CYNOSURE

FINAL REPORT

TERMINAL EVALUATION FOR THE "Strengthening Land Degradation Neutrality Data and Decision Making Through Free and Open Access Platforms" Program

SUBMITTED TO

CI-GEF

05 April 2023

ACKNOWLEDGEMENTS

Cynosure International, Inc. *would like to thank all the individuals and institutions whose cooperation made this report possible.*

The terminal evaluation was supported by ***Conservation International (CI)*** *and* ***Moore Center for Science (MCS)****. Our special thanks are due to CI GEF Program Manager / Vice President, Project Development and Impact – Dr. Free de Koning; Manager, Monitoring and Evaluation, GEF Project Agency and GCF Implementing Agency – Mr. Rocky (Aki) Marcelino; Senior Director of Resilience Science, CI-MCS – Dr. Alex Zvoleff; Director, Data Science for Resilience, CI-MCS – Monica Noon; Land Systems Scientist, CI-MCS,– Dr. Gabriel Daldegan for their support and valuable insights at all stages of the evaluation.*

The Terminal Evaluation Team would also like to express their sincere gratitude to the members of Executing Partners from University of Colorado, University of Bern, and University of California, Santa Barbara for their valuable insights and support during evaluation activities.

We are immensely obliged to the stakeholders in Colombia, and all the other interviewed stakeholders who shared their invaluable knowledge, experience, and challenges and offered their perspectives and advice.

EXECUTIVE SUMMARY

The *Strengthening Land Degradation Neutrality Data and Decision Making through Free and Open Access Platforms* project (henceforth, the Tools4LDN project) was launched in September 2019 as a 30-month project initially set to conclude in February 2022. With CI-GEF as the Implementing Agency (IA), the project was executed by the Moore Center for Science (MCS) as the lead Executing Agency (EA), with the University of California – Santa Barbara (UCSB), University of Colorado, and WOCAT at the Bern university functioning as the key executing partners. The Tools4LDN project was financed by a medium-sized GEF grant of USD 2 million, and with a total of USD 399,700 in co-financing from Conservation International (CI) and the World Overview of Conservation Approaches and Technologies (WOCAT). The overall objective of project was to provide improved methods and tools for assessing land degradation and understanding the socio-economic conditions of vulnerable communities in affected areas through the integration of free and open platforms to support country-level implementation and reporting to the UNCCD. Although global in terms of its geographic scope, the Tools4LDN project selected Colombia as the pilot country for testing the tools and approaches developed as well as for conducting capacity building workshops with key stakeholders within the country. Initially set to close in February 2022, the project received a 09-month no-cost extension in May 2021, which set the end date for the project to December 2022.

The objective of the terminal evaluation (TE) was to provide a comprehensive and systematic account of the performance of the project by assessing its design, implementation, and achievement of objectives. To that end, the scope of the current evaluation assessed the project implementation activities from its inception in September 2019 to its conclusion in December 2022. The TE from undertaken from November 2022 to February 2023, adopting a consultative and participatory approach and employing mixed methodologies by combining qualitative and quantitative data from both primary and secondary sources. The TE was conducted based on an extensive desk review of relevant project documents, which was followed by key informant interviews (KIIs) with the IA, EA, Executing Partners, and the UNCCD. In addition, in-depth interviews (IDIs) with a sample of stakeholders from Colombia involved in the project were also conducted.

Overall, the Tools4LDN project was found to be ***Highly Relevant*** to the various goals and needs of key stakeholders at the institutional, national and global levels through its alignment with key global and national priorities and action plans, as well as direct benefits to national-level stakeholders through increased capacity building. At the institutional level, the project was consistent with the GEF-7 Land Degradation Focal Area Objective 2, which pertains to creating an enabling environment to support LDN implementation globally. At the global level, the project was fully aligned with the goals of the United Nations Convention to Combat Desertification (UNCCD) and the UNCCD 2018-2030 Strategic Framework, as well as the Sustainable Development Goals (SDGs). At the national level, the project aligned with a various key national priorities, policies, and strategies of Colombia, particularly the Policy for Sustainable Land Management and the National Action Plan to Combat Desertification and Drought in Colombia. In addition, through its capacity building component for monitoring land degradation and facilitating national-level planning, the project was also relevant to the needs of national stakeholders working on land degradation in Colombia.

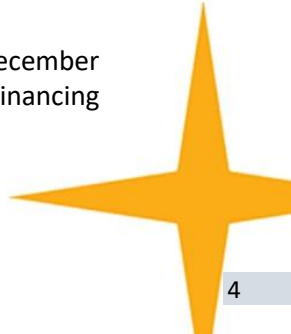
A review of the project strategy and design revealed that the current project was built on a previous GEF-funded and CI-GEF implemented project – *Enabling the Use of Global Data Sources to Assess and Monitor Land Degradation at Multiple Scales* – which resulted in the development and launch of the Trends.Earth toolbox. Moreover, the Tools4LDN project was also designed based on feedback obtained from various

stakeholders such as the UNCCD, LDN community, the Trends.Earth Team, and users. The TE Team found that the project was driven by a strong demand for an integrated and harmonized approach for UNCCD country Parties to measure, assess, and report on SDG 15.3.1 indicators, particularly for measurement of indicators related to UNCCD Strategic Objectives 02 and 03. A key component of the project involved strengthening linkages and ensuring interoperability of the Trends.Earth tool with two additional tools – LandPKS and the WOCAT SLM Database. These integrations allowed greater coherence and alignment between approaches used by these tools and provided country Parties with a one-stop-shop that covered different needs, namely assessment, monitoring, planning, and reporting of land degradation. Overall, the TE found that the project was well aligned with the needs and priorities of the UNCCD as well as to facilitate various user groups, particularly country Parties in meeting their reporting requirements. This was achieved through the integration between Trends.Earth and the UNCCD's reporting platform - Performance Review and Implementation System 4th edition (PRAIS4) – which enabled the direct import of outputs from Trends.Earth to the UNCCD's PRAIS4 which increases the efficiency and efficacy of reporting by minimizing errors from manual data entry. However, the project was designed to be piloted in just one country which deprived the project from a deeper assessment of the various tools in diverse socio-political/development contexts. Nevertheless, the selection of Colombia as a pilot country was appropriate as it allowed the project to test tools across the diverse landscapes present in Colombia.

With regards to the **project's implementation and adaptive management**, the TE Team ascertained that the CI-GEF Agency, as the IA, has been delivering on its responsibilities in a diligent and timely manner and according to the tasks assigned to it in the project design document which include reviewing and approving annual procurement plans, associated budgets, quarterly technical and financial reports, annual project implementation reports. In conclusion, the **quality of supervision** and implementation by CI-GEF as the Implementation Agency was deemed ***Satisfactory*** by the TE. With regards to the project's execution, the execution arrangements were found to be in line with the project design and the successful execution of the project was a result of the highly experienced and seasoned staff at the MCS as well as strong partnerships, engagement, and cohesion among the project's Executing Partners. Staffing within the Executing Agency and Partners was found to be adequate and mostly consistent, with no major challenges reported in terms of implementation and coordination of project activities after the departure of a core member at the MCS. Challenges from the COVID-19 pandemic resulted in implementation delays, particularly on Component 3, as the project team were unable to conduct field verification and in-country workshops with stakeholders in Colombia at the planned time. Alignment of project timelines with the UNCCD reporting calendar, which underwent two postponements, also affected activities under Component 4. Consequently, the project was granted a 09-month no-cost extension allowing it to complete all delayed activities within the extended timeframe. Overall, the project's **execution arrangements** were found to be ***Satisfactory*** by the TE Team.

The Tools4LDN **project's M&E** was found to be ***Satisfactory*** at both **design** and **implementation**, as the project's Results Framework was comprehensive in listing SMART indicators at the project, outcome and outputs levels with baselines and targets specified. The project also ensured that the M&E activities, such as planning and organizing the project inception workshop and report, quarterly progress reporting, annual progress and implementation reporting, and documentation of lessons learned, were carried out in a timely and comprehensive manner. MCS also regularly provided comprehensive quarterly financial and technical reports, annual financial reports, annual workplans, as well as the annual project implementation reports, as stipulated in the project document. However, challenges due to the COVID-19 pandemic prevented the undertaking of a country monitoring mission by the CI-GEF.

Against the total GEF grant of USD 2 million, the project expended USD 1.76 million (93%) as of December 31, 2022. In terms of co-financing, the project has been successful in garnering significant co-financing



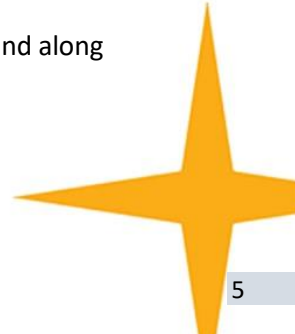
from existing sources, thereby exceeding its planned co-financing amount of USD 397,700, by an additional 1%, bringing the total co-financing amount materialized to USD 403,449.

With regards to progress towards results, the project successfully delivered on **Outcome 1.1** by identifying and integrating 04 datasets (03 on primary productivity, and 01 on land cover) as well as adding a functionality that allowed the integration of SOC degradation indicators into the land cover dataset, and the development of step-by-step guidelines for Trends.Earth users. Under **Outcome 2.1**, the project enabled the use of Trends.Earth for assessing drought hazard, drought exposure, drought vulnerability, and population exposure to drought by identifying and integrating the relevant datasets on Trends.Earth, thereby enabling its use for reporting to UNCCD on Strategic Objectives 2 and 3. Due to the COVID-19 pandemic, the project piloted these approaches in Colombia through a series of online and webinar-based trainings on the use of Trends.Earth for reporting on SO2 and SO3 in lieu of in-person workshops as originally planned. The trainings were well received by national stakeholders in Colombia who also reported additional needs for more trainings, greater outreach and sensitization on Trends.Earth, and the need for trainings on integrating available local data for the tool to function not just for reporting to UNCCD but also to facilitate national-level planning and policymaking.

Under **Outcome 3.1**, the project successfully implemented integrations of Trends.Earth and the WOCAT SLM database and LandPKS to ensure the interoperability of the three tools in undertaking assessment of land conditions and sustainable land management at the field level. Furthermore, the project also enabled the use of Trends.Earth as a platform to facilitate land use planning by integrating workflows with the FAO's Collect Earth and SEPAL, and GEO-LDN's LUP4LDN datasets. Under **Outcome 3.2**, the project developed a multi-criteria assessment module for Colombia which allows for the identification of priority areas for the implementation of SLM and improved the monitoring of land degradation through the integration of national-level datasets. In addition, the project also developed a global module, which was not originally planned under the project's design, that allows for a comparison of the different SDG products available on the UNCCD platform. Lastly, the project undertook pilot testing in Colombia under **Outcome 3.3**, which involved conducting a nation-wide land degradation assessment for different geographies within Colombia using the updated datasets on Trends.Earth. Despite significant delays in field verification activities, the project team was able to undertake two field visits to Colombia in 2022 in order to test the integration of Trends.Earth and the WOCAT database with the LandPKS mobile platform for the verification of biophysical degradation indicators and collection of land management information. Pilot testing revealed that these integrations were successful and well-received by local stakeholders, as it allowed users to see trends in precipitation, current and historical information on land use for sites, and trends in vegetation health. Moreover, the integration also allowed users to obtain location-specific recommendations on the type of SLM practices and technologies that could be implemented to address specific challenges at a given site.

Under **Outcome 4.1**, the project developed multi-media training modules on using Trends.Earth for UNCCD reporting, which were also integrated into the UNCCD's e-learning platform. Due to challenges resulting from the COVID-19 pandemic, the implementation of capacity building workshops underwent a change in format from training representatives of country Parties directly to conducting a training of trainers with regional technical experts of the UNCCD who would in turn support country Parties. Under this outcome, the project also integrated Trends.Earth with the UNCCD reporting platform, thereby allowing users to automatically import their calculated outputs onto the reporting platform and increasing the efficiency of the reporting process.

In line with TE Guidelines, the following outcome ratings are provided for each outcome overall and along the dimensions of relevance, effectiveness, and efficiency.



Outcome	Relevance	Effectiveness	Efficiency	Overall Rating
Outcome 1.1	Satisfactory	Satisfactory	Satisfactory	**Satisfactory**
Outcome 2.1	Satisfactory	Satisfactory	Satisfactory	**Satisfactory**
Outcome 3.1	Satisfactory	Highly Satisfactory	Satisfactory	**Highly Satisfactory**
Outcome 3.2	Satisfactory	Highly Satisfactory	Satisfactory	**Highly Satisfactory**
Outcome 3.3	Satisfactory	Satisfactory	Satisfactory	**Satisfactory**
Outcome 4.1	Satisfactory	Satisfactory	Satisfactory	**Satisfactory**

Overall, the TE found significant enthusiasm and buy-in from the GEF and UNCCD for the Trends.Earth tool, as the conception and continued development of the tool were a direct result of the demand for integrated tools for monitoring, assessing, and reporting on land degradation. In addition, the UNCCD is also recommending and promoting Trends.Earth to country Parties for reporting on SDG 15.3.1, as the tool is now integrated with the UNCCD's reporting platform and allows users to directly import their outputs from Trends.Earth to PRAIS4. In terms of financing, the TE found the presence of windows of flexible funding within GEF cycles reserved for demand-driven enabling activities, such as those delivered through the Tools4LDN project. However, there is a need to develop a more explicit financing strategy as well as setting up institutional arrangements with clear roles and responsibilities relating to future work on the Trends.Earth tool. Similarly, there is a need for a training and awareness raising plan to improve the uptake of the updated version of Trend.Earth, particularly since the project was unable to conduct workshops directly with the country Party representatives due to the COVID-19 pandemic. In light of these factors, the TE assessed the **sustainability** of the results achieved under the Tools4LDN project as ***Likely*.**

In terms of **impact**, the project was successful in creating an enabling environment for country Parties to improve the quality and efficiency of their reporting to the UNCCD through improved biophysical indicators and enhanced capabilities that enable country Parties to report on Strategic Objective 2 and 3 indicators. Furthermore, the integration between Trends.Earth and the UNCCD's PRAIS reporting platform enable a more streamlined reporting process that minimizes errors. At the country-level, the piloting in Colombia resulted in building the capacity of 119 national stakeholders (56 women: 47%; and 63 men: 53%) on using the updated Trends.Earth tool. Furthermore, the field verification exercises testing the integrations of Trends.Earth and WOCAT with the LandPKS mobile platform also resulted in the capacity building of 49 stakeholders (19 women: 39%; 30 men: 61%) on the use of LandPKS. Lastly, through in-country workshops, the project also provided trainings to 18 national stakeholders (06 women: 33%; 12 men: 67%) on the use of Trends.Earth for reporting trends in land degradation to the UNCCD. At the global scale, the Trends.Earth tool received global recognition in two COP decisions which called for the continued collaboration of the UNCCD Secretariat with CI on further development of the tool and increased uptake of the tool by countries. However, there is a need to assess the full extent to which the project impacted the reporting process for the current and future reporting cycles, in terms of the usage of Trends.Earth by country Parties to report to the UNCCD. In addition, the shift in modality from training country Party representatives directly to conducting a training-of-trainers with the UNCCD's regional technical experts also resulted in the project being unable to directly track and report the number of country Party representatives trained on the use of Trends.Earth.

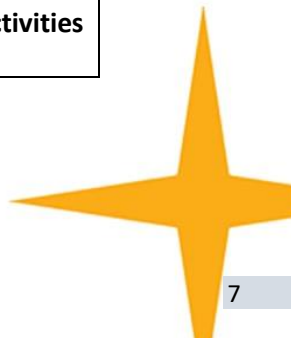
The TE found that the project did not trigger any of the Environmental and Social Safeguards Standards under the ESS policy and complied with the other three ESMF policies as described in the table below.

Safeguard Policy	Rating	Justification

Gender Mainstreaming Plan	Satisfactory	The GMP established indicators for measuring the participation of women throughout the project's implementation through engagements (349 women against target of 25 women), direct benefits for women and men through participating in project activities (71 women against a target of 20 women), and inclusion of gender considerations into the strategies, plans, and policies developed under the project (2 plans/policies against target of 2). In addition, gender was effectively mainstreamed across the projects results framework. Overall, the project was successful in meeting or exceeding the gender mainstreaming goals for the project.
Stakeholder Engagement Plan	Highly Satisfactory	There has been significant stakeholder engagement throughout the project's duration in the form engaging a total of 879 persons (40% women; 50% men) in the project. The project engaged a total of 16 stakeholder groups annually, against a target of 10. In addition, 56 engagements were undertaken, against a target of 08 annually. Overall, the project was successful in significantly exceeding the targets set for stakeholder engagement.
Accountability and Grievance Mechanism	Highly Satisfactory	The project established a robust AGM which provided a detailed and step-wise guidelines for the process. The AGM established constituted a web form on the Trends.Earth website which was accessible to all project partners and attendees of all trainings and workshops. The AGM was annoucned at all official project events, including in-person meetings and during virtual and in-country training workshops. Moreover, to enhance the accessibility and reach, the web form was also available for use in Spanish. Throughout the project life FY2021 – FY2023 no stakeholders reported any grievances, and all project activities were complacent to the guidelines established at project inception

Based on the above stated findings of the TE, recommendations are provided in the table below:

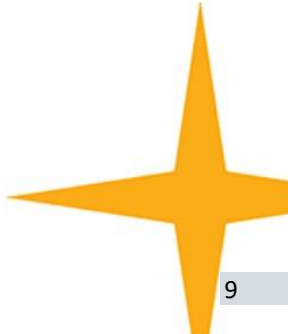
Recommendations for UNCCD	
1.	Due to the challenges posed by the COVID-19 pandemic, the project shifted its implementation of capacity building activities from providing trainings directly to country Party representatives to conducting training of trainers with UNCCD regional technical experts. Given the enhancements and new integrations implemented in Trends.Earth, it is recommended that the UNCCD **develop a comprehensive training and awareness raising plan** for undertaking capacity building and sensitization activities with country Party representatives to actively promote the use of Trends.Earth for the SDG 15.3.1 reporting process.
2.	To ensure the continuous relevancy of Trends.Earth as well as to monitor the uptake by country Parties, it is recommended that the UNCCD **develop a monitoring framework** to track the usage of the tool for the purposes of reporting to the UNCCD.
3.	While financing options in the form of set-aside funding on Land Degradation Focal Area in GEF Replenishment Cycles as well as the GEF-funded Global Support Programme (GSP) for reporting to the UNCCD are present, it is recommended that a **more explicit financing strategy, identifying additional potential sources of funding, be developed** given that upgrades to, enhancements of, and integrations on Trends.Earth are anticipated in the future. It is also recommended that clear roles and responsibilities be set between partners regarding the hosting, maintenance, and upkeep of the tool.
Recommendations for GEF	
1.	It is recommended that the GEF **continue to promote the Trends.Earth toolbox** for not just reporting by country Parties to the UNCCD, but also on leveraging its use as land-use planning tool at the national as well as local levels.
2.	The use of flexible funding set aside from GEF STAR allocations for each Focal Area can be effective and efficient in delivering results for projects with clear-cut objectives and implementation approaches. It is therefore recommended that the GEF **continue to fund such enabling activities** in the future, which can be used to leverage funding for similar global-scale projects.



ABBREVIATIONS & ACRONYMS

AGM	**Accountability and Grievance Mechanism**
CI	**Conservation International**
CIESIN	**Centre for International Earth Science Information Network**
COP	**Conference of the Parties**
CSIRO	**Commonwealth Scientific and Industrial Research organization**
CU	**University of Colorado**
EA	**Enabling Activities**
EA	**Executing Agency**
ESA	**European Space Agency**
EVI2	**Enhanced Vegetation Index**
FAO	**Food and Agriculture Organization**
GEF	**Global Environment Facility**
GEO	**Group on Earth Observations**
GSP	**Global Support Programmes**
GWPv4	**Gridded Population of the World version 4**
IDEAM	**Instituto de Hidrología, Meteorología y Estudios Ambientales**
IDEAM	**Institute of Hydrology, Meteorology and Environmental Studies**
IDI	**In-Depth Interviews**
IEO	**Independent Evaluation Office**
KII	**Key Informant Interviews**
KSS	**Knowledge Sharing System**
LandPKS	**Land Potential Knowledge System**

LDMP	**Land Degradation Monitoring Project**
LDN	**Land Degradation Neutrality**
LUP4LDN	**Land Use Planning for Land Degradation Neutrality**
MCS	**Manager at the Executing Agency**
MoU	**Memorandum of Understanding**
MSAVI	**Modified Soil-Adjusted Vegetation Index**
MSC	**Moore Center for Science**
NASA	**National Aeronautics and Space Administration**
NDVI	**Normalized Difference Vegetation Index**
PIRs	**Project Implementation Reports**
PRAIS	**Performance Review and Implementation System**
PSC	**Project Steering Committee**
QGIS	**Quantum Geographic Information System**
RITs	**Regional Implementation Teams**
SDG	**Sustainable Development Goal**
SEPA	**System for Earth Observation Data Access, Processing and Analysis for Land Monitoring**
SLM	**Sustainable Land Management**
SO	**Strategic Objective**
SOC	**Soil Organic Carbon**
STAP	**Scientific and Technical Advisory Panel**
TE	**Terminal Evaluation**
ToC	**Theory of Change**
TOT	**Training-of-Trainers**
UCSB	**University of California-Santa Barbara**



UNCCD	**United Nations Convention to Combat Desertification**
UNEP	**United Nations Environment Programme**
WOCAT	**World Overview of Conservation Approaches and Technologies**

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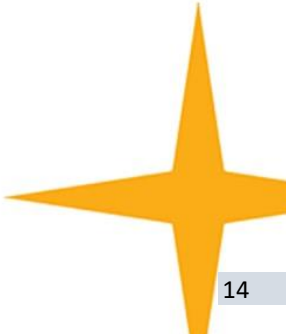


1. INTRODUCTION AND BACKGROUND

Land degradation is one of the world's most pressing environmental issues. Globally, approximately 45 percent of total land area has been degraded.[1] Land degradation releases soil carbon and nitrous oxide into the atmosphere, making it one of the most significant contributors to climate change. Furthermore, it is estimated that 12 million hectares of productive land is lost every year[2], primarily as a result of unsustainable agricultural practices. If current trends continue, 95 percent of the world's land areas may be degraded by 2050.

Land degradation reduces agricultural productivity while increasing the vulnerability of areas already vulnerable to the impacts of climate variability and change. Addressing land degradation, a Sustainable Development Goal (SDG) target 15.3 and a key component of the 2030 Agenda for Sustainable Development, is critical for improving the livelihoods of the most vulnerable people and building resilience for protection against the most extreme effects of climate change.

To support countries in addressing this challenge, the 13th Conference of the Parties (COP.13) of the United Nations Convention to Combat Desertification (UNCCD) adopted the Strategic Framework for 2018-2030 (Decision 7/COP.13) which identified the achievement of Land Degradation Neutrality (LDN) as key to combat the global challenges of desertification/land degradation. Under Decision 3/COP.12, LDN was defined by the Parties to the Convention as *"A state whereby the amount and quality of land resources, necessary to support ecosystem functions and services and enhance food security, remains stable or increases within specified temporal and spatial scales and ecosystems."* To date, over 120 countries have engaged with the LDN Target Setting Programme. LDN represents a paradigm shift in land management policies and practices being a unique approach that counterbalances the expected loss of productive land with the recovery of degraded areas. It strategically places the measures to conserve, sustainably manage and restore land in the context of land use planning[3].

The achievement of LDN requires a set of political, financial, and technical conditions to be met in order to make resources available, and to plan, execute and monitor on-the-ground management and conservation activities to avoid, reduce, and reverse land degradation. To that end, under a previous GEF-funded project titled "Enabling the use of global data sources to assess and monitor land degradation at multiple scales", also known as "Land Degradation Monitoring Project" (LDMP), Trends.Earth was developed through a partnership between Lund University in Sweden, the National Aeronautics and Space Administration (NASA) of the United States, and the Vital Signs program coordinated by Conservation International. Trends.Earth is a free and open-source tool for monitoring and assessing land degradation trends at the national and potentially sub-national scales through the use of spatial analyses of Earth Observation data. The tool enables the use of a set of standardized, recommended methods for estimating the indicators of land degradation to inform land management and investment decisions as well as to improve reporting to the UNCCD and the GEF.

[1] Global Land Outlook, second edition
[2] Source: https://press.un.org/en/2019/sgsm19680.doc.htm#:~:text=Every%20year%2C%20the%20world%20loses,weakened%20resilience%20to%20climate%20change.
[3] https://www2.unccd.int/actions/achieving-land-degradation-neutrality

2. ABOUT THE PROJECT

This section provides some historical perspective to the *"Strengthening Land Degradation Neutrality Data and Decision-making Through Free and Open Access Platforms"* project, as well as expected outputs, outcomes, and impact along with an overview of the implementation arrangements.

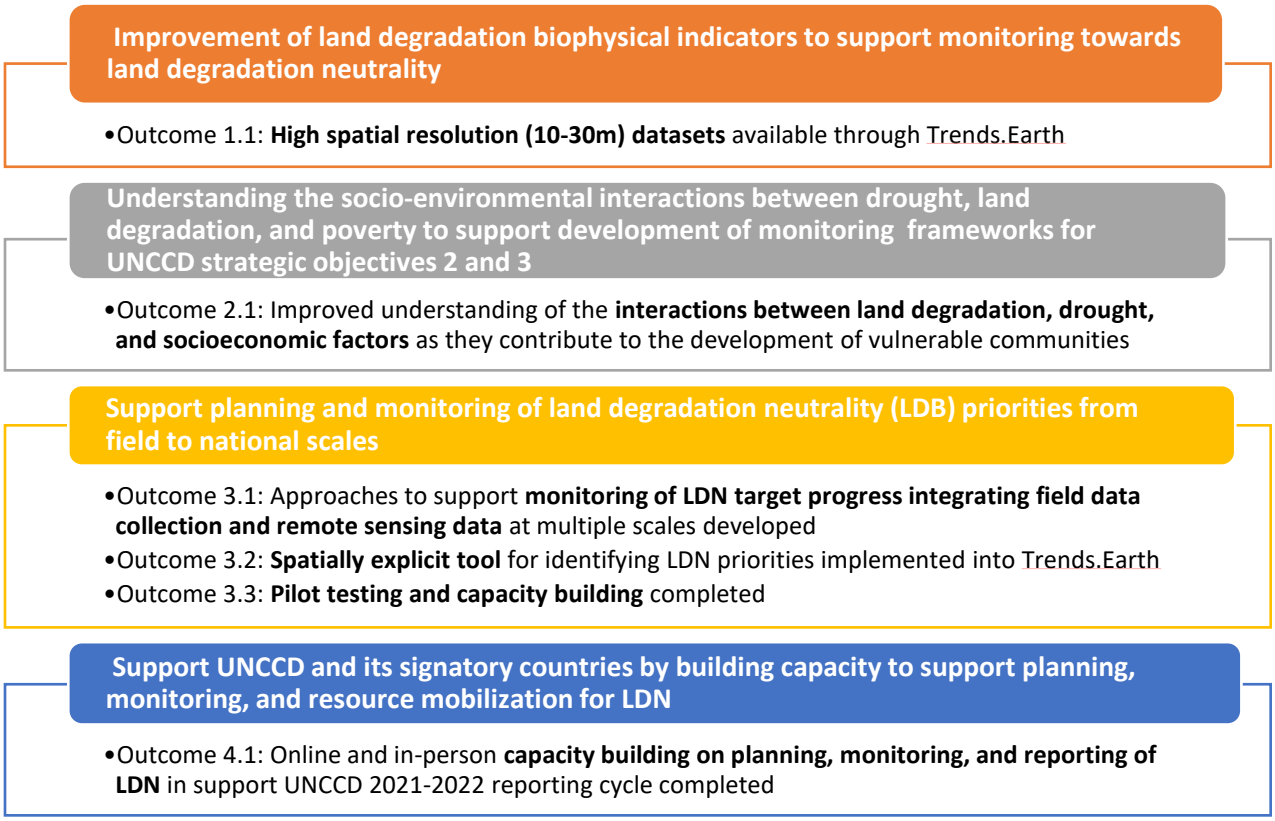
2.1 PROJECT BACKGROUND AND OBJECTIVES

The final activities of the LDMP concluded in March 2018 with Trends.Earth as its key output. The overall reception for the tool has been highly positive and a total of 700 users from 142 countries have been trained on Trends.Earth during the LDMP project period. Moreover, Trends.Earth's contributions have also been utilized and cited by at least 30 peer reviewed published scientific articles as of July 2019. Subsequently, users, stakeholders and partners provided feedback identifying key areas of improvement which would greatly benefit planning and monitoring for the LDN. These areas of improvement were:

1. Improved spatial resolution of the data;
2. Capabilities for linking remote sensing analysis with field and in-situ data for verification purposes;
3. Linking remote sensing with participatory assessment processes to include local knowledge and increase the sense of ownership over the outcomes; and
4. Inclusion of decision support tools to assess the trade-offs in different proposed activities and inform LDN planning.

In order to address these areas of improvement, the "*Strengthening Land Degradation Neutrality data and decision-making through free and open access platforms"* project (henceforth, "the Tools4LDN project") was launched in September 2019 as a 30-month project initially set to conclude in February 2022. However, the Tools4LDN project received a 09 month no-cost extension in May 2021, which set the end date for the project to December 2022. The Tools4LDN project was financed by a medium-size GEF grant of USD 2 million with a total of USD 399,700 in co-financing from Conservation International (CI) and the World Overview of Conservation Approaches and Technologies (WOCAT). The Moore Center for Science (MSC) at Conservation International was the lead Executing Agency of the Tools4LDN project, with the University of California-Santa Barbara (UCSB), University of Colorado, and the WOCAT at Bern University as key executing partners. The ***overall objective of the project was to provide improved methods and tools for assessing land degradation and understanding the socio-economic conditions of vulnerable communities in affected areas through the integration of free and open platforms to support country-level implementation and reporting to the UNCCD***. The project objective was planned to be achieved through **six outcomes** distributed among **four project components** as outlined in the figure below.

Figure 1: Project Components & Associated Outputs



2.2 GEOGRAPHIC SCOPE OF THE PROJECT

The geographic scope of the Tools4LDN project was global as it pertained to the improvement of Trends.Earth which has been freely available as a global public good for various stakeholders, such as researchers and governments. Nevertheless, under Outcome 3.3, the Tools4LDN project selected **Colombia as the pilot country** for testing the tools and approaches developed as well as for conducting capacity building workshops with key stakeholders within the country.

3. ABOUT THE TERMINAL EVALUATION (TE)

The Terminal Evaluation (TE) for the "*Strengthening Land Degradation Neutrality Data and Decision-making through Free and Open Access Platforms*" project began in October 2022 and concluded in February 2023. This section provides details on the purpose of the terminal evaluation as well as its programmatic and geographic scope in line with the terms of reference.

3.1 RATIONALE AND PURPOSE OF THE TE

The Tools4LDN project was a medium-sized GEF-funded project. In accordance with GEF policies and procedures, all medium-sized GEF-funded projects are required to undergo an independent Terminal Evaluation..

3.1.1 OBJECTIVES OF THE TE

The ***purpose of this terminal review was to provide a comprehensive and systematic account of the performance of the project by assessing its design, implementation, and achievement of objectives.*** The evaluation was expected to (a) promote accountability and transparency; and (b) facilitate synthesis of lessons. Also, the TE sought to provide feedback to allow the GEF Independent Evaluation Office (IEO) to identify recurring issues across the GEF portfolio and contribute to GEF IEO databases for aggregation and analysis.

3.2 SCOPE OF THE TE

The programmatic scope of the terminal evaluation primarily encompassed the objectives, outcomes, and outputs as detailed in the project documents and logical frameworks. In particular, the project implementation activities from its start in **September 2019 till December 2022** were reviewed. Furthermore, as outlined in the TORs, the scope of work for the TE covered aspects sketched in the table below:

TABLE 1: PROGRAMMATIC SCOPE OF THE TE

SCOPE OF WORK

Assess the project based on the standardized terminal review GEF Criteria, Questions, and Rating System: In order to establish objectively comparable performance, the review team would assess and rate the project under review on the following eight categories and rate them on a six-point scale from highly satisfactory (6) to highly unsatisfactory (1)[4]:
• **Project Design Assessment**
  ○ Project design
  ○ Project results framework/logframe
• **Project performance and progress towards results:**
  ○ Relevance
  ○ Effectiveness and progress towards results
  ○ Efficiency
• **Project Implementation Management:**
  ○ Project management
  ○ Results-based work planning, monitoring and evaluation systems, reporting
  ○ Financial management and co-finance
  ○ Stakeholder engagement and communication
• **Sustainability**
• **Gender mainstreaming**
• **Environmental and Social Safeguards**
• **Performance of Partners**

3.3 EVALUATION APPROACH AND METHODOLOGY

The TE was undertaken from November 2022 to February 2023. The TE Team adopted a consultative and participatory approach and employed mixed methodologies, combining qualitative and quantitative data from both primary and secondary data sources. The TE was

[4] The rating system is established by GEF and based on the "Guidelines for GEF Agencies in Conducting Terminal Evaluations – Evaluation Document No. 3", 2008, GEF.

undertaken by Cynosure International, Inc.[5] and the team included Ms. Umm e Zia as the International Team Leader, Mr. Daniel Flechas as the National Consultant for Colombia, and Mr. Faaiz Irfan as the Evaluation Assistant.

The TE was designed to be undertaken based on a literature review, collection of primary data from a sample of stakeholders through key informant interviews, and in-depth interviews. The list of documents reviewed is provided in Annex 01.

Based on the **desk review**, the programmatic and geographic scope of the evaluation activities as well as samples for interviews was determined. In addition, Key Informant Interview (KII) and In-Depth Interview (IDI) guide sheets were developed by the TE Team and utilized during the course of interviews with various stakeholders, partners, and beneficiaries, etc. The data collection tools pertaining to the various project participants are attached in Annex 02.

Key informant interviews were conducted with the implementing agency (CI-GEF), executing Agency (CI-MCS), Executing Partners (CU Boulder, UCSB, University of Bern/WOCAT), and the UNCCD. These interviews were conducted remotely using online communication software, including Zoom and MS Teams. In addition, **In-Depth Interviews** with a select sample of stakeholders from Colombia were also conducted. In total, the TE Team conducted 07 KIIs, and 05 IDIs with the various stakeholders. The details of the interviewees are provided in Annex 03.

TABLE 2: NUMBER OF STAKEHOLDERS INTERVIEWED

No.	Data Collection Method	No. of Interviews
1.	Key Informant Interviews	07
2.	In-Depth Interviews	05
	Total Interviews	**12**

3.4 KEY CHALLENGES AND LIMITATIONS

A key challenge encountered by the TE Team was in accessing in-country stakeholders in Colombia for undertaking interviews. Given that most of the stakeholders selected for interviews were based in national public institutions, the TE Team faced challenges in reaching out to them for scheduling interviews as they had moved on and no longer had access to their institutional email addresses. To mitigate this challenge, the TE Team requested alternative contact information from the Executing Agency. To that end, CI-GEF supported and facilitated the coordination process and helped the TE Team obtain stakeholder contact details. These stakeholders were then contacted via phone for scheduling interviews. This measure was successful in enabling stakeholder participation in the current evaluation.

[5] www.cynosure-intl.com

4. TE FINDINGS

4.1 PROJECT JUSTIFICATION (DESIGN OF THE GEF PROJECT)

This section provides an assessment of the project's justification through an analysis of its underlying explicit and implicit assumptions and theory of change (ToC), along with its relevance to the national priorities, GEF strategies, and CI institutional priorities.

4.1.1 RELEVANCE

The TE team found that the Project was relevant at the national, global, and institutional levels.

At the **institutional level**, the Tools4LDN Project followed an earlier CI-implemented and GEF-funded project, Land Degradation Monitoring Project, which resulted in the development and launch of Trends.Earth – a toolbox for assessing, monitoring the status of, and estimating trends in land degradation using remote sensing and other data sets. The current project sought to build on the successes of the previous project by implementing technical improvements and integrating additional datasets and sources into Trends.Earth. In that regard, the Tools4LDN Project was found to be consistent with the GEF-7 Land Degradation Focal Area Objective 2 which pertains to creating an enabling environment to support LDN implementation globally, including UNCCD Enabling Activities (EAs).

At the **global level**, the project was fully aligned with the goals of the *United Nations Convention to Combat Desertification (UNCCD)* and particularly with the *UNCCD 2018-2030 Strategic Framework,* as well as the Sustainable Development Goals (SDGs). In particular, the Tools4LDN Project was designed to not just implement improvements in the processes of reporting towards SDG 15.3.1 or Strategic Objective 1 of the UNCCD Strategic Framework, but also to identify and integrate datasets that could be used to monitor and report against Strategic Objectives 2 (living conditions of affected populations) and Strategic Objective 3 (vulnerability to droughts). Interviews with the UNCCD revealed the significance and relevance of the Trends.Earth tool for country Parties to utilize for their reporting to the UNCCD, which currently remains the only external tool that allows data generated from Trends.Earth to be imported directly into the UNCCD reporting platform Performance Review and Implementation System 4th edition (PRAIS4). Furthermore, the Trends.Earth tool is also regarded as the tool of choice for countries who wish to utilize/integrate their own national data and national assumptions for reporting to the UNCCD.

At the **national level**, the project aligns with a number of key national priorities, policies, and strategies of Colombia as the project pilot country. Most pertinently, the Tools4LDN Project aligned with the *Política para la Gestión Sostenible del Suelo* (Policy for Sustainable Land Management) formulated in 2016 which laid out a strategic action plan to promote sustainable soil management in Colombia through an integrated conservation approach encompassing conservation of biodiversity, water, air, land-use planning and risk management. Moreover, the project also aligned with Colombia's *National Action Plan to Combat Desertification and Drought in Colombia* (2004), which aims to advance actions against land degradation, desertification and drought by promoting and implementing plans, programs, projects and regulations for conservation, management, restoration, and sustainable use of ecosystems. Through its emphasis on capacity building for monitoring progress against land degradation and facilitate

national-level planning, the Tools4LDN Project was found to be highly relevant to the needs of various national-level stakeholders such as government representatives, academia and research institutions, and civil society organizations working on land degradation in Colombia.

In summary, the project was found to be ***highly relevant*** to the various goals and needs of key stakeholders at the institutional, national, and global level through its alignment with key global and national priorities and action plans, as well as directly benefitting national-level stakeholders through increased capacity building.

4.1.2 PROJECT THEORY OF CHANGE

The project document did not provide an explicitly laid out Theory of Change (ToC). Hence the TE Team constructed a ToC based on the descriptions of the project objectives, outcomes, outputs, underlying risks and assumptions, and pathways for long-term impact based on the project documents and through consultations with stakeholders, is depicted in the Figure 02 below.

Figure 2: Project Theory of Change


Barriers Addressed
Components
Outcomes
Outputs
Technical improvement in the biophysical indicators provided by default in Trends.Earth
Component 1: Improvement of land degradation biophysical indicators to support monitoring towards LDN
Outcome 1.1: High spatial resolution (10-30m) datasets available through Trends.Earth
Output 1.1.1.: Remotely sensed data and algorithms for assessing changes in primary productivity at high spatial resolution (10-30 m) available through Trends.Earth
Output 1.1.2.: Global land cover products at high spatial resolution (10-30 m) available through Trends.Earth
Output 1.1.3.: Soil Organic Carbon (SOC) degradation indicator at high spatial resolution (10-30m) available through Trends.Earth
Output 1.1.4.: Updated documentation and step by step guidelines for using high spatial resolution indicators (10-30 m) available through project website
Absence of data sources for supporting the assessments of strategic objectives 2 and 3, in relation to human vulnerability and drought
Component 2: Understanding the socio-environmental interactions between drought, land degradation, and poverty to support development of monitoring frameworks for UNCCD strategic objectives 2 & 3
Outcome 2.1: Improved understanding of the interactions between land degradation, drought, and socioeconomic factors as they contribute to the development of vulnerable communities
Output 2.1.1.: Evaluation of approaches for assessing socio economic vulnerability to drought and interplay with land degradation
Output 2.1.2.: Global drought and early warning datasets added to Trends.Earth for supporting analysis and visualization of analytical results
Output 2.1.3.: Global socioeconomic datasets to support UNCCD Strategic Objective (SO) 2 added to Trends.Earth for supporting analysis and visualization of analytical results
Output 2.1.4. Case study performed in a pilot country
Output 2.1.5.: Documentation and step by step guidelines for using climate, and socioeconomic variables available through project website
Lack of Integration of datasets on land management and their impacts on the LDN indicators at local level and national level and the integration to a mobile application for verification and data collection
Component 3: Support planning and monitoring of land degradation neutrality (LDN) priorities from field to national scales
Outcome 3.1: Approaches to support monitoring of LDN target progress integrating field data collection and remote sensing data at multiple scales developed
Output 3.1.1. LandPKS mobile platform with functionalities to retrieve degradation assessment from Trends.Earth and collect field data on land condition to contextualize remote sensing analysis
Output 3.1.2. LandPKS mobile platform with functionalities to collect and distribute data on sustainable land management practices harmonized with simplified version of WOCAT SLM database
Output 3.1.3. Integrated workflows for assessing changes in land condition combining Trends.Earth indicators with other monitoring tools, such as Collect Earth developed
Output 3.1.4. Documentation and guidelines for performing integrated assessments of land condition at national and subnational scales using WOCAT, LandPKS, Trends.Earth, Collect Earth and other tools available through project website.
Outcome 3.2.: Decision support tool for identifying LDN priorities implemented into Trends.Earth
Output 3.2.1.: New version of Trends.Earth optimized for Quantum GIS software version 3
Output 3.2.2.: LDN priority setting decision support functionalities based on multi-criteria evaluation of geospatial data, field data and participatory assessments at national level available through Trends.Earth
Output 3.2.3.: Documentation and step by step guidelines for performing prioritization of LDN activities available through project website
Outcome 3.3.: Pilot testing and capacity building completed
Output 3.3.1.: Degradation assessment for different geographies within the pilot country using improved biophysical indicators
Output 3.3.2.: Pilot testing of mobile platform and WOCAT integration for verifying biophysical degradation indicators and collection of land
Output 3.3.3.: LDN prioritization analysis using decision support tool and participatory process with local stakeholders
Output 3.3.4.: A capacity building workshop targeting 30 participants from key user groups (15 male and 15 female)
Limited capacity building resources to facilitate the uptake and continued support of the different tools
Component 4: Support UNCCD and its signatory countries by building capacity to support planning, monitoring, and resource mobilization for LDN
Outcome 4.1.: Online and in-person capacity building on planning, monitoring, and reporting of LDN in support UNCCD 2021-2022 reporting cycle completed
Output 4.1.1. Online modular training approach with videos and written materials available in three languages
Output 4.1.2. Implementation of a community of users' platform to mainstream and facilitate trouble shooting and sharing of experiences and
Output 4.1.3. Capacity building workshop on tools for supporting UNCCD 2021-2022 reporting cycle

Overall, the project was designed to improve the monitoring, assessment, planning, and reporting of land degradation through the use of reliable and cost-effective methods of collecting and analyzing data. In particular, the project's ToC was aimed at removing the technical challenges and limitations associated with the Trends.Earth tool as identified by various stakeholders and partners, namely the need for: a) technical improvements in the biophysical indicators provided in Trends.Earth; b) additional data sources to support measurement and assessment of indicators pertaining to the UNCCD Strategic Objective 2 and 3; c) integration of additional data sources on land management to monitor impact on the LDN indicators at local and national level; and d) capacity building resources to facilitate the uptake and continued support of the tools. To that end, the project's inputs, outputs and outcomes pertained to three main pathways which are elaborated below.

Technical Improvements and Capability Enhancements: The project aimed to incorporate updated and higher-resolution datasets onto the Trends.Earth tool to enable more accurate and higher quality reporting to the UNCCD, particularly for country Parties who lack access to rich national geospatial data. Concurrently, the project also enhanced capabilities for country Parties who possess such data, to incorporate it into Trends.Earth for monitoring land degradation and reporting to UNCCD that better fits their national contexts. Furthermore, the project also integrated Trends.Earth with the UNCCD's reporting platform to enhance the efficiency and accuracy of the reporting process.

Demonstrate Integrated Methods for Additional Use Cases: In addition to reporting to the UNCCD, another key component of the project pertained to the integration of Trends.Earth and associated land degradation tools, that allow for conducting field verification and land degradation assessments, and enable effective land-use planning. This was aimed to be achieved through the integration of the Trends.Earth and WOCAT SLM database with the LandPKS mobile platform, and enhanced the efficacy of the tool's usage for cases beyond reporting to the UNCCD.

Capacity Building: A significant aspect of the project pertained to capacity building of various stakeholders to train them on the usage of the updated Trends.Earth tool for various purposes including reporting to the UNCCD, as well as undertaking field verification and on-ground land degradation assessments.

4.2 PROJECT STRATEGY

This section presents a review and analysis of the project's strategy, particularly the project design and its results framework.

4.2.1 PROJECT DESIGN ASSESSMENT

The Tools4LDN project was built on the pioneering work undertaken through a previous GEF-funded and CI-GEF implemented project – *Enabling the Use of Global Data Sources to Assess and Monitor Land Degradation at Multiple Scales* – which was implemented between January 2016 and May 2018 and resulted in the development and launch of the Trends.Earth toolbox. Trends.Earth was developed as a free and open-source tool which allows non-expert users to use integrated national data with freely available global datasets to monitor land degradation trends using remote-sensing technology.

The TE found that the current project was designed based on the feedback obtained from various stakeholders such as the UNCCD, the LDN community, the Trends.Earth Team, and users of Trends.Earth. The feedback highlighted key technical challenges and limitations associated with the tool as previously mentioned. To enable an effective project design that addressed and responded to the various needs identified by stakeholders, the TE learned that the Project Preparation Grant (PPG) phase of the Tools4LDN project involved an extensive consultative process involving the various project partners.

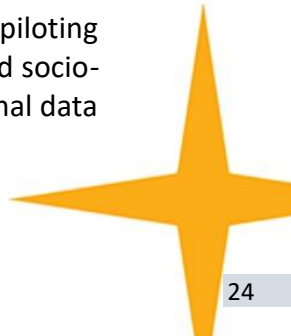
In addition, interviews with various stakeholders including CI-GEF and the UNCCD revealed that the Tools4LDN project was driven by a strong demand for an integrated and harmonized approach for UNCCD country Parties to measure, assess, and report on indicators pertaining to SDG 15.3.1 using the methodology outlined in the UNCCD's Good Practice Guidance. To that end, a key component of the Tools4LDN project pertained to the incorporation of datasets that allowed for the measurement of indicators related to Strategic Objectives 2 and 3 of the UNCCD that pertain to assessing and reporting on the socio-environmental interactions between drought, land degradation, and poverty.

Similarly, the Tools4LDN project was also designed to strengthen linkages and ensure interoperability with two additional tools, LandPKS and the WOCAT SLM Database, which are a part of the UNCCD's Knowledge Sharing System (KSS). The WOCAT database is a rich repository on SLM practices around the world and has been recognized by the UNCCD as the primary recommended database for reporting SLM best practices by the UNCCD Parties. Whereas, LandPKS is a mobile app supported by cloud computing that allows site-specific land-use planning, management and monitoring with capabilities to complete rapid, local assessments of key soil properties to assess the health state of the land and also to document land use practices. Interviews with the UNCCD revealed the presence of various such tools that support land degradation assessment, planning, and monitoring. Consequently, these integrations facilitated a two-pronged vision: a) to ensure greater coherence and alignment between approaches used by these tools; and b) to provide country Parties with a one-stop-shop that covered different needs, namely assessment, monitoring, planning, and reporting of land degradation.

An additional component of the project pertained to the integration between Trends.Earth and the UNCCD's PRAIS4 reporting platform to facilitate a more efficient reporting process. This was designed to be achieved through enabling the direct import of outputs from Trends.Earth on to the UNCCD reporting platform in an effort to minimize errors from manual data entry.

Thus, the TE found that the project was designed to be well-aligned with the needs and priorities of the UNCCD as well as to facilitate various user groups, particularly country Parties in meeting their reporting needs.

Lastly, the Tools4LDN project was designed to undertake piloting of the newly integrated tools in only one country – Colombia – which was selected during the project's inception stage. The TE found that the selection of Colombia was appropriate due to the presence of various different landscapes, from humid forests to drylands, which allowed for the testing of these tools across various land types. Having said that, the TE found that selecting only one country for piloting presented missed opportunities for testing and working in different types of national and socio-economic contexts. For instance, the TE found the presence of a rich repository of national data



sources as well as well-capacitated national institutions engaged in land degradation monitoring, assessment, and planning. Working directly with national stakeholders in other countries lacking national data sources as well as institutional capacity may have revealed additional lessons and findings pertaining to the use and uptake of Trends.Earth that could have strengthened the results achieved under the current project. Having said that, the TE is cognizant that the allocated budget may have precluded such a project design involving multi-country field testing and capacity building.

In summary, the TE Team found that the project design was sound and built on the prior history of work that the CI-MCS had done in partnership with Conservation International and the GEF. Moreover, the project was also found to have been designed with significant stakeholder engagement and input in order to be responsive to the needs of the UNCCD and its country Parties. However, the project was designed to be piloted in just one country which deprived the project from a deeper assessment of the various tools in diverse socio-political/development contexts. Nevertheless, the selection of Colombia as a pilot country was appropriate as it allowed the project to test tools across the diverse landscapes present in Colombia.

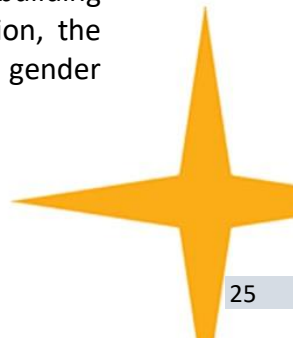
4.2.2 PROJECT RESULTS FRAMEWORK

An in-depth review and analysis of the project's results framework indicated that the framework provided in the project document lists specific indicators, baseline, and targets for each project outcome. Further supporting each outcome are lists of project outputs, their indicators and associated targets to gauge progress towards achieving the outcomes and in turn the project components as well.

In addition, the project document called for the development of a comprehensive Project Results Monitoring Plan covering all outcome and output indicators included in the Results Framework, and listing specific metrics, the methodology to be undertaken to achieve indicator metrics, baseline data, location of activity, frequency of monitoring, and the responsible parties to ensure the implementation of the activity.

The Project was found to have a sequential design, with outputs building off the work done upon one another. Furthermore, the Project Results Framework was well designed as the Outcomes were interlinked, providing a clear picture of Project baseline, end of project targets and expected outputs and indicators. Overall, the Project Results Framework presented a specific and measurable approach by having quantifiable indicators and targets, associated with each of the Outputs and Outcomes. However, the TE found some gaps in the type of results measured which could have enhanced the assessment of impact. For instance, the TE found that the results framework could have benefitted from the inclusion of an indicator which measured the number of country Parties who have utilized Trends.Earth in their reporting to the UNCCD, particularly since the project was designed to align with the 2021-2022 reporting cycle of the UNCCD.

In terms of gender mainstreaming, the TE found that gender was sufficiently integrated into the results framework through the inclusion of gender-disaggregated targets for capacity building and training activities (Output 3.3.4) and Trend.Earth users (Output 4.1.2). In addition, the project's results framework was also designed to emphasize the integration of gender considerations into the development of online training modules (Output 4.1.1).



In summary, the project results framework was found to provide sufficient monitoring guidance and planning with well-integration of gender mainstreaming and safeguards. In addition, the TE found that the project results framework was developed using SMART indicators, with targets against each output and outcome. Hence, the overall design was found to be ***Satisfactory.***

4.3 PROJECT IMPLEMENTATION AND ADAPTIVE MANAGEMENT

This section provides a detailed assessment of the processes and structures involved in project implementation and adaptive management. Specific aspects analyzed include: Quality of supervision by CI-GEF Agency, Execution Arrangements, Financial Management and Co-Financing, Work Planning, Project-level Monitoring Systems, and Reporting.

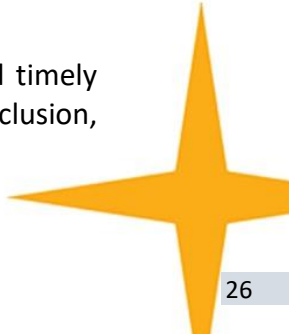
4.3.1 QUALITY OF SUPERVISION BY CI-GEF

As the Implementing Agency of the project, the CI-GEF Agency was responsible for providing overall project assurance, including supporting project implementation by maintaining oversight of all technical and financial management aspects to the Moore Center for Science (MCS) at CI (the Executing Agency). As part of its oversight functions, the CI-GEF Agency was also responsible for monitoring the project's implementation and achievement of outcomes and outputs, ensuring proper use of GEF funds, and reviewing and approving any changes in budgets or work plans.

The TE Team ascertained that CI-GEF has been delivering on its mandate by reviewing and approving the annual procurement plans as well as the associated budgets to ensure their alignment with given project budget and timeframe. Moreover, the CI-GEF Agency also reviewed and approved the quarterly technical and financial reports and the annual project implementation reports submitted by the MCS to verify the progress made towards achieving the project's results and objectives. Due to its close and cordial working relationship with the MCS, facilitated by their previous cooperation and close proximity, the CI-GEF Agency has engaged the Project Management Team at the MCS in the form of both regular check-ins and ad-hoc meetings to discuss emergent issues, seek clarifications and further elaborations on reporting. Within the CI-GEF Agency, the Safeguards Specialist has also closely reviewed the quarterly and annual progress reports submitted by the MCS to ensure that sufficient attention has been paid to the implementation of safeguards.

The CI-GEF Agency has also participated in monitoring activities at various stages of the project's implementation, such as at the inception stage where it coordinated the project's inception workshop with the MCS. In addition, the TE found that while a field monitoring mission to Colombia was planned, the COVID-19 pandemic prevented the CI-GEF Agency from undertaking the monitoring mission. Instead, the CI-GEF Project Agency relied on the Executing Agency (MCS) and partners, who were able to undertake country visits in 2022 for implementation of project activities for reporting on M&E aspects of implementation. The COVID-19 pandemic also slowed down progress, especially on Component 3 of the project, which involved field testing and verification of the integrations and upgradation of Trends.Earth, which necessitated the CI-GEF in granting a 09-month no-cost extension to the project in May 2021.

In brief, the CI-GEF Agency has been delivering on its responsibilities in a diligent and timely manner and according to the tasks assigned to it in the project design document. In conclusion,



the quality of supervision and implementation by CI-GEF as the Implementation Agency was deemed ***Satisfactory*** by the TE.

4.3.2 EXECUTION ARRANGEMENTS

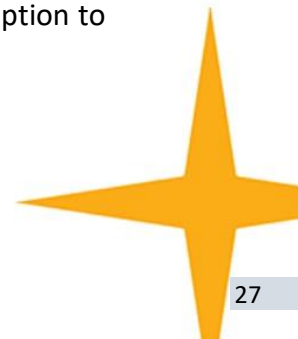
With CI-GEF Agency as the Implementing Agency (IA), the MCS acted as the Executing Agency (EA) of the project. The MCS Team, hosted at CI, originally comprised of a Senior Director of Data Science, a GIS Manager, a Director of Ecosystem Analysis, and a Land Systems Scientist. In addition, the MCS Team was also supported by a Senior Director of Finance and Operations. In February 2021, about 17 months into the project's implementation, the Director of Ecosystem Analysis departed from the MCS Team. The TE found that the departure did not have any significant challenges for implementation and that the remaining three members were able to allocate tasks between them.

The project also involved a number of Executing Partners representing various institutions and organizations, which included: a) the University of Bern (representing WOCAT); b) University of California – Santa Barbara; and c) University of Colorado (representing LandPKS). Together with the MCS, representatives of these partners comprised the **Project Executive Team** which was responsible for the planning and implementation of the project activities that fell under their respective purviews.

As the Executing Agency, the MCS was accountable to the CI-GEF Agency for the GEF funding it received under the project. The project also instituted a **Project Steering Committee (PSC)**, comprised of the Executive Team, representatives of UNCCD Secretariat, UNCCD regional representatives from Madagascar, India, and Colombia, and other external development sector actors such as FAO and GEO-LDN. The PSC functioned as the key governance mechanism for the project, providing high level guidance and monitoring progress against project activities. In addition, the PSC was also responsible for guiding and advising the Project Executive Team in aligning its work with external partners and organizations and any opportunities to spotlight the work done under the project at different conventions and events.

In addition to the PSC, the project also instituted a **Science Advisory Board** which was responsible for providing an advisory role, reviewing progress made by the project, and reviewing and approving the knowledge products produced by the project. The Science Advisory Board comprised of members from the GEF Scientific and Technical Advisory Panel (STAP), the European Space Agency (ESA), UNCCD Science-Policy Interface, and the Commonwealth Scientific and Industrial Research Organisation (CSIRO).

Overall, the TE Team found that staffing at the MCS has been adequate and mostly consistent over the implementation of the project. In fact, the TE observed that three of the four technical experts who initially comprised the Team at MCS had also been engaged in leading positions in the previous GEF-funded project that first developed the Trends.Earth tool. Thus, there was found to be significant cohesion as well as institutional knowledge among the Executing Agency. In addition, the TE also found that low turnover in general, as most of the senior staff from the Executing Agency as well as the Partners remained engaged in the project from its inception to its conclusion, facilitated smooth progress.



In summary, the project's overall execution arrangements were in line with the project design and GEF guidelines, largely on account of the highly experienced and seasoned staff at the MCS as well as strong partnerships with high-capacity representatives of Executing Partner organizations. Moreover, staffing within the Executing Agency and Partners was found to be adequate and mostly consistent, with no major challenges reported in terms of implementation and coordination of project activities after the departure of a core member at the MCS. Therefore, the project's execution arrangements were found to be ***Satisfactory*** by the TE Team.

4.3.3 WORK PLANNING

In line with the design of the project, the Executing Agency was responsible for developing annual workplans in collaboration and coordination with the Executing Partners and obtaining approvals on the workplan from the PSC and the CI-GEF Project Agency. Interviews with the MCS Team revealed that the previous GEF-funded project had taken a more decentralized approach to the planning of project activities that fell in the purview of different executing partners, with the lead Executing Agency working directly with Executing Partners on planning and monitoring of progress. However, under the Tools4LDN project, the Executive Team, which comprised of representatives from all partners, worked jointly on the planning of project activities and in reviewing progress on all of the various project components, which is indicative of the high level of engagement and cohesion among the project's Executing Agency and Partners. Moreover, the TE also found that the project's Executive Team met regularly every quarter as stipulated in the project design. However, while the Project Steering Committee (PSC) also met regularly on a semi-annual basis between October 2019 and September 2021, the TE found that the project management was unable to hold a final PSC meeting due to challenges around scheduling for multiple time zones. This deprived the other members of the Steering Committee from a final closure on the project.

Further, the advent of the COVID-19 pandemic posed challenges and some unexpected opportunities for the project. The project team reported that the COVID-19 presented an opportunity for increased flexibility in working arrangements, thereby making it easier to schedule meetings and plan amongst project partners for activities that did not require field-level implementation or engagements. Similarly, a review of the project's quarterly and annual progress reports revealed that desk-based project activities did not suffer from any major challenges or delays as a result of the pandemic.

Nevertheless, the COVID-19 travel restrictions posed several challenges in the form of delays under Component 3, which included conducting field verification and in-country workshops with stakeholders in Colombia. Another challenge was encountered in terms of aligning project timelines with the UNCCD reporting calendar as country Parties were unable to meet the deadline for the 2021-2022 reporting cycle. In fact, the TE found that the timeframe for the UNCCD reporting faced uncertainties, having undergone two postponements over the course of the project's implementation. This was seen to affect activities under Component 4 of the project which involved implementing integrations between Trends.Earth and the UNCCD reporting platform.

Consequently, the project requested a no-cost extension in May 2021, 20 months into the project's implementation and was granted a nine-month no-cost extension by CI-GEF, which ensured that all project activities affected by delays were completed in that extended timeframe.

4.3.4 PROJECT-LEVEL MONITORING SYSTEMS & REPORTING

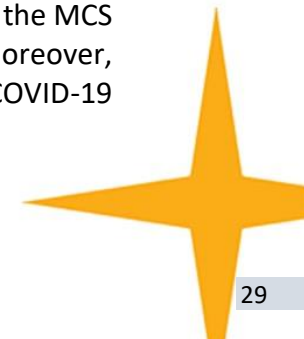
The project design provided a Project Results Framework that lists the project level indicators and collates indicators at the outcome and output-level under each outcome. In addition, the project document also stipulated the development of a comprehensive Project Results Monitoring Plan at the inception stage, covering all outcome and output indicators included in the Results Framework, and listing specific metrics, the methodology to be undertaken to achieve indicator metrics, baseline data, location of activity, frequency of monitoring, and the responsible parties to ensure the implementation of the activity. Moreover, the Plan provided types of M&E components and activities to be undertaken at various points of the project duration and specified the frequency of each activity as well as the associated stakeholder responsibility and indicative resources.

As the project's Executing Agency, the MCS was responsible for ensuring that the monitoring and evaluation activities were carried out in a timely and comprehensive manner, and for initiating key monitoring and evaluation activities, such as planning and organizing the project inception workshop and report, quarterly progress reporting, annual progress and implementation reporting, and documentation of lessons learned. Whereas, the University of Bern (WOCAT), University of California – Santa Barbara (Global Health Institute), and University of Colorado (LandPKS), as key project executing partners, were responsible for providing the requisite information for the timely and comprehensive completion of reporting.

A review of the available reports revealed that the MCS regularly provided comprehensive quarterly financial and technical reports, annual financial reports, annual workplans, as well as the annual project implementation reports, as stipulated in the project document. The TE Team found the information provided in the quarterly reports particularly helpful to understand project history. The TE Team also noted that the annual project implementation reports (PIRs) contained significantly detailed documentation regarding the various lessons learned over the course of the project's implementation. Moreover, the project also documented, monitored, and tracked progress on GEF core indicators as well as the indicators pertaining to the Accountability and Grievance Mechanism (AGM), Stakeholder Engagement Plan, and Gender Mainstreaming Plan.

In addition to its reporting requirements to CI-GEF, the project was also seen to have established a website for the Tools4LDN project on which it published the various approved stakeholder engagement and gender mainstreaming plans, as well as the knowledge products for wider dissemination. Lastly, although a monitoring field mission was planned for Q3 FY21 by the CI-GEF Project Agency, the advent of the COVID-19 pandemic and the resulting travel restrictions combined with the need to shift the timeline of the project's activities in Colombia to FY22, prevented the CI-GEF from undertaking the mission.

In summary, the project's M&E was ***Satisfactory*** at design. Also, during implementation the MCS ensured that the different mechanisms dictating the M&E framework were in place. Moreover, key reports of good quality were delivered on time. However, challenges due to the COVID-19



pandemic prevented the undertaking of a country monitoring mission by the CI-GEF. Consequently, the M&E during implementation is rated ***Satisfactory.***

4.3.5 FINANCE AND CO-FINANCE

The Project was funded by a USD 2 million GEF grant. Of this fund, the largest allocation of 34% was made to Component 3 of the project, followed by Component 2 (28%), Component 1 (17%), and Component 4 (12%). As of 31st December 2022, the project had spent a total of USD 1,757,400 (88%) of its allocated amount of USD 2 million. Across components, 91% of the funds allocated for Component 1 have been spent whereas 87% of the funds allocated for Component 2 have been spent, closely followed by Outcome 3 (84%). Compared to other components, the project was noted to have spent the least proportion of allocated funds on Component 4 (77%). Lastly, of the USD 179,320 allocated to cover the project management costs, 93% has been expended. However, as reported by the project's Senior Director of Resilience Science, 100% of the GEF grant funding is expected to be expended by the grant's closure on 30th April, 2023.[6] The table below outlines the GEF Fund amounts allocated and expended across components as of 31st December 2022.

TABLE 3: GEF FUND AMOUNTS ALLOCATED AND EXPENDED BY COMPONENT AS OF 31ST DECEMBER 2022

	GEF Grant Amount Allocated (USD)	Percent of Total Allocation	Expenditure as of 31st December 2022 (USD)	Percentage of Total Allocated Spent
Component 1	340,386	17%	309,036	91%
Component 2	555,331	28%	482,590	87%
Component 3	688,989	34%	576,920	84%
Component 4	235,974	12%	181,055	77%
Monitoring and Evaluation (M4)	N/A	N/A	41,691	N/A
Project Management Costs	179,320	09%	166,107	93%
TOTAL	**2,000,000**	**100%**	**1,757,400**	**88%**

In addition, the project document also identified co-financing of USD 397,700 from multiple partners. Over the course of implementation, the project reported five co-financing partners with a total cumulative co-financing of USD 403,449 (101% of the committed co-financing). Of the total co-financing, USD 31,700 (08%) was committed in the form of grants; while, USD 366,000 (92%) was committed through in-kind co-financing. As the following table outlines, the Resilience Atlas (USD 250,000 in in-kind) is the largest contributor of co-funding to the project at 63%, followed by the University of Bern (USD 116,000 in in-kind) at 29%. Co-financing in the form of grants was provided by NASA (USD 8,400), CI-Gordon and Betty Moore Center for Science (USD 3,800), and IDH Sustainable Land Initiative (USD 19,500).

[6] The reported finance data is from the most recently submitted and approved quarterly financial report from the Executing Agency (MCS) to CI-GEF, which also fell under the scope of the TE. During the post-evaluation debriefing, it was reported by the project's Senior Director of Resilience Science that 100% of the GEF grant is expected to be expended by the grant's closure on 30th April, 2023.

TABLE 4: CO-FINANCING PROPOSED AND MATERIALIZED ACROSS DIFFERENT SOURCES

Name of Co-Financier	Type of Co-financing	Amount (USD)	Percent of Total	Amount Materialized (USD)[7]	Percentage of Allocated Amount Materialized
NASA	Grant	8,400	02%	10,825	129%
CI-Gordon and Betty Moore Center for Science	Grant	3,800	01%	4,885	129%
IDH Sustainable Land Initiative	Grant	19,500	05%	21,739	111%
The Resilience Atlas	In-kind	250,000	63%	250,000	100%
University of Bern	In-kind	116,000	29%	116,000	100%
TOTAL		397,000	100%	403,449	101%

At the donor level, the project was successful in obtaining additional funding from donors such as the CI-NASA (129%), CI-Gordon and Betty Moore Center for Science (129%), and the IDH Sustainable Land Initiative (111%). In addition, the project also reported that 100% of the in-kind co-financing from The Resilience Atlas and the University of Bern materialized prior to the project's close. Therefore, the TE Team found the project co-financing to be satisfactory as the total co-financing had successfully materialized and the project was able to exceed the amount that had been reported at project design.

4.3.6 STAKEHOLDER ENGAGEMENT

Under the project, stakeholder engagement primarily occurred at two levels: a) at the global-level, with stakeholders involved in project implementation as well as external stakeholders who are key actors in the arena of land degradation; and b) at the national level, with stakeholders in Colombia trained on the use of Trends.Earth and involved in the deployment of the tools in the field.

As previously mentioned in the Work Planning section, the TE found a high level of engagement amongst the Executing Agency and the three Executing Partners (University of Colorado, University of Bern/WOCAT, and University of California, Santa Barbara) who were involved in frequent joint planning consultations. Prior to the COVID-19 pandemic, the project's Executive Team conducted in-person workshops in February 2020 for developing and designing the integration between LandPKS, Trends.Earth, and WOCAT. However, since then, due to the COVID-19 pandemic, such consultations and engagements were conducted virtually. Having said that, the Executive Team was successful in conducting field verification in Q3 of FY22 upon the easing of travel restrictions.

The project was also found to engage key stakeholders from Colombia at various levels and stages of implementation. At the project-level, a representative from the Ministry of Environment in Colombia was engaged as the national focal point, who was also a key member of the PSC and remained involved with the project since its inception workshop. Also, as COVID-19 prevented

[7] As of 31st December 2022

direct stakeholder engagement such as in-country workshops and field visits in Colombia, the project coordinated with the national focal point to hold a series of virtual webinar-based trainings from September to November 2021. As an additional measure, the project also hired a contractor to engage stakeholders for this training series, facilitate the trainings, and disseminate information from the workshops to various stakeholders in Colombia. Similarly, in anticipation of the field visits to Colombia in 2022, the project engaged with stakeholders in Colombia virtually to identify target regions for implementing field verification activities. In that regard, the IDEAM provided technical and advisory support to the project and facilitated in the identification of areas for field visits, local stakeholders, and partners to support undertaking field visits, as well as the selection of participants to undergo virtual and in-country workshops.

The TE also found that the project had undertaken significant stakeholder engagement with the broader global peer and partner organizations that are key actors in the LDN sphere. In that regard, a key highlight has been the continuous and close coordination of the project with the UNCCD Secretariat to ensure that all recommendations and updates to guidance documents, including the UNCCD-published Good Practices Guidance Document, were considered in the design and upgradation of the Trends.Earth tool. The capacity building modules developed under the current project were also made available to the UNCCD for wider-dissemination to country Parties through its internal e-learning platform. As elaborated upon in the Impact section, the project has also collaboratively engaged with other global initiatives such as the Global Commons Alliance and the Sustainable Trade Initiative (IDH) by providing key technical and advisory assistance. Although a direct question about the stakeholder satisfaction with the project's responsiveness to their views and concerns was not asked, nearly all interviewed stakeholders provided positive feedback regarding their interaction with the project and its responsiveness to their needs. Therefore, it can be safely said that 90% to 100% of interviewed stakeholders were satisfied with the project's responsiveness to their views and concerns. This also reflects the fact that this being a demand-based project, it had higher levels of acceptability amongst stakeholders.

Lastly, the project team was seen to undertake key strategic engagements at various global fora, such as the Living Planet Symposium 2022 and the UNCCD COP15. A key highlight of the UNCCD COP15 was the global recognition of the Trends.Earth tool in two COP decisions calling for the continued collaboration of the UNCCD Secretariat with CI on further development of the tool and increased uptake of the tool by countries.

4.4 PROGRESS TOWARDS RESULTS

This section provides an outcome-wise and output-level analysis of the project’s progress towards achieving results. In accordance with the TE guidelines, outcome ratings are also provided while taking into account the project’s relevance, effectiveness, and efficiency and achievements against its expected targets.

4.4.1 COMPONENT 1 – IMPROVED LAND DEGRADATION BIOPHYSICAL INDICATORS

Under Component 1, the project sought to improve the land degradation biophysical indicators to support monitoring towards land degradation neutrality. Component 1 comprised of a single outcome, which was in turn composed of four outputs corresponding to various components of the biophysical indicators. Output 1.1.1 related to making available remotely sensed data and algorithms for assessing changes in **primary productivity** at high spatial resolutions (10m to 30m) within Trends.Earth. Similarly, Output 1.1.2 pertained to making available **global land cover** products at similar high spatial resolutions; whereas, Output 1.1.3 entailed the incorporation of **Soil Organic Carbon (SOC) degradation** indicator within Trends.Earth. Lastly, Output 1.1.4 sought the development of **updated documentation and step-by-step guidelines** for using the high spatial resolution indicators integrated into Trends.Earth. The following table outlines the Outcome-level indicators associated with the Outcome and reports the progress made by the project towards their actualization.

TABLE 5: PROGRESS ON INDICATORS UNDER OUTCOME 1.1 (AS OF 31st DECEMBER 2022)

Outcome 1.1: High spatial resolution (10 -30m) datasets available through Trends.Earth				
Outcome Indicators	**Baseline**	**Target**	**Progress till TE**	**Progress Rating**
Outcome Indicator 1.1: Number of high spatial resolution datasets added to Trends.Earth and readily available for users	Current data available through Trends.Earth allow for analysis at 250m spatial resolutions	3 data sources	04 data sources	**Completed**

Overall, the evaluation ascertained that the project successfully delivered on Outcome 1.1 by integrating 04 datasets (03 on primary productivity, and 01 on land cover) as well as adding a functionality that allowed the integration of SOC degradation indicators into the land cover dataset, and the development of step-by-step guidelines for Trends.Earth users for using the new and additional indicators and functions integrated under the current Project.

The Project was seen to utilize a systematic approach to achieving the results in this outcome by first developing a short synthesis report on publicly available high resolution datasets on primary productivity indicators, global land cover, and global SOC degradation, which was finalized in October 2020. The report, produced in English and Spanish, led to the identification of three datasets for **primary productivity**: a) the Normalized Difference Vegetation Index (NDVI); b) the two-band Enhanced Vegetation Index (EVI2), which is particularly suitable for areas with high biomass; and c) the Modified Soil-Adjusted Vegetation Index (MSAVI), which is better-suited for areas with low biomass. Thus, the Project was successful in integrating annual integral land productivity datasets at 10m spatial resolution for 2018 to 2021.

With regards to **land cover** datasets, the Desk Review found that although the Copernicus Land Cover product had the highest spatial resolution at 100m, it fell short of the Project's target of integrating finer resolution data (10-30m) and only provided land cover data between 2015 and 2019. Consequently, the Project held consultations with additional providers and was successful in gaining approval for early access to Vito Remote Sensing's World Cover Land Cover dataset at 10m resolution. Although at a higher resolution, the MTR found that the Vito Remote Sensing

only provides a one-time set (for 2020) and thus cannot be incorporated into the UNCCD reporting for land degradation. Nevertheless, the Project incorporated the Vito Remote Sensing dataset in addition to the Copernicus dataset into Trends.Earth for users who may find it useful for visual comparison. Based on the incorporation of the land cover dataset, the Project successfully added a functionality for integrating high spatial resolution land cover into **soil organic indicators** within Trends.Earth. Lastly, the Project also developed step-by-step guidelines for using the high spatial resolution indicators for each sub-indicator and an overall integration of the final high spatial resolution for the SDG 15.3.1. The guidelines were completed by the first quarter of 2022 to align with the launch of the UNCCD reporting period.

Overall, the evaluation found that because Component 1 of the Project relied on the timely release and availability of datasets from external actors, such as NASA and Vito Remote Sensing, progress on the integration of these datasets was influenced by factors outside the Project's immediate ambit of control. For instance, the evaluation observed that the release of NASA's Sentinel-2 (for deriving NDVI, EVI2 and MSAVI datasets) was delayed by over 07 months (expected release: July 2020; not released until after January 2021). Despite the delay, the Project was successfully able to process the Sentinel-2 to create the NDVI, EVI2, and MSAVI datasets within the project's timeframe. Another key challenge pertained to the availability of suitable datasets. Although a significant improvement over the baseline (land cover data with 300m spatial resolution), the Copernicus land cover dataset was found to only have a resolution of 100m which covered the time period between 2015 and 2019. Despite additional efforts undertaken by the Project Team, land cover datasets with finer spatial resolution (10-30m) for a longer time series were not available, as the Vito Remote Sensing data at 10m resolution only provided data for one year (2020).

Based on the above assessment, the TE team gave the following performance ratings for Outcome 1.1 in accordance with the CI-GEF TE criteria.

TABLE 6: OUTCOME 1.1 RATING

Criteria	Rating
Relevance	Satisfactory
Effectiveness	Satisfactory
Efficiency	Satisfactory
Overall Outcome Rating	Satisfactory

4.4.2 COMPONENT 2 – SOCIO-ENVIRONMENTAL INTERACTIONS BETWEEN DROUGHT, LAND DEGRADATION AND POVERTY

Component 2 pertained to understanding the socio-environmental interactions between drought, land degradation, and poverty to support the development of monitoring frameworks for UNCCD Strategic Objectives 2 and 3 (Outcome 2.1) by:

a) evaluating approaches for assessing socio-economic vulnerability to drought and interplay with land degradation (Output 2.1.1);
b) adding global drought and early warning datasets to Trends.Earth for supporting analysis and visualization of results (Output 2.1.2);

c) adding global socioeconomic datasets to support UNCCD Strategic Objective 2 and 3 to Trends.Earth;
d) conducting a case study in a pilot country; and
e) developing documentation and step-by-step guidelines for using climate, and socioeconomic variables on Trends.Earth

The following table outlines the Outcome-level indicators associated with the Outcome and reports the progress made by the project towards their actualization.

TABLE 7: PROGRESS ON INDICATORS UNDER OUTCOME 2.1 (AS OF 31st DECEMBER 2022)

Outcome 2.1: Improved understanding of the interactions between land degradation, drought, and socioeconomic factors as they contribute to the development of vulnerable communities				
Outcome Indicators	**Baseline**	**Target**	**Progress till TE**	**Progress Rating**
Outcome indicator 2.1: Number of reports on the interactions between land degradation, drought and socioeconomic factors completed readily available for key stakeholders	0	03 Reports	02 Reports[8]	**Completed**

Overall, the TE found that the project successfully delivered on Outcome 2.1 by identifying and incorporating a total of five datasets, with two on SO2 (an indicator measuring drought hazard and precipitation each) and three on SO3 (a dataset on drought vulnerability, and two gender-disaggregated datasets on population counts). In addition, the project also piloted these datasets and tools monitoring progress on SO2 and SO3 by conducting a series of trainings in Colombia, with national stakeholders involved in the monitoring and evaluation of the UNCCD Strategic Objectives. Lastly, following the incorporation of the datasets pertaining to SO2 and SO3, the project also developed detailed documentation on the use of the datasets and made it available through the Trends.Earth website.

Similar to the approach taken under Outcome 1, the Project first developed two synthesis reports on publicly available geospatial datasets and indicators in support of UNCCD Strategic Objectives 2 and 3 respectively, before initiating the process of integrating the identified datasets onto Trends.Earth. Strategic Objective 2 of the UNCCD Strategic Framework 2018-2030 pertains to "improve the living conditions of affected populations" and encompasses: a) improved food security and access to water (Impact 2.1); b) improved livelihoods (Impact 2.2); c) empowerment of local people, especially women and youth (Impact 2.3); and d) reduced migration forced by desertification and land degradation (Impact 2.4). The report, produced in English (January 2021) and Spanish (March 2021), led to the identification and incorporation of two datasets, namely the Drought Hazard Indicator (at 30km^2 resolution) based on Global Precipitation Climatology Center (GPCC) and the Climate Hazards group infrared Precipitation with Stations (CHIRPS) dataset on precipitation. The CHIRPS precipitation dataset was included particularly because it

[8] The Project reported that one of the reports under this outcome should have fallen under Outcome 1.1 rather than Outcome 2.1

has a higher spatial resolution (5km); but it has limited geographic coverage, covering areas between 50 N and 50 S.

Strategic Objective 3 of the UNCCD Strategic Framework 2018-2030 aims to "mitigate, adapt to, and manage the effects of drought in order to enhance resilience of vulnerable populations and ecosystems" and encompasses: a) reduced vulnerability to drought (Impact 3.1); and b) increased resilience to drought (Impact 3.2). The synthesis report, produced in English (June 2021) and Spanish (August 2021), on the available geospatial datasets pertaining to SO3 led to the identification and integration of the WorldPop's global gridded high-resolution geospatial dataset on population distributions, disaggregated by gender, and the Gridded Population of the World version 4 (GWPv4) dataset developed by the Centre for International Earth Science Information Network (CIESIN), which is also gender-disaggregated. The inclusion of the population distribution allows for the calculation of the Drought Exposure within Trends.Earth. In addition, the Project also included a dataset on Drought Vulnerability from the JRC as well. With the addition of the abovementioned data sets, the project incorporated capabilities to assess drought hazard, drought exposure, drought vulnerability and population exposure to degradation through Trends.Earth. In addition, the project also developed step-by-step guidelines for using the incorporated climate and socio-economic indicators and datasets and made them available on the Trends.Earth website.

Upon identifying the abovementioned datasets and approaches, the project also undertook piloting in Colombia to test their usefulness in monitoring progress towards SO2 and SO3. The case study involved a series of trainings launched by the project team for Colombian stakeholders involved in monitoring and evaluation of UNCCD strategic objectives. These workshops and training events were initially planned to be held in-person in Colombia (in March 2021) but faced delays of up to six months due to the advent of the COVID-19 pandemic and the resulting restrictions on travel and gathering. As a result, the project modified its implementation approach and held virtual webinars and trainings, in lieu of in-person workshops, between September 2021 and November 2021, with 119 participants (56 women: 47%; and 63 men: 53%). As mentioned in the Gender Mainstreaming section, conducting the trainings online helped the project achieve a much better gender balance in terms of representation as it allowed for a wider dissemination to stakeholders and did not pose any limits on number of participants. The trainings served to sensitize stakeholders on the integration of the tools, additional datasets, and indicators to support reporting on drought and socioeconomic factors in line with the SO2 and SO3 of the UNCCD Strategic Framework. The TE also found that recordings of the virtual training and webinar series were made available online through the Tools4LDN's YouTube channel.

The TE found that these trainings were well-received by stakeholders and that there was demand for such trainings, particularly on tools such as Trends.Earth. In fact, the TE noted that only 53% of the stakeholders surveyed possessed prior knowledge of Trends.Earth, and that the majority of the workshop participants surveyed (73%) had not used Trends.Earth before the workshops, indicating significant opportunity and need for more outreach and sensitization on Trends.Earth.

In the context of Colombia which possesses a rich repository of national data sources, the TE found that stakeholders who participated in the training series stressed the importance of utilizing readily available local information and integrating local data into tools such as

Trends.Earth. For instance, participants pointed out that the data available through Trends.Earth was at a general scale for Colombia, and that more granular level data as well as data on additional indicators such as national erosion, salinization, and desertification, were available in Colombia. Furthermore, interviews conducted with the Instituto de Hidrología, Meteorología y Estudios Ambientales (IDEAM) as part of the TE also revealed that while Trends.Earth was very useful for reporting to the UNCCD, there was a need to better understand the processes, patterns and drivers affecting land degradation and other indicators so that such tools could be used for policy-making and national-level planning. Therefore, there is a need to tailor future trainings to incorporate local data, particularly in the context of countries with richer repository of national-level data, so that the tool can go beyond reporting to UNCCD and also contribute towards policymaking and planning efforts within such countries.

In conclusion, the TE found that through its results on Outcome 2, the project enabled the use of Trends.Earth for assessing drought hazard, drought exposure, drought vulnerability, and population exposure to drought, thereby allowing country Parties to report to UNCCD on SO2 and SO3 using Trends.Earth. Moreover, despite delays in their implementation due to the COVID-19 pandemic, the project also piloted these approaches in Colombia through a series of trainings on the use of Trends.Earth for reporting on the Strategic Objectives, particularly SO2 and SO3. The project was seen to demonstrate effective adaptive management by changing the modality of the trainings from in-person workshops to online trainings and webinars. The pilot revealed the need for additional trainings as well as greater outreach and sensitization on Trends.Earth. Country stakeholders also stressed the importance of integrating available local data as well as the tool to function beyond reporting to UNCCD, and also facilitate national level planning and policymaking. Therefore, the following ratings are provided for Outcome 2.1 in accordance with the CI-GEF TE criteria.

TABLE 8: OUTCOME 2.1 RATING

Criteria	Rating
Relevance	Satisfactory
Effectiveness	Satisfactory
Efficiency	Satisfactory
Overall Outcome Rating	**Satisfactory**

4.4.3 COMPONENT 3 –PLANNING AND MONITORING OF LDN PRIORITIES FROM FIELD TO NATIONAL SCALES

Component 3 of the project aimed to support the planning and monitoring of LDN priorities from the field to national scales. This was envisioned to be undertaken through the development of approaches to support monitoring of LDN targets by integrating field data collection and remote sensing data at multiple scales (Outcome 3.1) and integrating spatially explicit tools such as the WOCAT SLM database and LandPKS onto Trends.Earth (Outcome 3.2). Lastly, under this component, the project also conducted pilot testing of the newly integrated tools (LandPKS and WOCAT SLM database) for verifying biophysical indicators and collection of land management information (Outcome 3.3). The following table outlines the Outcome-level indicators associated with Outcome 3.1 and reports the progress made by the project towards their actualization.

TABLE 9: PROGRESS ON INDICATORS UNDER OUTCOME 3.1 (AS OF 31st DECEMBER 2022)

Outcome 3.1: Approaches to support monitoring of LDN target progress integrating field data collection and remote sensing data at multiple scales developed				
Outcome Indicators	**Baseline**	**Target**	**Progress till TE**	**Progress Rating**
Outcome indicator 3.1: Number of approaches to support monitoring of LDN target progress integrating field and remote sensing data completed and available through project website	0 approaches	02 mobile platforms, 01 integrated workflow, and 01 document	02 mobile platforms, 03 integrated workflows, and 01 document	**Completed**

Through Outcome 3.1, the project aimed to support the monitoring of LDN targets by utilizing field data collection and remote sensing data capabilities at multiples scales from LandPKS and the WOCAT Global SLM Database and integrating them into Trends.Earth. The WOCAT database is a rich repository on SLM practices around the world and has been recognized by the UNCCD as the primary recommended database for reporting SLM best practices by the UNCCD Parties. Whereas, LandPKS is a mobile app supported by cloud computing that allows site-specific land-use planning, management and monitoring with capabilities to complete rapid, local assessments of key soil properties to assess the health state of the land and also to document land use practices.

To that end, the project successfully integrated Trends.Earth outputs and the WOCAT SLM database into LandPKS to enable the assessment of land conditions and sustainable land management at the field level. As a result, the TE found that users at the field level can now access data from both Trends.Earth as well as WOCAT from LandPKS while in the field. Furthermore, the project also integrated LandPKS and WOCAT SLM database into Trends.Earth for assessing land degradation from remote-sensing data, thus ensuring the interoperability of the abovementioned tools. For instance, through the integration of WOCAT into LandPKS, field users can now obtain relatively more precise location-specific information on the different types of sustainable land management approaches and technologies that might be relevant based on the location they are at. Similarly, through the integration of Trends.Earth into LandPKS, field users can now directly access relevant information on productivity, land cover, SOC, and drought indicators for the location they are based in, through LandPKS rather than solely relying on the web-based or desktop-based versions of Trends.Earth.

In addition to enabling the interoperability of Trends.Earth, WOCAT SLM database, and LandPKS, the project also identified and developed integrated workflows with additional freely available and open source tools for assessing changes in land condition, such as the FAO's Collect Earth and the System for Earth Observation Data Access, Processing and Analysis for Land Monitoring (SEPAL), as well as the Land Use Planning for Land Degradation Neutrality (LUP4LDN) by the Group on Earth Observations (GEO) - Land Degradation Neutrality (LDN) [GEO-LDN]. Collect Earth enables data collection through Google Earth which can enable users to analyze high and very high resolution satellite imagery for multiple purposes, including multi-phase National Forest Inventories and Land Use, Land Use Change and Forestry assessments, among others. Similarly,

the FAO's SEPAL can also be a useful tool for users to process satellite data, create maps, and detect land cover and land-use change.[9] The LUP4LDN is a monitoring tool that enables the integration of LDN into a participatory land use planning approach, which enables policy-makers and land-use planners to better understand optimal and feasible sustainable land management interventions and where to focus land restoration efforts in order to enable progress towards LDN.[10]

The project also developed documentation and guidelines for performing integrated assessments of land condition at national and subnational scales using WOCAT, LandPKS, Trends.Earth, Collect Earth, SEPAL, and LUP4LDN. Moreover, the TE also found that the project published a scientific Featured Front Cover article in the *Land Degradation & Development* journal, on the integration of climate and socio-economic indicators to assess the impact of land degradation on vulnerable populations, to ensure a wider dissemination of scientific outputs of the project amongst the scientific community.

Overall, the TE found that the project successfully implemented integration of Trends.Earth and WOCAT SLM database and LandPKS to ensure the interoperability of the three tools. Moreover, through the implementation of integrated workflows with the FAO's Collect Earth and SEPAL, and the GEO-LDN's LUP4LDN datasets, the project has also enabled the use of Trends.Earth as a platform to facilitate land use planning. Therefore, the following ratings are provided for Outcome 3.1 in accordance with the CI-GEF TE criteria.

TABLE 10: OUTCOME 3.1 RATING

Criteria	Rating
Relevance	Satisfactory
Effectiveness	Highly Satisfactory
Efficiency	Satisfactory
Overall Outcome Rating	**Highly Satisfactory**

Outcome 3.2 pertained to the implementation of decision support tool for identifying LDN priorities into Trends.Earth, through the incorporation of a multi-criteria evaluation tool integrating remote sensing data with contextual socio-economic data and data collected from the field. The following table outlines the Outcome-level indicators associated with Outcome 3.2 and reports the progress made by the project towards their actualization.

TABLE 11: PROGRESS ON INDICATORS UNDER OUTCOME 3.2 (AS OF 31st DECEMBER 2022)

Outcome 3.2: Decision support tool for identifying LDN priorities implemented into Trends.Earth				
Outcome Indicators	**Baseline**	**Target**	**Progress till TE**	**Progress Rating**
Outcome indicator 3.2: Number of modules added to Trends.Earth to support decision making for LDN planning	0 modules	01 module	02 modules	**Completed**

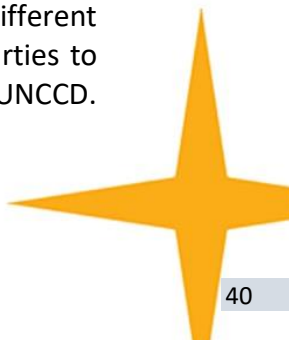
[9] Source: FAO. 2022. *SEPAL: Forest and Land Monitoring for Climate Action*. Available at: https://www.fao.org/documents/card/en/c/cc1803en
[10] Source: https://lup4ldn.scio.services/

The project first updated Trends.Earth to be fully supported on the most recent Quantum GIS version 3 (QGIS v3), an improved version of the software on which Trends.Earth was originally based on, which brings new, updated and enhanced functionalities, allowing users to run more comprehensive analysis on the free and open source platform. The project transferred all current functionalities as well as the ones developed across Components 1 and 2 onto the updated QGIS v3.

With regards to the development of the multi-criteria module, the project partnered with the Ministry of Environment, IDEAM, and WOCAT to develop an online browser-based platform to support decision-makers achieve LDN in Colombia. The TE found that the multi-criteria module functioned as a spatial tool which allows users to integrate national and global maps to identify priority areas for implementation of sustainable land management practices to map and monitor land degradation. A detailed review of the spatial tool revealed that this module integrates national level data on various indicators such as salination susceptibility and erosion degree, in addition to the different SDG 15.3.1 indicators on productivity (FAO-WOCAT, JRC, and Trends.Earth) and enables users to examine these data at the Department and Municipal levels within Colombia. Moreover, the TE also found that the project considered feedback obtained from national level stakeholders at various points from the virtual trainings, in-person workshops, as well as in-country fieldwork prior to the finalization of the module. A detailed user manual for the multi-criteria module was also developed and published on the Trends.Earth website.

In addition, the TE also found that the project had initially planned on just the development of a multi-criteria module to support decision-making in the implementation of sustainable land management practices and monitoring of land degradation in Colombia. However, the project also developed a separate global module that allows for comparison of different data products on LDN that are available within the UNCCD reporting platform – the Performance Review and Implementation System (PRAIS 4). This tool allows for an easy visualization and comparison of the global SDG products which are based on different algorithms and land productivity dynamic maps from different sources, and methods of calculation. However, the type of tool, and the associated datasets and methods of calculation, that is selected can lead to start differences in the results generated. Through this tool, the project aimed to enhance the scientific discussion behind data usage and calculation of indicators to raise awareness about the need to enhance capacity at national level so that countries can produce maps better suited and reflective of their national contexts. Moreover, by enabling comparison of different SDG datasets available on the UNCCD reporting platform, this global module also aids country Parties in selecting the appropriate dataset for reporting to UNCCD.

In summary, the project was successful in developing a multi-criteria assessment module for Colombia which allows for the identification of priority areas for the implementation of SLM and improved monitoring of land degradation through the integration of national-level datasets. In addition, the project also developed a global module that allows for a comparison of the different SDG products available on the UNCCD reporting platform, thereby enabling country Parties to make an informative decision on which dataset to choose when reporting to the UNCCD.



Therefore, the following ratings are provided for Outcome 3.2 in accordance with the CI-GEF TE criteria.

TABLE 12: OUTCOME 3.2 RATING

Criteria	Rating
Relevance	Satisfactory
Effectiveness	Highly Satisfactory
Efficiency	Satisfactory
Overall Outcome Rating	**Highly Satisfactory**

Outcome 3.3 involved undertaking pilot testing and capacity building in Colombia., which involved: a) developing a nation-wide level assessment of land degradation in Colombia using the improved biophysical indicators (Output 3.3.1); b) pilot testing the LandPKS mobile platform with Trends.Earth and WOCAT integration for verifying biophysical indicators and collection of land management information (Output 3.3.2); c) developing a land degradation prioritization exercise with Colombian stakeholders in support of national-level targets on LDN; and d) undertaking capacity building workshops on the usage of Trends.Earth, LandPKS, and WOCAT. The following table outlines the Outcome-level indicators associated with Outcome 3.3 and reports the progress made by the project towards their actualization.

TABLE 13: PROGRESS ON INDICATORS UNDER OUTCOME 3.3 (AS OF 31st DECEMBER 2022)

Outcome 3.3: Pilot testing and capacity building completed				
Outcome Indicators	**Baseline**	**Target**	**Progress till TE**	**Progress Rating**
Outcome indicator 3.3: Number of tests completed in pilot country	0 pilot	01 test in pilot country	01 test in pilot country	**Completed**

Overall, the TE found that relative to other Outcomes, progress on Outcome 3.3 was most impacted by the COVID-19 pandemic as the Executive Team was unable to undertake missions to Colombia for in-country consultations and field verification activities at their planned time in Q3 FY21. These challenges resulted in delays which necessitated the request for a no-cost extension to allow for additional time for the project to successfully undertake the required piloting activities in Colombia, under more favorable travel conditions. Eventually, the project was successful in pilot testing of the updated Trends.Earth tool with national stakeholders in Colombia, in Q3 FY22, after a delay of approximately one year.

As part of its piloting of the updated Trends.Earth tool, the project conducted a nation-wide land degradation assessment for different geographies within Colombia using the updated high-resolution productivity, land cover, and socio-economic indicators. The datasets as well as the analysis of high-resolution datasets was shared with key stakeholders and partners such as IDEAM in Colombia. These degradation assessments conducted were also presented to stakeholders and participants in virtual trainings held between September and November 2021 (under Outcome 2.1).

Although the implementation of field verification activities and country missions underwent significant delays, the project was seen to engage with relevant stakeholders in Colombia virtually for the identification of target sites and potential local stakeholders and partners to support undertaking field visits. In January-February 2022, the project undertook its first field mission in which six members of the WOCAT Team traveled to different landscapes within Colombia, from humid forests to drylands. These field visits also encompassed consultations with various national stakeholders such as farmers, land-owners, and researchers to obtain their perspectives on how landscapes have been changing, what are the environmental and socio-economic impacts from changes to the landscapes, and what tools and resources are being utilized for land monitoring and assessment. The field activities were primarily geared towards testing the integration of Trends.Earth and the WOCAT database with the LandPKS mobile platform (achieved under Outcome 3.1) for the verification of biophysical degradation indicators and collection of land management information.

The TE learned that the CI-GEF and LandPKS Teams were not represented in the first field mission to Colombia undertaken between January and February 2022 due to challenges with travel restrictions as a result of the COVID-19 pandemic. Consequently, the project planned for and implemented another extended field visit to Colombia in October 2022 (Q2 FY23). The second field mission also involved in-country workshops with stakeholders, with a particular emphasis on training relevant national stakeholders on sensitizing them to the integration between Trends.Earth and UNCCD's PRAIS4 platform (achieved under Outcome 4.1) and the use of the Trends.Earth for reporting to UNCCD on SDG 15.3.1.

To that end, the TE found that these integrations were successful and well-received by local stakeholders, particularly farmers, technicians, and agronomists, as the integrations allowed users to see trends in precipitation, current and historical information on land use for a given site, and trends in vegetation health over time. Moreover, the integration with WOCAT also allowed users to obtain location-specific recommendations and suggestions on the type of SLM practices and technologies that could be implemented to address challenges specific to a given location. In addition to the 119 stakeholders trained through virtual webinars conducted in 2021 (under Outcome 2.1), through its field missions and in-country workshops, the project also trained a total of 49 stakeholders (19 women: 39%; 30 men: 61%) on the use of LandPKS for soil characterization/identification and data access from the mobile application. In addition, a total of 18 stakeholders (06 women: 33%; 12 men: 67%) were trained to use Trends.Earth for reporting trends in land degradation to the UNCCD.

In conclusion, the project faced significant challenges regarding arranging travel to Colombia to undertake in-country workshops and conduct field testing and verification of the various integrations, which necessitated a nine-month no-cost extension. Despite these challenges, the project was found to have successfully undertaken the piloting exercise in Colombia within the extended timeframe. Moreover, the new integrations implemented under the project were also well-received by national stakeholders particularly land users and land use planners as it allowed for access to a wide range of location-specific information and data on land management and assessments of land degradation. Therefore, the following ratings are provided for Outcome 3.3 in accordance with the CI-GEF TE criteria.

TABLE 14: OUTCOME 3.3 RATING

Criteria	Rating
Relevance	Satisfactory
Effectiveness	Satisfactory
Efficiency	Satisfactory
Overall Outcome Rating	**Satisfactory**

4.4.4 COMPONENT 4 – CAPACITY BUILDING TO SUPPORT UNCCD AND COUNTRY PARTIES

Component 4 set out to support UNCCD and its signatory countries through online and in-person capacity building on planning, monitoring, and reporting of LDN in support of the UNCCD 2021-2022 reporting cycle (Outcome 4.1). To undertake this, the project planned the development of an online modular training approach through videos and written materials in multiple languages (Output 4.1.1). In addition, this Outcome also involved the development of a technological platform for creating a community of users (Output 4.1.2) and the implementation of capacity building workshops for country representatives on the usage of tools in support of the UNCCD country reporting needs for the 2021-2022 cycle (Output 4.1.3). The following table outlines the Outcome-level indicators associated with the Outcome, and reports the progress made by the project towards their actualization.

TABLE 15: PROGRESS ON INDICATORS UNDER OUTCOME 4.1 (AS OF 31st DECEMBER 2022)

Outcome 4.1: Online and in-person capacity building on planning, monitoring, and reporting of LDN in support UNCCD 2021-2022 reporting cycle completed				
Outcome Indicators	**Baseline**	**Target**	**Progress till TE**	**Progress Rating**
Outcome indicator 4.1: Number of online training modules produced and made available through project website	0 online training modules	No target set	07 online training modules, 1 video	**Completed**

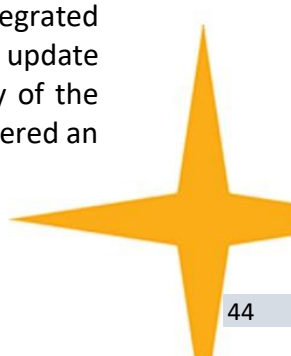
Through Outcome 4.1, the current project aimed to meet a critical need of the UNCCD country Parties for additional capacity building to support UNCCD reporting on land-based progress indicators through standardized tools such as Trends.Earth. To that end, the project was successful in developing a series of written and video training modules on integrated assessments for land degradation mapping, planning and monitoring. The TE found that the detailed documentation and step-by-step guidelines were published on the Trends.Earth website in a total of 07 languages, including the 05 official UN languages and Portuguese and Kiswahili. Likewise, the video training module has also been published on the Trends.Earth Youtube page for public dissemination, and on the UNCCD's E-learning platform (UNCCD Capacity Building Marketplace). The project coordinated with the UNCCD for the development of the written and video training modules to ensure that these were made available at the UNCCD COP, held between May 9 and May 20, 2022, and aligned with the UNCCD reporting cycle 2021-2022.

In addition, the project also collaborated with the UNCCD to streamline reporting by integrating Trends.Earth with the PRAIS4 reporting system, thereby making default datasets from Trends.Earth available to UNCCD to provide to Country Parties for reporting purposes. In addition, the TE also found that the integration between Trends.Earth and PRAIS4 allows reporting countries analyze data using both the Trends.Earth indicators or custom data and load the outputs directly into the PRAIS4 reporting system. Consequently, this integration was found to save time, reduce errors arising from manual data entry, and increase transparency in the reporting process.

In terms of capacity building, while the project had initially planned to conduct capacity training workshops with country representatives on the use of Trends.Earth for UNCCD reporting, a key challenge due to the COVID-19 pandemic resulted in delays in the implementation of these trainings. As a result, the project, in consultation with the UNCCD, modified the format of the capacity building workshops to instead utilize a Training-of-Trainers (TOT) modality whereby, 30 (25 men; 05 women) UNCCD technical experts serving as regional points of contacts were provided trained on the use of Trends.Earth to support country Parties in the 2021-2022 reporting cycle. The TE found that although the e-learning modules have been directly made available to the countries and regional UNCCD experts have been trained to support country Parties in their reporting, the UNCCD has reported that countries have been behind in their reporting requirements. One contributing factor to this may be the absence of in-person workshops and trainings for representatives, which are highly valued and sought by country Parties. Furthermore, the TE also noted that the change in the modality from trainings directly with country representatives to training-of-trainers, also deprives the project from tracking the number of country representatives that have been trained on the newly updated and improved Trends.Earth.

Lastly, an online user support was created on the project's website for the purposes of creating a community of users to mainstream and facilitate troubleshooting, knowledge sharing, and promote continued peer-learning. The TE found that the online forum has over 6,300 registered users and 438 users are active, representing a broad set of stakeholders from public sector, academia, and development sector. Interviews with the Project Team at MCS revealed that the project has also provided significant engagement and support to users who post queries on the forum.

In summary, the project was successful in developing multi-media training modules on using Trends.Earth for UNCCD reporting and making them publicly available and integrating them into the UNCCD e-learning platform. However, the project faced some challenges in implementing capacity building workshops due to the COVID-19 pandemic, as a result of which the project adapted the format to shift to conducting a training-of-trainers with regional technical experts of UNCCD who would in turn support country Parties in meeting their reporting requirements. Though, the project made e-learning modules publicly available and available through the UNCCD e-learning platform, the TE found that there was still considerable demand from country representatives for direct in-person trainings. In addition, the project also integrated Trends.Earth with the UNCCD reporting platform, which allows users to automatically update their calculated outputs onto the reporting platform, thereby increasing the efficiency of the reporting process and minimizing room for errors. Furthermore, the project has also fostered an



online community of users around Trends.Earth that encompass broad set of stakeholders, and which continues to grow. Therefore, based on the assessment of the TE Team, the following ratings are provided for Outcome 4.1 in accordance with the CI-GEF TE criteria.

TABLE 16: OUTCOME 4.1 RATING

Criteria	Rating
Relevance	Satisfactory
Effectiveness	Satisfactory
Efficiency	Satisfactory
Overall Outcome Rating	**Satisfactory**

4.5 SUSTAINABILITY

The following subsections examine the overall risks to sustainability of the project in terms of financial, institutional framework, and governance factors. Given the nature of the Tools4LDN project, the TE did not find any relevant socio-economic and environmental factors that may pose implications for the sustainability of the results achieved. The overall sustainability of the project outcomes is also rated on a four-point scale based on an assessment of the likelihood and magnitude of the risks to sustainability based on the results of the project.

4.5.1 FINANCIAL AND INSTITUTIONAL FACTORS

The project's sustainability in terms of institutional factors is bolstered by the fact that the TE found significant enthusiasm and buy-in from both the GEF as well as the UNCCD to ensure the success of Trends.Earth. Trends.Earth's conception as well as continued development over two projects was a direct result of the demand for integrated tools for monitoring, assessing, and reporting on land degradation to the UNCCD. In addition, the integration between Trends.Earth and the UNCCD's reporting platform (PRAIS4) also enhances the sustainability of the project by enabling country Parties to automatically import the outputs from Trends.Earth to PRAIS4 for reporting on the SDG 15.3.1. Interviews with the UNCCD revealed that country Parties are strongly encouraged to utilize Trends.Earth for fulfilling their reporting requirements, especially if they wish to use their national data as Trends.Earth provides the capability to easily perform calculations using a harmonized methodology for all required indicators. To that end, the TE also found that the UNCCD's team of technical regional experts who work directly with country Parties also provide technical and advisory assistance on the use of Trends.Earth for reporting to the UNCCD. Overall, the TE found that Trends.Earth plays a key role in the UNCCD reporting process and that there is significant interest from UNCCD to ensure the continued success and uptake of Trends.Earth by country Parties, which are likely to positively contribute to the sustainability of Trends.Earth.

The TE found that there is a need to develop an explicit financing strategy as well as overall institutional arrangements for the stewardship of the tool. This is pertinent given that the upgradation, enhancement, and additional integrations within Trends.Earth are expected in the future, as additional higher resolution datasets become available and technological advancements in land degradation monitoring and assessment occur. The TE found that the UNCCD and CI signed a Memorandum of Understanding (MoU) to formalize their collaboration

on Trends.Earth which has been ongoing since 2016. This presents an opportunity for the two organizations to develop clear roles and responsibilities in terms of stewardship on any future work.

Having said that, the TE found that the UNCCD has been supported by the GEF through its Global Support Programmes (GSP). The GSP, funded by GEF and implemented by the United Nations Environment Programme (UNEP), provides assistance to country Parties to enable the reporting process of the UNCCD.[11] The GEF has been funding the GSP to support the UNCCD reporting cycles of 2014-15 and 2017-18. Currently its third iteration, the GSP III was approved by GEF for implementation in April 2021. Under the GSP III, the programme envisions to continue collaborating with Conservation International to incorporate the updated version of Trends.Earth into the UNCCD reporting process and to facilitate country Parties; efforts to identify potential land degradation hotspots and bright spots for improvement.[12]

In addition, interviews with stakeholders from CI-GEF and UNCCD also reported the presence of windows of flexible funding within GEF cycles that are reserved for demand-driven enabling activities, such as those delivered through the Tools4LDN project. The *GEF-8 Programming Directions* sets aside resources from the Land Degradation Focal area in addition to STAR allocations for "UNCCD enabling activities to support countries to fulfil obligations to the convention, focusing on reporting".[13] Therefore, the TE found the presence of financing opportunities for the UNCCD and CI which may be leveraged for future updates to the Trends.Earth tool.

However, the TE found that there is a need to develop a more explicit financing strategy as well as setting up institutional arrangements with clear roles and responsibilities relating to future work on the Trends.Earth tool. Similarly, there is a need for a training and awareness raising plan to improve the uptake of the updated version of Trend.Earth

Overall, the project's sustainability in terms of financial and institutional factors was found to be ***Likely***, given the strong institutional buy-in from the UNCCD, CI and GEF for the success of the Trends.Earth tool and the presence of funding opportunities which may be leveraged for future work on the tool.

4.6 PROGRESS TOWARDS IMPACT

At the global scale, the Tools4LDN resulted in improvements in the Trends.Earth tool through improved biophysical indicators and enhanced capabilities that now enable country Parties to report on indicators pertaining to Strategic Objectives 2 and 3 of the UNCCD Strategic Framework. Furthermore, the integration between Trends.Earth and the UNCCD's PRAIS reporting platform enable a more streamlined reporting process that minimizes errors. To that end, the Tool4LDN project was successful in creating an enabling environment for country Parties to improve the quality as well as the efficiency of the UNCCD reporting process.

[11] https://www2.unccd.int/actionsldn-programme/global-support-programme
[12] Global Support Programme III: Strengthening Capacities of Country Parties for UNCCD Monitoring and Reporting.
[13] GEF/R.08/29/Rev.01. GEF-8 Programming Directions. April 2022, para. 557, available at: https://www.thegef.org/council-meeting-documents/gef-r-08-29-rev-01

However, the TE noted that there is a need to assess the full extent to which the project impacted the reporting process for the current cycle. The TE found that the timeframe of the 2021-2022 reporting cycle shifted multiple times due to the challenges reported by country Parties in being able to meet deadlines for reporting. As a result, the UNCCD reporting deadlines for the 2021-2022 period fell in January and February of 2023, after the project had closed, which hindered an effective assessment of the usage of Trends.Earth for reporting. An additional challenge faced by the project was encountered due to the change in the modality of capacity building training. The project had originally planned to directly train country Party representatives on the updated Trends.Earth tool. However, the challenges resulting from the COVID-19 pandemic necessitated a shift in the implementation approach and direct trainings of country Party representatives were replaced with a training of trainers with the UNCCD's regional technical experts. These regional technical experts work directly with their assigned country Parties to support the reporting process. As a result, the project was unable to directly track and report the number of country Party representatives that had undergone training on the use of Trends.Earth. Similarly, the project's results framework also lacked an indicator that measured and reported on the number of country Parties who used Trends.Earth to report to the UNCCD in the most recent reporting cycle.

Having said that, the Tools4LDN project was piloted in Colombia which involved significant capacity building component. Through virtual webinar-based trainings, the project built the capacity of 119 national stakeholders (56 women: 47%; and 63 men: 53%) on using the updated Trends.Earth tool. Furthermore, the field verification exercises conducted as part of piloting and testing the integrations of Trends.Earth and WOCAT with the LandPKS mobile platform also resulted in the capacity building of 49 stakeholders (19 women: 39%; 30 men: 61%) on the use of LandPKS for soil characterization/identification and data access from the mobile application. Lastly, through in-country workshops, the project also provided trainings to 18 national stakeholders (06 women: 33%; 12 men: 67%) on the use of Trends.Earth for reporting trends in land degradation to the UNCCD.

In addition, the Tools4LDN project has also engaged with the Global Commons Alliance by supporting the development of the Science Based Targets Network Land Hub and informing the work of the Land Hub on relevant indicators and approaches for assessing change in land condition. Similarly, the project team has also supported the Technical Assistance Facility for the LDN Fund, administered by the Sustainable Trade Initiative (IDH), in developing a methodology to apply LDN indicators at the project-level. Furthermore, the project also resulted in impact at key global fora. A key highlight of the UNCCD COP15 was the global recognition of the Trends.Earth tool in two COP decisions calling for the continued collaboration of the UNCCD Secretariat with CI on further development of the tool and increased uptake of the tool by countries.

4.7 SAFEGUARDS

The Tools4LDN project did not trigger any of the Environmental and Social Safeguard (ESS) Standards (safeguards) under the ESS policy and complied with the other three ESMF policies, namely : a) Gender Mainstreaming b) Stakeholder Engagement ; and c) Accountability and Grievance Mechanism by preparing and implementing those relevant plans. The following sub-

sections review the Gender Mainstreaming Plan, Stakeholder Engagement Plan, Accountability and Grievance Mechanism and documentation and analyze the effectiveness of implementing management measures related to those planss.

4.7.1 GENDER MAINSTREAMING PLAN

The TE found that the Tools4LDN project developed a Gender Mainstreaming Plan at the time of design. The action plan was drafted using the UNCCD Gender Action Plan and GEF's Gender Implementation Strategy to address technical capacitation of women at all levels. In the preparation of the GMP, the project undertook a gender analysis and established baselines on gender issues in land degradation and desertification and monitor the progress against these objectives. The plan included women's participation during the design, planning, implementation and evaluation of project activities.

The GMP was accompanied by indicators that established targets for measuring gender mainstreaming over the course of the project's implementation. To that end, gender-disaggregated targets were set against three indicators that measured:

a) Number of men and women who participated in project activities;
b) Number of men and women who received benefits from the project (e.g.: employment, income generating activities, training, etc.); and
c) Number of Strategies, plans and policies derived from the project that include gender considerations

Overall, the Tools4LDN project was found to have overachieved its targets against the established indicators set out in the GMP. In terms of the number of men and women who participated in project activities, the project reported a total of 879 participants, with 349 women (40%) and 530 men (60%), significantly overachieving its established target of 25 men and 25 women (50 persons in total). With the advent of the COVID-19 pandemic, the project undertook an increased number of virtual engagements, particularly webinar based trainings, which presented an opportunity to extend invitations to a wider audience and mix of stakeholders. This approach was found to be conducive to a relatively more gender-balanced mix of trainings beneficiaries. However, the TE found that, particularly for in-country workshops conducted in-person, the gender-mix of beneficiaries saw an imbalance. Although the TE found that the importance of equal participation from both genders was emphasized at all stakeholder level meetings, there was limited concrete actions that the project could take to improve on representation of women, particularly since the national stakeholders were responsible for the selection of training beneficiaries. Nevertheless, the TE found that support from the Colombia focal point was provided to ensure a relatively gender-balanced mix of participants selected to undergo trainings and partake in field verification activities.

Against a target of 20 men and women each, the TE found that the number of beneficiaries who received benefits from the project was over achieved by 395%, with a total of 158 beneficiaries (71 women: 45%; 87 men: 55%) participating in capacity building exercises, conferences and webinars on monitoring trends in land degradation and restoration activities. Based on the gender desk study undertaken by the project, the project also ensured that the use of gendered

language was eliminated in all documentation, and that both male and female facilitators were involved in the written, video or spoken content developed by the project.

The project aimed to introduce at least 25 women and men as users to the Trends.Earth forum, against which data could not be collected, as this is not an information mandatory to disclose when joining the forum. With a goal to develop at least two strategy plans/policy briefs that included gender considerations, the project was successful in meeting 100% (goal: 2 – achieved 2) of the goals. In particular, trainings imparted to in-country stakeholders included modules on how implementation of restoration activities on degraded land could have gender implications in future years. In addition, the synthesis report under Outcome 2.1[14], paid particular attention to the availability of gender-disaggregated datasets pertaining to SO2 (improved living conditions of affected populations) which led to the identification of 05 gender disaggregated datasets and 01 dataset with a focus solely on women, along with 08 other datasets that could not be disaggregated by gender.

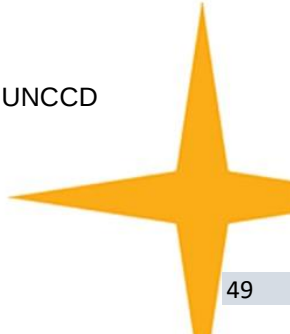
In conclusion, the TE found that the project was successful in meeting or exceeding the Gender Mainstreaming goals for the project. Consequently, the Gender Mainstreaming Plan of the project is rated as ***Satisfactory***. However, no gender disaggregated data could be collected for Trends.Earth users and forum participants, and the project was unable to report against that output indicator.

4.7.2 STAKEHOLDER ENGAGEMENT PLAN

The TE found that the project also prepared a stakeholder engagement plan at the time of design which involved undertaking a stakeholder mapping identifying various stakeholders involved in the Tools4LDN project and their role, interest, impact, and influence. The SEP also detailed the stakeholder consultations that took place between the various stakeholders during the course of the project's design process. The SEP listed three indicators that sought to measure the level of stakeholder engagement process throughout implementation: a) Number of people involved in project implementation; b) Number of stakeholder groups involved in project implementation; and c) Number of engagements undertaken with the stakeholders throughout implementation.

To that end, the TE found that the project significantly overachieved its established targets for the SEP indicators. Against an annual target of engaging 16 persons (8 men and women each) in the project, the TE found that the project consistently overachieved its target and cumulatively engaged 879 persons (349 women: 40%; and 530 men: 60%) over the course of implementation in various activities including trainings, workshops, field verification activities, etc. Furthermore, the project engaged a total of 16 stakeholder groups annually (160% of target of 10 stakeholder groups) from various research institutes, universities, government agencies, and donor organizations throughout implementation. Lastly, the project also cumulatively undertook 56 engagements with various stakeholder groups through meetings, workshops, consultations, field activities, and representation of global fora, exceeding the annual target of 08 engagements annually by 280%.

[14] CI-GEF. 2021. A Review of Publicly Available Geospatial Datasets and Indicators in Support of UNCCD Strategic Objective (SO) 2, pp 21-22



In summary, the project's stakeholder engagement plan was found to be ***Highly Satisfactory***, as the project has held a number of engagements with its stakeholders as elaborated in the Stakeholder Engagement section.

4.7.3 ACCOUNTABILITY AND GRIEVANCE MECHANISM

The TE found that the Tools4LDN project established a robust accountability and grievance mechanism which provided a detailed and step-wise guidelines for the process. The accountability and grievance mechanism established constituted a web form on the Trends.Earth website which was accessible to all project partners and attendees of all trainings and workshops. Using the web form, grievances could be submitted anonymously and directly to the Project Manager at the Executing Agency (MCS). In addition, the web form also provided response options, such as submitting a confidential response against a submission when contact information was provided or posting a public response on the Trends.Earth website.

The TE found that the project announced the AGM at all official project events, including in-person meetings and during virtual and in-country training workshops. Moreover, to enhance the accessibility and reach, the web form was also available for use in Spanish.

Throughout the project life FY2021 – FY2023 no stakeholders reported any grievances, and all project activities were complacent to the guidelines established at project inception. The evaluation team rated the projects Accountability and Grievance Mechanism as ***Highly Satisfactory***.

4.8 KNOWLEDGE MANAGEMENT

As stipulated in the CI-GEF TE criteria, the evaluators are also expected to provide an assessment of whether the Knowledge Management Plan as included in the Project Document was implemented. However, a review of the Project Document revealed that no associated Knowledge Management Plans were developed and included at the design stage of the project. However, a review of the project results framework as well as the project strategy revealed that the Tools4LDN project was designed to generate significant knowledge products over the course of implementation.

Overall, the Tools4LDN project developed a total of 18 knowledge products spread across the four project components, as indicated in the table below. The TE found that reports were prepared in both Spanish and English for wider dissemination and accessibility. In addition, the project also developed a series of e-learning modules and training videos on the updated Trends.Earth tool which were made publicly available on the project website, Youtube, as well as integrated with the UNCCD's e-learning platform.

TABLE 17: LIST OF KNOWLEDGE PRODUCTS DEVELOPED BY THE TOOLS4LDN PROJECT

#	Media type	Audience	Knowledge Management Product	Release date
1	Report	Project stakeholders	Inception Workshop	January 2020
2	Report	LDN community	Review of publicly available geospatial datasets and indicators in support of land degradation monitoring	October 2020

3	Report	Spanish speaking LDN community	(Spanish): Una revisión de los datos geoespaciales a disposición del público e indicadores en apoyo del monitoreo de la degradación de la tierra	November 2020
4	Report	LDN community	A review of publicly available geospatial datasets and indicators in support of drought monitoring	January 2021
5	Report	Spanish speaking LDN community	(Spanish): Tools4LDN Informe Técnico del Avance de Monitoreo hacia el Objetivo Estratégico 3 de la CNULD	March 2021
6	Report	LDN community	A review of publicly available geospatial datasets and indicators in support of UNCCD Strategic Objective 2 (socioeconomic)	June 2021
7	Report	Spanish speaking LDN community	(Spanish): Una revisión de los productos e indicadores geoespaciales a disposición del público en apoyo al Objetivo Estratégico (OE) 2 de la CNULD	August 2021
8	Virtual training/ Video	Project and land degradation reporting stakeholders	(Spanish): Trends.Earth: Use de datos de sensoriamento remote para el monitore de la condicion de las tierras Parte 1	September 2021
9	Virtual training/ Video	Project and land degradation reporting stakeholders	(Spanish): Trends.Earth: Use de datos de sensoriamento remote para el monitore de la condicion de las tierras Parte 2	September 2021
10	Virtual training/ Video	Project and land degradation reporting stakeholders	(Spanish): Una revision de los datos geoespaciales e indicadores a disposicion del publico en apoyo al monitorea de la sequia	October 2021
11	Virtual training/ Video	Project and land degradation community stakeholders	(Spanish): Una introduction a la aplicacion LandPKS	October 2021
12	Virtual training/ Video	Project and land degradation community stakeholders	(Spanish): Discusion en grupo focal de los Objectivoes Estrategicos (OS) 2 y 3 de la CLD.	November 2021
13	Virtual training/ Video	Project and land degradation community stakeholders	(Spanish): Taller de WOCAT	November 2021
14	Web application/ module	LDN community	Compare productivity indicators (Available in English and Spanish)	May 2022

15	Desk study	LDN community	Desk study to analyze the gendered differences in use of GIS resources and mobile technology	September 2022
16	Report	LDN community	A Review of Pilot Country Workshops in Support of UNCCD Strategic Objectives (SO) 1, 2, and 3	September 2022
17	Report	LDN community	(Spanish): Examen de los talleres piloto por país en apoyo de los objetivos estratégicos (OE) 1, 2 y 3 de la CNULD	September 2022
18	Publication	LDN community	Operationalizing an integrative socio-ecological framework in support of global monitoring of land degradation	September 2022

In addition to the development of knowledge products through reports reviewing the strengths and weaknesses of publicly available datasets for measuring and calculating various SDG 15.3.1 indicators, the project also developed detailed and step-by-step guidelines and training manual on the use of the Trends.Earth tool through the Trends.Earth website. Moreover, the TE found that these training manuals were prepared in a total of 07 languages, including the 05 official UN languages as well as Portuguese and Kiswahili, which greatly enhances the accessibility of these tools.

Lastly, in addition to the development of knowledge products, training videos, and training manuals as stipulated in the design of the project, the evaluation also found that the project undertook additional knowledge dissemination activities by representing Trends.Earth on key global fora and events showcasing the work being undertaken to strengthen monitoring and reporting on land degradation to the wider LDN community.

In conclusion, the evaluation found that while a specific Knowledge Management Plan was absent from the Project Document, the project was designed with a strong knowledge generation and dissemination component embedded into its design. Moreover, the evaluation also found that the project utilized multiple communications and knowledge dissemination channels to disseminate the knowledge products, tools, guidance documents, and best practices developed throughout the project duration to various LDN stakeholders.

5. CONCLUSIONS

In conclusion, the TE found the project to be highly relevant to the various goals and needs of key stakeholders at the institutional, national, and global levels. In particular, given the centrality of the project to supporting the UNCCD reporting process as well as supporting country Parties in improving the quality of reporting to the UNCCD, the project was found to be particularly well-aligned with the UNCCD Strategic Framework. At the national level, the project – piloted in Colombia – also aligned with a number of key national priorities, policies and strategies and was found to be responsive to the needs of national-level stakeholders through its emphasis on capacity building for monitoring progress against land degradation and facilitation of national-level planning.

The TE found that the project built upon the successes of a previous GEF-funded and CI-implemented project, which saw the development and launch of the Trends.Earth toolbox. The current Tools4LDN project was found to be designed based on extensive feedback from various stakeholders, including the UNCCD, the LDN community and the Trends.Earth Team. The feedback highlighted key technical challenges and limitations associated with the tool, namely the need for: a) technical improvements in the biophysical indicators provided in Trends.Earth; b) additional data sources to support measurement and assessment of indicators pertaining to the UNCCD Strategic Objective 2 and 3; c) integration of additional data sources on land management to monitor impact on the LDN indicators at local and national level; and d) capacity building resources to facilitate the uptake an continued support of the tools. To address these limitations, the current project sought to integrate additional higher-resolution datasets for biophysical indicators, incorporate additional datasets that allowed for the measurement of indicators related to Strategic Objectives 2 and 3 of the UNCCD Strategic Framework, strengthen linkages and ensure interoperability of two additional tools with Trends.Earth, and undertake capacity building of key in-country stakeholders and wider UNCCD country Parties' representatives. In addition, a key component of the project involved the piloting of the newly integrated tools in Colombia. The TE found that the selection of Colombia offered certain strengths such as the presence of various landscapes within the country which allowed for the testing of these tools across different land types. However, the TE noted that selecting only one country for piloting presented missed opportunities for testing and working in different types of national and socio-economic contexts.

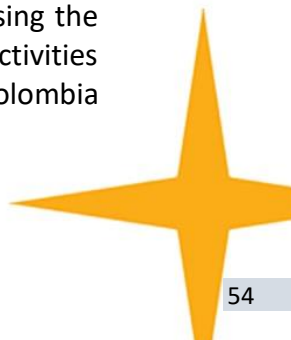
In terms of **implementation**, the TE found that the project's overall **execution arrangements** were in line with the project design and GEF guidelines, largely on account of the highly experienced and seasoned staff at the MCS as well as strong partnerships with high-capacity representatives of Executing Partner organizations. In addition, the TE found a high level of engagement and cohesion among the project's Executing Agency and Partners who undertook joint planning and monitoring of progress on all components of the projects. The project was found to face challenges in implementation due to the advent of the COVID-19 pandemic which resulted in significant delays on progress towards Component 3. Due to the travel restrictions, the project team was unable to conduct field verification and in-country workshops with stakeholders in Colombia at their planned time. In addition, the COVID-19 pandemic also resulted in challenges in aligning project timelines with the UNCCD reporting calendar which was in flux due to challenges reported by country Parties in being able to meet the deadline for the 2021-

2022 reporting cycle. Consequently, the project requested a nine-month no-cost extension in May 2021, which extended the project's timeframe to December 2022 to ensure that all outstanding project activities were completed within the extended timeframe.

In terms of results, the project was found to have successfully delivered on **Outcome 1.1** by integrating 04 datasets (03 on primary productivity, and 01 on land cover) as well as adding a functionality that allowed the integration of SOC degradation indicators into the land cover dataset, and the development of step-by-step guidelines for Trends.Earth users for using the new and additional indicators and functions integrated under the current Project. The TE found that Outcome 1.1 relied on the timely release and availability of datasets from external actors such as NASA and Vito Remote Sensing, and that progress was influenced by factors beyond the project's ambit of control. Moreover, despite additional efforts by the project team, land cover datasets with finer spatial resolution (10-30m) for a longer time series were not available, and the project integrated the next best available dataset (Copernicus land cover: 100m spatial resolution).

Under **Outcome 2.1**, the project enabled the use of Trends.Earth for assessing drought hazard, drought exposure, drought vulnerability, and population exposure to drought by identifying and integrating the relevant datasets on Trends.Earth. As a result, country Parties can now use Trends.Earth to report to UNCCD on Strategic Objectives 2 and 3. Despite delays in their implementation due to the COVID-19 pandemic, the project also piloted these approaches in Colombia through a series of trainings on the use of Trends.Earth for reporting on the Strategic Objectives, particularly SO2 and SO3. The project was seen to demonstrate effective adaptive management by changing the modality of the trainings from in-person workshops to online trainings and webinars. The pilot revealed the need for additional trainings as well as greater outreach and sensitization on Trends.Earth. Country stakeholders also stressed the importance of integrating available local data as well as the tool to function beyond reporting to UNCCD, and also facilitate national level planning and policymaking.

Under **Outcome 3.1**, the project successfully implemented integrations of Trends.Earth and the WOCAT SLM database and LandPKS to ensure the interoperability of the three tools in undertaking assessment of land conditions and sustainable land management at the field level. Furthermore, the project also implemented integrated workflows with other freely available and open source tools for assessing changes in land condition, such as the FAO's Collect Earth and SEPAL, and GEO-LDN's LUP4LDN datasets, thereby enabling the use of Trends.Earth as a platform to facilitate land use planning. Under **Outcome 3.2**, the project developed a multi-criteria assessment module for Colombia which allows for the identification of priority areas for the implementation of SLM and improved the monitoring of land degradation through the integration of national-level datasets. In addition, the project also developed a global module, which was not originally planned under the project's design, that allows for a comparison of the different SDG products available on the UNCCD platform, thereby enabling country Parties to make an informed decision on which dataset to choose when reporting to the UNCCD. Lastly, the project undertook a pilot testing in Colombia under **Outcome 3.3**, which involved conducting a nation-wide land degradation assessment for different geographies within Colombia using the updated datasets on Trends.Earth. Although the implementation of field verification activities underwent significant delays, the project team was able to undertake two field visits to Colombia



in 2022 in order to test the integration of Trends.Earth and the WOCAT database with the LandPKS mobile platform for the verification of biophysical degradation indicators and collection of land management information. To that end, the TE found that these integrations were successful and well-received by local stakeholders, as it allowed users to see trends in precipitation, current and historical information on land use for sites, and trends in vegetation health. Moreover, the integration also allowed users to obtain location-specific recommendations on the type of SLM practices and technologies that could be implemented to address specific challenges at a given site.

Under **Outcome 4.1**, the project developed multi-media training modules on using Trends.Earth for UNCCD reporting, which were also integrated into the UNCCD's e-learning platform. The COVID-19 pandemic resulted in challenges around implementing capacity building workshops which necessitated a change in format from training representatives of country Parties directly to conducting a training of trainers with regional technical experts of the UNCCD who would in turn support country Parties. Despite the availability of e-learning modules available publicly and through the UNCCD e-learning platform, the TE found that there was still considerable demand from country representatives for direct in-person trainings. Under this outcome, the project also integrated Trends.Earth with the UNCCD reporting platform, thereby allowing users to automatically import their calculated outputs onto the reporting platform and increasing the efficiency of the reporting process.

In terms of **sustainability**, several factors were found to bolster the long-term sustainability of the results achieved under the Tools4LDN project. The TE found significant enthusiasm and buy-in from the GEF and particularly the UNCCD. In fact, the conception and continued development of the Trends.Earth tool over two projects were a direct result of the demand for integrated tools for monitoring, assessing, and reporting on land degradation. Furthermore, the TE found that with the results achieved under the current project, Trends.Earth now plays a key role in the UNCCD reporting process, as the tool is integrated with the UNCCD's reporting platform and allows users to directly import their outputs from Trends.Earth to PRAIS4. Moreover, the tool is also being recommended and promoted by the UNCCD to the country Parties for reporting on SDG 15.3.1. In terms of financing, interviews with stakeholders from CI-GEF and UNCCD also reported the presence of windows of flexible funding within GEF cycles that are reserved for demand-driven enabling activities, such as those delivered through the Tools4LDN project. However, the TE found that there is a need to develop a more explicit financing strategy as well as setting up institutional arrangements with clear roles and responsibilities relating to future work on the Trends.Earth tool. Similarly, there is a need for a training and awareness raising plan to improve the uptake of the updated version of Trend.Earth, particularly since the project was unable to conduct workshops directly with the country Party representatives due to the COVID-19 pandemic.

6. LESSONS LEARNED AND RECOMMENDATIONS

6.1 LESSONS LEARNED

The project's design and implementation yielded the following lessons to inform future programming:

i. Demand-driven Enabling Activities with clear objectives and implementation arrangements can be highly effective in achieving desired results due to a high level of stakeholder buy-in, provided operational factors such as project management and financing etc. remain satisfactory.

ii. Strong levels of cohesion between the Executing Agency and Partners through regular engagements and joint planning and monitoring of progress can lend to a more effective and efficient implementation process, compared to a more siloed approach to implementation.

iii. In countries with relatively richer repository of national data, the ability to leverage existing national data onto global tools and platforms is highly valued.

iv. The use of e-learning training modules for capacity building allows for a wider dissemination of knowledge and enhances inclusivity.

6.2 RECOMMENDATIONS

Based on the in-depth assessment of the project, the TE Team presents the following recommendation directed at key stakeholders, including the UNCCD and CI-GEF.

6.2.1 RECOMMENDATIONS FOR UNCCD

1. **Development of Training and Awareness Raising Plan:** The TE found that given the challenges posed by the COVID-19 pandemic, the project shifted its implementation of capacity building activities from providing trainings directly to country Party representatives to conducting training of trainers with UNCCD regional technical experts. Given the enhancements and new integrations implemented in Trends.Earth, it is recommended that the UNCCD develop a comprehensive training and awareness raising plan for undertaking capacity building and sensitization activities with country Party representatives to actively promote the use of Trends.Earth for the SDG 15.3.1 reporting process.

2. **Development of Monitoring Framework for Tracking Trends.Earth Usage:** To ensure the continuous relevancy of Trends.Earth as well as to monitor the uptake by country Parties, it is recommended that the UNCCD develop a monitoring framework to track the usage of the tool for the purposes of reporting to the UNCCD. This will allow the UNCCD to measure the impact of the Tools4LDN project as well as facilitate in the identification of any gaps in its outreach to country Parties on promoting the usage of the tool.

3. **Development of a More Explicit Financing Strategy and Institutional Arrangements:** The TE found the presence of financing options in the form of set-aside funding on Land Degradation Focal Area in GEF Replenishment Cycles as well as the GEF-funded Global Support Programme (GSP) for reporting to the UNCCD. However, it is recommended that a more explicit financing strategy, identifying additional potential sources of funding, be developed given that upgrades to, enhancements of, and integrations on Trends.Earth are anticipated in the future, as higher-resolution datasets become available and technological advancements in and degradation monitoring and assessment occur.

   In addition, the TE found that the CI and UNCCD signed an MoU to formalize collaboration on Trends.Earth which has been ongoing since 2016. It is therefore recommended that clear roles and responsibilities be set between partners regarding the hosting, maintenance, and upkeep of the tool.

6.2.2 RECOMMENDATIONS FOR GEF

1. **Promote the Use of Trends.Earth:** It is recommended that the GEF continue to promote the Trends.Earth toolbox for not just reporting by country Parties to the UNCCD, but also on leveraging its use as land-use planning tool at the national as well as local levels.

2. **Continue to Fund Enabling Activities:** The TE found that the use of flexible funding set aside from GEF STAR allocations for each Focal Area can be effective and efficient in delivering results for projects with clear-cut objectives and implementation approaches. It is therefore recommended that the GEF continue to fund such enabling activities in the future, which can be used to leverage funding for similar global-scale projects.

ANNEXES

ANNEX 01:

LIST OF DOCUMENTS REVIEWED

LIST OF DOCUMENTS REVIEWED

- *Terms Of Reference for the TE*
- *CI-GEF Project Document*
- *CI-GEF Tools4LDN Project Inception Report*
- *Annual Workplans [FY20 – FY23]*
- *Annual Project Implementation Reports [FY21 – FY23]*
- *Quarterly Technical and Financial Reports [FY20 – FY23]*
- *CEO Endorsement*
- *Terminal Evaluation of the LDMP Project*
- *PSC Meeting Minutes*
- *Accountability and Grievance Mechanism Plan*
- *Stakeholder Engagement Plan*
- *Gender Mainstreaming Plan*
- *Knowledge Products*
- *Project Results Framework*
- *Organizational Structure*

ANNEX 02:

LIST OF INTERVIEWS WITH STAKEHOLDERS

LIST OF INTERVIEWS CONDUCTED WITH STAKEHOLDERS

KEY INFORMANT INTERVIEWS					
#	**RESPONDENT(S)**	**ORGANIZATION**	**DESIGNATION/ROLE**	**COUNTRY**	**DATE INTERVIEW CONDUCTED**
1	Alex Zvoleff	CI-MCS	Senior Director of Resilience Science	USA	December 02, 2022
	Gabriel Daldegan		Land Systems Scientist		
	Monica Noon		Project Manager/Director, Data Science for Resilience		
	Susan Mathew		Director, Sustainable Land Science		
	Christy Osoling		Senior Director of Finance and Operations		
2	David Lopez-Carr	UCSB	Professor	USA	December 07, 2022
3	Ingrid Teich	WOCAT	Researcher	Argentina	December 08, 2022
4	Free de Koning	CI-GEF	Vice President, Project Development and Impact, CI-GEF Agency	USA	December 08, 2022
5	Tatenda Lemann	WOCAT	Researcher	Bern	December 09, 2022
6	Sara Minelli	UNCCD Secretariat	Programme Officer for Monitoring and Assessment	Bonn	December 19, 2022
7	Jeff Herrick	USAID		Colorado, USA	January 19, 2023

IDIs CONDUCTED WITH IN-COUNTRY STAKEHOLDERS IN COLOMBIA				
#	Name	Organization	Contact Status	KII Date
1	Olga Lucia Ospina Arango / Reinaldo Sánchez	IDEAM		14 December 2022 3:00 – 4:00 pm
2	Javier Otero García	IDEAM	A reference given by Reinaldo Sánchez from the IDEAM Team, someone who had also contact with the project and can have an informed opinion to answer the questionnaire	Wednesday 22nd February 2023 8:00 – 9:00 a.m
3	Hilka Camargo Escorcia	Corporasion Autonoma regional del Madgalena		Tuesday 21st February, 2023 4:00 – 5:00 p.m
4	Deyanira Lobo Lujan	Universidad Sur Colombiana		Friday 9th of December 07:30 – 08:45 a.m
5	Mauricio Correa	Ministerio de Ambiente y Desarollo Sostenible	Not in the office until January - In holiday Responded mail the 16 February, 2023	Wednesday 22nd February 2023 9:00 – 10:00 am

ANNEX 03:

DATA COLLECTION TOOLS

KEY INFORMANT INTERVIEW (KII) SHEET
TERMINAL EVALUATION FOR
"Strengthening Land Degradation Neutrality Data And Decision Making Through Free And Open Access Platforms" Program

Project Management Team (MCS)	
1. Name of the Respondent	
2. Designation	
3. Contact Details	
4. Location	
5. Date of KII	
6. Starting Time of KII	
7. Finishing Time of KII	

PROJECT DESIGN

1. How does the current project fit into the priorities of the Moore Center for Science?

2. What were the timeline and process of project design? E.g. consultations, baseline studies, meetings, etc.

3. Were any of the key management staff from the Project Team currently working on the project involved in the project design? If yes, who? And what was the role of these staff members?

4. What challenges, if any, were faced during the design phase? E.g. limited baseline information, lack of stakeholder consensus, etc.

5. Based on your experience of implementing this project, what have been the major positive elements of the project design? E.g. flexibility, approach to financial management, partnership, and inclusion of particular activities that are easy to implement and/or highly welcomed by beneficiaries, SMART logframe, etc. Please elaborate.

6. And, what have been the major elements of design, if any, that resulted in implementation problems? E.g. ambitious targets, ambiguity in activities, reliance on external partners, etc. Please explain.

7. What factors were important for selecting Colombia as the pilot country for implementation of pilot testing and capacity building activities?

PROJECT MANAGEMENT

8. What is the role of the MCS as the executing agency of this project?

9. What is the composition of the MCS? What are the functions of the various teams within the MCS in terms of the current project?

10. What is the functional relationship between the MCS and: a) the Project Steering Committee; and b) the Science Advisory Board?

11. How were the Tools4LDN Project's implementation activities and tasks divided between the MCS and other partners, namely: a) the University of Bern; b) University of Colorado; c) University of California – Santa Barbara?

12. Overall, to what extent have the project's execution arrangements been effective in ensuring the smooth implementation of the project?

13. Have there been changes in the management structure over the course of the project's implementation? If so, what were the reasons for the changes and to what extent did they mitigate the challenges faced as a result of the management structure?

14. What are the major management challenges faced by the MCS in delivering its responsibilities? E.g. stakeholder capacity, internal capacity, COVID-19, etc. How were/can some of these challenges mitigated? Please provide details.

ADAPTIVE MANAGEMENT

15. What were the major activities undertaken and decisions made during the Inception phase?

16. Was a review of project logical framework undertaken at any time during the project? If yes, what were these changes? And what were the reasons for making these changes to the design?

17. Were these changes formally integrated into the project logical framework or project design? If yes, when?

18. What was the process of seeking approval for these amendments to the original design?

19. What changes to the project's implementation approaches were made in light of the COVID-19 pandemic?

20. To what extent were these changes effective in mitigating challenges faced?

EFFECTIVENESS

21. What challenges and opportunities has the MCS faced in project implementation? Please provide an overview of each project outcome and output.

22. Which project targets have been achieved and overachieved so far? What were the supporting factors responsible for meeting or exceeding these targets?

23. What are the major implementation challenges faced by the MCS with respect to accomplishing targets for Components 1, 2, 3, and 4?

24. Which project outputs/activities were/are delayed? And what were /are the reasons for these delays?

25. How do these delays affect progress of other project outputs and what is the effect on overall project?

26. What mitigation measures were undertaken to bring these activities back on track? To what extent were these measures effective?

27. Overall, to what extent have the tools and approaches developed under the current project been effective in addressing the key technical challenges with the Trends.Earth tool[15]?

[15] 1) Technical improvement in the biophysical indicators provided by default in Trends.Earth, 2) Added data sources for supporting the assessments of strategic objectives 2 and 3, in relation to human vulnerability and drought, 3) Integration of datasets on land management and their impacts on the LDN indicators at local level and national level and the integration to a mobile application for verification and data collection, and 4) Capacity building resources to facilitate the uptake and continued support of the different tools, and for development of on the ground projects to support LDN.

MONITORING AND EVALUATION

28. What are the major monitoring and evaluation responsibilities of the MCS?

29. Are any challenges faced when using the project's logical framework for monitoring progress? E.g. ambitious or non SMART indicators, long list of activities to be monitored, etc.?

30. What is the monitoring activity undertaken by each of the key project stakeholders, including MCS, CI-GEF, and executing partners, etc., e.g. monitoring visits, reports, etc.

31. How/Where is the M&E data collected, stored, and analyzed?

32. What have been major challenges with collecting and reporting M&E data by each stakeholder? How has this affect progress reporting? E.g. delay in submission of reports, etc.

33. What special efforts are being made to collect gender-segregated data, stakeholder data, and E&S impact data?

34. How has the M&E been helpful in timely indication of critical gaps in implementation? Please provide examples.

35. Were any of the key project planning decisions based on M&E data? If yes, please provide examples.

STAFFING

36. How many staff are working at the MCS? And what are the roles and responsibilities of these staff members?

37. Has this staff been sufficient for managing the project? If no, why not?

38. What measures are taken to bolster staffing capacity? E.g. hiring of short-term experts

39. Have there been any major changes in staffing during the period of implementation? E.g. staff turnover, or addition/elimination of positions, etc.

40. What are some of the staffing challenges faced by the MCS? E.g. limited availability of expert staff, difficult to engage field staff, high turnover, etc.

41. Does the project face any challenges in engaging good quality experts to provide TA? If yes, what are the key challenges and how can these be mitigated?

FINANCE

GEF Fund

42. Has the project faced any problems with financing? E.g. late approvals, difficult reporting processes, unrealistic budgeting at design or AWP stage, etc.?

43. Has the project faced any problems with financing availability? E.g. late approvals, difficult reporting processes, unrealistic budgeting at design or AWP stage, etc.?

44. How have these issues affected the project's performance? And what measures have been taken thus far to resolve some of these issues?

Co-Financing

45. Who are the main contributors to co-finance?

46. How is the project's co-financing tracked?

47. What can be done to improve the tracking of project's co-financing?

48. What measures can be taken to enhance/increase the co-financing levels currently being provided?

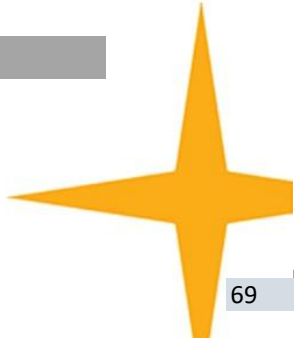
TIMELINESS

49. What planned activities have faced major delays? And what were the causes of these delays? E.g. COVID-19, capacity of stakeholders, seasonality, lengthy procurement and/or approval processes, etc.

50. How did these delays affect the project implementation? And what measures were taken to overcome the factors causing delays?

51. On what basis was the decision to grant the project a 09-month no cost extension made? Was it successful in achieving its intended goal(s)?

RELATIONSHIP MANAGEMENT



52. What are the main coordination mechanisms/arrangements utilized by the MCS to manage and engage with executing partners and the Colombia stakeholder organization (IDEAM)?

53. What has worked well in terms of effective collaboration with different types of stakeholders across different regions of the world?

54. What have been major challenges faced by the project when collaborating with different types of stakeholders across different regions?

IMPACT

55. In your opinion, which project activities have had the highest potential for impact? Why?

56. Also, which project activities do you think have had the lowest potential for impact? Why?

57. How can the potential impact of these activities be enhanced?

SUSTAINABILITY AND RISKS

58. Of the activities implemented thus far, which are the most sustainable? Why? E.g. improvement of biophysical indicators for LDN, improved understanding of socio-environmental interactions between drought, land degradation, and proverty, and capacity building on tools, etc. Similarly, which activities are the least sustainable? Why?

59. What steps or measures did the Tools4LDN project take to increase the sustainability of results achieved under the project?

60. What are the actual or potential threats to the sustainability of the implemented or planned activities by the project?

61. What are your recommendations for improving the likelihood of sustainability of project current or planned outputs and outcomes?

ASSESSMENT OF SOCIAL AND ENVIRONMENTAL SAFEGUARDS

Gender

62. What measures have been taken to ensure inclusion/mainstreaming of women's concerns in the project activities?

63. What have been the major challenges and opportunities regarding gender integration into project activities?

64. How are these being dealt with to ensure the achievement of project outcomes?

Stakeholder Engagement

65. Who are the major types of stakeholders of the project?

66. What are the different ways in which various stakeholder types, including key partners, external partners, academia, and public sector stakeholders, etc., have been engaged in the project activities?

67. What steps has the project undertaken to ensure that its various deliverables were delivered through effective stakeholder engagement?

68. How were stakeholders selected for participation in /benefiting from capacity building activities?

69. How did the Tools4LDN project ensure that stakeholders have been selected according to the established criteria?

70. What have been major challenges faced by the project when collaborating with each type of partners and stakeholders? E.g. extensive variety of partners, limited capacity, etc.

71. What measures are taken to ensure that women and historically marginalized groups are actively involved in the project's activities?

Accountability and Grievance Mechanisms (AGM)

72. How does the project's Accountability and Grievance Mechanism (AGM) work? What have been the observed shortcomings of the system?

73. What measures have been taken to improve the system?

Knowledge Management And Dissemination

74. What mechanisms and tools does the project have in place to organize and store knowledge gathered and generated during the course of project implementation? E.g. knowledge management strategy, development and maintenance of project website, etc.

75. What methods of dissemination is the project using to share this information with beneficiaries and various stakeholders, e.g. participating organizations, researchers, policy and planning departments, etc.

76. How have knowledge management and dissemination activities undertaken by the project been effective? Please provide examples.

77. How can the knowledge management and dissemination activities of the project be improved?

LESSONS LEARNT AND RECOMMENDATIONS

78. Based on your experience, what are the major lessons learned from:
    a. Project design;
    b. Execution and implementation arrangements;
    c. Monitoring and evaluation;
    d. Adaptive management;
    e. Sustainability; and
    f. Impact

79. What are your overall recommendations for the improvement of the following for similar future programmes:
    a. Project design;
    b. Execution and implementation arrangements;
    c. Monitoring and evaluation;
    d. Adaptive management;
    e. Sustainability; and
    f. Impact

KEY INFORMANT INTERVIEW (KII) SHEET
TERMINAL EVALUATION FOR
"Strengthening Land Degradation Neutrality Data And Decision Making Through Free And Open Access Platforms" Program

Executing and External Partners [UCSB, University of Colorado, University of Bern, UNCCD, FAO]	
1. Name of the Respondent	
2. Designation	
3. Name of Organization	
4. Contact Details	
5. Location	
6. Date of KII	
7. Starting Time of KII	
8. Finishing Time of KII	

BACKGROUND

1. How does the current project fit into the priorities of your organization?

2. What was your organization's level of involvement in the design of the Tools4LDN project?

3. When and how was your organization engaged to participate in the implementation activities under the Tools4LDN project?

PROJECT MANAGEMENT

4. What is the role of your organization in the Tools4LDN project?

5. What is the composition of your organization? What are the functions of the various teams within your organization in terms of the current project?

6. What is the functional relationship between your organization and: a) the Project Steering Committee; and b) the Science Advisory Board?

7. How were the Tools4LDN Project's implementation activities and tasks divided between the your organization and other partners, namely: a) MCS; b) the University of Bern; c) University of Colorado; d) University of California – Santa Barbara?

8. Overall, to what extent have the project's execution arrangements been effective in ensuring the smooth implementation of the project?

9. Have there been changes in the management structure over the course of the project's implementation? If so, what were the reasons for the changes and to what extent did they mitigate the challenges faced as a result of the management structure?

10. What are the major management challenges faced by your organization, if any, in delivering its responsibilities? E.g. stakeholder capacity, internal capacity, COVID-19, etc. How were/can some of these challenges mitigated? Please provide details.

11. What challenges, if any, did your organization face in terms of the disbursements of funding to your team? What impacts, if any, did these challenges have on the overall progress towards results as well as the management of the project?

EFFECTIVENESS

12. Please provide an overview of the project activities that your organization led and/or contributed to.

13. What challenges and opportunities has your organization faced in implementation of these activities? Please provide an overview of each project outcome and output, as applicable.

14. Which targets for activities implemented by your organization have been achieved and overachieved so far? What were the supporting factors responsible for meeting or exceeding these targets?

15. Which project outputs/activities were/are delayed? And what were /are the reasons for these delays?

16. How do these delays affect progress of other project outputs and what is the effect on overall project?

17. What mitigation measures were undertaken to bring these activities back on track? To what extent were these measures effective?

18. Overall, to what extent have the tools and approaches developed under the current project been effective in addressing the key technical challenges with the Trends.Earth tool[16]?

Monitoring and Evaluation

19. What are the major monitoring and evaluation responsibilities of your organization?

20. How/Where is the M&E data collected, stored, and analyzed?

21. What have been major challenges with collecting and reporting M&E data by each stakeholder? How has this affect progress reporting? E.g. delay in submission of reports, etc.

22. What special efforts are being made to collect gender-segregated data, stakeholder data, and E&S impact data?

23. How has the M&E been helpful in timely indication of critical gaps in implementation? Please provide examples.

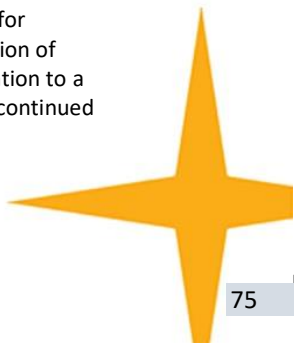
PARTNERSHIP MANAGEMENT

24. To what extent was the coordination between the different executing partners and your organization effective?

25. What has worked well in terms of effective collaboration with different types of stakeholders across different regions of the world?

26. What have been major challenges faced by the project when collaborating with different types of stakeholders across different regions?

[16] 1) Technical improvement in the biophysical indicators provided by default in Trends.Earth, 2) Added data sources for supporting the assessments of strategic objectives 2 and 3, in relation to human vulnerability and drought, 3) Integration of datasets on land management and their impacts on the LDN indicators at local level and national level and the integration to a mobile application for verification and data collection, and 4) Capacity building resources to facilitate the uptake and continued support of the different tools, and for development of on the ground projects to support LDN.



27. What measures were instituted to foster effective collaboration and coordination between multiple executing teams? To what extent were these measures effective?

IMPACT

28. In your opinion, which project activities have had the highest potential for impact? Why?

29. Also, which project activities do you think have had the lowest potential for impact? Why?

30. How can the potential impact of these activities be enhanced?

SUSTAINABILITY AND RISKS

31. Of the activities implemented thus far, which are the most sustainable? Why? E.g. improvement of biophysical indicators for LDN, improved understanding of socio-environmental interactions between drought, land degradation, and proverty, and capacity building on tools, etc. Similarly, which activities are the least sustainable? Why?

32. What steps or measures did the Tools4LDN project take to increase the sustainability of results achieved under the project?

33. What are the actual or potential threats to the sustainability of the implemented or planned activities by the project?

34. What are your recommendations for improving the likelihood of sustainability of project current or planned outputs and outcomes?

LESSONS LEARNT AND RECOMMENDATIONS

35. Based on your experience, what are the major lessons learned from:
    a. Project design;
    b. Execution and implementation arrangements;
    c. Monitoring and evaluation;
    d. Adaptive management;
    e. Sustainability; and
    f. Impact

36. What are your overall recommendations for the improvement of the following, for similar future programmes:
    a. Project design;

b. Execution and implementation arrangements;
c. Monitoring and evaluation;
d. Adaptive management;
e. Sustainability; and
f. Impact

CYNOSURE

IN-DEPTH INTERVIEW (IDI) SHEET
TERMINAL EVALUATION FOR
"Strengthening Land Degradation Neutrality Data And Decision Making Through Free And Open Access Platforms" Program

Government Representatives [IDEAM]	
1. Name of the Respondent	
2. Designation	
3. Name of Government Agency	
4. Contact Details	
5. Location	
6. Date of KII	
7. Starting Time of KII	
8. Finishing Time of KII	

BACKGROUND

1. What is the mandate of your organization?

2. What is the primary role of your organization/agency in the planning and monitoring of Land Degradation Neutrality (LDN) priorities in your country?

3. What are some of the other key agencies which are involved in this role?

4. What are the current priorities of your government in terms of the achievement of LDN?

5. What are the major challenges to the development of policy aimed to achieve LDN? E.g. Govt. priority, community buy-in, funding support, etc.

PROJECT DESIGN

6. How was your organization/department approached by the Tools4LDN Project?

7. What factors influenced your decision to partner and collaborate with the Tools4LDN Project?

8. Has your organization been involved in the design and/or implementation of the CI-GEF Tools4LDN project? If yes, please provide details, e.g. design process, different stakeholders.

9. If no, in your opinion, how did this lack of involvement affect your role with regards to project implementation?

10. To what extent is the current project aligned with the national and/or regional policy priorities of your government?

11. What gaps and limitations, if any, need to be filled to better align or improve the effectiveness of the project in the context of your country and/or region?

PROJECT IMPLEMENTATION

12. What role, if any, is played by your department in the implementation of the current project? E.g. participation in Steering Committee, policy support, provision of co-financing, etc.

13. What challenges have you faced with implementation of the project, if any? E.g. funding transfers, access to field, lengthy approval processes, etc.

14. What measures were taken to overcome these challenges?

15. To what extent has your department been successful in developing and integrating any policies, programs, or plans addressing drivers of land degradation in the context of your national and/or regional policy framework?

16. To what extent are the tools developed by the Project user-friendly, accessible, easy to understand, and useful to your organization in supporting national and subnational planning and monitoring towards LDN?

17. What capacity building activities implemented by the Tools4LDN Project have your department/organization been involved in?

18. What have been the major opportunities and benefits for your organization/department as a result of your participation in the project?

19. How effective has the collaboration and coordination with the MCS and the executing partner organizations been over the course of implementation?

20. What measures were instituted to ensure effective collaboration and coordination with the partner organizations?

21. What challenges, if any, did your organization/department face in collaborating with partners?

22. How were participants selected to undergo trainings on the Trends.Earth tool developed and improved under the CI-GEF project?

23. How did your organization/department ensure that a wide and representative group of participants were capacitated under the trainings implemented by the current project?

LESSONS AND RECOMMENDATIONS

24. What have been some of the other major activities related to LDN being implemented in your country over the past three years?

25. What have been the main opportunities and challenges faced by these projects?

26. What are your recommendations for the development of future projects supporting the planning and monitoring of LDN priorities in your country/region?

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