD 4: Mainstream biodiversity conservation and sustainable use into production landscapes/seascapes and sectors	Program 10: Integration of the Valuation of Biodiversity and Ecosystem Services into Development & Finance Planning Outcome 10.1 Biodiversity and ecosystems valued in	10.1 Stabilized biodiversity status (no net-loss).	Output 10.1 Fully developed valuations of biodiversity and ecosystem services at national scale which have been incorporated into decision-making processes.	$100 million	$150 million

Objectives	Programs and Expected Outcomes and Indicators	Outcome targets[27]	Core Outputs	Status Quo Scenario	Enhanced Impact Scenario
	national accounting systems and applied in development and finance policy and land-use decision-making. *Indicator 10. 1 Biodiversity status indicators to be developed within each participating country*.		Output 10.2 Number and value of incentives, including subsidies, harmful to biodiversity, removed, reformed or phased out; Output 10.3 Number of incentives that reward positive contribution to biodiversity and ecosystem services		

CLIMATE CHANGE MITIGATION FOCAL AREA STRATEGY

Background

Status of Climate Change

1. Climate change presents a significant global challenge to humanity and biosphere in the 21st century. Atmospheric carbon dioxide (CO2) concentration level observations recently exceeded 400 parts per million (ppm) for the first time in last 3 million years.[1] There is growing awareness that "the climate is moving out of the envelope of natural variability characteristic of the Holocene" and thereby, transgressing Earth's planetary boundary for climate change.[2] To prevent dangerous anthropogenic interference with the climate system, the global temperature rise needs to be less than 2 degrees Celsius (2°C) above preindustrial levels. Meeting the 2°C target, recently agreed by the Conference of the Parties (COP) to the United Nations Framework Convention on Climate Change (UNFCCC), requires significant reduction in the greenhouse gas (GHG) emissions.

2. Climate change-associated impacts are observed globally on marine and terrestrial ecosystems, affecting water availability, energy supply, food security, infrastructure, and human health, as highlighted in the Fourth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC) and others. Changes in marine ecosystem productivity, fisheries, coral reefs, and ocean acidification due to CO_2 uptake by oceans are likely. The severity of projected impacts becomes more significant at higher temperatures. About 30% of global coastal wetlands may also be lost with temperature increases above 3.5°C. Hundreds of millions of people may face water shortages. With a 4°C increase, productivity of all cereals decreases in low altitudes, impacting food security. Some irreversible impacts of climate change include increased risks of significant extinctions of 40-70% of assessed species with temperature increases above 3.5°C.[3][4] Of the five direct drivers of ecosystems and biodiversity identified by the Millennium Ecosystem Assessment, two drivers, namely climate change and pollution, showed very rapid increases of the impacts as current trends across all assessed ecosystems types.[5]

3. Furthermore, more recent observations suggest that delayed reductions in GHG emissions significantly constrain opportunities to achieve lower levels of atmospheric GHG concentrations and increase the risk of severity of climate change impacts. The need to accelerate the efforts to reduce GHG emissions and to adapt to climate change has been more widely recognized. Global

[1] National Oceanic and Atmospheric Administration (NOAA), Earth System Research Laboratory (2013). US Department of Commerce, USA. Accessed at: http://www.esrl.noaa.gov/gmd/webdata/ccgg/trends/co2_weekly_mlo.pdf

[2] Rockström, J., et al. (2009). Planetary boundaries: exploring the safe operating space for humanity. Ecology and Society 14(2): 32. Accessed at: http://www.ecologyandsociety.org/vol14/iss2/art32/

[3] Intergovernmental Panel on Climate Change (2007). Fourth Assessment Report of the Intergovernmental Panel on Climate Change. IPCC, Geneva, Switzerland.

[4] World Bank (2012). Turn down the Heat: Why a 4°C Warmer World Must be Avoided. Washington, DC, World Bank.

[5] Direct drivers of ecosystem changes identified in the Millennium Ecosystem Assessment are: habitat change, climate change, invasive species, over-exploitation, and pollution. Millennium Ecosystem Assessment 2005, Ecosystems and Human Well-being: Synthesis, Island Press, Washington DC.

environmental benefits achieved from other GEF focal area interventions could be compromised as the severity of climate change impacts grow. Timing is of the essence to pursue urgent mitigation strategies to limit the GHG emissions and stabilize atmospheric concentrations. These observations also underscore the need for systemic approaches in GEF programming to address drivers of global environmental changes in an integrated manner.

4. Mitigation actions involve direct reduction of anthropogenic emissions and enhancement of carbon sinks that are necessary for limiting long-term climate damage. Emissions of CO_2 are the primary driver of climate change. Key mitigation efforts—including low carbon technologies and land use, land-use change and forestry (LULUCF) options—and investment in the coming decade will have a large impact on our ability to achieve lower stabilization levels to address this global challenge.[6]

5. Efforts to date by the international community to address the climate change challenge, including those supported by the GEF, have been insufficient to reverse or even stabilize GHG emissions in a timely manner. Given the scale and scope of climate challenges, a project-by-project approach is clearly inadequate. Another challenge is the availability of financing. The current global public funding to address climate change is approximately $10 billion per year. By some estimates at least ten times that amount would be needed annually to address mitigation and adaptation needs.[7][8]

6. Facing these challenges, there is a need to step up a global effort in a coordinated manner. The Green Climate Fund (GCF) has been established, for which a mobilization effort is expected to begin. A robust partnership among various climate finance options, including the GCF, is needed to catalyze transformational change on global scale. The GEF Climate Change Mitigation Strategy seeks to explore complementarity and to maximize synergies within the evolving landscape of climate finance based on its unique value proposition.

Conference of the Parties (COP) Guidance to the GEF

7. The GEF-6 period (2014 to 2018) coincides with a seminal phase in the global negotiations to address climate change. The Durban Platform, agreed by UNFCCC Parties in 2011, launched a process to develop a legal instrument to reduce GHGs for all developed and developing countries. The work on an agreed outcome with legal force under the UNFCCC should be completed by 2015 and implemented by 2020. The GEF-6 period is therefore critical for developing and transition countries to prepare themselves for the new climate agreement, and the GEF has been directed by the COP to support this effort.

8. The GEF is an operating entity of the financial mechanism of the UNFCCC. Since the GEF's inception, 63 COP decisions have provided guidance to the GEF, through 169 paragraphs

[6] Science and Technical Advisory Panel. 2012. Climate Change: A Scientific Assessment for the GEF. Washington, DC, GEF.
[7] World Bank. 2012. Inclusive Green Growth: The Pathway to Sustainable Development. Washington, DC, World Bank.
[8] Food and Agricultural Organization of the United Nations (FAO), 2011. Linking Climate Change and Sustainability: Implications for Agriculture. Rome (FAO).

that provide direct guidance. The GEF continues to be responsive to COP guidance by incorporating it into its climate change strategies, by approving projects and programs, and by adapting its policies and procedures.

9. The most recent COP guidance was provided at COP 18 in Doha, Qatar in 2012. The key areas of COP 18 guidance concern biennial update reports (BURs) and national communications, nationally appropriate mitigation actions (NAMAs), and technology transfer. For example, the GEF is requested to make available support to non-Annex I Parties for preparing their BURs. Also, the COP invited the GEF to submit, as appropriate, information on financial, technology and capacity-building support available and/or provided for the preparation and/or implementation of NAMAs. In terms of technology transfer, the COP requested the GEF to support the operationalization and activities of the Climate Technology Centre and Network (CTCN). Earlier COP guidance led to the establishment of the Poznan Strategic Program on Technology Transfer and its Long-Term Elements, which are under implementation.

10. Additional COP guidance of key relevance is on the establishment of the GCF. In 2011, COP 17 Parties in Durban, South Africa requested the UNFCCC Secretariat jointly with the GEF Secretariat to take the necessary administrative steps to set up the Interim Secretariat of the GCF.

Rationale, Approach, and Specific Value Proposition

11. With financing for 600 mitigation projects and programs in over 150 countries to date, the GEF supports countries towards a low-carbon development path. The GEF-6 Climate Change Mitigation Strategy focuses on supporting integrated approaches that combine policies, technologies, and management practices with significant climate change mitigation potential.

12. The aim is to help countries address key drivers of global environmental degradation that stem from underlying global trends, notably urbanization, population growth, and the rising middle class. Transforming policy frameworks, creating demonstration effects through innovation, and setting standards to shift markets are key influencing models in the GEF-6 Climate Mitigation Strategy to address these drivers. This approach is fully in line with the long-term strategy—GEF 2020—that is currently being articulated, and seeks to help countries build stronger enabling environments with GEF support to catalyze impact. Given the growing significance of climate change influence on all areas of GEF interventions, the GEF-6 Climate Change Mitigation Strategy will also seek to enhance synergies across focal areas to generate global environmental benefits. This approach is different from previous GEF strategies that focused more on sectoral and technology-specific interventions, and builds on the integrated programming approaches that emerged in the GEF-5 period.

13. GEF has unique values for climate change mitigation efforts for the GEF-6 period:

a) *Facilitating innovation and technology transfer, with supportive policies and strategies*: GEF resources play a key role in piloting emerging innovative solutions, including technologies, management practices, supportive policies and strategies, and financial tools. Examples for GEF-6 include piloting advanced energy technologies, support for performance-based mechanisms, mitigation of emissions from short-lived climate forcers (SLCFs), as well as promotion of de-risking tools. Support in these

areas elucidates the potential for systemic change by partners and other financing institutions in position to mobilize much larger-scale financing. The GEF's piloting efforts also point to its well-established role in mitigating risks associated with the introduction of emerging solutions, enabling to accelerate the pace of delivery of such solutions. The GEF has significant experience coordinating project level financial support with other climate financing instruments, such as the Climate Investment Funds (CIF), exploiting this piloting and risk-taking feature (see Box 1), which may also be of relevance for the GCF. Building on the successful contributions of the Poznan Strategic Program on Technology Transfer and its Long-Term elements, the GEF will support the operationalization of the CTCN by financing technology transfer and networking projects that address national and regional priorities. The GEF-6 Climate Change Mitigation Strategy does not prioritize direct support for large-scale deployment and diffusion of mitigation options with GEF financing only. Rather, GEF-6 resources are utilized to reduce risks and address barriers, so that the results can facilitate additional investments and support by other international financing institutions, private sector, and/or domestic sources. This approach also ensures that the GEF mandate is complementary to those of other climate finance options that aim for scaling-up. The GEF thus embodies a pioneering spirit, to catalyze action by partners to generate additional global environmental benefits beyond the original GEF interventions.

b) *Catalyzing systemic impacts through synergistic multi-focal area initiatives*: The multilateral environmental Conventions, including UNFCCC, Convention on Biological Diversity, United Nations Convention to Combat Desertification, the Montreal Protocol, and Stockholm Convention, are increasingly highlighting synergies among their respective objectives. Emissions stemming from degradation of land and natural ecosystems have already contributed to climate change, and have potential to further exacerbate its impact. Furthermore, climate change has the potential to significantly affect global environmental benefits in all GEF focal areas. This interaction between climate change and the other GEF focal area subjects points to the importance of recognizing climate change implications in all GEF focal areas, harnessing mitigation options to address them, and integrating climate resilience measures into all GEF areas to address risks. The GEF has the unique ability to support actions that promote complementarity and synergy to seek multiple global environmental benefits across Conventions while reducing trade-offs and duplication. Examples of GEF-6 support may include integrated urban management that encompasses sustainable transport and energy solutions with natural resource management, and projects that address the water-energy-food nexus and waste management (see Box 2). With the advent of the Minamata Convention on Mercury, there is additional potential for synergies and co-benefits in projects addressing both CO_2 and mercury emission reductions. The proposed Signature Programs also present opportunities to address focal area objectives in an integrated fashion. Finally, since GEF-5, an increasing number of projects that address both mitigation and adaptation are being supported by the GEF to help countries realize their low carbon and climate resilient development goals. The flexibility of the GEF to support such initiatives by combining resources from the GEF Trust Fund and the two trust funds managed by the GEF for adaptation is a distinctive feature of the GEF.

c) *Building on Convention obligations for reporting and assessments towards mainstreaming*: The GEF's support for Convention-related reporting and assessment is becoming increasingly important, as the results help countries assess mitigation goals and the policies necessary to reach the 2015 climate agreement. GEF support may also generate data and analysis that support the development of other major international goals, such as the Sustainable Development Goals. The GEF is currently the only institution with the mandate to finance national communications and BURs, which provide data and analysis needed for countries to define articulate emissions sources and mitigation potential. GEF support has also generated policy-relevant outputs, through NAMAs, technology needs assessments (TNAs), national adaptation programmes of action (NAPAs, supported by the Least Developed Countries Fund (LDCF)), and other assessments. The GEF is also committed to supporting monitoring, reporting, and verification (MRV) efforts of national mitigation actions. This work will be further enhanced in GEF-6 to help mainstream climate mitigation planning and policies into strategic decision making.

Box 1: Example of complementarity with Climate Investment Fund

The GEF has been financing climate change initiatives that are complementary to efforts of other climate financing mechanisms. For example, the CIF, through its Clean Technology Fund (CTF) and Strategic Climate Fund (SCF), focuses on providing support to 20 countries, primarily with concessional lending devoted to investments.[9] The GEF, given its relatively smaller size of project financing and its emphasis on innovative technology and processes, has supported projects on which further investments by the CTF and SCF are based. For example, the CTF support in the Middle East and North Africa region and in Chile for concentrated solar power (CSP) follows a series of seminal GEF projects supporting the first trials of CSP implemented in developing countries. In Mexico, a $50 million GEF grant for a wind energy project by the World Bank encouraged the development of wind energy by removing one of wind development's key bottlenecks related to the lack of financial competitiveness.

GEF grants can also be used to help lower the risks of project financing schemes and to facilitate their design and implementation. For example, in India, the GEF is providing a pool of risk capital for commercial lenders for the CTF Partial Risk Sharing Facility for Energy Efficiency. In Mexico, the CTF is supporting the Efficient Lighting and Appliances Project. The GEF support helps to ensure the involvement of the country's development banks. By reducing the risks associated with consumer default, it removes a major barrier in the residential end-use sector to allow the adoption of more energy-efficient appliances. The GEF is committed to further enhancing complementarity with other climate financing initiatives. The GEF-6 results framework will include indicators that are complementary to the CIF framework, to facilitate coordination. The GEF is ready for further dialogue with the GCF and other mechanisms to enhance cooperation and support coordination in project conceptualization and financing.

[9] Climate Investment Funds (2012). Creating the Climate for Change. 2012 Annual Report. World Bank Group, Washington, DC, USA.

Box 2: Synergies among GEF focal areas

The GEF has a unique role to promote complementarity and synergy across various Conventions it serves. The GEF-6 Climate Change Mitigation Strategy encourages countries to seek synergistic opportunities to address global environmental concerns. Examples of support for GEF-6 may include the following:

- Integrated urban management and infrastructure investment initiatives that encompass sustainable transport, clean energy solutions, waste management, urban biodiversity, and structural resilience against projected climate change effects such as fluctuations in energy sources and demands, and extreme events.
- Design of urban systems that impose less stress on the ecosystem services within and outside city boundaries.
- Forest management that includes biodiversity priorities and leverages Sustainable Forest Management (SFM) incentive to provide carbon benefits as well as other social and environmental benefits that forest can provide as an ecosystem.
- Agricultural practices that responds to land degradation issues and enhance soil quality while reducing agro-based GHG emissions.
- Water-food-energy nexus initiatives.
- Mercury emission reduction and energy efficiency improvement in manufacturing sectors.
- Reduction in GHG emissions from landfills coupled with reduction in release of chemical pollutants and contamination.
- Integrated mitigation-adaptation projects that promote low-carbon growth with resilience, in areas such as coastal systems, urban transport and housing.
- Hydroflourocarbon (HFC) reduction and energy efficiency improvements.
- Development of proper MRV systems such that all relevant GEF projects can quantifiably contribute towards national goals of emission reduction.

Systematic identification of climate vulnerabilities and integration of adaptation measures into GEF projects

Goal and Objectives

14. The goal of the GEF-6 Climate Change Mitigation Program is to support developing countries and economies in transition to make transformational shifts towards a low-carbon development path. The GEF support also aims to enable recipient countries to prepare for the new climate regime under the UNFCCC, with universal emission reduction commitments.

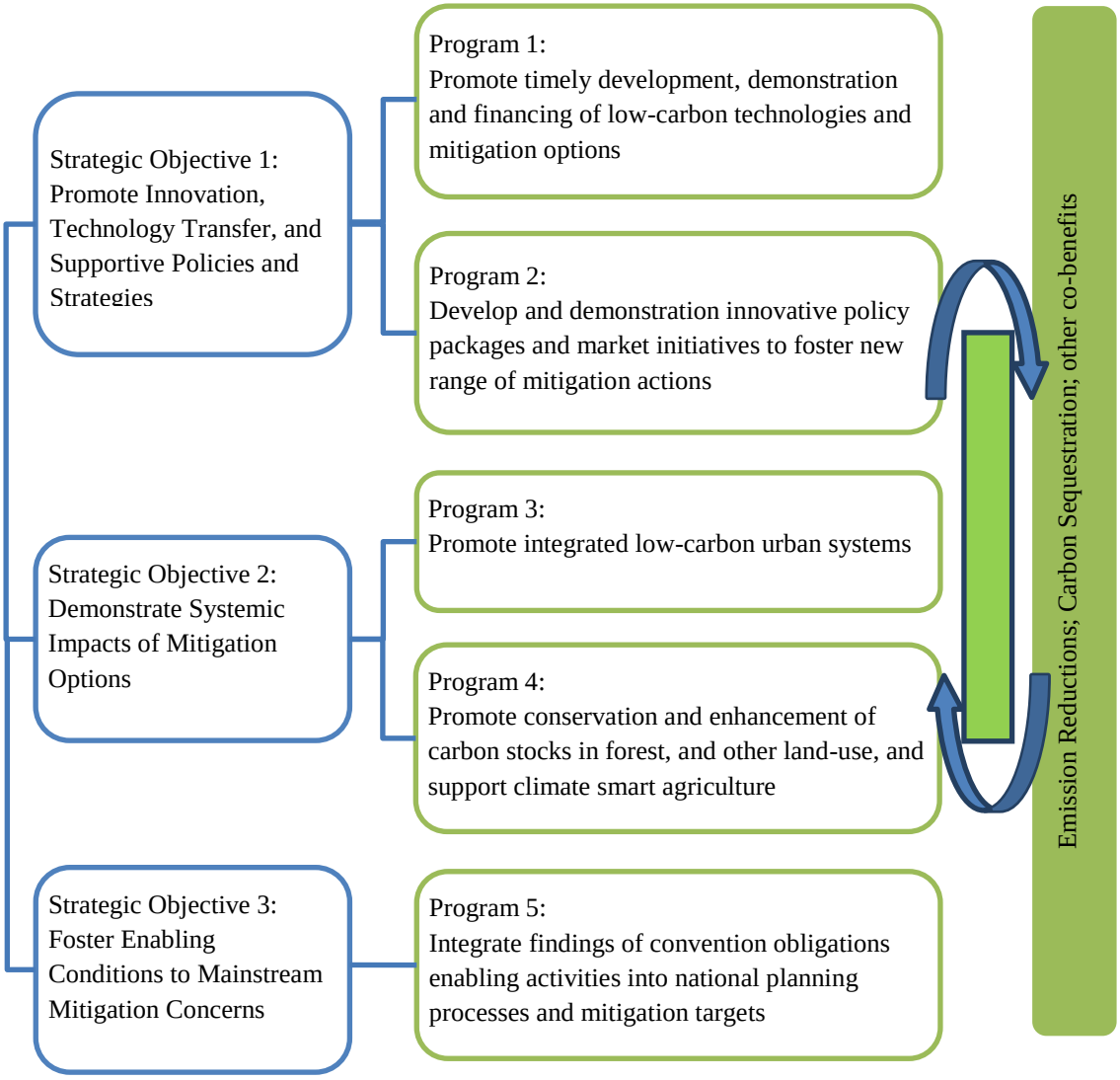
15. The GEF-6 Climate Mitigation Strategy has three objectives:

1. Promote innovation, technology transfer, and supportive policies and strategies;
2. Demonstrate systemic impacts of mitigation options; and
3. Foster enabling conditions to mainstream mitigation concerns.

16. These objectives comprise a multi-pronged strategy to help countries address key risks and barriers to the shift towards a low-carbon development pathway. The GEF-6 Climate Change Mitigation Strategy encompasses opportunities that combine technologies, systems, financial and organizational mechanisms, policies, and best practices that help countries move towards innovative, rapid, and transformational change in addressing climate change.

17. Five key Programs of GEF-6 interventions support the three objectives. They represent a suite of measures to assess and address risks and barriers that remain in the transformation toward low-carbon development. They are described further below, and also shown as Figure 1.

CC Figure 1 - GEF-6 Climate Change Mitigation Focal Area Strategic Framework



CC 1. Promote Innovation, Technology Transfer, and Supportive Policies and Strategies

18. Technology development and transfer plays a central role in the global response to the challenges of climate change. The transfer of environmentally sound technologies is embedded in the fabric of UNFCCC.[37] It is enshrined in Article 4.5 of UNFCCC as one of the key means to reduce, or slow the growth in, GHG emissions and to stabilize their concentrations. Also, technological change has the potential to significantly reduce the cost of meeting climate change goals. Innovation is a foundation for development and economic growth, helping to create or expand markets for products and services, and generating jobs. Supportive policies and enabling environments are fundamental to catalyze impact from innovation and technology transfer.

19. Objective 1 of the GEF-6 Climate Mitigation Strategy aims to promote innovation, technology transfer, and supportive policies and strategies. The Objective consists of two Programs:

(a) Program 1: Promote the timely development, demonstration, and financing of low-carbon technologies and mitigation options.
(b) Program 2: Develop and demonstrate innovative policy packages and market initiatives to foster a new range of mitigation actions.

20. The GEF support will focus on testing and demonstrating innovative mechanisms that may be complementary to efforts of other financial mechanisms, such as the GCF, to scale up, replicate and reach critical mass in a timely manner.

21. While projects and initiatives within this Objective are applicable to all countries, efforts may also be made to address time-sensitive needs to mitigate emissions from larger-emitting countries and sources, given their significant impacts on the global commons. Efforts will also be devoted to improving the sustainability of technology transfer financing and to involving the private sector.

22. COP 16 Parties agreed in 2010 in Cancun to establish and operationalize a Technology Mechanism within the Convention. Its aim is to facilitate the implementation of enhanced action on technology development and transfer in order to support action on mitigation and adaptation to climate change. In 2012, the CTCN operationalization took place. This Objective responds to the recent COP guidance from Parties, which requested the GEF support the CTCN operationalization and activities. Initiatives supported under this objective may include, and respond to, national priorities articulated through the CTCN. Expansions of regional and global level initiatives may also be considered. Coordination will be sought with relevant institutions,

[37] While there are many definitions of technology transfer, the GEF has adopted the concept as defined by the IPCC and embodied in the UNFCCC Technology Mechanism. Technology transfer is defined as "…a broad set of processes covering the flows of know-how, experience and equipment for mitigating and adapting to climate change amongst different stakeholders such as governments, private sector entities, financial institutions, non-governmental organizations (NGOs) and research and education institutions…" The definition includes a wide range of activities and extends to a broad array of institutions (for complete definition, see http://www.thegef.org/gef/sites/thegef.org/files/publication/GEF_PoznanTT_lowres%20final.pdf). The concept includes, in particular, processes designed to provide feedbacks on the technology demonstration results for further improvement.

including CTC network members and other climate financing institutions, to ensure complementarity in support to respond to national needs for technology transfer. The GEF's support for technology transfer continues to respond to COP guidance on the Poznan Strategic Program on Technology Transfer and its Long-Term Program. Support for TNAs is included in Objective 3, Program 5.

Program 1: Promote the timely development, demonstration, and financing of low-carbon technologies and mitigation options

23. The GEF-6 Climate Change Mitigation Strategy supports innovation and technology transfer at key early and middle stages, focusing on the demonstration and early deployment of innovative options, as shown in Figure 2. The GEF support aims to help address elevated risks associated with innovation and mitigate the barriers of technology transfer, and to pilot promising approaches.

24. Program 1 will consider key application areas with significant anticipated and proven mitigation potential, and will support innovative polices and mechanisms to enable their uptake. This Program will focus on the following elements:

25. Facilitate the development and demonstration of innovative technologies with transformational potential. Some new and emerging technologies have the potential to contribute towards a transformational shift to low carbon growth and overall sustainable development. While they may offer significant mitigation potential, they may also entail a high level of risk and uncertainty. Transformational technologies involve a change of frame ("doing what we did not do before"). They are distinguished from incremental technology change that involves modest changes and adjustments ("doing better what we already do").

26. The GEF-6 Climate Change Mitigation Strategy will support the development and demonstrations of options with transformational potential that are not yet fully commercial and market ready, and those whose technical potential and socio-economic implications need to be demonstrated and assessed in the country context. Technologies and options with potential for large-scale GHG reduction will be considered for support, including but not limited to: smart grid technologies; SLCF reduction measures; information and communication technology (ICT) for applications in smart grids, energy management, and industrial energy control systems; pre- and post-combustion carbon capture and storage (CCS); emerging distributed energy systems that complement renewable technologies such as micro turbines and reciprocating engines; advanced transmission, distribution, and energy storage (battery) technologies; energy efficient power systems; fuel switching, including natural gas as a bridge fuel from coal to renewables; and renewable options including algae, wave, and others. Innovative initiatives that harness synergies between mercury reduction and GHG mitigation, including industrial interventions, will also be encouraged.

27. In particular, reducing the concentration of SLCFs, such as black carbon, tropospheric ozone, methane (CH_4), and HFCs, has the potential to slow the rate of global warming over the next two to four decades, as they tend to have much stronger global warming potentials

compared to CO_2.[38] In response to the time-sensitive needs, GEF's support may include reducing emissions from sources such as vehicles, brick kilns, cook stoves, and open-field burning, as well as mitigating CH_4 emissions through upgrading wastewater treatment works. These efforts may bring about co-benefits of reducing local and regional pollutants such as particulate matter, as well as socio-economic benefits.

28. In line with the GEF-6 Private Sector Strategy, a private sector partnership mechanism for technology transfer and innovation may be supported under this Program. Projects with significant mitigation potential may be proposed. An expedited review and approval process may be established to encourage the engagement of small and medium-sized enterprises (SMEs), innovators, and entrepreneurs. The mechanism may release funding in phases to continue support for initiatives that demonstrate higher potential for scale-up and to mitigate risks.

29. Support innovative policies and mechanisms to accelerate low carbon technology uptake. The GEF will support the development, adoption, and implementation of policies, strategies, and regulations that enable increased investments in key mitigation options, including energy efficiency improvements, renewable energy, and sustainable transport. The focus is on systemic solutions, rather than specific technology support and individual sectoral interventions. The GEF support seeks to remove policy and regulatory barriers by creating enabling environments. Initiatives that are articulated as priorities by countries, for instance through the CTCN process, will be considered for support.

30. Energy efficiency: A majority of mitigation assessments point to the key role of energy efficiency in addressing climate challenges.[39] Energy efficiency gains also contribute to other national development goals, such as energy security, poverty alleviation, and increased productivity. Recognizing these co-benefits, the GEF-6 Climate Mitigation Strategy will focus on policies and strategies that support the systematic uptake of proven mitigation options. The GEF-6 support may include: global energy efficiency certification and standards program for "greening the supply chain," and mechanisms for appliance efficiency standards with global and regional coordination appropriately adapted to sensitivity to local conditions. The certification and standards programs for efficient appliances and equipment may continue to be supported. Candidate areas include lighting, air conditioning, refrigeration, motors, and building codes. The GEF encourages partnerships with institutions active in this area to help support global coordination efforts. Projects that facilitate capacity development and sustainable compliance and enforcement approaches (e.g., fee based building code enforcement) may also be supported.

31. Renewable energy: Renewable energy current meets 13% of global primary energy demand. Approximately 40% of the global population needs universal access to electricity and cleaner cooking methods. Renewable energy has the potential to meet the increasing demand for energy services in the developing world. By 2050, the share of renewable energy in global

[38] United Nations Environment Programme 2011, Near-term Climate Protection and Clean Air Benefits: Actions for Controlling Short-Lived Climate Forcers, Nairobi, Kenya.

[39] Plugging the Energy Efficiency Gap with Climate Finance, International Energy Agency, OECD/IEA 2012: http://www.iea.org/publications/insights/PluggingEnergyEfficiencyGapwithClimateFinance_WEB.pdf; Addressing the Challenge of Global Climate Mitigation, Friedrich Ebert Stiftung 2011: http://library.fes.de/pdf-files/iez/08466.pdf

primary energy provision could increase to 30-50% (GEA 2012, IPCC 2011). Despite the clear need in developing countries, developed countries continue to lead investments in renewable energy. For example, in 2011, developed countries had $168 billion in renewable investments, compared to $89 billion in developing countries.[40] These observations point to the need to create enabling environments for renewable energy deployment in developing countries. Coordination of clean energy policies with relevant policies in other areas, such as agriculture, rural development, health, and energy security, have the potential to generate synergistic co-benefits at the local, national, and global levels.

32. GEF support for renewables may be utilized to minimize key barriers to renewable energy deployment, including: support for energy access initiatives at the local level, including demonstrations and piloting of renewable options; support for policy and strategy frameworks to enhance integration of renewable options into energy supply systems, and; enhancement of technical and financial capacities to stimulate renewable energy project development. Candidate options include: medium and small-scale hydropower; on-shore wind power; geothermal power and heat; and bio-energy systems using biomass from wastes and residues; solar photovoltaic systems and CSP.

33. Furthermore, the GEF will help countries identify innovative business models, which can be adopted by the private sector to facilitate up-scaling of low carbon energy options. For instance, the GEF will support private or public energy service companies and SMEs to promote renewable energy and energy efficiency in rural areas. Decentralized, clean energy solutions for households, commercial buildings, and smart grids may also be considered. Such support, collectively, contributes to the goals of Sustainable Energy for All, and in line with the GEF Private Sector Strategy.

34. Sustainable transport: Sustainable transport urgently requires the timely development, demonstration, and financing of low-carbon systems and supportive policies, given the rapid increase of GHG emissions from the transport sources in developing countries. Options considered for GEF support may include: fuel and road pricing; policies and strategies to improve fleet fuel efficiency and promote low impact refrigerants for mobile air conditioning; support for alternative fuels and advanced engine technology pilots; demonstrations of smart transport grids, and; ICT applications for travel demand management. Public transport infrastructure such as bus rapid transit can potentially achieve significant, long-term GHG emission reductions, along with integration of non-motorized transport options. Policies and strategies to promote public transport and demonstrations of mitigation options will be supported. These initiatives will be harmonized with projects on integrated low-carbon urban systems (Objective 2, Program 3). Furthermore, efforts to catalyze GHG emissions reduction from maritime and aviation sectors may be considered for support. Policies and strategies to foster innovation and development of low carbon technologies, including those articulated in Program 1, will be supported. The GEF will also facilitate collaborative initiatives to help adapt mitigation options to user needs. These mechanisms may involve activities aimed at facilitating behavioral changes that enable people to adapt to new technologies and practices such as, among

[40] Bloomberg New Energy Finance (2012). Global Trends in Renewable Energy Investment 2012. Frankfurt School of Finance & Management gGmbH. Frankfurt, Germany. Accessed at: http://fs-unep-centre.org/sites/default/files/publications/globaltrendsreport2012.pdf

others, education, awareness raising, networking, and dissemination. The intent is to accelerate the uptake of mitigation options.

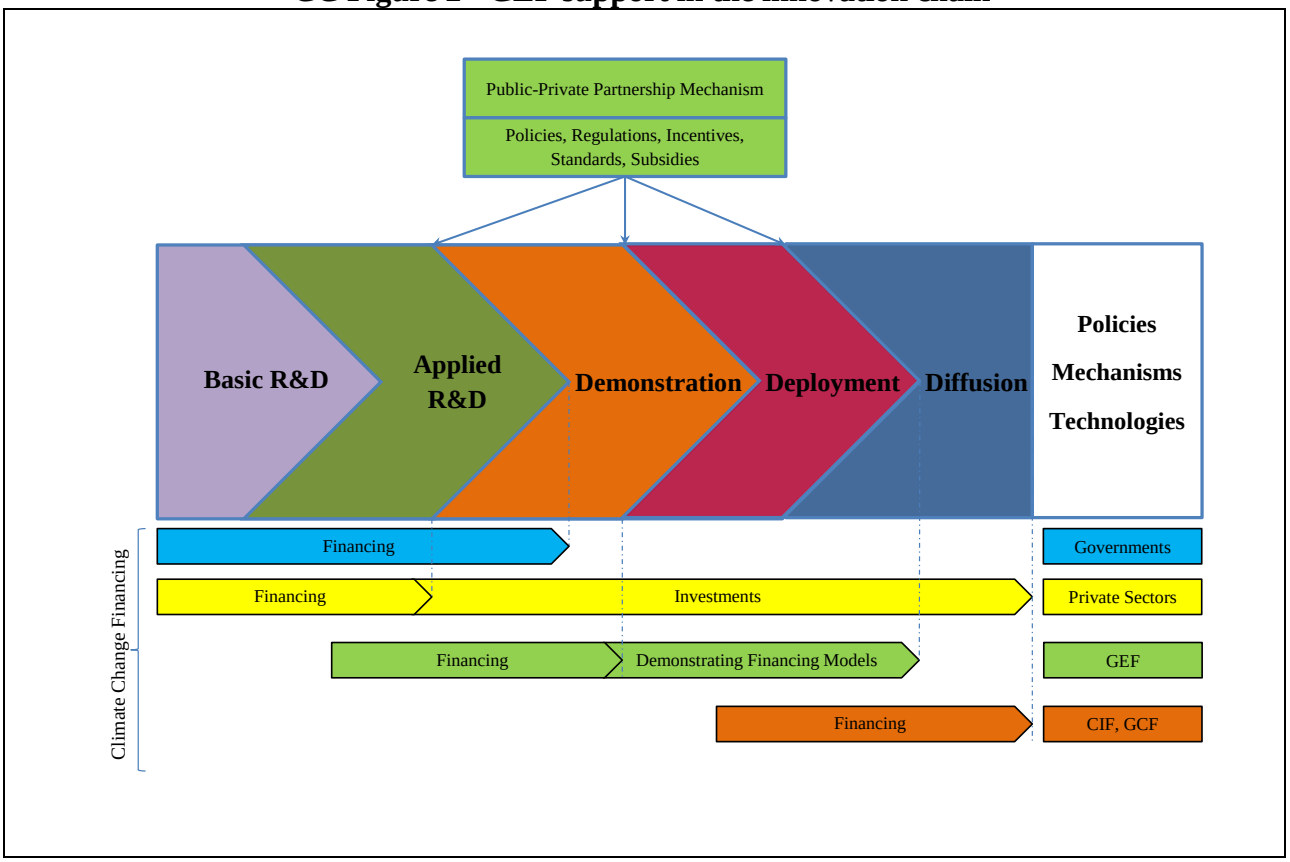
35. Projects under this program will develop and demonstrate innovative mechanisms that are sustainable beyond the project implementation period. Once testing of a technology, mechanism, or policy has proven successful, the results and lessons learned will be widely shared to facilitate subsequent replication efforts by larger-scale financing mechanisms, such as the GCF. Projects will also be expected to include activities to set up mechanisms for MRV of associated GHG emissions.

Outcomes

(a) Innovative technologies and management practices successfully demonstrated, deployed, transferred and financed.

(b) Enabling policy, legal and regulatory frameworks and mechanisms created and put into place to foster innovation and accelerate low-carbon technology transfer.

CC Figure 2 - GEF support in the innovation chain



Program 2: Develop and demonstrate innovative policy packages and market initiatives to foster a new range of mitigation actions

36. This program focuses on helping countries develop and demonstrate innovative policy packages that address mitigation concerns and promote market tools to foster a new range of incentives for economically sound mitigation actions. Three key areas of support are envisaged.

37. Supporting the design of innovative policy packages addressing climate mitigation concerns and socio-economic consequences. The GEF will support countries that articulate, particularly in the national communications, BURs, and other assessments, a need for policy packages for emission mitigation while maximizing economic benefits and/or minimizing the socio-economic consequences. Several studies, including an analysis by the International Monetary Fund, show that the implementation of domestic policies suited to the national context allows for significant reduction of the economic costs of mitigation policies.[41] GEF support may target the design, economic assessment, and implementation of such policy packages.

38. Demonstrating a performance-based mechanism linked to emission reductions. While carbon taxes or cap-and-trade systems may be considered attractive options to efficiently mitigate emissions through price signals, these instruments may be politically difficult to enact. At the same time, a project-by-project approach is not adequate, given the scale and scope of the climate challenges. Performance-based financing mechanism may provide an innovative alternative, and some GEF Agencies are using this concept in their programs. The GEF will support the testing of incentive mechanisms of financing based on ex-post emission reductions assessments. The design and development of such financing mechanisms linked to emission reductions will be supported at a sector level, city level, or economy-wide level. Specifically, the GEF may support:

39. Mechanisms to finance ex-post assessed emission reductions, based on an agreed upon baseline emission scenario;

(a) Mechanisms that associate loan financing to a GEF grant where the grant would incentivize additional emission reductions and lower the loan cost for the country if additional emission reductions are achieved;

(b) Mechanisms to enable national facilities to provide performance-based financing to banks and other financial institutions to support output-based climate change mitigation activities where the subsequent emission reductions would trigger concessional funding from the facility;

(c) Technical assistance and capacity building.

40. This approach may help countries build capacity and policy frameworks needed to meet the mitigation targets in future international agreement. Projects need to feature: flexibility of governments/municipalities to design and implement the mechanism; potential for scaling up; and results agreements and monitoring mechanism. The quality of the national and/or sectoral

[41] International Monetary Fund , 2011. Accessed at: http://www.imf.org/external/np/exr/facts/enviro.htm

scenarios and the MRV system will be important for the performance-based mechanisms to function.

41. Supporting measures to de-risk low-carbon investments. Many stakeholders lack the knowledge and tools necessary to make low-carbon investment decisions. This limitation impedes the ability of today's financial markets to steer investments in a sustainable direction. In collaboration with private sector partners and financial market stakeholders, the GEF may launch an initiative to support the design of methodologies and their applications at the national level to help assess the carbon risks of investments. These measures will be introduced to be consistent with the GEF-6 private sector strategy.

42. The GEF may also introduce financial de-risking instruments that do not seek to directly address policy and regulatory barriers, but instead share the risks that investors face with public actors. The GEF will also support the development and promotion of risk-mitigation tools that focus on energy efficiency or renewable energy financing, and mechanisms to support aggregation of small projects into bankable size and attract institutional investors (e.g., pension funds). The financial mechanisms may include guarantees, hedging instruments, regulatory risk insurance, and public co-investments.

Outcomes:

(a) Innovative policy packages that balance economic growth and emission reduction adopted and implemented;

(b) Performance based mechanisms linked to emissions reductions put in place.

(c) Risks associated with low carbon investments reduced through appropriate financial incentives and increased knowledge among governments and private sector.

CC 2. Demonstrate systemic impacts of mitigation options

43. This Objective addresses the need for impacts at regional and global scales and to expedite the adoption of mitigation options. The GEF intervention will focus on two emerging areas where potential systemic impacts of mitigation option are recognized. The Objective consists of the two Programs:

Program 3: Promote integrated low-carbon urban systems.

Program 4: Promote conservation and enhancement of carbon stocks in forest, and other land use, and support climate smart agriculture.

44. Among the proposed Signature Programs, the Sustainable Cities Program and Food Security Program are expected to contribute towards Objective 2, with targeted interventions to achieve significant GHG mitigation.

Program 3: Promote integrated low-carbon urban systems

45. The GEF-6 Climate Change Mitigation Strategy introduces a new program to address low carbon development needs at the city level. This program builds on transport and urban investments supported in GEF-5. Cities currently consume over two-thirds of the energy, and are

responsible for over 70% of CO_2 emissions globally.[42] Cities also have responsibility in managing sectors with significant GHG emissions, including transportation, electricity, waste and wastewater management, and buildings. Cities and urban institutions can have an innovative and practical role at the local level to address the global commons challenges.

46. This Program targets urban interventions with significant climate change mitigation potential, to help cities shift towards low-carbon urban development. The GEF-6 Sustainable Cities Signature Program, on the other hand, aims to address urbanization as a meta-trend affecting the global environment in a holistic manner, and builds on synergy among different GEF focal areas. Examples of projects eligible for GEF support, many of which are also linked to topics articulated in Objective 1, include:

(a) Urban initiatives that commit to GHG mitigation targets at the municipality level, which could utilize performance-based financing and incentives.
(b) Design and implementation of sustainable urban strategies, policies, and regulations, combining energy efficiency (buildings, lighting, air conditioning, transport, district heating systems), renewable energy development (solar, wind, co-generation, waste-to-energy), other sources of GHG emissions (waste and wastewater management) and other concerns (adaptation, chemicals management, air quality management, resilient buildings, green zones development).
(c) Land use management, planning, and zoning, including the integration of land use planning with transport planning and transit-oriented development, for sustainable cities to reduce energy demand, enhance climate resilience, and improve living standards.
(d) Promotion of sustainable production and consumption practices to de-couple urban growth and resource use, to reduce use of persistent organic chemicals (POPs) and other chemicals, CH_4 and other SLCF emissions, reduce mercury and lead emissions, and e-waste generation.
(e) Phase-out of ozone depleting substances, with energy efficient and low greenhouse potential options.
(f) Design and implementation of integrated water resource management strategies that address climate change mitigation and climate resilience objectives.
(g) Support urban sustainable transport infrastructure and systems to reduce demand for car travel through catalytic approaches, including road and parking pricing, and congestion charging, that are particularly relevant for urban, low carbon development.
(h) Support sustainable freight and logistics services to address the supply chain, including development of logistics platforms, reverse logistics, and low-emission zones.
(i) Initiatives to assess and reduce the impacts of black carbon and SLCF at the urban level.

47. Innovative policies and mechanisms for sustainable transport, fuel economy standards, vehicle registration fees, parking policy, and zoning and street/urban design codes will be considered. A strong focus on freight and logistics services will require the engagement of the private sector. With regard to assessment of GHG emission reductions, the transport sector has

[42] Sustainable Cities: Building cities for the future, 2012. Partnership: C40 Cities, ICLEI, UNEP, World Green Building Council. http://www.sustainablecities2013.com/images/uploads/documents/SC2012.pdf

had difficulty in developing sound MRV systems. GEF support for the MRV systems will leverage finances for sustainable transport from other climate mechanisms.

48. Projects addressing climate change mitigation issues under this Program will include a robust MRV system to assess the expected tangible results in terms of global environmental benefits.

Outcomes:

(a) Sustainable urban policy, legal and regulatory frameworks adopted and enforced for low carbon urban development;

(b) GHG efficiency of resource use improved in urban systems;

(c) Sustainable organization, financing and delivery mechanisms established and operationalized for low carbon urban development.

Program 4: Promote conservation and enhancement of carbon stocks in forest, and other land use, and support climate smart agriculture

49. This Program presents a unique opportunity within the GEF Climate Change Mitigation Strategy to draw direct linkages with programs under biodiversity, international waters, and sustainable land management, as well as climate change adaptation. The Program also articulates areas where complementary support from the SFM program may be sought to generate multiple benefits.

50. The LULUCF and the agriculture sectors represent major GHG emission sources, accounting for approximately 31% of global emissions.[43] CH_4 and nitrous oxide (N_2O) emissions from the agriculture and to a lesser extent forestry sectors represent 14% of global emissions. Globally, agricultural CH_4 and N_2O emissions have increased by nearly 17% from 1990 to 2005.[44] These emissions were not explicitly included in previous GEF strategies. GEF-6 support is extended to mitigate them.

51. The GEF-6 Climate Change Mitigation Strategy for LULUCF and agriculture is strengthened and expanded to address key emerging issues for these sectors. It will focus on robustly designed land use, forestry, or agriculture projects that mitigate climate change by addressing the drivers of carbon stock depletion and agricultural emission at a scale and scope consistent with these drivers. This Program also aims to address challenge of addressing mitigation concerns within the context of food security, and to strengthen and improve the MRV of the GHG emissions and carbon sequestration. In particular, the GEF will provide support for areas described in the following sections.

[43] IPCC (2007). Fourth Assessment Report of the Intergovernmental Panel on Climate Change. IPCC, Geneva, Switzerland.

[44] Smith, P., D. Martino, Z. Cai, D. Gwary, H. Janzen, P. Kumar, B. McCarl, S. Ogle, F. O'Mara, C. Rice, B. Scholes, O. Sirotenko, 2007: Agriculture. In Climate Change 2007: Mitigation. Contribution of Working Group III to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change [B. Metz, O.R. Davidson, P.R. Bosch, R. Dave, L.A. Meyer (eds)], Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA.

52. Support mitigation-focused management practices in LULUCF. The GEF will continue financing projects to protect and enhance carbon concentration and CO_2 sequestration in forests, peatlands, and other ecosystems. The GEF will finance management activities within and outside of forest and other land use areas to address the identified and prioritized drivers of carbon depletion at the appropriate scale. The management activities will focus on approaches designed to protect the prominent carbon pools in these ecosystems.

53. This Program may include robust climate change mitigation dimensions to SFM activities by integrating carbon consideration into forest management and identification and monitoring of high carbon value forests. The SFM program may thus contribute towards the sustainability of mitigation efforts in the forest sector by supporting efforts to diversify livelihoods and building capacity for improved forest management.

54. Deforestation and drainage of peatlands generate emissions of approximately 2 to 3 gigatonnes of CO_2 each year. The Program will support protection of carbon reservoirs in peatlands and technologically viable measures to restore such carbon sinks, in addition to reforestation.

55. With an integrated approach on riparian zones, particularly coastal peatlands, combining mitigation and adaptation objectives, the program will enable countries to protect blue carbon stocks in these ecosystems and harness their ability to function as an important carbon sink and a natural infrastructure.

56. Support mitigation focused management practices in agriculture. Climate smart agriculture (CSA[45]) initiatives that include a mitigation objective will become eligible for financing in GEF-6, recognizing a wide array of opportunities in the agricultural sector to reduce GHG emissions.

57. The program will promote soil management practices, improved fertilizing methods, and precision agriculture measures to maintain soil quality and reduce N_2O emissions. CH_4 emission reduction options may include improved livestock management, improved wetland rice fields irrigation, and better waste management in intensive livestock systems.

58. In addition to supporting approaches that reduce emissions from production landscapes, the program will also promote measures that increase carbon storage in farmlands, and degraded areas to make them viable for agriculture. These measures may include reduced tillage, integrated crop-livestock, agroforestry and other innovative soil quality improving techniques.

59. The Climate Change Mitigation Strategy will support the inclusion of activities to enhance mitigation potential by the Land Degradation Strategy and in related adaptation efforts, supported by the LDCF and SCCF. Such synergies will ensure the triple win of climate change mitigation, food security, and resiliency of agricultural systems. The Food Security Signature

[45] Climate-smart agriculture (CSA) seeks to increase sustainable productivity, strengthen farmers' resilience, reduce agriculture's GHG emissions and increase carbon sequestration. Climate-Smart Agriculture—A Call To Action, World bank 2011.

Program with its focus on the small holder farmers in Africa will complement the overall mitigation related goal of reducing GHG emissions from agriculture intensification.

60. Support policies and financial mechanisms to maintain and enhance carbon stocks or reduce emissions from LULUCF and agriculture. The GEF will support the development and enforcement of policies and financial mechanisms that aim to address the drivers of emissions linked to deforestation, change in land use, agricultural practices, at a scale consistent with the scale of these drivers. The GEF will also provide support to policies that integrate emissions from LULUCF in national mitigation and low carbon development goals.

61. Policy reforms are needed to develop incentives to initiate inclusion of innovative practices in forest and land management. The GEF will provide support to improve the existing schemes or developing new ones to incentivize land users to undertake emission reducing measures. Such support may include insurance and risk guarantee schemes, along with training systems to support farmers who engage in new practices.

62. Establish and strengthen accounting and MRV in LULUCF and agriculture. The GEF recipient countries often lack technical and institutional capacity to improve the accuracy of GHG emission estimates from LULUCF activities and agriculture. The GEF may support preparation of tools including mapping systems using high resolution satellite imagery to improve the accuracy of LULUCF dynamics and estimations of the resulting carbon stock evolution at a scale appropriate for drivers of GHG emissions. The LULUCF program will emphasize the ground-truthing of carbon estimates with field measurements.

63. In partner countries of the United Nations collaborative initiative on Reducing Emissions from Deforestation and Forest Degradation in developing countries (UN-REDD) is helping 47 partner countries develop methodologies and approaches for national level inventory systems and define national carbon monitoring programs for REDD+ readiness. In these countries, the GEF will provide complementary support to pilot the recommended carbon monitoring and accounting approaches. In other countries, the GEF support will be available to finance projects and programs to develop and implement national and sub-national level monitoring systems.

64. These MRV efforts may be complimented with capacity building of related institutions for carbon inventories and robust accounting, reporting and verification measures. Through such measures the GEF will assist countries define their 2015 emission targets as well as help countires participate in voluntary carbon markets.

65. With coordinated efforts with Land Degradation and Biodiversity focal areas, the Program seeks to identify areas of intervention that are important from GHG emissions perspective, define management practices to reduce emissions, and provide tools to monitor and account for the improvement in emissions.

Outcomes:

(a) Targeted policy, legal and regulatory frameworks to address the drivers of increased emissions from and depletion of carbon in agriculture, forest, and other land-use adopted and enforced.

(b) Sustainable management practices that lead to long-term climate change mitigation and carbon sequestration adopted in agricultural lands, forests, and in the wider landscape introduced.

(c) MRV systems for GHG emissions and carbon stock and flux in agriculture, forestry, and other land use established based on sound LULUCF and agriculture emissions and carbon stocks monitoring, reporting and verification.

CC 3. Foster enabling conditions to mainstream mitigation concerns

66. This Objective addresses the need for enabling conditions to mainstream climate change concerns into the national planning and development agenda, through sound data, analysis, and policy frameworks. The Convention obligations, considered as foundational blocks of GEF interventions, are addressed, as well as enabling activities. The Objective consists of the following program:

Program 5: Integrate findings of Convention obligations enabling activities into national planning processes and mitigation targets

67. The overall aim of this program is to facilitate the integration of the reporting and assessment results into the national planning process and to help countries mainstream mitigation action in support of the proposed 2015 agreement.

68. To be in a position to meet potential commitments for the 2015 agreement, which will enter into force beginning in 2020, GEF recipient countries face significant policy, technical, and organizational challenges, as well as data and analysis to support decision-making. The GEF has been providing financial and technical support to non-annex 1 countries to prepare national communications to comply with Convention obligations. Parties decided in 2011 at COP 17 to enhance the reporting of national communications from non-annex 1 countries, consistent with their capabilities and the level of support provided for reporting. Countries also agreed to submit BURs, including national GHG inventories, national inventory report, and information on mitigation actions, needs, and support received. The COP has given guidance to the GEF to finance the BURs.

69. During GEF-6, the GEF will continue to provide resources to help countries prepare national communications and BURs. The GEF may also support actions and activities to enhance the capacity of countries to prepare their national communications and BURs. Wider stakeholder engagement will be encouraged to enhance partnerships and involvement of institutions concerned with national development strategy development and implementation. Also, Program 5 supports activities responsive to other COP guidance in areas such as TNAs and capacity building.

70. Another Convention-related activity involves countries developing and implementing NAMAs to reduce their GHG emissions. During GEF-6, efforts to produce and implement NAMAs will be considered for support. The evolving NAMA modalities, may include domestic credit systems, cap and trade systems, and other voluntary new market mechanisms, and could constitute single-sector, multi-sector, or economy-wide approaches. NAMA implementation may

also be supported under Objectives 1 and 2. The GEF may provide support for the development of MRV systems within the NAMAs, which could strengthen the basis for innovative financial mechanisms, including carbon finance and voluntary emission trading at the national level. The GEF may also continue to support Low Emission Development Strategy development and implementation as one of the key vehicles to support mainstreaming of mitigation actions.

71. The GEF may facilitate ICT applications to improve the ability to compare and analyze assessment results, and thus enable wider use of such results efficiently and in a timely manner. Other partners, including financing institutions, may also support this effort. The GEF will provide resources to countries to assist with capacity building and creating enabling environments, in line with Convention guidance.

72. Finally, as indicated earlier in the Strategy, GEF-6 climate change mitigation projects are expected to articulate relevance to the analysis and findings of national communications, BURs, or TNAs, or be part of a NAMA implementation plan.

Outcomes:

(a) Convention-related reports and assessments completed and submitted in a timely manner to support the 2015 global agreement.

(b) Climate change mitigation and adaptation targets and priorities integrated into development and sectoral planning frameworks at the national level.

Climate Change Mitigation Focal Area Set-Aside

73. Countries will be able to access the focal area set-aside funds (FAS) to implement Convention obligations and enabling activities. Support would be provided for all GEF-eligible countries to produce the national communications and BURs, in line with COP guidance. Support for TNAs will also be made eligible for small island developing states (SIDs) and least developed countries (LDCs) for the FAS.

74. The remaining funds in FAS will be used to address supra-national strategic priorities or to incentivize countries to participate in global, regional, or multi-country projects. Some areas where such support may be made available include: programs that will produce significant global long-term GHG emissions, but with limited appeal to individual countries; support for expansion of carbon markets; early demonstrations of innovative financial mechanisms and instruments, such as performance-based mechanisms; and others.

75. Projects supported with FAS funds will meet some or all of the following criteria: (i) relevant to the objectives and programs of the GEF Climate Change Mitigation Strategy; (ii) support priorities identified by the COP; (iii) likelihood that the project will have a broad and positive impact on climate change mitigation; (iv) potential for replication; (v) global demonstration value; and (vi) contribute to global knowledge through formal experimental or quasi-experimental designs that test and evaluate the hypotheses embedded in project interventions.

76. An incentive system may also be made available for global and regional projects whereby participating countries would receive resources from the FAS proportionate to the amount of resources dedicated to a project from their national allocation.

Results Framework

Goal: To support developing countries and economies in transition to make transformational shifts towards a low-carbon development path.
Impacts: Reduced growth in GHG emissions and contribution to the eventual stabilization of GHG concentrations in the atmosphere.
Key Indicators: Tonnes of CO_2 equivalent avoided (both direct and indirect) over the investment or impact period of the projects.

More robust financial scenarios enable the GEF to achieve economies of scale and critical mass, resulting in higher emission reduction per dollar of GEF resources compared to the status quo scenario.

CC Table 1 - Results Framework

GEF-6 Objectives	Core Outcomes and Indicators	Expected Outputs
Total indicative allocation: Status quo scenario: $1,100 million Enhanced impact scenario: $1,420 million		
C 1. ***Promote innovation, technology transfer, and supportive policies and strategies*** Indicative allocation for objective: Status quo scenario: $445 million Enhanced impact scenario: $605 million		
Program 1: To develop, demonstrate and finance low-carbon technologies and mitigation options Indicative allocation for program: Status quo: $235 million Enhanced impact: $355 million	**Outcome 1.1.1**: Innovative technologies and management practices successfully demonstrated, deployed, transferred and financed *Indicator: to be developed* **Outcome 1.1.2**: Enabling policy, legal and regulatory frameworks and mechanisms created and put into place to foster innovation and accelerate low-carbon technology transfer *Indicator: New national, sectoral and municipal/local policies and regulations developed or existing ones strengthened to enable acceleration of low carbon technology transfer and uptake (Quality of policy framework expressed as a qualitative rating 1-*	**Output 1.1.1a**: Early and middle stage technologies with high transformational potential for mitigation tested and their effectiveness demonstrated *Indicator: Number of transformational technologies, identified by type, by development cycle stage, mitigation potential, risk factors and cost* **Output 1.1.1b**: Barriers and risks inhibiting adoption of transformational technologies identified and addressed *Indicator: Lessons learned from experience of technology testing/transfer documented and reported* **Output 1.1.1c**: Financing and delivery mechanisms to operationalize new technologies and appropriate mitigation options established

	10[46]*)*	*Indicator: Existence and operational sustainability of financing mechanism (as reflected source/mode/operational details of financing mechanism)* **Output 1.1.1d**: Accelerated timing of transfer and deployment of low carbon technologies *Indicator: Average time prior to technology deployment; Percentage market/service demand met with low carbon technologies* **Output 1.1.1e**: Increased partnership of private sector *Indicators*: *Existence of PPP; Number of private sector participants* **Output 1.1.1f**: MRV systems for determination of emissions from different technologies developed *Indicator: Data measure, reported, verified (verification process conducted) and archived for easy access* **Output 1.1.2**: Processes and mechanisms to facilitate the development of policy and regulatory frameworks that foster innovation and accelerate low-carbon technology transfer put in place and/or budgeted (may include public awareness raising, knowledge sharing activities to identify, design and address policy and regulatory agenda) *Indicator: Evidence of implementation readiness related to policy priorities for low carbon development options*
Program 2: To foster a range of mitigation actions through development and demonstration of innovative policy packages and market initiatives	**Outcome 1.2.1**: Innovative policy packages that balance economic growth and emission reduction adopted and implemented *Indicator: Number of countries with such combination policy formulations in place* **Outcome 1.2.2**: Performance based	**Output 1.2.1**: Design, assessments and implementation of policy packages that balance economic growth and emission reduction *Indicator: Technical reports assessing emissions, Environmental and Socio-economic impact of emissions reduction activities and policy recommendations for aggressive carbon mitigation with complementary offsets listed/rated*[1]

[46] The rating (similar to the policy rating used in the CIF results framework) reflects the quality of policy and regulatory frameworks that enable accelerated progress in carbon mitigation and uptake of technologies that reduce emissions. While this is a subjective rating, it is expected that it will reflect the consensus of a variety of key stakeholders in the country. A rating of 1 indicates that the policies exist with minimal emphasis on carbon mitigation, a middle range rating would reflect that strong measures for carbon mitigation are there in policy and implementation is in progress, a higher rating would indicate that a combination of policies reflecting aggressive mitigation priorities combined with measures in place for their implementation (budgets, regulations, fiscal incentives etc).

Indicative allocation for program: Status quo: $210 million Enhanced impact: $250 million	mechanisms linked to emissions reductions put in place *Indicator: Number of city, sector or economy wide performance based mechanisms directly linked to emission reduction* *Indicator: Volume of investment mobilized and extent of carbon emission reduction realized through performance based financing systems.* **Outcome 1.2.3**: Risks associated with low carbon investments reduced through financial incentives and increased knowledge among governments and private sector *Indicator: Number of city, sector or economy wide risk-mitigating financial incentive developed/promoted* *Indicator: Volume of investments where carbon related factors (emissions, risk etc) are explicitly considered prior to investment*	**Output 1.2.2a**: Mechanisms to finance performance-based emission reductions set up and operational *Indicator: Knowledge products generated, result agreements and monitoring systems set up to quantify emissions, rating[1]* **Output 1.2.3a**: Measures to de-risk low carbon options designed and implemented *Indicators: Number/Quality of financial mechanisms to de-risk carbon options (such as guarantees, insurance, etc) and activities that help assess carbon related risk to future investments (carbon risk include both impact of climate on investments as well as risk arising from pricing or policy changes under new carbon mitigation regimes on investments) completed* **Output 1.2.3c**: MRV systems for determination of emissions and their reductions from investments developed *Indicator: Data measure, reported, verified (verification process conducted) and archived for easy access*
CC 2. ***Demonstrate systemic impacts of mitigation options*** Indicative allocation for objective: Status quo scenario: $380 million Enhanced impact scenario: $480 million		
Program 3: To promote integrated low-carbon urban systems Indicative allocation for program: Status quo: $190 million Enhanced impact: $260 million	**Outcome 2.3.1**: Sustainable urban policy, legal and regulatory frameworks adopted and enforced for low carbon urban development *Indicator: Number of cities with city-level policies, regulations and plans designed and adopted reduce emissions, Number of cities with carbon or energy intensity targets* **Outcome 2.3.2**: GHG efficiency of resource use improved in urban systems. *Indicator: Efficiency level of urban resources utilized (such as GHG emissions per capita, GHG per GDP, carbon intensity per unit of GDP, national/city level), Annual Energy savings as a result of GEF investment (GwH)*	**Output 2.3.1a**: City regulations, planning and management measures incentivize/include low carbon options for energy use, buildings/commercial constructions and urban transport and supply chains. *Indicators: Number of urban service sectors where such regulations exist; Number of regulations, plans and management measures, by sector; Quality of low carbon related enabling frameworks, rating[1]* **Output 2.3.1b**: Assessment and design of improved urban land use planning frameworks *Indicators: Number and quality of land use plans that incentivize high density, low carbon options, rating[1]; Percentage of urban area covered under improved/smart land use plans* **Output 2.3.2a**: Reduced resource use in production and

	Outcome 2.3.3: Sustainable organization, financing and delivery mechanisms established and operationalized for low carbon urban development *Indicators: Volume of financing generated for less-GHG intensive urban transport and infrastructure systems, Percentage of urban services met by low carbon systems (e.g. Additional passengers using low carbon transport)*	consumption practices. Measures to reduce resource use in production and consumptions put in place/incentivized e.g. Low emission freight and logistical services implemented *Indicators: No. of measures by sector in place and other indicators measuring reduced resource use (e.g. % of supply chain based on low carbon energy use).* **Output 2.3.2b**: MRV systems for determination of emissions from different urban sectors developed *Indicator: Data measure, reported, verified (verification process conducted) and archived for access* **Output 2.3.2c**: City programs to assess and design actions to reduce black carbon and SCLFs initiated and implemented *Indicator: Assessment and design of such programs completed and measures for implementation in place, rating** **Output 2.3.3**: Assessment and design of innovative financing systems by urban service completed *Indicator: Technical reports and implementation strategy completed, rating*
Program 4: To support innovative models and mechanisms for conservation of carbon stocks in forest and other land use, and reduction of GHG emissions in agriculture through Climate Smart Agriculture Indicative allocation for program: Status quo: $190 million Enhanced impact: $220 million	**Outcome 2.4.1**: Targeted policy, legal and regulatory frameworks to address the drivers of increased emissions from and depletion of carbon in, agriculture, forest, and other land-use adopted and enforced *Indicators: Sectoral policies explicitly identify and address drivers of land use that underpin increasing GHG emissions and carbon conservation enabling frameworks in place, rating[1]; Volume of investment in operationalizing priorities for sustainable land use and conservation* **Outcome 2.4.2**: Sustainable management practices that lead to long-term climate change mitigation and carbon sequestration adopted in agricultural lands, forests, and in the wider landscape introduced *Indicators: Number of Hectares*	**Output 2.4.1** Support for strengthening land use and sectoral policies and strategies (Agriculture, forestry, wetland, livestock, pasture and other lands) and operational plans to include carbon conservation and emission reduction as specific priorities and *Indicator: Process and resources to strengthen the policy and regulatory framework and budgets and plans to operationalize in place* **Output 2.4.2a**: Sustainable management practices and climate-smart agriculture and land use practices that reduce GHG emissions and enhance carbon stocks identified and demonstrated in agricultural lands, forests, pastures and in other land-use types *Indicators: Number of practices identified and demonstrated; Volume of investment and area involved* **Output 2.4.2b**: Capacity strengthened for sustainable management practices and climate-smart agriculture and land use practices that reduce GHG emissions and enhance carbon stocks

	protected/conserved; % of threatened areas conserved/restored; area of blue carbon conserved, tCO_2 sequestered/tCO_2 avoided in emissions *Indicator: tCO_2, CH_4 and N_2O emissions reduced from LULUCF mitigation relative to reference emissions level; Number of livestock and quantity of manure managed with lower CH_4 or N_2O emissions; Number of hectares of agricultural and other production (pasture, forestry etc) lands under Climate Smart Agriculture and SLM/SFM practices to reduce emissions of CO_2, CH4 and N2O* **Outcome 2.4.3**: MRV systems for GHG emissions, and carbon stock and flux in agriculture, forestry, and other land use established based on sound LULUCF and agriculture emissions and carbon stocks monitoring reporting and verification. *Indicator: Number of countries with Standardized MRV systems for carbon stock and flux in agriculture, forestry, and other land use established and operational. defining their 2015 emission targets based on sound LULUCF and agriculture emissions and carbon stocks monitoring reporting and verification*	*Indicator: Number of persons with improved capacity to implement sustainable management practices and climate-smart agriculture and land use practices* **Output 2.4.3**: MRV systems for carbon stock and flux and for GHG emissions in agriculture, forestry, and other land use established *Indicator: Data measure, reported, verified (verification process conducted) and archived for easy access*
CC 3. ***Foster enabling conditions to mainstream mitigation concerns*** Indicative allocation for objective: Status quo scenario: $90 million Enhanced impact scenario: $90 million		
Program 5: To integrate the Convention findings and enabling activities into national planning processes and mitigation targets Indicative allocation for program: Status quo: $90 million Enhanced impact: $90 million	**Outcome 3.5.1**: Convention-related reports and assessments completed and submitted in a timely manner *Indicator: Number of countries satisfying Convention obligations and other reporting* **Outcome 3.5.2**: Climate change mitigation targets and priority actions integrated into development and sectoral planning frameworks at the national level *Indicator: Number of development strategies and planning frameworks in a country that include*	**Output 3.5.1a**: Processes for monitoring and reporting for Convention related reporting and other obligations operational *Indicator: BUR, National communications and related reports prepared* **Output 3.5.1b**: Capacity building activities that address critical gaps in ability of countries to meet UNFCCC reporting and assessment obligations *Indicator: Core staff with related skills and capacity in place, rating*[1]

	mitigation targets and priority actions based on Convention obligations	**Output 3.5.2a**: NAMAs and other assessments/studies in relation to mitigation targets (2015) completed *Indicator: Preparation reports for 2015 targets* **Output 3.5.2b**: Priority actions following from assessments for mitigations targets identified and incorporated into development strategies and sectoral planning *Indicator: Number of development strategies and plans listing priority actions* **Output 3.5.2c**: ICT applications to improve ability to collect, analyze, share results and information in the entire process towards mitigation targets designed and implemented *Indicator: Number of countries with ICT platforms*
Global and regional set-aside Indicative allocation: Status quo scenario: $185 million Enhanced impact scenario: $245 million		

Annex 1. Innovative Programming Options

1. For the GEF Climate Change Mitigation focal area, innovation in project design and implementation is critical. Global and regional investment in clean energy and other low-carbon technologies and innovative practices is growing but not at the speed needed to meet the 2 °C target. The innovative programming options identified in the GEF-6 position paper will increase flexibility in programming, create new entry points for project partners, and offer low-cost opportunities for achieving GHG emission reductions. Some examples of how climate mitigation projects will utilize the innovative programming options are listed below:

(a) Performance-based financing and incentives: Performance-based financing and in particular output based aid has been used, including by GEF Agencies, in the health and education sectors. Its application in the climate change mitigation field is emerging. The Climate Change Mitigation focal area will promote the use of performance-based financing and incentives introduced , including the following cases:

(i) Project-based: performance-based financing could be utilized on individual projects. The easiest way to do so is through the inclusion of output based funding. Projects that require strong measurement and verification to ensure global environmental benefits, such as renewable energy supply or forest protection, may be suitable. A more consistent application of this mode of financing may be pursued in larger emitting countries.

(ii) Sector, city or economy-wide: Countries or cities that commit to economy-wide or sector-based emission reduction targets (in tonnes of CO_2 equivalent and/or percent reduction) may utilize performance-based financing. Possible mechanisms and proposed conditions are detailed in the description of Objective 1, Program 2. Countries that pilot such approaches will gain flexibility and viable options for governments/municipalities to design and implement activities to achieve the agreed-upon results to access financing.

2. The performance-based funding can facilitate competitive bidding and encourages grantees to implement projects quickly with an emphasis on results. Provisions to support technical assistance covering the initial transaction costs and first activities of such mechanisms will be considered.

(a) Incentives for signature integrated projects: Climate change mitigation is a focal area for which initiatives serving multiple global environmental benefits in synergy can be identified with a clear added value in addressing these multiple benefits in a unique project. Examples of eligible topics may include: SFM; land use-related carbon management; low carbon urban systems; and climate-chemical nexus. Another emerging area is the synergy opportunity for mercury reduction and climate mitigation in power generation. In addition to the multi-focal projects that combine funding from multiple focal areas, projects under single focal areas can also enhance the emphasis on multiple global environmental benefits. For example, sustainable transport projects can also address climate resilience, projects promoting energy efficient buildings can also address climate resilience, and projects promoting renewable energy can help reduce pressure on water resources. The GEF will encourage such projects to address multiple benefits, for instance through the application of climate resilience principles in all mitigation projects.

(b) Flexible programming for high-impact projects and under-served countries:

(i) Large-scale, high-impact projects: Projects with the potential to deliver significant, rapid, sustained emission reduction must become a regular part of the GEF portfolio. These large-scale, high-impact projects will be needed particularly in countries with economies in transition and fast-growing urban centers. To encourage these projects, GEF may consider incentives, regional approaches, and public private partnerships.

(ii) Flexible programming for least developed countries (LDCs) and Small Island Developing States (SIDS): Incentive programs for expedited and flexible programming for LDCs and SIDS may be pursued to promote clean energy access for SIDs and LDCs.

(c) Call for innovative proposals and partners: The new objective on low carbon urban systems would allow the GEF and its agencies to engage with city governments and leading institutions in the field. The GEF support for stronger monitoring and verification of carbon emissions could be an opportunity to engage with institutions engaged in carbon monitoring methodologies.

(d) Flexibility for regional projects and programs: The Climate Change Mitigation focal area has supported regional projects, such as the Strategic Program for West Africa, and regional Climate Technology and Financing Center projects. In GEF-6, Agencies will be encouraged to identify several themes in climate change that would allow for rapid replication and adoption of regional programs. Topics may include energy access, innovation and technology transfer promotion, energy efficiency appliances and equipment, transboundary SFM, and regional sustainable agriculture efforts.

(e) Catalyzing private sector engagement: To help catalyze investments and leverage opportunities, the Climate Change Mitigation focal area will also actively pursue projects with private sector engagement. Agencies will be encouraged to submit projects that take advantage of the GEF-6 private sector engagement options. Some examples of how the GEF will take encourage private sector engagement are listed below. More detail can be found in the descriptions of each Program.

(i) Public Private Partnerships (PPP)

Clean energy and low-carbon technologies are rapidly going down the cost curve and achieve high penetration rates in some GEF recipient countries. However, this growth is not consistent, reliable, or uniform across the countries. New PPP have proven successful in promoting low-carbon investments through loans, equity investments, and risk-sharing. The Climate Change Mitigation focal area will encourage countries to consider PPPs under the private sector set-aside and within the focal area allocation.

(ii) Risk-mitigation and structured financing tools

Clean energy and low-carbon technologies are often perceived as risky by potential investors. The development of new tools to assess risks and their applications may help those countries having difficulty attracting strong private sector investment for clean energy. For example, the GEF support may be extended to projects to pilot and

validate insurance programs applied to policy risk for renewable power purchase agreements. Other areas are structured financing tools that allow the GEF to reduce risk and attract institutional investors.

(iii) Global certification and standards program

This approach may be pursued for energy efficiency technologies, modeled after the ongoing successful initiatives. For example, this effort could support growing efforts at national and international level for "greening of the supply chain" which helps businesses grow locally while delivering global environmental benefits. The program would identify and promote quality, standards, policy development, and MRV for efficient appliances and equipment and green supply chains. Candidate technologies include lighting, air conditioning, refrigeration, motors, and building codes.

(iv) SME Small Grant/Loan Program

The GEF could develop an SME grant/loan program focused on climate change mitigation and low-carbon technologies. The SMEs could use small grants or loans to promote, for example, enhanced adoption of solar thermal technologies for manufacturing; energy efficient cook-stoves; local manufacturing of mini-hydro systems; and other low-carbon technologies. Integrated mitigation and adaptation projects might include small grants for adoption of ICT for tracking of climate smart agriculture to reduce emissions, and use of fertilizer and water.

CHEMICALS AND WASTE FOCAL AREA STRATEGY

Background

1. New chemicals are developed and manufactured every day. Most, when used properly, help us improve agriculture, refrigerate products, improve medicines, make buildings safer and contribute to many other aspects of human development. The UNEP Global Chemicals Outlook 2013 indicates that although the exact number of chemicals on the market is unknown, it is estimated that there are more than 140,000 chemicals on the EU market. The European Union's Registration, Evaluation and Authorization of Chemicals (REACH) regulation requires registration for chemical substances over one tonne and expects to register at least 30,000 chemicals in this category prior to 2018. These figures may be a reasonable guide to the approximate number of chemicals in commerce globally. The UNEP Outlook further states that new chemicals are also introduced into commerce each year. For example, the US Environmental Protection Agency adds an average of about 700 new chemicals per year to the Toxic Substances Control Act inventory.

2. The UNEP Global Chemical Outlook 2013 indicates that the continuous growth trends and the changes in global production, trade and use of chemicals point toward an increasing chemical intensification of the economy. This trend affects all countries but will particularly exert an added chemicals management requirement on developing countries and countries with economies in transition (CEITs) that often have limited capacities to deal with such complex challenges.

3. The contribution chemicals make to improved living standards needs to be balanced with recognition of their potential adverse impacts. When used and disposed of improperly, chemicals can have serious toxic and hazardous effects and long term negative impacts on human health and the environment, including the atmosphere, water, soil and wildlife, through a variety of mechanisms, depending on the amount, timing, duration, and pattern of exposure as well as the properties of the specific chemical. Fetal exposure to polychlorinated biphenyls (PCBs) is related to behavioral and cognition problems. Pesticide DDT exposure has been related to women's inability to produce sufficient breast milk. Mercury has been identified as the cause of Minamata disease. With the increasing chemical intensification of the economy, the risks for widespread and multifaceted exposures of humans and the environment to chemicals also rise.

4. Contamination by chemicals is a global issue. Scientists estimate that everyone today carries within her or his body a large number of chemical contaminants, for which the health impact is not precisely known. This is true whether we live in rural or isolated areas, in the middle of a large city, or near an industrialized area. Many chemicals have the ability to attach to dust particles or get disbursed through air and water currents and travel over large distances. Chemicals such as PCBs, mercury and DDT have been found in high concentrations in Arctic species and indigenous populations in these areas where these chemicals are not used, and are causing a number of negative impacts to these populations and species. All ecosystems on earth are contaminated by toxic chemicals.

5. There are a variety of chemicals sources. Some of the chemicals residing in our bodies are pesticides, and some are used in or produced by other forms of industrial production. A

pesticide found inside our body may have come from pesticide spraying at a local school, in our garden or kitchen, or it may have arrived on foodstuffs grown with pesticides. Whatever their sources, harmful chemicals enter the food chain. Chlorinated pesticides, such as DDT, can remain in the body for 50 years.

6. At the end of the life, chemicals are recycled or disposed as part of waste. Therefore, it is critical to perform environmentally-sound management of waste so that harmful chemicals are not released into the environment. For example, electrical and electronic waste (e-waste) is growing rapidly in developing as well as in developed countries. Inappropriate management of e-waste, such as open burning, poses heavy impacts on human health and the environment.

7. Some chemicals like dioxins and furans are created unintentionally by industrial processes using chlorine and from the manufacture and incineration of certain plastics. Almost all of the dioxin found inside humans got there from eating contaminated food. It may have originated in a local medical waste incinerator or it may have been created by a distant, chlorine-based, paper manufacturing plant located thousands of miles away. Scientists estimate that there are many other unintentionally created by-products which have not yet been "discovered" since no tests have yet been developed that would fully identify or describe these by-products.

Development of Global Architectures to Address Harmful Chemicals and Waste

8. Governments have established a number of global architectures to address harmful chemicals and waste (Annex 2). The sixth replenishment period of the GEF Trust Fund (2014 to 2018; GEF-6) coincides with a period of a rapidly evolving chemical and waste management global architecture and changing needs of developing countries and CEITs. The following are the major developments:

Stockholm Convention on Persistent Organic Pollutants (POPs)

9. During the last three Conferences of the Parties to the Stockholm Convention, 11 new POPs have been added to the Stockholm Convention (nine at COP 4 and one each at COP 5 and COP 6). There are candidate chemicals which are expected to be added at COP 7. Urgent global action is required to eliminate the production and consumption of all these chemicals. At its sixth session in May 2013, the COP requested the GEF to consider increasing the overall amount of funding accorded to the chemicals focal area in GEF-6 (Decision SC-6/20).

Minamata Convention on Mercury

10. The text of the Minamata Convention was agreed in January 2013. The text will be adopted and opened for signature at the diplomatic conference in Kumamoto and Minamata, Japan, in October 2013. The text identifies the GEF as the key element of the financial mechanism of the Convention. The Convention is expected to come into force before the end of GEF-6 period. Work on national assessments and assessments of emissions and releases from small-scale gold mining (ASGM) in more than 70 countries should preferably be done prior to the Convention coming into force given the direct exposure to humans in this sector.

Integrated Approach for Financing Chemicals and Waste

11. Given the increased need for sustainable, predictable, adequate and accessible financing for the chemicals and wastes agenda, the consultative process on financing options for chemicals and waste was launched by the UNEP Executive Director at COP 4 of the Stockholm Convention. After the consultation, the Executive Director presented an integrated approach that was adopted by the 27th UNEP Governing Council (decision 27/12) in February 2013. The decision underscores that the three components of an integrated approach, mainstreaming, industry involvement and dedicated external finance, are mutually reinforcing and are all important for the financing of sound management of chemicals and wastes. The decision also invites the GEF in the context of the 6th replenishment process to revise its focal area structure and strategy in order to address the chemicals and wastes agenda, and consider ways of further strengthening its relations with the conventions if serves as a financial mechanism.

12. Furthermore, Decision 27/12 of the UNEP Governing Council invites the Conference of the Parties to the Basel, Rotterdam and Stockholm conventions to take steps to implement, and the Conference of Plenipotentiaries of the Minamata Convention to consider, an integrated approach for the purposes of the respective conventions, as appropriate. In May 2013, the COPs to the Basel, Rotterdam and Stockholm conventions noted with appreciation the invitation made by the UNEP Governing Council to the GEF and invites donors to increase their financial contributions during the sixth replenishment, taking into account the increasing needs for the sound management of chemicals and wastes.

13. In September, 2012, the 3rd International Conference on Chemicals Management (ICCM 3) invited the GEF in the process of the 6th replenishment to consider the priorities and activities identified in the Strategic Approach to International Chemicals Management (SAICM) in support of the achievement of its objectives. This invitation was without prejudice to the ongoing process on the UNEP Executive Director's draft proposal on an integrated approach to the financing of the sound management of chemicals and wastes.

Emerging Chemicals and Waste

14. Other emerging chemicals and waste issues will require interventions geared towards the priority needs of countries. The Scientific and Technical Advisory Panel (STAP) of the GEF has identified a number of priority emerging chemical issues of global concern not yet covered or adequately addressed by MEAs. These include heavy metals (other than mercury), polycyclic aromatic hydrocarbons (PAHs), mixture effects, open burning, endocrine disruption and marine debris, followed by a range of other issues. Interactions between issues (such as PAHs and open burning) allows for multiple possibilities of interventions at various levels.

GEF's Position in the Global Chemicals and Waste Agenda

15. Since GEF-2, the GEF has moved from a small program on Persistent Toxic Substances under International Waters and through the support to CEITs for their implementation of the Montreal Protocol to a consolidated Chemicals Strategy in GEF-5. That strategy brought together the different pieces of the GEF that addresses POPs and ODS, as well as new areas

including mercury and SAICM. The GEF-5 chemical strategy aims to reduce the fragmentation and low synergy in the global chemicals agenda.

16. The GEF has assisted in building capacity in countries for chemicals management and has piloted a number of environmentally sound technologies, practices, techniques, and approaches that have proven to be effective in reducing and eliminating chemicals.

17. Since 2001, the GEF has invested $ 695 million to projects in the Chemicals focal area and leveraged some $ 1.7 billion in co-financing from partners in the public and private sectors, bringing the total value of the GEF Chemicals portfolio to over $2.4 billion. In terms of the amount of harmful chemicals, the GEF through its projects has addressed approximately 300,000 tons of PCB, DDT and obsolete pesticides through its programming since 1992.

Barriers and Opportunities

18. Despite domestic and international effort, including GEF's intervention, National Implementation Plans of developing countries and CEITs under the Stockholm Convention suggest the quantity of chemicals (only PCB, DDT and obsolete pesticides contained in the original 12 POPs) requiring clean up is significant (see Table 1). For example, the amount of pure PCB oils is approximately 47,000 tons. The clean-up of those chemicals would require substantial investments and capacity development. This does not include the leveraged resources or the cost estimates for reducing unintentional POPs and the new POPs.

CW Table 1 - Amount of Chemicals under the Stockholm Convention

Types of Chemicals		Unit	Quantity
Obsolete stockpiles	POPs pesticides (excluding DDT stockpiles)	1000 tons	269
	Other pesticides	1000 tons	200
PCB	Pure PCB oils	1000 tons	47
	Contaminated oils	1000 tons	6,490
		1000 liters	1,728
	Contaminated equipment	1000 tons	293
DDT stockpiles	For use	1000 tons	0.32
	As waste	1000 tons	109
Dioxins and Furans	Total estimated releases	g TEQ/year	63,000
	Total estimated releases to air	g TEQ/year	30,000

* This table has been developed from the NIP inventory data submitted to date by Parties to the Secretariat of the Convention (NIPs can be accessed at: www.pops.int). Since the NIPs only provide a snapshot of the ongoing process of establishing POPs inventories, there are possible inaccuracies in the data.

19. Chemical usage and waste generation permeates every development sectors. The increasing complexity of the background mix of chemicals and the ever longer and more intricate chemical supply chain including wastes leads to varied gaps, lapses and inconsistencies in government and international policies and corporate practices. These gaps feed growing international concerns over the threat that poor management of chemicals pose to the health of communities and ecosystems. Coordinated effort at the national, regional, international and

private sector levels is required to bring meaningful changes to reduce the harmful impact of chemicals and waste.

20. Another barrier for the slow pace of clean-up and elimination is lack of resources at all levels including the national level and public international sources. The STAP says that the cost of environmentally sound disposal of the totality of POPs waste in developing countries and CEITs will greatly exceed available GEF resources. A fragmented approach by governments, which largely neglects to involve the private sector, further exacerbates the problem.

21. In addition, the changing global climate, including increase in variability, are precipitating shifts in ecological balance leading to releases of semi-volatile chemicals, such as POPs from their reservoirs (such as glaciers, polar, and high-altitude snow), contamination of land and water with dangerous chemicals due to increased flooding, concentration of chemicals in diminishing – due to drought – water bodies, increases in chemicals releases into the environment due to greater occurrence of fires, and others.

22. On the other hand, there are opportunities to improve the global response to chemicals and waste. In its 2013 global chemicals outlook, UNEP concluded that many national governments have enacted laws and established institutional structures for managing the hazards of this growing volume of chemicals. There is a clear political will to do more on chemicals. Furthermore, leading corporations have adopted chemical management programs and there are now many institutions for addressing these chemicals globally. The private sector should play a greater role in transformation activities.

23. Another encouraging movement is Green Chemistry, which is defined as the design of chemical products and processes that reduce or eliminate the use and generation of hazardous substances. Green Chemistry and life cycle analysis of organic and inorganic chemicals are receiving more attention from producers and consumers of potentially toxic chemicals. With the advent of the Green Chemistry Council, greater emphasis, globally, is being placed on sustainable policies, technologies and best practices in the life cycle of toxic chemicals.

Catalytic Role of the GEF

24. To achieve clean-up and reduction at the scale needed to protect human health and the environment, the GEF should play a catalytic role in leveraging budgetary resources from national governments and incentivizing the private sector to contribute more to the achievement of elimination and reduction of harmful chemicals and waste.

25. Greater awareness of the impacts of harmful chemicals and waste needs to be communicated to policy makers at the national level so that sound management of chemicals and waste is fully integrated into national budgets and sector level plans. The issue must be taken up not only by ministries of environment but by ministries of planning and finance, as well as ministries of industry, technology and innovation, and ministries of health. This shift would systematically increase the visibility of these issues using assessments of the cost of inaction on chemicals and waste and the impact on the productivity and health of impacted communities. The allocation of resources from national budgets, and increased participation and contributions from the private sector will allow GEF interventions to be sustained after the projects and

programs are completed. This way, the GEF can become a true catalyst for sustainable and sustained behavioral change.

26. To achieve transformational change and be effective in a global market, the GEF interventions need to seek closer integration with global supply chains ensuring that products crossing national borders are free of global priority substances that otherwise enter into markets and recycling chains. These interventions will need to integrate the private sector more closely due to the primary role the sector has in the production of chemicals.

Goal and Objectives

Long-Term Goal

27. The GEF-6 chemical and waste strategy's long term goal is a significant reduction in the production and consumption and prevents the exposure of humans and the environment to harmful chemicals and waste of global importance including mercury, persistent organic pollutants and ozone depleting substances. This could be achieved through innovative and sustainable investments in partnership with other stakeholders including the private and public sectors and civil society groups to pilot new areas of work to begin the process of tackling new and emerging issues.

Scope of the GEF-6 Strategy on Chemicals and Waste

28. The GEF-6 chemicals and waste strategy targets harmful chemicals and waste regulated under legally binding MEAs for which the GEF is the financial mechanism. The strategy also takes into account activities regarding the environmentally sound management of chemicals and waste under non-binding instruments, with a view of supporting the implementation of legally binding instruments. Furthermore, in line with the invitation of the UNEP Governing Council (GC 27/12), and the invitation of the 3rd International Conference on Chemicals Management, the strategy seeks to create a fully integrated focal area for chemicals and waste that is responsive to the instruments shown in Annex 2 and supportive of an integrated approach for long term financing of chemicals and waste.

29. The GEF will address two main areas. One is to reduce existing stockpiles of persistent organic pollutants, mercury, and chemicals of global concern. This will require removing the barriers that prevent both governments and the private sector from completely destroying stocks of obsolete chemicals and cleaning up contaminated sites. The other is to reduce the use of persistent organic pollutants and mercury in production and supply chains. This will involve, among other things, cleaning up supply chains and manufacturing processes. The GEF will focus on working with governments and the private sector to find alternatives to toxic chemicals and reducing waste generation through green chemistry and other innovative approaches.

<u>GEF as the key element of the Financial Mechanism of the Mercury Convention</u>

30. The GEF has supported a number of projects intended to inform the intergovernmental negotiation process that led to the adoption of the new mercury treaty. Projects are consistent with GEF-5 strategy and address reducing mercury use in products and in industrial processes,

reducing mercury use and exposure in artisanal and small scale gold mining, enhancing capacity for mercury storage and enhancing capacity to address waste and contaminated sites.

31. In GEF-6, the work of supporting the Minamata Convention will be conducted through eligible enabling activities, activities that support the rapid ratification of the Convention and areas where urgent work is needed such as capacity building, artisanal and small scale gold mining and development of specific legislation. In parallel, storage solutions and reduction/elimination techniques and technologies for atmospheric emissions and industrial process will need to be developed and demonstrated as well as work on global monitoring in order to have the tools necessary for Parties of the Convention to undertake their phase out and elimination of mercury.

32. The GEF-6 strategy is mindful of the on-going work to elaborate the role of the specific program related to the integrated approach[1] and the specific international program that forms the second part of the financial mechanism of the Minamata Convention. These programs will be funding non-GEF activities and would be expected to work complimentary to the GEF funded work on chemicals and waste.

Synergies with other focal areas

33. The GEF can provide unique added value based on its role as a financial mechanism for multiple conventions and will seek to build projects and programs that serve multiple focal areas and trust funds, help to deliver multiple benefits within the chemical and waste cluster and the Montreal Protocol and with other focal areas. Countries can access incentives on projects/programs that aim to address multiple environmental benefits and seek synergies across Conventions. Examples of eligible topics include: climate-chemical nexus (Clean Cities, Green Industry), and Chemical-Natural Resource Nexus (Healthy Ecosystems, Smart Agriculture, Clean Rivers, Lakes and Oceans). This modality may incentivize projects where targeting multiple benefits brings clear economies of scale and results to have more significant impacts compared to separate projects. With the GEF as the financial mechanism of the Mercury and the Climate Change conventions, there are opportunities to explore synergies of carbon and mercury emissions reduction. Projects that seek to bring about these synergies may be afforded priority funding.

34. Meanwhile, the GEF-6 programming will make a concerted effort to ensure that the benefits from efforts in this focal area are not undermined by the adverse effects of climate change and other environmental degradation. Resilience considerations will be integrated across all objectives and programs, through a systematic effort that will examine the potential vulnerabilities of proposed approaches to, inter alia, climate change and seek to identify appropriate adaptation measures.

[1] In February 2013, The UNEP Governing Council decided to invite governments to consider establishing, through an existing institution, a special programme, funded by voluntary contributions, to support institutional strengthening at the national level for implementation of the Basel, Rotterdam and Stockholm conventions, the future Minamata Convention and the SAICM, noting that each respective governing body would have to determine the participation of its entity in the special programme (GC 27/12).

Partnership with the Private Sector

35. Private sector cooperation and involvement is an important ingredient of GEF-6 chemicals and waste strategy. The strategy will help address the main barriers to achieving greater involvement of the private sector. The GEF chemicals and waste focal area has numerous projects that demonstrate successful private sector engagement and have attracted significant private sector co-financing. For example, Green Chemistry is an area that may benefit from private sector partnership as leading multi-national corporations are expanding research and development into green chemistry and pursuing greater partnerships for management of chemicals.

36. Consistent with the GEF-6 private sector strategy, this focal area will include provisions for the full range of intervention models to be utilized: support for enabling policy environments; financial assistance; corporate alliances; and capacity building/incubation for innovation. Each of these models will provide options for GEF agencies and countries to apply the best tools to the situation at hand when designing a project. As identified in the private sector strategy, each model may be used in different ways across several categories of private sector players, including capital providers, financial intermediaries, and industry partners (large corporations, SME, and innovators).

37. Within that context, this focal area will seek projects that propose innovative engagement models with the private sector, and that complement public sector support rather than replace or minimize its importance. High priority engagement opportunities are identified in the objectives description, but all forms of private sector partnerships will be encouraged during GEF-6 and addressed through focal area funding. Further descriptions on private sector partnerships are included in Annex 1.

Innovative programming options

38. In order to incentivize countries and stakeholders to expedite and scale up action to eliminate and reduce chemicals and waste, the following innovative programming options may be used in implementing the strategy: performance-based financing and incentives; support for civil society initiatives; and support for convention regional centers. The options complement the traditional GEF financing instruments, and can be applied as appropriate. Examples of how chemicals and waste will take advantage of the innovative programming options are listed in Annex 1.

Waste Strategic Objectives

39. The GEF-6 chemicals and waste strategy encompasses a broad range of opportunities. The strategy seeks to combine environmentally safe technologies and systems with financial and organizational mechanisms, policies, and practices that help countries move towards innovative, rapid, transformational change. The GEF-6 strategy is based on three strategic objectives that in combination will build and sustain capacity, opportunity, and means to meet the goals of eliminating harmful chemicals and waste.

CW 1:	Promote the development of the enabling conditions, tools and environment to manage harmful chemicals and wastes
CW 2:	Reduce the prevalence of harmful chemicals and waste
CW 3:	Support least developed countries (LDCs) and small island developing states (SIDS) to take action on harmful chemicals and waste

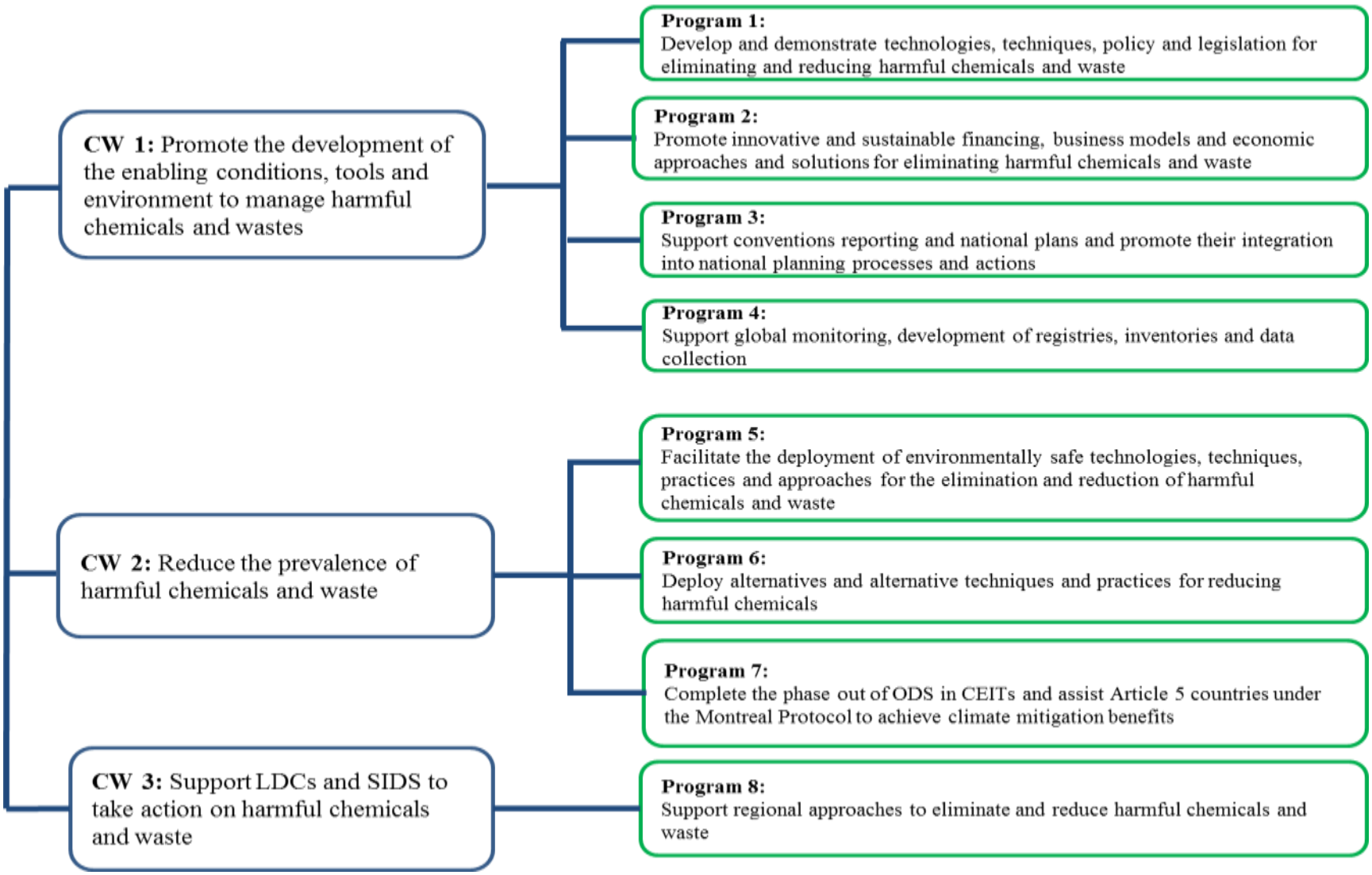
40. Eight programs under the three strategic objectives will enable the market transformations needed to achieve significant action on reducing and eliminating harmful chemicals and waste (Figure 1).

41. All of these programs support the Minamata and Stockholm Conventions with the exception of program 7 which supports the Montreal Protocol. Other chemical and waste issues primarily related to the sound management of chemicals and waste is integrated into each of the programs.

42. The following areas will receive priority funding in GEF-6, while other areas would also be funded but on a case-by-case basis:

- Elimination of stockpiles of PCB, DDT and obsolete pesticides and stockpiles of new POPs
- Management and phase out of PCB oils, POPs pesticides and the new POPs as stipulated in the Stockholm Convention
- Reduction of emissions of unintentional POPs (UPOPs)
- Introduction of alternatives to DDT for vector control
- Early action on mercury to enable ratification of the Mercury Convention including some enabling activities, rapid assessments, capacity building, action on artisanal and small scale gold mining and development of specific legislation
- Development and demonstration of techniques and technologies to facilitate the phase out, elimination and storage of mercury and mercury waste
- Action on new POPs particularly in the context of e-waste and chemicals in products
- Complete phase out of ODS in CEITs and introduction of low GWP, zero ozone depleting potential (ODP) alternatives

CW Figure 1 - Strategic Objectives and Programs



CW 1: Promote the development of the enabling conditions, tools and environment to manage harmful chemicals and wastes

43. This objective will help countries develop the enabling conditions, tools, and environment to manage harmful chemicals and wastes. In addition to support for traditional enabling activities for the implementation of the relevant conventions, this objective seeks to address the need for enabling conditions to mainstream chemicals and waste management concerns into the national planning and development agenda through sound data, analysis, and policy frameworks. This objective will develop policy, legislative, financial, economic, technical and technological tools that will remove barriers to scaling up interventions, including access to finance. The objective will also provide resources to monitor the effectiveness of the conventions.

Program 1: Develop and demonstrate technologies, techniques, policy and legislation for eliminating and reducing harmful chemicals and waste

44. With eleven new POPs added to the Stockholm Convention, the majority of countries will be reviewing and updating their NIPs in GEF-6. Countries will need new techniques, alternatives, and technologies in order to take quick action on these chemicals. With regard to mercury, it will be necessary to extend the GEF-5 program to the other sectors where mercury is an issue so that countries will have these tools ready by the time the Minamata Convention comes into force.

45. This program will support the development, testing and demonstration of technologies, alternatives, techniques, best practices, and legislative and policy tools relating to the new POPs, mercury, and emerging chemical and waste issues. Demonstration and validation for new, environmentally-sound and climate-resilient technologies will be encouraged. Examples of cutting-edge technologies include contaminated soil and sediment cleanup technologies, bio-remediation, Green Chemistry, and non-combustion technologies. Multiple applications of some of these techniques should be further explored. The GEF can support demonstration projects to help countries pursue technology transfer and adoption, where GEF incremental funding can catalyze significant additional efforts and benefits.

46. The GEF may support the following initiatives under this program:

- National initiatives and projects for the demonstration and transfer of innovative environmentally safe chemical and waste reduction and elimination technologies
- Public-private partnerships to mobilize financing for innovation in technology transfer and development of indigenous technological solutions
- Technological solutions to address harmful hazardous chemicals and waste including emerging chemical and waste issues of global concern (e.g. e-waste, mercury, lead in paints, endocrine disruptors, marine debris and chemicals in products)
- Innovative modalities targeting the rapid emergence and up-take of low chemical and waste development technological innovations
- Testing and demonstration of environmentally safe technologies for chemical and waste reduction/disposal
- Deployment of proven environmentally safe reduction and elimination

technologies, techniques, practices and approaches through innovative financing

- Development and demonstration of private sector partnerships, economics instruments and financing models to reduce and eliminate chemicals and waste
- Innovative approaches to remediating contaminated sites

Outcomes:

(a) Demonstrated tools for the implementation of the reduction of chemicals and waste, in particular new POPs, mercury and emerging chemical issues
(b) Innovative technologies successfully demonstrated, deployed, and transferred
(c) Enabling policy environment and mechanisms created for innovation and chemical development

Indicators:

(i) Number of demonstrated tools for mercury, new POPs and emerging chemical and waste issues
(ii) Demonstrated amount of harmful chemicals and waste eliminated and reduced, including POPs, mercury, ODS, CO_2, lead in Paints, chemicals in products and e-waste
(iii) Number of technologies developed with the ability to be quickly absorbed by other countries and easily scaled up
(iv) Countries implementing SAICM priorities that generate global environmental benefits

Program 2: Promote innovative and sustainable financing, business models and economic approaches and solutions for eliminating harmful chemicals and waste

47. Global public financing for harmful chemicals and waste management has so far only been able to demonstrate technologies and practices that can be scaled up. To deal with the extent of global pollution caused by harmful chemicals and waste, financing on a much larger scale needs to be mobilized for long-term sustainable actions.

48. This program will develop the mechanisms and financial/economic models that can achieve large scale and long-term investment in the reduction of production and use of chemicals. Those actions include cleaning up contaminated sites, closure and/or repurposing of hazardous chemical manufacturing and waste management. Actions under this program can complement activities in other focal areas and support the sustainable cities and food security signature programs. Examples of projects and programs that the GEF may support under this program are:

- Design and implementation of sustainable financing and economic models and instruments that can be applied in a range of sectors, countries, and regions. Projects from countries with mature chemical and waste programs that have already demonstrated various technologies and practices will be the priority, so that the financing models and instruments can be demonstrated for effectiveness in generating the levels of resources needed to scale up action.

- Promotion of sustainable production and consumption practices to de-couple urban growth and resource use from the use of POPs and other chemicals of concern (e.g. heavy metals including mercury and lead, and e-waste generation). This approach may use Green Chemistry and will need to be driven by the private sector.
- Phase-out of ODS, with energy efficient and low greenhouse potential options

Outcomes:

(a) Policy, legal and regulatory frameworks adopted and enforced for low chemical development
(b) Sustainable organization, financing and delivery mechanisms established and operationalized
(c) Innovative financing and delivery mechanisms established and operationalized.

Indicators:

(i) Extent to which low chemical development policies and regulations are adopted and enforced
(ii) Volume of investment mobilized
(iii) Number of sites cleaned up through increased financing
(iv) Number of tonnes of chemicals and waste eliminated, reduced and avoided as a result of implementation of innovative financing solutions

Program 3: Support conventions reporting and national plans and promote their integration into national planning processes and actions

49. This program will help countries report to the conventions and develop implementation plans for meeting their obligations under the conventions. This objective applies principally to the Stockholm Convention, the Mercury Convention and the Montreal Protocol (for CEIT countries only). The Stockholm Convention has a mechanism to add chemicals to the list of POPs, which requests countries to update their NIPs. This program can be complemented by institutional arrangements that may arise from the special program under the integrated approach adopted by the UNEP Governing Council (decision 27/12) and from the second part of the financial mechanism of the Minamata Convention.

50. This program will also promote integration of the findings of enabling activities and convention reporting into national and sector level development planning. Such integration will help inform countries on establishing reduction targets and leveraging resources from all sectors for the sound management of harmful chemicals and waste.

51. The joint reporting will support the synergistic process of the chemical and waste conventions. Where possible, projects can be developed that includes reporting to other conventions to which the GEF serves as the financial mechanism.

Outcomes:

(a) Countries meet their convention reporting and planning obligations
(b) Countries develop consolidated frameworks for reporting to conventions
(c) Development and sector level planning frameworks at the national level to include sound management of chemicals and waste
(d) Countries are able to leverage resources from their national and sector level budgets

Indicators:

(i) Number of countries receiving support to prepare convention reports and national plans
(ii) Number of countries developing mechanisms for joint reporting
(iii) Number and type of development and planning frameworks that include sound management of chemicals and waste and actions based on Convention obligations and other enabling activities
(iv) Amount of resources leveraged from national budgets

Program 4: Support global monitoring, development of registries, inventories and data collection

52. The GEF received guidance from the COP of the Stockholm Convention to provide assistance for the Global Monitoring Plan in developing countries and CEITs. The GEF has funded this work on a regional basis and continues to do so.

53. In GEF-6 it is expected that the Global Monitoring Plan will need to be replicated and strengthened for the new POPs added to the Stockholm Convention and for the Minamata Convention. This program is required to measure the effectiveness of the conventions and would help identify priority chemicals on a global scale. In addition, the program will support development of mechanisms to utilize the data with the aim of assisting the decision-making of the conventions and sustaining the monitoring networks.

Outcomes:

(a) Global level date available to all countries and the conventions
(b) Global monitoring networks operational and sustainable

Indicators:

(i) Number of monitoring sites and analytic laboratories receiving support
(ii) Percentages of emissions POPs reduced, using the Toolkit for Identification and Quantification of Releases of Dioxins, Furans and Other Unintentional POPs
(iii) Number and categories of chemicals monitored and analyzed

CW 2: Reduce the prevalence of harmful chemicals and waste

54. While CW 1 focuses on the development of enabling conditions, this objective will help countries reduce and eliminate harmful chemicals and waste, i.e. POPs, mercury, and their waste, along with other chemicals of global concern, thereby reducing the exposure of humans and the environment to harmful substances. Specifically, this objective will support the implementation of environmentally-safe technologies, techniques, and practices that will be necessary for chemical and waste elimination and management. The integration of sound management of chemicals and waste into other focal areas would be supported under this objective.

Program 5: Facilitate the deployment of environmentally safe technologies, techniques, practices and approaches for the elimination and reduction of harmful chemicals and waste

55. Demonstrated and proven technologies, alternatives, techniques, and practices already exist, for the reduction and elimination of the initial 12 POPs and ODS. Under this program, these interventions will be scaled up to facilitate increased reductions. This scale up will be achieved through removal of the barriers (e.g. lack of enforcement of regulations) that prevent wide scale adoption and replication of demonstrated elimination and reduction technologies, techniques, and methods. For the new POPs and mercury, the tools and methods developed under CW 1 should be incorporated into projects seeking to deal with reduction and elimination of these chemicals and waste. The GEF also will need to address mercury in a number of sectors as well as emerging chemical and waste issues of global concern. In addition, the impacts of climate change on the effectiveness of these technologies, techniques, practices, and approaches will need to be considered as appropriate.

56. Projects with significant investment need, for example treatment technologies such as alternatives to large-scale incineration, implementation of supply chain management and Green Chemistry, may be considered when there are both large-scale leveraging of national and bilateral resources and strong long-term national commitments.

Outcomes:

(a) Private and public sector investment in the sectors to reduce emissions and chemical usage
(b) Private and public sector investment in the sectors to reduce the generation of waste and elimination of waste
(c) Innovative technologies successfully demonstrated, deployed, and transferred

Indicators:

(i) Volume of harmful chemicals and waste eliminated, reduced and avoided
(ii) Volume of investment mobilized for sustained elimination and reduction of chemicals and waste
(iii) Number of technologies developed with the ability to be quickly absorbed by other countries and easily scaled up
(iv) Amount of harmful chemicals and waste eliminated and reduced, including POPs, mercury, ODS, CO_2

(v) Lead in paints, chemicals in products and e-waste

Program 6: Deploy alternatives and alternative techniques and practices for reducing harmful chemicals

57. With the aim of dealing with the demand for harmful chemicals, the program will help reduce global consumption of these chemicals through deployment of alternative chemicals and new techniques for reducing chemical use, including controlling the demand for chemicals for addressing issues exacerbated by climate change. In this program, partnerships with the private sector and other stakeholders will be developed long with the necessary policy, economic and regulatory instruments. The GEF may support the following initiatives under this program:

- Deployment of alternatives and practices to DDT and other chemicals
- Integrated pesticide management including in the context of food security
- Private sector engagement
- Application of green industry, by the deployment of "Reduce, Reuse and Recycle Waste," cradle to cradle and eco-sensitive industrial development approaches
- Green Chemistry, i.e. pilot projects for SMART chemicals management along the supply chain
- Design of products and processes that minimize the use and generation of hazardous substances and waste

Outcomes:

(a) Global demand for harmful chemicals reduced
(b) Efficient use of natural resources
(c) Development of green industry

Indicators:

(i) Volume of investment mobilized
(ii) Volume of harmful chemicals and waste eliminated and avoided
(iii) Number of produces and processes designed to reduce harmful chemicals and waste

Program 7: Complete the phase out of ODS in CEITs and assist Article 5 countries under the Montreal Protocol to achieve climate mitigation benefits

58. This program applies specifically to the completion of the phase-out of hydro-chloro-fluoro-carbons (HCFCs) in CEITs. This program will support HCFC phase-out management plans and production sector plans. Special programs will be established to promote linkages in Article 5 countries to assist in the phase-out of HCFCs. This will only apply to manufacturing of appliances and foams and will cover only energy efficiency gains associated with action being taken using other funding sources by the Article 5 countries. The phase-out of HCFCs in appliance and form manufacturing will achieve climate mitigation benefits as well.

59. There are significant climate benefits from replacing HCFC's with low or zero GWP alternatives and replacement of HCFC dependent technology with more energy efficient technologies. Work is underway to phase out HCFC in countries considered Article 5 parties in the Montreal Protocol. The modality of the Multilateral Fund which provides financial assistance to these countries in their conversion process considers, as per the guidelines of the Executive Committee, the most cost-effective alternative that may or may not fully address the most climate benefits that could potentially be achieved from this process. As a result, countries have approached the GEF to co-finance additional activities in HCFC phase-out program which could cover activities that are not eligible for funding under the Multilateral Fund, and would introduce those elements that would maximize climate and ozone benefits.

60. This program proposes a set aside from the CCM focal area outside of the STAR to allow better coordination of projects that combine funds from the MLF and the GEF regarding the phase out of HCFC in Article 5 countries. The funding will only be to maximize climate benefits and only when these elements are clearly not eligible under the Multilateral Fund and their funding guidelines, and where these benefits cannot be captured through other means.

Outcomes:

(a) Countries able to meet their phase-out obligations under the Montreal Protocol
(b) Indicators:
(c) Tonnes of HCFCs phased out
(d) Tonnes of CO_2 equivalent phased out

CW 3: Support LDCs and SIDS to take action on harmful chemicals and waste

61. The LDCs and SIDS typically have limited capacity to deal with harmful chemicals and waste. In many instances, they are also geographically isolated and remote. These countries have historically had difficulty leveraging sufficient resources from their own budgets, the private sector, and other bi-lateral donors to deal with harmful chemicals and waste. They also have difficulties in accessing GEF funds in comparison to other countries. Given these facts, different approaches for solutions are required for these types of countries.

62. This objective will allow programming for resources to LDCs and SIDS to help them create the enabling environment, and to take action to eliminate and reduce harmful chemicals and waste. The objective will encourage regional and sub-regional cooperative action and south-south cooperation for developing regional approaches. In particular, regional approaches, such as coordination of POPs collection and disposal, will improve logistical and financial efficiency of waste management in SIDS. Hence, regional cooperation will be fostered and encouraged.

63. This objective will also encourage civil society participation in enabling activities to ensure broad recognition of public needs and requirements. Management of harmful chemicals is especially urgent for these countries, as correct decisions made now can result in the avoidance of negative environmental and social consequences suffered by industrialized countries in this context.

64. It is intended that a programmatic approach be used in utilizing resources in this objective so that economies of scale can be achieved which would otherwise make programming in these countries difficult and in some cases prohibitive.

Program 8: Support regional approaches to eliminate and reduce harmful chemicals and waste

65. This program will support regional and sub-regional approaches to eliminate and reduce harmful chemicals and waste in response to the barriers LDCs and SIDS are facing. The regional and sub-regional approaches will cover:

- Enhanced capacity to manage harmful chemicals and waste at a regional/sub-regional level
- Regional-level plans for the management of harmful chemicals and waste
- Technologies and techniques suitable to LDCs and SIDS
- Innovative management practices suitable to LDCs and SIDS
- Innovative financing models appropriate for LDCs and SIDS
- Development of private public partnerships with SMEs

66. Through this program, along with activities covered by CW 1 and 2, LDCs and SIDS will be able to manage harmful chemicals and waste, and to mainstream sound management of chemicals and waste into regional/sub-regional, national and sector level development planning.

Outcomes:

(a) Enhanced capacity of LDCs and SIDS to manage harmful chemicals and waste
(b) LDCs and SIDS regional/sub-regional plans include and account for the management of harmful chemicals and waste.
(c) Technologies developed and deployed that meet the particular needs of LDCs and SIDS
(d) LDCs and SIDS eliminate and reduce harmful chemicals and waste.
(e) Regulation, management practices and policy instruments developed and deployed to LDCs and SIDS
(f) Financial models specific to the needs of LDCs and SIDS developed

Indicators:

(i) Number of regional/sub-regional level plans developed that account for chemicals and waste issues
(ii) Number of technologies deployed
(iii) Number of regulatory, policy instruments developed and enforced
(iv) Percentages of emissions POPs reduced, using the Toolkit for identification and quantification of releases of Dioxins, Furans and Other UPOP

CW Table 2 - GEF-6 Support for the Minamata Convention on Mercury

The GEF-6 strategy seeks a fully integrated focal area for chemicals and waste, including mercury. The GEF-6 period is critical to the early ratification and implementation of the Minamata Convention on Mercury. The table below clarifies how mercury will be integrated into the chemicals and focal area to support the early ratification and implementation of the Convention in the GEF-6 period.

Program	**Examples of activities supported in the GEF-6 Strategies**
CW 1: Promote the development of the enabling conditions, tools and environment to manage mercury	
Program 1	• Development and demonstration of technologies and techniques to reduce mercury emissions and releases from main sources (e.g. artisanal and small scale gold mining, mercury storage, mercury-added products, vinyl chloride monomer production, chlor-alkali facilities, mercury-contaminated sites etc.) • Development of legislation and regulations to enable countries to ratify and implement the Convention
Program 2	• Development of the mechanisms and financial/economic models to clean up mercury-contaminated sites, including the public-private partnership • Promotion of sustainable production and consumption practices to reduce the use of mercury in products
Program 3	• Reporting on the measures taken under the Convention • Rapid assessments to determine sources of mercury emissions and releases • Development of mercury inventories • Development of implementation plans under the Convention • Capacity building to assist countries in implementing the Convention
Program 4	• Global monitoring of levels of mercury and mercury compounds in vulnerable populations and in environmental media • Development of mechanisms to utilize the monitoring data
CW2: Reduce the prevalence of mercury	
Program 5	• Elimination of mercury from main sources (e.g. artisanal and small scale gold mining, mercury storage, mercury-added products, vinyl chloride monomer production, chlor-alkali facilities, mercury-contaminated sites etc.)
Program 6	• Deployment of alternatives to mercury (e.g. mercury-free medical devices) • Reduction of atmospheric mercury emissions through best available techniques and best environmental practices (BAT/BEP)
CW3: Support LDCs and SIDS to take action on mercury	
Program 8	• Regional abatement of mercury and mercury-containing waste (e.g. environmentally sound interim storage of mercury and mercury compounds)

CW Table 3 - Support for Reduction or Elimination of New POPs

In addition to the 12 POPs originally controlled, 10 new POPs have been added to the list of controlled substances under the Stockholm Convention since 2009. GEF-6 support for reduction or elimination of new POPs is integrated into all the objectives in the GEF-6 chemicals and waste strategy. The table below illustrates how activities may support the reduction or elimination of new POPs in the GEF-6 period.

Program	Examples of activities supported in the GEF-6 Strategy
CW 1: Promote the development of the enabling conditions, tools and environment to reduce or eliminate releases of new POPs	
Program 1	• Development and demonstration of technologies and techniques to reduce or eliminate releases of new POPs (e.g. contaminated soil and sediment cleanup technologies, bio-remediation, Green Chemistry, non-combustion technologies etc.) • Development of policies and legislation to enable countries to reduce or eliminate releases of new POPs
Program 2	• Development of the mechanisms and financial/economic models to reduce or eliminate releases of new POPs (e.g. cleaning up contaminated sites, closure and/or repurposing of manufacturing) • Improvement of food security through reducing the use of new POPs pesticides (e.g. Chlordecone, Lindane etc.)
Program 3	• Review and update of the National Implementation Plan under the Stockholm Convention in response to new POPs • Development of new POPs inventories • Development of a sectoral framework at a national level to reduce or eliminate releases of new POPs
Program 4	• Global monitoring of levels of new POPs in vulnerable populations and in environmental media • Development of mechanisms to utilize the monitoring data
CW 2: Reduce the prevalence of new POPs	
Program 5	• Reduction and elimination of new POPs, including reduction of brominated flame retardants (polybromodiphenyl ethers: PBDEs) and of perfluorooctane sulfonic acid (PFOS) • Management of obsolete new POPs stockpiles and wastes • Public-private partnership to reduce or eliminate new POPs usage
Program 6	• Deployment of alternatives to new POPs (e.g. alternatives to new POPs pesticides) • Reduction of unintentional production of new POPs (e.g. Pentachlorobenzene) through best available techniques and best environmental practices (BAT/BEP)
CW 3: Support LDCs and SIDS to take action on new POPs	
Program 8	• Regional abatement to deal with imported new POPs and new POPs containing products.

Results Framework

CW Table 4 - Results Based Management Framework

Objectives	Expected Outcomes and Indicators	Core Outputs
CW 1 *Promote the development of the enabling conditions, tools and environment to manage harmful chemicals and wastes* Indicative allocation: Status quo scenario: $128 million Enhanced impact scenario: $138 million		
Program 1: Develop and demonstrate technologies, techniques, policy and legislation for eliminating and reducing harmful chemicals and waste	Outcome 1.1: Demonstrated tools for the implementation of the reduction of chemicals and waste, in particular new POPs, mercury and emerging chemical issues *Indicator 1.1.1: Number of demonstrated tools for mercury, new POPs and emerging chemical and waste issues* *Indicator 1.1.2: Demonstrated amount of harmful chemicals and waste eliminated and reduced, including POPs, mercury, ODS, CO_2, lead in paints, chemicals in products and e-waste*	Output 1.1.1: Tools for the reduction of chemicals and waste Output 1.1.2: Reduction of POPs, mercury, ODS and CO_2
	Outcome 1.2: Innovative technologies successfully demonstrated, deployed, and transferred *Indicator 1.2: Number of technologies developed with the ability to be quickly absorbed by other countries and easily scaled up*	Output 1.2: Innovative technologies demonstrated, deployed and transferred on the ground
	Outcome 1.3: Enabling policy environment and mechanisms created for innovation and chemical development *Indicator 1.3: Countries implementing SAICM priorities that generate global environmental benefits*	Output 1.3: Policies and mechanisms for innovation and chemical development
Program 2: Promote innovative and sustainable financing, business models and economic approaches and solutions for eliminating harmful chemicals and waste	Outcome 2.1: Policy, legal and regulatory frameworks adopted and enforced for low chemical development *Indicator 2.1: Extent to which low chemical development policies and regulations are adopted and enforced*	Output 2.1: Policy, legal and regulatory frameworks enacted
	Outcome 2.2.1: Sustainable organization, financing and delivery mechanisms established and operationalized	Output 2.2.1: Investment mobilized
	Outcome 2.2.2: Innovative financing and delivery mechanisms established and operationalized.	Output 2.2.2: Elimination and reduction of harmful chemicals and waste

Objectives	Expected Outcomes and Indicators	Core Outputs
	Indicator 2.2.1: Volume of investment mobilized *Indicator 2.2.2: Number of sites cleaned up through increased financing* *Indicator 2.2.3: Number of tonnes of chemicals and waste eliminated, reduced and avoided as a result of implementation of innovative financing solutions*	
Program 3: Support conventions reporting and national plans and promote their integration into national planning processes and actions	Outcome 3.1: Countries meet their convention reporting and planning obligations *Indicator 3.1: Number of countries receiving support to prepare convention reports and national plans*	Output 3.1: Convention reporting and national implementation plans
	Outcome 3.2: Countries develop consolidated frameworks for reporting to conventions *Indicator 3.2: Number of countries developing mechanisms for joint reporting*	Output 3.2: Joint convention reporting
	Outcome 3.3: Development and sector level planning frameworks at the national level to include sound management of chemicals and waste *Indicator 3.3: Number and type of development and planning frameworks that include sound management of chemicals and waste and actions based on Convention obligations and other enabling activities*	Output 3.3: National and sector level development plans which include sound management of harmful chemicals and waste
	Outcome 3.4: Countries are able to leverage resources from their national and sector level budgets *Indicator 3.4: Amount of resources leveraged from national budgets*	Output 3.4: Tangible assets for sound management of harmful chemicals and waste
Program 4: Support global monitoring, development of registries, inventories and data collection	Outcome 4.1: Global level date available to all countries and the conventions *Indicator 4.1.1: Number of monitoring sites and analytic laboratories receiving support* *Indicator 4.1.2: Percentages of emissions POPs reduced, using the Toolkit for Identification and Quantification of Releases of Dioxins, Furans and Other Unintentional POPs*	Output 4.1.1: Monitoring sites and analytic laboratories receiving support Output 4.1.2: Countries using Toolkit for identification and quantification of releases of UPOPs
	Outcome 4.2: Global monitoring networks operational and sustainable	Output 4.2: Global monitoring network

Objectives	Expected Outcomes and Indicators	Core Outputs
	Indicator 4.2: Number and categories of chemicals monitored and analyzed	
CW 2 Reduce the prevalence of harmful chemicals and waste Indicative allocation: Status quo scenario: $344 million Enhanced impact scenario: $394 million		
Program 5: Facilitate the deployment of environmentally safe technologies, techniques, practices and approaches for the elimination and reduction of harmful chemicals and waste	Outcome 5.1.1: Private and public sector investment in the sectors to reduce emissions and chemical usage Outcome 5.1.2: Private and public sector investment in the sectors to reduce the generation of waste and elimination of waste *Indicator 5.1.1: Volume of harmful chemicals and waste eliminated, reduced and avoided* *Indicator 5.1.2: Volume of investment mobilized for sustained elimination and reduction of chemicals and waste* Outcome 5.2: Innovative technologies successfully demonstrated, deployed, and transferred *Indicator 5.2.1: Number of technologies developed with the ability to be quickly absorbed by other countries and easily scaled up* *Indicator 5.2.2: Amount of harmful chemicals and waste eliminated and reduced, including POPs, mercury, ODS, CO_2* *Indicator 5.2.3:* Lead in paints, chemicals in products and e-waste	Output 5.1.1: Elimination and reduction of harmful chemicals and waste Output 5.1.2: Investment mobilized Output 5.2.1: Innovative technologies demonstrated and deployed on the ground Output 5.2.2: Reduction of POPs, mercury, ODS and CO_2
Program 6: Deploy alternatives and alternative techniques and practices for reducing harmful chemicals	Outcome 6.1: Global demand for harmful chemicals reduced *Indicator 6.1.1: Volume of investment mobilized* *Indicator 6.1.2: Volume of harmful chemicals and waste eliminated and avoided* Outcome 6.2.1: Efficient use of natural resources Outcome 6.2.2: Development of green industry *Indicator 6.2: Number of produces and processes designed to reduce harmful chemicals and waste*	Output 6.1.1: Policy, legal and regulatory frameworks for alternatives and alternative techniques and practices Output 6.1.2: Investment mobilized Output 6.2: Alternatives and alternative techniques and practices deployed on the ground
Program 7: Complete the phase out of ODS in	Outcome 7: Countries able to meet their phase-out obligations	Output 7.1: HCFC phase-out management plan and

Objectives	Expected Outcomes and Indicators	Core Outputs
CEITs and assist Article 5 countries under the Montreal Protocol to achieve climate mitigation benefits	under the Montreal Protocol *Indicator 7.1: Tonnes of HCFCs phased out* *Indicator 7.2: Tonnes of CO_2 equivalent phased out*	production sector plan Output 7.2: Energy savings achieved
CW 3. *Support LDCs and SIDS to take action on harmful chemicals and waste* Indicative allocation: Status quo scenario: $28 million Enhanced impact scenario: $43 million		
Program 8: **S**upport regional approaches to eliminate and reduce harmful chemicals and waste	Outcome 8.1.1: Enhanced capacity of LDCs and SIDS to manage harmful chemicals and waste Outcome 8.1.2: LDCs and SIDS regional/sub-regional plans include and account for the management of harmful chemicals and waste. *Indicator 8.1: Number of regional/sub-regional level plans developed that account for chemicals and waste issues* Outcome 8.2: Technologies developed and deployed that meet the particular needs of LDCs and SIDS *Indicator 8.2: Number of technologies deployed* Outcome 8.3: LDCs and SIDS eliminate and reduce harmful chemicals and waste. *Indicator 8.3: Percentages of emissions POPs reduced, using the Toolkit for identification and quantification of releases of Dioxins, Furans and Other UPOPs* Outcome 8.4.1: Regulation, management practices and policy instruments developed and deployed to LDCs and SIDS Outcome 8.4.2: Financial models specific to the needs of LDCs and SIDS developed *Indicator 8.4: Number of regulatory, policy instruments developed and enforced*	Output 8.1: Regional/sub-regional plans for harmful chemicals and waste management Output 8.2: Technologies specific to the needs of LDCs and SIDS demonstrated and deployed on the ground Output 8.3: LDCs and SIDS using Toolkit for identification and quantification of releases of UPOPs Output 8.4.1: Regulation, management practices and policy instruments enacted Output 8.4.2: Financing models enacted

Annex 1. Innovative Programming Options in the GEF-6 Chemicals and Waste Strategy

Private Sector Partnerships

1. In GEF-6, all focal area strategies will be identifying and establishing stronger partnerships with the private sector to attract and retain private sector investment. For chemicals and waste this has been an area that has not been fully explored but it will be a robust area of activity in GEF-6. In some cases, for example in PCB management projects where private utilities are involved the utilities sustain the reduction and management of PCB while in others where disposal equipment or facilities are provided the sustainability ends when resources for disposal ends with the project.

2. A major aim in GEF-6 for this focal area will be to explore and develop and demonstrate models that integrate the private sector in chemical and waste projects thereby achieving the scale of engagement and investment that is needed to scale up action on chemicals and waste.

3. Partnerships may take several forms, including assessment and fortification of enabling environments; certification and standards programs; engagement across global supply chains; application of risk-mitigation tools; and engagement of institutional investors. Recent GEF intervention in hospitals and the way they manage waste is one example. Another innovative approach will invite private sector project ideas that can be submitted and cleared through agency processes quickly. Countries will be encouraged to hold competitive bidding for innovative projects. In some cases, countries will be encouraged to provide endorsement letters to agencies in advance to allow rapid approval and project launch. This approach enables the GEF network to engage with potential private sector partners with innovative ideas that need demonstration and validation. Examples of projects that would be amenable to this approach include:

(a) Innovative environmentally sound waste reduction projects
(b) Technology demonstrations
(c) Recycling and waste-management through micro, small and medium enterprises
(d) Green development – industries and cities
(e) Innovative approaches to cleaning up and remediation of contaminated sites
(f) Economic instruments and business models to facilitate income generation for chemicals and waste management including waste recycling and extraction of valuable constituents of waste
(g) Life cycle and green chemistry investments

4. For risk-mitigation and structured financing tools, the GEF Chemicals Network will explore the development of non-grant instruments. For example, innovative e-waste technologies do not have a proven track record and may be perceived as too risky for commercial investors. The GEF and its agency partners will explore what types of risk-mitigation tools could help catalyze investment in e-waste technologies.

5. Furthermore, chemicals and waste projects will need to ensure that small and medium-sized enterprises (SMEs) are prepared to properly manage POPs and ODS, and to take up new

technologies for reduction and disposal. SMEs could use small grants or loans to promote for example, to improve waste management practices, encourage recycling and reuse of plastics, e-waste, adopt integrated pest and vector management, improvements in preventing contamination from ASGM through provision of low cost technological solutions. Chemicals and waste projects will certainly be considered for the SME Small Grant/Loan Program.

Performance-based Financing and Incentives

6. The GEF may introduce performance-based financing and incentives, where countries/agencies receive GEF resources based on successful project implementation and demonstration of results. For chemicals and waste, this option may be applied in cases including the following:

(a) Project-based: Performance-based financing could be utilized on individual projects. Projects that require strong measurement and verification to ensure global environmental benefits, such as phase out of chemicals, may be suitable. This would be at the invitation of the country and would be subject to a performance based agreement between the GEF and the country which may specify phase out targets.

(b) Sector or economy-wide: Countries or cities that commit to national or sector-based emission reduction targets (in toxic equivalents (TEQ/g) for UPOPs, ODP for Ozone, and Tons for mercury and POPs) may utilize performance-based financing. Countries commit to the measurement and verification of meeting the targets, and are paid if the targets are achieved. Countries will have flexibility in project design, implementation modalities and selection and implementation of emission/release reduction options. This approach offers flexibility for countries and agencies to develop programs and reduces the review process in the GEF since the details of project design will be left to the country and agency.

Support for Civil Society Initiatives

7. In GEF-6, nongovernmental organizations can submit, through one of the GEF implementing agencies, and receive approval for projects focused on elimination of hazardous chemicals and waste. Partnership with this sector will be supported through GEF Small Grant Program (SGP) where a proportion of funding given to initiatives on chemicals and waste will be shared equally with other GEF SGP national priorities such as climate change and biodiversity. Projects where CSO's and NGO's are included as executing partners may be given priority for funding in GEF-6.

Support for Convention Regional Centers

8. The GEF has received guidance from the COP of the Stockholm Convention to provide the opportunity for Regional Centers set up under the Stockholm Convention and Basel Convention to execute projects. The GEF is cognizant of the country driven approach for project identification and development and recognizes that the regional centers can only be involved on the invitation of countries. This notwithstanding in order to facilitate the opportunities for regional centers, when they are fully endorsed by the participating countries to execute projects, the GEF will endeavor, within its operational guidelines and framework, to include at least one

project executed by a regional center in every work program in GEF 6 and set aside resources in strategic objective three for regional center executed projects.

Annex 2: Multilateral Environmental Agreements in the Harmful Chemicals and Waste Area

1. Governments recognize that concerted action at the international level is required to address certain substances or practices of global concern. Over the past 30 years, governments have agreed a number of multilateral environmental agreements (MEAs) that regulate harmful chemicals and waste. Most governments have ratified these conventions. The conventions relevant to the GEF are:

(a) Legally-binding instruments where the GEF serves as the financial mechanism

(i) **The Stockholm Convention on POPs** – This convention controls the production and use of POPs. The convention originally had 12 controlled POPs substances including DDT, PCB and Dioxins and Furans. The convention also has a process for adding new substances when there is scientific evidence that the substances exhibit persistent organic pollutant characteristics. As a result of this, 10 new POPs have been added to the list of controlled substances and more can be added in the future. As the financial mechanism for this convention the GEF finances programs and projects to assist developing country parties and countries with economies in transition to meet their convention obligations.

(ii) **The Minamata Convention on Mercury** – This convention has recently been negotiated to control the use of mercury. The GEF has been identified as the major part of the financial mechanism. The text of the convention will be officially adopted and will be open for signature in October 2013 and will come into force once the required number of countries ratifies the Convention. The GEF will provide funding to assist developing country parties and CEITs to meet some of their obligations. In the period prior to the coming into force of the convention (the 'interim' period), the GEF may be asked to provide resources to parties to enable ratification of the convention and take early action on urgent areas.

(b) Legally binding instruments where the GEF does not serve as the financial mechanism but has provided support up to today

(i) The Montreal Protocol on Substances that Deplete the Ozone Layer – The Montreal Protocol controls ozone depleting substances (ODS) which are the substances that created the hole in the Earth's protective ozone layer. This Protocol has its own financial mechanism; however the GEF, since the pilot phase of the GEF, provides support to parties with economies in transition to meet their obligations under the Montreal Protocol.

(c) Legally binding instruments where the GEF provides indirect support through its programming in POPs

(i) **The Basel Convention on Controlling Transboundary Movements of Hazardous Wastes and their Disposal** – This Convention pre-dates the Stockholm Convention and deals with the international movement of hazardous

waste and its disposal. All POPs waste are treated as Basel Wastes so that in providing support to the parties to the Stockholm Convention for disposal of obsolete POPs and POPs waste, the GEF has supported the implementation of the Basel Convention.

(ii) **The Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade** – This convention deals with the control in trade of hazardous and harmful chemicals. All POPs for the purposes of trade are controlled under this convention so the GEF in providing support to parties to control the trade of POPs through import and export bans has supported the implementation of this convention.

(d) **Non-legally binding instruments:**

(i) **Strategic Approach to International Chemicals Management (SAICM)** – The development of multiple chemical conventions was recognised as creating fragmentation in the global management of harmful chemicals and waste particularly since the conventions are not uniformly ratified. In 2006 governments adopted the SAICM in an attempt to harmonise global management of harmful chemicals and waste through a cradle to grave approach. The SAICM process identifies emerging chemical issues of global concern and provides a framework to operationalize the implementation of an integrated approach to managing harmful chemicals and waste. The GEF has been invited at each of the International Conference on Chemicals Management to support the priorities identified by the SAICM. The GEF has provided support to the management of e-waste, lead in paints and chemicals in products.

2. In order to meet the objectives of the harmful chemicals and waste MEAs and SAICM, each Party must implement actions to meet its obligations under these treaties. In most cases, these treaties prohibit or limit the production, use, trade and release of particular substances of concern or restrict and control the practices by which they are managed. It follows that governments need to establish legal and regulatory frameworks and to monitor and enforce their operation as well as take action to stop the consumption and production of these substances and dispose of stockpiles and contaminated material.

INTERNATIONAL WATERS FOCAL AREA STRATEGY

Background

Status of International Waters

1. Water scarcity and stress is increasing in most regions. Approximately 80% of the world's population is already exposed to high levels of threat for water security, and some 1.2 billion people live in river basins where human water use has surpassed sustainable limits.[1] Climate change and increasing climatic variability will create additional pressure on water resources, disproportionally affecting the world's poor. Finally, communities and ecosystems habitats associated with 65% of global river discharge are already under moderate to high threat.[2] In the near term, as the planet warms basins mainly fed by high altitudes glaciers will see increased frequency and intensity of floods and decreased dry season flows. Longer term, these basins will face an overall decrease of run-off.

2. Land based sources of pollution are leading to increasing ocean hypoxia. Coastal ecosystems, including deltas, reefs, mangroves, and others, are threatened by the high level of influx of nutrients and other pollutants originating from land-based activities, primarily agricultural fertilizers, livestock waste, and insufficiently treated wastewater. This contributes to pollution and eutrophication of inland water bodies and receiving waters. Ocean hypoxic zones driven by nutrient loads and pollution have grown at a geometric pace over the last 30 years, and there are now nearly 500 known hypoxic areas. Globally, more than 80% of collected and discharged wastewater is not treated. Further, the direct contribution from non-point pollution sources — such as fertilizer production, application and animal farming — to water systems is in itself another major source of pollution.[3] This will decrease the water quality of receiving fresh and marine waters and as a result accelerate the coming water crisis, as limited water resources decrease further as a result of water pollution.

3. Global fisheries are under threat. One of the key issues affecting the oceans is unsustainable fishing practices, with almost 30% of assessed global fish stocks considered collapsed or overexploited in 2009, while a further 57% are fully exploited and need to be carefully monitored and managed to prevent overexploitation.[4] About 25% of stock from the high seas (so-called Areas beyond National Jurisdiction, ABNJ) is considered overexploited or collapsed. Overall, the annual global economic loss from unsustainable fishing is estimated to be $50 billion per year,[5] with an estimated net present value of $2.2 trillion.[6] Yet at the same time, with sustained growth in fish production and better distribution channels, world fish food supply has increased substantially during the last five decades, showing an average growth rate of 3.2 percent per year in the period 1961–2009[7].

[1] Molden, 2007.
[2] C.V. Vorosmarty, et al., 2010
[3] J. Rockström et al, 2009.
[4] FAO Review of the state of world marine fishery resources. FAO Fisheries and Aquaculture Technical Paper No. 569. Rome, FAO. 2011. 334 pp.
[5] Arnason et al., 2008
[6] Sunken Billions, World Bank and FAO, 2008
[7] Outpacing the increase of 1.7 percent per year in the world's population.

The Challenge

4. Most water and ocean resources are transboundary in nature. More often than not, water knows no political boundaries. Globally, more than 260 watersheds cross the political boundaries of two or more countries; these watersheds represent about one-half of the earth's land surface, home to about 40% of the global population. The majority of the world's Large Marine Ecosystems (LMEs), from which over 85% of the world's fish catch are derived, are equally shared by two or more countries.

5. Needs for food and water are rising, yet water needs associated with land uses are rarely addressed in basin management plans. Agriculture accounts for 70% of global freshwater use, and for over 85% in many of the least development countries that are eligible for GEF support. Driven by population growth and by the rise in dietary standards, food production will have to increase by 70% within the next 40 years to meet this growing demand. At the same time, basin planning rarely accounts for continued investments for expansion of agricultural land for greater food production and associated water use. Working with government and a range of private sector players – both large investors as well as groups of farmers – in linking land and water rights will be key to assuring sustainable use and transparency.

6. Groundwater governance frameworks remain weak. While heavily used surface water resources are already regulated in many regions, that is not the case for groundwater. Groundwater provides a buffer to climate variability, and acts as storage to be used during drought crises. With the increase in the frequency of droughts combined with expanded food production, groundwater is becoming an increasingly important source of water for agriculture, accentuating the pressure on aquifer resources. Yet, groundwater levels in many areas are rapidly declining as water abstractions continue to increase. Groundwater also contributes significantly to global river flows. There is thus an urgent need for more systematically linking surface and groundwater governance systems and management, while also understanding that the geographical extent of river basins and underlying aquifers rarely coincide. The technical and governance needs are challenging and not yet comprehensively addressed in the existing GEF International Waters (IW) portfolio.

7. Long-term target setting and proactive strategies for pollution reduction from different sectors are key components of an effective response to pollution. High pollutant loads are increasingly harmful to human uses and health, ecosystem functions, and biodiversity. The global socioeconomic impacts of hypoxia and eutrophication are estimated at between $200-$800 billion per year. Nutrient burdens transported from land to the ocean have roughly tripled since pre-industrial times, and are projected to further double or triple by 2050 under a business as usual scenario, with the majority of stresses affecting the developing world. Nitrogen deposition is one of a three 'planetary boundaries' that have already been transgressed, and an estimated 70% reduction in the release of reactive nitrogen will be needed to reverse the trend. There is hence an urgent need to integrate nutrient management needs into water and coastal resource management strategies.

8. Massive loss of wetlands and coastal habitats requires global action. The loss of riparian and coastal habitats including mangroves, salt marshes, sea grasses and seaweed — the so-called

blue forests — has had negative impacts on community livelihoods, food security, and the capacity of these habitats to sequester carbon. These habitats represent only 1% of coastal and marine areas, yet they store carbon at estimated rates several times higher than the more widely recognized terrestrial carbon sinks, such as tropical forests. The loss of riparian and coastal habitats also means the loss of ecosystem services such as flood regulation and shelter belts from increasing storms. Urgent global action is therefore needed to preserve the vital functions provided by these high priority ecosystems. For example, the Ramsar Convention on Wetlands is of critical importance for securing the conservation and wise-use of wetlands and water resources, including freshwater and saline inland waters and shallow marine waters.[8]

9. Commitments to improve ocean health are rising, but actions remain slow. The challenges and consequences of inaction were reiterated by the world leaders at the recent UN Conference on Sustainable Development (Rio+20) recognizing that "oceans, seas and coastal areas form an integrated and essential component of the Earth's ecosystem and are critical to sustaining it." They stressed "... the importance of the conservation and sustainable use of the oceans and seas and of their resources for sustainable development, including through their contributions to poverty eradication, sustained economic growth, food security and creation of sustainable livelihoods and decent work, while at the same time protecting biodiversity and the marine environment and addressing the impacts of climate change." The Outcomes Document[9] has identified oceans and the ecosystem services they provide as a critical part of all three dimensions of sustainable development. The world leaders committed themselves to "protect, and restore, the health, productivity and resilience of oceans and marine ecosystems, to maintain their biodiversity, enabling their conservation and sustainable use for present and future generations, and to effectively apply an ecosystem approach and the precautionary approach in the management, in accordance with international law, of activities having an impact on the marine environment, to deliver on all three dimensions of sustainable development."

Drivers

10. Increasing and competing demands on freshwater resources. Climate change, population growth, and growing global food demand, among others, put increasing pressures on aquatic resources and connected ecosystems and their management. Rising demand for irrigation water combined with higher variability in rainfall, for example, will lead to ever greater demands on groundwater, thus decreasing its buffer capacity in times of drought and leading to increased salt water intrusion in coastal areas. In addition, most of the global freshwater resources are shared by more than one country and uncoordinated development and exploitation of water resources as well as increasing pollution all contribute to global water stress.

11. Lack of incentives for sustainable fisheries management. A common driver behind the accelerating degradation of the marine environment is the inability of markets to sustainably develop and manage open-access resources such as those found in the ocean. A recent study from the Stockholm Environment Institute stated that "…the ocean is the victim of a massive market failure. The true worth of its ecosystems, services, and functions is persistently ignored

[8] The Ramsar Convention defines wetlands fairly broadly, to include "areas of marine water the depth of which at low tide does not exceed six meters.".

[9] http://www.uncsd2012.org/thefuturewewant.html and http://sustainabledevelopment.un.org/index.php?menu=1624

by policy makers and largely excluded from wider economic and development strategies…" In this context, not only will the WSSD target of "maintaining or restoring stocks to levels that can produce the maximum sustainable yield where possible and not later than 2015" not be met but also the relevant CBD Aichi target will be in jeopardy without concentrated and timely intervention. The cumulative, annual economic impact of poor ocean management is estimated to exceed $200 billion dollars. Mismanagement is compounded by $15–$30 billion a year in subsidies to an inefficient fishing industry.

Rationale and Approach

12. GEF experience has shown that cooperation on shared waters helps to build mutual respect, understanding, and trust among countries and to promote peace, regional security and economic growth. Therefore, transboundary cooperation is essential, albeit invariably complex to achieve. Historical relations and political imbalances between riparian countries, cross-sectoral interdependencies, and conflicting water use needs, together with global trade and deterioration of key environmental parameters, all enter into this complex equation. To complicate the challenge further, increasingly transboundary water management will need to address the existing links with climate resilience and disaster risk management. Transboundary management will also be necessary to tackle the increasing severity and frequency of floods and droughts, together with higher demand for water associated with expanded food production. Sustainable water management will be essential to achieve the MDGs on eradicating extreme poverty and hunger, and to ensure environmental sustainability. This requires integrated governance frameworks for land and water use – i.e. integrated management of the 'green' and 'blue' water. Furthermore, the sustainable management of surface and groundwater should take account of the goals of Chapter 18 of Agenda 21, which addresses the needs of water related ecosystems, their biodiversity, and ecosystems services. As reiterated in the outcome document of the UN Rio +20 summit, water and ocean resources are central to sustainable development. Effective management of water variability, ecosystems changes, and the resulting impacts on livelihoods in a changing climate scenario is central to climate–resilient and robust green growth and the post 2015 development agenda.[10]

13. The IW focal area helps countries jointly manage their transboundary surface water basins,[11] groundwater basins, and coastal and marine systems to enable the sharing of benefits from their utilization. Through the IW focal area, the GEF attends to a unique demand in the global water agenda, fostering transboundary cooperation and building trust between states that often find themselves locked in complex and long-lasting water-use conflicts.

14. The GEF Council approved the long-term goal for the IW focal area within its 1995 Operational Strategy. This goal and GEF's strategic approaches remain relevant. The goal of the IW focal area is to promote collective management for transboundary water systems and subsequent implementation of the full range of policy, legal, and institutional reforms and investments contributing to sustainable use and maintenance of ecosystem services.

[10] See also post 2015 thematic consultations on water (http://www.worldwewant2015.org/water) and the outcomes of the High Level Forum on World Water Day, The Hague, 2013.

[11] The GEF is taking an ecosystems based approach to the management of transboundary waters – hence the term water basin - or its equivalent on marine side - is used in most cases throughout the text to underline this approach (e.g. freshwater basin, groundwater basin, large marine ecosystem).

15. The global environment benefits targeted by the IW focal area are related to transboundary concerns, including (i) multi-state cooperation to reduce threats to international waters; (ii) reduced pollution load in international waters from nutrient enrichment and other land-based stresses; (iii) restored and sustained freshwater, coastal, and marine ecosystems goods and services, including globally relevant biodiversity, as well as maintained capacity of natural systems to sequester carbon; and (iv) reduced vulnerability to climate variability and climate-related risks, and increased ecosystem resilience.

16. The IW focal area is directly addressing a number of planetary boundaries that have been or are predicted to be exceeded in the near future – exceeding the boundaries for human interference with the nitrogen cycle, global freshwater use, and ocean acidification. Management of fresh and marine waters also directly relates to boundaries on chemical pollution, biodiversity, and land use.[12] While current freshwater withdrawals have not exceeded the indicated limit for consumptive freshwater use,[13] a 2050 world of more than 9 billion people and changing dietary requirements combined with a projected increase in biofuels will transgress the safe operating space of humanity, leading to a series of ecological collapses of riverine, coastal, and lake ecosystems.[14] Water must therefore be a central focus of the post-2015 framework for poverty eradication and sustainable development.[15]

17. Numerous international conventions, treaties, and agreements address international waters. The architecture of marine agreements is especially complex, and a large number of bilateral and multilateral agreements exist for transboundary freshwater basins. There is also a network of more specific regional international legal instruments as well as several regional seas conventions and their protocols. Related conventions and agreements[16] in other areas complement the global legal framework within which the GEF International Waters focal area operates. Furthermore, a recent decision of the Parties to the UNECE Water Convention enabling accession of non-UNECE member states to the Convention will increase potential for fostering multistate-cooperation on shared river basins and aquifers.[17]

History of GEF Support

18. Over the last twenty years, the IW focal area has developed, tested and refined a series of methodologies and approaches for improving the management of many of the world's most important shared marine and freshwater systems. These include the support of common fact-finding through the Transboundary Diagnostic Analysis (TDA) methodology. Building the TDA, countries come together to agree on a prioritized Strategic Action Program (SAP). SAPs primarily aim at both institutional and policy reforms and strategic investments on regional,

[12] Rockström et al, 2009 (a and b).
[13] Ibid.
[14] Falkenmark et al., 2012.
[15] High Level Forum, World Water Day, the Hague, 2012.
[16] e.g., the UN Convention on Biological Diversity (CBD), the RAMSAR Convention, the UN Convention on the Law of the Sea (UNCLOS), the U.N. Convention to Combat Desertification (UNCCD), and others.
[17] This was done via an "amendment to the UNECE Water Convention". The amendment was agreed in 2003, it entered into force on February 6, 2013;
http://treaties.un.org/Pages/ViewDetails.aspx?src=TREATY&mtdsg_no=XXVII-5-b&chapter=27&lang=en

national, and local levels in transboundary rivers, lakes, aquifers, and LMEs. GEF IW has also demonstrated the utility of Integrated Coastal Management (ICM)[18] as a tool to improve management of coastal and marine resources at national, provincial, and municipal levels. The GEF has also been a pioneer in advancing scientific understanding of key emerging issues through a series of targeted research projects. Lastly, GEF has demonstrated success in building upon and supporting emerging regional water and ocean legal frameworks as a means to catalyze transformation of sectors such as shipping and fisheries towards more sustainable practices.

19. To date, the GEF has facilitated the development and adoption of 30 SAPs and implementation of almost half of them. In many cases, these SAPs have helped to create an enabling policy environment that has catalyzed sizeable investments and other financial flows for aquatic ecosystem restoration and protection. SAP implementation led to measurable improvements in the environmental status of major transboundary river basins such as the Danube, and the reversal of a large scale hypoxic area in the Black Sea, the first such documented reversal in the world. In East Asia, initial demonstration of ICM has led to a massive scaling-up and the region is on target to implementing ICM programs in at least 20% of East Asia's coastline by 2015. In Africa, a convention legally underpinning the first ecosystem-based LME commission in the Benguela Current has recently been signed. The GEF Globallast program played a key role in advancing the negotiation, adoption, and anticipated coming into force of the Global Convention on Ship's Ballast Water and Sediments. GLoballast built capacity in over 60 countries to comply with the new regime, and, working closely with the private sector, helped to catalyze a projected $35 billion ballast water treatment industry.

20. One of the key factors behind the long-term success of the IW focal area has been the consistency in its strategic approach, since the first GEF Operational Strategy of 1995: joint fact-finding, multi-country strategic planning, implementation of governance reforms and investments. As such, and reiterating the long time-frames required for countries to agree on multi-state legal and institutional frameworks for cooperation, grow functioning and financially self-sustaining regional institutions, and reverse degradation in large shared aquatic ecosystems, it is essential that the GEF retains its long-term strategic vision and commitment, building on ongoing GEF initiatives at both the enabling and implementation stages.

Goals and Objectives

21. The long-term goal of International Waters Focal Area is anchored in its 1995 Operational Strategy (see figure 1). To achieve this goal, the GEF-6 IW strategy has three objectives:

(a) Catalyze sustainable management of transboundary water systems by supporting multi-state cooperation through foundational capacity building, targeted research and portfolio learning

[18] ICM is a continuous process, which addresses unresolved as well as emerging issues arising from coastal development in order to increase the efficiency and effectiveness of coastal governance towards the sustainable use of coastal resources and of the services generated by ecosystems in coastal areas. It does this by protecting the functional integrity of these natural resource systems while allowing economic development to proceed.

(b) Catalyze investments to balance competing water-uses in the management of transboundary surface and groundwater and enhance multi-state cooperation;

(c) Catalyze investments to rebuild marine fisheries, restore and protect coastal habitats, reduce pollution of coasts and LMEs, and enhance multi-state cooperation.

22. Each objective encompasses distinctive, innovative programs that will deliver collective actions and impact on the ground.

IW Figure 1 - The GEF-6 International Waters Strategy

The GEF-6 International Waters Strategy promotes collective management of transboundary water systems and implementation of the full range of policy, legal, and institutional reforms and investments contributing to sustainable use and maintenance of ecosystem services. It has three objectives and supports seven
programs

IW 1: Catalyze sustainable management of transboundary water systems by supporting multi-state cooperation through foundational capacity building, targeted research and portfolio learning.

Rationale

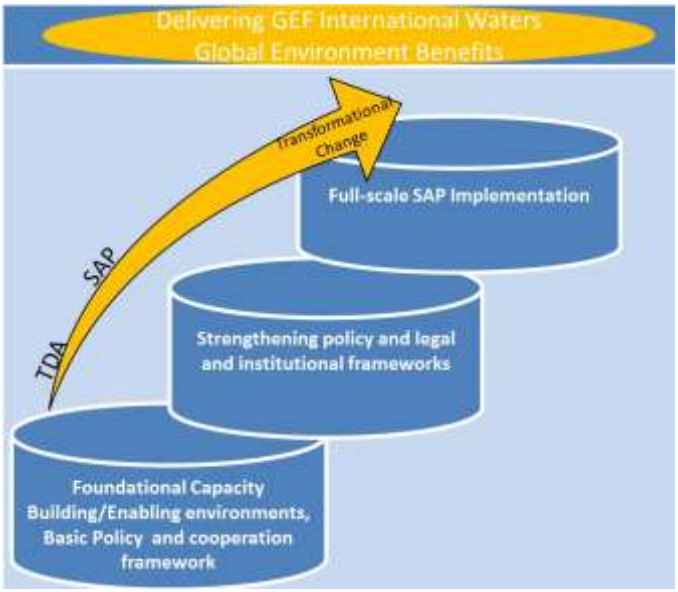
23. Water and ocean resources are central to economic growth, food security, and livelihoods. Yet, water needs are increasing due to population growth combined with increasing food demand and changing diets. Climate Change, in addition, is resulting in decreased water availability in most regions and at the same time is leading to increasing frequency and severity of extreme events, such as floods and droughts. This is especially true in GEF eligible countries, many of which lack infrastructure, capacity, and financial means to store, treat, or reuse water or increase its productivity. Improved transboundary cooperation for water and ocean governance to balance water and living marine resources needs across sectors and states will become ever more central to not transgressing the estimated global boundary for consumptive (blue) water use of ~4000km^3/year, maintaining regional stability, and avoiding conflicts over water and related natural resources, preventing climate induced migrations, and providing for basic human needs, economic growth and maintaining critical ecosystem services. GEF is uniquely positioned to be a catalyst for cooperation on transboundary waters, for example, by building capacity on regional as well as national levels, and bringing about transformational shifts in country interaction and regional development. The aim is to strengthen cooperation among riparian states for sustainable use of water and related resources, and to develop water infrastructure to increase the efficiency and effectiveness of the delivery of benefits.

Program 1.1: Foster Cooperation for Sustainable Use of Transboundary Water Systems and Economic Growth

24. GEF seeks to foster transboundary cooperation. Where capacity and agreement among States is not yet built for collectively addressing transboundary concerns, an enabling environment for action will be created through GEF supported foundational processes. These processes include: facilitating a transboundary dialogue process to derive a Shared Vision for collective action; moving from perceptions to agreed facts on pressures and drivers of environmental degradation within the transboundary water-body through a participatory and cross-sectoral Transboundary Diagnostic Analyses (TDAs); third-party facilitation to design legal and institutional frameworks for coordinated or collaborative action; enhanced stakeholder participation processes; and formulation of SAPs, including agreed reforms and investments. Transboundary political commitments require time and early visible pay-offs in order to sustain a dialogue. GEF foundational activities, therefore, support both a long-term political dialogue as well as building institutional capacity on regional, national, and local levels and demonstration-scale investments on local and/or national level. This foundational approach will support the prioritization and delivery of regionally agreed, country-driven, and country-owned high impact investments through Objectives 2 and 3 and the underlying programs (see figure 2).

IW Figure 2 - The GEF International Waters Focal Area

The GEF International Waters Focal Area catalyze transformational changes through a refined series of methodologies in a step-wise, long-term approach to support countries.



25. Building broad trust and confidence is essential to facilitate lasting commitments for cooperation for sustainable management of transboundary water systems. The TDA process involves a range of stakeholders – from ministries, academia, and civil society groups and other stakeholders, including the private sector (e.g. local business councils, groups of individual entrepreneurs such as farmers unions, SMEs, or national industry groups) — to create a commonly agreed upon factual base regarding pressures on the transboundary water body and their root causes. This forms a foundation for formulating, prioritizing, and agreeing on priority concerns within SAPs to be agreed on the ministerial level. SAP implementation directly addresses key drivers of degradation and unsustainable uses of water and related natural resources and assures long term sustainable development and a move to a green economy.

26. Increasing information on clear trade-offs in financial and economic terms will enhance TDA/SAP formulation in GEF 6. This will enable more effective dialogue between ministries of water, environment, and other natural resources sectors and central decision makers, including ministries of finance and planning. These ministries, therefore, need to be active partners in national inter-ministerial committees. Priority setting based on sound economic trade-offs will provide greater political buy-in and likely leverage additional public and private finance for SAP implementation, resulting in greater impacts. GEF support is essential to fostering partnerships among development partners within a common approach of support to riparian countries.

27. Recommendations from the 2012 GEF International Waters Science Conference clearly pointed to the unique opportunity to use the TDA/SAP process as a vehicle to bridge the science policy gap through the use of scientific panels, science-policy fora, and dissemination of state-of-the-art methods and tools. For example, methods for the economic valuation of direct- and

indirect-use values of ecosystems will be included in TDA formulation. GEF 6 will also mainstream an assessment of risks from climatic variability and change into the TDA/SAP based on current science and available tools.

28. Building on IW's success in support of implementation of the Globallast Convention and the strong partnership with International Maritime Organisation (IMO), and GEF activities in support of the Anti-Fouling Convention, the GEF will pursue additional new opportunities for expanded collaboration with the soon-to-become global United Nations Economic Commission for Europe (UNECE) Water Convention. Another piece in the international legal architecture on international waters is the United Nations Convention on the Non-navigational Uses of International Watercourses, which has not yet entered into force. For groundwater, the UN General Assembly Resolution 63/124 and draft articles on the 'law of transboundary aquifers' annexed therein are important guidance for the formulation of legal and institutional frameworks for transboundary cooperation.

29. Engagement in transboundary waters poses an added challenge for substantial private sector investments due to the complexity and related uncertainty of the policy and regulatory environment. Foundational GEF interventions can pave a way to a more predictable and stable policies on regional, national, and local levels (e.g. in terms of access and regulation of access to fish, water and land use) thus improving the investment climate and facilitating greater engagement of the private sector in SAP implementation. Water savings, pollution prevention along the supply chains and other sustainability commitments – such as product sustainability - are other engagement with industry groups that will be explored during GEF-6.

30. Over a decade of GEF support within the International Water Focal Area has led to a range of experiences, innovations, and lessons. GEF's efforts to harness this knowledge capital and exchange experiences within its learning project - the IW-Learn – has proven highly successful and has been recognized by partners. GEF 6 will step up its knowledge management and learning efforts, work with UNECE and other partners, including key NGOs active in international cooperation on freshwater and oceans. This will enhance exchanges between scientists and practitioners within the GEF portfolio, as well as serve as a model for effective knowledge management for other GEF focal areas. Emphasis will be on active learning across the portfolio, enhancing the impact of GEF funded interventions, and South-South experience sharing.

31. Large water bodies on global scale may reach tipping points slowly, yet once reached impacts can be detrimental and timeframes for remedial actions are long and extremely costly to society. GEF will fund a limited number of targeted research projects to evaluate the severity of key upcoming, under-researched global threats and looming environmental tipping points and to identify a possible niche for GEF support to address these threats.[19] Areas that have been identified by GEF STAP and others for potential targeted research includes the disruption of the Global Nitrogen Cycle;[20] better understanding of effective management options to protect coral reefs; connection of nutrient management with eutrophication and hypoxia; and role of groundwater resources in river basin management and their potential for meeting various

[19] Targeted research projects are implemented by GEF agencies – see also GEF/C.9/5
[20] See GEF STAP Hypoxia report.

demands in the changing environment. However, even though this list may now be valid, adjustments and developments during the course of GEF- 6 may require additional or changed priorities for targeted research.

32. GEF will support common participatory fact finding processes resulting in TDAs as a basis for formulating prioritized SAPs that require political agreement and adoption at ministerial level. An enabling environment for adopting national or regional Integrated Water Resources Management (IWRM) plans and policies per WSSD targets will be supported in riparian states sharing transboundary surface and groundwater systems; and climatic variability and change will be integrated into GEF supported processes. For coastal and marine ecosystems, GEF will utilize similar foundational capacity building as states adopt ecosystem-based approaches at the LME and local ICM scales.

33. Agreements in complex transboundary settings most often require a long-term process of dialogue. While in some water-bodies GEF foundational processes will directly result in the formulation of legal and/or institutional frameworks and the creation of regional institutions, in other cases getting all parties around the table in an active dialogue to define such framework and/or create interim institutions will be a highly successful output in itself. Foundational support from the GEF will include building the capacity of the emerging regional institutional mechanisms and national counterpart ministries – including inter-ministerial committees. Innovative modeling and dispute resolution tools and approaches have been successful in moving from perception to facts to opportunities in terms of transboundary resource uses and will continue to be supported as appropriate. GEF has a history of supporting mechanisms to facilitate involvement of civil society on local, national, and transboundary levels, in fact-finding and dialogue on transboundary challenges and opportunities, increasing public awareness, cultural exchanges, and delivery of demonstration activities. This will continue, though the type and level of this support will differ from basin to basin.

34. Demonstrating benefits from cooperation early on is essential to building and maintaining momentum for regional cooperation. GEF foundational projects therefore support high visibility, local investments in parallel to longer term regionally processes for cooperation. Local government counterparts, local private sector and civil society organizations (CSOs) are often the key implementers of such local demonstrations investments (e.g. through the GEF Small Grants Program or other mechanisms).

Program 1.2: Increase the Resilience and Flow of Ecosystems Services in the Context of Melting High Altitude Glaciers

35. Human populations and ecosystems dependent on water resources in mountain ranges like the Andes, the Himalaya-Hindu Kush, and Central Asia face increased risk as glaciers melt due to climate change. The rapidly melting glaciers feed a system of international rivers, resulting in both significant decreases of dry season flows and increases of flows and frequency and intensity of floods in other periods. If left unattended, melting glaciers will become politically, socially, and economically destabilizing, potentially affecting up to 1.5 billion people. In Asia alone, 500 million people dependent on the waters from the Himalaya-Hindu Kush may be severely affected by the changing climate scenarios. Melting glaciers will also have

widespread consequences for priority mountain and lowland ecosystems of global relevance for biodiversity and ecosystem services.

36. Glaciers can be categorized as being a transboundary resource depending on their geographical position, e.g. melting water from High Asian glaciers feeds many of the region's largest rivers, including Indus, Ganges, Tsangpo-Brahmaputra, and Mekong. While the average melt constitutes roughly 10% of the flow volume, continued rapid glacial melt could eventually impact water availability and food security in densely populated areas of South and East Asia as well as in Patagonia and the Andes, which depend on the ice deposits as reservoirs providing a steady summer water supply.

37. The challenges that the basins with High Altitude Melting Ice are facing will be more sustainably addressed through consolidated, multifaceted efforts. Synergies with the Climate Investment Fund, Least Developed Countries Fund, Pilot Program for Climate Resilience, other GEF focal areas, and coordinated support to countries by development partners will enhance the impact of specific measures. South-south knowledge exchanges and scientific cooperation among basins facing comparable challenges may further advance regional knowledge and action.

38. GEFs response will result in increased regional cooperation between countries affected by glacial melt through improved and shared information, by enhancing regional dialogues across governments and civil society, strengthened governance institutions at regional, national, and local levels, and by investing in innovative demonstrations that will introduce resilience-enhancing measures at the local level. Support will be provided for formulating and implementing ministerial agreed regional action programs or sub-basin IWRM plans that will underpin adaptive management strategies. Innovative approaches for increased resilience of people and ecosystems will set in motion the scaling-up of climate resilience strategies in priority risk areas.

IW 2: Catalyze investments to balance competing water-uses in the management of transboundary surface and groundwater and to enhance multi-state cooperation.

Rationale

39. GEF assistance is building on more than a decade of support for foundational activities to catalyze multi-state action and to implement agreed SAPs for interventions in cross-border surface and groundwater basins. All told, GEF has supported 30 transboundary river basins, 10 transboundary lakes, and 6 transboundary groundwater basins so far. While this is a significant achievement, GEF action has addressed only a fraction of the world's key freshwater basins.

40. Past GEF support led to increased water use efficiency and productivity, and water quality improvements through a range of ecosystem-based interventions. This experience has shown that the implementation of visible action on the ground is an incentive for riparian states to continue their political dialogue, which may lead to transboundary treaties or other regional coordination or cooperation efforts. Furthermore, increased coordination between river basin institutions and regional economic institutions/commissions is expected to lead to greater regional integration and economic and political stability. GEF support will explore strengthening

relevant linkages between waterbody-based institutions and emerging regional institutions/commissions in order to facilitate greater regional integration, cooperation, and contributing to increased regional stability and prosperity.

41. Effective GEF responses to support implementation of actions on the ground based on SAPs or equivalent agreed regional action programs in GEF-6 requires functioning regional institutions based on national and local policy reforms and investments at regional, national, and local scales. GEF-6 will, therefore, mainly focus on two programs: (i) enhanced institutional effectiveness for conjunctive management of surface and groundwater; and (ii) investments to address the Water/Food/Energy/Ecosystems Nexus.

42. While all new GEF-supported TDA and SAPs will consider climate variability and change, TDAs and SAPs that have already been completed and that would benefit from latest science regarding climate impacts will be updated to take climate effects into account. Interventions to address increasing frequency and severity of floods and droughts will continue to be incorporated into the formulation and implementation of SAPs. Furthermore, GEF support will continue to address the needs of Least Developed Countries and SIDS to meet their water and development challenges in a changing climate.

Program 2.1: Advance Conjunctive Management of Surface and Groundwater through Effective Institutional, Legal, and Policy Measures

43. GEF-6 will focus support on more effective conjunctive management[21] and sustainable use of transboundary surface and groundwater resources, together with associated ecosystems and the services they provide. Partly due to lack of comprehensive information on groundwater resources and to the invisible nature of groundwater, governance of this resource remains in an incipient stage compared to surface water. GEF-6 support will create the enabling environment and necessary capacity to achieve consistency of water governance frameworks for river and connected groundwater basins. These frameworks will be guided by the principles contained in current international conventions on surface and groundwater.[22] Consistent governance will become increasingly important as groundwater is used for irrigation for expanding food production and, on the other hand, provides a buffer to sustain water supplies in times of drought. Groundwater levels, for example, are declining rapidly in several major breadbaskets and rice bowls of the world. Sustainable management of surface water and groundwater systems and associated ecosystems is therefore essential for long-term food security.

44. Advancing a sound understanding of the extent and water resources potential of aquifers, together with quality and flow characteristics, will be a necessary first step in many regions. GEF

[21] Conjunctive management is a coordinated and combined use of surface and groundwater to increase the availability of water and to improve the reliability of water supply.
strategy, as will be the integrated management of 'green' and 'blue' waters, the management of floods and droughts, the implementation of innovative measures for nutrient management and water-reuse, and also the promotion of sustainable freshwater fisheries and aquaculture.

[22] Examples include the soon to become global United Nations Economic Commission for Europe (ECE) Water Convention, the United Nations Convention on the Non-navigational Uses of International Watercourses, which has not entered into force yet, and the UNGA Resolution 63/124 and draft articles on the law of transboundary aquifers annexed therein.

support will build on and seek cooperation with ongoing efforts supported by development partners, such as the Internationally Shared Aquifer Resources Management initiative led by UNESCO and IAH, and others. Increased focus on institutional measures and tools for improved groundwater assessments and conjunctive management, therefore, will be an integral part of the IW GEF-6.

45. GEF-6 will foster dialogue and cooperation with the private sector, particularly regarding initiatives that promote greater transparency and reporting standards,[23] lead to a decrease in the water footprint arising private sectors — such as from food and beverage production/agroindustry and their supply chains, cotton production, and mining — and reduce pollution externalities within supply chains. For example, expansion of agricultural land for greater food production and associated water uses need to be made transparent and be factored into water management strategies at local, national, and basin levels.

46. A range of institutional measures and investments identified in the SAP at regional, national, and local scale will be supported within GEF 6, such as the sustainable functioning of existing joint legal and institutional regional frameworks for surface and groundwater management or support to new ones. A broad range of institutional and capacity building measures and, more concretely, the development and enforcement of policy, legislative, and institutional reforms identified in SAPs will be supported, including measures for greater transparency and policies to connect land and water rights.

47. Lack of information often hampers conjunctive groundwater management. Investments in regional and national data and information, and decision support systems will thus form an integral part of GEF-6 support. Furthermore, the conjunctive management of surface and groundwater resources to address food crop security needs to take account of climate variability and change. Hence tools and measures to assess climate impacts on recharge areas, storage capacity as buffer against times of droughts, and measures to reduce or avoid over-abstraction of surface and groundwater resources and salt-water intrusion in coastal aquifers will all need to be addressed.

Program 2.2: Addressing the Water/Food/Energy/Ecosystem Security Nexus

48. GEF support will contribute to increased Water/Food/Energy/Ecosystems security and reduced conflict potential through institutional, policy and legal frameworks, and through investments at regional, national, and local levels. In combination, the strategy will strengthen the delivery of environmental and socio-economic benefits in transboundary basins by balancing competing water uses through an integrated transboundary water resources management approach.

49. Building on the IW Focal Area mandate and to achieve transformational impacts within the wide range of policy and investment needs, GEF will harness synergies across focal areas to focus implementation of agreed basin-/sub-basin SAPs or equivalent regionally agreed

[23] Such as working with and building on the CEO Water Mandate pledging to corporate responsibility actions, such as setting targets for water conservation, cleaner production, and factoring water sustainability considerations into business decision-making, among other.

development plans. IW will work predominantly on the nexus of Water/Food/Ecosystems security, while being cognizant of the relevance of the entire spectrum of competing water needs within the larger Water/Food/Energy/Ecosystems Security Nexus for transboundary water management. Taking account of this Nexus, rather than solely focusing on IWRM principles, also stresses the explicit role, interests, and leadership of other players not focused specifically on water. This integrated, cross-sectoral approach is required to safeguard water availability and productivity, water quality, and management and delivery of water and ecosystems services in the long term. The focus on Water and Food and Ecosystem security – including food from freshwater and marine fisheries — provides direct linkage with priority programs within the Land Degradation, Climate Change Adaptation, and Biodiversity Focal Areas that will be leveraged for greater impact in programming where feasible (see section on cross-area synergy and linkages below). GEF support to energy security in SAP implementation will primarily address studies and activities, including those necessary to establish environmental flow needs to assure enhancement and maintenance of ecosystems services in basin planning and implementation of multi-purpose investments. Attracting private sector capital in such investments will be key as private investments – generally dwarf public investments given a conducive investment climate.

50. Point and non-point source nutrient pollution is the primary cause of eutrophication of freshwater water bodies, such as rivers, lakes and inland deltas, and of ocean hypoxia. A range of innovative abatement measures may be financed where these are either advancing technology or approaches for nutrient control and impacts are significant with the specific basin or aquifer. Synergies with the Land Degradation focal area will be built on to address pollution from agricultural land uses in particular. Consolidated programming action is nevertheless described under Objective 3, because negative impacts and disruption of ecosystems are manifested in receiving waters, i.e. ocean systems. GEF-6 will also continue to support collaborative measures to improve the water quality of international water bodies, such as agreed regulatory approaches for setting long-term targets and proactive strategies for pollution reduction from different sectors.

51. Implementation of SAPs or equivalent regional development programs addresses drivers hampering water and ecosystems security. GEF support needs to respond to agreed regional and national needs established through a participatory process and confirmed by adoption of SAPs through GEF foundational projects – hence it will be impossible to a priori determine specific investment support by GEF and development partners. GEF-6 will focus on implementing measures that enhance conjunctive management; water, food and ecosystems security; and/or maintain ecosystems services together with multi-purpose water resources investments.

52. Innovative approaches and technologies will be supported and/or scaled-up, including through transfer of highly successful approaches or technologies from other regions or GEF-financed interventions. Demonstration and/or scale-up of innovative approaches will include but will not be limited to: basin-wide ecosystems based approaches to balance competing water needs and sharing of benefits from water and related natural resources across borders and sectors; water efficiency measures; climate resilience enhancing water resources management; nature based approaches and restoration of ecosystems function; and reducing water pollution. Under this objective, IW will work with policy makers as well as private sector players

(including capital providers, large corporations, SMEs, local business councils and other groups of small scale individual entrepreneurs).

53. GEF-6 resources may also be used to leverage private and/or public finance by creating or contributing to basin investment funds to prepare and finance SAP investments with GEF support focusing on enhancing and/or maintaining ecosystems services. This type of investment fund support may only be realized in the higher funding scenario.

IW 3: Catalyze investments to rebuild marine fisheries, restore and protect coastal habitats, reduce pollution of coasts and Large Marine Ecosystems (LMEs) and enhance multi-state cooperation.

Rationale

54. Over more than a decade, GEF LME projects have been piloting and testing how integrated management of oceans, coasts, estuaries, and freshwater basins can be implemented through an ecosystem-based management approach. This led to globally significant progress in foundational capacity building for States choosing to address the multiple stresses on their shared LMEs and coasts. GEF has supported capacity building projects for 20 LMEs, representing more than one-half of the LMEs that developing countries share. In these projects, sound science assisted policy making within a specific geographic location, leading to an ecosystem-based approach to management that can be used to engage stakeholders. GEF-6 Strategy will continue to promote and utilize the LME approach as a key organizing principle for SAP implementation in marine and coastal areas.

55. If communities are to benefit with on-the ground results in terms of access to safe water and improved livelihoods, food security, safety and socio-economic status, the LMEs and ABNJ programs will have to be implemented in conjunction, while addressing the respective priorities of each program. In order to minimize the vulnerability from sea-level rise, displaced fisheries, and other concerns from climatic variability and climate change, GEF support for ICM and LMEs will also consider risks related to these issues as new Strategic Action Programs are implemented. The GEF IW strategy will support the fulfillment of Global Partnership for Oceans (GPO) objectives. The programs described in more detail below will directly contribute to achieving the outcomes of all three components of the GPO: reduction of pollution from excess nutrients that cause coastal hypoxia; prevention and loss and degradation of coastal habitats; and reduction or elimination of unsustainable fishing practices and improvement of fisheries management systems through, for example, ecosystem-based fishery management , rights based management, and territorial use rights in fisheries. The expected outcomes and types of interventions proposed for the GEF-6 Strategy, being fully aligned with those of GPO, would allow the establishment or reinforcement of partnerships within GEF programs and projects, leading to more leveraged finance, increased efficiency, and better coordination amongst partners' investment under the GPO. The implementation of SAPs endorsed by participating governments and addressing the key drivers of deterioration of coastal and marine areas will promote investment leading to optimization of benefits from their use, catalyze efforts to halt further degradation, and enhance provision of support ecosystem services that underpin sustainable economic activities

Program 3.1.: Reduce Nutrient Pollution Causing Ocean Hypoxia

56. Most hypoxic zones are a result of run-off from land-based activities to LMEs in developed countries. GEF support would make important impact on LMEs of global significance in GEF-eligible countries, where the bulk of projected increases are expected absent concerted action. Actions under GEF-6 will therefore be closely tied to and in many instances directly combined with support under the GEF Land Degradation Focal Area.

57. The expansion of hypoxia and eutrophication is just one result of a global scale disruption of the earth's nitrogen cycle. Dramatic increases in groundwater nitrate levels is another such impact. The challenge presented by the scope of the increasingly perturbed global nutrient cycle remains under-appreciated in both policy and scientific circles, but impacts of such changes on biodiversity, climate, economies, livelihoods, and human health provide convincing arguments to trigger priority actions on possible options that can lead to better nutrient management and related policies.

58. GEF will seek to catalyze a transformation in the nutrient economy that will reduce nutrient pollution and coastal hypoxia in 60% or more of all LMEs in developing countries. Innovative policy, economic, and financial tools, public-private partnerships and demonstrations will be pursued with relevant governments and sectors towards 'closing the loop' on nutrient production and utilization and restoring nutrient balance within planetary boundaries and eliminating or substantially decreasing the extent of dead zones.

59. The GEF STAP Hypoxia report[24] has helped identify a number of gaps within the International Waters portfolio on activities specifically designed to address the globally disrupted nitrogen cycle. To address these gaps, GEF will initiate collaboration through targeted research as well as with the private sector, including capital providers, large corporations, SMEs, and groups of small scale individual entrepreneurs.

60. GEF will fund ecosystem-based approaches allowing for sustainable management of LMEs including reducing land-based pollution and the resulting eutrophication. Where capacity is built and collective action agreed upon, GEF will support national and local strategies and policies, legal, and institutional reforms to reduce land-based inputs of nutrients as in accordance with the Global Program of Action on Land-based Sources of Marine Pollution (GPA). The GPA remains a valuable and flexible tool to achieve the various goals and targets set by the international community regarding the coastal and marine environment and associated watersheds. Innovative partnerships, types of investments, and financing, will be pursued with relevant sectors targeting land-based sources of marine pollution, and for wetland restoration. GEF will engage the private sector in developing solutions, especially for agriculture sources of nutrients, and process water from factories.

[24] GEF STAP 2011

Program 3.2.: Preventing the Loss and Degradation of Coastal Habitats

61. An estimated 20% of global mangroves have been lost since 1980, 19% of coral reefs have disappeared, and seagrasses have been disappearing at a rate of 110 km^2 yr^{-1} since 1980.[25] In addition, climate change is expected to increase the intensity and frequency of severe tropical storms, making the protective role of reefs and mangroves even more critical. Investments in the protection of reefs through establishment of Marine Protected Areas (MPAs) is dwarfed by the avoided investments cost for hard infrastructure, such as seawalls, and co-benefits from tourism and sustainable fisheries.[26] Despite such obvious win-win opportunities, only 1.4% of marine habitats are protected.

62. The GEF will substantially contribute to preventing further loss and degradation of coastal habitats. The GEF's investments have demonstrated the utility of Integrated Coastal Management (ICM) as a tool to promote national, provincial and local governance reform for improved management of coastal and ocean resources (e.g. in East Asian Seas region). ICM provides a structured, multi-stakeholder approach to tackle the complex threats to coastal habitats on different administrative levels. By leveraging sizeable public and private investment in environmental protection and restoration, local ICM reforms supported by national governments have been shown in GEF IW projects to achieve cost-effective outcomes for coastal protection. Furthermore, GEF-6 will support the conservation of "blue forests" within ICM investments with stronger link to MPAs. This support in GEF-6 will lead to protection of critically important ecosystems in globally significant areas and will contribute to meeting the Aichi Targets of the CBD, in particular Target 11 on conservation of 10% coastal and marine areas.

63. GEF would invest in innovative practical applications of spatial planning and management of coastal areas and in some cases adjacent freshwater basins through ICM principles and in coastal habitat protection and/or conservation and mangrove restoration. GEF would also support investments in sustainable alternative livelihoods, habitat restoration, targeted research on coral reefs, action towards national and local policy, legal, and institutional reforms and increased enforcement to secure coastal/marine habitat, especially the "blue forests" that need protection as carbon sinks.

Program 3.3.: Fostering Sustainable Fisheries

64. The Food and Agriculture Organization of the United Nations (FAO) estimated that 19% of all marine fish stocks have been overexploited, 8% are depleted, and only 1% are recovering from past overexploitation. (FAO, 2009). Fisheries are in decline in many places primarily because governance and management arrangements have failed to address open access conditions. Illegal, unregulated and unreported (IUU) fishing alone accounts for catches worth as much as $23.5 billion annually — equivalent to about one-fifth of the reported global catch.[27] It is essential that efforts be substantially increased to reverse these trends through application of

[25] Michelle Waycott et al., 2009
[26] R. Munang et al, 2013
[27] D. J. Agnew at al., 2009

ecosystem-based approaches, strengthened fisheries institutions, improved monitoring and enforcement, and scaling up of rights-based approaches, sustainable mariculture, and MPAs.

65. To help maintain fish stocks at productive levels, and to reverse further fisheries depletion, gaps and weaknesses in the regional and national institutions responsible for managing the world's fisheries must be addressed. In particular, additional monitoring and enforcement efforts are needed to reduce illegal, unregulated, and unreported fishing (IUU) in order to ensure access to nominated fisheries by right holders and the effective application of the Rule of Law. Furthermore, restructuring fisheries management to increase economic output and efficiencies, improve livelihoods and food security by aligning the socioeconomic incentives of fishermen and fishing communities with the biological health of fish stocks is likely the most important investment to make toward restoring the health of the world's oceans. Rights-based approaches to fisheries management have been shown to be effective in aligning incentives with sustainable fishing practices in a range of cases where they have been properly designed and applied, and the current strategy will seek to expand their applicability.

66. The GEF-6 strategy will catalyze a global transformation of the fisheries sector by supporting improved fisheries management systems. Such systems should encourage long term investments in sustainability and should introduce sustainable fishing practices into 20% of the globally depleted fisheries (by volume), taking into account, for example, threats to biodiversity and importance for livelihoods. Ecosystem-based frameworks, improved monitoring and enforcement, together with scaling up of rights-based approaches, sustainable mariculture, and expansion of marine protected areas (MPAs) can all help encourage investment. Progress towards this goal will be monitored using new tools, including the World Bank's Fisheries Performance Indicators, and FAO's review of the status of fish stocks. This program will primarily focus on assessed fish stocks, where multi-state intervention would catalyze transformation in fisheries management at regional and global scales and advance introduction of sustainable fishing practices. While this IW focal area program will address the multi-country governance reforms and investments on a long time horizon, the Fisheries Signature Program[28] will support rapidly replicable improvements in coastal fishery management on a far shorter time scale. The Fisheries Signature Program's success at the coastal level will complement the long-term governance reforms of Regional Fishery Management Organizations that also depend on implementing and enforcing rights based management regimes on a far grander geographic scale for highly migratory species. The coastal fishery reforms envisioned by the Fisheries Signature Program will demonstrate success and build a constituency for analogous approaches on the RFMO scale.

67. The GEF, therefore, will support the strengthening of Regional Fisheries Bodies (RFB) including Regional Fisheries Management Organizations (RFMOs) and LME commissions that are entrusted with the responsibility for management of transboundary fish stocks, including enhancing regional and national capacities to monitor and enforce fisheries regulations and eliminate destructive fishing practices. GEF will continue pursuing partnerships with national governments and with private sector to further promote innovative, market-based approaches

[28] The GEF-6 Signature Programs are distinct from the International Waters strategy and are described in the document, "GEF-6 Programming Directions" under the section entitled "An Integrated Approach to the Global Environmental Commons in Support of Sustainable Development.

fostering good fishing practices and fishery management on LMEs and ABNJ. Furthermore, GEF will assist countries - in the frame of UNCLOS - in the implementation of the 1995 International Code of Conduct for Responsible Fisheries, and related instruments, together with the 1995 UN Fish Stocks Agreement, and the ratification of the 2009 Port States Measures Agreement (PSMA) by flag and port states.

68. In order to increase the economic, social, and nutritional benefits from their fisheries GEF will support the enhancement of the capacity of developing countries and SIDS to make optimal use of their fishery resources. GEF would invest in policy, legal, and institutional reforms at the regional and global scale that will spur national reforms toward sustainable fisheries and support multi-agency strategic partnerships that contribute to WSSD targets for recovering and sustaining fish stocks. For example, actions supported will, include regional and national-level reforms of legal frameworks and governance, access rights, and enforcement in LMEs and ABNJ.

Results Framework

Long-term IW Goal*:*

- Promotion of collective management of transboundary water systems and implementation of the full range of policy, legal, and institutional reforms and investments contributing to sustainable use and maintenance of ecosystem services.

Impact:

- Threats to international waters reduced through catalyzed multi-state cooperation to address concerns of transboundary water systems for most every continent and oceans with special impact on conjunctive management of fresh- and groundwater resources, rebuilding marine fish stocks and protecting coastal habitats globally.

IW Table 1 - Results Based Management Framework

Objectives	**Expected Outcomes**	**Key targets under Status Quo scenario**	**Key Targets under enhanced impact scenario**	**Outputs**
IW 1: Catalyze sustainable management of transboundary water systems by supporting multi-state cooperation through foundational capacity building, targeted research and portfolio learning.	PROGRAM 1.1: Foster cooperation for sustainable use of transboundary water systems and economic growth. Outcome 1.1.1: Political commitment/shared vision and improved governance demonstrated for joint, ecosystem-based management of transboundary water bodies. *Indicator 1.1.1.1.: # of SAPs endorsed at ministerial level;* *Indicator 1.1.1.2: Capacity of transboundary cooperation/ institution built and degree of active participation in national inter-ministry as per IW tracking tool score card* *Indicator 1.1.1.3: Type and degree of involvement of civil society in transboundary dialogue and formulation of TDA and SAP –incl.*	US$ 90 million Multi-state cooperation and demonstration investments supported in 7-9 new transboundary water bodies/basins	US$120 million Multi-state cooperation, stepped up demonstration investments, and extensive cross-sectoral capacity & awareness development supported in 7-9 new transboundary water bodies/basins.	# of national inter-ministry committees established. # of Transboundary Diagnostic Analyses & Strategic Action Programs. # of legal and/or institutional frameworks for transboundary cooperation adopted and # of signatory countries; and/or Active dialogue process to define legal and institutional framework for governance of transboundary water bodies. # of regional institutions for joint management of transboundary water body/and related resources established. Involvement of civil society organization in identifying challenges and opportunities for

Objectives	Expected Outcomes	Key targets under Status Quo scenario	Key Targets under enhanced impact scenario	Outputs
	NGOs, CSOs, academe, and private sector players; Public awareness of transboundary cooperation benefits (survey). Outcome 1.1.2: On-the-ground demonstration actions implemented, such as in water quality, quantity, conjunctive management of groundwater and surface water, fisheries, coastal habitats. *Indicator 1.1.2.1: # and type of investments at demonstration scale (as reported in IW tracking tool score card.)* Outcome 1.1.3: IW portfolio performance enhanced from active learning/KM/science/experience sharing. *Indicator 1.1.3.1: GEF-6 performance improved over GEF 5 per data from IW Tracking Tool;* *Indicator 1.1.3.2. Positive feedback from stakeholders/participants, including civil society representatives.* Outcome 1.1.4: Targeted research influences global awareness upcoming critical global concerns. *Indicator 1.1.4.1: Reports and publications and/or uptake of results into GEF IW projects.* PROGRAM 1.2 - Increase the Resilience and Flow	75% IW projects demonstrate active GEF portfolio experience sharing/learning Targeted research on upcoming critical global concerns carried out and disseminated – one urgent issue..	85% IW projects demonstrate active GEF portfolio experience sharing/learning Targeted research on upcoming critical global concerns carried out and disseminated – two urgent issues.	transboundary cooperation. # of adaptive management measures implemented, including local demonstration of innovative approaches Demonstration of ministerial agreed regional action programs or sub-basin IWRM plans for High

Objectives	Expected Outcomes	Key targets under Status Quo scenario	Key Targets under enhanced impact scenario	Outputs
	of Ecosystems Services in the Context of Melting High Altitude Glaciers Outcome 1.2.1: Adaptive management measures identified, agreed and tested in limited transboundary basins/sub-basins with high- altitude melting ice to inform future GEF replenishments. *Indicator 1.2.1.1: Ministerial agreed transboundary action programs or sub-basin IWRM plans for demonstration basin testing of adaptive management strategies*	Adaptive management measures implemented in 1 high altitude basins with melting glaciers.	Adaptive management measures implemented in 2 high altitude basins with melting glaciers.	Altitude Glacier Basins..
IW 2: Catalyze investments to balance competing water-uses in the management of transboundary surface and groundwater and enhance multi-state cooperation.	PROGRAM 2. 1 Advance Conjunctive Management of Surface and Groundwater Resources Outcome 2.1.1 Improved governance of shared water bodies, including conjunctive management of surface and groundwater through regional institutions and frameworks for cooperation lead to increased environmental and socio-economic benefits. *Indicators 2.1.1.1. Level of capacity and sustainability of regional institutions as reported in GEF 6 IW tracking tool.* *Indicator 21.1.2: Functioning inter-ministerial committees at national level as reported in GEF IW tracking tool score card.* *Indicator 2.1.1.3: # and type of national/local reforms implemented.* Outcome 2.1.2 Increased management	130 million Adoption and/or implementation of national/local reforms and investments identified in SAPs or equivalent in at least 60 % of basin states 100 % of new and	$150 million Adoption and/or implementation of national/local reforms and investments identified in SAPs or equivalent in at least 75 % of basin states 100 % of new and	Enhanced capacity of regional & national institutions demonstrated to address: (i) management and efficient use and conjunctive management of surface and groundwater; and (ii) climatic variability and change – including enhanced preparedness & management of floods and droughts. Adaptive management demonstrated through updated TDAs/SAPs in X basins (including addressing climate variability & change).

Objectives	Expected Outcomes	Key targets under Status Quo scenario	Key Targets under enhanced impact scenario	Outputs
	capacity of regional and national institutions to incorporate climate variability and change, including improved capacity for management of floods and droughts. *Indicator 2.1.2.1: Degree to which climatic variability and change in transboundary surface water basins and aquifers is incorporated into updated SAPs as reported in GEF IW tracking tool score card.*	updated TDAs and SAPs address climate variability and change.	updated TDAs and SAPs address climate variability and change.	
	PROGRAM 2. 2 Water/Food/Ecosystem/Security Nexus Outcome 2.2.1 Increased water/food/energy/ ecosystems security and sharing of benefits on basin/sub-basin scale underpinned by adequate regional legal/institutional frameworks for cooperation. *Indicator 2.2.1.1: #, results and type of investments within basin/sub-basin Strategic Action Programs or equivalent development plans balancing competing water uses, climate change and promoting conjunctive use of surface and groundwater implemented.* *Indicator 2.2.1.2: Amount of leveraged finance for SAP/SAP equivalent implementation from public/public-private partnerships.* *Indicator 2.2.1.3: Measurable water &*	Multi-state-cooperation results in greater water-food-ecosystems security in 6-7 transboundary water systems.	Multi-state-cooperation results in greater water-food-ecosystems security in 6-7 transboundary water systems. Targeted investments funds created in 1-2 high impact basins to unleash large scale public and private investments	XX $ million leveraged to support investments by private and/or public actors. Innovative investments implemented, such as for increased water use efficiency and water reuse; reduced pollution (nutrients and other); maintained or enhanced ecosystem services; sustainable inland fisheries; water supply protection in SIDS; and protection of catchments and recharge areas.

Objectives	Expected Outcomes	Key targets under Status Quo scenario	Key Targets under enhanced impact scenario	Outputs
	natural resources related results and socio-economic benefits for target population on basin/sub-basin/ or areas of investments as reported in GEF IW tracking tool score card.			
IW 3: Catalyze investments to rebuild marine fisheries, restore and protect coastal habitats, reduce pollution of coasts and Large Marine Ecosystems (LMEs) and enhance multi-state cooperation		\$170 million SAP implementation underway in 6-7 Large Marine Ecosystems.	\$200 million SAP implementation underway in 8-9 Large Marine Ecosystems.	Application of ecosystem-based approaches, improved monitoring and enforcement in fisheries, and scaling up of rights-based approaches, sustainable mariculture, and expansion of MPAs.
	PROGRAM 3.1 Reduce Ocean Hypoxia Outcome 3.1.1 Elimination or substantial decrease in frequency and extend of "dead zones" in sizeable part of developing countries' LMEs. *Indicator 3.1.1.1: #, result and type of investments and reforms for nutrient reduction; demonstration of innovative policy, economic and financial tools and functioning national inter-ministry committees.*	GEF cumulatively supporting efforts to reduce nutrient pollution and coastal hypoxia in 60% or more of (GEF-eligible) LMEs facing eutrophication and hypoxia.	GEF cumulatively supporting efforts to reduce nutrient pollution and coastal hypoxia in 70% or more of (GEF-eligible) LMEs facing eutrophication and hypoxia.	National and local policy/legal/institutional reforms adopted. XX \$ million leveraged to support investments by private and/or public actors. Institutions for joint ecosystem-based and adaptive management for LMEs and local ICM frameworks capacitated and demonstrate sustainability. Types of technologies and investments implemented at regional, national and10 % of coastline in globally most significant areas protected from further loss and degradation of coastal habitats
	PROGRAM 3.2 Preventing the Loss of Degradation of Coastal Habitats Outcome 3.2.1: Coasts in globally most significant areas protected from further loss and degradation of coastal habitats while protecting and enhancing	5 % of coastline in globally most significant areas protected from further loss and degradation of coastal habitats.	10 % of coastline in globally most significant areas protected from further loss and degradation of coastal habitats	

Objectives	Expected Outcomes	Key targets under Status Quo scenario	Key Targets under enhanced impact scenario	Outputs
	livelihoods *Indicator 3.2.1.1: Adoption and implementation of ICM plans and reforms to protect coastal zones (% of country coastline under ICM, # of countries adopting and applying ICM) as reported in GEF IW tracking tool score card.*			
	PROGRAM 3.3 Fostering Sustainable Fisheries Outcome 3.3.1: Introduction of sustainable fishing practices into xx % of globally depleted fisheries *Indicator 3.3.1.1: # of Management plans and appropriate measures implemented for rebuilding or*	20% of globally depleted fisheries (by volume) moved to sustainable exploitation levels through implementation of comprehensive fisheries governance in accordance	20% of globally depleted fisheries (by volume) moved to sustainable exploitation levels through implementation of comprehensive fisheries governance in accordance	

LAND DEGRADATION FOCAL AREA STRATEGY

Background

Status of Land Degradation

1. According to the Food and Agriculture Organization (FAO), 4.9 billion hectares, or 38%, of the planet's land area is used for agriculture, including 3.4 billion hectares of pastureland and 1.5 billion hectares of cropland (arable land and land under permanent crops). An estimated 52% of this area is moderately or severely affected by land degradation and 5 to 10 million hectares of these production areas are lost annually, due largely to the impact of unsustainable land management on soil productivity and health. More than 2 billion people, including some of the world's poorest smallholders and pastoralists, are affected globally. Land degradation, if not brought under control, will threaten the livelihoods of rural populations in many regions and contribute to undermining the planet's life support.

2. Land degradation is defined as the reduction or loss of the biological or economic productivity and complexity of rained cropland, irrigated cropland, or range, pasture, forest and woodlands. This degradation or loss is the result of land uses or of a process or combination of processes, including processes arising from human activities and habitation patterns, such as: (i) soil erosion caused by wind/water; (ii) deterioration of the physical, chemical and biological or economic properties of soil; and (iii) long-term loss of natural vegetation.

3. Combating land degradation is particularly critical for ensuring sustainability of existing agro-ecosystems[1] to support current and future demands in crop and livestock production.[2] Projections of global populations in the coming decades suggest that the pressure to expand cultivated areas for food and feed production will likely increase, especially in developing countries. Because humans already appropriate a significant proportion of the total harvestable net primary plant production[3] for food and other consumptive needs, there are only limited options for major new expansions in area. Sustaining productivity of existing agricultural and grazing land is, therefore, essential to meet current and future aspirations for increasing food production without compromising ecosystem goods and services.

Drivers of Land Degradation

4. Global land use change is one of the defining factors of the planet's safe operating space,[4] and changes in land use for crop, livestock, and forest production are an important source of human-induced threats to the planet's life support system.[5] Land degradation due to desertification and deforestation is a major factor in the progressive deterioration of ecosystem

[1] Agro-ecosystems encompass intensive and extensive crop-based, livestock-based, and mixed systems.
[2] World Bank. 2007. World Development Report 2008: Agriculture for Development. World Bank, Washington, DC
[3] Net Primary Productivity (NPP) is the total food resource on earth, and its use or appropriation by humans serves as a useful indicator of land degradation. Global NPP is limited and has been remarkably consistent at a level of 53.6 Pg per year (Running, Stephen W. 2012. A Measurable Planetary Boundary for the Biosphere. Science 337: 1458)
[4] Rockström et al. 2009. Planetary boundaries:exploring the safe operating space for humanity. Ecology and Society **14**(2): 32. [online] URL: http://www.ecologyandsociety.org/vol14/iss2/art32/
[5] Foley et al. 2005. Global Consequences of Land Use. Science 309:570-574

services affecting agro-ecosystems and forest landscapes globally (see Table 1). Unsustainable land use practices (especially by poor farmers and herders lacking alternative livelihoods), and inadequate or ineffective land use policies are the major drivers of land degradation. These drivers are in turn strongly influenced by global forces of change, such as population expansion and growth, elevated food prices, expansion of major agricultural commodities, and climate change. Agricultural, rangeland, and forest landscapes affected by desertification and deforestation ultimately become unproductive. The gradual loss of tree and vegetative cover, depletion of soil nutrients and organic matter, and decline in quality and quantity of water resources are pervasive symptoms of land degradation in the developing world. Land degradation also has feedback effects on other environmental issues. For example, millions of tons of top soil are lost annually, some of which end up as sediments in water bodies, causing eutrophication and fisheries collapse.

LD Table 1 - Ecosystem services in agro-ecosystems and forest landscapes [modified from Millennium Ecosystem services (2005) and Global Environment Outlook (2007)]

Provisioning	Regulating	Supporting	Cultural
• Food and nutrients • Fuel • Animal feed • Genetic resources	• Erosion control • Climate regulation • Natural hazard regulation (droughts, floods, fire) • Water flows and quality	• Soil formation • Soil protection • Nutrient cycling • Water cycling • Habitat for biodiversity	• Traditional land management practices • Sacred groves as sources of water

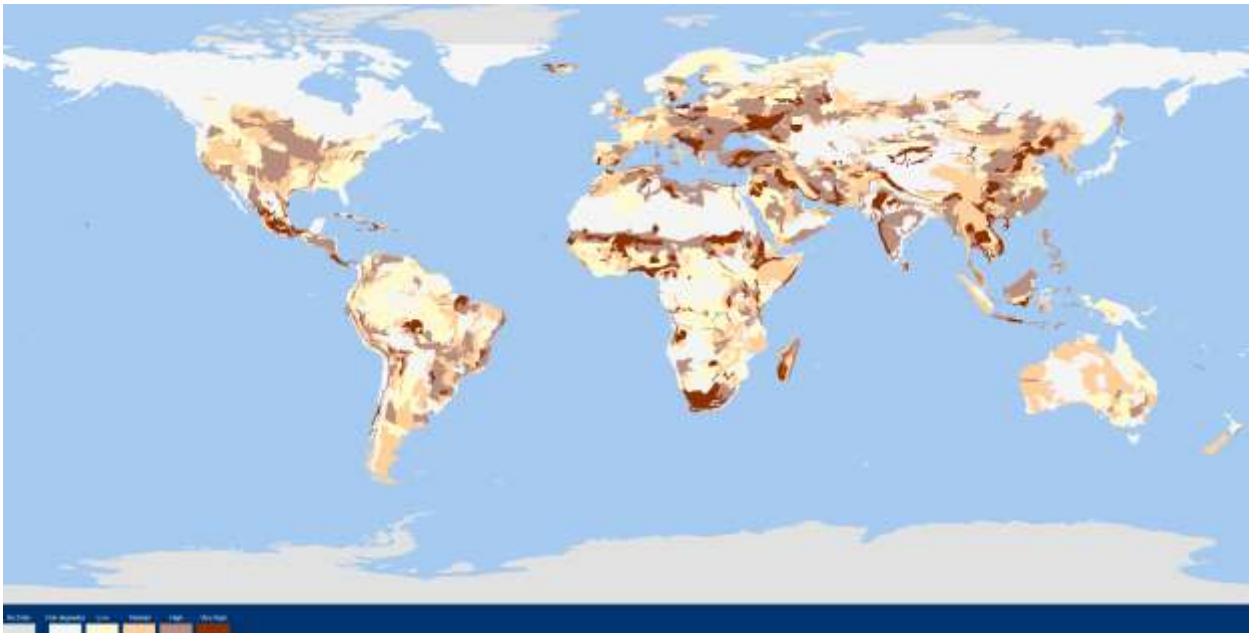
5. Extensive soil degradation due to erosion, salinization, compaction, and nutrient depletion is one of the major drivers of declining crop and livestock productivity in agro-ecosystems (Fig 1). Soil degradation reduces the capacity of the soil to produce goods and services, such as providing nutrients for crop and livestock production, sustaining biomass production, sequestering and storing carbon, safeguarding biodiversity, and supporting water and nutrient cycles.[6] Ultimately, severely degraded land can no longer sustain production, and the economic cost of restoring such lands is often prohibitive. As a result, new areas are continuously opening up for agriculture and grazing use in order to meet overall demands, with implications for the health of planet's other global environmental commons, including freshwater, biodiversity, and climate. Agriculture expansion into forests and other natural habitats harms biodiversity, and increases vulnerability of people and the environment to impacts of climate change.

6. These challenges create socioeconomic problems in agro-ecosystems dominated by poor smallholder farmers, herders, and pastoralists. In some regions of the world, farmers and herders are forced to degrade and ultimately abandon land and migrate to other areas, sometimes leading to conflict. Land degradation is therefore a major factor in the fight against poverty, hunger, food insecurity, and natural resource conflicts throughout the developing world. The land degradation

[6]Lal, R. 1997. Soil quality and sustainability. In: Lal, R., Blum, W.H., Valentin, C., and Stewart, B.A. (eds), Methods for Assessment of Soil Degradation, p 17-30. CRC Press, Boca Raton, Florida.

– poverty nexus is particularly obvious in the world's drylands[7], where poverty and unsustainable land use practices reinforce each other. Climate change is likely to further aggravate these challenges by reducing agricultural productivity, production stability, and incomes in developing countries and affected regions.

LD Figure 1 - Severity of Soil Degradation Globally



Source: UNEP/GRID ARENDAL; Note: Darker colors show severity of soil degradation

Challenges and Potential for Transformational Change

7. The Millennium Ecosystem Assessment noted that degradation of ecosystem services may threaten future improvements in human well-being and possibly reverse gains in some regions.[8] Overcoming these challenges requires integrated approaches that generate both environment and development benefits, and for which incremental financing is needed to support developing countries. Incremental financing is essential for developing countries to specifically account for global environment benefits, such as through innovative approaches that improve crop and livestock productivity without compromising ecosystem services. This includes financing to improve land and soil health, enhance sustainability of surface and groundwater resources, and increase resilience to effects of climate change.

8. Sustainable land management is a major priority for developing countries, particularly in the dryland regions where climate change often exacerbates desertification.[9] As stated in the Outcome Document of the recent United Nations Conference on Sustainable Development

[7] Based on the UNCCD definition, drylands is used here to include all arid, semi-arid, and dry sub-humid regions.
[8] Millennium Ecosystem Assessment. 2005. Ecosystems and Human Well-Being Scenarios; Findings of the Scenarios Working Group, Millennium Ecosystem Assessment Series, Island Press, Washington, DC.
[9] World Bank. 2007. World Development Report 2008: Agriculture for Development. World Bank, Washington, DC

(UNCSD or "Rio+20"), "desertification, land degradation and drought are challenges of global dimension and continue to pose serious challenges to sustainable development of all countries, in particular developing countries." The Document identified sustainable agriculture and food security among the major thematic areas for action and follow-up, including "the need for urgent action to reverse land degradation," and their commitment to strive for a "land-degradation-neutral world in the context of sustainable development."[10] This presents an important opportunity for the GEF to influence transformational change through investments in sustainable land management (SLM).

9. For developing countries and regions facing the challenges of decreased productivity in agro-ecosystems, investments directed toward chemical inputs and crop improvements are larger than those to combat land and soil degradation and depletion of water resources. Yet the sustainability and resilience of agro-ecosystems depend to a large extent on safeguarding the natural capital (land, soil, water) and associated ecosystem services (Table 1). Investing in natural capital warrants major transformation in the economics of land management to account for the costs, benefits, and tradeoffs in SLM. The investment will enable countries to handle biophysical threats to ecosystem services in agro-ecosystems, while providing the policy options and socioeconomic and institutional support that would prevent unsustainable land use. Hence, it is important to scale-up and align environmental financing with development priorities to meet the needs for sustainability of ecosystem services and resilience of the production systems.

The Role of GEF – Transitioning Production Systems to a Sustainable Pathway

10. The Land Degradation Focal Area is the GEF window for supporting eligible countries' efforts to combat land and forest degradation in rural production landscapes. By focusing on SLM,[11] the focal area strategy seeks to address the need for sustaining the flows of ecosystem services that underpin productivity of agricultural and rangeland systems. This focus is consistent with the findings of the Millennium Ecosystem Assessment, which identified land use change, natural resources consumption, and climate change as the three major direct drivers of terrestrial ecosystem degradation.[12] The Millennium Ecosystem Assessment recommended investments in the prevention and control of land degradation in areas with medium to high production potential that are essential for peoples' livelihoods, and in affected areas where the social consequences of continuing land degradation can trigger serious environmental and developmental problems.

11. GEF investment in SLM is based on a diversified portfolio of interventions from farm-level to wider landscapes, with a focus on maintaining or improving the productivity of drylands, rain-fed, and irrigated systems. Interventions such as crop diversification, crop rotation, conservation agriculture, agroforestry, and small-scale irrigation schemes, as well as water harvesting and water-saving techniques, are helping farmers in many developing countries to secure fragile production lands from further deterioration. As a result, potential gains in soil health and quality will enable sustained productivity of farm lands, while increasing ecosystem

[10] http://sustainabledevelopment.un.org/content/documents/733FutureWeWant.pdf
[11] GEF financing for SLM started in earnest during the Third Replenishment Phase (2002-2006).
[12] See 'Ecosystems and Human Well-being: Synthesis', Millennium Ecosystem Assessment, 2005 - http://www.millenniumassessment.org/documents/document.356.aspx.pdf

service flows. Furthermore, arresting soil erosion and siltation in production landscapes also reduces the risk of sedimentation in aquatic systems.

12. In most developing countries, SLM represents a major opportunity for sustainable intensification of existing farmlands through efficient management of nutrients (combining organic and inorganic sources of fertilizers), integrated management of land and water resources ("blue water" and "green water"[13]) and diversification of farming systems (combining crops, trees and livestock). This approach ensures improved management of agro-ecosystem services across production systems and reduces pressure on natural areas, especially those under threat from agricultural expansion. GEF support also helps improve and sustain the economic productivity and environmental sustainability of rangeland and agro-pastoral systems. Specifically, GEF investment targets SLM priorities such as improved grazing management and livestock fodder alternatives, but as part of mainstream investments in livestock development. The GEF also supports interventions that safeguard rangelands from degradation, through actions such as reducing water and wind erosion and resolving wildlife–livestock–crop conflicts. While context influences the types of interventions, the ecosystem service benefits are consistent with keeping the rangelands productive and healthy.

13. With the renewed global policy framework emerging from Rio+20 (Sustainable Development Goals), and growing need for environmental sustainability and resilience in production systems, the GEF is well positioned to influence transformational change in management of agricultural, rangeland (including pastoral), and forest landscapes. GEF's experience in financing SLM indicates that efforts needs to be targeted toward appropriate contexts (geographical and agro-ecological) and scales where the potential for global environmental benefits can be maximized. Such a shift will require a stronger alignment of the Land Degradation Focal Area strategy with global aspirations for safeguarding agroecosystem services (e.g. food, clean water, and biomass energy) on which millions of poor land users depend.

14. In order to maximize potential for transformational impact in the context of sustainable development goals, the focal area strategy will specifically focus on maintenance of land resources and ecosystem services to support sustainable intensification of agricultural, rangelands and forest landscapes. With food security as one of the major priorities being considered for the post-2015 agenda, GEF investment in sustainable management of agro-ecosystem services will create opportunities for affected countries to catalyze significant development financing, particularly in the dryland regions. For example, the focus on both SLM and Sustainable Forest Management (SFM) can serve as important entry point for climate-smart agriculture and food security investments. In this context, the mitigation potential of production systems and urgency for adaptation to a changing climate are major grounds for increasing environmental investments to combat land degradation.

[13] Green water and blue water are used to describe water use in non-irrigated (rain-fed) and irrigated agriculture, respectively.

UNCCD COP Guidance to the GEF

15. The GEF mandate to invest in global environmental benefits from production landscapes relates directly to its role as financial mechanism of the UNCCD. The land degradation focal area provides the framework for eligible countries to utilize GEF resources for implementing the Convention and its 10-year (2008-2018) strategy,[14] which aims "to forge a global partnership to reverse and prevent desertification/land degradation and to mitigate the effects of drought in affected areas in order to support poverty reduction and environmental sustainability." Approval of the focal area by the GEF Assembly (October 2002) and its operationalization by the GEF Council (May 2003) was in line with acceptance by the Conference of Parties (COP), of GEF as a financial mechanism of the Convention. A Memorandum of Understanding between the UNCCD Conference of Parties and the GEF Council (decision 6/COP.7) has since paved the way for direct support to those affected countries eligible for GEF financing through enabling activities. The amendment of the GEF instrument in 2010 has formally designated the GEF as financial mechanism of the UNCCD.[15]

16. The GEF-6 strategy will support affected country Parties in achieving objectives of the 10-year Strategy, which "will involve long-term integrated strategies that focus simultaneously in affected areas, on improved productivity of land and on the rehabilitation, conservation, and sustainable management of land and water resources, leading to improved living conditions, in particular at the community level." The GEF will also play a catalytic role in supporting efforts of eligible Parties to mobilize resources for combating land degradation.

Goal and Objectives

Strategic Considerations

17. The Land Degradation Focal Area embraces the landscape approach[16] to promote integrated natural resources management.[17] The focal area drives an agenda for multiple global environmental benefits, including those related to the protection and sustainable use of biodiversity, climate change mitigation and adaptation, and the protection and sustainable use of international waters. In this regard, joint programming with other GEF focal areas will be actively pursued, especially in the context of integrated watershed management in priority transboundary catchments and groundwater recharge areas (links with International Waters Focal Area); increasing forest and tree cover in production landscapes (links with the Climate Change Mitigation Focal Area and the Sustainable Forest Management Program); and implementation of

[14] Document available at http://www.unccd.int/cop/officialdocs/cop8/pdf/16add1eng.pdf#page=8
[15] The Fourth GEF Assembly held in May 2010 in Punta del Este, Uruguay, formally amended the GEF Instrument.
[16] Defined according to the World Bank, as taking both a geographical and socio-economic approach to managing the land, water and forest resources that form the foundation – the natural capital – for meeting our goals of food security and inclusive green growth (http://go.worldbank.org/CS4D0TLTA0)
[17] As defined in Sayer J.A and Campbell, B. 2004. The Science of Sustainable Development: Local Livelihoods and the Global Environment. Cambridge University Press. "Integrated Natural Resource Management is a conscious process of incorporating the multiple aspects of resource use into a system of sustainable management to meet the goals of resource users, managers and other stakeholders (e.g. production, food security, profitability, risk aversion and sustainability goals)."

landscape approaches for protected area management (links with the Biodiversity Focal Area). These efforts will also take into account opportunities to develop country-level or regional programmatic approaches for natural resource management where they are likely to trigger transformational changes in the agriculture and forest sectors.

18. The GEF recognizes that successful SLM investment requires appropriate enabling environments, such as effective policies, legal and regulatory frameworks, capable institutions, and mechanisms for knowledge sharing and monitoring. Project support will be aligned with existing or planned investments in such enabling conditions to combat land degradation, including policy frameworks, investment strategies, and regulatory mechanisms. However, focal area resources will be directly channelled toward investment in on-the-ground implementation of SLM practices to generate multiple benefits at scale.

19. Investing in SLM to control and prevent land degradation in production landscape is an essential and cost-effective way to deliver multiple global environmental benefits related to ecosystem functions. SLM innovations that address productivity needs in crop, livestock, and forest landscapes also contribute to: a) biodiversity conservation by reducing the conversion of natural ecosystems and safeguarding agro-biodiversity; b) reduction of pollution risks and degradation of water resources to ensure sustainable flow for consumptive uses; c) reducing deforestation and emission of greenhouse gasses in production systems; and d) increasing sustainability and resilience of agro-ecosystem services. These multiple benefits are at the heart of GEF's mandate, and offer an opportunity to foster cross-focal area investments for harnessing synergies and managing tradeoffs.

20. During GEF-5, there was an increased focus on enhancing the focal area portfolio with solutions to the emerging challenges and opportunities to act in rural production landscapes. This included efforts at addressing management of competing land uses and resulting changes in land cover and ecosystem dynamics, the potential of sustainable land management supporting both climate change adaptation and mitigation, and options for mitigating the exploitation of natural resources for short-term economic gain at the cost of ecological and social sustainability. The GEF-6 strategy will further deepen and expand these integrated efforts in the context of supporting implementation of the UNCCD 10-Year Strategy.

21. In this regard, the focal area strategy for GEF-6 will directly support three of the four strategic objectives on achieving long-term benefits for affected populations (SO 1), affected areas (SO 2), and for the global environment (SO 3). Specifically, the strategy will support actions and innovations that generate human livelihood and global environmental benefits. Because the GEF-6 replenishment phase (2014 – 2018) coincides with the final four years of the UNCCD 10-year strategy, the alignment will ensure that Land Degradation focal area investments are appropriately channeled by eligible countries to deliver targeted outcomes.

22. The goal of the land degradation focal area is to contribute to arresting and reversing current global trends in land degradation, specifically desertification and deforestation. This is accomplished by promoting and supporting good practices conducive to SLM,[18] and that are able

[18] As defined in: World Bank. 2006. Sustainable Land Management: Challenges, Opportunities and Tradeoffs. International Bank for Reconstruction and Development/The World Bank, Washington, DC. Sustainable land

to generate global environmental benefits while supporting local and national socio-economic benefits. At a landscape level this includes SFM practices that generate sustainable flows of forest ecosystem services, in particular in drylands, sustaining livelihoods of forest dependant people. It also encompasses integrated natural resource management (INRM) addressing pressures on natural resources from competing land uses, including the prevention of further land and forest degradation.

23. Through investments in SLM practices in production systems, the focal area contributes to both global environmental benefits (improved provision of agro-ecosystem and forest ecosystem goods and services; reduced GHG emissions from agriculture, deforestation and forest degradation and increased carbon sequestration; and reduced vulnerability of agro-ecosystem and forest ecosystems to climate change and other human-induced impacts) and local or national socio-economic benefits (sustained livelihoods for people dependent on the use and management of natural resources; and reduced vulnerability to impacts of climate change of people dependent on the use and management of natural resources in agricultural and forest ecosystems).

24. The primary approach for GEF-6 will be to address priorities that represent the best opportunity for supporting agriculture, livestock management, and forest landscape restoration to underpin rural livelihoods in the world's most affected regions. This will directly address the need to: a) reinforce SLM for enhancing resilience in agro-ecosystems; b) harness and maintain ecosystem services for agro-ecological intensification; c) promote integrated management of production landscapes; and d) mainstream SLM in sustainable development. As a result, the LD FA will contribute to improved sustainable management of land, soil, water, and vegetative cover to generate multiple global environment benefits. The focal area approach will also create opportunities for scaling-up successful interventions across increasingly larger areas to benefit millions of land users.

25. Building on the focal area mandate and the opportunities for transformational impact as described above, the GEF-6 investments will be guided by the following four objectives to deliver agreed global environment benefits and expected national socio-economic benefits (with indicators and measures in Annex 1):

(a) LD 1.- Maintain or improve flows of agro-ecosystem services to sustain food production and livelihoods;

(b) LD 2. - Generate sustainable flows of forest ecosystem services, particularly in drylands;

(c) LD 3. - Reduce pressures on natural resources by managing competing land uses in broader landscapes; and

(d) LD 4. – Maximize transformational impact through mainstreaming of SLM for agro-ecosystem services.

---

management (SLM) is a knowledge-based procedure that helps integrate land, water, biodiversity, and environmental management (including input and output externalities) to meet rising food and fiber demands while sustaining ecosystem services and livelihoods.

Objectives and Program Priorities for GEF Support

LD-1: Maintain or improve flow of agro-ecosystem services to sustain food production and livelihoods

Rationale

26. This objective primarily focuses on agricultural and rangeland systems affected by land degradation. The efficient use of natural resources (land, soil, water, and vegetation) in existing agro-ecosystems is essential for intensifying production of food crops and livestock. To-date, GEF support to countries has contributed toward creating enabling environments for SLM in these systems, such as those linked to the policy, legal and regulatory environment, human and institutional capacities, and access and transfer of knowledge and technology relevant to the management of agricultural lands. However, these enabling environments can only lead to global environment benefits if land users to take full advantage of them in the context of improving crop and livestock production. Hence, LD-1 will specifically address this need to prevent further degradation of land under production and to restore land that is already degraded.

27. There are myriad SLM options for agro-ecological intensification, from diversification of farming systems to improvement of soil health, and conservation of water resources. These options are at the heart of evergreen agriculture and farmer-managed natural regeneration, both of which promote the use and integration of trees in production landscapes.[19] These options are particularly critical in sub-Saharan Africa where land degradation is inextricably linked to food insecurity and vulnerability to climate change. In this regard, LD-1 is linked to the proposed Signature Program on Sustainability and Resilience for Food Security in sub-Saharan Africa, and could potentially incentivize many more countries on the continent and in other regions to program the LD FA resources for transformational impact.

28. Focal area investment under this objective will promote these and related options that contribute to reduced soil erosion rates, reduced GHG emissions from agricultural (crop and livestock) activities, increased accumulation of soil organic matter and sequestration of carbon, and maintenance of all types of habitats for biodiversity in the agricultural landscape. Consistent with the development priority, GEF will focus on areas where agricultural and rangeland management practices underpin the livelihoods of poor rural farmers and pastoralists, and take into account the need to conserve biodiversity outside protected areas, to mitigate and adapt to climate change, and to enhance food security.

[19] Garrity, D et al. (2010). Evergreen Agriculture: a robust approach to sustainable food security in Africa. Food Security 2(3):197-214

Program Priorities

29. **Agro-ecological Intensification** – This program priority will target multiple environment benefits from agro-ecosystems and rangelands through improved land and soil health and increased vegetative cover. As a means to ensure long-term sustainability, the GEF will seek to leverage commitments by other development partners to increase investments in policy options for achieving food security. The program will therefore build on planned or existing initiatives addressing improvements in genetic resources and use of inputs, institutional frameworks to strengthen capacity of smallholder farmers, and efficient marketing and extension programs. GEF support will focus on:

(a) Agroecological methods and approaches including conservation agriculture, agroforestry, etc.;

(b) Improving rangeland management and sustainable pastoralism, from regulating livestock grazing pressure through sustainable intensification, rotational grazing systems, and increasing diversity of animal and grass species to managing fire disturbance;

(c) Strengthening community-based agricultural management, including participatory decision-making by smallholder farmers and diversification of farms and practices at scale;

(d) Integrated watershed management where SLM interventions can improve hydrological functions and services for agro-ecosystem productivity (crop and livestock);

(e) Implementing integrated approaches to soil fertility and water management.

30. **SLM for Climate-Smart Agriculture** – An emerging opportunity for increasing the role of SLM in agro-ecosystem resilience is through Climate-Smart Agriculture, defined as "…agriculture that sustainably increases productivity, resilience (adaptation), reduces/removes greenhouse gases (mitigation), and enhances achievement of national food security and development goals."[20] Innovative SLM approaches can help achieve this triple win in targeted agro-ecosystems, especially rain-fed and irrigation systems where climate change exacerbates the risk of land degradation. Furthermore, projects addressing Climate-Smart Agriculture provide an excellent opportunity to attract private sector investments in SLM. Activities under this program priority would mainly support LD-1 (agro-ecosystems and rangelands) with linkages to LD-3 (mixed land uses), and enable eligible countries to potentially leverage additional financing from other focal areas. The program will prioritize concrete actions that diversify income and improve livelihoods of farmers and pastoralists through:

(a) Agricultural land management systems that are resilient to climate shocks (drought, flood).

(b) Improving management of impacts of climate change on agricultural lands (including water availability) to enhance agro-ecosystem resilience and manage risks.

[20] FAO 2010. "Climate-Smart" Agriculture: Policies, Practices and Financing for Food Security, Adaptation and Mitigation. Food and Agriculture Organization of the United Nations, Rome.

(c) Diversification of crops and livestock production systems through SLM to enhance agro-ecosystem resilience and manage risks; e.g. Integration of tree-based practices into smallholder crop-livestock systems to increase resilience.

(d) Mitigate impacts of climate change on agricultural lands using SLM (e.g. water management practices) to enhance agro-ecosystem resilience and manage risks.

(e) Applying SLM strategies and other ecosystem-based climate adaptation strategies for drought mitigation in drylands.

(f) Applying innovative financial and market instruments (e.g. carbon finance with public and private sector partners) to implement SLM practices that reduce GHG emissions and increase sequestration of carbon on smallholder farms.

(g) Rangeland management and sustainable pastoralism, focusing on SLM options for climate change adaptation and grazing management to reduce GHG emissions.

Key Outcomes

- Improved management of agricultural, rangeland and pastoral systems, including soil health and fertility through maintenance of soil organic matter;
- Increased availability of technologies and practices for crop, tree and livestock production that increase ecosystem services;
- The functionality and vegetative cover of agro-ecosystems are improved and maintained;
- Increased investments in sustainable land management.

LD-2: Generate sustainable flows of ecosystem services from forests, particularly in drylands

Rationale

31. Forests in agricultural landscapes play an important role in maintaining ecosystem services that are the foundation of sustainable crop and livestock production. In addition, millions of farmers and herders, particularly in drylands, harness forest resources as vital components of their livelihood. This objective focuses on integration and management of forests in agricultural landscapes by promoting access to innovative financing mechanisms, technology, and best practices combined with on-the-ground application. Land degradation focal area resources programmed for LD-2 will complement the SFM/REDD+ incentive mechanism by emphasizing agro-ecological practices that secure forests patches in agricultural landscapes. Results will ultimately lead to a net gain in forest area and the improvement of selected forest ecosystem services such as provisioning (e.g. food and fuel for livelihoods), regulating (e.g. reducing greenhouse gas emissions, erosion control) and supporting (e.g. soil protection and habitat for biodiversity).

32. Forests in agricultural landscapes provide multiple ecosystem goods (fodder, fuelwood, fruits, vegetables, resins, gums, and medicinal plants) and services (hydrological flows, reduction of erosion). In the drylands where communities have evolved adaptive capacities to manage and harness these services, drought and climate variability exacerbate the threat of land degradation due to desertification and deforestation. Management of forests in agricultural landscapes plays an important role in tackling these threats by harnessing synergies at appropriate scales.

Integrated landscape management and restoration will diversify livelihood options for affected communities while safeguarding the valuable ecosystem services that support crop and livestock production.

Program Priorities

33. **Landscape Management and Restoration** – This program priority will address forests and trees outside forests in agricultural landscapes and will seek synergies with the SFM/REDD+ program. It is also linked with LD-3 (reducing pressures in broader landscapes). GEF support will focus specifically on land management options that increase and maintain agricultural productivity and deliver multiple environment benefits at landscape scale, particularly in the context of addressing food security and livelihood needs of affected communities, e.g.:

(a) Sustainable management of forests and agroforestry for increased ecosystem services (e.g. food resources, reduced land and soil degradation, diversification) in agriculture;

(b) Landscape regeneration through use of locally adaptive species, including agro-forestry and farmer-managed natural regeneration;

(c) SLM approaches to avoid deforestation and forest degradation in production landscapes;

(d) Good practices in community and small-holder land management, including local knowledge;

(e) Integrated forest fire management.

Key Outcomes

(a) Support mechanisms in place for forest management, particularly in dryland landscapes.
(b) Functionality and vegetative cover of forest ecosystems maintained and improved.
(c) Increased availability of technologies and practices that sustain or enhance ecosystem services.
(d) Increased investments in forests for local communities to maintain or scale-up the application of improved management practices.

LD-3: Reduce pressures on natural resources by managing competing land uses in broader landscapes

Rationale

34. The pace, magnitude, and spatial extent of human-induced changes to the land are unprecedented. Land degradation severely affects the resilience of habitats and ecosystems, and contributes to local and regional as well as global climate change. This objective will address the pressures on natural resources from competing land uses across broad landscapes (e.g. extending the agricultural frontier into forest lands, extractive industry destroying forests, urbanization of rural areas). It reinforces LD-1 and LD-2 by emphasizing cross-sector harmonization and multi-

scale integration of SLM, and creates opportunity for engaging multiple stakeholders in SLM, including the private sector. This is particularly crucial in regions where deforestation is driven by large numbers of smallholder land users engaged in production of major agricultural commodities.

35. Because global demand for soybeans, oil palm, beef, and plantation pulp are at historical highs, the risk of extensive deforestation on the agricultural frontier is likely to increase, particularly in Asia and Latin America. In this context, LD-3 is directly linked to the Signature Program on Commodities, which is designed to take deforestation out of the supply chain. While the Signature Program is focusing on the supply chain of the commodities, LD-3 will enable countries to program LD FA resources for cross-sector integration to reduce pressure across production landscapes. This support will therefore address specific barriers to sustainable production of agricultural commodities, including those not considered under the Signature Program.

36. The GEF support will specifically focus on reinforcing efforts by eligible countries to create an enabling environment for cross-sector engagement and to apply good management practices based on integrated land use planning at a large scale. At the same time, GEF will encourage countries to explore and experiment with financing instruments and mechanisms that provide incentives for reducing the pressures and competition between land use systems.

Program Priorities

37. **Scaling-up sustainable land management through the Landscape Approach** – Through this program priority, the GEF will promote policies, practices, and incentives for improving production landscapes with environmental benefits, and will encourage wider application of innovative tools and practices for natural resource management at scale. This includes innovations for improving soil health, water resource management, and vegetation cover in production landscapes. The GEF support will therefore contribute to advancing the landscape approach sustainability of ecosystem services at scale in crop lands, rangelands, forest landscapes, and pastoral systems to benefit land users most vulnerable to land degradation. Potential support activities include:

(a) Institutional capacity development and institutional finance for sustainable land management.

(b) Securing innovative market and financing mechanisms that provide incentives for reducing the pressures and competition between land use systems.

(c) Integrated watershed management, including transboundary areas and mountainous regions where SLM interventions can improve hydrological functions and services for agro-ecosystem productivity (crop and livestock).

(d) Multi-stakeholder landscape planning involving both public and private sector to inform decision-making on integrated management of ecosystem services important for the global environment and for peoples' livelihoods.

(e) Improving agricultural land management near protected areas.

(f) Management of impacts of climate change on integrated landscapes.

Key Outcomes

(a) Support mechanisms in place for integrated landscape management in production systems.

(b) Integrated landscape management practices adopted by communities and other actors in relevant economic sectors.

(c) Increased investments in integrated landscape management approaches linking multiple environment and development sector priorities.

LD-4: Maximize transformational impact through mainstreaming of SLM for agroecosystem services

Rationale

38. Influencing awareness, standards, institutions, governance and policy frameworks that promote SLM in all productive land uses will greatly enhance the potential to achieve transformational change for sustainability of production systems. In addition to agriculture, livestock and forestry, SLM mainstreaming is relevant in the context of poverty reduction and rural development investments. Mainstreaming SLM enables countries to effectively scale-up best practices to safeguard agroecosystem services and minimize the risk of negative externalities from other development sectors. The GEF already has considerable experience from investing in the mainstreaming of SLM, particularly in the context of creating enabling environment to meet the needs of affected populations.

Program Priorities

39. **Mainstreaming SLM in Development** – This program priority will address Objectives LD-1, LD-2 and LD-3 in an integrated manner by influencing standards, institutions, and governance and policy frameworks relative to all productive land uses. GEF support will specifically target innovative mechanisms for multi-stakeholder planning and investment in SLM at scale, including engagement of the private sector. This will be crucial for integrating ecosystem services into mainstream development investments and value-chains to support agriculture and food security across multiple scales, from local to national and regional. Potential support activities include:

(a) Incorporating SLM in new PPP agricultural investments developed by countries in the context of smallholder agriculture.

(b) Securing innovative financing mechanism based on valuation of environmental services (e.g. PES and other market-based mechanisms) to create sustainable finance flow for reinvestment in sustainable agriculture.

(c) Improving valuation of natural resource assets and ecosystem services from production landscapes to inform decision-making on investments.

(d) Developing mechanisms to scale-up good practices for landscape regeneration, for example through engagement of private sector, local institutions, community-based organizations, extension services, and media.

Key Outcomes

(a) Mainstreaming of development investments and value chains to support agriculture and food security across multiple scales.

(b) Innovative mechanisms for multi-stakeholder planning and investments at scale.

(c) Appropriate actions to secure long-term sustainability and resilience of agro-ecosystems.

Cross-cutting and Enabling Activities

40. The basic rationale for Cross-cutting and Enabling Activities is to ensure that investments in country-driven efforts to combat land degradation are complemented by learning and knowledge transfer that broaden GEF's catalytic role beyond national boundaries. Such investment will directly support countries through targeting of affected transboundary production systems, and guidance from the UNCCD on Enabling Activities. These investments under the Land Degradation focal area will further enhance the importance of GEF role as financial mechanism for the UNCCD.

41. Financing for Enabling Activities to support implementation of the UNCCD and 10-Year Strategy will be in accordance with country obligations to the convention, and based on guidance from the Conference of Parties. The financing will also take into account the need to align focal area portfolio monitoring needs with planned activities by STAP and the UNCCD Secretariat on indicator-based reporting in response to COP guidance.

42. Cross-cutting investments will enable eligible countries to link nationally-developed projects on the basis of: a) thematic issues that will deepen and reinforce the focal area agenda; and b) potential for spatial and geographical integration at appropriate scales (including transboundary areas) for transformational impact. Depending on resources allocated to the focal area under the replenishment scenarios for the focal area, three such priorities to be considered are: a) further advancement of the dryland agenda under the Central Asia Countries Initiative on Land Management (CACILM); b) regional approach to sand and dust storms in Southeast Asia and the Middle East and North Africa (MENA) regions; and c) advancement of the integrated desert ecosystems and livelihoods approach in Southern Africa.

43. Finally, the GEF investments will also catalyze efforts by countries to engage in knowledge sharing and transfer on the basis of south-south exchange and practitioner forums at regional and global level. This will also significantly leverage GEF's catalytic role through the focal area, and at the same time contribute to a stronger visibility for the UNCCD by facilitating engagement of broader stakeholder community involved in implementation of GEF projects.

Results Framework

Goal:

- To contribute to arresting and reversing current global trends in land degradation, specifically desertification and deforestation.

Impact:

- Sustained productivity of agro-ecosystems and forest landscapes in support of human livelihoods

Indicators:

- Change in land productivity (greenness measure as proxy - NPP, NDVI – corrected by RUE)
- Improved livelihoods in rural areas (Farmer income)
- Value of investment in SLM ($ generated from diverse sources, co-financing in projects)

LD Table 2 - Results Based Management Framework

Objectives Indicative Allocations (Status Quo: US$355M; Enhanced: US$435M)	**Expected Outcomes and Indicators**	**Core Outputs**
LD-1: Agriculture and Rangeland Systems: Maintain or improve flow of agro-ecosystem services to sustain food production and livelihoods **Indicative Allocation:** Status Quo: US$100 million Enhanced: US$125 million	Outcome 1.1: Improved agricultural, rangeland and pastoral management *Indicator 1.1 Increased land area under effective agricultural, rangeland and pastoral management practices (Hectares by management practice)* Outcome 1.2: Functionality and cover of agro-ecosystems maintained *Indicator 1.2 Land area under effective management in production systems with improved vegetative cover; Flow of services in agro-ecosystems maintained/increased* Outcome 1.3: Increased investments in SLM *Indicator 1.3: Value of resources flowing to SLM from diverse sources*	• Types of Innovative SL/WM practices introduced at field level • Suitable SL/WM interventions to increase vegetative cover and soil health in agro-ecosystems • Appropriate actions to diversify the financial resource base • Reduced erosion and siltation risks in water bodies • Information on SLM technologies and good practice guidelines disseminated

Objectives Indicative Allocations (Status Quo: US$355M; Enhanced: US$435M)	**Expected Outcomes and Indicators**	**Core Outputs**
LD-2: Forest Landscapes: Generate sustainable flows of forest ecosystem services, including sustaining livelihoods of forest dependent people **Indicative Allocation**: Status Quo: US$50 million Enhanced: US$50 million	Outcome 2.1: Support mechanisms in place for forest landscape management in drylands *Indicator 2.1: Innovative mechanisms, institutions, legal and regulatory frameworks functioning to support SFM* Outcome 2.2: Improved forest management in drylands *Indicator 2.2 Increased land area under sustainable forest management practices; Increased coverage and quality of forests in dryland ecosystems* Outcome 2.3: Increased investments in SFM in dryland forests ecosystems *Indicator 2.3: Increased resources flowing to SFM from diverse sources (e.g. PES, small credit schemes, voluntary carbon market)*	• Institutional, legal and regulatory frameworks that integrate SFM principles • Types of innovative SFM practices introduced at field level • Suitable SFM interventions to increase/maintain natural forest cover in dryland production landscapes • Appropriate actions to diversify the financial resource base • Information on SFM technologies and good practice guidelines disseminated
LD-3: Integrated Landscapes: Reduce pressures on natural resources from competing land uses in the wider landscape **Indicative Allocation:** Status Quo: US$75 million Enhanced: US$100 million	Outcome 3.1: Support mechanisms for SLM in wider landscapes *Indicator 3.1: Demonstration results strengthening cross-sector integration of SLM* Outcome 3.2: Integrated landscape management practices adopted by local communities *Indicator 3.2: Application of integrated natural resource management (INRM) practices in wider landscapes* Outcome 3.3: Increased investments in integrated landscape management *Indicator 3.3: Increased resources flowing to INRM and other land uses from divers sources*	• Government agencies collaborating on SLM initiatives across sectors and at multiple scales • Innovative INRM tools and methodologies developed and tested • Appropriate actions to diversify the financial resource base for integrated landscapes • Information on INRM technologies and good practice guidelines disseminated
LD-4: Maximizing transformational impact: Maintain land resources and agroecosystem services through mainstreaming **Indicative Allocation:**	Outcome 4.1: Mainstreaming of SLM in development investments and value chains across multiple scales *Indicator 4.2: Increased investments in SLM*	• Government agencies collaborating on SLM initiatives across sectors and at multiple scales

Objectives Indicative Allocations (Status Quo: US$355M; Enhanced: US$435M)	**Expected Outcomes and Indicators**	**Core Outputs**
Status Quo: US$75 million Enhanced: US$75 million	Outcome 4.2: Innovative mechanisms for multi-stakeholder planning and investments in SLM at scale *Indicator 4.2: Innovative mechanisms, institutions, legal and regulatory frameworks functioning to support SLM*	• Decision-making informed by valuation of natural resource assets and ecosystem services from production landscapes • Increased PPP agricultural investments to support food security
Cross-cutting and Enabling Activities: Supporting UNCCD obligations and adaptive management **Indicative Allocation:** Status Quo: US$55 million Enhanced: US$U$85 Million	Outcome A: Increased capacities of countries to fulfill obligations in accordance with the provisions provided in the UNCCD. *Indicator A: Improved quality and timeliness of reporting compliance* by countries Outcome B: Regional institutional frameworks established for learning and knowledge exchange *Indicator B: Increased learning and knowledge exchange between countries and regions* **With the enhanced allocation:** Outcome C: Multi-country and regional platforms strengthened to address major thematic priorities *Indicator C: Number of platforms addressing major SLM priority*	At least 100 countries successfully deliver on Enabling Activity obligations At least two institutional frameworks for learning and knowledge exchange in the context of UNCCD At least three regional programs designed to address major SLM priorities

SUSTAINABLE FOREST MANAGEMENT STRATEGY

Background

Status of Global Forests and Forest Ecosystem Services

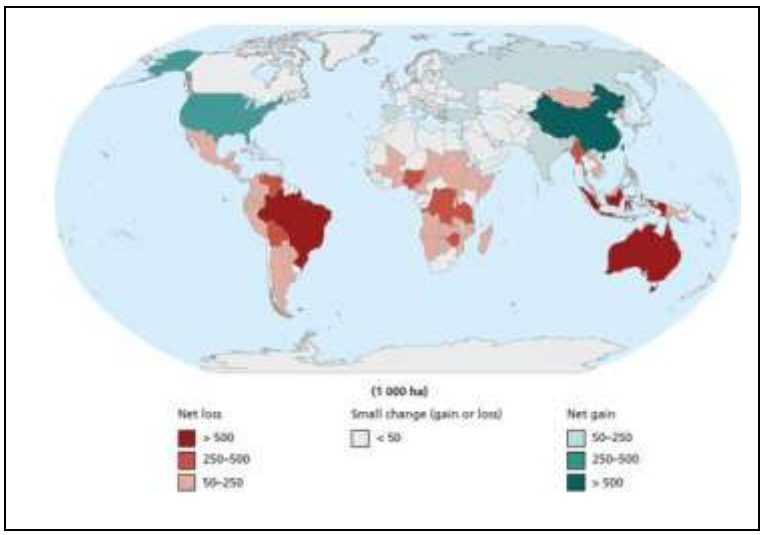
1. Forests fulfill a diverse range of functions. Forests include some of the worlds' most biodiverse habitats and harbor up to three-quarters of all terrestrial biodiversity, the majority in tropical forests[1]. Biodiversity underpins forest productivity, resilience and adaptive capacity; maintains ecological processes such as pollination, seed dispersal and decomposition; and supports important ecosystem services such as carbon sequestration, water regulation and soil protection.

2. Well-managed forests contribute to countries' sustainable development and provide livelihood opportunities for local communities and indigenous peoples. Forests are critically important to the food insecure because they are one of the most accessible productive resources available to them. The importance of forests for people and the world's environment is therefore hard to over-estimate.

3. Despite 20 years of activity since the World Summit on Environment and Development in Rio de Janeiro, deforestation and forest degradation continue at alarming rates in many countries. Approximately 45 percent of the Earth's original forest cover has already disappeared, cleared mostly during the past century. The world's total forest area is just over 4 billion hectares, or 31 percent of total land area. The rate of forest loss has decreased over recent years in some countries as a result of both a decrease in the deforestation rate and an increase in the area of new forest established through planting or seeding and natural expansion of existing forests (Figure 1). Over the last decade, each year 13 million hectares of forest were converted to other uses with attendant loss in biodiversity, livelihoods provision and ecosystem services[2].

[1] CPF (2008) Strategic framework for forests and climate change. A proposal by the Collaborative Partnership on Forests for a coordinated forest-sector response to climate change.
[2] FAO (2010) Global Forest Resources Assessment 2010.

SFM Figure 1 - Annual change in forest area by country 2005-2010 (from FAO GFRA 2010)



4. This loss of forests is significant at both local and regional scale, but may also add to important effects at a global level. Gradual changes in key elements of ecosystems can trigger abrupt system state changes once critical thresholds are crossed.[3] Forests present a unique natural resource that provides a range of benefits and services in their intact state and also as part of a managed ecosystem. Forests are key elements of one earth system process at planetary scale (climate change) and three aggregated processes from local/regional scale (freshwater use, land use change and biodiversity loss). Forests are the meeting point of a number of earth system functions where the loss and degrade of forests results in impact on one or more planetary boundaries. Forests account for 12-17% of global greenhouse gas emissions, largely as agricultural expansion leads to deforestation. Forests' importance for freshwater availability is well known through the regulation of water flow dynamics at local and regional scales. Many of the most populous cities around the world are dependent on forested water catchments for their domestic and commercial water supplies[4].

Drivers of Deforestation and Forest Degradation

5. The drivers of forest loss and degradation are deeply rooted in institutional and market problems that cannot be solved by taking a purely a forest perspective. Deforestation and forest degradation result from complex interactions of social, economic, political, cultural and technological processes often remote from the location of deforestation. While illegal activities are prevalent in some countries, in most a deliberate policy decision determines the manner in which forest resources are used. While market forces drive private sector investments and actions, in many cases public policy has not integrated forest protection into the governance structures that shape markets. Decisions in both the public and private sectors as well as at the national and local level that impact forests are often being made based on incomplete

[3] Rockstrom, J et al (2009) Planetary Boundaries: Exploring the Safe Operating Space for Humanity. Ecology and Society 14(2):32.
[4] Dudley, N. and S. Stolton, eds. (2003) Running pure: the importance of forest protected areas to drinking water. WWF/World Bank Alliance for Forest Conservation and Sustainable Use.

information on alternative forest management options. The lack of a long-term and more integrated vision for a country's natural assets, including an understanding of the impacts of these decisions on socio-economic and ecological stability, often exacerbates the problem. There is potential to harness the supportive actions of the private sector through responsible business practices, such as those identified by the Consumer Goods Forum to catalyze sectoral change.

6. The expansion of agriculture is the main driver of forest loss worldwide[5]. The actors involved range from small scale farmers to large companies. Other drivers of deforestation include expansion of infrastructure, mining, and illegal logging. Forest degradation, in contrast, often has different driving forces, including unsustainable and illegal logging, over-harvest of fuelwood and non-timber forest products (NTFPs), overgrazing, human-induced fires, and poor management of shifting cultivation. While degradation is commonly a longer-term process than deforestation it is still a major issue for forests, with an estimated two billion hectares of deforested and degraded land worldwide[6].

7. Population and economic growth create increased demand for agricultural land and increased demand for forest products[7]. Poor forest governance, unsustainable natural resource planning, high levels of corruption, low capacity of public forestry agencies and land tenure uncertainties often exacerbate the pressures to create a situation where further loss and degrade of forests is inevitable without fundamental change to both the direct and indirect causes.

Challenges and Potential for Transformational Impact

8. Governments face a range of economic, ecological and political choices in achieving sustainable forest management[8] (SFM). Three major challenges face many countries with forest resources: how to avoid further loss of high conservation value forests through deforestation; how to improve management of forest resources and avoid practices which continue to degrade forests; and how to restore forest landscapes already degraded to an extent that ecosystem services have been lost or severely impacted. Only by addressing these simultaneously can governments achieve the sustainable flow of forest goods and ecosystem services for the benefit of all.

9. Many governments are only now beginning to recognize the true costs and consequences of the loss and degradation of forests and there is growing appreciation of the links between national and local development and the sustainable management of forest resources.[9] Through the use of approaches such as natural capital accounting, governments have a clearer understanding of the economic value of the multiple goods and services their forests can provide[10]. In addition, indigenous people, local communities and the general public have a

[5] Kissinger, G., M. Herold, V. De Sy (2013) *Drivers of Deforestation and Forest degradation. A Synthesis Report for REDD+ Policy Makers.*
[6] Global Partnership on Forest Landscape Restoration (2013) Assessing national potential for landscape restoration: A Briefing Note for Decision-Makers.
[7] IUCN (2011) The Root of the Problem. What's Driving Tropical Deforestation Today?
[8] Norgard, R (2010) Ecosystem services: from eye-opening metaphor to complexity blinder. Ecological Economics 69: 1219-1227.
[9] UNEP (2011) Forests in a Green Economy. A Synthesis.
[10] TEEB For Business Coalition (2013) *Natural Capital at Risk: The Top 100 Externalities of Business*.

growing appreciation of the social, political, and economic costs of forest loss or degradation.

10. Forests, like other ecosystems, are affected by climate change. In some places, impacts may be negative, while in others they may be positive. Studies show that the greater frequency of extreme climatic events resulting from global warming affects forests significantly. Climate change also modifies local climatic regimes and can lead to species and ecosystem extinction. There is, however, a positive relationship between diversity and ecosystem resilience. Approaches that support genetic, species, and landscape heterogeneity thus can help support healthy forest ecosystems[11]. Forests also play a significant role in climate change mitigation efforts by maintaining and enhancing forest carbon, particularly through REDD+ initiatives.

11. The role of the private sector in forest management is also crucial for sustainable development. Although the state controls many forests, the private sector is responsible for most of the forest-based activities at a range of scales and intensities – from large scale business to small holders and communities. While governments provide the enabling conditions through public policy and governance structures, on the ground activities are almost exclusively carried out by private sector entities. Hence including the private sector in avoiding further deforestation and the development of sustainable forest management approaches is vital. Introducing best practices for private sector operations and catalyzing private sector investment in practices that protect and maintain forest resources is the only way to achieve our vision for sustainable forest management.

12. A number of transitions are underway in the forest sector, including the growing roles of local communities and indigenous groups, forest governance modernization, appreciation of the role of the private sector, advance of REDD+, novel forest financing mechanisms and nascent markets for ecosystem services that present new opportunities for forests. An integrated approach to sustainable forest management, poverty alleviation and sustainable development offers potential convergence of separate social, conservation, and economic agendas.

The Role of GEF – Investing in Forests for Multiple Benefits

13. For over 20 years the GEF has been an important advocate of sustainable forest management across the world. The GEF-5 SFM/REDD+ Incentive strengthened GEF's assistance through transformational investments supporting countries to manage their forest resources sustainably and continue to provide a wide range of ecosystem services and support diverse livelihood opportunities. The GEF's approach is fully aligned with current global efforts that address forests in a holistic manner and recognize the links between poverty alleviation and the sustainable management of forest resources[12]. The objectives of the biodiversity, climate change mitigation, and land degradation focal areas can be achieved only if the needs of local communities and forest dependent people are met in the implementation of sustainable forest management.

14. Through its support for sustainable forest management the GEF aims to champion the

[11] Secretariat of the Convention on Biological Diversity (2009) Forest Resilience, Biodiversity, and Climate Change. A Synthesis of the Biodiversity/Resilience/Stability Relationship in Forest Ecosystems.
[12] Lele U., A. Karsenty, C. Benson, J. Fetivean, M. Agrawal, S. Goswami (2013) Changing Roles of Forests and their Cross Sectorial Linkages in the Course of Economic Development. Prepared for UNFF10.

protection and responsible use of the world's forests. The GEF will also respond to the different national circumstances of recipient countries and catalyze 'step-change' innovation and investments in the world's forests. Through transformational investments the GEF will help countries manage their forest resources sustainably, so they will continue to provide a wide range of ecosystem services, support diverse livelihood opportunities, and strengthen climate change resilience. The GEF will also encourage private sector engagement through innovative mechanisms to encourage investment in sustainable forest management, such as payment for ecosystem services and REDD+.

15. This drive for multiple benefits is reinforced by GEF's unique position to respond to the combined guidance of the three Rio conventions (UN Convention on Biological Diversity, UN Framework Convention on Climate Change and UN Convention to Combat Desertification) and the United Nations Forum on Forests (UNFF) to ensure the maintenance of the multiple benefits and services provided by forests. GEF will continue to help countries implement the three forest-related conventions and their respective country action plans in a more synergistic fashion.

16. The proposed strategy for Sustainable Forest Management is fully responsive to the guidance provided to the GEF by the UNFCCC and CBD. It is also in line with the UNCCD 10-year strategy, which focuses on efforts to prevent, control, and reverse desertification/land degradation while contributing to the reduction of poverty in the context of sustainable development. Furthermore, the strategy addresses the focus of the Non-Legally Binding Instrument on all types of forests[13] of the UNFF which supports international cooperation and national action to reduce deforestation, prevent forest degradation, promote sustainable livelihoods and reduce poverty for all forest-dependent peoples.

[13] The non-legally binding instrument on all types of forest of the UNFF defines sustainable forest management as a dynamic and evolving concept that aims to maintain and enhance the economic, social and environmental value of all types of forests, for the benefit of present and future generations.

SFM Table 1 - Links between the forest-related decisions of the Rio conventions and the UNFF

Links between the forest-related decisions of the Rio conventions and the UNFF[14]			
Aichi Biodiversity Targets (CBD decision X/2)	**REDD-plus elements (UNFCCC decision 1/CP.16)**	**DLDD and sustainable forest management (SFM) (UNCC D decision 4/CO P.8)**	**UNFF Global Objectives on Forests (E/2006/42 E/CN.18/2006/18)**
5. By 2020, the rate of loss of all natural habitats, including forests, is at least halved and where feasible brought close to zero, and degradation and fragmentation is significantly reduced	• Reducing emissions from deforestation • Reducing emissions from forest degradation • Conservation of forest carbon stocks	• Reinforce SFM as a means of preventing soil erosion and flooding, thus increasing the size of atmospheric carbon sinks and conserving ecosystems and biodiversity. • Strengthen the capacity of LFCCs to combat desertification, land degradation and deforestation.	• Reverse the loss of forest cover worldwide through sustainable forest management (SFM), including protection, restoration, afforestation and reforestation, and increase efforts to prevent forest degradation.
7. By 2020 areas under agriculture, aquaculture and forestry are managed sustainably, ensuring conservation of biodiversity	• Sustainable management of forests • Actions are to be consistent with conservation of natural forests and biological diversity and are to incentivize the protection and conservation of natural forests and their ecosystem services	• Reinforce SFM as a means of preventing soil erosion and flooding, thus increasing the size of atmospheric carbon sinks and conserving ecosystems and biodiversity.	• Increase significantly the area of sustainably managed forests, including protected forests, and increase the proportion of forest products derived from sustainably managed forests.
11. By 2020, at least 17 percent of terrestrial areas are conserved through effectively and equitably managed, ecologically representative and well connected systems of protected areas	• Conservation of forest carbon stocks • REDD-plus activities should be consistent with the objective of environmental integrity and take into account the multiple functions of forests and their ecosystems	• Reinforce SFM as a means of preventing soil erosion and flooding, thus increasing the size of atmospheric carbon sinks and conserving ecosystems and biodiversity. • Strengthen the capacity of LFCCs to combat desertification, land degradation and deforestation.	• Increase significantly the area of sustainably managed forests, including protected forests.

[14] Adapted from CBD, UNCCD and UNFCCC (2012) The Rio Conventions. Action on Forests.

Links between the forest-related decisions of the Rio conventions and the UNFF[14]			
Aichi Biodiversity Targets (CBD decision X/2)	**REDD-plus elements (UNFCCC decision 1/CP.16)**	**DLDD and sustainable forest management (SFM) (UNCC D decision 4/CO P.8)**	**UNFF Global Objectives on Forests (E/2006/42 E/CN.18/2006/18)**
14. By 2020, ecosystems that provide essential services, including services related to water, and contribute to health, livelihoods and well-being, are restored and safeguarded, taking into account the needs of women, indigenous and local communities, and the poor and vulnerable.	• Conservation of forest carbon stocks • Enhancement of forest carbon stocks • REDD-plus activities should promote and support full and effective participation of relevant stakeholders, in particular indigenous peoples and local communities	• Strengthen SFM and integrated water management to maintain ecosystem services in affected areas, prevent soil erosion and flooding, increase the size of atmospheric carbon sinks, and conserve and sustainably use biodiversity.	• Enhance forest-based economic, social and environmental benefits, including by improving the livelihoods of forest-dependent people.
15. By 2020, ecosystem resilience and the contribution of biodiversity to carbon stocks has been enhanced, through conservation and restoration, including restoration of at least 15 percent of degraded ecosystems, thereby contributing to climate change mitigation and adaptation and to combating desertification.	• Reducing emissions from deforestation • Reducing emissions from forest degradation • Conservation of forest carbon stocks • Sustainable management of forests • Enhancement of forest carbon stocks	• Strengthen SFM and integrated water management to maintain ecosystem services in affected areas, prevent soil erosion and flooding, increase the size of atmospheric carbon sinks, and conserve and sustainably use biodiversity.	• Reverse the loss of forest cover worldwide through sustainable forest management (SFM), including protection, restoration, afforestation and reforestation, and increase efforts to prevent forest degradation.

History of GEF Forest Funding - Lessons Learned from GEF-4 and GEF-5

17. The GEF's early efforts in the field of sustainable forest management (SFM) were rather fragmented. GEF-4 introduced a more strategic and focused approach to SFM that encompassed a mix of traditional forest management approaches such as protected areas and integrated watershed management. The GEF-4 strategy also piloted new and emerging aspects to forests such as biomass production for biofuels and the role of forests in climate change mitigation via land use change and forestry (LULUCF). The successful GEF-4 strategy was operationalized through a SFM program which rapidly emerged as a diverse portfolio of investments that address individual GEF focal area aspects of forests or emphasize the multiple benefits of forest ecosystems through major programmatic approaches.

18. In its fifth replenishment cycle, acting on GEF Council guidance to foster a convergence of investments in more efficient and cost-effective projects and programmatic approaches, the GEF expanded and strengthened its SFM efforts. Uniquely this initiative supported countries to combine resources from biodiversity, climate change and land degradation focal areas for more comprehensive SFM/REDD+ multi-focal area (MFA) projects and programs. The GEF-5 SFM/REDD+ Incentive sought multiple global environmental benefits from the management of

all types of forests and strengthening of sustainable livelihoods for people dependent on forest resources.

19. The objective of encouraging $1 billion investment in forests reinforced GEF's position as a significant global funder of forest-related activities. The GEF SFM/REDD+ Incentive has been able to build and expand GEF's support for a wide range of activities. Some key lessons already emerging from this experience are:

(a) After a slow start due to the novelty of the incentive mechanism, it has proved effective in mobilizing resources for forests both within GEF and through co-financing, particularly through the programmatic approach modality. The SFM-REDD+ Program has contributed over $623 million towards forest projects. This compares with $470 million over the full GEF-4 period. The program has also encouraged a total of $4.35 billion in co-finance so far during GEF-5.

(b) The incentive mechanism has encouraged 72 countries to target significant investments directed at a range of different forest types. These investments are also addressing a range of forest use situations, including strictly protected areas, mixed agricultural and forest landscapes, and community managed areas. In particular, the GEF is promoting SFM as a tool for delivering multiple benefits at a range of levels, including REDD+ and through payments for ecosystem services (PES) mechanisms.

(c) The SFM/REDD+ incentive mechanism has supported an expansion in GEF investments in landscape-level approaches. From GEF-4 to GEF-5, the number of forest projects focusing on landscape-level actions has grown in comparison with the past predominance of those directed at the creation and strengthening of protected area systems. The majority of projects in GEF-5 are located in active productive landscape matrices and deal with a range of focal area topics at the same time.

(d) Many projects aim at mainstreaming management practices to support biodiversity, reduce land degradation and address REDD+ issues in productive landscapes. This has included a wide range of sustainable livelihood opportunities for forest dependent communities.

(e) Implementation of the incentive identified some issues to be considered for follow up:

(i) Being strictly tied to the STAR allocation and the use of STAR resources the incentive allowed only national issues to be addressed. However, this approach did not allow the potential for synergy between projects to be harnessed through addressing overarching thematic issues. While each project addresses important national issues, because of its diversity, the GEF's forest portfolio has not had similar impact on major issues facing forests regionally or globally.

(ii) Although the mechanism has led to over 50 percent of the incentive being drawn down, it can be seen that it is easier and more attractive for those countries with larger allocations and the ability to develop larger projects. While the incentive ratio of 3:1 suits these situations it may not provide suitable incentive for the development of projects in countries with more modest STAR allocations (particularly where forests are not currently seen as a development agenda topic)

or the development of smaller SFM projects.

(iii) Financial support for regional projects and programmatic approaches are becoming more relevant for low forest cover countries (LFCCs) and small island developing states (SIDS). However, countries with modest forest resources tend to have fewer forest-focused staff and thus face a perennial issue when it comes to developing new projects. Therefore, the programmatic approach for both LFCCs and SIDS will remain one of the few instruments available for directing financial resources until the necessary capacity is built within their national agencies.

(iv) While the major role of the private sector in the active management of forests is acknowledged, relatively few projects had substantial components led the private sector by or supported by private sector finance. In particular, the limited number of regional and global projects provided few opportunities for large-scale private sector engagement.

Sustainable Forest Management Strategy Goal And Objectives

Strategic considerations

20. The GEF's Sustainable Forest Management Program advocates an integrated approach at the landscape level, embracing ecosystem principles. This includes the integration of people's livelihood objectives in the management of forest ecosystems. Supporting an integrated approach to managing forest ecosystems, the GEF aims to achieve multiple global environmental benefits, including those related to the protection and sustainable use of biodiversity, climate change mitigation and adaptation, and combating land degradation.

21. The program strives to maximize the synergy developed through multi focal area programs and projects. The program recognizes the importance of forests in maintaining the Earth's critical life support systems and the need for management that considers the impacts and opportunities far beyond the forest boundary[15]. For example, tropical forests are a key component of regional and global energy balances and hydrological cycles. Hence there is a growing understanding that deforestation in South America may impact water resource availability as far away as Asia[16]. In this respect the strategy shows links to the Amazon Signature Program. Given the important role that production of agricultural commodities plays in the continuing loss of forests, the strategy complements the specific focus of the Commodities Signature Program by supporting additional governments to avoid the loss of high conservation value forests.

22. Beyond the global environmental benefits that are created by investments in forest related focal areas, the SFM Program will specifically generate the following global environmental benefits addressing the emphasis placed by UNFCCC, CBD and UNCCD as well as UNFF on the importance of conservation, sustainable use and management of forests:

[15] Andraea, M., D. Rosenfield, P. Artaxo, A. Costa, G. Frank, K. Longo, M. Silva Dias. (2004) Smoking rain clouds over the Amazon. Science 303:1337-1342.
[16] Snyder P., C. Delire, J. Foley (2004) Evaluating the influence of different vegetation biomes on the global climate. Climate Dynamics 23:279-302.

(a) Reduction in forest loss and forest degradation;
(b) Maintenance of the range of environmental services and products derived from forests; and
(c) Enhanced sustainable livelihoods for local communities and forest-dependent peoples.

Goal and Objectives

23. The goal for the GEF-6 SFM Program is to achieve multiple environmental benefits from improved management of all types of forests and trees outside of forests. The Program supports the move away from governance with unitary sector focus and towards management across institutional, commercial, and planetary system boundaries. This includes pristine, managed forests and degraded forest land. The program is applicable to forests under all forms of ownership, tenure, and use regimes including public, private, community, and traditional or customary arrangements. The program recognizes that when forests fulfill their potential to contribute to national economic development and sustainable livelihood options for local communities, they are more likely to effectively contribute enhanced global environmental benefits. The program acknowledges that countries vary significantly in their current development pathway, technical and institutional capacity, and the extent and nature of the forest resources with which they are endowed. The program recognizes the importance of integration with and support for existing efforts developing national strategies, programs, and frameworks relevant for SFM including those focusing on biodiversity, climate change adaptation, and REDD+ readiness. The program also recognizes the importance of multi-stakeholder approaches for SFM and encourages wide stakeholder engagement and involvement including local communities, civil society, and the private sector. The program will provide options for countries in different circumstances to tackle the drivers of deforestation and forest degradation while supporting the development of forests' role in national and local sustainable development plans.

24. The program will support novel and adaptive governance approaches at local and regional level necessary to address the drivers of change and impacts currently affecting the world's biophysical processes. Four objectives will drive the SFM portfolio and contribute to the goal:

(a) Maintained Forest Resources: Reduce the pressures on high conservation value forests by addressing the drivers of deforestation.

(b) Enhanced Forest Management: Maintain flows of forest ecosystem services and improve resilience to climate change through sustainable forest management.

(c) Restored Forest Ecosystems: Reverse the loss of ecosystem services within degraded forest landscapes.

(d) Increased Regional and Global Cooperation: Enhanced regional and global coordination on efforts to maintain forest resources, enhance forest management and restore forest ecosystems through the transfer of international experience and know-how.

SFM-1: Maintained Forest Resources: Reduce the pressures on high conservation value forests by addressing the drivers of deforestation.

Rationale

25. Primary forests account for 36% of the total forest area. Forest ecosystems are still disappearing at an alarming rate. Remaining forest areas suffer from increasing fragmentation.[17] The loss of quantity and quality of linked ecosystem services from high conservation value forests reaches from disappearing plant and animal species to the diminished ability to sequester carbon above and below ground, and reduced production capacity because of lost top soil and water retention capacity. In addition, forest-dependent people struggle to sustain their livelihoods once the forest-based opportunities have been removed. The social benefits of high conservation value forests support healthy livelihoods and combined with good governance, can contribute to peace and stability of entire regions.

26. This objective will address the drivers of loss of high conservation value forests by promoting the enabling conditions for integrated national and landscape level planning that recognizes and incorporates the true value of high conservation value forests in natural resource decision-making in both the public and private sectors and within a range of governance levels. This objective will support national strategies to reduce emissions from deforestation which foster intra-governmental and cross-sector integration including those being developed through REDD+ readiness and support for REDD+ Phase II initiatives. Synergy will be sought with initiatives such as the Forest Investment Program, Forest Carbon Partnership Facility, and UN-REDD, as well as bilateral support such as the Government of Norway's International Climate and Forest Initiative. This objective seeks to identify the key values that forest contain or provide, beyond protected areas and pristine forests, and to incorporate the multiple functions and services of forests into landscape level planning. The concept of high conservation value forests[18] can be a multi-stakeholder means of identifying those key values and using them as the basis for rational decision making that is consistent with the protection of forests which have critically important environmental and social values.

27. The objective will support effective land use planning combined with large-scale applications on the ground to avoid further loss and fragmentation of high conservation value forests and the maintenance of forest ecosystem services such as habitat services (biodiversity), regulating services (carbon and water) and productive services (soil and livelihoods). This objective will seek to foster and enhance existing private sector engagement in particular through corporate alliances with sector leaders as well as working with governments to improve the enabling conditions to avoid the loss of high conservation value forests. This objective will address impacts on one planetary system (climate change) as well as impacts on three aggregated processes (fresh water use, land use change and biodiversity loss). This objective develops synergy particularly with the efforts on protected areas and the mainstreaming of biodiversity

[17] Kissinger, G., M. Herold, V. De Sy (2013) Drivers of Deforestation and Forest Degradation. A Synthesis report for REDD+ Policy Makers

[18] There are a number of mechanisms available for identifying and managing forests with important conservation values, these include, inter alia, definitions and processes described by The HCV Network www.hcvnetwork.org and the Programme for the Endorsement of Forest Certification www.pefc.org.

relevant management technologies within the Biodiversity Focal Area and the promotion of carbon stocks within the Climate Change – Mitigation Focal Area. By maintaining vital forest functions and high levels of biodiversity the program also maintains forest resilience to climate change, which at the same time ensures that GEF investments are sustainable in the long term.

Outcomes

28. The following key outcomes will be achieved under this objective:

(a) Public and private operations adopt cross-sector collaboration and planning approaches to avoid loss of high conservation value forest at appropriate governance scales ;

(b) Innovative mechanisms to avoid the loss of high conservation value forest are established.

Programs

(a) Integrated land use planning: Many developing countries need to review and revise their policies and laws pertaining to forests, agriculture, infrastructure development and mining to effectively address the drivers of deforestation and forest degradation. Knowledge about tools and methodologies for valuing natural capital and identifying appropriate policy and economic incentives are key supporting capacities. Supporting forest, agriculture, and energy policy and related legal and regulatory frameworks reformulation and action plans for land use and land-use change driven by agriculture and bio-energy production can address the drivers of deforestation.

(b) Identification and monitoring of high conservation value forests: The high conservation value forest concept is being used by a wide range of organizations as a way to identify and support the conservation of important forest areas. In particular, its adoption by the private sector to identify critical areas in landscape level development plans as well as a means to identify and support the implementation of zero-deforestation commodity supply chains highlight the potential of this approach in addressing the drivers of deforestation. Supporting its adoption in active landscapes undergoing rapid development will help to identify and protect the most important forest resources and maintain critical ecosystem services.

(c) Identifying and monitoring forest loss: Recent years have seen significant technological advances in the identification of forest loss. Equipment and data are more widely availability and less expensive, offering governments new opportunities to understand the modalities of forest loss and their potential landscape impacts. However, a lack of capacity means few countries have been able to take advantage of these advancements. By supporting the development of technical and institutional capacities to identify and monitor forest loss, countries will be able to make improved land-use planning decisions, target specific drivers of deforestation, and engage with forest carbon and REDD+ initiatives including mechanisms that allow for generation of revenues from forest carbon.

SFM-2: Enhanced Forest Management: Maintain flows of forest ecosystem services and improve resilience to climate change through sustainable forest management.

Rationale

29. Thirty percent of the world's forests, 1.2 billion hectares, are primarily used for production of wood and non-wood forest products. An additional 949 million hectares (24%) are designated for multiple-use – in most cases including the production of wood and non-wood forest products[19]. Only 12% of the world's forests are protected, and the costs of enforcing strict protection on any more and potential curbs on livelihoods mean that forests must generate wealth and provide employment as well as deliver the full range of environmental services. The development and implementation of sustainable forest management across a range of scales and governance models which are based on sustainable practices[20] is a priority prerequisite for a future in which forests can continue to contribute through productive and conservation functions.

30. The challenge is to develop mechanisms that make sustainable forest management competitive with unsustainable uses of forests and alternative uses of forest land. Governments generally do not fully recognize the contribution of forests to sustainable development and their potential to provide livelihood opportunities and assist in poverty reduction, in part because the true value of these resources is unknown or as it is presently calculated not high enough to attract the attention of policy makers and private investors alike[21].

31. Forest products such as timber have been traded internationally for hundreds of years, and often led to forest degradation and loss. Recently, the globalization of commodities such as palm oil, soy, beef and pulp and paper has brought a much wider array of players, often including large multinational companies, to the forest sector. The scale and reach of global corporations offers the potential to inject much needed capital and to modernize forest management and forest products businesses. Progressive companies are seeking sustainable forest supply chains as a means to differentiate from those operating without regard for environmental and social concerns.

32. Forest policies and land tenure legislation has been revised in some countries[22], enabling the participation of the private sector in forest management, including indigenous people, community groups and farmers. Joint forest management between government and local communities and management by forest-user groups is spreading. While modernization of forestry departments is taking place, many are still in need of radical change to their structure and functions[23]. Following wider government reform, forest departments' primary responsibilities are likely to shift from direct management of forests to policy development, which means that regulatory and enabling functions as stewardship of forests will be further

[19] FAO (2010) Global Forest Resources Assessment 2010.
[20] Sustainably managed forest is identified in line with ITTO Assessment of the Status of Tropical Forest Management 2006.
[21] TEEB (2010) The Economics of Ecosystems and Biodiversity: Mainstreaming the Economics of Nature. A synthesis of the approval, conclusions and recommendations of TEEB.
[22] FAO (2013) Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests in the Context of National Food Security.
[23] FAO (2009) Towards national Financing Strategies for Sustainable Forest management in Latin America.

devolved to the private sector and local communities. Forest law enforcement and governance efforts are providing a focus for renewed interest in transparent processes for strengthening forest governance and are providing opportunities for synergies between national approaches[24].

33. Traditional and community based forest management practices can provide management regimes in which environmental, social and economic benefits are realized.[25] Locally managed forests have been shown to provide enhanced opportunities for the improvement and maintenance of carbon stocks and the conservation of biodiversity, as well as providing livelihood opportunities for rural communities. Payment for ecosystem services (PES) systems interact with the full scope of financial, natural, social, human, and built assets that underpin local livelihoods. PES can have important impacts on local and indigenous peoples' livelihoods and the maintenance of services including carbon sequestration or water regulation for domestic and commercial uses such as agricultural production. However, the design and implementation of PES schemes, including how to address climate adaptation, tenure and rights insecurity, benefit sharing and local communities' capacity still require development to avoid unnecessary trades-off between efficiency, effectiveness, equity and social welfare.

34. This objective will support the implementation of sustainable forest management within all types of forest covering all of the UNFF's seven themes in order to promote the continued provision of the widest possible range of forest derived benefits, products, and services. This objective will support the implementation of sustainable forest management by public, private, and local community organizations and address the barriers which prevent the uptake and spread of sustainable forest management in developing countries including technical, capacity, and financial aspects. It promotes the mobilization of forest financing in particular through national forest programs and financing strategies taking into account the inter-linkages of forests with different issues including poverty eradication, food security, climate change adaptation, and rural development as well as the importance of forest ecosystems within transnational water catchments. This objective develops synergy with the mainstreaming of conservation and sustainable use of production landscapes in the Biodiversity Focal Area and also with the provision of sustainable flows of ecosystem services such as the provision of freshwater in forests and trees outside forests in rural production landscapes within the Land Degradation Focal Area.

Outcomes

35. The following key outcomes will be achieved under this objective:

(a) Good management practices are applied in all forests by relevant government, local community and private sector actors;

(b) Sustained forest ecosystem services contribute to national economies;

(c) Sustainable finance and delivery mechanisms are established and operational.

[24] IUFRO (2010) Embracing Complexity: Meeting the Challenges of International Forest Governance.
[25] IUFRO (2012) Understanding Relationships Between Biodiversity, Carbon, Forests and People: The Key to Achieving REDD+ Objectives.

Programs

(a) Developing and implementing model projects for Payment for Ecosystem Services: The extent of human dependence on forest ecosystem services and how best to protect these services in perpetuity is a key question in many forested countries. PES is acknowledged as one of the mechanisms that allow societies to pay for the maintenance of these services. PES schemes offer considerable potential to raise new funds for SFM activities or to use existing funding more efficiently. Both the public and private sectors can play a role in establishing PES in different contexts. However, for PES to effect change at scale there is a need to build capacity at the local and national level to properly design and implement PES schemes and promote the uptake and use of PES as a means to support SFM activities. This could include activities such as modifying the policy and regulatory frameworks, building human and institutional capacity, or setting up and implementing pilot PES schemes and initiating public-private partnerships for the inclusion of market forces into PES schemes.

(b) Capacity development for SFM within local communities: The increased devolution of forest management to local communities and indigenous peoples provides opportunities for a range of livelihood, sustainable development, and conservation benefits. However in many cases support for these initiatives to develop the capacity for community based forest management is limited and the realization of the potential benefits is unfulfilled. Additionally, inadequate and insecure tenure rights increase forest dependents' vulnerability, hunger and poverty, and can lead to conflict and environmental degradation when competing users compete for control of forest resources. By providing technical support for SFM and forest-based community enterprises that builds on the conservation of traditional knowledge and management practices, local communities will be empowered to develop a range of sustainable livelihoods based on responsible forest management which will also maintain forest resources and ecosystem services as well as support climate change adaptation efforts. Providing capacity building and incubation support for the private sector also may help develop sustainable market links between local communities and the wider private sector.

(c) Supporting sustainable finance mechanisms for SFM: National assessments of the net benefits of SFM and the incorporation of forests within natural capital accounting initiatives are crucial for improving public and private decision making on forests and land use. These assessments would then be integrated into national policy and planning processes by identifying sustainable uses of forest resources and developing mechanisms for sustainable finance in particular the injection of greater private sector investment.

SFM 3: Restored Forest Ecosystems: Reverse the loss of ecosystem services within degraded forest landscapes.

Rationale

36. Degradation can be but is not always a precursor to the total loss of forest and subsequent land use change. Degradation may also occur as a prolonged process as constituent elements of the forest are run down or even lost over many years or decades but remnant forest

characteristics are left intact. The extent of degraded forest is considerable and the potential exists to prevent complete forest loss and maintain important ecosystem services. The Global Partnership on Forest Landscape Restoration suggests that more than two billion hectares of deforested and degraded land worldwide are suitable for restoration[26]. Farmer assisted regeneration in the Sahel zone and 'mountain closures' in the Chinese Loess Plateau are among the encouraging examples on how degraded forest landscapes can be brought back to life and made functional again, especially by assisted natural regeneration.

37. The restoration of forest lands offers the potential to support the maintenance and rehabilitation of forest ecosystem services and the development of sustainable product flows as well as creating livelihood opportunities for local communities. Forest landscape restoration also offers the opportunity through which greater private sector involvement, across a range of scales and tenure arrangements, can be fostered in sustainable forest management. In many cases policy environments do not promote private sector investment in degraded lands but rather allow easier expansion into forested areas. GEF support for developing enabling policy and helping the private sector lower the risk of investing in degraded lands could provide catalytic change in how degraded lands are viewed and utilized by both the public and private sectors.

38. This objective will help slow the loss of environmental services from forest landscapes that are currently undergoing depletion of function and degradation, and will also help restore environmental function to landscapes that have already been degraded. This objective will support efforts at both planning and field level. The objective will encourage efforts to identify degraded forest areas and undertake climate resilient restoration activities that will reduce the pressure on forests with high conservation values and reverse the loss of and maintain important ecosystem services. In particular this objective will focus on the restoration of landscapes including forests, forest remnants, and trees outside forests to restore a wide range of ecosystem services, while at the same time ensuring the support of local livelihood opportunities, enhance climate change resilience and support sustainable development efforts. Restoration activities can include a range of management objectives, all of which will support the achievement of SFM. At the landscape level this may include a wide range of land uses, management regimes, and land users. The GEF will give priority to restoration efforts which utilize natural processes as far as possible, including natural regeneration, assisted natural regeneration and planting of indigenous tree species. This objective links with LULUCF activities within the Climate Change-Mitigation Focal Area, the Land Degradation Focal Area's activities on maintaining forest ecosystems services in production systems and the reduction of pressures on natural resources from competing land uses, and the Biodiversity Focal Area's activities on managing the Human-Biodiversity interface.

[26] Global Partnership on Forest Landscape Restoration (2013) Assessing national potential for landscape restoration: A Briefing Note for Decision-Makers.

Outcomes

39. The following key outcomes will be achieved under this objective:

(a) Integrated landscape restoration plans to maintain forest ecosystem services prepared;

(b) Forest restoration techniques are applied at appropriate scales by government, private sector and local community actors.

Programs

(a) Building technical and institutional capacities to identify degraded forest landscapes and monitor forest restoration: The implementation of restoration at scale is hampered by a lack of capacity. In particular there is a need for improved landscape level planning processes to rehabilitate ecosystem services and create livelihood opportunities. Additionally, support for innovative finance mechanisms for restoration, including PES and testing of public-private approaches that allow for generation of revenues from options such as forest carbon, will result in forest landscape restoration at scale.

(b) Integrating sustainable forest management in landscape restoration: Large scale landscape restoration requires the combination of mixed land uses in order to finance extensive restoration operations. Such restoration remains an elusive goal. The opportunity exists to capture potential synergy between the development of reforestation efforts, local community livelihood opportunities, and the restoration of forest ecosystem services. By supporting the development of integrated natural resource management including agroforestry techniques, especially for small scale land users, a mix of conservation, commercial, and community focused restoration can be achieved.

SFM 4: Increased Regional and Global Cooperation: Enhanced regional and global coordination on efforts to maintain forest resources, enhance forest management and restore forest ecosystems through the transfer of international experience and know-how.

Rationale

40. Major international events, including UN General Assembly sessions and resolutions, have stressed the increasing relevance and importance of South-South Cooperation for capacity building and knowledge transfer. In the context of capacity building, the considerable experiences and successes that many developing countries have achieved in sustainable forest management and REDD+ can provide valuable impetus, ideas, and means for other countries in the South to address similar concerns and challenges. South-South Cooperation can also increase the flow of information, resources, expertise, and knowledge among developing countries in a cost-effective way.

41. The work of the UNFF Facilitative Process has clearly identified the importance of regional collaboration and cooperation on forest finance and other issues among LFCCs and SIDS. The UNFF has also called for strengthened coordination and cooperation to build on existing regional and international mechanisms to implement sustainable forest management. Such mechanisms include national forest programs, criteria and indicators for SFM, and other

monitoring methodologies and assessment tools and means for capacity building and the transfer of environmentally sound technologies for forests. The Collaborative Partnership on Forest (of which the GEF is a partner) has also been invited to support cooperation on forest law enforcement and governance.

42. The issues facing forests can rarely be addressed in isolation. Many issues are of a transboundary and regional nature that cannot be addressed by national project alone. Transboundary and regional cooperation addressing thematic gaps and geographic issues can help support national efforts at maintenance, responsible use, and restoration of forests as well as improve linkages with FCPF, UN-REDD and wider REDD+ readiness processes. In addition, as many of the key forces impacting on forests are becoming increasingly globalized in nature, many private sector companies have supply chains that source from a range of different countries and seek solutions which can be applied across a diverse geographic source base. The support of regional and global cooperation will also help to tackle pressing forest issues such as policy integration and dissemination of lessons learned, the application of key technologies in monitoring, regional watershed management issues, and global wildlife trade. This objective will support the development of forest management that considers issues from across institutional, commercial, and planetary system boundaries to develop novel and adaptive approaches to SFM at local and regional scales.

Outcomes

43. The following key outcomes will be achieved under this objective:

(a) Tools and technologies for improved monitoring of sustainable forest management available;

(b) Collaboration between countries on sustainable forest management;

Programs

44. Programs addressing this strategic objective may for example focus on:

(a) Private sector engagement: There is increasing recognition that the private sector and public-private partnerships, have important roles to play in achieving sustainable forest management and land-use. It is important to consider both (i) the role of the private sector in financing a transition to sustainable forest management, and (ii) the role of the private sector as a key stakeholder and as a proximate driver of deforestation, notably in agriculture, mining, and other key sectors. However, few national REDD+ strategies or National Forest Programs explicitly address the engagement of the private sector. Private sector engagement, for example through supply chain financing for products from sustainably managed forests, can benefit from regional approaches, as key private sector actors are often active across several neighboring countries, and regional approaches can reduce the costs of engagement, as well as provide inspiration between countries for best practices to engage the private sector.

(b) Global technologies for national progress: In recent years, technological progress has supported countries in achieving global environmental benefits. For example, cost-effective technologies for community-based natural resource monitoring has benefitted

from the development of key technologies at global level, which has then been tested and improved at national level. Likewise, the recent progress in tracking illegal timber through the use of genetic fingerprinting has been developed for global use, and is now being verified and tested in GEF eligible countries. GEF-6 would continue to invest in the development of key technologies to enable the achievement of Objectives 1-3 of the SFM strategy, preferably linked with national-level testing and further development of such technologies in particular through partnerships and alliances with the private sector.

Operational Aspects of the GEF-6 SFM Funding Envelope

45. The GEF-6 SFM Program proposes to build on the successes of the GEF-5 SFM/REDD+ Incentive Mechanism by further developing and refining the incentive in order to maintain continuity in the approach without making it more complicated. The GEF-6 SFM Program is based on a dedicated SFM funding envelope operated as an incentive mechanism to encourage countries to invest portions of their allocations from biodiversity, climate change, and land degradation in fully integrated multi-focal area SFM projects and programs. The respective focal area contributions will address specific focal area objectives in forests while the incentive will address specific SFM objectives. Synergy is created especially in landscape scale projects where the incentive will make sure that the project has a clear forestry focus by applying the SFM impact indicators to the entire project.

46. In order to achieve synergy within SFM projects and programs between the biodiversity, climate change, and land degradation focal areas, countries will be required to invest national allocation from at least two of the three focal areas. As an effort to improve access for Least Developed Countries and Small Island Developing States countries with flexible allocations are at liberty to use this full flexibility and are required to invest national allocation from at least one focal area.

47. The allocation of resources to projects and programs addressing SFM issues will be carried out on a two-tier basis:

(a) Countries with flexible allocations, Least Developed Countries, Small Island Developing States and Low Forest Cover Countries will be supported at a ratio of 1:1,

(b) All other countries will be supported with a ratio of 2:1.

48. To ensure countries have access to sufficient funding to invest in SFM at an ecologically and operationally significant scale, each country is required to invest a minimum of $2 million from their national allocations in order to qualify for incentive investments from the SFM envelope. Where projects and programs involving two or more countries are proposed, the $2 million minimum is assessed collectively. Countries are eligible to access up to a maximum of $20 million from the SFM Incentive supported with qualifying investments from their national allocations.

49. In addition to the incentive mechanism as described above and in order to address the collaborative and cooperation issues identified through GEF-5, it is proposed to decouple 10% of the program envelop from countries' allocations to provide for targeted investments to increase regional and global cooperation on major issues such as the participation of indigenous peoples,

civil society organizations, and the private sector in SFM through networking, South-South cooperation, and sharing of international experience and know-how

Results Framework

Goal:

- To achieve multiple environmental, social and economic benefits from improved management of all types of forests and trees outside of forests.

Impacts:

- Maintaining forest resources and strengthening the sustainable management and restoration of forest landscapes in ways that improve rural livelihoods to achieve environmental benefits.

Indicators:

(i) Reduction in forest loss and forest degradation (% reduction);

(ii) Maintenance of the range of environmental services and products derived from forests (number of services and products maintained);

(iii) Enhanced sustainable livelihoods for local communities and forest-dependent people (% increase in income).

SFM Table 2 - Results Based Management Framework

Objectives	Expected Outcomes and Indicators	Core Outputs
SFM-1: Maintained Forest Resources: Reduce the pressures on high conservation value forests by addressing the drivers of deforestation. Programming: Status quo: $70 million Enhanced Impact: $90 million	Outcome 1.1: Public and private sector operations adopt cross-sector collaboration and planning approaches to avoid loss of high conservation value forest at appropriate governance scales. *Indicator 1.1: Increase in the area of high conservation value forest identified and monitored.* Outcome 1.2: Innovative mechanisms to avoid the loss of high conservation value forest are established. *Indicator 1.2: Incentive mechanisms to avoid the loss of high conservation value forests are implemented.*	Innovative mechanisms and approaches (number) that avoid deforestation. High conservation value forests (number) and extent (hectares). Maintenance of forest carbon stock (tCO2e). Sustainable financing mechanisms are under full operation (number).

Objectives	Expected Outcomes and Indicators	Core Outputs
SFM-2: Enhanced Forest Management: Maintain flows of forest ecosystem services and improve resilience to climate change through sustainable forest management. Programming: Status quo: $100 million Enhanced Impact: $110 million	Outcome 2.1: Good management practices are applied in all forests by relevant government, local community and private sector actors. *Indicator 2.1: Increase in the area of sustainably managed forest.* Outcome 2.2: Sustained forest ecosystem services contribute to national economies. *Indicator 2.2: The range of ecosystem services valued and accounted for within forest landscapes*. Outcome 2.3: Enhanced forest-based livelihoods for communities and smallholders. *Indicator 2.3: Increased income from forest-based activities.*	New forest areas (number) and extent (hectares) sustainably managed. Increase in forest carbon stock (tCO2e). Products and services (number) derived from sustainable sources. Payment for ecosystem services systems (number) established. Areas of forest (number) and extent (hectares) managed under government-recognized community forest management.
SFM-3: Restored Forest Ecosystems: Reverse the loss of ecosystem services within degraded forest landscapes. Programming: Status quo replenishment: $55 million Enhanced Impact: $70 million	Outcome 3.1: Integrated landscape restoration plans to maintain forest ecosystem services prepared. *Indicator 3.1: Plans and programs support integration of forest, agriculture and other land uses in restored landscapes.* Outcome 3.2: Forest restoration techniques are applied at appropriate scales by government, private sector and local community actors. *Indicator 3.2: Extent of forest resources restored in the landscape*.	Forest landscape restoration tools and methodologies (number) developed and tested. Payment for ecosystem services systems (number) established. New areas (number) and extent (hectares) of degraded forest restored. Increase in forest carbon stock (tCO2e).
SFM-4: Increased Regional and Global Cooperation: Enhanced regional and global coordination on efforts to maintain forest resources, enhance forest management and restore forest ecosystems through the transfer of international experience and know-how. Programming: Status quo replenishment: $25 million Enhanced Impact: $30 million	Outcome 4.1: Tools and technologies for improved monitoring of sustainable forest management are available. *Indicator 4.1: Increased capacity to monitor including shared databases and tools*. Outcome 4.2: Collaboration between countries on sustainable forest management. *Indicator 4.2: Development of networks to promote regional and global cooperation.*	Monitoring methodologies developed (number). Use of shared tools by countries (number). Increase in use of regional and global networks (number). Increase in South-South collaborations (number).

CORPORATE PROGRAMS STRATEGY

Introduction

1. Corporate programs are those activities undertaken by the GEF to support work in the focal areas as well as to ensure the coherence of the GEF mandate across its network of partners. Corporate activities are largely cross-cutting in nature and seek to address the needs of countries and civil society organizations to effectively develop their capacity that allow them to protect the global commons. For GEF-6, three corporate programs are proposed: (i) Cross-Cutting Capacity Development (CCCD); (ii) Country Relations (CR); and (iii) Small Grants Program (SGP).

2. The GEF-6 strategic approach to corporate programs will build further on the successes achieved in GEF-5 and will incorporate the results of the evaluations done for some programs. Overall, the rationale and strategic objectives of corporate programs will be aligned with both the GEF 2020 vision and the strategies of the GEF focal areas.

3. The GEF Secretariat will continue to work with the GEF Agencies and other stakeholders on these corporate programs and take the lead in CR. UNDP will continue to implement the SGP, while various GEF Agencies will assist countries in the design of CCCD projects, as in the previous replenishment periods. The descriptions of the proposed corporate programs are below.

Cross-Cutting Capacity Development

Background

4. Countries require appropriate foundational capacity to undertake the necessary actions to achieve sustainable development and overcome global environmental challenges. The capacities needed to meet global environmental objectives are closely linked to the capacities to undertake priority actions at the national level. Building countries' capacities for managing the global commons has always been and must remain a key concern for the GEF.

5. Cross-Cutting Capacity Development (CCCD) in the GEF context traditionally refers to the targeted support provided to countries to strengthen their capacities to meet their commitments under the Rio Conventions and other Multilateral Environment Agreements. The GEF funded National Capacity Self Assessments (NCSA) projects in 153 countries most of which have been completed. A synthesis of the results and lessons learned of the NCSAs conducted in 2010 indicated that the top five capacity development needs were: public awareness and education; information management and sharing; policy, legislative, and regulatory framework; organizational mandates and structures; and economic and financial sustainability.

6. Follow up projects aimed at addressing the challenges identified have begun in some of the countries during GEF5. A comprehensive assessment of this Capacity Development portfolio

will be undertaken during 2013 to analyze whether CCCD projects have been responsive to critical gaps in countries' capacity development needs.

7. The value added of the GEF CCCD resides in its ability to address capacity needs across multiple GEF focal areas and catalyze synergies among different sectors. The Cross-Cutting Capacity Development Strategy for GEF-6 is distinct in that it will address those transversal issues that focal area projects alone do not address. Cross-cutting refers to the GEF's ability to establish synergies between the Rio conventions and other MEAs and the consequent possibility to work across sectors of the economy. During GEF 6 special emphasis will be placed on these projects bringing together the national and local stakeholders, in particular the Ministries of Finance, Agriculture, Industry, Energy, Planning, Budget, as appropriate, so that the issues referring to the global commons are understood as an essential part of national interest and are incorporated in to the regular process of decision making.

Overall Goal

8. To help countries meet and sustain global environmental outcomes by strengthening key capacities that address challenges and remove barriers common to the MEAs that the GEF serves and to mainstream the global commons into decision making.

Strategic Objectives

9. The Cross-Cutting Capacity Development Strategy for GEF-6 (2014-2018) will facilitate the acquisition, exchange and use of knowledge, skills, good practices, behavior necessary to shape and influence national planning and budgeting processes and implementation in support of global environmental benefits by:

(i) ***Promoting country ownership*** and country-led programs to ensure that the GEF supports embedded environmental objectives at the core of national decision-making and the development planning;

(ii) ***Fostering Innovation*** and replicable actions;

(iii) ***Catalyzing*** synergies, burden-sharing and the scale-up of capacities to support on- going sustainable environmental management and growth.

(iv) ***Promoting knowledge sharing and improved information management*** at all levels to enhance public awareness and promote a behavioral change;

(v) ***Ensuring consultations and involvement of public and other stakeholders*** in decision making from the earliest stages of planning;

(vi) ***Promoting partnerships*** with different stakeholders and across different (development) sectors; and

(vii) ***Empowering action*** through learning-by-doing.

Strategic Programs

10. The main features of the CCCD strategy in GEF-6 is that projects be transformative from a systemic perspective and pilot innovative approaches to realizing and sustaining global environmental outcomes.

11. Thus, in addition to mainstreaming of MEAs into the national and sub-national policy, legal and planning agenda, it is proposed that the strategy emphasizes integration of environmental sustainability across key development sectors, and across various actors including government, civil society and the private sector.

(a) **To integrate global environmental needs into management information systems.** This objective focuses on strengthening cross-sectoral, national and regional knowledge management systems that are directly relevant to meeting global environmental priorities. Institutional networks and information centers will be developed, both nationally and regionally, so as to strengthen an integrated approach to information analysis and its dissemination to support improved decision- and policy making, monitoring and evaluation.

(b) **To strengthen consultative and management structures and mechanisms.** This objective focuses on filling critical decision- and policy-making gaps. Whereas objective 1 focuses on the creation, coordination and dissemination of new and improved information, this objective focuses on how this information is used. Broader non-state stakeholder engagement would be built into the key consultative mechanisms that lead to policy-decisions, reinforced by related consultative processes from the local (e.g., private sector round-tables and local community and village meetings) to the national (open- ended technical committees in parliamentary sessions).

(c) **To integrate Multilateral Environmental Agreements' provisions within national policy, legislative, and regulatory frameworks.** This objective will be targeted to a set of mainstreaming exercises. Specifically, projects would support a more systematic integration of the global environmental priorities called for in the articles of the three Rio Conventions and decisions of their respective Conference of the Parties and other MEAs. Vertical integration would be piloted to demonstrate the need for monitoring and enforcing of new and improved policies, legislation, and regulation. This type of cross- cutting capacity development project could build upon the outcomes delivered under objectives 1 and/or 2.

(d) **To pilot innovative economic and financial tools** for Convention implementation. Under this objective; projects would pilot environmental fiscal reform within a broader program of fiscal reforms to improve the flow of resources to finance activities under the MEAs, as well as to create stronger financial disincentives for degradation of the global environment under the Rio Conventions. In concrete terms, this would mean the restructuring of processes for the collection of environmental taxes, fees and fines, as well as a more transparent and streamlined process of resource allocation and distribution between the local, regional, and central government authorities. Another type of project would develop a set of natural resource valuation tools that could be applied to the national sustainable development context, which would include SMART program indicators for the delivery of global environmental outcomes. The project would

complement the development of these natural resource valuation tools with a set of training and awareness-raising workshops to facilitate the use of these tools, including the piloting of these for a specific sectoral plan, program or project.

(e) **Updating of NCSAs.** Countries will be supported to update their NCSAs and, as appropriate, expand them to include other MEAs for which the GEF serves as a financial mechanism. Those countries that have assessed the capacity development needs across the set of MEAs whose implementation is being financed by the GEF would be eligible to design a CCCD project that delivers global environmental outcomes under that set of MEAs.

Table A: Examples of CCCD activities

Programmatic Objectives:	**Program Activities**	**Performance Activities**
Integrating global environmental needs into management information systems	• Carry out (or update) an in-depth analysis of the current management information systems (MIS) related to the Rio Conventions and other MEAs employed by line ministries and their agencies • Negotiate an agreement among all key line ministries and agencies on a realignment of their MIS mandates to fill data gaps and reduce unnecessary duplication • Provide training on the use of targeted advanced data collection methodologies	• Preparation of draft background analyses by national experts are peer reviewed by representatives of all key stakeholders • Draft policy and program recommendations are prepared collaboratively among representatives of all stakeholders
Strengthening consultative and management structures	• Undertake (or update) an in-depth evaluation of the current domestic decision-making processes related to the Rio Conventions and other MEAs	• Carry out public

and mechanisms	• Negotiate an agreement among ministries and non-state stakeholders on the best practicable consultative process for improved decision-making on the Rio Conventions and other MEAs • Provide training to decision-makers on the critical linkages between the objectives of the Rio Conventions and other MEAs and sectoral development priorities	dialogues of key issues with targeted stakeholder groups • Conduct surveys to asses baseline and evolving environmental attitudes, values and behavior (N>500) • Actively engage potential project champions • Pilot proposed recommendations and/or reforms to a targeted sector or region • Negotiate strengthened partnership agreements with key national and international organizations • Facilitate active roles for partner stakeholders to carry out project activities and promote project objectives
Integrating MEAs provisions within national policy, legislative, and regulatory frameworks	• Undertake (or update) an in-depth analysis of the country's environment and development policy framework • Develop an analytical framework for the in-depth analysis of sectoral policies, plans, programs and associate legislative and regulatory instruments • Pilot the negotiated realignment of a selected set of sectoral policies with the provisions of the Rio Convention and other MEAs	
Piloting innovative economic and financial tools for Convention implementation	• Undertake a detailed study on the applicability of innovative econometric indicators for the valuation of natural resources • Undertake a detailed study on potentially applicable best practices on environmental fiscal reforms • Test the applicability of targeted innovative tools for the review of a proposed development project.	
Updating of NCSAs	• Conduct a consultative process to update the capacity needs to implement the Rio Conventions and the country's commitments under other MEAs	• Preparation of the updated NCSA involving different stakeholders and sectors

Country Relations

Background

12. The sixth replenishment period of the Global Environment Facility (GEF) from 2014 to 2018 coincides with a moment when most of the global environmental challenges addressed with the support of GEF funding are at a complex stage of urgency. For the upcoming phase, the GEF is seeking to change its way of doing business to address these resulting challenges by achieving transformational change to become the champion of the global commons.

13. The GEF is a partnership institution and, as such, its success depends on the manner in which its member countries, GEF Agencies, the private sector, and civil society work together. This partnership is a complex arrangement that has many rules, procedures and regulations that are constantly evolving. No matter how simplified, these are not easy to understand and to follow. Therefore, the Secretariat has the responsibility to guide the partners and to maintain the consistency and integrity of the GEF core mission.

14. In this context, and consistent with the principle of country ownership, developing country participants need to enhance their understanding of these complexities. The Country Relations Strategy (CRS) will address this need so countries can fully benefit from the partnership and effectively use the resources available.

15. The GEF is the/a financial mechanism of the main Multilateral Environmental Agreements and is therefore the only common element that links them together thus allowing the partnership to explore and exploit synergies for greater impact. The CRS will continue to provide a setting for the different focal points to develop coordination among them and discuss issues of common interest.

16. The Country Relations Strategy for GEF-6 will build on the successes and lessons learned from its past activities. The design and content of the programs described below has been redeveloped based on experience and feedback from participants. Additionally, the CRS will work closely with all focal areas to ensure a cohesive message and integrated support for all countries. Finally, the Country Relations Strategy will be guided by discussions and outcomes of the GEF2020 strategy.

Overall Goal

17. The goal of the Country Relations Strategy is to support countries by informing, assisting and empowering them so they can fully benefit from the partnership and effectively use the resources available, thus maintaining the consistency and integrity of the GEF core mission to protect the global commons.

Strategic Objectives

18. Following the description above, the Country relations Team will seek the following strategic objectives:

(a) **To facilitate countries' understanding and adoption of the new approaches of GEF-6**. The transformational change sought by the GEF over the coming years will require fundamentally different and new ways of doing business. The transition from GEF-3 to GEF-4 showed that radical change is resisted until it is understood and embraced. The way to achieve this desired change faster is to inform, explain and convince of the merit and need of such fundamental changes.

(b) **To empower countries to use GEF funds in the most cost-efficient and impactful manner to safeguard the global environment.** For countries to use the limited resources available through the GEF partnership, they have to understand the GEF strategies and how they can benefit from them. For this to happen, they need to learn how to work more cohesively on all the issues related to the GEF partnership: among government ministries, in the conventions, with agencies, with civil society, etc. This will lead to the realization of projects, programs and activities with greater impact that are validated and broadly supported.

(c) **To contribute to building greater recognition for the GEF in Participant Countries.** By virtue of being a partnership, the GEF seeks efficiency by building upon the strengths of the various partners. As such, the GEF has no individual presence on the ground and its efforts are often overlooked. The CRS programs provide the only institutional presence in the field.

(d) **To serve as the first point of entry or reference for all country focal points and other stakeholders on GEF issues.** The Country Relations team will continue to provide timely information and advice to countries on various rules, procedures and regulations relating to the GEF partnership.

Programs

GEF Workshops

19. The GEF Secretariat, in consultation with countries and Agencies, will design and organize regional workshops to train participants on the GEF6 business model. The workshops will also facilitate trans-boundary collaboration; discuss regional programming; address signature projects; and other issues based on thematic and geographic areas. These workshops will be one of the main vehicles to improve the knowledge management between the GEF and its partners. The workshops will also be used for south-south exchange of experiences and to build political and financial support.

20. Each year the agenda of the workshops will be different so as to address different topics that will lead to the achievement of the above mentioned objectives. Developed countries will be invited to participate so they can interact with developing countries on GEF issues.

GEF National Dialogues

21. National Dialogues will be used as a strategic tool for promoting the incorporation of the global commons into national thinking. A broad array of national and local level stakeholders, including line ministries and civil society, will discuss and understand how protecting the global commons is essential to the national interest and how to reflect it in daily work. These dialogues will further engage key players in the country's public and private financial architecture, in a discussion on the possible ways to catalyse public/private financing for the environment.

22. For these purposes, a more standardized and fixed format for carrying out these dialogues will be designed jointly between the GEF Secretariat and the GEF Agencies, and adapted to host Country requirements, as necessary. National Dialogues will be available to all countries at the request of the OFP. Additionally, in close consultation with GEF technical teams, a number of countries where these dialogues can be particularly useful will be targeted.

GEF National Portfolio Formulation Exercise (NPFE)

23. This activity is to help GEF Operational Focal Points to engage main national stakeholders and line ministries, in the planning process for developing national priorities for GEF support. This approach strongly promotes national ownership and will result in a document that will guide programming of GEF resources. The NPFE will be optional, will not be a prerequisite for project funding and will build upon existing national development plans and strategies. GEF Operational Focal Points may request an NPFE during the first 18 months of GEF-6. GEF technical teams will be actively involved, as necessary.

24. The final output of this activity is a National Portfolio Formulation Document (NPFD). GEF Evaluation Office is currently undertaking an evaluation of the NPFE activity carried out in GEF-5, and the recommendations of the evaluation will be incorporated in the final design of this activity for GEF-6.

GEF Introduction Seminars

25. The aim of this activity is to train new GEF Agency staff, Convention Secretariat staff, and selected stakeholders. Introduction Seminars will reach out to other audiences that are critical for the GEF to succeed, particularly national line Ministries, media, as well as people from other organizations that are part of the current financial environmental architecture and the private sector, where possible. These seminars will take place once a year in Washington, D.C.

GEF Constituency Meetings

26. Constituency Meetings continue to be the main tool for the Council Members to engage their Constituency members in the decision making at the GEF Council. They are meant to

discuss Council agendas, papers and draft decisions so that the Council Member and Alternate may better understand and represent constituency members' interests. These meetings, that are also an instrument to discuss constituency governance, will continue to be organized at the request of the Council Member. They are also a critical tool for the GEF country officers to maintain personal contact with OFPs/PFPs.

Pre-Council Meeting for developing country constituencies

27. An additional option will be available in GEF- 6 for the developing country Council / Alternate Members to meet the day before the Council Meeting to exchange views, positions and perspectives in relation to the Council documents and to receive clarification from Secretariat staff, as necessary.

Relations with developed countries

28. In GEF-6 the Country Relations team will engage more strategically with developed countries. The team will organize and coordinate visits for developed country officials to some of the recipient countries' GEF financed projects to understand how they incorporate the GEF core mission into their national strategies. These missions would be organized based on an initial survey on developed country/donor interest. The purpose of these missions is to familiarize them with the activities and concrete results on the ground, and for the recipient countries to share their lessons learned.

GEF Small Grants Programme

Background

29. The GEF Small Grants Programme (SGP) has been designed to empower poor and vulnerable communities so that they become direct and active actors in environment and sustainable development work. The active participation of poor and vulnerable sectors is critical in that their increasing population make them a major driver of environmental change.[68] Poverty and social exclusion impact directly on the global environment because it leads these people to engage in highly destructive forms of resource exploitation.

30. The way that SGP that has contributed to the good management and defense of the global commons is through local empowerment and good governance objectives. For example, agreement by governments for a highly socially-inclusive approach is one of the first transformative outcomes of the programme. The 2007 Joint Evaluation of the SGP concluded that the programme has significantly higher sustainability than MSPs and FSPs and that it "has contributed to numerous institutional reforms and policy changes in the recipient countries to address global environmental issues".

31. GEF SGP projects have been "incubators" in the design of MSPs and FSPs and of replication by other non-GEF projects. At the global level, lessons learned have informed global environmental governance discussions and debate. Over time, a critical mass of coverage leads to sizeable impact such as in the effective management of over 3 million hectares of protected areas and buffer zones in UNESCO natural World Heritage Sites. Support to global CSO

networks such as that of the Indigenous and Community Conserved Areas and Territories (ICCA) Network have strengthened the conservation of 13.66 million hectares of critical ecosystems and the recognition of the value of ICCAs by the Convention on Biological Diversity in meeting its global targets. Successful community-based adaptation (CBA) work in Namibia and the network of micro-hydro projects in Dominican Republic have led to national policies that further support these initiatives. In a 2013 survey of SGP Country Programmes, about 70% reported that activities to expand the impact of projects beyond the community have been initiated with 50% citing influence on national or regional policy-making. All these will serve as strong foundations for further contributions by GEF SGP in GEF-6 to global environmental benefits and the defense of the global commons.

[68] It is estimated that 1.3 billion people live in extreme poverty, mostly in South Asia and Sub-Saharan Africa. If social exclusion is also factored in, the proportion of the global population at risk increases to 2.8 billion, spread across all developing regions. (Chen Shaohua and Martin Ravallion (2012) 'More Relatively Poor People in a Less Absolutely-Poor World' Policy Research Working Paper 6114, World Bank).

Overall Goal of the GEF Small Grants Programme

32. The goal of the SGP in GEF-6 can be stated in the following:

> "*Effectively support the creation of global environmental benefits and the safeguarding of the global commons through community and local solutions that complement and add value to national and global level action*".

Strategic Objectives

33. To achieve the overall goal, SGP will use a two-pronged approach: (a) by focusing its work on globally recognized critical ecosystems and; (b) by setting-up innovative institutional and financial support mechanisms to expand the value and impact of projects nationally and globally.

34. GEF SGP in GEF-6 will focus its efforts on the following strategic objectives:

(a) *Implementation of sustainable co-management of ecosystems of universal value at the landscape/seascape-wide level in participating countries.*

This represents a new approach for SGP, moving from standalone projects to a consolidated approach in such a way that, spatially and thematically, each project supported complements the others, thereby creating a greater impact at a faster rate. This also involves linking more closely to a clearly identified niche in the development and implementation of national plans and strategies as well as national policy making. Focused work can be supported by promoting the use of *SGP as a delivery mechanism* for national or regional level FSPs.

(b) *Expansion of the coverage of and strengthening networks of Indigenous and Community Conserved Areas and Territories (ICCAs) within countries and globally.*

This objective supports an important objective of the CBD Program of Work on Protected Areas (POWPA) and potentially increases the global coverage of protected areas from 12% to 17%. It also follows the shift to consolidated and integrated approaches for SGP in GEF-6.

(c) *Establishment of a network of capable communities and CSOs in each country that will serve as hub for country-wide joint action and provide a representative constituency for constructive dialogue with government in national-level environment and sustainable development planning and policy development.*

(d) *Global sharing of innovative technologies and methodologies for the protection and sustainable management of the global commons that are adapted to community and CSO application.*

(e) *Increasing the flow of additional resources to communities and local CSOs through the design and testing of sustainable use of local assets and innovative environmental*

financing mechanisms including their replication and scaling up.

35. The shift for GEF SGP in this case is its transformation from mainly being a mechanism for communities and local CSOs to access GEF funds to one that will be *a catalyst for innovative environmental finance*. This means supporting efforts at augmenting limited SGP funds through the implementation of microlending or hybrid grant/microlending approaches in partnership with established credit coops and banks, supporting the design of "payment for ecosystem services", and the establishment of revolving funds at project and country programme levels. A *"Green Grameen"* concept will be also explored.

Programs

36. There are four (4) programs proposed for implementation at the country level:

1. Community Landscape and Seascape Conservation
2. Climate Smart Innovative Agro-ecology
3. Low-Carbon Energy Access Co-benefits
4. Local to Global Chemicals Management Coalitions

37. Additionally, support mechanisms will be organized:

(a) Barefoot Consultants
(b) Grassroots Reach communication channels
(c) CSO-Government Policy and Planning Dialogue Platform

38. At the global level, under a *Global Reach for Citizen-Practice Based Knowledge* program, SGP will set up the following:

(a) Digital library of Community Innovations for the Global Commons
(b) South-South Community Innovation Exchange Platform

39. The implementation of these programs will be highly integrated both in terms of geographic focus and portfolio programming. The synergistic relation between the four (4) *programs* and the three (3) *support mechanisms* at the country level and two (2) *initiatives* at the global level must also be noted. The programs will provide inputs for these support mechanisms and initiatives. The latter on the other hand will provide an enabling environment and will scale up the impacts of the programs nationally and globally through networking and knowledge exchange. In this way, what starts at the local level eventually reaches global level discourse and action hence allowing the SGP to contribute more fully to global environmental benefits and to the defense of the global commons.

Community landscape and seascape conservation (CLSC)

40. During OP6, SGP will identify important ecosystems and use a landscape and seascape (CLSC) approach for their protection and sustainable use. Under CLSC, the number of WHS adopting a "shared PA governance" approach will be expanded globally with a special focus on natural WHS at risk in Africa. Similarly, SGP work with large international waters projects that utilized SGP as a delivery mechanism for their community/NGO components[69] will be used to set up *Satoumi* "ridge-to-reef" seascape approach to support the expansion of the global network of Locally Managed Marine Areas (LMMAs).

41. SGP through the community landscape and seascape conservation approach will assist civil society coalitions and governments to achieve of the Aichi CBD targets by 2020. Identified landscapes will promote Community-Based REDD+ (CBR+), an innovation arising out of SGP's community-based approach to forest carbon storage, piloted in Mexico and Panama. Under the CLSC, SGP will implement a truly multi-focal approach involving communities in buffer zones and corridors thus providing connectivity for complex landscape mosaics – representing a unique advantage GEF would have through SGP over other funding mechanisms.

Climate Smart, Innovative Agro-ecology

42. During OP6, SGP's niche in this will be in the production buffer zones of its identified critical ecosystems, also in forest corridors in danger of fragmentation, often remote and unaddressed by other traditional donors. In this way, SGP will support the strategic move towards land degradation neutrality by 2035 as stipulated in the Rio+20 outcome document. SGP will further innovate by integrating elements of *in-situ* conservation of genetic resources,[70] market-based solutions for promoting sustainable products, as well as use of land-based organic providers (i.e. biodeposit) to reduce use of chemical-based fertilizers, while also reducing emission from ozone depleting substances such as nitrites and nitrates. With support from a Global Initiative in CBA (GICBA) which will be formed to network CSOs from all countries involved in CBA, the proven methodologies and tools from these projects will be utilized to make agro-ecology projects within buffer and forest zones in more than 100 countries truly climate smart.

Low Carbon-Energy Access Co-benefits

43. SGP will contribute to "decarbonize" development while still satisfying global demand for energy services for 1.3 billion people without access to electricity and 2.7 billion that still

[69] SGP was a delivery mechanism for the World Bank-implemented Nile Transboundary Environmental Action Project, the UNEP-implemented South China Sea Project, and the UNDP-implemented Program for the Environmental Management of the Seas of East Asia (PEMSEA).

[70] In-situ conservation of agrobiodiversity is an important task in the management of the global commons, one that is best taken on by the farmers themselves and exemplifies the important role of a grant mechanism that they can easily access.

rely on traditional biomass for cooking.[71]. SGP will work within the larger framework of Sustainable Energy for All (SE4ALL), which will provide a platform for scaling up SGP work in this sphere and synergies with national and global planning and policy advocacy. SGP will focus on low-cost and high mitigation options that can contribute to a large proportion of carbon emissions reduction, which, for improved cookstoves alone, is estimated at 1 Gt CO2 per year[72]. GEF and other public sector funding delivered by SGP will play a catalytic role, as successful innovations will be positioned to attract financing from private sector and households.

Local to Global Chemicals Management Coalition

44. SGP will focus support on communities in the forefront of chemical threats either as users or consumers. Activities will include support for innovative, affordable and practical solutions to chemicals management in joint effort with SGP's established partners such as IPEN, as well as new partnerships including with government agencies, research institutions, private sector and international agencies such as UNIDO and WHO. SGP will seek to establish systems of local certification of producers and/or their products which then could expand to the national level through initially producer-consumer agreements eventually graduating to national government policy. In mercury management, at least one artisanal gold-mining community in each of the hotspot countries -- Burkina Faso, Cambodia, Ghana, Indonesia, Mali, Mongolia, Peru, Senegal, Tanzania, Zimbabwe – could be converted to the use of alternative gold mining techniques and serve as basis for policy changes in these countries.

Global Reach for Citizen-Practice-Based Knowledge

45. Expanding the reach of SGP knowledge and lessons learned will be further achieved through a highly proactive sharing of knowledge developed by the programme's wide network of grantee-partners.

46. Activities related to the promotion of citizen-practice-based knowledge will include the development of a Digital Library of Community Innovations for the Global Commons. Complementing the digital library of community innovations will be a South-South Community Innovations Exchange Platform. This platform will create active communities of practice, link mentors to emerging practitioners, provide contact persons in every SGP country that can share actual experience of particular projects[73] and of projects that can be used as models. An

---

[71] Resource Revolution: Meeting the world's energy, materials, food and water needs. McKinsey Global Institute, November 2011.

[72] Assessing the Climate Impacts of Cookstove Projects: Issues in Emissions Accounting, Carrie M. Lee, Chelsea Chandler, Michael Lazarus and Francis X. Johnson, Stockholm Environment Institute, Working Paper 2013-01) http://www.cdmgoldstandard.org/wp-content/uploads/2013/02/SEI-WP-2013-01-Cookstoves-Carbon-Markets.pdf

[73] In the GEF EO evaluation of Cuba GEF portfolio: Experiences and results from two SGP projects have received international recognition and willingness to replicate them abroad. For example, the expert in charge of an SGP project that developed a model for raising *Jatropha* was hired by Brazil and the expert in charge of an SGP project on biodiversity that developed a model for raising sponges was hired by Nicaragua and later by Mexico.

important feature would be for the platform, in regional groupings, to be able to use adaptive language and speak in virtually all languages and dialects.

SGP as Grantmaker+

47. The high value of SGP to the GEF lies on the assets the programme has built up over the last 20 years. These include: (a) Global and national networks of over 16,000 grantee-partners alone, that have the ability to "speak" in almost all languages and dialects and can quickly and effectively mobilize constituencies on key environment matters, and; (b) Committed SGP staff in each country who, with more than a thousand voluntary NSC government and non-government members, provide a core for knowledge sharing, advisory services, and policy advocacy on GEF focal area matters.

48. To derive full utility for these built up assets there must be agreement that projects are not the ends but the means and that funds for non-grant services such as institution-building and policy advocacy are also vital and will allow SGP to build value beyond grant-making. The additional services and value that SGP can provide as a "Grantmaker+" include:

- assisting country stakeholders, especially communities and local CSOs, to develop relevant proposals as "***Barefoot Consultants***" particularly with the "direct access" modality of new funds;

- setting up a "***Grassroots Reach***" communication channel for use not only by SGP but also by the government, GEF, other international donor agencies, and the private sector interested either as a business partner on marketing sustainable products or in CSR partnership;

- supporting the establishment of a "***CSO-Government Policy and Planning Dialogue Platform***" (which could be in partnership with the GEF NGO Network) building on the built trust and joint working relationship developed between civil society and government in SGP National Steering Committees (NSCs).

- In preparation for SGP in GEF6, country programmes will immediately begin the necessary institutional shifts that include strengthening the SGP staff capacity in many new non-grant skills such as policy advocacy, entrepreneurship, environmental finance, and project development with non-GEF funding mechanisms. The SGP National Steering Committee will be expanded to involve additional members from the Ministry of Finance and/or Economic/Development Planning as well as from the private sector. Networking with national and global CSO advocacy networks will also be expanded, including those based in key urban centers. Each country programme will identify at least one national university to establish an agreement to bolster SGP's scientific and technological base as well as its training capacity.