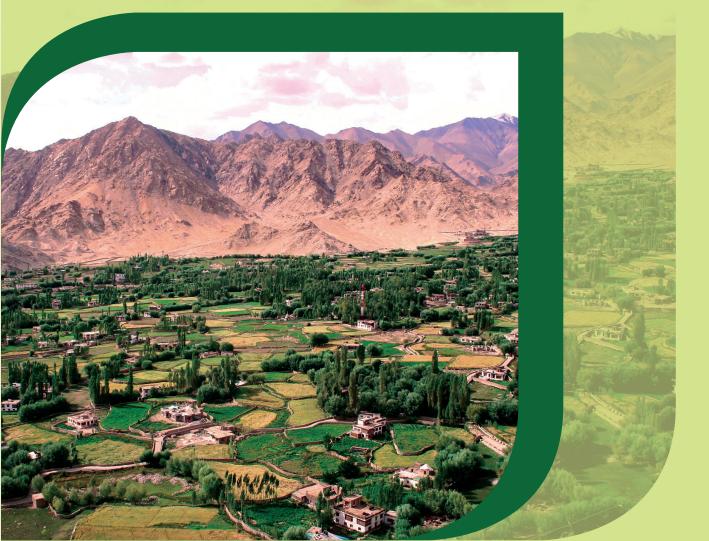


Land Degradation Focal Area Study

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Global Environment Facility Independent Evaluation Office

Land Degradation Focal Area Study

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Cover: Subsistence farming in cold desert, Ladakh, India, by Anupam Anand/GEF IEO

Contents

Forewordv				
Acknowledgments vi				
Abbreviationsvii				
Executive summaryviii				
1: Introduction 1 1.1 Objectives, methodology, and context 1 1.2 Evolution of the Land Degradation Focal Area Strategy 2				
2: Findings 6 2.1 Portfolio 6 2.2 Relevance 14 2.3 Results 16 2.4 Case study: The SLEM-CPP. 20 2.5 Value-for-money analysis 23				
3: Recommendations				
Annexes				
 A: Projects reviewed in depth or for specific data. 27 B: Stakeholders interviewed				
Bibliography				
Box 2.1 Programmatic approaches in the land degradation focal area20 Figures				

1.1	Evolution of GEF Land Degradation Focal Area					
	Strategy					

2.1	Number of and GEF grant amounts for land degradation-related projects, by GEF replenishment period7
2.2	Number of projects in the land degradation focal area and multifocal area projects with land degradation components, by GEF replenishment period7
2.3	Percentage of funding from focal area allocation for land degradation-only versus multifocal area projects
2.4	Number of projects in the land degradation focal area and multifocal area projects with land degradation components, by GEF replenishment period and project modality8
2.5	GEF grants to land degradation projects, by GEF replenishment period, modality, and focal area9
2.6	Location of land degradation focal area projects
2.7	Regional distribution of total GEF funding and GEF funding for the land degradation focal area
2.8	Top eight country recipients of GEF grants for national land degradation projects 10
2.9	Number of and GEF grant amounts for land degradation by lead GEF Agency
2.10	Cofinancing for land degradation projects for every \$1 from the GEF
2.11	Cofinancing by organization type 12
2.12	Types of land systems targeted by GEF land degradation projects, by area
2.13	Types of restoration included in GEF land degradation projects14
2.15	GEF target allocations by focal area and SGP funding since GEF-315
2.16	Land degradation drivers cited as major objectives in 25 sample project documents 17
2.17	Land degradation drivers discussed in 25 sample project documents17

iv

2.18	Performance ratings for land degradation focal area projects
2.19	Land degradation focal area projects with satisfactory/likely performance and sustainability ratings by region
2.20	Percentage of land degradation focal area projects with sustainability ratings of moderately likely or above
2.21	Average project outcome and sustainability ratings for all land degradation projects by total project investment amount
2.22	Increase in vegetation productivity in Madhya Pradesh child project: time-series plot and vegetation productivity maps
2.23	Average estimated differences in rate of total forest loss at GEF intervention versus control locations
2.24	Average estimated differences in increased vegetation productivity at GEF intervention versus control locations

Average estimated differences in reduced forest fragmentation at GEF intervention versus control locations
Average estimate differences for key factors at GEF intervention versus control locations 25
les
Expected direct and indirect benefits tracked in eligible land degradation focal area projects

2.2	Number of tracking tool indicators for land	
	degradation projects by GEF replenishment	
	period	14

Foreword

uring the first decade of the Global Environment Facility (GEF), land degradation was viewed as a "linkage activity" that cut across its climate change, biodiversity, and international waters focal areas. Land degradation was established as a separate GEF focal area during the third GEF replenishment in 2002, leading to immediate allocation of resources to directly combat the challenges associated with this global issue. The next few GEF periods had more integrated regional or multicountry projects, with expansion into the programmatic and multifocal area approaches, and the recent launch of integrated approach pilots during GEF-6. The GEF Assembly declared the GEE a financial mechanism for the United Nations Convention to Combat Desertification (UNCCD) in May 2010.

This study is the first comprehensive evaluation conducted by the GEF Independent Evaluation Office to assess GEF support to activities focused on addressing land degradation. Stand-alone evaluations of GEF support to the land degradation focal area had not been conducted previously either by the Office or any other agency. The study's purpose was to inform the GEF-7 replenishment process by evaluating the focal area since GEF-3. The study derived evidence from a wide range of sources, using innovative methods such as geospatial techniques and value for money analysis alongside traditional evaluation methods. Sources of evidence include document reviews, key informant interviews, portfolio analysis of 618 projects, value for money analysis, review of completed projects, and a case study. Staff from the GEF Secretariat, the GEF Agencies, and the GEF Scientific and Technical Advisory Panel as well as GEF Council members provided expert inputs and technical feedback.

The study was presented to the GEF's 51st Council meeting in October 2016 as part of the Office's Semi-Annual Evaluation Report. The Council noted that similar value for money analysis in other evaluations of GEF focal areas would make a strong case for a robust replenishment. The findings of this study also contributed to the GEF report to the UNCCD's 13th session of the Conference of the Parties (COP13) and side events in Ordos, China.

Juha I. Uitto Director, GEF Independent Evaluation Office

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This evaluation was led by Anupam Anand, Evaluation Officer with the Independent Evaluation Office (IEO) of the Global Environment Facility (GEF). The core evaluation team members were Sara El Choufi, Evaluation Analyst, and Maximilian Ashwill, Consultant. A team led by Daniel Runfola, from AidData at the College of William and Mary, contributed to the value for money analysis. Min Feng, Consultant, helped with the satellite data analysis. Peixuan Zhou, Evaluation Analyst, and Qijin Wu, Consultant, helped with the portfolio analysis.

The evaluation benefited from guidance and oversight provided by Juha Uitto, Director of the IEO. Supervision and quality control were provided by Geeta Batra, IEO Chief Evaluation Officer. Administrative support was provided by Evelyn Chihuguyu, Program Assistant; Malac Kabir, Research Assistant; and Marie-Constance Manuella Koukoui, Senior Executive Assistant. Charles Hagner edited the report, and Nita Congress handled design and layout. The team is grateful for the information, data, and insights provided by the United Nations Convention to Combat Desertification Secretariat, the GEF Secretariat, and all the GEF Agencies. The team is also deeply thankful to the GEF focal points, national and local government staff, civil society organizations, communities, and other stakeholders whose logistical support and information provided during the case study missions were critical to the success of this evaluation. The team acknowledges the support provided by the Norwegian Agency for Development Cooperation (NORAD) to develop the value for money approach.

The GEF IEO is grateful to all of these individuals and institutions for their contributions. Final responsibility for this report remains firmly with the Office.

Abbreviations

FSP	full-size project
GEF	Global Environment Facility
IAP	integrated approach pilot
IEO	Independent Evaluation Office
LDN	land degradation neutrality
M&E	monitoring and evaluation
MSP	medium-size project
NDVI	Normalized Difference Vegetation Index
PMIS	Project Management Information System

SDG	Sustainable Development Goal			
SGP	Small Grants Programme			
SLEM-CPP	Sustainable Land and Ecosystem Management Country Partnership Program			
SLM	sustainable land management			
UNCCD	United Nations Convention to Combat Desertification			
UNDP	United Nations Development Programme			

The GEF replenishment periods are as follows: pilot phase: 1991–94; GEF-1: 1995–98; GEF-2: 1999–2002; GEF-3: 2003–06; GEF-4: 2006–10; GEF-5: 2010–14; GEF-6: 2014–18; GEF-7: 2018–22.

All dollar amounts are U.S. dollars unless otherwise indicated.

Executive summary

he land degradation focal area, established during the Global Environment Facility's (GEF's) third replenishment period as a separate focal area, currently combines the principles of landscape approach and integrated ecosystem management to maximize the global environmental benefits of combating land degradation. The purpose of this study, as part of the Sixth Comprehensive Evaluation of the GEF (OPS6), is to inform the GEF-7 replenishment process based on the evidence from an analysis of 618 land degradation focal area projects or multifocal area projects with a land degradation component, terminal evaluations, review of the results frameworks of completed projects, key informant interviews, and a case study. This focal area study is the first stand-alone study undertaken by the GEF's Independent Evaluation Office (IEO) to assess the relevance and effectiveness of the GEF land degradation focal area. It presents the following key themes: (1) the relevance of the Land Degradation Focal Area Strategies, (2) the land degradation focal area portfolio, and (3) the performance, including monitoring and evaluation (M&E), of completed projects. The study concludes with recommendations for consideration

Findings

STRATEGIC FOCUS

The GEF land degradation focal area has evolved through the GEF-3, GEF-4, GEF-5, and GEF-6

replenishment periods to remain relevant, closely reflecting convention guidance and, more recently, expanding to include the new ambition toward achieving land degradation neutrality (LDN). Viewed as a "linkage activity" in the first decade of the GEF, land degradation emerged as a single focal area during GEF-3 and has been gradually moving toward integrated approaches aiming to deliver global environmental benefits in multiple focal areas while generating local environmental and development benefits.

The GEF's Land Degradation Focal Area Strategies have responded well to United Nations Convention to Combat Desertification (UNCCD) global priorities, including its focus on combating desertification in Africa and the emphasis on drylands. In addition, the GEF's support for tackling land degradation since its early replenishment periods (GEF IEO 2005) has also strived both to achieve geographical balance and to include non-dryland areas. During the 12th Conference of the Parties to the UNCCD, the LDN framework expanded its scope from drylands to include global lands (Safriel 2017). The GEF's mandate to address unsustainable land management practices and degradation issues has been much broader in scope and driven by country priorities and needs.

PORTFOLIO

Move toward multifocal area projects. Since the launch of the focal area in GEF-3 and as of April

2017, the time of this analysis, there have been 618 land degradation projects or multifocal area projects with a land degradation component, amounting to a total of \$3.364 billion in financing—\$3.046 billion in project grants (including project preparation grants) and \$318.6 million in Agency fees. Of these 618 projects, 42 percent are classified solely as land degradation projects, and 58 percent are classified as multifocal area projects with a land degradation component.¹ Ninety-eight projects (16 percent) have been completed, 135 (22 percent) are under implementation, and the rest are at various stages in the approval process. Excluding Agency fees, a total of \$689 million has been approved for land deqradation focal area-only projects, and another \$2.35 billion has been approved for multifocal area projects.

Regional focus. Africa has the highest share of land degradation focal area projects in the portfolio, with \$1.12 billion or 37 percent of financing, followed by Latin America and the Caribbean, with \$674 million or 24 percent of financing, and then Asia, with \$528 million or 17 percent of financing. In fact, the Africa region receives fewer GEF resources than Asia or regional projects but by far the most land degradation focal area resources.

Cofinancing. On average, for every GEF dollar spent on land degradation projects, another \$6.70 in cofinancing is acquired. The overall cofinancing for land degradation stand-alone projects is lower, \$6 to \$1. GEF average cofinancing has improved from \$5.50 to \$1 during GEF-4 to \$7.50 to \$1 during GEF-6. Shift toward integrated landscapes. Land degradation focal area projects most frequently focus on forest and agricultural lands. Rangelands are also a common focus of land degradation stand-alone projects. Agricultural lands, rangelands, degraded productive lands, and desert lands are the most frequent land type focus areas for land degradation stand-alone projects. Urban lands are the least frequent land focus of land degradation focal area projects. Between GEF-3 and GEF-5, forest lands, agricultural lands, and water bodies have declined as a focus of land deqradation focal area projects. Although forest lands saw a 35 percent decline, the focus shifted to more holistic integrated landscapes, with an almost 30 percent increase over that time frame.

While new projects in the GEF-6 pipeline have increased their focus on responding to LDN targets through both sustainable land management (SLM) and restoration activities, about three-quarters of land degradation focal area projects do not include a restoration component. When land restoration does occur, it is twice as likely to be for forested lands or other natural ecosystems. One in 10 land degradation focal area projects includes a component to restore productive lands that are degraded.

Tracking. The new and improved version of the tracking tool began only in GEF-5 and as such has not tracked results for any completed projects from GEF-3 and GEF-4 and has tracked only one project that has reached a midterm review. The tracking tool has been simplified from its original cumbersome version to a more practical form, but tracking can still be difficult for multifocal area projects, which require project managers to complete separate tracking tools for each focal area. The Integrated Approach Pilots, the Amazon Sustainable Landscapes Program, the Restoration Initiative, and the Illegal Wildlife Trade Program have their own tracking tools.

¹An additional 34 projects were identified as multifocal area, but it was not clear in the Project Management Information System if they included a land degradation component.

RELEVANCE

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Overall, the land degradation focal area has helped the GEF achieve its mandate of creating global environmental benefits. Land degradation focal area investments have led to positive impacts on UNCCD targets—specifically, increasing vegetation productivity and carbon sequestration and reducing forest loss and forest fragmentation besides generating additional benefits for the biodiversity and climate change focal areas.

The land degradation focal area is responding to UNCCD efforts to achieve LDN. The UNCCD, in line with the sustainable development goals, has made a major shift in focus toward achieving LDN by maintaining and improving the productivity of land resources through SLM practices, and restoring productive lands that have been degraded. Even though the focal area has maintained a relevant focus on SLM activities critical for maintaining and improving land productivity, this study found that 10 percent of land degradation focal area projects work on restoring degraded productive lands.

The land degradation focal area is highly relevant to country needs in all regions, particularly in Africa. The focal area has the largest number of projects and funding in Africa. An analysis of the GEF Small Grants Programme, which allocates small donations to civil society organizations, shows that demand for land degradation focal area projects is much higher than actual GEF funding would suggest. Currently, the land degradation focal area receives the least resources of all five GEF focal areas but is the second most demanded focal area among civil society organizations in the Small Grants Programme.

PERFORMANCE

Effectiveness. The land degradation focal area is effective in producing global environmental

benefits, though results varied across regions. A geospatial impact analysis and value-for-money analysis show that there have been important reductions in fragmentation and forest loss and an increase in vegetation productivity and carbon sequestration. The value-for-money analysis reveals three pertinent findings on project effectiveness:

- A lag time of 4.5–5.5 years was an important inflection point at which impacts were observed to be larger in magnitude.
- Projects with access to electricity tend to have some of the largest relative positive impacts. This may be due to better infrastructure and access to energy sources for irrigation.
- The initial state of the environment is a key driver in GEF impacts, with GEF projects tending to have a larger impact in areas with poorer initial conditions.

Analysis of land degradation focal area projects in the 2016 Annual Performance Report database showed that the portfolio was rated satisfactorily on outcomes, sustainability, M&E design and implementation, implementation quality, and execution quality. Land degradation focal area projects have slightly higher M&E design ratings than the GEF average: 63 percent of land degradation focal area projects were rated satisfactory, compared to 61 percent of non–land degradation focal area projects.

Multistakeholder partnerships and local participation. Sustainable land and ecosystem management case study analysis shows that effective multistakeholder partnerships between government agencies and civil society, private sector, and grassroots organizations, and prioritizing the participation of local stakeholders play a critical role in addressing policy issues such as land tenure rights, and environmental issues such soil erosion and the loss of land productivity at the local level, and in generating environmental and socioeconomic benefits that are sustainable.

Income generation and livelihood security.

Income generation and livelihood security through land degradation focal area initiatives offered the greatest motivation for people to adopt SLM practices and subsequently influenced their decision to migrate. Case study analysis and beneficiary surveys show that project activities that focus on improving income and market access and the productive capabilities of project beneficiaries improve both environmental and socioeconomic outcomes and influence people's decision not to migrate to urban areas.

Climate risks. Addressing climate risks is imperative to realize the full potential of achieving global environmental benefits. Case study analysis in India demonstrates that variability in weather and extreme events, such as droughts, were not given due consideration in designing some of the agriculture-based livelihood activities. While the projects did generate environmental and socioeconomic benefits through SLM practices, beneficiaries raised concerns regarding their knowledge, adaptive capacity, and the suitability of the ongoing practices to cope with climate-related shocks. These gaps at the local level, if unaddressed, could potentially limit the realization of the global environmental benefits through land degradation focal area initiatives.

Recommendations

Implement LDN with an appropriate mix of interventions. While being cognizant of cost-effectiveness, context, and country priorities, the land degradation focal area should also consider restoration activities along with SLM. SLM practices are intended to help avoid and reduce land degradation, while ecosystem restoration will help reverse the process. Newer projects in GEF-6 increasingly focus on achieving LDN targets and therefore would benefit from distinguishing between the two complementary pathways—SLM and ecosystem restoration—to be able to measure progress toward the LDN targets.

Give due consideration to complex contextual factors within an integrated approach framework. While the land degradation focal area's strategic focus has appropriately moved toward integrated approaches, complex contextual factors—including drought, food insecurity, and migration—should be given due consideration during project design. The focal area is highly relevant to areas with land degradation, including Africa, particularly with its distressed emigration hotspots. While neither land degradation nor drought is the primary driver, both increase food insecurity and vulnerability and therefore may exacerbate the risk of conflict or migration.

Assess climate risks to land degradation focal area initiatives, and design adaptive management responses to such risks. Unsustainable land management practices, which the GEF Land Degradation Focal Area Strategies aim to ameliorate, have a direct and clear linkage to climate change. The effects of climate change are likely to affect many land-based activities, including ecosystem functions and services. Broader application of the Resilience Adaptation and Transformation Assessment framework is encouraged.

Strengthen M&E tools and methods of knowledge dissemination. The development and continued improvement of the tracking tool is a step in the right direction but will be inadequate to assess project impacts in the long run. The tracking tools should include additional biophysical indicators, increasingly available through geospatial data, to set baselines and measure progress of land productivity to track both global environmental benefits and LDN targets. Precise geospatial information on project locations is imperative for carrying out accurate M&E of land degradation projects. The land degradation focal area should consider integrating the indicators proposed by the UNCCD's LDN framework. The benefits and impacts of sustained SLM practices and restoration measures are not fully accounted for in the current M&E system. Recognition, therefore, should be given to the fact that it might be necessary to set a sufficiently longer time frame in monitoring projects striving to achieve LDN.

1: Introduction

1.1 Objectives, methodology, and context

The Land Degradation Focal Area Strategy of the Global Environment Facility (GEF) currently combines the principles of sustainable land management (SLM) and integrated natural resource management to maximize the global environmental benefits of combating land degradation.¹ During GEF-1 and GEF-2, land degradation was viewed as a "linkage activity" that cut across the focal areas on climate change, biodiversity, and international waters. However, in GEF-3, the GEF mandate was expanded to include land deqradation as a new focal area on the basis of the Millennium Ecosystem Assessment's recommendation for investment in the prevention and control of land degradation in production landscapes. In 2010, the GEF began serving as the financial mechanism of the United Nations Convention to Combat Desertification (UNCCD).

Previous studies on the GEF land degradation investments include progress toward impact studies, country portfolio evaluation reports, focal area strategy evaluations, GEF Small Grants Programme (SGP) evaluations, and annual monitoring reports. Findings from these studies point to the GEF's responsiveness to UNCCD guidance both at the strategic and portfolio levels (GEF IEO 2013), to the high demand for GEF support in combating land degradation and insufficient funding (GEF IEO 2008), and consideration to the time frame in measuring the impact of land degradation projects (GEF IEO 2010).

Neither the GEF's Independent Evaluation Office (IEO) nor any other Agencies have conducted previous stand-alone evaluations of GEF support to the land degradation focal area. This evaluation is the first comprehensive study carried out by the IEO assessing GEF support of activities focused on addressing land degradation.

The purpose of this study is to inform the GEF-7 replenishment process by evaluating the GEF's land degradation focal area based on the evidence gathered through the review of available documentation, portfolio analysis, a case study, and analysis of the relevance and effectiveness of the land degradation focal area since GEF-3. The study has the following objectives:

 Assess the Land Degradation Focal Area Strategy

¹According to the World Bank (2008), "Sustainable land management is a knowledge-based procedure that helps integrate land, water, biodiversity, and environmental management (including input and output externalities) to meet rising food and fiber demands while sustaining ecosystem services and livelihoods." Sayer and Campbell (2004) define integrated natural resource management as "a conscious process of incorporating the multiple aspects of resource use into a system of sustainable management to meet the goals of resource users, managers and other stakeholders (e.g. production, food security, profitability, risk aversion and sustainability goals)."

2

- Analyze the land degradation focal area portfolio and present trends
- Assess the performance of completed land degradation focal area projects
- Present recommendations for GEF-7

This study draws on document reviews, key informant interviews, a portfolio analysis of 618 land degradation focal area projects based on the GEF's Project Management Information System (PMIS), a review of completed projects to assess performance, and a case study to assess progress toward impact. The case study comprises two completed multifocal area projects with land degradation components and was complemented by field visits and interviews at the project sites (see <u>annex B</u> for a complete list of interviewees). A mobile phone application based on Open Data Kit was piloted to collect perspectives from 80 percent of the project beneficiaries at one site.

The study also includes a value-for-money (VFM) analysis carried out by the GEF IEO to understand the effectiveness of GEF investments in land degradation projects. In addition, the study also includes the preliminary results of the portfolio monitoring and assessment tool that was carried out by the GEF Secretariat, commonly known as the tracking tool used for land degradation focal area projects since GEF-5.

1.2 Evolution of the Land Degradation Focal Area Strategy

The GEF Land Degradation Focal Area Strategy has evolved through the GEF periods to remain relevant. Land degradation was designated as a separate focal area during GEF-3. Over the years, it has gradually been moving toward integrated approaches aimed at delivering global environmental benefits in multiple focal areas while generating local environmental and development benefits (figure 1.1).

GEF-1 AND GEF-2

From the GEF's inception in 1991 until GEF-3, land degradation was viewed as a "linkage activity" that cut across the climate change, biodiversity, and international waters focal areas. A 2001 analysis (Berry and Olson 2001) showed that almost 70 percent of the projects with a strong land degradation component fell within the biodiversity focal area. The other 30 percent of these projects belonged to the climate change mitigation and international waters focal areas, 15 percent for each.

The 2001 analysis showed that land degradation was not as strong a component as previously thought and that "the number of land degradation projects and financial allocation to land degradation have not increased in recent years." Also most of the land degradation components focused on, or near, protected conservation areas. The study concluded, "In general, the large majority of current projects identified as land degradation linkage projects have been designed to address the (other) focal areas as a first priority and only in some cases has land degradation mitigation been a priority."

GEF-3

During GEF-3, land degradation was established as a separate focal area. This was important for two reasons. First, it meant there was an immediate allocation of resources to combat land degradation challenges directly. According to the SLM primer for GEF-6 (GEF 2015a), this led to the formulation of 158 projects with land degradation components, totaling \$644 million. Second, it approved a separate \$250 million for projects under the new land degradation focal area. Together, this led to the development of 180 land degradation-related projects, more than twice as many as had existed until then. At the close of GEF-3, SLM investment was nearly \$400 million and generated \$1.08 billion in cofinancing.

GEF-1 and 2	GEF-3	GEF-4	GEF-5	GEF-6		
Operational p	rograms (OPs)	Land degradation focal area strategies				
OP12: Integrated Ecosystem Management Synergy between three GEF focal areas (biodiversity, climate change, and international waters) and land degradation to optimize multiple benefits through integrated approaches	OP15: Sustainable Land Management (SLM) • SLM practice • Capacity building • On-the-ground investments • Targeted research at the community, national, and/or transboundary levels	Objective 1: To develop an enabling environment that will place SLM in the mainstream of development policy and practices at the regional, national, and local levels OP15 Strategic Program (SP)-1: Sustainable agriculture and rangeland management SP-2: Forest management in production landscapes Objective 2: To upscale SLM investments that generate mutual benefits for the global environment and local livelihoods SP-3: Investing in innovative approaches in SLM	LD-1: Maintain or improve flow of agro-ecosystem services to sustaining livelihoods SP-1	LD-1: Maintain or improve flow of agro- ecosystem services to sustain food production and livelihoods Program 1: Agro-ecological Intensification Program 2: SLM for climate-smart agriculture SP-1 LD-2: Generate sustainable flows of ecosystem services from forests, including in drylands Program 3: Landscape management and restoration SP-2 LD-3: Reduce pressures on natural resources by managing competing land uses in broader landscapes Program 4: Scaling- up sustainable land management through the Landscape Approach LD-4: Maximize transformational impac through mainstreaming of SLM for agro- ecosystem services Program 5: Mainstream- ing SLM in development DI 02 SP-3		

FIGURE 1.1 Evolution of GEF Land Degradation Focal Area Strategy

GEF-4

Starting in 2006, during the GEF's fourth replenishment period, the land degradation focal area was expanded in two ways. First, there was a shift from designing land degradation projects solely at the national level to more regional or multicountry projects. Second, rather than focusing on single-tranche, stand-alone land degradation projects, the land degradation focal area expanded into programmatic approaches. Specifically, 61 percent of the \$340 million GEF-4 allocation to land degradation was invested in three large-scale programmatic approaches to SLM. The total GEF-4 allocation saw a doubling in cofinancing from GEF-3 to \$2.3 billion.

GEF-5

4

GEF-5 saw similar allocations as GEF-4, but with some structural changes. Overall, the GEF-5 land degradation focal area allocation was \$385 million, with \$2 billion in cofinancing. However, this was the first time that the land degradation focal area functioned as one of the financing mechanisms for the UNCCD, along with the UNCCD's Global Mechanism. The land degradation focal area is directly linked to the UNCCD's 10-year strategy, which concludes in 2018. The UNCCD aims to reverse and prevent desertification and land degradation and to support poverty reduction and environmental sustainability.

During GEF-5, a new system of resource allocation was applied to the land degradation focal area. For the first time, most land degradation focal area resources were allocated using the System for a Transparent Allocation of Resources, which is based on a set of indexes. These include the GEF performance index, the gross domestic product index, and the GEF benefits index. The GEF benefits index for the land degradation focal area has three indicators: the area affected by land degradation, the total dryland area, and the vulnerable population affected. Basing resource allocation on measurable indexes improves transparency and flexibility and ensures synergies with focal area objectives, since a smaller portion of land degradation focal area resources are allocated as set-aside funds. These funds are used to support the focal area through (1) UNCCD enabling activities. (2) incentive mechanisms for sustainable forest management programs and the integrated approach pilot (IAP) Fostering Sustainability and Resilience of Product Systems in Sub-Saharan Africa, and (3) global initiatives to foster regional integration and knowledge sharing and transfer to advance SLM globally.

GEF-6

GEF-6 has trended toward using a multifocal area approach project design. In practice, a multifocal area approach implements projects that are designed to achieve objectives in two or more of the focal areas. Land degradation focal area resources have steadily moved toward a multifocal area approach. To further highlight this trend, GEF-6 introduced three IAPs, one of which, Fostering Sustainability and Resilience for Food Security in Sub-Saharan Africa, is focused on land degradation in Africa. Generally, these integrated pilots aim to generate global environmental benefits by promoting local development benefits. More specifically, an IAP is intended to target the entire supply chain to improve productive systems. This goes beyond reducing land degradation acreage and extends into areas such as improved market access, policy reforms, private sector engagement, and knowledge generation to promote sustainability and resilience in food value chains.

The GEF-6 Land Degradation Focal Area Strategy is responding to the framework of land degradation neutrality (LDN). The UNCCD's Intergovernmental Working Group defines LDN as "a state whereby the amount of healthy and productive land resources, necessary to support ecosystem services, remains stable or increases within specified temporal and spatial scales." The benefit of LDN is that it allows nations to manage their own trade-offs between biological and economic productivity through voluntary commitments to achieve the LDN target. In 2012, LDN was designated as a priority at the United Nations Conference on Sustainable Development, or Rio+20. The UNCCD also made LDN a priority by including LDN targets in the new Sustainable Development Goals (SDGs) (target 15.3). In fact, LDN has become the UNCCD's chief mandate.

5

The land degradation focal area has responded to this development and the guidance to the convention. The GEF-6 strategy was approved prior to the formal release of the Scientific Conceptual Framework for Land Degradation Neutrality. However, during the later part of GEF-6, land degradation focal area project identification forms (PIFs) submitted by countries with voluntary LDN targets require linkages between project activities and how those activities bolster LDN targets. As part of GEF-6, more projects are increasingly recognizing LDN as a major component of their project design. For example, a full-size project (FSP) for combating land degradation in the mountain landscapes of Lebanon seeks to achieve LDN through integrated landscape management.

The land degradation focal area has steadily expanded the number of Agencies it partners with on land degradation or land degradation-related projects. The number of lead Agencies on land degradation focal area projects or multifocal area projects with a land degradation component has doubled since GEF-3. This allows for a broader spectrum of institutions with a broader set of mandates to combat land degradation in ways specific to those institutions.

2: Findings

2.1 Portfolio

As of April 2017, there were 618 land degradation projects or multifocal area projects with a land degradation component since GEF-3 (figure 2.1a). Of these, 42 percent (259 projects) are classified solely as land degradation projects, and 58 percent (359 projects) are classified as multifocal area projects with a land degradation element. Of the 618 projects, 98 (16 percent) have been completed,¹ 135 (22 percent) are currently under implementation, and 196 (32 percent) have completed their GEF approval process and are ready to start implementation,² while the remaining 187 projects (30 percent) are at various stages of the design and approval process.³ A total of \$689 million has been approved for land degradation focal area stand-alone projects. Another \$2.35 billion has been approved for land degradation multifocal area projects, but not all of these

funds come from land degradation focal area replenishments⁴ (figure 2.1b).

The land degradation focal area portfolio has 428 (69 percent) FSPs, accounting for \$2.923 billion (96 percent of total funding); 144 projects (23 percent), accounting for \$113.6 million (4 percent of total funding) are medium-size projects (MSPs); and 46 (7 percent) are enabling activity projects, with financing of less than \$150,000 each. A slight majority of land degradation stand-alone projects are MSPs (111 versus 102 FSPs), while the majority of multifocal area projects with a land degradation component are FSPs (326 versus 33 MSPs).

BY REPLENISHMENT PERIOD

Most land degradation-related projects were approved during GEF-5 (figure 2.1),⁵ but GEF-6 already has a higher amount of approved grants than any other replenishment period. This is largely because of the increased focus on multifocal area projects, which utilize resources from multiple focal areas, not just the land degradation focal area. Eleven percent of GEF-5 projects are

¹With the exception of one GEF-5 project, all completed projects were initiated during GEF-3 and GEF-4.

² Projects that have been approved or endorsed by the Chief Executive Officer are considered to have completed their GEF approval process and are ready to start implementation.

³ Projects that either have been approved by the Council (but still need Chief Executive Officer approval) or are still in the pipeline (at the project preparation grant stage or awaiting work program inclusion).

⁴ It is unclear from the GEF PMIS how many of these multifocal area funds come from land degradation focal area replenishments. Also note that financing excludes Agency fees to account only for money gone to actual projects.

⁵Note that two more years still remain for the GEF-6 replenishment, so the figures do not represent the final GEF-6 tallies.

1,292

GEF-6

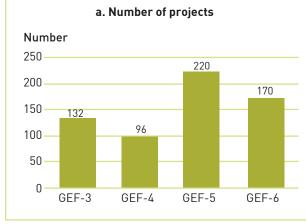


FIGURE 2.1 Number of and GEF grant amounts for land degradation-related projects, by GEF replenishment period

Million \$

1.000

800

400

0

351

GEF-3

SOURCE: GEF PMIS, as of April 2017.

NOTE: GEF grant amounts exclude Agency fees.

under implementation; 69 percent are approved/ endorsed and ready to start implementation; and 20 percent are at various stages of the approval process. At the time of this evaluation, GEF-6 included 170 projects (28 percent of the total portfolio and 42 percent of the funding), 42 of which (accounting for \$277 million) are approved and ready to start implementation, while the remaining are still in the pipeline. Figure 2.2 shows the number of land degradation stand-alone projects and the number of multifocal area projects with land degradation components, and the latter far exceeds the number of stand-alone projects. Funding is also greatly skewed toward multifocal area projects that include funds from several focal areas, where approximately 24 percent of the funding is coming from the land degradation focal area allocation for land degradation components (figure 2.3).

b. Total GEF grant

471

GEF-4

931

GEF-5

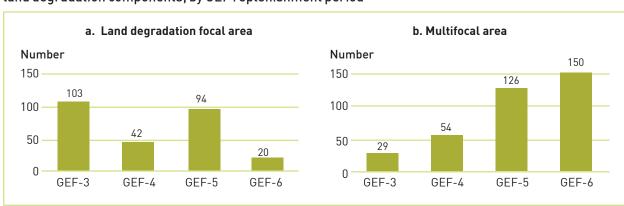
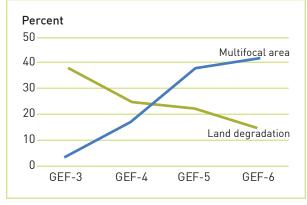


FIGURE 2.2 Number of projects in the land degradation focal area and multifocal area projects with land degradation components, by GEF replenishment period

SOURCE: GEF PMIS, as of April 2017.

FIGURE 2.3 Percentage of funding from focal area allocation for land degradation-only versus multifocal area projects



SOURCE: GEF PMIS, as of April 2017.

BY FUNDING MODALITY

The GEF provides funding through four basic modalities: FSPs, MSPs, enabling activities, and programmatic approaches. There are 428 (69 percent) land degradation FSPs, accounting for \$2.923 billion (96 percent of total funding); 144 projects (23 percent), amounting to \$113.6 million (4 percent of total funding), are MSPs; and 46 (7 percent) are enabling activity projects, usually worth less than \$150,000 for each participating country.

A slight majority of land degradation stand-alone projects are MSPs (111 versus 102 FSPs), while the majority of multifocal area projects with a land degradation component are FSPs (326 versus 33 MSPs) (figure 2.4). Multifocal area FSPs exceed land degradation stand-alone FSPs in terms of number and financing. On average, a multifocal area project with a land degradation component has an investment of \$6.56 million (the average land degradation contribution to a multifocal area project is \$1.5 million), while a land degradation stand-alone project has an investment of \$2.66 million. This would explain the discrepancy between the total approved grant amounts for multifocal area projects with land degradation components and land degradation stand-alone

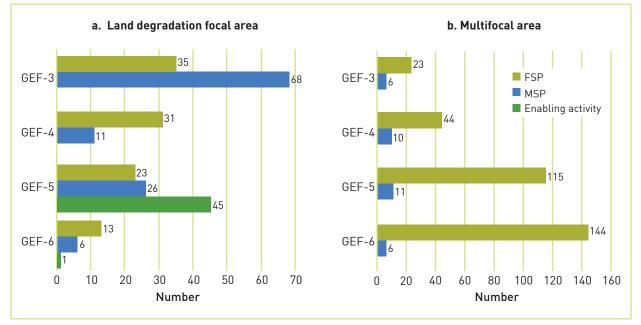


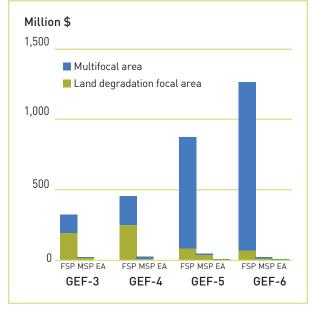
FIGURE 2.4 Number of projects in the land degradation focal area and multifocal area projects with land degradation components, by GEF replenishment period and project modality

SOURCE: GEF PMIS, as of April 2017.:

9

projects (figure 2.5). It also demonstrates the clear trend of the land degradation focal area toward a multifocal area approach.

FIGURE 2.5 GEF grants to land degradation projects, by GEF replenishment period, modality, and focal area



SOURCE: GEF PMIS, as of April 2017.

NOTE: EA = enabling activity. Figures exclude Agency fees.

All enabling activities are land degradation stand-alone projects. Forty-five of the 46 enabling activity projects are worth \$150,000 or less each and are generally used to help countries comply with UNCCD targets. At the time of this analysis, the only enabling activity approved in GEF-6 is being used to support the UNCCD in setting global LDN targets and is worth \$2.8 million.

BY GEOGRAPHIC COVERAGE

The land degradation focal area operates in all developing regions of the world (figure 2.6), but the majority of projects and funding goes to Africa. Africa has the highest share of land degradation focal area projects in the portfolio, with \$1.12 billion or 37 percent of financing (220 projects or 36 percent), followed by Latin America and the Caribbean, with \$674 million or 24 percent of financing (121 projects or 20 percent), and Asia, with \$528 million or 17 percent of financing (142 projects or 23 percent). In fact, the Africa region receives fewer GEF resources than projects in Asia but by far the most land degradation focal area resources (figure 2.7). There are 40 percent

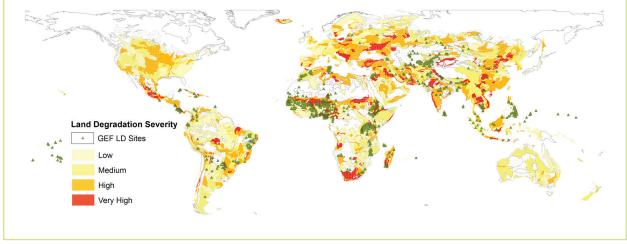
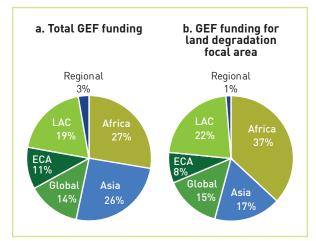


FIGURE 2.6 Location of land degradation focal area projects

SOURCE: Adapted from UNEP 2017.

FIGURE 2.7 Regional distribution of total GEF funding and GEF funding for the land degradation focal area



SOURCE: GEF PMIS, as of April 2017.

NOTE: ECA = Europe and Central Asia; LAC = Latin America and the Caribbean.

more land degradation focal area projects in Africa than in Latin America and the Caribbean, which has the second highest number.

National projects make up a majority of land degradation focal area projects in the portfolio.

Eighty-four percent of all projects, accounting for 67 percent of land degradation focal area project financing, are national projects, while 16 percent of projects, accounting for 33 percent of project financing, are regional/global projects. India, Mexico, Brazil, Indonesia, and China received the majority of land degradation financing (excluding regional and global projects) (figure 2.8a).

India has the largest amount of funding, as it includes the large programmatic grant, the Sustainable Land and Ecosystem Management Country Partnership Program (SLEM-CPP). However, when looking at the countries with the most land degradation stand-alone projects, six of the top eight are in Africa, as are the projects with the most amounts of funding (figure 2.8b).

BY GEF AGENCY

The United Nations Development Programme (UNDP) is implementing the most land degradation-related projects (245 projects or 40 percent, and \$977 million financing or 32 percent), followed by the World Bank, with 17 percent of projects

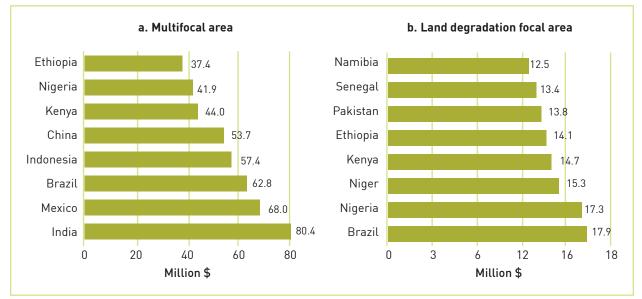


FIGURE 2.8 Top eight country recipients of GEF grants for national land degradation projects

SOURCE: GEF PMIS, as of April 2017.

(103 projects) and 22 percent (\$664 million) of financing (figure 2.9). The World Bank and UNDP have the longest experience working with the GEF on SLM projects. The United Nations Environment Programme has 97 projects, compared to 103 World Bank projects, but its grant amounts are a much smaller part of the total (\$239 million or 8 percent).

Newly accredited GEF Agencies have a total of 19 projects (3 percent) and \$59 million (2 percent).

BY LAND TYPE

Land degradation focal area projects most frequently focus on forest and agricultural lands. Rangelands are also a common focus of land degradation stand-alone projects. Agricultural lands, rangelands, degraded productive lands, and desert lands are the most frequent land type focuses for land degradation stand-alone projects. The focus on water bodies is more relevant to the international waters focal area, though several of the international waters multifocal area projects include land degradation components. Predictably, urban lands are the least frequent land focus of land degradation focal area projects. This shows the diversity of land cover types that land degradation focal area projects cover within the production landscapes.

Forest lands, agricultural lands, and water bodies have declined as a focus in land degradation focal area projects. In particular, forest lands saw a 35 percent decline in project focus from GEF-3 to GEF-5. By contrast, the focus on integrated landscapes has increased by almost 30 percent. This reflects the GEF's strategic decision to pursue more integrated approaches to SLM.

COFINANCING

On average, for every dollar the GEF spends on land degradation projects, another \$6.70 in cofinancing is acquired. The overall cofinancing for land degradation stand-alone projects is lower, \$6 to \$1. The GEF average cofinancing has improved from \$5.50 to \$1 during GEF-4 to \$7.50 to \$1 during GEF-6. Cofinancing for land degradation focal area projects has increased since GEF-3 (figure 2.10).

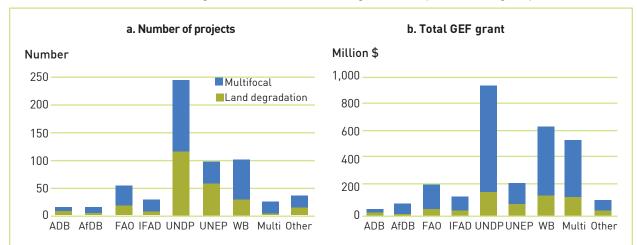


FIGURE 2.9 Number of and GEF grant amounts for land degradation by lead GEF Agency

SOURCE: GEF PMIS, as of April 2017.

NOTE: ADB = Asian Development Bank; AfDB = African Development Bank; FAO = Food and Agriculture Organization of the United Nations; IFAD = International Fund for Agricultural Development; UNEP = United Nations Environment Programme; WB = World Bank. GEF grant amounts exclude Agency fees.

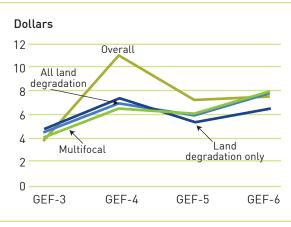


FIGURE 2.10 Cofinancing for land degradation projects for every \$1 from the GEF

SOURCE: GEF PMIS, as of April 2017.

Every \$1 of GEF funds in programs is leveraged by \$11.50 in cofinancing.

GEF cofinancing by government has increased from 38 percent during GEF-3 to 54 percent during GEF-6. While cofinancing by the private sector remains low, with 1 percent in GEF-3 and 3 percent in GEF-6, cofinancing by multilateral Agencies has decreased over time (figure 2.11).

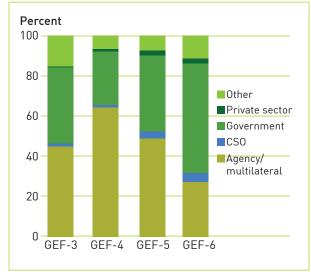


FIGURE 2.11 Cofinancing by organization type

SOURCE: GEF PMIS, as of April 2017.

EXPECTED RESULTS FROM THE MONITORING SYSTEM

To monitor the global environmental benefits of land degradation focal area projects, implementing Agencies are required to complete the portfolio monitoring and assessment tool, commonly known as the tracking tool. The tool helps report outcomes to the UNCCD and enhances the accountability of the land degradation focal area. The tracking tool began for land degradation focal area projects only in GEF-5. This includes tracking of 109 full- and medium-size land degradation focal area – only projects (37 projects) and multifocal area projects with land degradation components (72 projects). Only one of these has reached the midterm reporting stage, and none has been completed.

The system reports the expected results from the portfolio. The land area covered by the 98 projects included in the tracking tool amounts to 620,000 km². Seventy-nine projects have 212.3 million potential beneficiaries, including over 100 million poor people. Ninety percent of potential land degradation focal area project beneficiaries live in rural areas. The remaining 10 percent live in urban or peri-urban locations. This implies that the average land degradation focal area project covers nearly 6,300 km² (about half the size of Jamaica) and potentially benefits about 2.7 million individuals. It should be noted, however, that this number reflects only potential beneficiaries, or people living in project areas, and does not capture the actual number of beneficiaries.

Lead implementing Agencies are also asked to calculate the system areas targeted by projects. Figure 2.12 shows the number of hectares of each landscape system targeted by the 94 reporting projects. Pastoral and rangeland systems are the largest targeted areas of land degradation focal area projects. Projects target less forest and

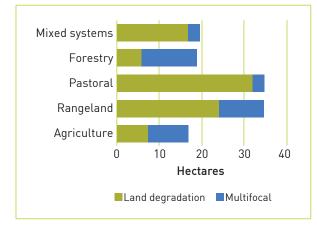


FIGURE 2.12 Types of land systems targeted by GEF land degradation projects, by area

SOURCE: GEF PMIS, as of April 2017.

agricultural system area. This is probably not a reflection of priorities but may be because individual rangelands and pastoral systems tend to be larger land areas in general than forest or agricultural land. Rangelands and pastoral systems are often used for livestock grazing and simply require a larger area to be productive.

The GEF tracking tool monitors the direct and indirect benefits expected over a project's lifetime, as shown in table 2.1. Based on the analysis of available tracking tool data, on average, a land degradation focal area project or a multifocal area project with land degradation components is expected to (1) produce 13,078 km² of vegetation cover. (2) avoid 4.3 million tons of carbon emissions, (3) sequester about 3 million tons of carbon, and (4) protect 4,807 km² of biodiversity habitat in productive systems. However, land degradation focal area-only projects are expected to generate fewer benefits than multifocal area projects in these areas. For example, a land degradation focal area stand-alone project is expected to produce 40 percent less vegetation cover on average than a comparable multifocal area project with a land degradation component. Similarly, land degradation focal area stand-alone projects are expected to avoid 57 percent fewer tons of carbon emissions, and to sequester 95 percent fewer tons of carbon than comparable multifocal area projects with a land degradation component. The reason is that multifocal area projects include other focal areas, such as climate change and biodiversity, which are focused more on improving these global environmental benefit indicators. The land degradation focal area, however, is also expected to produce more socioeconomic benefits—such as improved incomes, livelihoods, land productivity, and other local benefits (Foley et al. 2005; GEF STAP 2006)—which the tracking tool does not capture. At the same time, land degradation focal area-only projects protect 61 percent more biodiversity habitat in productive systems on average than multifocal area projects with a land degradation component. Also, considering

-			-	-				
			٦					
	Vegetative cover		Avoided em	issions	Carbon sequ	uestered	Habitat pr	otected
Project type	На	# of projects	Tons CO ₂ eq	# of projects	Tons CO ₂ eq	# of projects	Ha	# of projects
Land degradation	20,777,838	23	12,431,575	6	463,249	3	12,793,792	15
Multifocal with land degradation component	78,621,048	53	131,041,983	27	105,806,746	32	12,686,844	38
Total	99,398,886	76	143,473,558	33	106,269,995	35	25,480,636	53

TABLE 2.1 Expected direct and indirect benefits tracked in eligible land degradation focal area projects

14

that the allocation for a land degradation project is around \$2.6 million on average, while the average allocation for a multifocal area project with a land degradation component is \$1.5 million out of land degradation focal area, the multifocal area land degradation project is expected not only to generate more ecological benefits but also to provide greater returns for the investments.

The GEF has simplified the tracking tool. The number of required indicators for land degradation projects was reduced by 75 percent (from 239 to 61) for GEF-6. For multifocal area projects, the GEF still requires the tracking tool to be completed separately for each focal area component of the project (table 2.2).

TABLE 2.2 Number of tracking tool indicators forland degradation projects by GEF replenishmentperiod

Section	GEF-5 indicators	GEF-6 indicators
Project identification	6	6
Context	140	33
Global environmental benefits and development	16	8
Agriculture and rangelands	12	3
Forest management	18	4
Integrated land management	10	3
Knowledge management	37	4
Total	239	61

2.2 Relevance

The land degradation focal area is highly relevant to global land degradation challenges, strategic partners, the 2030 development agenda, and the objectives of the GEF land degradation focal area. The land degradation focal area acts as the main financial mechanism for the UNCCD. Both the UNCCD and the land degradation focal area were initially highly focused on combating desertification, especially in Africa, but, over time, both have evolved and are addressing a wider array of land degradation challenges in all regions.

Four strategic objectives were defined in GEF-6 for the land degradation focal area: sustaining food production and livelihoods, ecosystem services from forests, reducing pressure on natural resources from land use, and mainstreaming SLM for agro-ecosystem services. The objectives related to improving degraded ecosystems, improving the living conditions of people on degraded land, and producing global environmental benefits are highly aligned with three of the UNCCD's four strategic objectives: (1) improved living conditions of affected populations, (2) improved condition of affected ecosystems, and (3) generation of global benefits. However, the GEF does not use partnerships to mobilize resources for the UNCCD's fourth objective. (See annex E.) This is a role for the UNCCD's Global Mechanism.

Recently approved projects and projects in pipeline in GEF-6 have begun to focus on addressing LDN. Figure 2.13 shows that about three-quarters of land degradation focal area projects do not include a restoration component. When land restoration does occur, it is twice as likely to be for forested lands or other natural ecosystems. One

Percent 90 Land degradation Multifocal focal area area 60 30 0 No Restoration of Restoration degraded restoration of other productive ecosystems lands

SOURCE: GEF PMIS, as of April 2017.

FIGURE 2.13 Types of restoration included in GEF land degradation projects

in 10 land degradation focal area projects includes a component to restore productive lands that are degraded. Figure 2.14 also shows there has been a slight increase in this type of restoration since GEF-3.

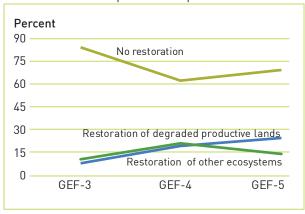


Figure 2,14 Evolution of restoration activities over the GEF replenishment periods

SOURCE: GEF PMIS, as of April 2017.

The land degradation focal area is highly relevant to country needs, especially in the Africa region. To measure country needs, the evaluation compares GEF funding for land degradation to the GEF's SGP funding as a proxy. The SGP provides small grants (up to \$50,000) to local grassroots groups and civil society organizations to improve local ecosystems. To receive this funding, local CSOs must apply for grant money in a focal area. Since nearly all countries utilize SGP funds, the civil society organization applications represent a reasonable measurement of country demand. As figure 2.15 shows, this is only 10 percent of the GEF focal area allocations. By contrast, the land degradation focal area has been the second highest funded SGP, receiving nearly 20 percent of grant funds (per data provided by the SGP). This suggests that, at least in purely monetary terms, countries and civil society organizations place a relatively higher priority on land degradation focal area projects than does the GFF.

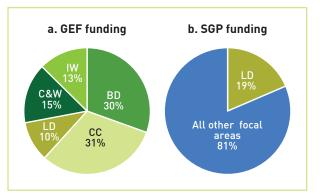


FIGURE 2.15 GEF target allocations by focal area and SGP funding since GEF-3

SOURCE: GEF PMIS, as of April 2017.

In Africa, the demand for land degradation focal area projects is especially high. Africa receives the most land degradation focal area funding than any other region, as described in the discussion above on portfolio coverage by geographic region. At the African Development Bank, approximately 50 percent of all GEF funding goes to land degradation or climate change adaptation projects. The other 50 percent goes to fewer but relatively more expensive climate change mitigation projects.⁶ However, a closer look at the climate change adaptation projects (typically funded by the Least Developed Country Fund) shows that these projects essentially address issues related to combating land degradation. Even though climate change adaptation is not funded through the land degradation focal area allocation, it is largely being used to combat land degradation.

To examine the focal area's relevance to address global land degradation drivers, an in-depth review of 25 land degradation-related project documents was carried out (see <u>annex A</u> for a list of land degradation-related projects). These projects were chosen to reflect the diversity of

⁶Figures provided by the African Development Bank's GEF coordinator.

16

projects within the land degradation focal area portfolio, but not necessarily as a representation of the portfolio. Projects were also selected to represent a diversity of regions, lead Agencies, project sizes, and implementation stages. Of the 25 projects, 18 were classified as land degradation focal area–only projects, while 7 were multifocal area projects with a land degradation component. Using the framework established by Mirzabaev et al. (2016), project documents were examined to see if different land degradation drivers were discussed and considered (annex C).⁷

Figure 2.16 charts how frequently land degradation drivers were prioritized and targeted in the projects' results frameworks. Figure 2.17 shows the different land degradation drivers discussed in the project documents.

Assessment shows that the land degradation focal area is highly relevant to the proximate and natural causes of land degradation (<u>annex C</u>). The focal area is relevant to most of the natural causes of land degradation, including climate change, land use change, and soil erodibility. The focal area is also relevant to reducing drivers such as poverty, weak land degradation policies, and unsustainable land management. But the land degradation focal area is largely absent from tackling other drivers of land degradation, such as weak land tenure policy, population changes, low market access, and urbanization and infrastructure development.

2.3 Results

The IEO's 2016 Annual Performance Report database was used to review the performance trends of 116 completed land degradation focal area projects. The database compiles the results ratings from all GEF projects with completed terminal evaluations. The data set included ratings on outcomes, sustainability, and the quality of implementation, execution, and monitoring and evaluation (M&E) design and implementation. The terminal evaluation and Annual Performance Report data set was of completed land degradation focal area projects.

OVERALL PERFORMANCE

In all, 116 land degradation-related projects have completed terminal evaluations. This includes 70 FSPs and 46 MSPs. Of these, 67 are land degradation stand-alone projects, and 49 are multifocal area projects with a land degradation component. All projects were initiated during GEF-3 or GEF-4, with the exception of one GEF-5 completed project, A Global Initiative on Landscapes for People, Food and Nature (GEF ID 4806). All projects are rated on a six-point scale.

Overall, 76 percent of land degradation-related projects and land degradation stand-alone projects had satisfactory outcome ratings (figure 2.18). This is slightly less than the GEF average for all projects from GEF-3, GEF-4, and GEF-5, which have an 82 percent satisfactory rating.

BY REGION

Figure 2.19 shows overall project rating by GEF region. Projects in Latin America and the Caribbean generally have the lowest ratings for outcomes, M&E implementation, and implementation and execution quality. Global projects tend to have the highest ratings for five of the six

⁷Mirzabaev et al. (2016) reviewed the relevant scientific literature to compile a comprehensive list of the proximate and underlying drivers of land degradation. The study examined if the project documents (1) included a strategy or framework for managing Mirzabaev's drivers and (2) considered the different drivers in contextual discussions. For the former, inclusion of each driver in the project's proposed activities was checked. For the latter, each document was reviewed in detail to see if the different drivers were discussed and considered

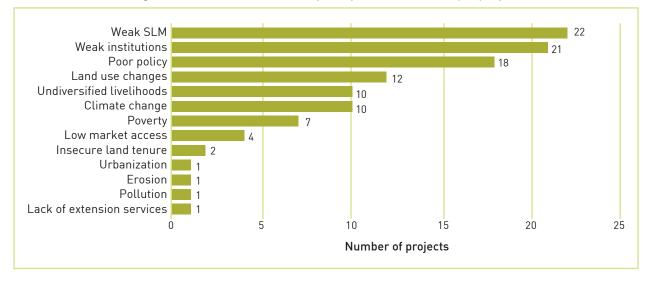
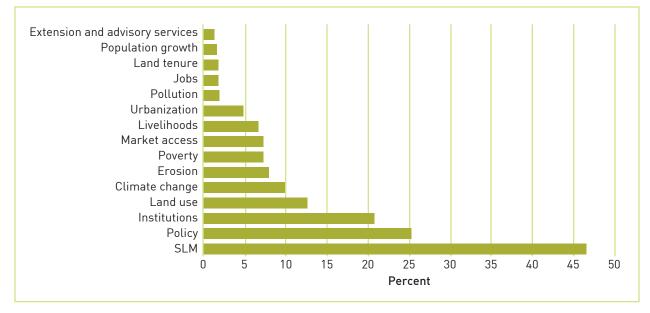


FIGURE 2.16 Land degradation drivers cited as major objectives in 25 sample project documents

FIGURE 2.17 Land degradation drivers discussed in 25 sample project documents



indicators, the exception being M&E design, where global projects receive the lowest ratings. The average execution quality and the average implementation quality are substantial to high in all regions, while the overall sustainability of projects is only low to modest. Among the sustainability ratings, land degradation focal area projects generally have higher environmental (greater than 80 percent), institutional, and political sustainability ratings (greater than 75 percent) than financial sustainability ratings (figure 2.20).

BY FINANCIAL INVESTMENTS

Figure 2.21 shows outcome and sustainability ratings by total project investment for land

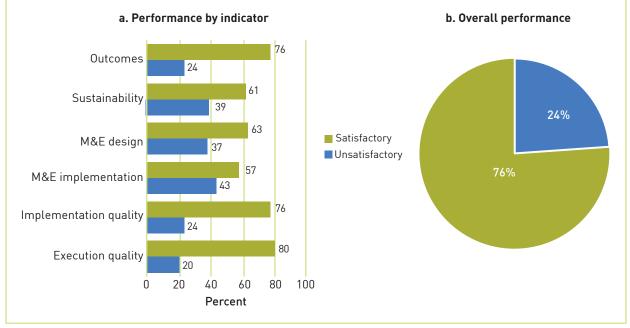
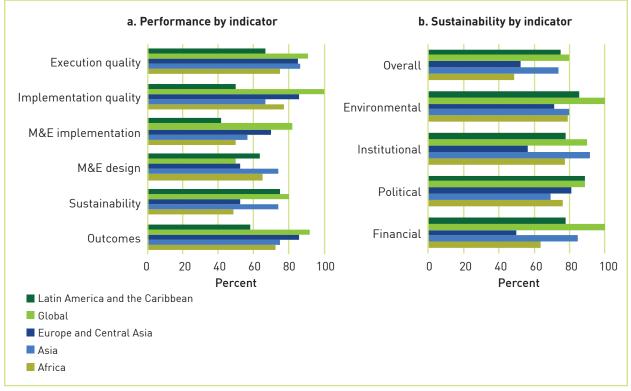


FIGURE 2.18 Performance ratings for land degradation focal area projects

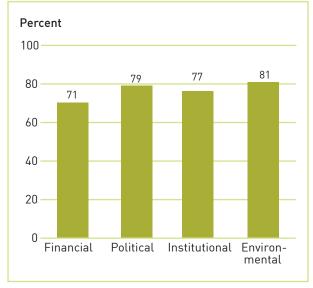
FIGURE 2.19 Land degradation focal area projects with satisfactory/likely performance and sustainability ratings by region



SOURCE: GEF IEO APR 2016 database.

SOURCE: GEF IEO APR 2016 database.

FIGURE 2.20 Percentage of land degradation focal area projects with sustainability ratings of moderately likely or above

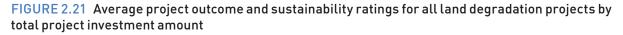


SOURCE: GEF IEO APR 2016 database.

degradation projects (both focal area stand-alone projects and multifocal projects with a land degradation component). These totals include both GEF financing and cofinancing to provide a complete picture of project funding. Outcomes and sustainability are positively correlated with increases in funding. The higher the level of investment, the better the project outcomes and sustainability. The highest ratings are for projects in the \$10 million to \$20 million cohort, with a slight decline in ratings for the largest projects, which average \$47 million each in this sample.

On average, land degradation focal area projects take slightly less time to complete (5.1 years) than most GEF projects (5.7 years). MSPs require just under four years, while FSPs require just over five years. This shorter time frame could possibly explain the lower outcome ratings for closed projects, since environmental benefits take much longer to materialize in land degradation interventions.

Land degradation focal area projects have higher M&E design ratings than the GEF average, but the differences are small. Sixty-three percent of land degradation focal area projects were rated satisfactory, compared to 61 percent of non-land degradation focal area projects.





SOURCE: GEF IEO APR 2016 database.

NOTE: Outcome rating scores are: 0 = unable to assess; 1 = highly unsatisfactory; 2 = unsatisfactory; 3 = moderately unsatisfactory; 4 = moderately satisfactory; 5 = satisfactory; 6 = highly satisfactory. Total project investment includes both GEF grant and cofinancing.

2.4 Case study: The SLEM-CPP

Box 2.1 discusses programmatic approaches in the land degradation focal area; this section looks at one such program as a case study. The SLEM-CPP in India was launched in 2009, with a budget of \$327.8 million: GEF funding was \$27.3 million, while cofinancing was \$300.5 million. The program was designed to pilot and demonstrate integrated approaches to the management of production systems and generation of global environmental benefits, including adaptation to climate change. The SLEM-CPP contains six child projects mainly located in the dryland zone and vulnerable to degradation of land, water, and forest resources. The degradation is likely to be intensified by climate change. This case study analysis pertains to two completed child projects of the SLEM-CPP: (1) Integrated Land Use Management to Combat Land Degradation in Madhya Pradesh, and (2) Sustainable Land Water and Biodiversity Conservation and Management for Improved Livelihoods in Uttarakhand Watershed Sector

BOX 2.1 Programmatic approaches in the land degradation focal area

A program is a series of interconnected projects with a shared goal. Thirty-six land degradation focal area projects are part of six programs. On average, land degradation-relevant programs have investments of about \$46 million each. The six programs are (1) the SLEM-CPP in India, (2) the Integrated Nature Resources Management Program in the Middle East and North Africa Region, (3) the Partnership on Land Degradation in Dryland Ecosystems Program in China, (4) the Congo Basin Strategic Program, (5) the Sahel and West Africa Program in Support of the Great Green Wall Initiative, and (6) the Desert Ecosystems and Livelihoods Program in the Middle East and North Africa. The purpose of the SLEM-CPP is threefold: (1) to reverse and control land degradation and biodiversity loss while taking climate change into account, (2) to enhance institutional and local adaptive capacity to improve land and ecosystem resilience, and (3) to mainstream and upscale SLEM at the local, national, and regional levels.

To assess progress toward impact, the terminal evaluation of the World Bank's Institutional Coordination, Policy Outreach and M&E Project was reviewed. Site visits and interviews at two completed child projects of the SLEM-CPP program were included in the review. This analysis pertains to these two child projects. Thirty project beneficiaries were also interviewed at nine different locations of the Uttarakhand project site.

FINDINGS FROM THE MADHYA PRADESH SLEM CHILD PROJECT

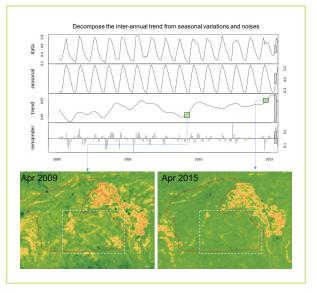
The Integrated Land Use Management to Combat Land Degradation in Madhya Pradesh child project was implemented in 10 forest divisions of five districts in Madhya Pradesh by the Madhya Pradesh Forest Department and UNDP in collaboration with local communities and joint forest management committees. It was implemented in an area of 15,000 hectares of degraded bamboo forests. The main intervention involved allotting 20 hectares of degraded areas for four years (5 hectares/year) to each beneficiary family residing near degraded bamboo forests. Families received a monthly remuneration of approximately \$40 for weeding, cleaning congested bamboo clumps, and soil work in order to rehabilitate the degraded bamboo forests. The money was directly deposited in their bank accounts. Supporting activities for SLM included vermicomposting, weed removal, water management, and techniques such as the use of mesh for moisture retention. The project also provided occupational training and support for livelihood-diversification activities for

establishing vegetable gardens and making furniture from bamboo and lantana, an invasive species.

Eighty percent of the beneficiaries⁸ responded to 12 questions related to the project's effectiveness, and the responses were automatically compiled. The key findings from the survey are:

- Nearly all interviewed beneficiaries (87 percent) noted that the project contributed to improved land management to a major or moderate extent.
- Nearly all beneficiaries indicated that the project included local participation, included their perspectives, and benefited youth, men, and women.
- All beneficiaries noted that the project "allowed creating new jobs and livelihoods," and 75 percent responded that the project had some impact.
- Nearly 70 percent of the practices taught through the project were sustainable and being replicated locally.

Results of the geospatial analysis indicate that vegetation has been fluctuating but has demonstrated an increasing trend after 2008 (figure 2.22). Results indicate that the vegetation cover in the area improved over the project period. The average Normalized Difference Vegetation Index (NDVI) for April, the driest month in the region in 2015, increased by about 10 percent, compared to 2009 levels. The vegetation significantly improved inside the project area, compared to areas outside the project boundary. Field visits and stakeholder perspectives corroborate that FIGURE 2.22 Increase in vegetation productivity in Madhya Pradesh child project: time-series plot and vegetation productivity maps



SLEM interventions improved land management and helped in the regeneration of bamboo forests in the area.

FINDINGS FROM THE UTTARAKHAND PROJECT

The Sustainable Land Water and Biodiversity Conservation and Management for Improved Livelihoods in Uttarakhand Watershed Sector child project was linked to a previous decentralized watershed management project implemented between 2004 and 2012 in 75 microwatersheds in the state. The GEF project targeted 20 microwatersheds based on severity of erosion, extent of poverty, and lack of infrastructure facilities. Year-round availability of water is a problem in the project area, and soil erosion during the rainy season had threatened soil and water conservation. Forest fires are another environmental issue, caused by the highly inflammable material of dry pine needles and the leaf litter of the chir pine (*Pinus roxburghii*). The project focused on reducing land, water, and forest degradation. Microwatershed management activities included construction

⁸Household heads of 16 beneficiary families were interviewed, covering 80 percent of beneficiaries from four villages visited during the case study.

of gravity sprinklers and check dams. Slopes were stabilized by planting Napier grass, a species that is also used to feed livestock. Supporting activities for sustainable forest management included the introduction of preventive practices to reduce the number of forest fire incidents.

The project involved a Van Panchayat, a village-level traditional community-based forest management body, unique to the state, to manage the local forests. The Van Panchayat was given rights to manage the government oak forest. Forest management practice involves setting aside saplings with potential for healthy growth and cutting off the rest for use as animal feed and fuel wood. This collaborative practice was institutionalized in the second phase of the project, and stakeholders reported a healthy forest cover in the area as a result of the initiative. The project also supported agricultural intensification and livelihood diversification activities. Prior to project implementation, farmers in the area were growing potatoes and wheat but later included cash crops such as vegetables, fruits, flowers, and peas and considered them more profitable.

IMPACT

Field visits were conducted to gather evidence on impacts of the project through interviews with a variety of stakeholders. The main findings were as follows:

- Policy and institutional reforms implemented have been successful largely because the Indian government is fully engaged in the implementation of this program.
- Social and environmental benefits have been wide ranging and include minor tenure reforms, sustainable livelihood opportunities, sustainable resource management, and science-driven interventions.

- The projects have a strong decentralized and grassroots structure because of a high level of local participation.
- So far, project activities seem sustainable because of successes in building local skills and creating alternative income-generation opportunities. It is these productive enhancements that ensure sustainability and positive environmental outcomes.
- Project beneficiaries less likely to migrate to urban areas due to the increase in income-generating opportunities and improved access to forest and water resources.

CHALLENGES AND LESSONS

There were also project-specific challenges in the case of the land degradation project in Madhya Pradesh.

- Most project landowners own small plots or have been provided small five-hectare plots. These small land holdings make it difficult to apply interventions consistently across large areas. Each plot is controlled by individuals who decide if and how they will apply SLEM practices and for how long. Moreover, small plots do not generate high incomes, so farmers on these lands must seek alternative seasonal work elsewhere.
- Most farmers engaged in traditional subsistence farming, so transitioning them toward production required a change in thinking.
- There has been little to no involvement from civil society. The program is essentially a program between locals and the government. The lack of civil-society participation could affect sustainability.

- Continued efforts must be made to generate incomes and build local and institutional capacity.
- At the time of our field visit (September 2016), prolonged dry spells with sporadic rises in temperature caused many restored bamboo forests to dry out.

The project in Uttarakhand had a unique issue: the introduction of expensive equipment that is not cost-effective and sustainable. Focus group participants mentioned that repair costs for the portable tiller is very costly, and local skills were not developed to perform repairs. Thus, expensive equipment routinely sits idle and unusable. Project stakeholders at the Uttarakhand site also raised two main concerns regarding the suitability of some of the project activities in the context of variability in seasons and amount of rainfall:

- Erratic rainfall patterns made it difficult to plan what to grow. Farmers reported previous instances of crop damage due to either delayed or excessive rains.
- Farmers noted that they lacked adequate knowledge and strategies to face climate shocks, including droughts, pointing to the need to address risks.

2.5 Value-for-money analysis

A VFM analysis was carried out by the GEF IEO to learn about the effectiveness of land degradation focal area investments. The VFM had two goals. The first was to identify the causal impacts from land degradation focal area projects along three indicators that closely relate to those suggested by the UNCCD's 2015 LDN scientific framework and the proposed indicators and subindicators for SDG 15. These include forest cover change, forest fragmentation, and vegetation productivity. The second aim was to determine the VFM from these land degradation focal area projects.

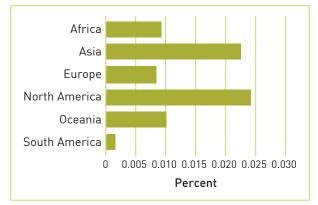
Land degradation focal area investments had led to positive environmental impacts, specifically reducing forest loss, reducing forest fragmentation, and increasing vegetation productivity. Vegetation productivity or density is measured by the NDVI. Globally, within 25-km catchment areas surrounding project locations, land degradation focal area projects increased NDVI by approximately 0.03 percent (relative to an average NDVI of 0.55). Moreover, land degradation focal area projects reduced forest loss by 1.3 percent (relative to the 2.4 percent global mean forest loss). Land degradation focal area projects also increased the average forest patch size by 0.25 km (relative to a global mean of 7.3 km²).

Impacts vary across different geographic contexts. Projects in Africa and Asia had generally positive impacts on average. Projects in Oceania, and North and South America all had positive impacts on all three indicators. In all regions of the world, land degradation focal area projects reduced the rate of forest loss as measured in 2014 (figure 2.23). Likewise, all regions except Europe saw improved vegetation productivity (figure 2.24). Fragmentation was the most differentiated across regions.

Africa had the most fragmentation in areas of land degradation focal area projects, while North America and South America had the largest mean patch sizes (figure 2.25).

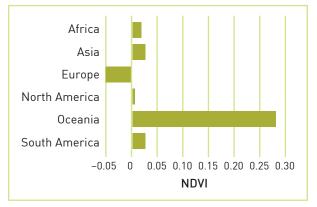
Improvements in vegetation cover from land degradation focal area projects have led to higher levels of carbon sequestration. The estimated carbon sequestered was 43.52 tons of carbon per hectare, on average. This equates to about 108,800 tons of carbon sequestered in each land degradation focal area project location. The VFM analysis further estimates that, at a valuation of \$12.90 per

FIGURE 2.23 Average estimated differences in rate of total forest loss at GEF intervention versus control locations



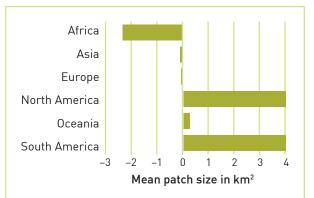
NOTE: This figure excludes a small number of projects that are not clearly delineated as affecting a single continent (i.e., where the exact degree of impact attributable to each continent is unknown).

FIGURE 2.24 Average estimated differences in increased vegetation productivity at GEF intervention versus control locations



NOTE: This figure excludes a small number of projects that are not clearly delineated as affecting a single continent (i.e., where the exact degree of impact attributable to each continent is unknown).





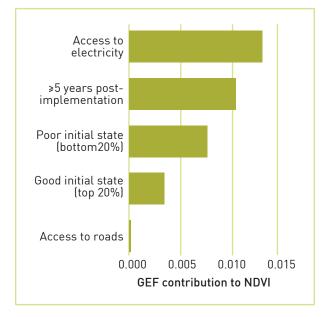
NOTE: This figure excludes a small number of projects that are not clearly delineated as affecting a single continent (i.e., where the exact degree of impact attributable to each continent is unknown).

ton, individual land degradation focal area projects contributed \$7.5 million on average to sequestration, which is well above the average cost of most land degradation focal area projects.

The analysis identified a range of values consistent with previous analyses of the value of land degradation projects. Because considerable uncertainty exists, the range of potential benefits from a single focal area land degradation project is estimated at \$52-\$143/hectare affected in terms of carbon sequestration alone; soil retention promotes an additional value of \$10-\$43/hectare, for a total valuation of \$62-\$186/hectare across all land degradation projects. After costs are accounted for, it is estimated that the per-dollar return on investment for land degradation projects is approximately \$1.08 per dollar invested. This is likely to be an underestimate, since it captures only two ecosystem services.

The VFM analysis reveals the following three pertinent findings on project effectiveness (figure 2.26):

FIGURE 2.26 Average estimate differences for key factors at GEF intervention versus control locations



- A lag time of 4.5–5.5 years was an important inflection point at which impacts were observed to be larger in magnitude.
- Projects with access to the electricity tend to have some of the largest relative positive impacts. This may be due to better infrastructure and access to energy sources for irrigation.
- The initial state of the environment is a key driver in GEF impacts, with GEF projects tending to have a larger impact in areas with poorer initial conditions.

Geospatial impact analysis provides some evidence that multifocal area projects in areas with particularly poor conditions (high slope, poor initial conditions, and little rainfall) tended to outperform single focal area projects. However, multifocal area projects tended to underperform single focal area projects in the Horn of Africa.

Geospatial impact analysis highlighted a lack of information on exact geographic boundaries of the land degradation focal area project interventions. The 202 projects analyzed were mapped to 1,704 project locations, of which 446 (26 percent) had exact geographic information available—that is, the latitude and longitude at which the project was executed is known with a high degree of precision. Precise geographic information is a prerequisite for monitoring and tracking progress through geospatial analysis, and improved spatial data can reduce the uncertainties inherent in portfolio-wide analyses.

3: Recommendations

ollowing are the four main recommendations of the evaluation.

- Implement LDN with an appropriate mix of interventions. While being cognizant of cost-effectiveness, context, and country priorities, land degradation focal area should also consider restoration activities along with SLM. SLM practices are intended to help avoid and reduce land degradation, while ecosystem restoration will help reverse the process. Newer projects in GEF-6 increasingly focus on achieving LDN targets and therefore would benefit from distinguishing between the two complementary pathways—SLM and ecosystem restoration—to be able to measure progress toward LDN targets.
- Give due consideration to complex contextual factors within an integrated approach framework. While the land degradation focal area's strategic focus has moved appropriately toward integrated approaches, complex contextual factors—including drought, food insecurity and migration—should be given due consideration during project design. The focal area is highly relevant to areas with land degradation, including Africa, particularly with its distressed emigration hotspots. While neither land degradation nor drought is the primary driver, both increase food insecurity and vulnerability and therefore may exacerbate the risk of conflict or migration.
- Assess climate risks to land degradation focal area initiatives, and design adaptive

management responses to such risks. Unsustainable land management practices that the GEF Land Degradation Focal Area Strategies aim to ameliorate have a direct and clear linkage to climate change. The effects of climate change are likely to affect many land-based activities, including ecosystem functions and services. Broader application of the Resilience Adaptation and Transformation Assessment framework is encouraged.

Strengthen M&E tools and methods of knowledge dissemination. The development and continued improvement of the tracking tool is a step in the right direction but will be inadequate to assess project impacts in the long run. The tracking tools should include additional biophysical indicators, increasingly available through geospatial data, to set baselines and measure progress of land productivity to track both global environmental benefits and LDN targets. Precise geospatial information on project locations is imperative for carrying out accurate M&E of land degradation projects. The land degradation focal area should consider integrating the indicators proposed by the UNCCD's LDN framework. The benefits and impacts of sustained SLM practices and restoration measures are not fully accounted for in the current M&E system. Recognition, therefore, should be given to the fact that it might be necessary to set a sufficiently longer time frame in monitoring projects striving to achieve LDN.

Annex A: **Projects reviewed in** depth or for specific data

GEF ID	Project title	Focal area
1666	Development and Implementation of a Sustainable Resource Management Plan for Marsabit Mountain and Its Associated Watersheds	LD
2356	Ecosystem Restoration of Riparian Forests in São Paulo	LD
2373	Sustainable Land Management in the Semi-Arid Sertao	LD
2402	Sustainable Land Management for Mitigating Land Degradation, Enhancing Agricultural Biodiversity and Reducing Poverty (SLaM)	LD
2440	Sustainable Land Management in Drought Prone Areas of Nicaragua	LD
2509	Sustainable Land Management for Combating Desertification (Phase I)	LD
2517	Sustainable Environmental Management for Sixaola River Basin	MF
2739	Building Sustainable Capacity and Ownership to Implement UNCCD Objectives in Latvia	LD
2753	Participatory Coastal Zone Restoration and Sustainable Management in the Eastern Province of Post-Tsunami Sri Lanka	MF
3222	LDC/SIDS Portfolio Project: Capacity Building for Sustainable Land Management in Republic Central Africa	LD
3355	CPP Namibia: Enhancing Institutional and Human Resource Capacity through Local Level Coordination of Integrated Rangeland Management and Support (CALLC)	LD
3356	CPP Namibia: Sustainable Land Management Support and Adaptive Management Project (NAM SLM SAM)	LD
3374	SIP: Stabilizing Rural Populations through Improved Systems for SLM and Local Governance of Lands in Southern Madagascar	LD
3385	SIP: Sustainable Land Management in Senegal	LD
3468	SLEM/CPP: Institutional Coordination, Policy Outreach and M&E Project under Sustainable Land and Ecosystem Management Partnership Program	LD
3469	SLEM/CPP: Sustainable Land Management in Shifting Cultivation Areas of Nagaland for Ecological and Livelihood Security	MF
3470	SLEM/CPP: Sustainable Rural Livelihood Security through Innovations in Land and Ecosystem Management	MF
3471	SLEM/CPP: Sustainable Land Water and Biodiversity Conservation and Management for Improved Livelihoods in Uttarakhand Watershed Sector	MF
3472	SLEM/CPP: Integrated Land Use Management to Combat Land Degradation in Madja Pradesh	MF
3483	PRC-GEF Partnership: Forestry and Ecological Restoration in Three Northwest Provinces (formerly Silk Road Ecosystem Restoration Project)	MF
3484	PRC-GEF Partnership: Capacity and Management Support for Combating Land Degradation in Dryland Ecosystems	LD

GEF ID	Project title	Focal area
4352	Environmental Land Management and Rural Livelihoods	LD
4583	Sustainable Land Management and Climate-Friendly Agriculture	MF
4630	Agriculture Competitiveness	LD
4754	Sustainable Land Management Programme to Combat Desertification	LD
4764	Enhancing the Resilience of Pastoral Ecosystems and Livelihoods of Nomadic Herders	MF
4775	Promotion of Climate-Smart Livestock Management Integrating Reversion of Land Degradation and Reduction of Desertification Risks in Vulnerable Provinces	MF
4952	Landscape Approach to Forest Restoration and Conservation (LAFREC)	MF
5005	Integrating Biodiversity Conservation, Climate Resilience and Sustainable Forest Management in Trung Truong Son Landscapes	MF
5080	Transforming Management of Protected Area/Landscape Complexes to Strengthen Ecosystem Resilience	MF
5220	PSG: Sustainable Land Management Project 2	MF
5277	Strengthening the Resilience of Multiple-Use Protected Areas to Deliver Multiple Global Environmental Benefits	MF
5395	R2R- Pacific Islands Ridge-to-Reef National Priorities—Integrated Water, Land, Forest and Coastal Management to Preserve Biodiversity, Ecosystem Services, Store Carbon, Improve Climate Resilience and Sustain Livelihoods	MF
5398	Implementing a "Ridge to Reef" Approach to Preserve Ecosystem Services, Sequester Carbon, Improve Climate Resilience and Sustain Livelihoods in Fiji (Fiji R2R)	MF
5423	GGW: Building Resilience through Innovation, Communication and Knowledge Services (BRICKS) Project	MF
5487	Integrated Development for Increased Rural Climate Resilience in the Niger Basin	MF
5718	Integrated Landscape Management for Improved Livelihoods and Ecosystem Resilience in Mount Elgon	MF
5775	Building the Foundation for Forest Landscape Restoration at Scale	LD
5825	Applying Landscape and Sustainable Land Management (L-SLM) for Mitigating Land Degradation and Contributing to Poverty Reduction in Rural Areas	LD
8005	Sustainable Land Management for Increased Productivity in Armenia (SLMIP)	LD
9050	Building Resilience for Food Security and Nutrition in Chad's Rural Communities	MF
9070	Food-IAP: Fostering Sustainability and Resilience for Food Security in Sub-Saharan Africa—An Integrated Approach	MF
9123	Cities-IAP: Sustainable Cities Management Initiative	MF
9133	Food-IAP: Climate-Smart Agriculture for Climate-Resilient Livelihoods (CSARL)	MF
9139	Food-IAP: Establishment of the Upper Tana Nairobi Water Fund (UTNWF)	MF
9141	GEF-IAP: Participatory Natural Resource Management and Rural Development Project in the North, Centre-North and East Regions (Neer Tamba project)	LD
9153	Climate-Smart Livestock Production and Land Restoration in the Uruguayan Rangelands	MF
9264	TRI The Restoration Initiative—Fostering Innovation and Integration in Support of the Bonn Challenge	MF
9265	Mekong Delta Integrated Climate Resilience and Sustainable Livelihoods Project	MF
9277	Risk Mitigation Instrument for Land Restoration (Nongrant)	LD
9293	Scaling Up a Multiple Benefits Approach to Enhance Resilience in Agro- and Forest Landscapes of Mali's Sahel Regions (Kayes, Koulikoro and Ségou)	MF

GEF ID	Project title	Focal area
9340	Food-IAP: Sustainable Land and Water Management Project, Second Additional Financing	MF
9365	Land Degradation Neutrality Target Setting Project	LD
9385	Forest Landscape Restoration in the Mayaga Region	MF
9388	Land Degradation Neutrality of Mountain Landscapes in Lebanon	LD
9389	Ensuring Sustainability and Resilience (ENSURE) of Green Landscapes in Mongolia	MF
9405	Integrated Management of Oasis Ecosystems of Northern Niger (IMOE-NN)	MF
9406	Integrated Ecosystem Management and Restoration of Forests on the South East Coast of St. Lucia	MF
9477	Promoting Sustainable Land Management (SLM) through Integrated Restoration of Ecosystems	LD
9556	Restoration of Arid and Semi-Arid Lands (ASAL) of Kenya through Bio-Enterprise Development and Other Incentives under the Restoration Initiative	MF

SOURCE: GEF PMIS.

NOTE: LD = land degradation; MF = multifocal. **Boldface** indicates projects that were reviewed in depth.

Annex B: Stakeholders interviewed

Alan Fox, Evaluation Advisor, UNDP IEO Amitabh Pandey, Professor, Indian Institute of Forest Management Anand Rao, Beneficiary, Self-Help Group Arun Kumar Mehta, Joint Secretary, Government of India Ashok, Beneficiary, Self-Help Group Baldev, Beneficiary, Self-Help Group Brajpal, Beneficiary, Self-Help Group Camilla Nordheim-Larsen, Coordinator, Land Governance Programme, UNCCD Global Mechanism Carlo Carugi, Senior Evaluation Officer, GEF IEO Charles Nyandiga, Programme Advisor, UNDP SGP Chitranjan Tyagi, Chief Conservator of Forests, Government of India Dharmendra Meena, Divisional Forest Officer, Government of India Fareeha Igbal, Asia Adaptation Program, GEF Fulakram, Beneficiary, Self-Help Group Gayatri Kanungo, AFR GEF Coordinator, World Bank Hema Negi, Beneficiary, Self-Help Group Ivan Cossios, Project Manager, International Fund for Agricultural Development Brazil Jaco Cilliers, Country Director, UNDP Jean-Marc Sinnassamy, Environmental Specialist, GEF Jessie Mee, Knowledge Specialist, UNDP Kaliram Kudohpa, Beneficiary, Self-Help Group Lianchawii Chhakchhuak, Programme Analyst, UNDP Mahamat Assouvouti, GEF Coordination, African **Development Bank**

Mahendra Yaduvendu, Project Director, Government of India Mannu, Beneficiary, Self-Help Group Marina Walter, Deputy Director, UNDP Maryam Niamir-Fuller, Advisor on Sustainability, Independent Melchiadre Bukuru, Chief of the Liaison Office, **UNCCD** Secretariat Midori Paxton, Regional Technical Adviser, UNDP Mohamed Bakarr, Lead Environmental Specialist, GEF Muhammad Khalid Saddig, Project Manager, **UNDP** Pakistan Nancy Bennett, GEF Coordinator, UNDP Nandhini Krishna, Liaison Officer, UNCCD Secretariat Nayanika Singh, GEF Consultant, GEF Neena Grewal, Director, Government of India Pankaj Tiwari, Executive Director, Central Himalayan Environment Agency Paola Agostini, Global Lead for Landscape, World Bank Preeti Soni, Assistant Country Director, UNDP Premlal Anke, Beneficiary, Self-Help Group Rajesh, Beneficiary, Self-Help Group Rajni Ranjan Rashmi, Special Secretary, Government of India Rakesh, Beneficiary, Self-Help Group Ranjan Samantaray, Senior Agriculture Specialist, World Bank Ravindra Mani Tripathi, Divisional Forest Officer, Government of India Rekha Singhal, Professor, Indian Institute of Forest Management

S. K. Upadhyay, Dy Director, Government of India

Sardas Salame, Beneficiary, Self-Help Group Sarojni Melkani, Van Sarpanch, Self-Help Group Satish Dhurbey, Beneficiary, Self-Help Group Siyalal, Beneficiary, Self-Help Group Siyaram, Beneficiary, Self-Help Group Sobharam Koureti, Beneficiary, Self-Help Group Somit Burman, Project Manager, UNDP

- Tehmina Akhtar, Deputy Global Manager, UNDP SGP
- Ulrich Apel, land degradation focal area Coordinator, GEF
- Yashwant Parthe, Beneficiary, Self-Help Group

Annex C: Focal area relevance to land degradation drivers

		Land degradation focal area objectives											
			LD1			LD2			LD3		LI	04	
Major driver	Example	1.1	1.2	1.3	2.1	2.2	2.3	3.1	3.2	3.3	4.1	4.2	
Topography	Steep slopes are vulnerable to severe water-induced soil erosion.	x	x	x	x	x	x	x	x	х			
Land cover change	Conversion of rangelands to irrigated farming with resulting soil salinity. Deforestation.	x	x	x	x	x	x	x	x	x	x	x	
Climate	Dry, hot areas are prone to naturally occurring wildfires, which, in turn, lead to soil erosion. Strong rainstorms lead to flooding and erosion. Low and infrequent rainfall and erratic and erosive rainfall (monsoon areas) lead to erosion and salinization.	x	x	x	x	x	x	x	x	x	x	x	
Soil erodibility	Some soils—for example, those with high silt content—could be naturally more prone to erosion.	x	x	x	x	x	x	x	x	x	x	x	
Pest and diseases	Pests and diseases lead to loss of biodiversity, loss of crop and livestock productivity, and other forms of land degradation.												
Unsustainable land management	Land clearing, overgrazing, cultivation on steep slopes, bush burning, pollution of land and water sources, and soil nutrient mining are among the major causes of land degradation.	x	x	x	x	x	x	x	x	x	x	x	
Infrastructure development	Transport and earthmoving techniques, such as trucks and tractors, as well as new processing and storage technologies, could lead to increased production and foster land degradation if not properly planned.												
Population density	Population density leads to land degradation.												

			1.1 1.2 1.3 2.1 2.2 2.3 3.1 3.2 3.3 4.1											
			LD1			LD2			LD3		LI	04		
Major driver	Example	1.1	1.2	1.3	2.1	2.2	2.3	3.1	3.2	3.3	4.1	4.2		
Market access	High market access raises opportunity cost of labor, making households less likely to adopt labor-intensive sustainable land management practices.							x	x	x				
Land tenure	Insecure land tenure can lead to the adoption of unsustainable land management practices.													
Poverty	There is a vicious cycle between poverty and land degradation. Poverty could lead to land degradation, while land degradation could lead to poverty.	x	x	x	x	x	x	x	x	x	x	x		
Access to agricultural extension services	Depending on the capacity and orientation of the extension providers, access to extension services could lead to land- degrading practices.							x	x	x				
Decentralization	Strong local institutions with a capacity for land management are likely to enact bylaws and other regulations that could enhance sustainable land management practices.							x	x	x				
International policies	International policies through the United Nations and other organizations have influenced policy formulation and land management.													
Nonfarm employment	Alternative livelihoods allow farmers to rest their lands or to use nonfarm income to invest in land improvement.													

SOURCE: von Braun et al. 2013, as cited by Mirzabaev et al. 2016.

Annex D: Focal area relevance to the SDGs

TABLE D.1 Relevance to the 17 Sustainable Development Goals

		Land degradation focal area objectives											
			LD1			LD2			LD3		LI	04	
SDG	Goal	1.1	1.2	1.3	2.1	2.2	2.3	3.1	3.2	3.3	4.1	4.2	
1: No poverty	End poverty in all its forms everywhere	х	х	х	х	х	х						
2: Zero hunger	End hunger, achieve food security and improved nutrition, and promote sustainable agriculture	x	x	х				x	x	x	х	x	
3: Good health and well being	Ensure healthy lives and promote well-being for all at all ages												
4: Quality education	Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all												
5: Gender equality	Achieve gender equality, and empower all women and girls								x				
6: Clean water and sanitation	Ensure availability and sustainable management of water and sanitation for all	x	x	x	x	x	x	x	x	x	x	x	
7: Affordable and clean energy	Ensure access to affordable, reliable, sustainable, and modern energy for all												
8: Decent work and economic growth	Promote sustained, inclusive, and sustainable economic growth, full and productive employment, and decent work for all	х	x	х	х	x	x						
9: Industry, innovation, and infrastructure	Build resilient infrastructure, promote inclusive and sustainable industrialization, and foster innovation												
10: Reduced inequalities	Reduce inequality within and among countries	х	х	х	х	х	х	х	x	х			
11: Sustainable cities and communities	Make cities and human settlements inclusive, safe, resilient, and sustainable												
12: Responsible consumption and production	Ensure sustainable consumption and production patterns												

			L	and d	legra	datio	n foca	alare	a obje	ective	s	
			LD1			LD2			LD3		LI	D4
SDG	Goal	1.1	1.2	1.3	2.1	2.2	2.3	3.1	3.2	3.3	4.1	4.2
13: Climate action	Take urgent action to combat climate change and its impacts	x	х	х	х	х	х	х	х	х	х	х
14: Life below water	Conserve and sustainably use the oceans, seas, and marine resources for sustainable development											
15: Life on land	Protect, restore, and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, halt and reverse land degradation, and halt biodiversity loss	x	x	x	x	x	x	x	x	x	x	x
16: Peace, justice, and strong institutions	Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable, and inclusive institutions at all levels											
17: Partnerships for the goals	Strengthen the means of implementation, and revitalize the global partnership for sustainable development											

SOURCE: Sustainable Development Knowledge Platform, <u>https://sustainabledevelopment.un.org/</u>.

TABLE D.2 Relevance to SDG 15: Life on land

	Land degradation focal area objectives											
		LD1			LD2			LD3		L)4	
Target	1.1	1.2	1.3	2.1	2.2	2.3	3.1	3.2	3.3	4.1	4.2	
15.1: By 2020, ensure the conservation, restoration, and sustainable use of terrestrial and inland freshwater ecosystems and their services—in particular forests, wetlands, mountains, and drylands—in line with obligations under international agreements	x	x	x	x	x	x	х	x	x	х	x	
15.2: By 2020, promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests, and substantially increase afforestation and reforestation globally				х	x	x						
15.3: By 2030, combat desertification, restore degraded land and soil, including land affected by desertification, drought, and floods, and strive to achieve a LDN [land degradation neutrality] world	x	х	х	х	х	х	х	x	х	х	x	
15.4: By 2030, ensure the conservation of mountain ecosystems, including their biodiversity, in order to enhance their capacity to provide benefits that are essential for sustainable development							х	x	х			
15.5: Take urgent and significant action to reduce the degradation of natural habitats, halt the loss of biodiversity, and, by 2020, protect and prevent the extinction of threatened species				х	x	x						
15.6: Promote fair and equitable sharing of the benefits arising from the utilization of genetic resources and promote appropriate access to such resources, as internationally agreed												
15.7: Take urgent action to end poaching and trafficking of protected species of flora and fauna, and address both demand and supply of illegal wildlife products												
15.8: By 2020, introduce measures to prevent the introduction and significantly reduce the impact of invasive alien species on land and water ecosystems, and control or eradicate the priority species												
15.9: By 2020, integrate ecosystem and biodiversity values into national and local planning, development processes, poverty- reduction strategies and accounts							x	x	x	x	x	
15.a: Mobilize and significantly increase financial resources from all sources to conserve and sustainably use biodiversity and ecosystems												

	Land degradation focal area objectives										
		LD1		LD2				LD3		L)4
Target	1.1	1.2	1.3	2.1	2.2	2.3	3.1	3.2	3.3	4.1	4.2
15.b: Mobilize significant resources from all sources and at all levels to finance sustainable forest management, and provide adequate incentives to developing countries to advance such management, including for conservation and reforestation				х	х	x					
15.c: Enhance global support for efforts to combat poaching and trafficking of protected species, including by increasing the capacity of local communities to pursue sustainable livelihood opportunities											

SOURCE: Sustainable Development Knowledge Platform, <u>https://sustainabledevelopment.un.org/sdg15</u>.

Annex E: Focal area relevance to the UNCCD

			L	and d	egra	datio	n foca	alare	a obje	ective	s	
UNCCD strategic			LD1			LD2			LD3		L)4
objective	Expected impact	1.1	1.2	1.3	2.1	2.2	2.3	3.1	3.2	3.3	4.1	4.2
1. Improved living conditions of affected	1.1: People living in areas affected by desertification/land degradation and drought to have an improved and more diversified livelihood base and to benefit from income generated from sustainable land management	x	x	x	x	x	x	x	x	x		
populations	1.2: Affected populations' socioeconomic and environmental vulnerability to climate change, climate variability, and drought is reduced	x	x	x	x	x	x	x	x	x		
2. Improved condition of affected	2.1 Land productivity and other ecosystem goods and services in affected areas are enhanced in a sustainable manner, contributing to improved livelihoods	x	x	x	x	x	x	x	x	x		
ecosystems	2.2 The vulnerability of affected ecosystems to climate change, climate variability, and drought is reduced	x	x	x	x	x	x	x	x	x		
3. Genera- tion of global benefits	3.1 Sustainable land management and combating desertification/ land degradation contribute to the conservation and sustainable use of biodiversity and the mitigation of climate change	x	x	x	x	x	x	x	x	x	x	x
4. Resource mobilization through partnerships	4.1 Increased financial, technical, and technological resources are made available to affected developing country parties and, where appropriate, Central and Eastern European countries to implement the convention											
hai mei suiha	4.2 Enabling policy environments are improved for UNCCD implementation at all levels											

SOURCE: UNCCD 10-Year Strategic Plan and Framework, <u>https://www.unccd.int/sites/default/files/relevant-links/2017-01/</u> Strategy-leaflet-eng.pdf.

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