



# GEF-6 PROGRAM FRAMEWORK DOCUMENT (PFD)

TYPE OF TRUST FUND: GEF Trust Fund

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## PART I: PROGRAM IDENTIFICATION

Program Title:	The Restoration Initiative (TRI) – Fostering innovation and integration in support of the Bonn Challenge		
Country(ies):	Cameroon, CAR, China, DRC, Guinea-Bissau, Kenya, Myanmar, Pakistan, Sao Tome & Principe, Tanzania	GEF Program ID: <sup>1</sup>	9264
Lead GEF Agency:	IUCN	GEF Agency Program ID:	
Other GEF Agenc(ies):	FAO UNEP (select)	Submission Date:	2015-08-28
Other Executing Partner(s):		Program Duration(Months)	60
GEF Focal Area (s):	Multi-focal Areas	Program Agency Fee (\$):	4,872,034
Integrated Approach Pilot	IAP-Cities <input type="checkbox"/> IAP-Commodities <input type="checkbox"/> IAP-Food Security <input type="checkbox"/>		
Program Commitment Deadline: December 2017			

### A. FOCAL AREA STRATEGY FRAMEWORK AND OTHER PROGRAM STRATEGIES<sup>2</sup>:

Objectives/Programs (Focal Areas, Integrated Approach Pilot, Corporate Programs)	Expected Outcomes	Trust Fund	Amount (in \$)	
			GEF Program Financing	Co-financing
BD-4 Program 9 (select) (select)	Increased area of production landscapes and seascapes that integrate conservation and sustainable use of biodiversity into management; Sector policies and regulatory frameworks incorporate biodiversity considerations.	GEFTF	13,199,186	29,201,496
(select) CCM-2 Program 4 (select)	Accelerated adoption of innovative technologies and management practices for GHG emission reduction and carbon sequestration; Policy, planning and regulatory frameworks foster accelerated low GHG development and emissions mitigation.	GEFTF	9,142,609	48,883,946
LD-2 Program 3 (select) (select)	Support mechanisms for forest landscape management and restoration established; Improved forest management and/or restoration; Increased investments in SFM and restoration.	GEFTF	7,238,955	28,470,496
LD-3 Program 4 (select) (select)	Support mechanisms for SLM in wider landscapes established; Integrated landscape management practices adopted by local communities based on gender sensitive needs; Increased investments in integrated landscape management.	GEFTF	4,083,820	19,020,000
(select) (select) SFM-3	Integrated landscape restoration plans to maintain forest ecosystem services are implemented at appropriate scales by government, private sector and local community actors, both women and men.	GEFTF	16,949,409	70,780,000
(select) (select) SFM-4	Improved collaboration between countries and across sectors on the implementation of SFM.	GEFTF	3,519,725	5,095,000
<b>Total Program Costs</b>			54,133,704	201,450,938

<sup>1</sup> Program ID number will be assigned by GEFSEC.

<sup>2</sup> When completing Table A, refer to the excerpts on [GEF 6 Results Frameworks for GETF, LDCF and SCCE](#).

## B. INDICATIVE PROGRAM RESULTS FRAMEWORK

<b>Program Objective: To contribute to the restoration and maintenance of critical landscapes to provide global environmental benefits and enhanced resilient economic development and livelihoods, in support of the Bonn Challenge.</b>					
Program Components	Financing Type <sup>3</sup>	Program Outcomes	Trust Fund	(in \$)	
				GEF Program Financing	Co-financing
Component 1. Policy Development and Integration	TA	<p>Increased national and sub-national commitment to forest and landscape restoration.</p> <p>Indicators and targets:</p> <p>1.1 40 million hectares of deforested and degraded land newly committed to restoration by TRI countries, in support of the Bonn Challenge.</p> <p>National and sub-national policy and regulatory frameworks in TRI countries are increasingly supportive of restoration, sustainable land management, maintenance and enhancement of carbon stocks in forest and other land uses, and reduced emissions from LULUCF and agriculture.</p> <p>Indicators and targets:</p> <p>1.2 Policies and regulatory frameworks in TRI countries that support forest and landscape restoration while incorporating biodiversity conservation, accelerated low GHG development and emissions reduction, and sustainable livelihood considerations.</p>	GEFTF	8,211,168	23,276,416
Component 2. Implementation of Restoration Programs and Complementary Initiatives	TA/Inv	<p>Integrated landscape management practices and restoration plans implemented by government, private sector and local community actors, both men and women.</p> <p>Indicators and targets:</p> <p>2.1 1 million hectares of deforested and degraded landscapes in restoration transition, stratified by land management actors (communities, farmers, private enterprises, and others) in TRI countries by operational closure of TRI.</p> <p>2.2 Improved/new application of forest and landscape restoration and complementary land management practices covering 46 million ha of land in TRI countries.</p> <p>2.3 Number of direct project beneficiaries (from capacity building, trainings, equipment, jobs, revenue and income, products such as sustainably harvested timber, NTFP, etc.) by women and men.</p> <p>2.4 Conservation and enhancement of carbon stocks in landscapes undergoing restoration and/or complementary land management practices generating an estimated direct emissions</p>	GEFTF	26,730,885	116,913,286

<sup>3</sup> Financing type can be either investment or technical assistance.

		reduction/sequestration in the order of 190 million tons of CO <sub>2</sub> eq in TRI countries.			
Component 3. Institutions, Finance, and Upscaling	TA/Inv	Strengthened institutional capacities and financing arrangements in place to allow for and facilitate large-scale restoration and maintenance of critical landscapes and diverse ecosystem services in TRI countries. Indicators and targets: 3.1 Cross-sectoral (e.g., agriculture, forestry, transportation, energy, etc.) planning mechanisms and/or frameworks incorporating and supporting restoration established/strengthened at national and sub national levels in TRI countries. 3.2 Field-level support mechanisms for forest landscape management and restoration established/strengthened. 3.3 Value of resources (public, private, development partners) flowing into restoration initiatives in TRI countries. 3.4 Number of “bankable” restoration projects developed in TRI countries.	GEFTF	8,381,715	32,484,062
Component 4. Knowledge, Partnerships, Monitoring and Assessment	TA	Increased effectiveness of Program investments among Program stakeholders. Indicators and targets: 4.1 High-quality TRI-supported South-south exchanges that address restoration. 4.2 Program monitoring system successfully developed and supporting implementation of child projects.  Improved knowledge of best practices on restoration among key external audiences Indicators and targets: 4.3 TRI-related best practices and lessons-learned published on TRI web portal and shared with environmental and development agencies and organizations. 4.4 Increased number of people equipped with new knowledge related to forest and landscape restoration through communications from TRI national and global projects.	GEFTF	8,097,845	19,932,112
Subtotal				51,421,613	192,605,877
Program Management Cost (PMC) <sup>4</sup>			GEFTF	2,712,091	8,845,061
<b>Total Program Cost</b>				54,133,704	201,450,938

PMC is the total of the Project Management Costs of all child projects. For multiple trust fund projects, please provide the total amount of PMC in Table B, and indicate the split of PMC among the different trust funds here: (PMC breakdown).

<sup>4</sup> For GEF Project Financing up to \$2 million, PMC could be up to 10% of the subtotal; above \$2 million, PMC could be up to 5% of the subtotal. PMC should be charged proportionately to focal areas based on focal area project financing amount in Table D below.

**C. CO-FINANCING FOR THE PROGRAM BY SOURCE, BY NAME AND BY TYPE**

<b>Sources of Co-financing</b>	<b>Name of Co-financier</b>	<b>Type of Cofinancing</b>	<b>Amount (\$)</b>
GEF Agency	FAO	In-kind	1,900,000
GEF Agency	IUCN	In-kind	1,805,000
GEF Agency	UNEP	In-kind	2,200,000
GEF Agency	UNDP	In-kind	1,000,000
GEF Agency	FAO	Grants	2,030,000
GEF Agency	FAO	Unknown	3,000,000
Recipient Government	Government of China	Grants	52,200,000
Recipient Government	Government of DRC	Grants	9,105,150
Recipient Government	Government of Kenya	Grants	7,500,000
Recipient Government	Government of Central African Republic	In-kind	4,000,000
Recipient Government	Government of DRC	In-kind	325,400
Recipient Government	Government of Kenya	In-kind	6,000,000
Recipient Government	Government of Sao-Tome & Principe	In-kind	4,000,000
Recipient Government	Government of Tanzania	In-kind	20,550,000
Recipient Government	Government of Pakistan	Guarantees	4,827,000
Recipient Government	Government of Pakistan	Loans	3,000,000
Recipient Government	Government of Cameroon	Unknown	1,000,000
Recipient Government	Government of Kenya	Unknown	3,000,000
Donor Agency	Government of UK, Germany, Norway	Grants	1,090,000
Donor Agency	IBAP/Monte ace-GSRF-PNTC	Grants	3,017,000
Donor Agency	IFAD - Economic Development Project for the Southern Regions (PADES) - (Guinea-Bissau Child project)	Grants	18,990,000
Donor Agency	MAVA-IUCN-Fisheries co-management in the "Southern Rivers" region of Guinea-Bissau	Grants	670,880
Donor Agency	WAEMU / IUCN - Fisheries co-management in the "Southern Rivers" region of Guinea-Bissau	Grants	1,821,876
Donor Agency	West African Development Bank (BOAD) - Project de promotion de l'oriziculture (PPRFJ)	Loans	20,538,693
Donor Agency	IFAD	Unknown	830,000
Others	Congo Basin Forest Fund	Grants	3,000,000
Others	University of Brazzaville UCB & UERHA-ISDR; IFDC	Grants	770,950
Others	CGIAR Centers	Unknown	2,690,000
CSO	OCDN,CODICOM; Alisei, ADAPPA & Monte Pico	In-kind	1,800,000
CSO	International Network for Bamboo and Rattan	Unknown	27,489
CSO	Nature Kenya	Grants	800,000
CSO	Food for the Hungry and ECN/DFS	Grants	1,288,500
CSO	[Part of Kenya FAO child project]	Unknown	1,000,000
Beneficiaries	Local communities, CAR	In-kind	3,000,000
Beneficiaries	Local communities, Kenya	In-kind	1,000,000
Beneficiaries	Local Community organization, Pakistan	In-kind	1,173,000
Beneficiaries	Pilot communities, Sao Tome & Principe	In-kind	3,000,000
Private Sector	Danone Waters China	Grants	1,500,000
Private Sector	Industries forestiers Batalimo & SEFCA	In-kind	600,000
Private Sector	Agripalma & SATOCAO	In-kind	500,000
Private Sector	[Part of Kenya FAO child project]	Unknown	4,500,000
Donor Agency	Project PRESIBALT	In-kind	400,000
<b>Total Cofinancing</b>			<b>201,450,938</b>

**D. GEF/LDCF/SCCF RESOURCES REQUESTED BY AGENCY, TRUST FUND, COUNTRY, FOCAL AREA AND THE PROGRAMMING OF FUNDS**

GEF Agency	Type of Trust Fund	Country Regional/Global	Focal Area	Programming of Funds	(in \$)		
					Program Amount (a)	Agency Fee (b)*	Total c=a+b
IUCN	GEF TF	Cameroon	Biodiversity	(select as applicable)	822,211	73,999	896,210
IUCN	GEF TF	Cameroon	Climate Change	(select as applicable)	26,523	2,387	28,910
IUCN	GEF TF	Cameroon	Land Degradation	(select as applicable)	39,784	3,581	43,365
IUCN	GEF TF	Cameroon	Multi-focal Areas	SFM	437,628	39,387	477,015
FAO	GEF TF	CAR	Biodiversity	(select as applicable)	1,943,430	174,909	2,118,339
FAO	GEF TF	CAR	Land Degradation	(select as applicable)	2,031,006	182,791	2,213,797
FAO	GEF TF	CAR	Multi-focal Areas	SFM	1,987,202	178,848	2,166,050
IUCN	GEF TF	China	Biodiversity	(select as applicable)	879,391	79,145	958,536
IUCN	GEF TF	China	Land Degradation	(select as applicable)	3,401,209	306,109	3,707,318
IUCN	GEF TF	China	Multi-focal Areas	SFM	2,141,418	192,728	2,334,146
FAO	GEF TF	DRC	Biodiversity	(select as applicable)	950,000	85,500	1,035,500
FAO	GEF TF	DRC	Climate Change	(select as applicable)	550,000	49,500	599,500
FAO	GEF TF	DRC	Land Degradation	(select as applicable)	850,000	76,500	926,500
FAO	GEF TF	DRC	Multi-focal Areas	SFM	1,250,000	112,500	1,362,500
IUCN	GEF TF	Global	Multi-focal Areas	SFM	3,519,725	316,775	3,836,500
IUCN	GEF TF	Guinea-Bissau	Climate Change	(select as applicable)	1,500,000	135,000	1,635,000
IUCN	GEF TF	Guinea-Bissau	Land Degradation	(select as applicable)	698,869	62,898	761,767
IUCN	GEF TF	Guinea-Bissau	Multi-focal Areas	SFM	1,099,435	98,949	1,198,384
UNEP	GEF TF	Kenya	Biodiversity	(select as applicable)	867,431	78,069	945,500
UNEP	GEF TF	Kenya	Climate Change	(select as applicable)	924,128	83,172	1,007,300
UNEP	GEF TF	Kenya	Land Degradation	(select as applicable)	438,716	39,484	478,200
UNEP	GEF TF	Kenya	Multi-focal Areas	SFM	1,115,138	100,362	1,215,500
FAO	GEF TF	Kenya	Biodiversity		1,770,965	159,387	1,930,352
FAO	GEF TF	Kenya	Climate Change		442,741	39,847	482,588
FAO	GEF TF	Kenya	Land Degradation		557,854	50,207	608,061
FAO	GEF TF	Kenya	Multi-Focal Areas	SFM	1,385,780	124,720	1,510,500
IUCN	GEF TF	Myanmar	Biodiversity	(select as applicable)	262,577	23,632	286,209
IUCN	GEF TF	Myanmar	Climate Change	(select as applicable)	929,186	83,627	1,012,813
IUCN	GEF TF	Myanmar	Land Degradation	(select as applicable)	574,664	51,720	626,384
IUCN	GEF TF	Myanmar	Multi-focal Areas	SFM	885,866	79,728	965,594
FAO	GEF TF	Pakistan	Biodiversity	(select as applicable)	884,098	79,569	963,667
FAO	GEF TF	Pakistan	Climate Change	(select as applicable)	1,768,196	159,138	1,927,334
FAO	GEF TF	Pakistan	Multi-focal Areas	SFM	1,326,146	119,353	1,445,499
FAO	GEF TF	Sao-Tome and Principe	Climate Change	(select as applicable)	2,652,294	238,706	2,891,000
FAO	GEF TF	Sao-Tome and Principe	Land Degradation	(select as applicable)	442,049	39,784	481,833
FAO	GEF TF	Sao-Tome and Principe	Multi-focal Areas	SFM	1,572,172	141,495	1,713,667
UNEP	GEF TF	Tanzania	Biodiversity	(select as applicable)	4,819,083	433,717	5,252,800
UNEP	GEF TF	Tanzania	Climate Change	(select as applicable)	349,541	31,459	381,000
UNEP	GEF TF	Tanzania	Land Degradation	(select as applicable)	2,288,624	205,976	2,494,600
UNEP	GEF TF	Tanzania	Multi-focal Areas	SFM	3,748,624	337,376	4,086,000
<b>Total Grant Resources</b>					<b>54,133,704</b>	<b>4,872,034</b>	<b>59,005,738</b>

\* Please indicate fees related to this Program. Refer to the [Fee Policy for GEF Partner Agencies](#).

## E. PROGRAM'S TARGET CONTRIBUTIONS TO GLOBAL ENVIRONMENTAL BENEFITS<sup>5</sup>

Provide the expected program targets as appropriate.

Corporate Results	Replenishment Targets	Indicative Program Targets
1. Maintain globally significant biodiversity and the ecosystem goods and services that it provides to society	Improved management of landscapes and seascapes covering 300 million hectares	1,627,450 hectares
2. Sustainable land management in production systems (agriculture, rangelands, and forest landscapes)	120 million hectares under sustainable land management	46,807,685 hectares
3. 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	Water-food-ecosystems security and conjunctive management of surface and groundwater in at least 10 freshwater basins;	N/A number of freshwater basins
	20% of globally over-exploited fisheries (by volume) moved to more sustainable levels	N/A percent of fisheries, by volume
4. Support to transformational shifts towards a low-emission and resilient development path	750 million tons of CO <sub>2e</sub> mitigated (include both direct and indirect)	102,289,562 metric tons
5. Increase in phase-out, disposal and reduction of releases of POPs, ODS, mercury and other chemicals of global concern	Disposal of 80,000 tons of POPs (PCB, obsolete pesticides)	N/A metric tons
	Reduction of 1000 tons of Mercury	N/A metric tons
	Phase-out of 303.44 tons of ODP (HCFC)	N/A ODP tons
6. Enhance capacity of countries to implement MEAs (multilateral environmental agreements) and mainstream into national and sub-national policy, planning financial and legal frameworks	Development and sectoral planning frameworks integrate measurable targets drawn from the MEAs in at least 10 countries	Number of Countries: N/A
	Functional environmental information systems are established to support decision-making in at least 10 countries	Number of Countries: 10

## PART II: PROGRAMMATIC JUSTIFICATION

*1. Program Description.* Briefly describe: a) the global environmental and/or adaptation problems, root causes and barriers that need to be addressed; b) the baseline scenario or any associated baseline program/ projects, c) the proposed alternative scenario, GEF focal area<sup>6</sup> strategies, with a brief description of expected outcomes and components of the program, d) [incremental/ additional cost reasoning](#) and expected contributions from the baseline, the GEFTF, LDCF, SCCF, and [co-financing](#); and e) innovation, sustainability and potential for scaling up.

### Introduction

The Restoration Initiative (TRI) Program has been developed to make a significant global contribution to restoring ecosystem functioning and improving livelihoods through the restoration of priority degraded and deforested landscapes, in support of the Bonn Challenge, and in response to the expressed needs of countries. Through the GEF programmatic approach, the TRI will create synergies, provide a wider array of tools and resources to national projects, and leverage key partnerships to yield cost savings and realize greater impact than possible under a fragmented, project-by-project approach.

The Program consists of national projects supported by a Global Learning, Financing, and Partnerships project to develop and disseminate best-practices and tools, catalyze investment in restoration, expand the scope of countries and actors engaged in forest and landscape restoration, and realize benefits at scale. The Restoration

<sup>5</sup> Provide those indicator values in this table to the extent applicable to your proposed program. Progress in programming against these targets for the program per the *Corporate Results Framework* in the [GEF-6 Programming Directions](#), will be aggregated and reported during mid-term and at the conclusion of the replenishment period.

<sup>6</sup> For biodiversity projects, in addition to explaining the project's consistency with the biodiversity focal area strategy, objectives and programs, please also describe which [Aichi Target\(s\)](#) the project will directly contribute to achieving.

Initiative has been developed through collaboration between and will be steered by GEF Agencies IUCN, FAO, and UNEP. Additional advice on program development has been provided by WWF.

The program will be implemented in Africa and Asia initially, with Latin American countries as well as additional African and Asian countries and other Implementing Agencies wishing to align with the program at the next opportunity.

**a) The global environmental problem, root causes and barriers that need to be addressed:**

Deforestation and degradation of lands are major causes of biodiversity loss and significantly reduce the productivity of the natural assets upon which the well-being of humanity relies. Global estimates suggest that one quarter of global soils are degraded (UNEP, 2014). This in turn negatively impacts the provision of ecosystem services, with approximately 60% (15 out of 24) of the ecosystem services examined under the Millennium Ecosystem Assessment being degraded or used unsustainably, including the provision of fresh water, food, fuel and fiber, air and water purification, and climate regulation (Millennium Ecosystem Assessment, 2005).

Together, emissions from agriculture, forestry and other land use accounted for 20-24% of global annual greenhouse gas (GHG) emissions, or net emissions of 12 Gt CO<sub>2</sub>e in 2010 (International Panel on Climate Change, 2014). Land conversion and land degradation alone are estimated to account for 4.4 Gt of CO<sub>2</sub>e emissions each year (Mathews & van Noordwijk, 2014). Moreover, degraded lands contribute to loss of soil and water retention, biodiversity, create barriers to migration of species, reduce replenishment of underground aquifers, and overall, generate fewer and lower ecosystem services that societies seeking to achieve the goals of the three Rio Conventions so desperately need.

Until recently degradation and its potential economic impacts have been largely ignored. This means that there is no standardized framework by which governments can assess and report on ecosystem degradation. Nevertheless even low-end, conservative estimates reveal the significant scale and global reach of the problem. Evidence suggests that land degradation and conversion have led to the loss of between \$4.3-20.2 trillion/year in the value of ecosystem goods and services (Costanza, et al., 2014). This is equivalent to somewhere between 5% and 23% of the combined gross national product of all the world's countries combined.

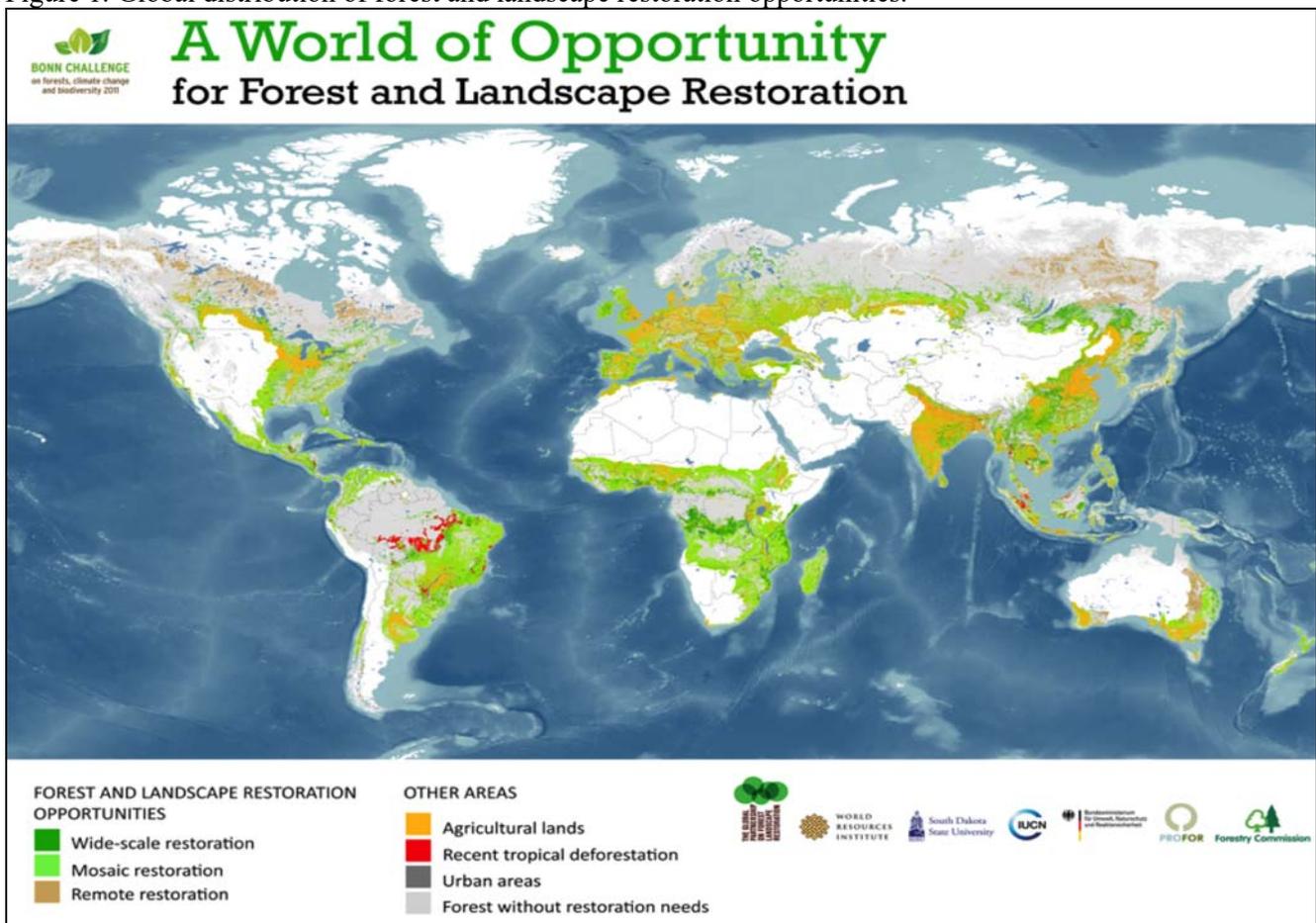
Most indirect or direct drivers of forest and landscape degradation are human activities and actions that negatively impact lands and result in loss of carbon stocks. Agriculture (in particular commercial agriculture) is estimated to be the main driver of around 80% of deforestation worldwide. Mining, infrastructure and urban expansion are also important drivers of forest and landscape degradation. Findings on global patterns of forest degradation indicate that (commercial) timber extraction and logging activities account for more than 70% of total forest degradation in Latin America and (sub) tropical Asia. Fuel wood collection, charcoal production, subsistence agriculture, uncontrolled fire and livestock grazing in forested landscapes are also important drivers of forest and landscape degradation in several developing countries, particularly in Africa (G. Kissinger, M. Herold and V. De Sy. 2012).

Consequently, continued forest and land degradation pose serious obstacles to eliminating poverty, hunger and biodiversity loss in many parts of the world today and to the ability of women and men, farmers and local communities to adapt to the impacts of climate change. This degradation process also increases competition for scarce resources with possible conflicts between users and could exacerbate inequalities for certain groups, such as women, in relation to the use and control over them. These processes threaten the livelihoods, well-being, food, water and energy security and the resilience capacity of millions of people (FAO, 2015), and in some cases have even been suggested to cause serious social unrest. Furthermore, continued forest and land degradation means continued atmospheric emissions of carbon and reduced capacity to sequester carbon, and increased risk of catastrophic changes to the earth's climate system.

Given the right tools and incentives, much of the deforested and degraded estate can be restored – that is, ecological integrity and resiliency enhanced and human well-being improved in deforested and degraded lands through introduction and/or better management of forests, woodlands, trees and other woody plants at the landscape level. The Global Partnership on Forest and Landscape Restoration (GPFLR) has identified more than 2 billion hectares of deforested and degraded landscapes worldwide – an area larger than South America – where

opportunities for forest and landscape restoration may be found. This represents areas where ecosystem goods and services are or could be delivered through the presence of forests, trees and other forms of woody biomass. Furthermore, nearly 40% of all degraded land is thought to be ‘lightly’ degraded, with strong potential for restoration at low cost (UNEP, 2014). Figure 1 shows where opportunities of forest and landscape restoration may be found. National or sub-national assessment should be undertaken to confirm the nature, extent and location of restoration potential.

Figure 1. Global distribution of forest and landscape restoration opportunities.



Most restoration opportunities fall into one of two categories: (1) *wide-scale restoration* into closed forest or open woodland (shown in dark green in Figure 1), and (2) *mosaic restoration* into a mix of agriculture, forests, and other uses (shown in light green in Figure 1). Wide-scale restoration is generally suitable for less populated areas with less intensive land-use demands, while mosaic restoration, which accounts for nearly three quarters of global restoration opportunities, is appropriate for more populated areas ranging from African drylands, to rural areas in temperate-zone countries, to buffer zones around tropical forested parks in Asia and South America.

Although trees and other woody biomass are central to global restoration efforts, restoration is much more than planting. Forest and landscape restoration (FLR) is a landscape- and systems-level approach to managing the dynamic and often complex interactions between people, natural resources, and the different land uses that comprise a landscape. It makes use of collaborative approaches to harmonize the many land-use decisions of stakeholders with the aims of restoring both ecological integrity and economic productivity as well as enhancing the socio-economic development of local communities as they strive to increase and sustain the benefits they derive from the management of their landscape. As such, it employs a wide range of restorative approaches and tools, from satellite-aided biological and economic assessments of restoration opportunities, to design of payments for ecosystem service programs, to establishment of protective regimes for forests that facilitate rehabilitation (e.g. protection from fires or grazing or erosion control), to natural and assisted tree planting activities, including the use of agroforestry systems on agricultural land (see Box 1 for key principles and examples of FLR in practice).

Restoration, if it is to be sustainable and effective in arresting global land degradation trends, necessarily involves a number of complementary strategies that address drivers of deforestation and land degradation, including strategies to increase the productivity and resilience of agriculture (i.e., Climate Smart Agriculture), programs and

### **Box 1. Forest and Landscape Restoration (FLR) – key principles and practice**

Given the great diversity of ecosystems and landscapes to be restored, and the different communities with a stake in restoration, FLR necessarily makes use of a broad array of tools and techniques. At the same time, the following FLR principles underpin successful and lasting approaches to restoration:

- Planning is done at the landscape level, which allows trade-offs to be made between conflicting interests.
- Local stakeholders are actively engaged in the decision-making, collaboration and implementation of the solution.
- Restoration strategies are forward-looking, tailored to local conditions, and adaptively managed over time.
- Landscape functionality is restored and managed to provide a suite of ecosystem goods and services.
- A wide range of restoration strategies are considered, ranging from natural regeneration to tree planting.

FLR has been proven to work worldwide, improving livelihoods, stimulating local economies, contributing to carbon sequestration and storage, and safeguarding biodiversity. Examples include:

- Agroforestry to enhance soils, meet energy needs and improve food security, as in Rwanda, Ethiopia and China.
- Ecological restoration of degraded lands in Brazil's Mata Atlantica for improved connectivity and to sequester 200 million tons CO<sub>2</sub>e per year, equal to more than 2 billion tons of CO<sub>2</sub>e by 2050.
- Regeneration of native woodlands by pastoralist communities for increased dry season livestock fodder in Northern Tanzania.
- Directing oil palm development to improved productivity of degraded lands as an alternative to further land clearance in Indonesia.
- Managing natural regeneration to secure urban water supply, as in the watersheds of Beijing and Rio de Janeiro.
- Nationwide reforestation of highly degraded landscapes, as in the Republic of Korea.
- Regeneration and planting to aid recovery from catastrophic wildfire in the South Platte watershed, US.
- Restoration of grasslands using woody plants in the Cerrado, of Brazil.
- Active restoration of coastal mangroves to improve livelihoods from fisheries and create opportunities for ecotourism, as in Costa Rica or Vietnam.

incentive mechanisms to slow, halt and reverse forest and forest carbon loss (e.g., REDD+), and other sustainable livelihood programs that take pressure off of natural resources. Together, these strategies are mutually reinforcing, with restoration serving to increase the amount of productive land available for agriculture, agroforestry, and forest uses, and complementary strategies acting to reduce pressure to convert natural ecosystems and primary forest.

There are many local, national, and global benefits from restoration. Healthy, fertile landscapes provide homes for wildlife and human life, providing food, clean water and materials for shelter. Sustainably cultivated and farmed woodlands yield biofuel and raw products that can be worked or processed for trade, stimulating local industry and creating jobs. There are opportunities to grow new crops where trees once stood that can be harvested for agriculture, and reduce pressures to expand the agricultural frontier. Trees in agricultural landscapes can improve soil moisture and fertility, sequester and store carbon, and boost food production. And responsible tourism and other services can be developed as part of the rehabilitation mix. All of these forms of sustainable enterprise can inject new income and new life into threatened communities, relieving poverty, enhancing gender equality and women's empowerment and funding improvements in education.

## ***Barriers to forest and landscape restoration***

Restoration of degraded and deforested lands and associated carbon stocks is gaining traction with increasing political commitment, but there is currently inadequate support and capacity for making the transition to implementation at scale. A number of factors, present at various degrees in affected countries, limit the achievement of forest and landscape restoration objectives and targets:

- *Insufficient political prioritization of restoration.* Restoration has often been seen as too costly and too time consuming, and less urgent compared to the fight against deforestation. While a growing portfolio of evidence from successful restoration initiatives over the last twenty years is helping to dispel these myths, implementation of restoration at the needed scale will involve increasing buy-in and support for elevation and prioritization of restoration within national and sub-national development strategies as a complement to avoiding deforestation.
- *Insufficient information on the status, nature, and extent of deforestation and degradation as well as restoration opportunities.* The demand for tools to define and implement forest and landscape restoration, and support in applying these, is outstripping the current ability of Program partners to respond. Specifically, there is inadequate information about the status of land degradation and restoration potential in countries, including about the potential associated benefits.
- *Lack of enabling environment for investment in forest and landscape restoration (policies/laws/institutional setting).* Where knowledge exists on restoration potential it is not always informing and being integrated into the necessary policies, programs and budget allocations. Furthermore, restoration assessment processes are revealing policy and institutional challenges to implementation within countries, which are acting as bottlenecks to progress.
- *Governance issues (tenure, local community/farmer organizations involvement etc.).* Land tenure and governance issues are key areas to be addressed in order to provide an incentive for local communities and others to engage in restoration activities and also to provide an attractive environment for investors.
- *Cross-sectoral challenges.* Sustainable landscape management is challenged by multiple threats that can be overcome only with inter-sectoral or integrated approaches, yet few national planning processes involve adequate consultation across sectors. As a response, the landscape approach offers a means to consider a range of land-use systems in a more integrated manner.
- *Inadequate mobilization of resources.* While there are many existing and potential sources of finance available for restoration of degraded and deforested lands, the models, information and partnerships needed to unlock those resources are not always present. There is a particular need to examine how bridge financing may be provided to kick start restoration activities while revenue flows have not yet materialized.
- *Limited in-country capacity and extension support.* Currently there are many projects being developed that relate to the restoration of degraded and deforested lands but opportunities to scale these up and achieve maximum impact in countries, regions and internationally are being missed due to insufficient technical support within countries as well as the lack of cross-country and inter-regional exchange of expertise and perspectives. Information dissemination, including of relevant research and guidelines that propose innovative solutions to local stakeholders, is also needed.
- *Failure to incorporate gender considerations.* At present the majority of the efforts in relation to forest and landscape restoration are gender blind. There is a need to promote a gender-responsive approach in these efforts. This entails developing methodologies and processes that will identify, reflect, and implement interventions to address gender gaps and overcome historical gender biases in policies and interventions.

- *Insufficient awareness and replicable models.* Finally, there is a need to more thoroughly make and communicate the case for restoration based on early action at scale in countries. This includes compiling analysis on the benefits of restoration and successful experiences but more importantly a proven track record with measurable progress needs to be demonstrated through successful cases.

## **b) Baseline scenario:**

The TRI Program builds upon commitments and action at multiple levels, underpinned by a growing body of scientific knowledge and real-world positive experience, to recognize and address the problems of forest and landscape degradation through restoration.

At the international level, each of the Rio conventions has identified forest and landscape restoration as a vital component to achieving their goals, and has adopted restoration-related goals: the Convention on Biological Diversity's Aichi target 15 calls for restoration of 15% of degraded ecosystems by 2020 (CBD, 2011); the UN Framework Convention on Climate Change has adopted the global goal to slow, halt, and reverse forest cover and carbon loss (UNFCCC, 2013); the UN Convention to Combat Desertification is focusing on restoring unproductive lands (UNCCD, 2013), an effort bolstered by the Rio+20 Summit adoption of the land degradation neutrality goal; and the Global Objectives on Forests, adopted by the UN General Assembly (2007) call for reversing the loss of forest cover worldwide.

The importance of forest and landscape restoration was further elevated on the global agenda in 2011 with the establishment of the Bonn Challenge, calling for the restoration of 150 million hectares of deforested and degraded lands by 2020. Nearly 60 million hectares have already been committed to this target. The largest commitments in hectares are the US and Ethiopia with 15 million ha each, but others are greater in proportion of land area, e.g. El Salvador at 50% and Rwanda at 80%. The Bonn Challenge was voted the most important forest outcome in a global public poll for the Rio+20 Summit. IUCN's Assembly of Members (more than 1,100 state and non state members) in 2012 adopted a resolution endorsing the Bonn Challenge and calling for action in support of it. This demonstrates public and political recognition of forest and landscape restoration as a well-established and viable framework for large-scale restoration of deforested and degraded lands.

A number of GEF Partner Agencies and organizations have been at the forefront of efforts to restore deforested and degraded lands. There is a long established collaboration between IUCN, FAO and UNEP on forest and landscape restoration, including through the Global Partnership on Forest Landscape Restoration (GPFLR) and the Collaborative Partnership on Forests (CPF) (11 of 14 CPF members are also members of the GPFLR). Ongoing efforts to align our programs of work to enable our institutions to provide more effective support to countries will be reinforced by this Program.

The TRI Program builds off a number of recent GEF projects and leadership that have targeted forest and landscape restoration issues and have informed the design of the Program, including:

- The "Great Green Wall Initiative," demonstrating the potential for landscapes in the African Sahel to be restored, and involving 11 participating countries.
- The "Landscape Approach to Forest Restoration and Conservation" project in Rwanda, targeting critical forest and other landscapes for restoration.
- The "Recovery and Protection of Climate and Biodiversity Services in the Southeast Atlantic Forest Corridor of Brazil" project, which seeks to restore and enhance carbon stocks in forest and non-forest lands.
- "Building the Foundation for Forest Landscape Restoration at Scale," which seeks to galvanize political and financial commitments to forest landscape restoration in 5 participating countries.

The Program extends these experiences and builds on the existing investments of the three agencies (IUCN, FAO

and UNEP) in forest and landscape restoration, which represent the broad baseline of action on forest and landscape restoration, including:

- IUCN’s global restoration program, including the following projects:
  - UK DFID: “Improving the way knowledge on forests is understood and used internationally”.
  - Germany BMUB ICI: “Utilising landscape scale forest ecosystem rehabilitation as a cost effective bridge for the integrated deployment of national land -based mitigation and adaptation strategies.
  - Norway NICFI: “Accelerating action on REDD+ through forest landscape restoration”, with WRI.
- FAO’s Forest and Landscape Restoration Mechanism, supported by the Republic of Korea and Sweden.
- The UNEP/IUCN Programmatic Cooperation Agreement on “Tools and approaches to support countries in incorporating multiple benefits, green economy and green investment approaches in REDD+ planning”.
- Initiative 20x20 Latin American restoration and land management commitments, managed by WRI, CATIE, CIAT and IUCN.

The Program includes a diverse group of countries with different starting points. There has been a varying degree of political recognition of the need for restoration of forest landscapes (e.g. some countries have domestic restoration targets or have made Bonn Challenge pledges while others have not). There is not always full understanding that forest and landscape restoration could meet a diversity of national and sub-national objectives in a coherent way. Restoration actions that will meet mitigation, adaptation and other national and sub-national needs (economic, social, biodiversity, etc.) tend to be planned in isolation from each other, potentially undermining each other and missing out on the opportunity to leverage co-benefits of a more coherent and integrated approach.

Within the baseline, there is growing political, technical and financial support for implementation of forest and landscape restoration activities. While the three implementing Agencies have their own extensive relevant experience and complementary initiatives their existing projects and technical expertise are not currently tailored to supporting the implementation of child projects in the TRI geographies. The TRI Program will offer child projects the opportunity to access this expertise in a coordinated, less fragmented and targeted manner, while facilitating enhanced project outcomes and achieving both national and global environmental benefits.

### **c) Alternative scenario:**

The purpose of the TRI Program is to contribute to the restoration and maintenance of critical landscapes that provide global environmental benefits and enhanced resilient economic development and livelihoods, as a contribution to the Bonn Challenge. The Program will deliver global environmental benefits above and beyond the baseline of national and international action on restoration.

TRI will contribute the achievement of the CBD Aichi 2020 Biodiversity targets, including target 15, which aims to restore at least 15% of world degraded ecosystems by 2020.

The Program combines a bottom-up approach at the country level to removing barriers to more widespread commitment to, and effective implementation of, forest and landscape restoration, supported by a Global Learning, Finance, and Partnerships project to capture and disseminate best practices, provide financing tools and bankable models for attracting investment, and leverage key partnerships to yield cost savings and realize greater impact than possible under a fragmented, project-by-project approach.

Child projects under the TRI will engage in some or all of the following four broad Program components as appropriate. The nature of each Child project’s programmatic engagement will be determined by country objectives, resources, and context.

## **Component 1: Policy Development and Integration**

The outcome of TRI Component 1 is:

*Increased national and sub-national commitment to forest and landscape restoration in TRI countries; and national and sub-national policy and regulatory frameworks supportive of restoration, sustainable land management, maintenance and enhancement of carbon stocks in forest and other land uses, and reduced emissions from LULUCF and agriculture.* This outcome is consistent with GEF-6 focal area objectives from LD-2, Program 3; BD-4 Program 9; and CCM-2, Program 4.

Component 1 will deliver support for identification and development of policies that define restoration goals and complementary sustainable land management objectives and create the enabling in-country conditions for successful implementation of restoration and sustainable land management. Component 1 also includes support for development of complementary land-use policies and incentive mechanisms that promote conservation and enhancement of carbon stocks in forest and other land-use, and that support climate smart agriculture. A range of approaches and policy instruments are being considered in TRI countries including scaling up of national restoration commitments (e.g., as contributions to the Bonn Challenge), national and sub-national ecosystem service valuation and accounting programs, payments for ecosystem service schemes, integration of restoration into national energy and trade policies, and reforms to address land governance and land tenure issues. Support will be provided for uptake of restoration policy solutions and incentive mechanisms into national and sub-national level policies, and embedding those policies into strategies and practices. Support will be provided through the following two sub-components:

- *Filling of knowledge gaps to underpin policy change:* Where inadequate or unclear information exists on the status of land degradation and restoration opportunities, or on the status of existing domestic restoration targets and programs, countries will be supported to access and consolidate relevant information on the extent and location of biophysical potential, and on the socio-economic benefits including carbon sequestration and mitigation potential and ecosystem services, at the appropriate scale needed to support national and sub-national restoration efforts.
- *Identification and development of policy solutions:* Key enabling conditions, specifically national and sub-national policies, legal and regulatory frameworks together with potential bottlenecks to successful implementation of restoration, sustainable land management, conservation and enhancement of carbon stocks in forest and other land-use, and adoption of climate smart agricultural practices will be identified. Information and analysis (including findings from Program and project experiences) supporting in-country policy development processes will be provided at key policy forums and to key stakeholders. Support will include assisting countries in defining domestic restoration targets and Bonn Challenge commitments, including maximizing linkages and contributions to CBD Aichi Target 15, the UNFCCC REDD+ goal and the land degradation neutrality goal. Emphasis will be on bringing a wide range of stakeholder voices into the policy planning process, including women and minority groups.

## **Component 2: Implementation of Restoration Programs and Complementary Initiatives**

The outcome of TRI Component 2 is:

*Integrated landscape management practices and restoration plans to restore and maintain deforested and degraded landscapes implemented by government, private sector and local community actors, both men and women.* This outcome is consistent with GEF-6 focal area objectives from LD-2 Program 3; LD-3, Program 4; and CCM-2, Program 4; and SFM-3 Program 8.

Component 2 will deliver support for implementation of restoration programs on identified priority landscapes, as well as support for complementary sustainable land management initiatives. Emphasis will be on application of forest and landscape restoration best practices and principles, including design and facilitation of multi-stakeholder initiatives to develop and implement restoration programs. This will take into account the range of complementary sustainable land management initiatives being considered in TRI countries, including climate smart agriculture, community forestry, and alternative livelihood options.

- *Planning and implementation of (sub)national restoration programs:* The Program will enable planning and initiation of restoration programs and activities on identified priority landscapes. The exact form

this implementation will take will vary from country to country. The full range of forest and landscape restoration options and innovative technologies and approaches is possible and the application of these in any country will depend on many factors, including social acceptance, ability to meet the needs of communities, cost, etc., in addition to biophysical and other aspects. Support will be provided for the design and facilitation of multi-stakeholder processes to develop or reinforce restoration programs, ensuring that gender equality is a guiding principle in this efforts.

- *Planning and implementation of complementary sustainable land management programs:* Support will also be provided for synergistic implementation of high-value, demand-driven initiatives that take pressure off of natural resources, and reduce the need to convert natural ecosystems and primary forest. Options being considered by TRI countries include climate smart agriculture, community forestry, and alternative livelihood options.

### **Component 3: Institutions, Finance, and Upscaling**

The outcome of TRI Component 3 is:

*Strengthened institutional capacities and financing arrangements in place to allow for and facilitate large-scale restoration and maintenance of critical landscapes and diverse ecosystem services in TRI countries.* This outcome is consistent with GEF-6 focal area objectives from LD-2 Program 3; LD-3, Program 4; CCM-2, Program 4; and SFM-2 and SFM-3.

Component 3 will focus on strengthening the capacity, reach, and effectiveness of national and sub-national institutions essential to the successful implementation of restoration and sustainable land management initiatives, and increasing the flow of sustainable finance, both public and private, into restoration and sustainable land management. Financing efforts will include a strong focus on structures and products that promote engagement with the private sector. Support will be provided through the following two sub-components:

- *Institutional strengthening and capacity building:* Support to strengthen and enable a range of national and sub-national institutions across sectors at different scales to effectively coordinate and engage in restoration and sustainable land management - including public sector ministries, agricultural extension service providers, trade groups, local grower associations, and communities. Inter-sectoral coordination mechanisms will be encouraged for greater coherence of policies and regulations and effective integration of restoration priorities in key sectors. Support will include targeted, national and sub-national capacity building towards effective implementation of restoration programs using forest and landscape restoration best-practices, including forest and agricultural extension services; monitoring of biodiversity, carbon storage and flux, and other ecosystem services in forested and agricultural landscapes.
- *Mobilizing domestic and external funding:* The Program will focus on both harnessing existing domestic public financing structures and accessing risk reduction products that are underutilized at present in landscape restoration activities. The “bankable models” from jurisdictions that have already had success with restoration of forest landscapes and who have allocated substantial domestic resources from either national treasuries or via multilateral loans will be mined for approaches that could assist the child projects to, e.g., examine domestic subsidy and incentive reform towards improved landscape restoration in TRI countries. A new *Enabling Investments Rapid Diagnostic* tool will be developed and applied. In parallel, child projects will be supported in linking with existing instruments/products for pricing and mitigating risk in private sector investments in landscape restoration activities. One or two “bankable” restoration projects will be developed in each program country. In the course of TRI development possible linkages will be explored to the finance working group proposed by the participants in the March 2015 Bonn Challenge 2.0 high level roundtable. The working group is intended to provide an opportunity to develop proposals for mobilizing private-sector funding and to deepen the understanding of key constraints to creating an enabling environment for investment and participation from both government and investors. The Global Environmental Facility and Barclays Bank offered to initiate a process towards building the finance working group.

### **Component 4: Knowledge, Partnerships, Monitoring and Assessment**

The outcome of TRI Component 4 is:

*Increased effectiveness of Program investments among Program stakeholders; and improved knowledge of best practices on restoration among key external audiences and other donors.* This outcome supports all TRI components and their associated GEF-6 focal areas identified above, as well as SFM-4.<sup>7</sup>

Component 4 will provide support for knowledge generation and exchange, broadening and strengthening engagement in restoration, and monitoring and assessment of progress in achieving Program objectives – activities that will create synergies, enhance learning, and underpin and scale up the success of TRI. The Global Learning, Finance, and Partnerships Child project, prepared by IUCN, will play a lead role in implementing activities under this component. Activities under this component are grouped under the following 3 sub-components.

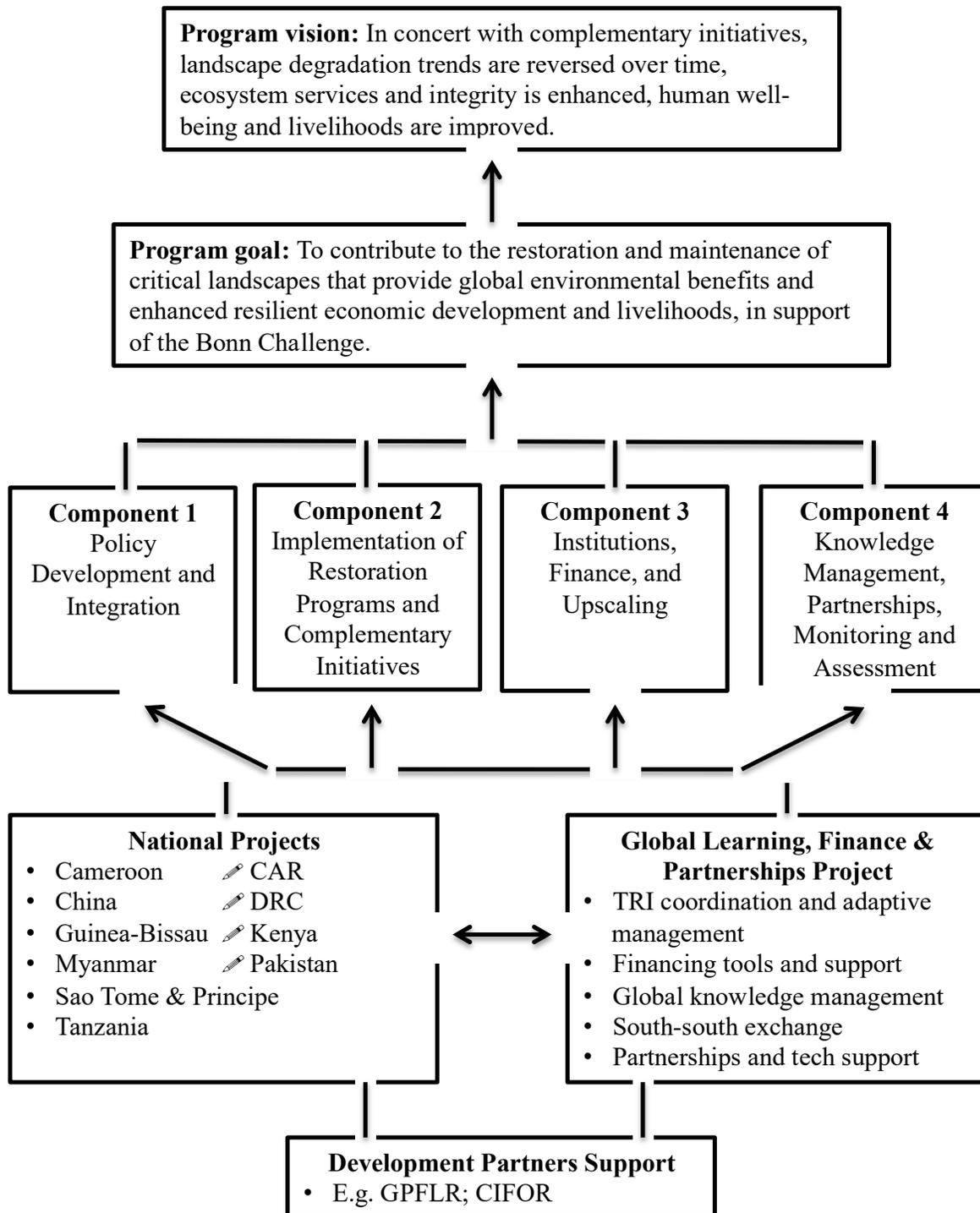
- *Sharing and aggregation of innovative experiences and partnerships:* Activities under this sub-component will coordinate and maintain extensive and continued stakeholder engagement at the national, regional, and global levels, to support components of the Program and strengthen impact. Participating countries and organizations will benefit from sharing of expertise and opportunities for South-South, regional, eco/sub-regional and international experiential exchange through, e.g. exchange visits, farmer field school and events for sharing best practices. Countries will contribute to further developing tools and approaches for restoration, including the Restoration Opportunities Assessment Methodology, so that these may then be of use to a wider group of countries and actors.
- *Awareness raising and policy influence: Building and maintaining political will for the required transformational changes to achieve forest and landscape restoration at scale will be paramount.* A global communications and awareness raising campaign will be built with relevant partners, popularizing the opportunities and challenges related to forest and landscape restoration, including through restoration champions. The campaign will have national components for use by Child projects, including packages of policy influencing materials, and high profile events targeted to national and international decision-makers. It will also include the development of outreach and communications tools including field visits for journalists and release of timely media products. The development of a new Typology of Forest and Landscape Restoration will be an important contribution to the preparation of communications and influencing materials. Knowledge sharing will also be reinforced through the GPFLR, FAO FLR mechanism, UNEP UN-REDD, as well as key regional initiatives (e.g. Initiative 20x20 in Latin America, Silva Mediterranea initiatives, GGWISS, Asia-Pacific network for Sustainable Forest Management and Rehabilitation). Activities under this sub-component cross-link with policy development work under Component 1.
- *Tracking of measurable progress:* The program will contribute to accelerated implementation of Bonn Challenge commitments through systematic and credible documentation of progress. This will include contributing to the development of the Bonn Challenge Barometer (an IUCN initiative that will report on progress quantified in hectares and carbon sequestration potential), the FAO FLR Mechanism information platform and monitoring tools, and other means for tracking and reporting on sub-national, national and global implementation progress. Efforts related to monitoring, assessment and evaluation of restoration and complementary sustainable land management efforts at country level will be enhanced, including the harmonization of M&E systems of Child Projects to enable aggregated reporting of results. Harmonization of Child project M&E systems will be facilitated through the use of a Program-level tracking tool, developed within the development of the Global Learning, Finance, and Partnerships Child project, and to be integrated into all Child projects, thus allowing for greater compatibility and utility of aggregated Child project M&E data, and reducing the reporting burden for Child projects.

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<sup>7</sup> Funding for project and program M&E will be provided under Component 4 of the Program. In-line with GEF M&E policy (2010), dedicated and clearly marked funding for M&E will be provided for in the budgets of all TRI Child projects, and will be sufficient to support all required M&E tasks, including independent terminal evaluation, annual Project Implementation Reporting (PIRs), and a mid-term review. It is estimated that these M&E expenditures will require some 2-4% of total Program funds based on past experience (see “Guidance for Conducting Terminal Evaluations of UNDP-Supported, GEF-Financed Projects,” UNDP Evaluation Office, 2012), or roughly \$1.1-\$2.2 million USD. These estimates will be refined during Child project development. It is also anticipated that M&E costs for the TRI program will benefit from cost-savings in the use of a harmonized tracking tool to be developed within development of the Global Learning, Finance, and Partnerships Child project.

Figure 2 illustrates the TRI Program’s conceptual framework and constituent parts.

Figure 2. TRI Program conceptual framework



#### **d) Incremental reasoning and expected contributions from the baseline, the GEF Trust Fund, and co-financing:**

Without GEF support, restoration actions at the national and sub-national level will continue to receive low attention, any planned activities will be ad hoc or focused on single objectives and will not maximize the flow of multiple benefits of restoration – including global benefits and local livelihood benefits. Lessons learnt globally by different countries and agencies will not be harnessed as effectively as they could be to scale up action on restoration.

Through the TRI Program, GEF investment will be used to catalyze actions across the suite of project interventions that will achieve significant global environmental benefits above and beyond the baseline of national and international action. These include the following:

- Program will enable partnering countries to achieve the ambitious goals of improving management of 46 million hectares and direct restoration of 1 million hectares of degraded lands, making a substantial contribution to the achievement of the Bonn Challenge.
- GEF investment will significantly strengthen the movement to restore degraded landscapes, through the Program's global awareness campaign, further development of best practices and tools for restoration, and through the Program's work to mainstream restoration into national and sub-national policies.
- GEF investment with help to quicken the pace of national efforts to implement sustainable land management practices, through support for strategies complementary to restoration that reduce pressures to convert natural ecosystems and primary forest.
- The Program will strengthen national systems and tools for implementation of forest and landscape restoration including national financing mechanisms and funds targeting the environment and climate change.
- GEF investment will help to catalyze private sector engagement in forest and landscape restoration, through development and provision of "Bankable" models for investing in restoration and instruments for pricing and mitigating investment risk, and support for programs that incentivize investment in restoration.
- Governments will provide substantial and significant co-financing in cash and in kind for projects related to the proposed interventions, identified in table C above.
- TRI will contribute to the achievement of the CBD Aichi 2020 Biodiversity targets, including target 15, which aims to restore at least 15% of world degraded ecosystems by 2020.
- The Program's work to promote the conservation and enhancement of carbon stocks in forest and agro-forest landscapes supports the UN Framework Convention on Climate Change goal of slowing, halting, and reversing forest cover and carbon loss.
- The Program's work on restoration also supports the UN Convention to Combat Desertification, particularly the Convention's embrace of the land degradation neutrality goal, put forward at the Rio+20 Conference.

#### **e) Innovation, sustainability and potential for scaling up:**

##### ***Innovation***

The Program is innovative in including a wide range of types of landscapes and in bringing together different conservation, land management and restoration approaches within one programmatic framework. It recognizes and is strengthened by the diversity of country situations and challenges that are brought together, enabling the

aggregation and sharing of a broader suite of solutions, combined with cutting edge knowledge and effective partnerships.

The holistic approach of the Program to include a broad range of forest and landscape restoration strategies and interventions provides a strong opportunity for the GEF to demonstrate the full toolbox of activities available to achieve global degradation and restoration objectives. These varied forest and landscape restoration activities – natural regeneration, plantations, silvicultural, agroforestry, fallow, rangelands, mangroves and watershed/riparian restoration - are being brought together in a unique platform that will allow for profile and awareness in overcoming the predominate misconception that restoration is simply afforestation or tree planting.

The Program is also innovative in its support for countries to develop and integrate restoration and sustainable land management goals into national and sub-national policies. Other innovation is found in its support for programs that recognize the value of ecosystem services and integrate them into development and finance policy and land use planning and decision-making. And the Program is innovative in its work to catalyze private sector engagement in forest and landscape restoration, through development and provision of financing tools and models, and support for programs that incentivize investment in restoration.

The Program is innovative in its design, tools, and approach. IUCN together with WRI, and on behalf of the GPFLR, has developed a pioneering methodology – the Restoration Opportunities Assessment Methodology (ROAM) – for countries to flexibly, affordably, and rapidly identify and assess forest and landscape restoration potential, and identify the barriers and enabling conditions for successful restoration. This Program will provide opportunities to further test and refine these tools and methodologies where this meets national needs to fill information gaps to underpin policy change.

The program will develop and apply 3 new tools, building on existing work of the partners and the Child Project experiences:

- A Typology of Forest and Landscape Restoration.
- An Enabling Investments Rapid Diagnostic tool.
- The Bonn Challenge Barometer tracking protocol.

### ***Sustainability***

Sustainability of project outcomes will be enhanced by the Program’s support for inclusive and transparent approaches to restoration and benefit sharing that involve all stakeholders, particularly local communities, and women and minorities, ensuring that restoration planning and initiatives are demand-driven, built upon a wide base of support. Sustainability will be enhanced by the Program’s capacity building efforts and support for key institutions who will be responsible for carrying on the project work following Program closure. Sustainability of outcomes will be strengthened by the Program’s efforts to engage and catalyze private sector investment in restoration – further demonstrating the potential for restoration to provide a strong return on investment.

Sustainability of project outcomes will also be enhanced by the Program’s emphasis on integrating resiliency planning into all restoration investments under TRI. The Program will support collaborative, stakeholder-driven forest and landscape restoration planning with the best science and analysis on how resiliency to anticipated climate impacts can be strengthened in restoration investments. A systems-level approach, informed by the new Resilience, Adaptation and Transformation Assessment and Learning Framework<sup>8</sup> (RAPTA), developed by the Commonwealth Scientific and Industrial Research Organization (CSIRO) in partnership with STAP, will be utilized.

### ***Potential for scaling up***

This Program offers large potential for scaling up. The more than 2 billion hectares of potential global restoration opportunities have largely not been capitalized upon through (sub)national processes and constitute essential resources for addressing climate mitigation and adaptation challenges, strengthening ecosystem health and resilience, and improving livelihoods. In addition, the Program’s links to the wider restoration community,

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<sup>8</sup> O’Connell, D., Walker, B., Abel, N., Grigg, N. (2015). The Resilience, Adaptation and Transformation Assessment Framework: From Theory to Application. CSIRO, Australia.

particularly through the GPFLR, and through the Program's global awareness and communications campaign, ensures that Program's impact will not be limited to TRI countries.

2. *Stakeholders*. Will program design include the participation of relevant stakeholders from [civil society organizations](#) (yes  /no ) and [indigenous peoples](#) (yes  /no )? If yes, identify key stakeholders and briefly describe how they will be engaged in program preparation.

The TRI Program will seek to support action with five key groups of actors towards unlocking the potential from forest and landscape restoration: (1) Local communities and small farmers which seek ways to minimize the risk and uncertainty they live with, whilst realizing livelihood opportunities, (2) Decision-makers from different levels of government whom may have inconsistent mandates and need more strategic information on which to base decisions and work in a more integrated manner, (3) Sector representatives involved in rehabilitation research and knowledge, (4) International policy makers, donors and NGOs that help create to the conditions for restoration activities to take place, and (5) Investors who need accurate information about opportunities and enabling conditions, and the confidence to invest that comes from evidence of political and stakeholder support and results showing returns from investment in forest and landscape restoration.

The governments of the countries involved in the implementation of the Program will be central to the project preparation phase and during implementation. Ministries of Environment, Forests, Agriculture and Finance have a role in most of the countries and in all cases local governments, at State, Province or District level, will have an active role in the specific landscapes within child projects.

Specific partners per geography of implementation will be sought and engaged as part of discussion and analysis during project preparation and implementation. Some of the key global program partners for implementation may include: IUCN, FAO, UNDP, UNEP, UNEP-FI, UNDP, WWF, the UN-REDD Program, the World Bank's FCPF and NGOs. Additional national and local-level stakeholders will be identified in the preparation phase of national child projects.

IUCN, FAO and UNEP have mobilized their networks on the development of TRI – including through global, regional and country offices. IUCN has also involved its State and non-governmental members where relevant. This has included consultations with a significant number of senior government officials, technical staff and Operational Focal Points of TRI countries.

3. *Gender Equality and Women's Empowerment*. Are issues on [gender equality and women's empowerment](#) taken into account? (yes  /no ). If yes, briefly describe how it will be mainstreamed into program preparation (e.g. gender analysis), taking into account the differences, needs, roles and priorities of women and men.

The TRI Program is consistent with the GEF Policy on Gender Mainstreaming (SD/PL/02. May 1, 2012) and is fully aligned with the gender strategies and policies of the participating GEF agencies, in particular with that of IUCN, the lead agency for TRI. IUCN's Gender Policy Statement of 1998 calls for the promotion of equity and equality as essential to the sustainable use, management, and conservation of natural resources. Moreover, IUCN recognizes the importance of women in the implementation of sustainable forest and landscape restoration.

Specific benefits from bringing gender considerations to bear on restoration processes may include:

- Capturing specific and relevant knowledge, skills and experiences of women as primary forestry users and food producers;
- Understanding the different roles, rights and responsibilities of men and women, as well as their particular access to and use patterns in forests and agricultural lands;
- Guaranteeing accuracy of information on forest degradation;
- Ensuring efficient measures for the sustainable management of forests, forest conservation and restoration;
- Improving the equitable sharing of benefits from restoration; and
- Complying with a human rights-based approach to development.

Risks related to ignoring gender issues in restoration may include:

- Imprecise identification of the primary stakeholders of forests, forest management and agricultural practices;
- Establishment of inequitable systems for sharing of benefits;
- Maintenance of existing inequality in land and resource use rights;

- Expanded marginalization of women in decision-making; and
- Limiting the sustainability and long-term effectiveness of restoration outcomes.

This Program seeks to raise the levels of participation of women in forest decision-making and management, by identifying and addressing barriers to participation faced by women. TRI will mainstream the following gender concerns into its child projects (indicators will be selected depending upon the nature of the project):

- Ensure women receive an equitable share of the benefits of restoration;
- Increase women’s representation in decision-making on restoration; and
- Achieve an equitable workload balance.

Monitoring of progress in mainstreaming gender will be done at the project and program level, and the knowledge management component of the TRI will ensure consistency of data collection across Child projects.

4. *Benefits.* Describe the socioeconomic benefits to be delivered by the program at the national and local levels. Do any of these benefits support the achievement of [global environmental benefits](#) (for GEF Trust Fund), and/or adaptation to climate change?

The socioeconomic benefits of TRI to participating TRI countries at both national and sub-national levels are significant and far-reaching. Forest and landscape restoration can trigger economic activity to benefit local communities, and ensure for a future generation the forest goods and services they will need to ensure their social and economic stability and growth. IUCN estimated economic benefits worth USD 85 billion/year from restoration of 150 million hectares per the Bonn Challenge, as well as social benefits (poverty reduction, improved livelihoods and food security and nutrition, empowerment of communities and women, etc.) and ecological benefits (including improved water quality, reduced soil erosion and flooding associated with extreme weather events, etc.), while attracting private sector and other investment.

At the global level, restoration and maintenance of critical landscapes – both in TRI countries and through the Program’s contribution to broadening and strengthening support for restoration worldwide – is important to the achievement of global environmental benefits, including biodiversity and climate change mitigation and adaptation. First, restoration increases the amount of productive land available for agriculture and forest uses, thus serving to reduce pressure to convert natural ecosystems and primary forests that provide critical habitat for globally significant biodiversity. This is particularly true in the forests of Africa and Asia where the Program will be implemented. Second, with the LULUCH and agricultural sectors representing major emission sources, the Program’s support for integration of carbon considerations into forest management, identification and monitoring of carbon stock in forest and agricultural landscapes, initiation of restoration transitions, and reduced pressure to convert primary forests will support achievement of GEF objectives in addressing climate change.

5. *Risks.* Indicate risks, including climate change risks, potential social and environmental future risks that might prevent the program objectives from being achieved, and if possible, propose measures that address these risks to be further developed during the program design:

Risks	Rating	Risk mitigation measures
Political will to implement reforms and make Bonn Challenge commitments is not forthcoming, or changes in decision makers or other events beyond the control of the program lead to changes in policies and/or support for Program objectives and activities.	Medium	Program priorities are in line with what all stakeholders have agreed to in international forums. Support for restoration is already reflected to varying degrees in national legislation and policies, and will be further strengthened through implementation of TRI components 1 and 4 focusing on support for policy development and information and awareness-raising work. Program will focus on implementation of commitments, supported in part by public, transparent reporting. Program will work to identify and support champions of restoration at all levels, from the public and

		private sectors.
There is insufficient capacity within countries to support the Program’s proposed transformational changes, particularly with regard to institutional and administrative support.	Medium	Component 3 of the Program will work to build and strengthen capacity at the national and sub-national levels to enable a range of institutions at different scales to effectively coordinate and engage in restoration and sustainable land management. Capacity building efforts will also be supported by work under Component 4, particularly opportunities for South-South learning and knowledge sharing, and partnerships with other supportive organizations and initiatives.
Private sector interests are reluctant to invest in restoration due to lack of information and experience	Medium	A key emphasis of activities under Component 3 will be to further develop, test, and scale up financing tools and risk mitigation instruments that demonstrate the potential for restoration to yield a high return on investment. Work under Component 1 to develop and strengthen the enabling policy environment should send a strong signal to private investors on the willingness of public sector to engage in public-private partnerships on restoration.
Current and future climate change impacts threaten the sustainability of restoration investments	Medium-Low	The Program seeks to restore and enhance the ecological integrity in deforested and degraded landscapes and enhance human well being. In doing so, the objective of strengthening resiliency to anticipated climate impacts will be embedded into all restoration planning and investments, using a systems-level, landscape approach informed by the recent RAPTA framework (see Sustainability section).

6. *Coordination.* Outline the institutional structure of the program including [monitoring and evaluation](#) coordination at the program level. Describe possible coordination with other relevant GEF-financed projects and other initiatives.

IUCN, as lead implementing Agency, will ensure coherence of the Program and be responsible for overall coordination of the TRI, and all enquiries regarding Program implementation progress and Program-level reporting, mid-term evaluation, and final Program evaluation. Each of the three TRI Implementing Agencies brings comparative advantages to the Program in overcoming the barriers identified above in Section II-A of the Programmatic Justification towards restoring and maintaining deforested and degraded landscapes at scale.

The Global Learning, Finance, and Partnerships child project will support the overall implementation and coordination of the TRI, and include a Program Steering Committee (Program SC). The Program SC, initially constituted by the three Implementing Agencies, IUCN, FAO, and UNEP, and expanded to include key Agencies involved in the project design process and implementation, ensures alignment and synergy during implementation of the Child projects. The Program SC will meet at least once a year in person – linked to an annual “knowledge and learning workshop,” where Child projects will have additional opportunities to share lessons with each other and increase learning. These learning workshops will be held at different Child project locations to ensure field learning is part of the event. In addition, the Program SC will meet virtually at least one additional time each year as necessary.

The principle responsibilities of the Program SC are as follows:

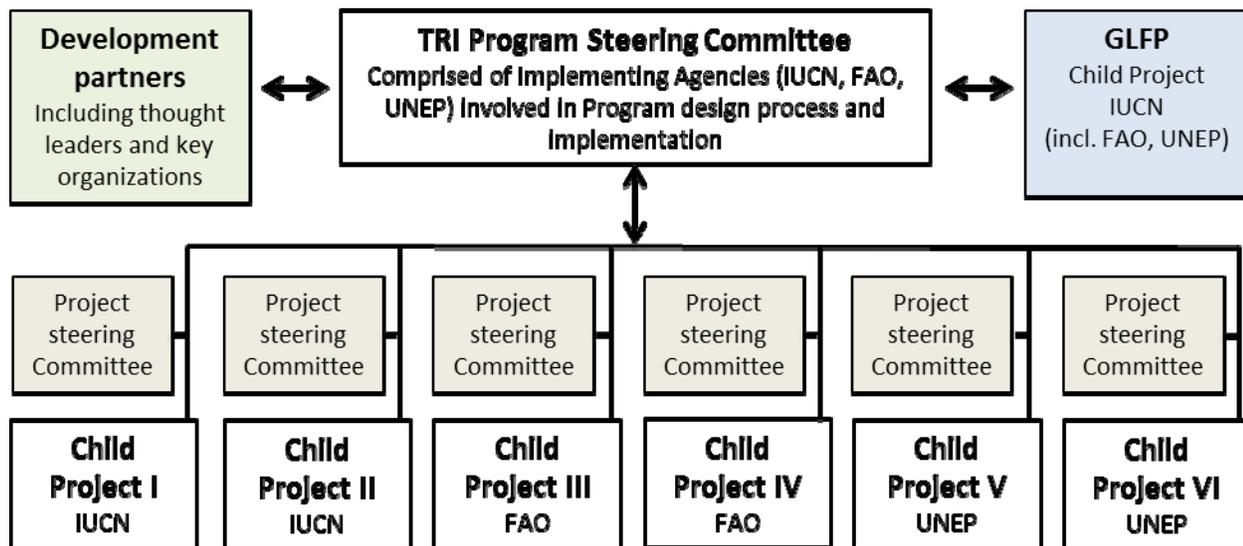
- Review progress of previously agreed Program work-plans
- Define key milestones and points for review

- Discuss process forward, and any proposed changes to plans and main activities
- Review group reports and communications to the GEF on Program-level activities
- Coordinate key interaction with Governments and OFPs in each country for Program-level activities
- Coordinate organization of joint workshops and events related to the Program
- Serve as the project steering committee for the Global Learning, Finance, and Partnerships child project

In addition to the above responsibilities, the Program SC will consult with leading external agencies, organization and experts with globally recognized expertise relevant to the TRI’s main areas of work. These ad-hoc consultations will include members from diverse geographies and stakeholder groups in order to ensure a range of perspectives. The Program, through the global Child project and the national Child projects, will create partnerships supporting achievement of Program and project objectives with the wide array of development partners engaged on restoration. Figure 3 shows the institutional structure of the TRI.

Monitoring and evaluation of TRI will be guided by the GEF’s Monitoring and Evaluation guidelines and Partnering GEF Agency procedures and guidelines. The TRI Results Matrix in Annex B will form the basis for overall monitoring and evaluation of the Program. Detailed M&E for the overall Program will be developed and presented through the Global Learning, Financing, and Partnerships project (GLFP). The GLFP will be responsible for preparing an M&E schedule that will outline the content and timing of monitoring and evaluation activities through the GLFP project at the TRI Program level. The Program will be subject to an independent mid-term review, followed by an independent Terminal Evaluation, within 12-months of the closure of all project activities.

Figure 3. TRI Institutional Structure



[Note – Number and distribution of Child projects is illustrative].

Monitoring and Evaluation will be carried out at two levels:

*Program level:* Based on data from the individual projects and including activities under the Global Learning, Financing, and Partnerships project, the GLFP will aggregate, synthesize, and report quarterly on Program progress. An Annual Monitoring Report will be prepared and shared with the Program SC, the GEF, and other stakeholders. Proposed annual knowledge and learning workshops will provide an additional venue to monitor and evaluate progress at both the Program and project levels. M&E information will help to identify emerging good practices in projects and will be linked to the development of learning products. Program level M&E information, project level performance reports and Program learning products will be available on a common and easy-to-access portal.

*Project Level:* Each Child project will develop a detailed monitoring and evaluation system following its strategic results framework and monitoring plan and based on a menu of standardized core indicators derived from the TRI Results Matrix. Outputs will be evaluated for the degree to which they are contributing to the expected outcomes and overall Program goal. The GLFP will assist Child project teams as needed to implement M&E arrangements. The Child projects will also provide quarterly and annual monitoring reports to the GLFP in required formats, prepare and submit annual Project Implementation Reviews (PIRs) to the GEF, and will undergo independent midterm review and terminal evaluations. Detailed monitoring and evaluation design will be prepared during the full project development phase.

*7. Knowledge Management.* Outline the knowledge management approach for the program, including plans for the program to learn from other relevant initiatives, and to assess and document in a user-friendly form, and share these experiences and expertise with relevant stakeholders.

Effective knowledge management is integral to the Program's goals of achieving successful restoration at scale. Knowledge management will receive support under Component 4. The TRI Program will develop a knowledge management strategy at the outset of the Program, with the participation of all TRI partners. The Program will also learn from other ongoing GEF and non-GEF supported restoration initiatives, such as the World Bank/GEF Sahel and West Africa Program in support of the Great Green Wall Initiative, the UNEP/GEF project "Building the Foundation for Forest Landscape Restoration at Scale," and other GEF programmatic approaches, including the PRC-GEF Land Degradation Partnership.

A knowledge management component will benefit all Child projects. The Global Learning, Finance and Partnerships project will adapt existing tools to the needs of the Program and make them available in a user-friendly format to all participating countries. The global project will also provide training and capacity building in the application of tools to ensure consistent quality, reporting and dissemination of lessons learned, and harmonization of M&E systems of Child Projects to enable aggregated reporting of results.

*8. National Priorities.* Is the program consistent with the National strategies and plans or reports and assessments under relevant conventions? (yes  /no  ). If yes, which ones and how: NAPAs, NAPs, NBSAPs, ASGM NAPs, MIAs, NCs, TNAs, NCSA, NIPs, PRSPs, NPFE, BURs, etc.

With its focus on forest and landscape restoration and the Bonn Challenge, TRI supports the implementation by national governments of numerous international agreements. Action on restoration contributes to the Global Objectives on Forests, adopted by the UN General Assembly in 2007, particularly Global Objective 1 which calls for reversing the loss of forest cover worldwide through sustainable forest management, including protection, restoration, afforestation and reforestation, and increase efforts to prevent forest degradation. The UN Forum on Forests (UNFF) in 2011 called on Member States and others to further develop and implement forest landscape restoration.

The Bonn Challenge was launched in September 2011 explicitly as an implementation vehicle for existing international commitments including CBD Aichi Target 15, which calls for restoration by 2020 of at least 15% of degraded ecosystems, thereby contributing to climate-change mitigation and adaptation and to combating desertification, and the UNFCCC REDD+ goal to slow, halt and reverse forest cover and carbon loss. The Rio+20 Summit in 2012 established the land degradation neutrality global goal, in support to the Convention to Combat Desertification, to which the Bonn Challenge also contributes. The Bonn Challenge will also contribute to achievement of the Sustainable Development Goals.

The New York Declaration on Forests from the 2014 United Nations Climate Summit - which was endorsed by more than 100 governments, civil society and indigenous organizations, and private enterprises - included the Bonn Challenge target in its ambitions and extended this goal by calling for restoration of at least an additional 200 million hectares by 2030.

A number of initiatives contribute to the Bonn Challenge. This includes the AFR100 African restoration initiative, which aims to facilitate a collective goal to bring 100 million hectares into restoration by 2030. TRI countries the Central African Republic, DRC and Kenya are associated with AFR100 and Cameroon is taking steps to be. The complementary objectives of TRI and AFR100 in support of the Bonn Challenge will reinforce the impetus for the implementation of landscape restoration in participating countries and regionally. The Bonn Challenge can be a resource for countries, associations, enterprises and others who manage land and wish to meet national goals on restoration of degraded and deforested lands while contributing to achieving these international commitments and being recognized for doing so.

TRI objectives are consistent with strategies and policies of TRI countries addressing forest and landscape restoration. Table 1 below provides brief summaries of relevant policy and strategy frameworks in TRI countries demonstrating alignment with TRI Program objectives, and key associated dates.

Table 1. Relevant policy frameworks in TRI countries demonstrating alignment of national strategies and plans with TRI objectives.

Country	Relevant policy framework	Key dates
Cameroon	<p>Cameroon's 1<sup>st</sup> National Communication identifies reforestation of degraded lands as an important mitigation response action for the energy sector that helps to both sequester carbon and relieve pressure off of standing forests.</p> <p>Cameroon's <a href="#">Vision 2035</a> points to a development challenge involving environmental protection and has actions in phase one (2010-19):</p> <ul style="list-style-type: none"> <li>• Drafting and starting implementation of major policy for environmental protection and fight climate change</li> </ul> <p>and two in phase two (2020-27):</p> <ul style="list-style-type: none"> <li>• Protecting and ensuring sustainable management of forest ecosystems</li> <li>• Fighting desert encroachment</li> </ul> <p>The <a href="#">NBSAP</a> (2012) biodiversity target 9 states that by 2020 degraded ecosystems should be rehabilitated and target 11 includes restoration of degraded protected areas.</p>	1 <sup>st</sup> NC 2005; Vision 2035, published 2009; NBSAP 2012
Central African Republic	<p>The 2<sup>nd</sup> National Communication (<a href="#">2013</a>) lists adaptation options in the forest sector and biodiversity including the restoration of degraded ecosystems. Furthermore, the 2008 Forest Code puts emphasis on overall good forest governance, and further strengthens the National Environmental Action Plan (PNAE 1999) that helps implement the participation of local communities in forest conservation and community reforestation.</p>	2 <sup>nd</sup> NC 2013 Forest Code 2008; PNAE 1999
China	<p>China's <a href="#">SNCCC</a> (2012) (Second National Communication on Climate Change of The PRC) sets a goal to increase forest area by 40,000,000 ha by 2020 relative to 2005 levels. China's <a href="#">UNCCD</a> (2006) (China National Report on the Implementation of the UNCCD) National Action Programme (NAP) contains an intermediate objective (2011-2020) to create 1.7 Mha forest shelterbelt, and 11,000,000 ha sandy land enclosed for forest and grassland regeneration (ANR). The Long-term objective (by 2050) of the program includes: 34,000,000 ha forest and grassland established, 1,800,000 ha forest shelterbelt system established, and 19,000,000 ha sand land enclosed for ANR (forest and grassland).</p>	SNCCC published 2012 and 40 Mha goal for 2020; UNCCD NAP published 2006 with goals for 2020 and 2050
DRC	<p>DRC's <a href="#">2<sup>nd</sup> National Communication</a> (2009) has restoration supporting activities that fall under the sector: Agriculture, Land Use Change, Forests. The activities include:</p> <ul style="list-style-type: none"> <li>• Agroforestry promotion in savannah areas</li> <li>• Reforestation in Low-River area</li> <li>• Firewood plantation in Kinshasa, Lubumbashi, Mbuji-Mayi</li> </ul> <p>The DRC's plans in its 2<sup>nd</sup> National Communication are further supported by efforts under the FCPF in its 2014 ER-PIN where activities are planned in the Mai Ndombe region. These activities to take place on customary lands include support for agroforestry, PES, reforestation, and savanna protection, awareness and enhancement.</p>	2 <sup>nd</sup> NC 2009;  ER-PIN submission: 2014
Guinea Bissau	<p>Guinea Bissau's <a href="#">2<sup>nd</sup> National Communications</a> (2011) has forestry mitigation options that include restoration of damaged forests and reforestation of degraded areas. The Master Forestry Plan and Forest Law further elaborates the actions necessary for forestry adaptation measures.</p>	2 <sup>nd</sup> NC 2011
Kenya	<p>In Kenya's 1<sup>st</sup> National Communication (<a href="#">2002</a>), identified mitigation options include promotion of conversion of marginal agricultural land to grassland, forest or wetland to increase carbon sequestration and decrease land degradation, and reforestation of degraded lands. Kenya's National Climate Change Response Strategy (<a href="#">2010</a>) forestry mitigation actions include rehabilitation and restoration of all degraded forests and riverine vegetation with afforestation/reforestation over 4.1 Mha. These efforts are also part of the greater goal to increase forest cover to 10% by 2030 as part of Kenya's Vision 2030.</p>	1 <sup>st</sup> NC 2002; National Climate Change Response Strategy 2010
Myanmar	<p>The Myanmar 5<sup>th</sup> National Report under CBD highlights that the Myanmar Forest Policy targets expansion of forest cover from 25% (2013) to 30% by 2030. Also, the <a href="#">NBSAP</a> for 2011-2030 includes reforestation activities to restore forest cover in critical watersheds. Myanmar's <a href="#">1<sup>st</sup> National Communication</a> has forestry mitigation options that include rehabilitation of degraded lands through afforestation and reforestation and promoting participation in forestry mitigation through community forestry.</p>	NBSAP 2011; 1 <sup>st</sup> NC 2012

Pakistan	Pakistan's 1 <sup>st</sup> National Communication identifies restoration of degraded rangeland areas as a key adaptive response for Pakistan's livestock sector, and identifies agroforestry as among the highest value/least costly investments for the forestry sector. The <a href="#">NCCP</a> (National Climate Change Policy) (2012) Adaptation section includes forestry policy measures that are supportive of restoration. These measures include forest management through A/R programs with plantations and restoring degraded mangrove forests in the deltaic region. Other relevant measures include arresting soil erosion through afforestation on barren/degraded lands and uphill watershed areas, and reducing forest fires by encouraging afforestation with indigenous species and only useful/tested non-native species. The Mitigation section includes policy measures in carbon sequestration and forestry that include setting annual A/R targets to increase national forest cover, and promoting farm forestry practices.	1 <sup>st</sup> NC 2003; NCCP 2012
Sao Tome and Principe	In the 2 <sup>nd</sup> National Communication ( <a href="#">2012</a> ), Sao Tome and Principe have proposed measures for adaptation for forests. These include the development of a national program for reforestation, SFM, and agroforestry, and creating a National Development Plan for Forestry.	2 <sup>nd</sup> NC 2012
Tanzania	Tanzania's 1 <sup>st</sup> National Communication ( <a href="#">2003</a> ) includes reforestation as a proposed forestry mitigation option. The National Forest Policy of 2002 is meant to enhance sustainable forest management by aiding community based forest management which is regarded as the most appropriate way to achieve forest landscape restoration in Tanzania.	1 <sup>st</sup> NC 2003

9. *Child Selection Criteria.* Outline the criteria used or to be used for child project selection and the contribution of each child projects to program impact.

The geographic focus of TRI is based on the following Child Selection Criteria, not all of which need to be present:

- A Bonn Challenge pledge has been made
- There are domestic restoration objectives or programmes which could provide a foundation for a Bonn Challenge pledge
- The country has asked for support in defining its restoration potential and/or a possible target
- There are opportunities to build on and add value to existing initiatives
- There is already or there is potential to attract significant co-financing
- The program implementing agencies have established capacity
- There is broad regional spread and representation
- A diversity of restoration interventions, such as those described in Box 1 above, are represented in the program package.

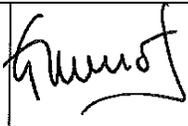
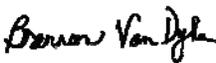
**PART III: APPROVAL/ENDORSEMENT BY GEF OPERATIONAL FOCAL POINT(S) AND GEF AGENCY(IES)**

**A. RECORD OF ENDORSEMENT OF GEF OPERATIONAL FOCAL POINT (S) ON BEHALF OF THE GOVERNMENT(S):**  
 (Please attach the [Operational Focal Point endorsement letter](#) with this template).

<b>NAME</b>	<b>POSITION</b>	<b>MINISTRY</b>	<b>DATE (MM/dd/yyyy)</b>
Justin Nantchou	Director, Ministry of Environment and Nature Protection	CAMEROON	07/31/2015
Bertrand-Blaise Nzanga	GEF OFP	CAR	07/27/2015
Guo Wensong	Director, IFI Division II, OFP	CHINA	10/08/2015
Vincent Kasulu Seya Makonga	Secretaire Generale	DRC	07/18/2015
Joao Raimundo Lopes	Technical Adviser, OFP	GUINEA BISSAU	05/23/2015
Richard L. Lesiyampe	Principal Secretary	KENYA	07/28/2015
Hla Maung Thein	Deputy DG, OFP	MYANMAR	04/08/2015
Aftab Ahmad Maneka	OFP	PAKISTAN	07/28/2015
Lourenco Menteiro De Jesus	OFP, Director of Environmental Education	SAO TOME AND PRINCIPE	07/05/2015
Julius Ningu	Permanent Secretary	Tanzania	07/29/2015

## B. GEF AGENCY(IES) CERTIFICATION

This request has been prepared in accordance with GEF policies<sup>9</sup> and procedures and meets the GEF criteria for program identification and preparation.

Agency Coordinator, Agency name	Signature	DATE (mm/dd/yyyy)	Program Person	Telephone	Email Address
Jean Yves Pirot, IUCN		07/31/2015	Carole Saint-Laurent	+ 1 647 458 0564	carole.saint-laurent@iucn.org
Gustavo Merino (Mr.), Director, Investment Centre Division; FAO		07/31/2015	Sameer Karki		Sameer.Karki@fao.org
Brennan Van Dyke Director, GEF Coordination Office, UNEP		07/31/2015	Marieta Sakalian OiC GEF Biodiversity/ Land Degradation/ Biosafety Unit Senior Liaison Officer DEPI	+39 06 5705 5969	Marieta.Sakalian@unep.org

<sup>9</sup> GEF policies encompass all GEF managed trust funds, namely: GEFTF, LDCE, and SCCF

- C. **Additional GEF Project Agency Certification** (*Applicable Only to newly accredited GEF Project Agencies*)  
For newly accredited GEF Project Agencies, please download and fill up the required [GEF Project Agency Certification of Ceiling Information Template](#) to be attached as an annex to the PFD.

**PIF ANNEX ON GEF FINANCING CEILINGS FOR GEF PROJECT AGENCIES**<sup>10</sup>

Date: 31 July 2015

To: The GEF Secretariat  
Washington, DC 20433

**Subject:** *GEF Project Agency Certification of Ceiling Information*

Per Council requirement for GEF Project Agencies, I am pleased to inform you that

- (a) the value of the largest project implemented (or executed) by IUCN to date is USD 27.4 million<sup>11</sup>; and
- (b) the total value of all projects under implementation by IUCN as of the end of FY 2015 was USD 366 million.<sup>12</sup>

I certify that the GEF financing currently being requested by IUCN for its child projects under the program, “*The Restoration Initiative*”, in the amounts of 7,200,000 USD for China, 3,000,000 for Myanmar, 3,745,152 USD for Guinea-Bissau, 1,500,000 for Cameroon, and 3,836,500 USD for the global coordination component to be implemented in partnership with UNEP and FAO, are respectively lower than the largest project that IUCN has implemented (or executed) to date.

I further certify that the total amount of GEF financing currently under implementation by IUCN plus the requested GEF financing for the above mentioned program does not exceed 20 percent of the total amount of all projects that IUCN had under implementation as of the end of FY 2015.

Sincerely,



Jean-Yves Pirot  
GEF Coordinator, IUCN

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<sup>10</sup> This annex needs to be submitted together with the PIF.

<sup>11</sup> This amount excludes co-financing.

<sup>12</sup> In support of these statements, a copy of (a) the signed loan/grant agreement for the largest project implemented (or executed), and (b) a list of all projects (together with their amounts in US dollars) need to be sent via email, under a separate cover, to the GEF Secretariat at [Project\\_Agency@theGEF.org](mailto:Project_Agency@theGEF.org). These supporting documents will be treated as confidential and will not be shared with any parties external to the Secretariat. The PIF will not be approved in the absence of these supporting documents.

**ANNEX A: LIST OF CHILD PROJECTS UNDER THE PROGRAM FRAMEWORK<sup>A</sup>**

Country	Project Title	GEF Agency	GEF Program Funding (\$)					Agency Fee (\$)	Total (\$)
			Focal Area BD	Focal Area CCM	Focal Area LD	SFM	TOTAL Program		
	<b>FSPs</b>								
CAR	1. FLR in Supporting Landscape and Livelihoods Resilience in Central African Republic	FAO	1,943,430	0	2,031,006	1,987,202	5,961,638	536,548	6,498,186
China	2. Building Climate Resilient Green Infrastructure: Enhancing Ecosystem Services of Planted Forests in China through FLR and Governance Innovation	IUCN	879,391	0	3,401,209	2,141,418	6,422,018	577,982	7,000,000
DRC	3. The Restoration Initiative, DRC child project [provisional title]	FAO	950,000	550,000	850,000	1,250,000	3,600,000	324,000	3,924,000
Global	4. Global Learning, Finance, and Partnerships project under TRI	IUCN, FAO, UNEP	0	0	0	3,519,725	3,519,725	316,775	3,836,500
Guinea-Bissau	5. Managing Mangroves and Production Landscapes for Climate Change Mitigation	IUCN	0	1,500,000	698,869	1,099,435	3,298,304	296,847	3,595,151
Kenya	6. Enhancing Integrated Natural Resource Management to Arrest and Reverse Current Trends in Biodiversity and Land Degradation for Increased Ecosystem Services in the Tana Delta, Kenya	UNEP	867,431	924,128	438,716	1,115,138	3,345,413	301,087	3,646,500
Kenya	7. Support to Sustainable Bioenterprise Development for Healthy Rangelands in Arid and Semi-Arid Lands of Kenya	FAO	1,770,965	442,741	557,854	1,385,780	4,157,340	374,161	4,531,501
Myanmar	8. The Restoration Initiative, Myanmar child project [provisional title]	IUCN	262,577	929,186	574,664	885,866	2,652,293	238,707	2,891,000
Pakistan	9. Reversing Deforestation and Degradation in High Conservation Value Chilgoza Pine Forests in Pakistan	FAO	884,098	1,768,196	0	1,326,146	3,978,440	358,060	4,336,500
Sao Tome & Principe	10. Forest Landscape Restoration in the STP Republic	FAO	0	2,652,294	442,049	1,572,172	4,666,515	419,985	5,086,500
Tanzania	11. Supporting the Implementation of Integrated Ecosystem Management Approach for Landscape Restoration and Biodiversity Conservation in Tanzania	UNEP	4,819,083	349,541	2,288,624	3,748,624	11,205,872	1,008,528	12,214,400
	<b>FSP Subtotal</b>		12,376,975	9,116,086	11,282,991	20,031,506	52,807,558	4,752,680	57,560,238
	<b>MSPs</b>								
Cameroon	1. Bamboo for Africa: Helping Communities Access Renewable Energy, Address Land Degradation and Mitigate Climate Change	IUCN	822,211	26,523	39,784	437,628	1,326,146	119,354	1,445,500
	<b>MSP Subtotal</b>		822,211	26,523	39,784	437,628	1,326,146	119,354	1,445,500
	<b>Total</b>		13,199,186	9,142,609	11,322,775	20,469,134	54,133,704	4,872,034	59,005,738

<sup>A</sup> - Total amount of child project concepts should equal the GEF program financing requested and consistent with Tables A, B and D

## ANNEX B: ESTIMATION OF GLOBAL ENVIRONMENTAL BENEFITS OF TRI CHILD PROJECTS

Table 1. Estimated Global Environmental Benefit (GEB) contributions from TRI child projects and methodology used to derive estimates.

Country	Lead GEF Agency	Title	Estimated Global Environmental Benefits			Methodology(s) used to estimate GEBs
			Maintaining BD (ha)	Sustainable Land (ha)	Carbon (tCO <sub>2</sub> eq)	
Cameroon	IUCN	Bamboo for Africa: Helping Communities Access Renewable Energy, Address Land Degradation, and Mitigate and Adapt to the Effects of Climate Change	9,000	10,000	1,210,000	<p><b>BD:</b> At present, bamboo forests are important component of forests in Cameroon. While Cameroon doesn't have national inventory data for bamboo, an INBAR commission study has shown that there is up to 5,000 hectares in the Northwest Region alone. Other areas of Cameroon also have considerable bamboo forests, but precise coverage data is not available. Bamboo forests throughout the country currently suffer from over-exploitation and threat of clearance due to land use change, with the bamboo forest areas having been reported to be in decline. This project will work directly with the Ministry of Forests and Wildlife in Cameroon, which has prioritized bamboo NTFPs in its forest laws to maintain existing bamboo forest ecosystems. The current figure of 9,000 ha is a conservative estimate.</p> <p><b>LD:</b> The project will work directly with the Ministry of Forests and Wildlife and local districts to incorporate bamboo into restoration programmes in degraded areas, particularly around natural bamboo forest landscape boundaries. Based on discussions with the Ministry of Forests and Wildlife, as well as 9 mayors of local authorities, it has been estimated that Bamboo will contribute to at least bringing 10,000 hectares of degraded land under sustainable land management production systems - this is additional to existing forests, which will also be brought under sustainable management.</p> <p><b>CCM:</b> Cameroon is still heavily reliant on tree-based biomass (fuel wood and charcoal) to meet household energy needs, with roughly 80% of the population using biomass energy. The project will have a renewable energy and cookstove component that will help to promote a shift to improved cookstoves from traditional ones. SNV has calculated that improved cookstoves, compared with 3 stone fire and other traditional stoves can reduce</p>

						<p>emissions per stove per year by 3 tonnes. Based on SNV's experience of implementing clean cook stove programmes, it is expected that the project will be able to deliver 40,000 cookstoves over 4 years. This will deliver emissions savings of 120,000 tonnes per year after completion of the project. During the project life, to account for the fact cookstove uptake will be phased of the project, we estimate direct mitigation of emissions from cookstoves to be around 210,000 tonnes, slightly less than 50% of the full emissions savings if all 40,000 cookstoves were in use at the start of the (480,000 tonnes). In addition to direct savings, we have estimated restoration on 10,000 hectares will sequester 100 tonnes/ha, equal to 1 million tonnes of mitigation. This estimation will be revised following the preparatory grant, when we will collect the necessary baseline data and apply the INBAR methodology for carbon sequestration in bamboo afforestation projects, which is also gold standard approved - <a href="http://www.inbar.int/wp-content/uploads/downloads/2013/11/Working-paper-73_Nov2013.pdf">http://www.inbar.int/wp-content/uploads/downloads/2013/11/Working-paper-73_Nov2013.pdf</a></p>
CAR	FAO	FLR in Supporting Landscape and Livelihoods Resilience in Central African Republic	250,000	10,000	45,830,538	<p><b>BD:</b> Project activities will result in improved management of forests and landscapes (i.e. reduction of deforestation, and sustainable forest and land management) in 250,000 ha of forest areas in the dense humid forest zone which covers a total area of 3,820,000 ha. This zone experiences an annual rate of deforestation corresponding to 19,400 ha/year, roughly 0.5% annually (NBSAP, 2010). The project will reduce deforestation to 0.2%, and enable improved and sustainable management of the area deforested and lost to annual cropland (2,500 ha).</p> <p><b>LD:</b> Project activities include the restoration of 10,000 ha of degraded forests and landscapes through natural regeneration and tree planting.</p> <p><b>CCM:</b> The project will generate mitigation benefits of 45,830,538 tCO<sub>2</sub>e over a period of 20 years – 3,549,068 tCO<sub>2</sub>e in direct mitigation, and 42,281,470 tCO<sub>2</sub>e in indirect reductions. Direct mitigation benefits come primarily from the afforestation of 10,000 ha, while indirect mitigation come primarily from a decrease in deforestation, with improved forest management of an adjacent forest area of</p>

						250,000 ha. [Estimates calculated using the EX-ACT tool – see Annex B supplement for additional details].
China	IUCN	Building Climate Resilient Green Infrastructure: Enhancing Ecosystem Services of Planted Forests in China through FLR and Governance Innovation	45,000,000	200,000	-	<p><b>BD:</b> the project will be integrated with the governance reform process of the State-owned Forest Farms (SFFs). There are over 4,800 of them, covering a total area of 77 million ha, of which 45 million ha are forests. The reform will cover all SFFs and therefore, with best practices integrated into the reform policies that will be rolled out nation wide, the management of all 45 million ha landscapes could be improved.</p> <p><b>LD:</b> the project will test/demonstrate FLR practices in 3 landscapes in China, in total including 80 SFFs and about 240,000 ha land. The 200 k is a conservative estimate of what could be achieved.</p>
DRC	FAO	The Restoration Initiative, DRC child project (provisional title)	645,000	139,000	108,833,571	<p><b>BD:</b> The project will provide for improved management of a large forest area and mosaic landscape adjacent to Kahuzi Biega National Park amounting to 645,000 and in addition reduced land degradation from 520,000 ha or reduced degradation.</p> <p><b>LD:</b> Project interventions will include reforestation and restoration of 4,000 ha degraded forests through natural regeneration; Improved crop production on 20,000 ha through improved agricultural practices; Improved crop production on 10,000 ha (land use change from forests to annual crop); and improved management and restoration of 5,000 ha of degraded grasslands.</p> <p><b>CCM:</b> The project will provide total mitigation benefits of 108,833,571 tCO<sub>2</sub>eq over a period of 20 years – 19,511,109 tCO<sub>2</sub>eq in direct mitigation, and 89,322,462 tCO<sub>2</sub>eq in indirect reductions. Indirect mitigation benefits are derived from improved forest management of a large adjacent forest area and mosaic landscape amounting to 645,000 ha and in addition, reduced land degradation from 525,000 ha of reduced degradation [Estimates calculated using the EX-ACT tool – see Annex B supplement for additional details].</p>
Guinea-Bissau	IUCN	Managing Mangroves and Production Landscapes for Climate Change Mitigation	16,500	1,200	2,280,000	<p><b>BD:</b> The project will work on 3 sites of 500 ha each (1,500 ha total). In addition, participatory management of mangroves will be applied according to a 10ha ratio (1,500x10=15,000).</p>

						<p>Therefore, 16,500 ha will be better managed as a result of the project.</p> <p><b>LD:</b> Three mangrove rice fields will be rehabilitated at each site. 400ha per site (400ha x 3 = 1,200ha)</p> <p><b>CCM:</b> estimates that natural mangrove stores 1,520 t CO<sub>2</sub>/Ha in Central Africa. If we reforest 1,500 ha, this is 1,500ha*1,520t=2,280,000 t CO<sub>2</sub>.</p>
Kenya	UNEP	Enhancing Integrated Natural Resource Management to Arrest and Reverse Current Trends in Biodiversity and Land Degradation for Increased Ecosystem Services in the Tana Delta, Kenya	71,000	120,000	5,000,000	<p><b>BD:</b> The project will work to improve management on 71,000 ha of land, mainstreaming biodiversity-based options that improve forest and agricultural land productivity and ecosystems services and reduce land degradation. DATAR (Diversity Assessment Tool for Agrobiodiversity and Resilience) tool will be used in PPG stage to refine and monitor estimates.</p> <p><b>LD:</b> The project will work to restore 120,000 ha of deforested and degraded land, mainstreaming biodiversity-based options that improve forest and agricultural land productivity and ecosystems services and reduce land degradation. DATAR (Diversity Assessment Tool for Agrobiodiversity and Resilience) tool will be used in PPG stage to refine and monitor estimates.</p> <p><b>CCM:</b> 5,000,000 tCO<sub>2</sub>eq mitigation estimate is derived using published estimates of the carbon stocks stored in a variety of east African habitat types (Wilcock et al 2012, Towards Regional, Error-Bounded Landscape Carbon Storage Estimates for Data- Deficient Areas of the World. PLoS ONE). These values were used, since they cover a complete range of the habitat types in the landscapes targeted by the project. These “stock factors” were applied to the areas of each targeted habitat, as defined by the LUP/SEA current situation, and to those projected to the future LUP scenarios (as defined in Peter Nelson’s report. The sum of each of these sub-pools gave an estimate of the total ecosystem stock of carbon now and in 2030 and 2050 under the three potential future scenarios. By using these three future scenarios, and subtracting the current value from these, partners came up with the amount of carbon lost under each potential future, thus the hybrid future wild prevent the loss of around 5 million tonnes of</p>

						carbon when compared to doing nothing (continued development). Thus, partners arrived at an estimated avoided emission of 5 million tonnes of carbon as result of planned project intervention.
Kenya	FAO	Support to Sustainable Bio-enterprise Development for Healthy Rangelands in Arid and Semi-Arid Lands (ASAL) of Kenya	15,000	9,000	4,800,000	<p><b>BD:</b> Project activities include restoration of degraded wood/shrub lands, forests, and landscapes in ASAL through natural regeneration and tree planting.</p> <p><b>LD:</b> Restoration of degraded grasslands by protection and sustainable land management (SLM in ASAL).</p> <p><b>CCM:</b> The project will provide total mitigation benefits of 4,800,000 tCO<sub>2</sub>eq over a period of 20 years – 800,000 tCO<sub>2</sub>eq in direct mitigation, and 4,000,000 tCO<sub>2</sub>eq in indirect reductions. The direct GHG emission mitigation potential from the project derive from restoration activities of 24,000 ha of degraded wood/shrub lands and grasslands in ASAL. Indirect GHG emission mitigation benefits assume project activities will indirectly contribute to 80,000 ha of restored wood/shrub lands and 30,000 ha of sustainably managed grassland over 20-year period [Estimates calculated using the EX-ACT tool – see Annex B supplement for additional details].</p>
Myanmar	IUCN	The Restoration Initiative, Myanmar child project (provisional title)	TBD	TBD	TBD	
Pakistan	FAO	Reversing Deforestation and Degradation in High Conservation Value Chilgoza Pine Forests in Pakistan	33,600	2,000	11,500,000	<p><b>BD:</b> Project activities include protection and maintenance of biodiversity in forest and other maintain landscapes covering 30,000 ha. In addition, 3,600 ha of forest will be restored through assisted natural regeneration.</p> <p><b>LD:</b> Agro-forest enhancements targeting soil productivity, site stability and biomass on 2,000 ha of production landscapes</p> <p><b>CCM:</b> The project will provide total mitigation benefits of 11,500,000 tCO<sub>2</sub>eq over a period of 20 years – 3,500,000 tCO<sub>2</sub>eq in direct mitigation, and 8,000,000 tCO<sub>2</sub>eq in indirect reductions. Direct mitigation benefits stem from primarily from afforestation of 3,600 ha of forest and agro-forest enhancements of 2,000 ha within forested production landscapes, and reduced deforestation in 30,000 ha of forest and other mountain landscapes. For the indirect GHG estimate, it is expected that the project will indirectly contribute to 132,647 ha of restored</p>

						forest lands and 50,000 ha of sustainably managed grassland over a 20-year period [Estimates calculated using the EX-ACT tool – see Annex B supplement for additional details].
Sao Tome & Principe	FAO	Forests Landscape Restoration in the Sao Tome & Principe Republic	25,000	11,000	5,870,428	<p><b>BD:</b> Project activities will include improved management of 23,500 ha of forests and landscapes (i.e., reduction of deforestation, and sustainable forest and land management). In addition, project will ensure sustainable crop production measures on 1,500 ha of deforested land.</p> <p><b>LD:</b> Project activities will include restoration of 10,000 ha of degraded forests and mosaic forest/croplands through assisted natural regeneration and tree planting. In addition, the project will promote use of agroforestry on 1,000 ha of degraded and deforested lands.</p> <p><b>CCM:</b> The project will provide direct mitigation benefits of 5,870,428 tCO<sub>2</sub>eq over a period of 20 years – equivalent to 8.2 tCO<sub>2</sub>eq per hectare per year. The strongest mitigation benefits derive from the main project component of 10,000 ha of afforestation followed by the application of agroforestry systems. Furthermore, the decrease in deforestation also plays a significant role. Note that because of the small total area of STP, there is little difference between direct and indirect reductions [Estimates calculated using the EX-ACT tool – see Annex B supplement for additional details].</p>
Tanzania	UNEP	Supporting the Implementation of Integrated Ecosystem Management Approach for Landscape Restoration and Biodiversity Conservation in Tanzania	102,000	505,000	5,000,000	<p><b>BD:</b> The project will work to improve management on 102,000 ha of land, mainstreaming biodiversity-based options that improve forest and agricultural land productivity and ecosystems services and reduce land degradation. DATAR (Diversity Assessment Tool for Agrobiodiversity and Resilience) tool will be used in PPG stage to refine and monitor estimates.</p> <p><b>LD:</b> The project will work to restore 505,000 ha of deforested and degraded land, mainstreaming biodiversity-based options that improve forest and agricultural land productivity and ecosystems services and reduce land degradation. DATAR (Diversity Assessment Tool for Agrobiodiversity and Resilience) tool will be used in PPG stage to refine and monitor estimates.</p> <p><b>CCM:</b> 5,000,000 tCO<sub>2</sub>eq mitigation estimate is</p>

						<p>derived using published estimates of the carbon stocks stored in a variety of east African habitat types (Wilcock et al 2012, Towards Regional, Error-Bounded Landscape Carbon Storage Estimates for Data- Deficient Areas of the World. PLoS ONE). These values were used, since they cover a complete range of the habitat types in the landscapes targeted by the project. These “stock factors” were applied to the areas of each targeted habitat, as defined by the LUP/SEA current situation, and to those projected to the future LUP scenarios (as defined in Peter Nelson’s report. The sum of each of these sub-pools gave an estimate of the total ecosystem stock of carbon now and in 2030 and 2050 under the three potential future scenarios. By using these three future scenarios, and subtracting the current value from these, partners came up with the amount of carbon lost under each potential future, thus the hybrid future will prevent the loss of around 5 million tonnes of carbon when compared to doing nothing (continued development). Thus, partners arrived at an estimated avoided emission of 5 million tonnes of carbon as result of planned project intervention.</p>
<b>TOTAL</b>			<b>46,167,100</b>	<b>998,200</b>	<b>190,324,537</b>	

## ANNEX B, SUPPLEMENT

The following pages show application of the EX-ACT methodology used to derive estimates of the CCM benefits for TRI Child Projects to be implemented in CAR, DRC, Kenya, Pakistan, and Sao Tome & Principe.



# FLR in Supporting Landscape and Livelihoods Resilience in Central African Republic

## Project Activities

The project targets a direct overall area of 10,000 ha. Table 1 below highlights the main project restoration activities with the total number of ha per activity group. The mitigation benefits have been calculated with the use of the EX-ante Carbon Balance Tool (EX-ACT) in compliance with IPCC methodology.

Table 1. Overview of project activities and corresponding direct target benefit area

Activities	Number of hectares (ha)
Restoration of degraded forests and landscapes through natural regeneration and tree planting	10,000
<b>Total</b>	<b>10,000</b>

## Results

The project will contribute with mitigation benefits of 3,549,068 t CO<sub>2</sub>.eq over a period of 20 years. This is equivalent to 17,7 t CO<sub>2</sub>-eq per hectare per year. Both results can be considered to be very high mitigation benefits with a significant amount of C sequestered per year. The strongest mitigation benefits derive from the main project component, i.e. 10,000 ha of afforestation. The indirect benefits amount to 42,281,470 t CO<sub>2</sub>.eq over a period of 20 years equivalent to 8,5 t CO<sub>2</sub>-eq per hectare per year. This is mainly derived from a decrease in deforestation, with improved forest management of an adjacent forest area of 240,000 ha.

Table 2. Results matrix for the direct GHG fluxes from the CAR FLR project

Project Name	FLR in Supporting Landscape		Climate	Tropical (Moist)			Duration of the Project (Years)		20		
Continent	Africa		Dominant Regional Soil Type	LAC Soils			Total area (ha)		10000		
Components of the project	Gross fluxes			Share per GHG of the Balance					Result per year		
	Without	With	Balance	CO <sub>2</sub>			N <sub>2</sub> O	CH <sub>4</sub>	Without	With	Balance
	All GHG in tCO <sub>2</sub> e			Biomass	Soil	Other					
	Positive = source / negative = sink										
<b>Land use changes</b>											
Deforestation	0	0	0	0	0	0	0	0	0	0	0
Afforestation	-804,548	-4,353,617	-3,549,068	-3,327,803	-221,266	0	0	0	-40,227	-217,681	-177,453
Other LUC	0	0	0	0	0	0	0	0	0	0	0
<b>Agriculture</b>											
Annual	0	0	0	0	0	0	0	0	0	0	0
Perennial	0	0	0	0	0	0	0	0	0	0	0
Rice	0	0	0	0	0	0	0	0	0	0	0
<b>Grassland &amp; Livestocks</b>											
Grassland	0	0	0	0	0	0	0	0	0	0	0
Livestocks	0	0	0	0	0	0	0	0	0	0	0
<b>Degradation &amp; Management</b>											
Degradation	0	0	0	0	0	0	0	0	0	0	0
Inputs & Investments	0	0	0	0	0	0	0	0	0	0	0
<b>Total</b>	<b>-804,548</b>	<b>-4,353,617</b>	<b>-3,549,068</b>	<b>-3,327,803</b>	<b>-221,266</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>-40,227</b>	<b>-217,681</b>	<b>-177,453</b>
<b>Per hectare</b>	<b>-80</b>	<b>-435</b>	<b>-355</b>	<b>-332.8</b>	<b>-22.1</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>-4.0</b>	<b>-21.8</b>	<b>-17.7</b>
<b>Per hectare per year</b>	<b>-4.0</b>	<b>-21.8</b>	<b>-17.7</b>	<b>-16.6</b>	<b>-1.1</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>-4.0</b>	<b>-21.8</b>	<b>-17.7</b>

Table 3. Results matrix for the indirect GHG fluxes from the CAR FLR project

Project Name	FLR in Supporting Landscap		Climate	Tropical (Moist)			Duration of the Project (Years)		20		
Continent	Africa		Dominant Regional Soil Type	LAC Soils			Total area (ha)		250000		
Components of the project	Gross fluxes			Share per GHG of the Balance					Result per year		
	Without	With	Balance	CO <sub>2</sub>			N <sub>2</sub> O	CH <sub>4</sub>	Without	With	Balance
	All GHG in tCO <sub>2</sub> e			Biomass	Soil	Other					
	Positive = source / negative = sink										
<b>Land use changes</b>											
Deforestation	50,335,083	8,053,613	-42,281,470	-38,164,858	-4,116,613	0	0	2,516,754	402,681	-2,114,074	
Afforestation	0	0	0	0	0	0	0	0	0	0	
Other LUC	0	0	0	0	0	0	0	0	0	0	
<b>Agriculture</b>											
Annual	0	0	0	0	0	0	0	0	0	0	
Perennial	0	0	0	0	0	0	0	0	0	0	
Rice	0	0	0	0	0	0	0	0	0	0	
<b>Grassland &amp; Livestocks</b>											
Grassland	0	0	0	0	0	0	0	0	0	0	
Livestocks	0	0	0	0	0	0	0	0	0	0	
<b>Degradation &amp; Management</b>											
Inputs & investments	0	0	0	0	0	0	0	0	0	0	
<b>Total</b>	<b>50,335,083</b>	<b>8,053,613</b>	<b>-42,281,470</b>	<b>-38,164,858</b>	<b>-4,116,613</b>	<b>0</b>	<b>0</b>	<b>2,516,754</b>	<b>402,681</b>	<b>-2,114,074</b>	
<b>Per hectare</b>	<b>201</b>	<b>32</b>	<b>-169</b>	<b>-152.7</b>	<b>-16.5</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	
<b>Per hectare per year</b>	<b>10.1</b>	<b>1.6</b>	<b>-8.5</b>	<b>-7.6</b>	<b>-0.8</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>-8.5</b>	

Table 4. Global Environment Benefits (GEBs)

GEF-6 Corporate Results	Replenishment Targets	Indicative Child project contribution
1. Maintain globally significant biodiversity and the ecosystem goods and services that it provides to society	Improved management of landscapes and seascapes covering 300 million hectares	250,000 ha (indirect)
Sustainable land management in production systems (agriculture, rangelands, and forest landscapes)	120 million hectares under sustainable land management	10,000 ha (direct)
4. Support to transformational shifts towards a low-emission and resilient development path	750 million tons of CO <sub>2</sub> e mitigated (include both direct and indirect)	Direct: 3,549,068 t CO <sub>2</sub> -eq Indirect: 42,281,470 t CO <sub>2</sub> -eq

### Restoration costs

The overall budget for the CAR child project is \$US 5,961,638. The project's total area of intervention accumulates to 10,000 ha. The direct restoration cost per ha is then \$US 596/ha. This amount is within the results reported in the literature (Global Mechanism, 2015<sup>13</sup>) ranging from a few dollars to several thousands of dollars per ha, depending on e.g. intervention and maintenance.

<sup>13</sup> Global Mechanism. 2015. [Reaping the rewards: Financing Land Degradation Neutrality](http://eld-initiative.org/fileadmin/pdf/Reaping_the_rewards.pdf). [http://eld-initiative.org/fileadmin/pdf/Reaping\\_the\\_rewards.pdf](http://eld-initiative.org/fileadmin/pdf/Reaping_the_rewards.pdf)



## The Restoration Initiative-TRI-DRC Child Project

### Project Activities

The project interventions cover a direct area of 139,000 ha. This area is comprised of mosaic landscapes. Table 1 below illustrates the various project components and how they will contribute to restoration. The mitigation benefits have been calculated with the use of the EX-ante Carbon Balance Tool (EX-ACT) in compliance with IPCC methodology.

Table 1. Overview of direct project activities.

Activities	Number of hectares (ha)
Reforestation and restoration of degraded forests (natural regeneration)	4,000
Improved crop production (no land use change, only improvement of agricultural practices)	20,000
Improved management of forests (i.e. reduction of deforestation, sustainable forest and land management*)	100,000
Improved crop production (land use change from forests to annual crop)	10,000
Improved management and restoration of degraded grasslands	5,000
<b>Total</b>	<b>139,000</b>

### Results

The project will provide total mitigation benefits of 19,511,109 t CO<sub>2</sub>-eq over a period of 20 years. This is equivalent of 7 t CO<sub>2</sub>-eq per hectare per year. Both results can be considered highly significant. See table 2 and 3 for detailed results. The indirect benefits amount to 89,322,462 t CO<sub>2</sub>-eq over a period of 20 years equivalent to 3,9 t CO<sub>2</sub>-eq per hectare per year. These indirect benefits are derived from improved forest management of a large adjacent forest area and mosaic landscape amounting to 645,000 ha and in addition reduced land degradation from 525,000 ha of reduced degradation.

Table 2. Results matrix for the direct GHG fluxes from the DRC FLR project

Project Name	The Restoration initiative-TI		Climate	Tropical (Moist)			Duration of the Project (Years)		20		
Continent	Africa		Dominant Regional Soil Type	HAC Soils			Total area (ha)		139000		
Components of the project	Gross fluxes			Share per GHG of the Balance					Result per year		
	Without	With	Balance	CO <sub>2</sub>			N <sub>2</sub> O	CH <sub>4</sub>	Without	With	Balance
	All GHG in tCO <sub>2</sub> eq			Biomass	Soil	Other					
	Positive = source / negative = sink										
<b>Land use changes</b>											
Deforestation	12,983,580	8,642,387	-4,321,193	-3,634,748	-542,208		-29,562	-114,675	648,179	432,119	-216,080
Afforestation	-86,538	-346,154	-259,615	-50,031	-209,584		0	0	-4,327	-17,308	-12,981
Other LUC	0	0	0	0	0		0	0	0	0	0
<b>Agriculture</b>											
Annual	-830,025	-976,500	-146,475	0	-146,475		0	0	-41,501	-48,825	-7,324
Perennial	0	0	0	0	0		0	0	0	0	0
Rice	0	0	0	0	0		0	0	0	0	0
<b>Grassland &amp; Livestocks</b>											
Grassland	0	-59,583	-59,583	0	-59,583		0	0	0	-2,979	-2,979
Livestocks	0	0	0	0	0		0	0	0	0	0
<b>Degradation &amp; Management</b>											
Inputs & Investments	421,186	-14,303,057	-14,724,242	-12,044,003	-2,502,500		-36,428	-141,311	21,059	-715,153	-736,212
	0	0	0				0	0	0	0	0
<b>Total</b>	<b>12,468,203</b>	<b>-7,042,906</b>	<b>-19,511,109</b>	<b>-15,728,782</b>	<b>-3,460,351</b>	<b>0</b>	<b>-65,990</b>	<b>-255,987</b>	<b>623,410</b>	<b>-352,145</b>	<b>-975,555</b>
<b>Per hectare</b>	<b>90</b>	<b>-51</b>	<b>-140</b>	<b>-113.2</b>	<b>-24.9</b>	<b>0.0</b>	<b>-0.5</b>	<b>-1.8</b>			
<b>Per hectare per year</b>	<b>4.5</b>	<b>-2.5</b>	<b>-7.0</b>	<b>-5.7</b>	<b>-1.2</b>	<b>0.0</b>	<b>0.0</b>	<b>-0.1</b>	<b>4.5</b>	<b>2.5</b>	<b>-7.0</b>

Table 3. Results matrix for the indirect GHG fluxes from the DRC FLR project

Project Name	The Restoration Initiative-T1		Climate	Tropical (Moist)			Duration of the Project (Years)		20		
Continent	Africa		Dominant Regional Soil Type	HAC Soils			Total area (ha)		1150000		
Components of the project	Gross fluxes			Share per GHG of the Balance					Result per year		
	Without	With	Balance	CO <sub>2</sub>			N <sub>2</sub> O	CH <sub>4</sub>	Without	With	Balance
	All GHG in tCO <sub>2</sub> e			Biomass	Soil	Other					
	Positive = source / negative = sink										
<b>Land use changes</b>											
Deforestation	80,701,697	61,687,020	-19,014,676	-16,153,549	-2,409,682		-136,668	-314,777	4,035,085	3,084,351	-950,734
Afforestation	0	0	0	0	0		0	0	0	0	0
Other LUC	0	0	0	0	0		0	0	0	0	0
<b>Agriculture</b>											
Annual	-3,526,190	-2,441,250	1,084,940	0	1,084,940		0	0	-176,310	-122,063	54,247
Perennial	-4,707,917	-4,707,917	0	0	0		0	0	-235,396	-235,396	0
Rice	0	0	0	0	0		0	0	0	0	0
<b>Grassland &amp; Livestocks</b>											
Grassland	0	0	0	0	0		0	0	0	0	0
Livestocks	0	0	0	0	0		0	0	0	0	0
<b>Degradation &amp; Management</b>											
Inputs & Investments	1,601,735	-69,790,992	-71,392,727	-59,743,530	-10,948,438		-212,144	-488,615	80,087	-3,489,550	-3,569,636
	0	0	0	0	0		0	0	0	0	0
<b>Total</b>	<b>74,069,324</b>	<b>-15,253,138</b>	<b>-89,322,462</b>	<b>-75,897,079</b>	<b>-12,273,179</b>	<b>0</b>	<b>-348,812</b>	<b>-803,393</b>	<b>3,703,466</b>	<b>-762,657</b>	<b>-4,466,123</b>
<b>Per hectare</b>	<b>64</b>	<b>-13</b>	<b>-78</b>	<b>-66.0</b>	<b>-10.7</b>	<b>0.0</b>	<b>-0.3</b>	<b>-0.7</b>			
<b>Per hectare per year</b>	<b>3.2</b>	<b>-0.7</b>	<b>-3.9</b>	<b>-3.3</b>	<b>-0.5</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>3.2</b>	<b>-0.7</b>	<b>-3.9</b>

Table 4. Global Environment Benefits (GEBs)

GEF-6 Corporate Results	Replenishment Targets	Indicative Child project contribution
1. Maintain globally significant biodiversity and the ecosystem goods and services that it provides to society	Improved management of landscapes and seascapes covering 300 million hectares	645,000 ha (indirect)
Sustainable land management in production systems (agriculture, rangelands, and forest landscapes)	120 million hectares under sustainable land management	139,000 ha (direct)
4. Support to transformational shifts towards a low-emission and resilient development path	750 million tons of CO <sub>2</sub> e mitigated (include both direct and indirect)	Direct: 19,511,109 t CO <sub>2</sub> e Indirect: 89,322,462 t CO <sub>2</sub> e

### Restoration costs

The budget from the DRC child project reserved for forest and land restoration activities is approximately USD 3,600,000. The project's total area 139,000 ha. Therefore, the restoration cost would be \$US 26/ha. This value is in line with the reported costs in the literature (Global Mechanism, 2015<sup>14</sup>).

<sup>14</sup> Global Mechanism. 2015. [Reaping the rewards: Financing Land Degradation Neutrality](http://eld-initiative.org/fileadmin/pdf/Reaping_the_rewards.pdf). [http://eld-initiative.org/fileadmin/pdf/Reaping\\_the\\_rewards.pdf](http://eld-initiative.org/fileadmin/pdf/Reaping_the_rewards.pdf)

## Support to bio-enterprise development for socioeconomic development in Arid and Semi-Arid Lands (ASAL) of Kenya: building resilience of dry land communities against impacts of climate change

### Methodological Basis of Global Environment Benefits (GEBs) Estimation

The project targets an overall direct benefit area of 24,000 ha. Table 1 below highlights the main project restoration activities with the total number of ha per activity group.

**Table 1. Overview of project activities and corresponding direct target benefit area**

Activities	Number of hectares (ha)
Restoration of degraded wood/shrub lands forests and landscapes in ASAL through natural regeneration and tree planting	15,000
Restoration of degraded grasslands by protection and sustainable land management (SLM) in ASAL	9,000
<b>Total</b>	<b>24,000</b>

The GEF grant size for the Kenya child project is \$US 4,157,340. The restoration cost allocation deriving from the GEF grant is about 173 \$US/ha for the total direct target benefit area in this ecosystem. According to TEEB (2009)<sup>15</sup>, the typical costs of restoration projects in grassland and in wood/shrub lands are 260 US\$/ha and 990 US\$/ha, respectively. Since the restoration cost per ha will be dependent on the final mode of interventions and maintenance measures, detailed assessment will be further conducted during the PPG phase. Also, appropriate co-financings will be ensured.

Direct and indirect GHG emission reduction potential from the intervention is calculated by using EX-ante Carbon Balance Tool (EXACT) in compliance with IPCC methodology. Direct GHG emission reduction potential is estimated with the observation period of 20 years. For the target areas of indirect GHG emission reduction potential, it is expected that the project indirectly contributes to 80,000 ha of restored wood/shrub lands and 30,000 ha of sustainably managed grassland over 20 years of period. It is expected that the restoration activities are replicated with the restoration cost of 37.8 US\$/ha, which is derived from the GEF grant.

### Global Environment Benefits

The direct GHG emission mitigation potential from the project is estimated as 800,000 t CO<sub>2</sub>-eq, which is equivalent to about 1.7 t CO<sub>2</sub>-eq per hectare per year in the considered biome and time frame. The indirect GHG emission mitigation potential is estimated as 4,000,000 t CO<sub>2</sub>-eq. This is equivalent to 1.8 t CO<sub>2</sub>-eq per hectare per year.

Table 2 and 3 below provide the details of the GHG fluxes as calculated with the EXACT tool and the Global Environment Benefits respectively.

<sup>15</sup> TEEB (2009) TEEB Climate Issues Update.

Table 2a. Results matrix for the direct GHG fluxes

Project Name	SUPPORT TO BIO-ENTEI		Climate	Tropical (Dry)			Duration of the Project (Years)		20		
Continent	Africa		Dominant Regional Soil Type	HAC Soils			Total area (ha)		24000		
Components of the project	Gross fluxes			Share per GHG of the Balance					Result per year		
	Without	With	Balance	CO <sub>2</sub>			N <sub>2</sub> O	CH <sub>4</sub>	Without	With	Balance
	All GHG in tCO <sub>2</sub> e <sub>q</sub>			Biomass	Soil	Other					
	Positive = source / negative = sink										
<b>Land use changes</b>											
Deforestation	0	0	0	0	0	0	0	0	0	0	0
Afforestation	0	0	0	0	0	0	0	0	0	0	0
Other LUC	0	0	0	0	0	0	0	0	0	0	0
<b>Agriculture</b>											
Annual	0	0	0	0	0	0	0	0	0	0	0
Perennial	0	0	0	0	0	0	0	0	0	0	0
Rice	0	0	0	0	0	0	0	0	0	0	0
<b>Grassland &amp; Livestocks</b>											
Grassland	0	-43,890	-43,890	0	-43,890	0	0	0	0	-2,195	-2,195
Livestocks	108,210	88,330	-19,881				-6,039	-13,841	5,411	4,416	-994
<b>Degradation &amp; Management</b>	0	-729,685	-729,685	-546,810	-182,875	0	0	0	0	-36,484	-36,484
<b>Inputs &amp; Investments</b>	0	0	0			0	0	0	0	0	0
<b>Total</b>	108,210	-685,245	<b>-793,456</b>	-546,810	-226,765	0	-6,039	-13,841	5,411	-34,262	-39,673
<b>Per hectare</b>	5	-29	-33	-22.8	-9.4	0.0	-0.3	-0.6			
<b>Per hectare per year</b>	0.2	-1.4	-1.7	-1.1	-0.5	0.0	0.0	0.0	0.2	-1.4	-1.7

Table 2b. Results matrix for the indirect GHG fluxes

Project Name	SUPPORT TO BIO-ENTEI		Climate	Tropical (Dry)			Duration of the Project (Years)		20		
Continent	Africa		Dominant Regional Soil Type	HAC Soils			Total area (ha)		110000		
Components of the project	Gross fluxes			Share per GHG of the Balance					Result per year		
	Without	With	Balance	CO <sub>2</sub>			N <sub>2</sub> O	CH <sub>4</sub>	Without	With	Balance
	All GHG in tCO <sub>2</sub> e <sub>q</sub>			Biomass	Soil	Other					
	Positive = source / negative = sink										
<b>Land use changes</b>											
Deforestation	0	0	0	0	0	0	0	0	0	0	0
Afforestation	0	0	0	0	0	0	0	0	0	0	0
Other LUC	0	0	0	0	0	0	0	0	0	0	0
<b>Agriculture</b>											
Annual	0	0	0	0	0	0	0	0	0	0	0
Perennial	0	0	0	0	0	0	0	0	0	0	0
Rice	0	0	0	0	0	0	0	0	0	0	0
<b>Grassland &amp; Livestocks</b>											
Grassland	0	-146,300	-146,300	0	-146,300	0	0	0	0	-7,315	-7,315
Livestocks	256,688	218,458	-38,230				-15,767	-22,463	12,834	10,923	-1,912
<b>Degradation &amp; Management</b>	0	-3,891,653	-3,891,653	-2,916,320	-975,333	0	0	0	0	-194,583	-194,583
<b>Inputs &amp; Investments</b>	0	0	0			0	0	0	0	0	0
<b>Total</b>	256,688	-3,819,495	<b>-4,076,184</b>	-2,916,320	-1,121,633	0	-15,767	-22,463	12,834	-190,975	-203,809
<b>Per hectare</b>	2	-35	-37	-26.5	-10.2	0.0	-0.1	-0.2			
<b>Per hectare per year</b>	0.1	-1.7	-1.9	-1.3	-0.5	0.0	0.0	0.0	0.1	-1.7	-1.9

Table 3. Global Environment Benefits (GEBs)

GEF-6 Corporate Results	Replenishment Targets	Indicative Child project contribution
1. Maintain globally significant biodiversity and the ecosystem goods and services that it provides to society	Improved management of landscapes and seascapes covering 300 million hectares	15,000 ha
2. Sustainable land management in production systems (agriculture, rangelands, and forest landscapes)	120 million hectares under sustainable land management	9,000 ha
4. Support to transformational shifts towards a low-emission and resilient development path	750 million tons of CO <sub>2</sub> e mitigated (include both direct and indirect)	Direct: 800,000 t CO <sub>2</sub> -eq; Indirect: 4,000,000 t CO <sub>2</sub> -eq

## Reversing deforestation and degradation in high conservation value Chilgoza Pine Forests in Pakistan

### Methodological Basis of Global Environment Benefits (GEBs) Estimation

The project targets an overall direct benefit area of 35,600 ha. Table 1 below highlights the main project restoration activities with the total number of ha per activity group.

Table 1. Overview of project activities and corresponding direct target benefit area

Activities	Number of hectares (ha)
Protection and maintaining of biodiversity for forest and other mountain landscapes (e.g. rangelands)	30,000
Forest restored through assisted natural regeneration, generating carbon sequestration and biodiversity conservation benefits	3,600
Agro-forest enhancements targeting soil productivity, site stability and biomass (improving carbon sequestration) within forested production landscape	2,000
<b>Total</b>	<b>35,600</b>

The GEF grant size for the Pakistan child project is \$US 3,978,440. The restoration cost allocation deriving from the GEF grant is about 112 \$US/ha for the total direct target benefit area. According to TEEB (2009)<sup>16</sup>, the typical costs of restoration projects in grassland and in wood lands are 260 US\$/ha and 990 US\$/ha, respectively. The typical cost of restoration projects in forest ranges from 2,390 to 3,450 US\$/ha (including tropical forest ecosystem). Since the restoration cost per ha will be dependent on the final mode of interventions and maintenance measures, detailed assessment will be further conducted during the PPG phase. Appropriate co-financings will also be ensured.

Direct and indirect GHG emission reduction potential from the intervention is calculated by using EX-ante Carbon Balance Tool (EXACT) in compliance with IPCC methodology. Direct GHG emission reduction potential is estimated with the observation period of 20 years. For the target areas of indirect GHG emission reduction potential, it is expected that the project indirectly contributes to 132,647 hectares of restored forest lands and 50,000 ha of sustainably managed grassland over 20 years of period. It is expected that the restoration activities are replicated with the restoration cost of 22 US\$/ha, which is derived from the GEF grant.

### Global Environment Benefits

The direct GHG emission mitigation potential from the project is estimated as 3,500,000 t CO<sub>2</sub>-eq, which is equivalent to about 4.9 t CO<sub>2</sub>-eq per hectare per year in the considered biome and time frame. The indirect GHG emission mitigation potential is estimated as 8,000,000 t CO<sub>2</sub>-eq. This is equivalent to 2.2 t CO<sub>2</sub>-eq per hectare per year.

Table 2 and 3 below provide the details of the GHG fluxes as calculated with the EXACT tool and the Global Environment Benefits respectively.

<sup>16</sup> TEEB (2009) TEEB Climate Issues Update.

Table 2a. Results matrix for the direct GHG fluxes

Project Name	Reversing deforestation and		Climate	Warm Temperate (Dry)			Duration of the Project (Years)		20		
Continent	Asia (Indian subcontinent)		Regional Soil Type	HAC Soils			Total area (ha)		35600		
Components of the project	Gross fluxes			Share per GHG of the Balance					Result per year		
	Without	With	Balance	CO <sub>2</sub>			N <sub>2</sub> O	CH <sub>4</sub>	Without	With	Balance
	All GHG in tCO <sub>2</sub> e <sub>q</sub>			Biomass	Soil	Other					
	Positive = source / negative = sink										
<b>Land use changes</b>											
Deforestation	95,235	0	-95,235	-80,187	-15,048	0	0	4,762	0	-4,762	
Afforestation	0	-1,347,060	-1,347,060	-1,044,595	-302,465	0	0	0	-67,353	-67,353	
Other LUC	0	-176,103	-176,103	-8,067	-168,036	0	0	0	-8,805	-8,805	
<b>Agriculture</b>											
Annual	0	0	0	0	0	0	0	0	0	0	
Perennial	0	-254,430	-254,430	-242,550	-11,880	0	0	0	-12,722	-12,722	
Rice	0	0	0	0	0	0	0	0	0	0	
<b>Grassland &amp; Livestocks</b>											
Grassland	0	0	0	0	0	0	0	0	0	0	
Livestocks	0	0	0	0	0	0	0	0	0	0	
<b>Degradation &amp; Management</b>	0	-1,695,133	-1,695,133	-1,326,457	-368,676	0	0	0	-84,757	-84,757	
<b>Inputs &amp; Investments</b>	0	0	0	0	0	0	0	0	0	0	
<b>Total</b>	95,235	-3,472,726	<b>-3,567,961</b>	-2,701,856	-866,105	0	0	4,762	-173,636	-178,398	
<b>Per hectare</b>	3	-98	-100	-75.9	-24.3	0.0	0.0	0.0			
<b>Per hectare per year</b>	0.1	-4.9	-5.0	-3.8	-1.2	0.0	0.0	0.0	0.1	-4.9	

Table 2b. Results matrix for the indirect GHG fluxes

Project Name	Reversing deforestation and		Climate	Warm Temperate (Dry)			Duration of the Project (Years)		20		
Continent	Asia (Indian subcontinent)		Regional Soil Type	HAC Soils			Total area (ha)		182647		
Components of the project	Gross fluxes			Share per GHG of the Balance					Result per year		
	Without	With	Balance	CO <sub>2</sub>			N <sub>2</sub> O	CH <sub>4</sub>	Without	With	Balance
	All GHG in tCO <sub>2</sub> e <sub>q</sub>			Biomass	Soil	Other					
	Positive = source / negative = sink										
<b>Land use changes</b>											
Deforestation	421,088	0	-421,088	-354,552	-66,536	0	0	21,054	0	-21,054	
Afforestation	0	0	0	0	0	0	0	0	0	0	
Other LUC	0	0	0	0	0	0	0	0	0	0	
<b>Agriculture</b>											
Annual	0	0	0	0	0	0	0	0	0	0	
Perennial	0	0	0	0	0	0	0	0	0	0	
Rice	0	0	0	0	0	0	0	0	0	0	
<b>Grassland &amp; Livestocks</b>											
Grassland	0	-313,500	-313,500	0	-313,500	0	0	0	-15,675	-15,675	
Livestocks	0	0	0	0	0	0	0	0	0	0	
<b>Degradation &amp; Management</b>	0	-7,495,146	-7,495,146	-5,865,020	-1,630,126	0	0	0	-374,757	-374,757	
<b>Inputs &amp; Investments</b>	0	0	0	0	0	0	0	0	0	0	
<b>Total</b>	421,088	-7,808,646	<b>-8,229,734</b>	-6,219,572	-2,010,161	0	0	21,054	-390,432	-411,487	
<b>Per hectare</b>	2	-43	-45	-34.1	-11.0	0.0	0.0	0.0			
<b>Per hectare per year</b>	0.1	-2.1	-2.3	-1.7	-0.6	0.0	0.0	0.0	0.1	-2.1	

Table 3. Global Environment Benefits (GEBs)

GEF-6 Corporate Results	Replenishment Targets	Indicative Child project contribution
1. Maintain globally significant biodiversity and the ecosystem goods and services that it provides to society	Improved management of landscapes and seascapes covering 300 million hectares	33,600 ha
2. Sustainable land management in production systems (agriculture, rangelands, and forest landscapes)	120 million hectares under sustainable land management	2,000 ha
4. Support to transformational shifts towards a low-emission and resilient development path	750 million tons of CO <sub>2</sub> e mitigated (include both direct and indirect)	Direct: 3,500,000 t CO <sub>2</sub> e <sub>q</sub> ; Indirect: 8,000,000 t CO <sub>2</sub> e <sub>q</sub>



## Forests Landscape Restoration in the Sao Tome e Principe Republic

### Project Activities

The project will target the restoration of 36,000 ha of degraded forests and landscapes. Table 1 below illustrates the various project components and their role in the restoration.

Table 1. Overview of project activities

Activities	Number of hectares (ha)
Restoration of degraded forests and mosaic forest/croplands through assisted natural regeneration and tree planting	10,000
Promotion of agroforestry on degraded and deforested lands	1,000
Improved management of forests and landscapes (i.e. reduction of deforestation, sustainable forest and land management)*	23,500
Improved land use of deforested area (land use change from forest to annual crops. The project will ensure sustainable crop production measures)	1,500
<b>Total</b>	<b>36,000</b>

\*According to the FAO Global Forest Resource Assessment approximately 27,390 ha of Sao Tome e Principe's total area of 96,000 ha is covered with forest. The project targets 25,000 ha of forest lands by halting deforestation. Despite the project intervention, deforestation will continue with an estimated loss of 1,500 ha over the implementation period, which will be converted to annual crops. The project will enable the newly converted land to apply SLM practices and measures.

### Results

The project will provide direct total mitigation benefits of 5,870,428 t CO<sub>2</sub>-eq over a period of 20 years. This is equivalent of 8,2 t CO<sub>2</sub>-eq per hectare per year. Both results indicate high Carbon sequestration and mitigation benefits. The strongest mitigation benefits derive from the main project component, of the 10,000 ha of afforestation followed by the application of agroforestry systems. Furthermore, the decrease in deforestation also plays a major role. See table 1 below for detailed results. Deforestation will take place despite the project intervention, however at much lower level than business as usual. It is estimated that with project intervention, deforestation will be reduced 2,000 ha over the 5-year period. The 2000 ha will be converted to annual crops. The newly established crops will be managed through sustainable cropping management.

Table 2. Results matrix for the direct GHG fluxes from the Landscape Restoration for Adaptation Mitigation in the STP Republic project.

Project Name	Landscape Restoration for A		Climate	Tropical (Moist)			Duration of the Project (Years)		20		
Continent	Africa		Dominant Regional Soil Type	LAC Soils			Total area (ha)		36000		
Components of the project	Gross fluxes			Share per GHG of the Balance					Result per year		
	Without	With	Balance	CO <sub>2</sub>			N <sub>2</sub> O	CH <sub>4</sub>	Without	With	Balance
	All GHG in tCO <sub>2</sub> e			Biomass	Soil	Other					
	Positive = source / negative = sink										
<b>Land use changes</b>											
Deforestation	3,221,445	1,208,042	-2,013,403	-1,817,374	-196,029		0	0	161,072	60,402	-100,670
Afforestation	0	-3,979,525	-3,979,525	-3,979,525	0		0	0	0	-198,976	-198,976
Other LUC	-69,612	-69,612	0	0	0		0	0	-3,481	-3,481	0
<b>Agriculture</b>											
Annual	0	0	0	0	0		0	0	0	0	0
Perennial	-314,317	-191,817	122,500	0	122,500		0	0	-15,716	-9,591	6,125
Rice	0	0	0	0	0		0	0	0	0	0
<b>Grassland &amp; Livestocks</b>											
Grassland	0	0	0	0	0		0	0	0	0	0
Livestocks	0	0	0	0	0		0	0	0	0	0
<b>Degradation &amp; Management</b>	0	0	0	0	0		0	0	0	0	0
<b>Inputs &amp; Investments</b>	0	0	0			0	0	0	0	0	0
<b>Total</b>	2,837,517	-3,032,911	<b>-5,870,428</b>	-5,796,899	-73,529	0	0	0	141,876	-151,646	-293,521
<b>Per hectare</b>	79	-84	-163	-161.0	-2.0	0.0	0.0	0.0			
<b>Per hectare per year</b>	3.9	-4.2	-8.2	-8.1	-0.1	0.0	0.0	0.0	3.9	-4.2	-8.2

Table 3. Global Environment Benefits (GEBs)

GEF-6 Corporate Results	Replenishment Targets	Indicative Child project contribution (direct)
1. Maintain globally significant biodiversity and the ecosystem goods and services that it provides to society	Improved management of landscapes and seascapes covering 300 million hectares	25,000 hectares
Sustainable land management in production systems (agriculture, rangelands, and forest landscapes)	120 million hectares under sustainable land management	11,000 hectares
4. Support to transformational shifts towards a low-emission and resilient development path	750 million tons of CO <sub>2</sub> e mitigated (include both direct and indirect)	5,870,428 t CO <sub>2</sub> e

### Restoration costs

The overall budget for the Sao Tome e Principe Republic child project is USD 4,666,515 (GEF project grant). The project's total area of intervention accumulates to 36,000 ha. The restoration cost per ha is then USD 130/ha. This amount is within the results reported in the literature (Global Mechanism, 2015<sup>17</sup>) ranging from a few dollars to several thousands of dollars per ha, depending on e.g. intervention and maintenance.

<sup>17</sup> Global Mechanism. 2015. [Reaping the rewards: Financing Land Degradation Neutrality](http://eld-initiative.org/fileadmin/pdf/Reaping_the_rewards.pdf). [http://eld-initiative.org/fileadmin/pdf/Reaping\\_the\\_rewards.pdf](http://eld-initiative.org/fileadmin/pdf/Reaping_the_rewards.pdf)