International Forum facilitated by the Forest Ecosystem Restoration Initiative:

Workshop on ecosystem restoration-related planning and capacity-building needs for the implementation of the Kunming-Montreal Global Biodiversity Framework

12 September, 10 am - 12 pm EDT

UN environment programme

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2020 UN BIODIVERSITY CONFERENCE

COP 15 - CP/MOP10 - NP/MOP4

Ecological Civilization-Building a Shared Future for All Life on Earth

KUNMING – MONTREAL

FERI

산림청 Korea Forest Service

KM-GBF Target 2

CBD Secretariat, 12 September 2023

Convention on
Biological Diversity

Convention on Biological Diversity

Outline

- Lessons learned from 2010-2020
- Unpacking KM-GBF Target 2
- Roadmap for Target 2

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Progress on Aichi Biodiversity Target 15 (GBO5)

Target 15:

"By 2020, ecosystem resilience and the contribution of biodiversity to carbon stocks have been enhanced, through conservation and restoration, including restoration of at least 15 percent of degraded ecosystems, thereby contributing to climate change mitigation and adaptation and to combating desertification."

- Has not been achieved (medium confidence) -33% were on track
- Not all elements of ABT15 were addressed
- Lack of consensus on land degradation (baseline)
- SMARTness of national targets (specific, measurable, accurate, realistic, time-bound) – difficulty with assessing the total area of degraded ecosystems, locations to be restored
- Ecosystem restoration in marine and coastal areas needs more guidance

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Capacity development to accelerate implementation of ABT 15

Short-Term Action Plan on Ecosystem Restoration (CBD, 2016)

- Online Course on Ecosystem Restoration
- WePlan Forest - restoration decision-making tool

Forest Ecosystem Restoration Initiative (FERI)

- 7 sub-regional workshops (2015-2020): Caribbean, Pacific, Mediterranean, Central-Eastern-Southern Africa, Latin America, Asia, West Africa.
- 12 small-scale projects on forest landscape restoration

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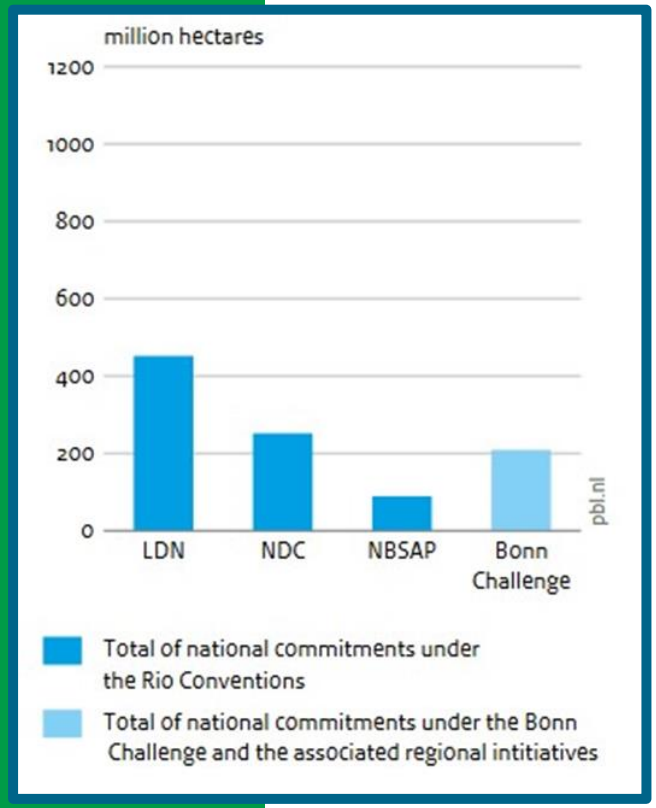
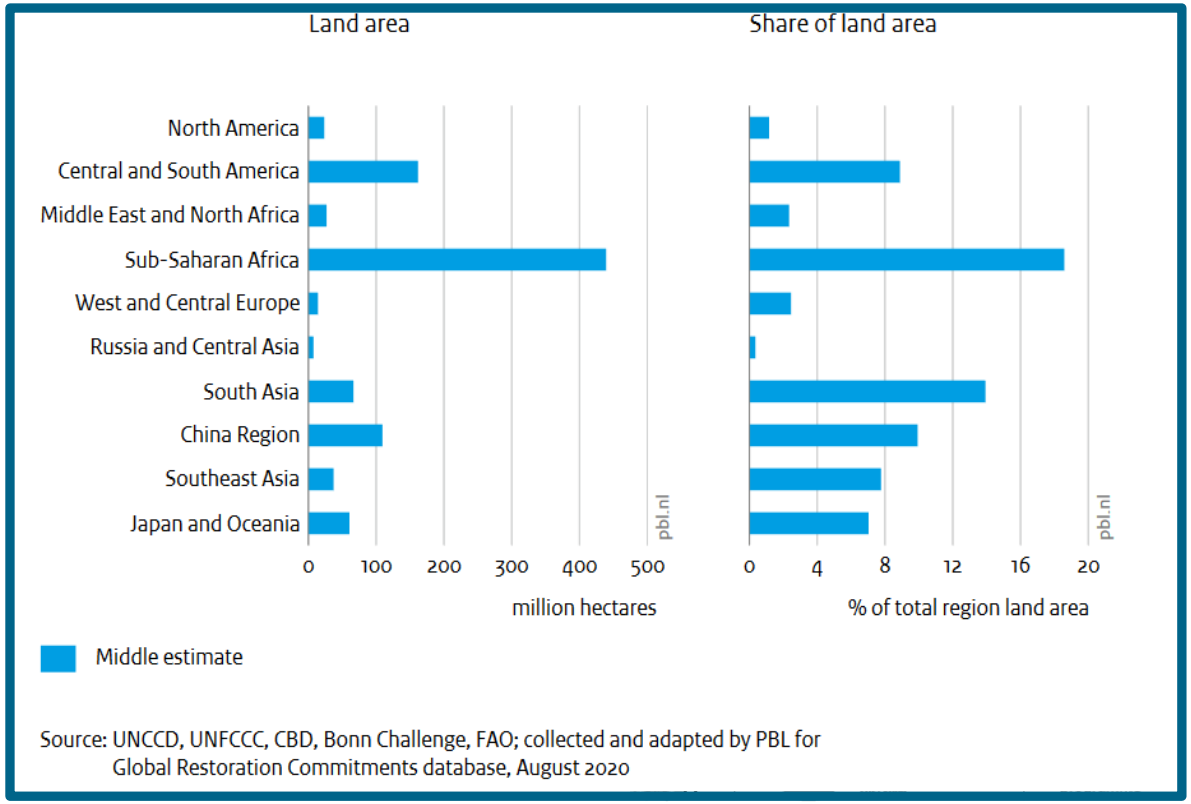
1 bln ha is committed





Source: UNCCD, UNFCCC, CBD, Bonn Challenge, FAO; collected and adapted by PBL for Global Restoration Commitments database, August 2020

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Unpacking KM-GBF Target 2

Ensure that by 2030 at least 30 % of areas of degraded terrestrial, inland water, and coastal and marine ecosystems are under effective restoration, in order to enhance biodiversity and ecosystem functions and services, ecological integrity and connectivity.

Headline indicator: Area under restoration

- Level of ambition
- Avoiding further degradation
- Types of ecosystem
- Baseline
- Restoration/Rehabilitation
- Enhanced ecosystem functions and services
- Ecological integrity and connectivity
- Interlinkages with other targets

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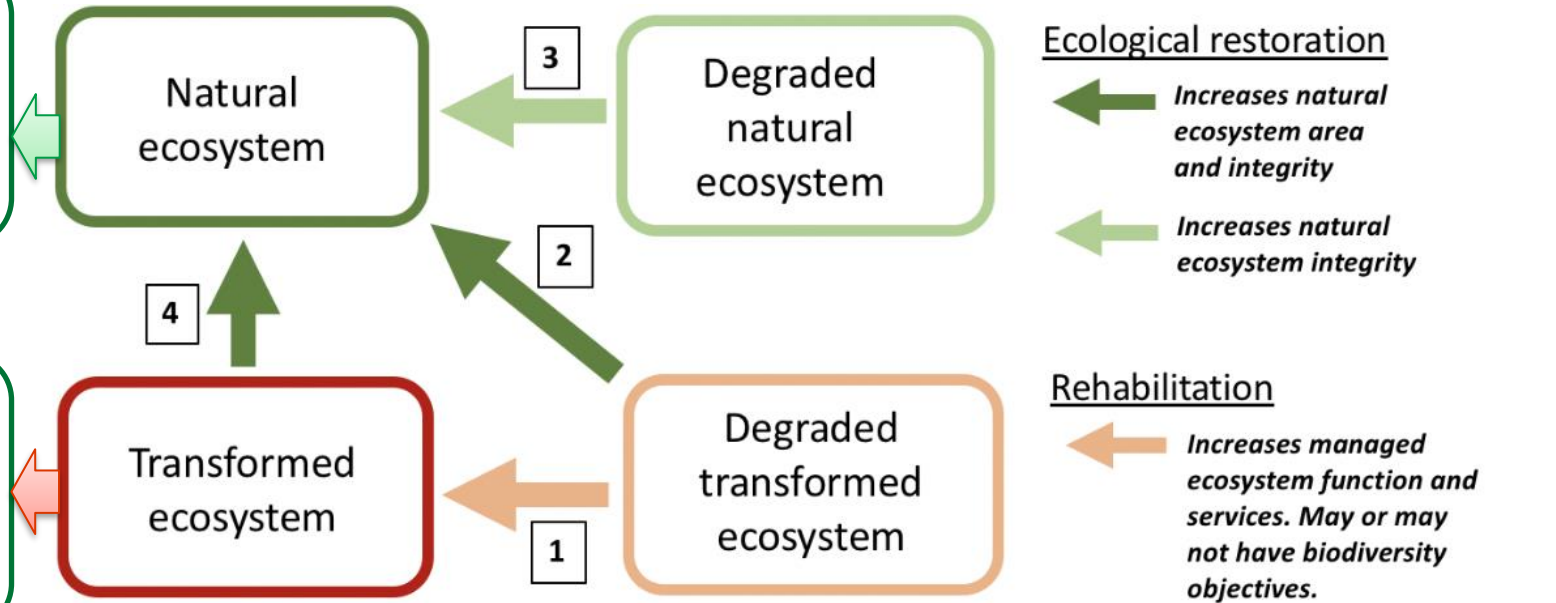
Restoring to what state

GOAL A

GOAL B



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Target 2: Capacity development

2023 | 2024 | COP-16 | 2025

Side-event at SBSTTA 25 –October, Nairobi

Workshop on ecosystem restoration related planning and capacity needs November, Rome

SBSTTA 26

Restoration planning/monitoring e-learning

Regional capacity development with partners

Contribution to NSBAP webinars

Awareness raising and mobilization of technical support through UN Decade Partner Network

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Post-COP16: Partnership and country support

2025

COP 16 Rio-Pavilion Restoration Day

Global stock take

Restoration Gap report

7th national reporting process

2026

Submission of 7th national reports

Analysis of data, review of implementation, and gap analysis

NICFI Norway's International Climate and Forest Initiative

Federal Ministry for the Environment, Nature Conservation, Nuclear Safety and Consumer Protection

based on a decision of the German Bundestag

IKI INTERNATIONAL CLIMATE INITIATIVE

UK Government

FERI

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Questions

- High expectation to deliver multiple benefits
- On-going and committed restoration initiatives
  - MEAs
  - International –UNDER, Bonn Challenge
  - Regional – AGI, AFR100, 20x20 LAC, ECCA30, Great Green Wall, others
- Knowledge and data sharing (scientific and traditional)
- Finance for restoration

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“From Agreement to Action: Build Back Biodiversity”

THANK YOU!

Secretariat of the
Convention on Biological
Diversity
secretariat@cbd.int
www.cbd.int

Convention on
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Ecological Civilization-Building a Shared Future for All Life on Earth

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Food and Agriculture Organization of the United Nations

UNITED NATIONS DECADE ON ECOSYSTEM RESTORATION 2021-2030

Framework for Ecosystem Restoration Monitoring

Toward transparent monitoring of restoration and disseminating results.

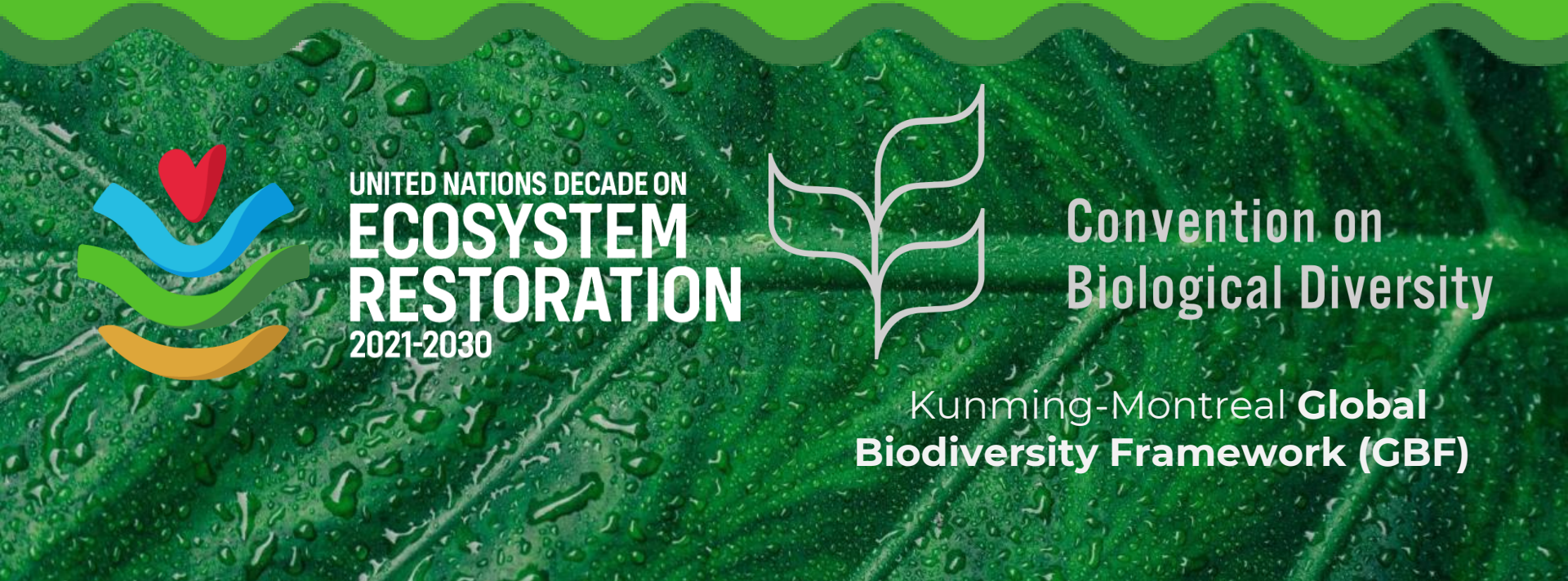
Julian Fox

FAO, Senior Forestry Officer

Yelena Finegold

FAO, Forestry Officer

What is the global status of ecosystem restoration?



Task Force on Monitoring

Terrestrial ecosystems

Sub TF

e.g. Forests, Pasture, Croplands

Aquatic and transitional ecosystems

Sub TF

e.g. Coastal, Sea grass, Tidal marshes, Coral reef, Mangroves, Peatlands, Lakes and rivers

Socio-economic

Sub TF

e.g. Drivers, impacts, effectiveness of restoration from socio-economic aspect

Working group on drafting methodology for reporting area under restoration

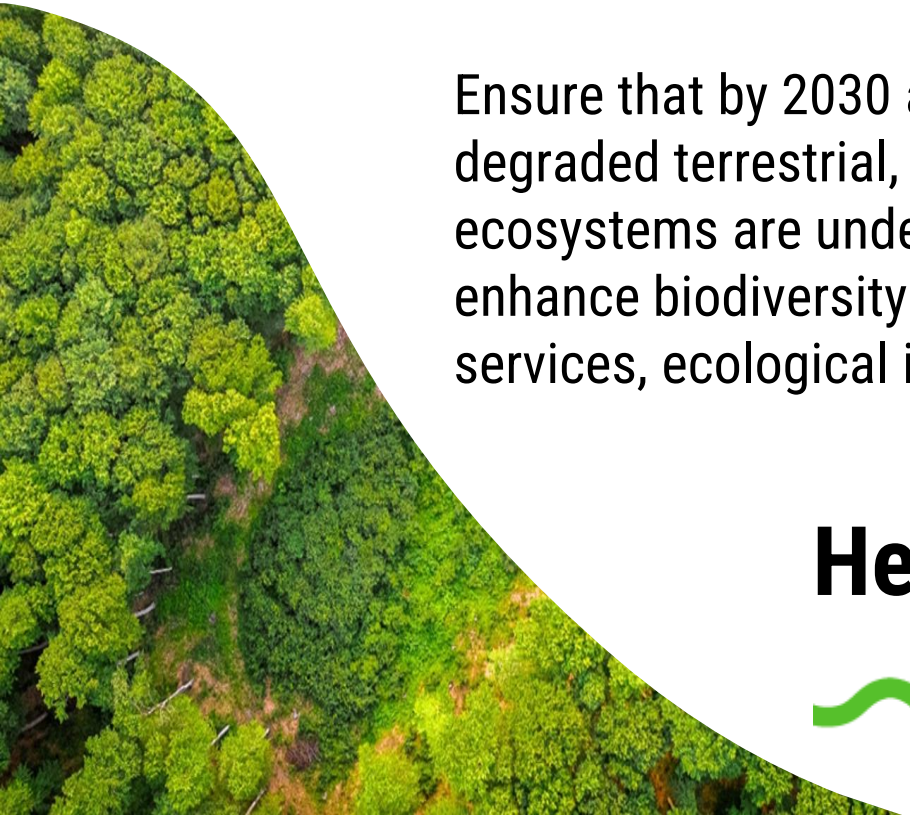
~400 technical experts from
100+ organizations with a shared vision:

Sound monitoring can catalyze investments and ensure science-based actions

Target 2 of the Kunming-Montreal Global Biodiversity Framework

Convention on Biological Diversity

UNITED NATIONS DECADE ON ECOSYSTEM RESTORATION 2021-2030



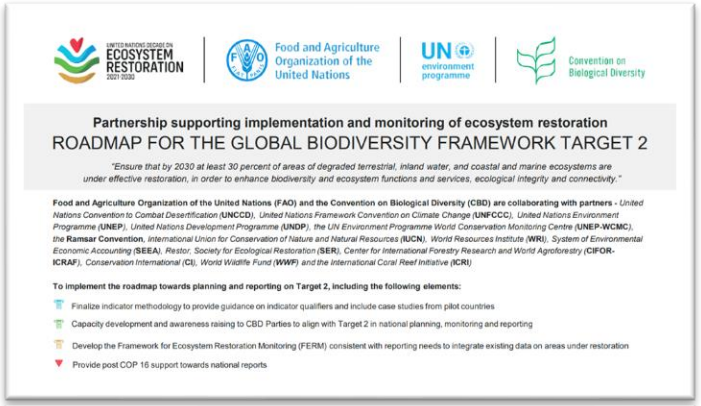
Ensure that by 2030 at least 30 per cent of areas of degraded terrestrial, inland water, and coastal and marine ecosystems are under effective restoration, in order to enhance biodiversity and ecosystem functions and services, ecological integrity and connectivity.

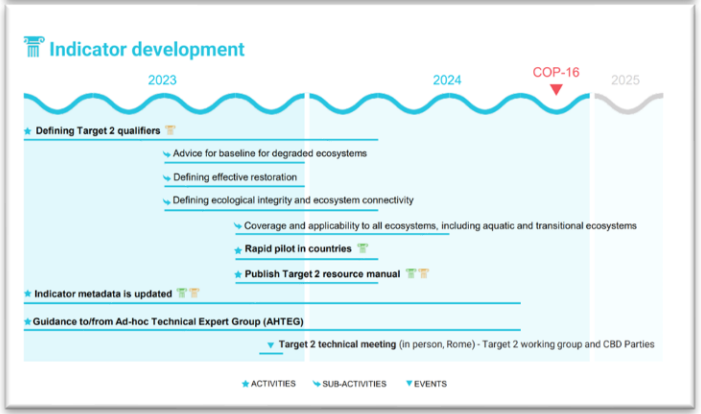
Headline indicator

Area under restoration

Target 2: Road map

- FAO, as lead of the Task Force on Monitoring, is the custodian of the headline indicator for Target 2 of the Kunming Montreal Global Biodiversity Framework
- The road map to provide guidance on the implementation and monitoring of Target 2 includes the following elements:
  - Finalize **indicator methodology** to provide guidance on indicator qualifiers and include case studies from pilot countries (Burkina Faso, Kenya, Peru, and Vietnam)
  - Develop the **Framework for Ecosystem Restoration Monitoring (FERM)** consistent with reporting needs to integrate existing data on areas under restoration and provide a default dataset
  - **Capacity development** and awareness raising to CBD Parties to align with Target 2 in national planning, monitoring and reporting
  - Provide **post COP 16** support towards national reports



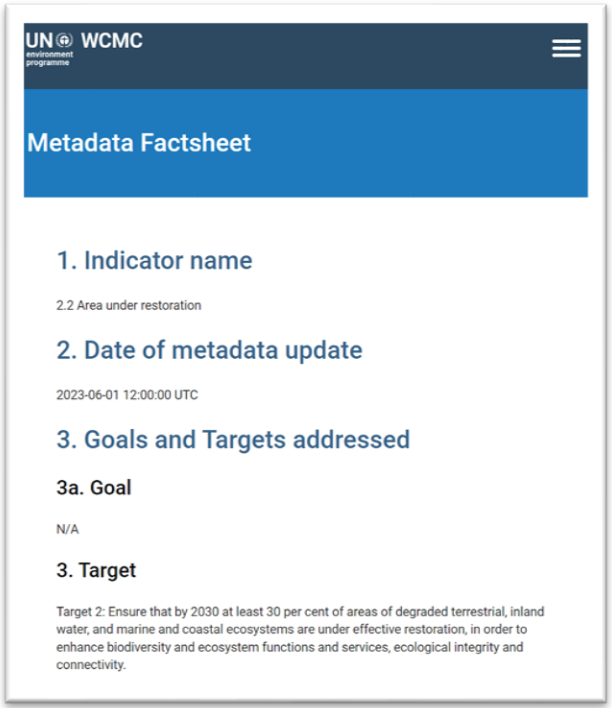


Indicator methodology

Metadata for the Target 2 headline indicator

- Builds on existing guidance (e.g., STAPER, Road to Restoration)
- Outlines a default dataset based on compiled data from restoration platforms and frameworks
- Provides flexibility for use of national datasets, databases, and definitions
- Data parameters for the project/initiative database include:
    - area committed to restore, area under restoration, ecosystem, restoration status, type of restoration, restoration activity, lead entity, tenure status
- Guidance on degraded ecosystems and effective restoration is in development
- Promotes alignment and interoperability, channeling data through the Framework for Ecosystem Restoration Monitoring (FERM)

https://www.post-2020indicators.org/metadata/headline/2-2


UN environment programme WCMC

Metadata Factsheet

1. Indicator name

2.2 Area under restoration

2. Date of metadata update

2023-06-01 12:00:00 UTC

3. Goals and Targets addressed

3a. Goal

N/A

3. Target

Target 2: Ensure that by 2030 at least 30 per cent of areas of degraded terrestrial, inland water, and marine and coastal ecosystems are under effective restoration, in order to enhance biodiversity and ecosystem functions and services, ecological integrity and connectivity.

FAO tools for planning, monitoring, and reporting restoration

Food and Agriculture Organization of the United Nations

Planning

Identify potential areas for restoration: **se.plan**

Identify indicators for monitoring: **AURORA**

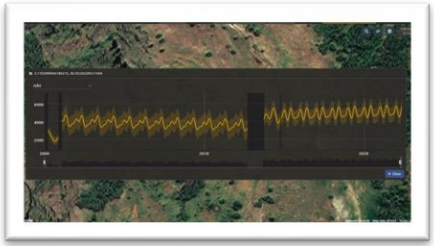
Monitoring:

Field and remote sensing assessments

Field inventories: **Collect Mobile**

Delineate restoration areas: **Ground** ***(coming soon)***

Analyze times series of satellite imagery: **SEPAL**



Collect sample-based data using satellite images: **Collect Earth**

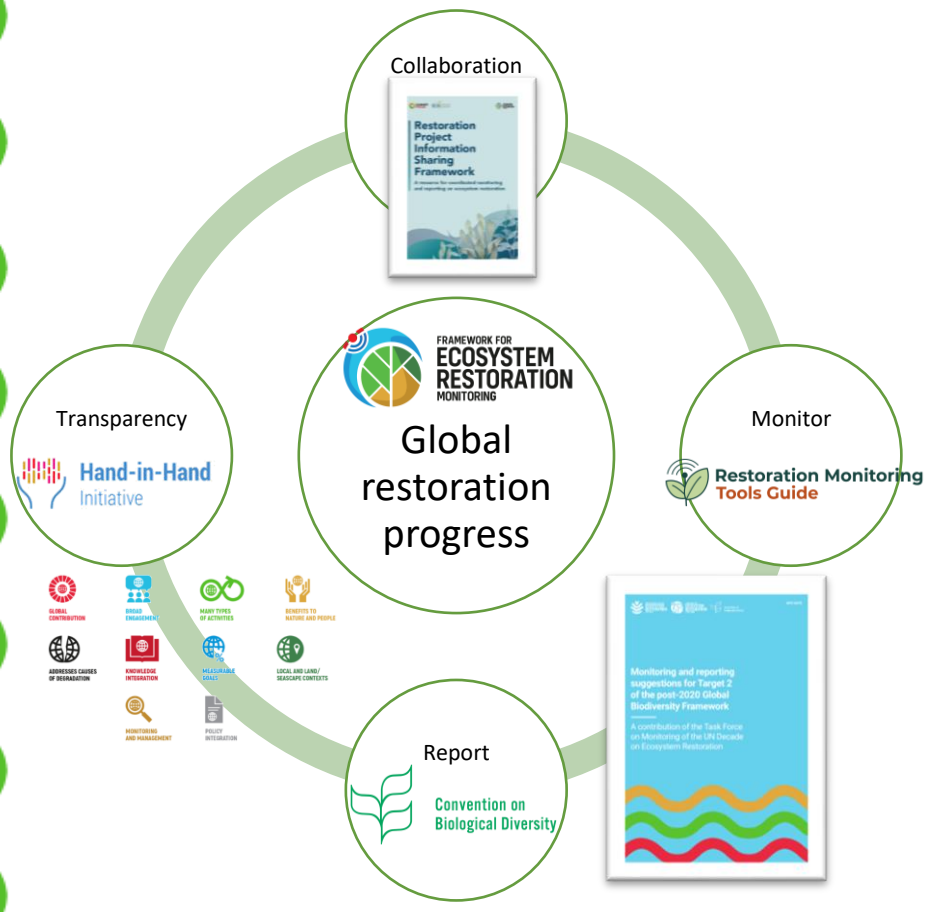
Reporting

Report restoration progress to the UN Decade and KM GBF:

https://ferm.fao.org/

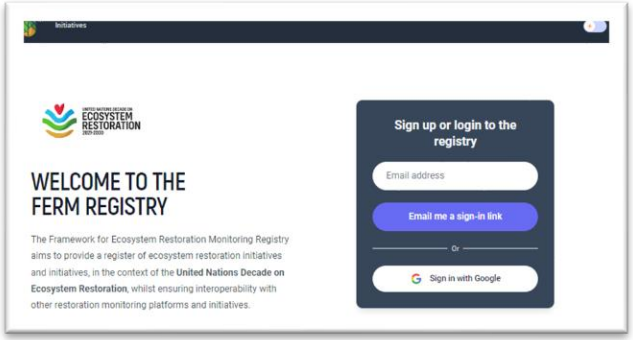
Framework for **E**cosystem **R**estoration **M**onitoring (FERM)

1. **COLLABORATION**: Brings together frameworks/mechanisms that are collecting data on restoration under a common interoperable framework.
2. **MONITOR**: Provide a platform, guidance, and capacity development for collecting geospatial data to share good practices for implementing restoration and subsequent monitoring of the areas under restoration.
3. **REPORT:** On global restoration status using the interoperability framework to the UN Decade and support the Parties to report under the post-2020 Global Biodiversity Framework
4. **TRANSPARENCY:** Provide a public searchable database of geospatial data related to restoration and good practices to ensure that restoration targets are being met.

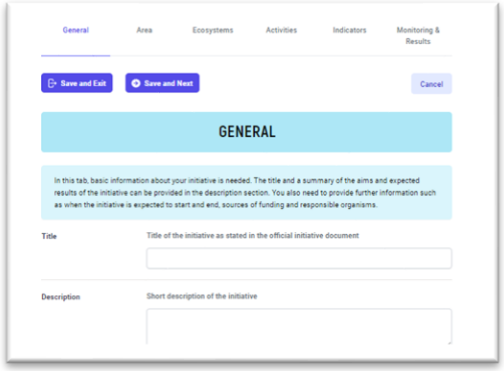


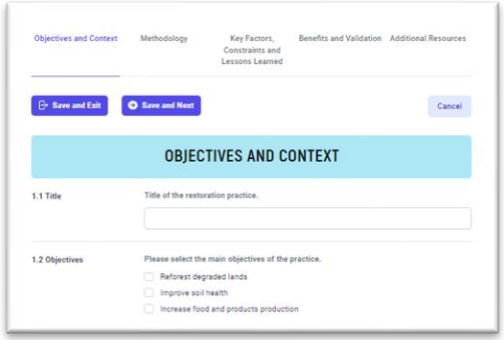
FERM Registry, Platform, and Search Engine

Sign up – open, easy sign up, groups by institutions

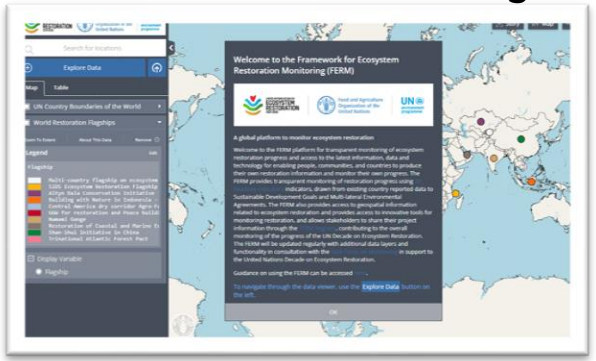


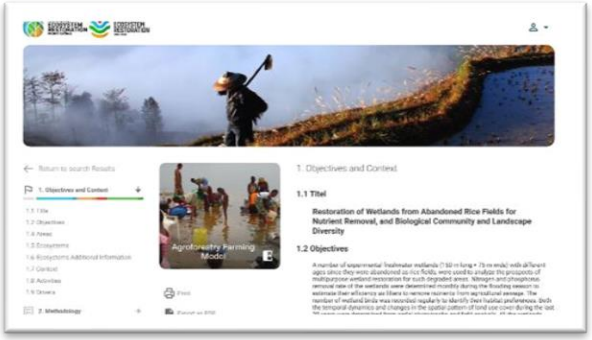
Register the initiative and add good practices





Initiatives and good practices are reviewed and published on the FERM Platform and Search Engine





Collaboration

Interoperability of monitoring and reporting frameworks

afr100

Initiative 20x20

gef

Restoration Barometer

United Nations Convention to Combat Desertification

PRAIS4

Ramsar Sites Information Service
2,492 Sites covering 256,637,813 ha

SER SOCIETY FOR ECOLOGICAL RESTORATION

RESTOR

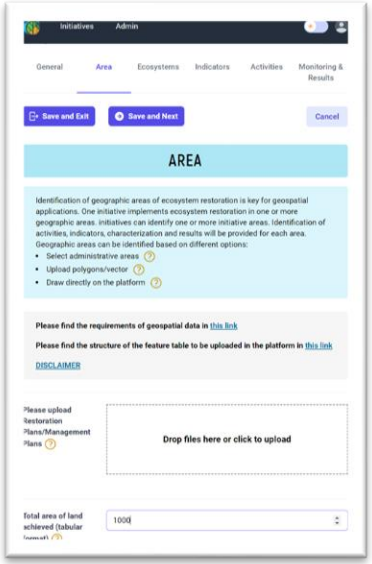
protected planet

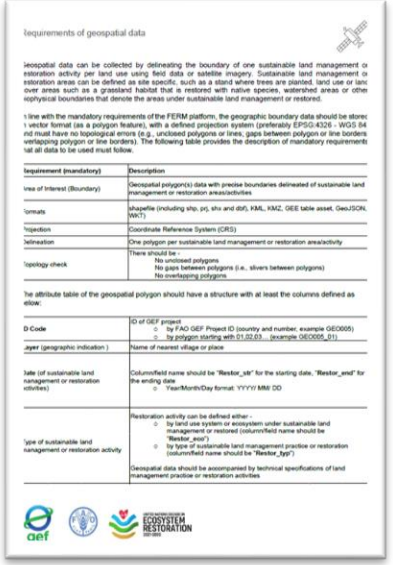
ICRI

Nature Commitments
Showcasing Area-based Commitments

AURORA
Assessment, Understanding and Reporting Of Restoration Actions

Customization of FERM registry for GEF projects with GEF Core Indicators





Invitation to CBD Parties to explore, use, and provide feedback to the FERM Registry

We encourage you to **register your restoration initiatives** and document good practices through the **FERM Registry** https://ferm.fao.org/ and search good practices through the **Search Engine**

For further assistance and to provide feedback, please contact: restoration-monitoring@fao.org

Follow up

SBSTTA 25 side event
16-20 October 2023
Nairobi, Kenya

Target 2 Workshop
22-24 November 2023
Rome, Italy

Food and Agriculture Organization of the United Nations

UNITED NATIONS DECADE ON ECOSYSTEM RESTORATION 2021-2030

Thank you.

restoration-monitoring@fao.org

julian.fox@fao.org

yelena.finegold@fao.org

#GenerationRestoration

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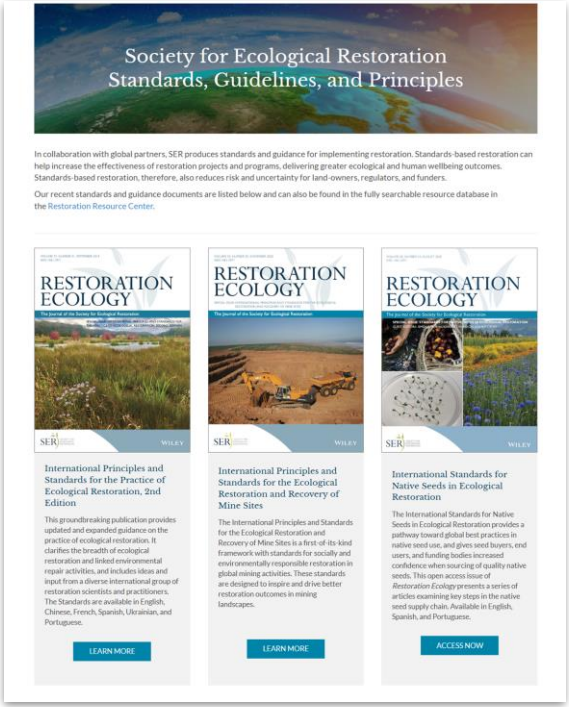
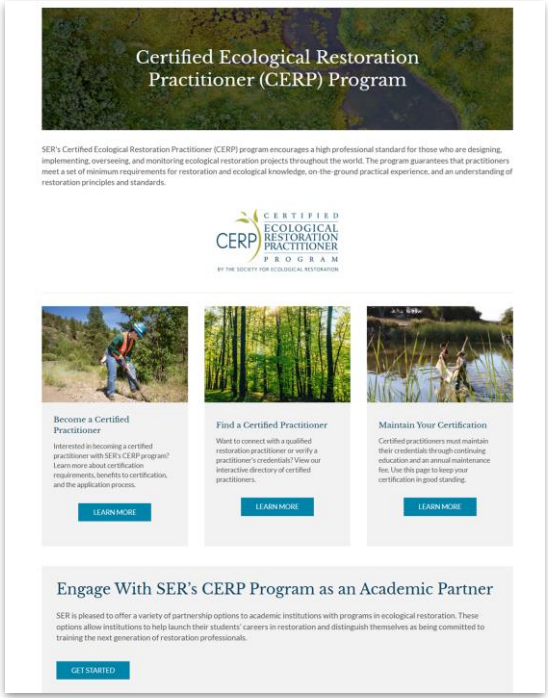
산림청 Korea Forest Service

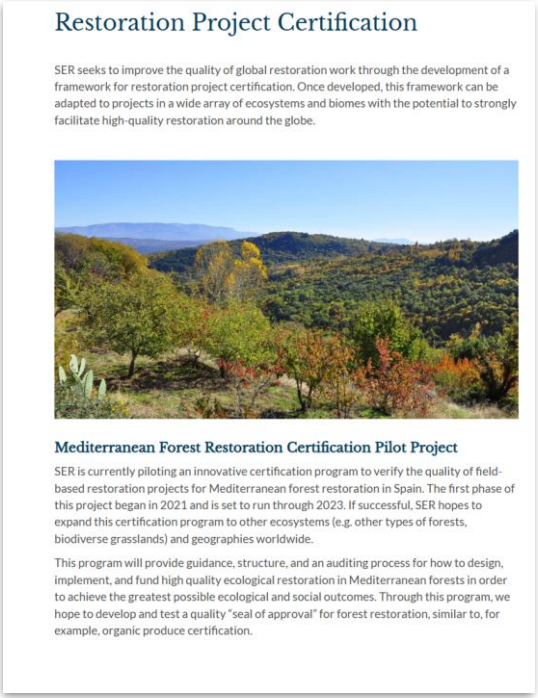
Ecosystem Restoration Effectiveness, Principles, and Standards of Practice: planning to achieve multiple benefits from ecosystem restoration (biodiversity, ecosystem services, connectivity, and resilience)

- George Gann, International Policy Lead, CERP #574
- Bethanie Walder, Executive Director

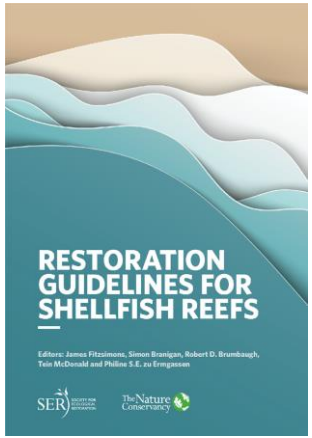
Programmatic work in the Policy, Standards, and Certification Space

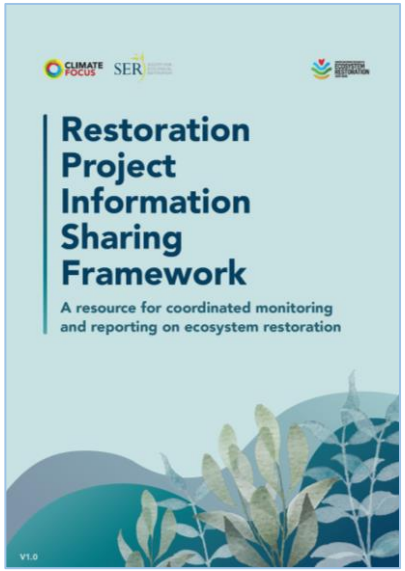


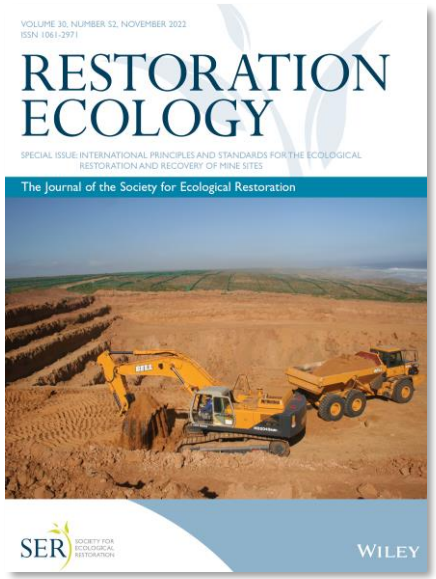




Collaborative Effort







The Global Biodiversity Standard

Microsoft is proud to collaborate with Society and Ecological Restoration to deliver standards-based ecological restoration with Trinity University and the San Antonio River Association in San Antonio, Texas USA. Learn more here.

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Supported by Microsoft

“Under Effective Restoration” – What Does it Mean?

1997

Conservation Biology

What is Good Ecological Restoration?

¿Que es una Buena Restauración Ecológica?

Eric S. Higgs

First published: 27 February 2002 | https://doi.org/10.1046/j.1523-1739.1997.95311.x | Citations: 204

PDF TOOLS SHARE

Abstract

EN ES

The rapid rise of ecological restoration is forcing consideration of what good restoration entails. Defining an end point for restoration is as much an ethical matter as a technical one, but scientifically trained restorationists have largely ignored the former issue. I argue that good restoration requires an expanded view that includes historical, social, cultural, political, aesthetic, and moral aspects. This expanded definition is necessary at a practical level to guide practitioners in the pursuit of excellence and at a conceptual level to prevent restoration from being swamped by technological activities and projects that veer away from ecological fidelity. Ecological fidelity is based on three principles: structural/compositional replication, functional success, and durability. These principles produce effective restoration, which is a necessary but not a sufficient condition of good restoration. An examination of characteristic problems that emanate from technological practices—reverse adaptation, an attention to product at the expense of process, and the separation of actions from consequences—leads directly to an expanded, inclusive framework for restoration. The results of an inclusive restoration process set up conditions necessary for restoration to achieve both ecological fidelity and harmonious human relationships within ecosystems.

2012

IUCN

Ecological Restoration for Protected Areas

Principles, Guidelines and Best Practices

Prepared by the IUCN WCPA Ecological Restoration Taskforce
Karen Keenleyside, Nigel Dudley, Stephanie Cairns, Carol Hall and Sue Stolton, Editors
Peter Valentine, Series Editor

Developing capacity for a protected planet

Best Practice Protected Area Guidelines Series No.18

WCPA Convention on Biological Diversity Parks Canada Parcs Canada SER protectedplanet

Higgs – Relationship to 3 principles of ecological fidelity: 1) structural/compositional replication; 2) functional success; 3) durability.

Keenleyside et al. – 3 Principles of Ecological Restoration in Protected Areas: Effective, Efficient, Engaging.

“Effective ecological restoration for protected areas is restoration that re-establishes and maintains protected area values.”

Guidelines for Effective Restoration in Keenleyside et al. 2012

- ‘Do no harm’ by first identifying when active restoration is the best option
- Re-establish ecosystem structure, function and composition
- Maximize the contribution of restoration actions to enhancing resilience
- Restore connectivity within and beyond the boundaries of protected areas
- Encourage and re-establish traditional cultural values and practices that contribute to the ecological, social and cultural sustainability of the protected area and its surroundings
- Use research and monitoring, including from traditional ecological knowledge, to maximize restoration success

Effectiveness in the STAPER

UNEP

CBD

Convention on Biological Diversity

Distr.
GENERAL

CBD/COP/DEC/XIII/5
10 December 2016

ORIGINAL: ENGLISH

CONFERENCE OF THE PARTIES TO THE
CONVENTION ON BIOLOGICAL DIVERSITY
Thirteenth meeting
Cancun, Mexico, 4-17 December 2016
Agenda item 10

DECISION ADOPTED BY THE CONFERENCE OF THE PARTIES TO THE CONVENTION ON BIOLOGICAL DIVERSITY

XIII/5. Ecosystem restoration: short-term action plan

The Conference of the Parties,

Recalling Article 8(f) and decisions XI/16 and XII/19,

Aware that Parties have identified ecosystem restoration needs in their national biodiversity strategies and action plans and in other national, regional and global strategies and/or plans, and that a number of ecosystem restoration activities are under way with support from various organizations and Governments, and *noting* that many degraded ecosystems are still in need of restoration,

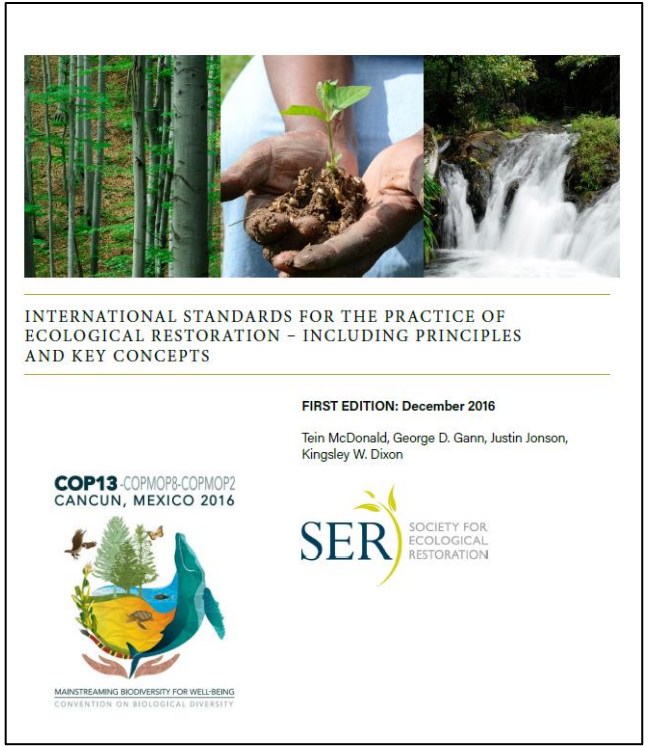
Welcoming the progress made in the implementation of the Forest Ecosystem Restoration Initiative, supported by the Korea Forest Service of the Republic of Korea,

Underlining that ecosystem restoration, when effectively implemented and coherent with other related policies, helps to achieve not only many of the Aichi Biodiversity Targets, but also several Sustainable Development Goals,[1] ecosystem-based adaptation and combating desertification, mitigating the effects of drought and supporting mitigation under the United Nations Framework Convention on Climate Change,[2] land degradation neutrality under the United Nations Convention to Combat Desertification,[3] the Sendai Framework for Disaster Risk Reduction 2015-2030,[4] the wise use of wetlands under the Ramsar Convention on Wetlands,[5] the four Global Objectives on Forests of the United Nations Forum on Forests, commitments under the Convention on the Conservation of Migratory Species of Wild

[1] See General Assembly resolution 70/1, annex.
[2] United Nations, *Treaty Series*, vol. 1771, No. 30822.
[3] Ibid., vol. 1954, No. 33480.
[4] General Assembly resolution 69/283, annex II.
[5] Ibid., vol. 996, No. 14583.

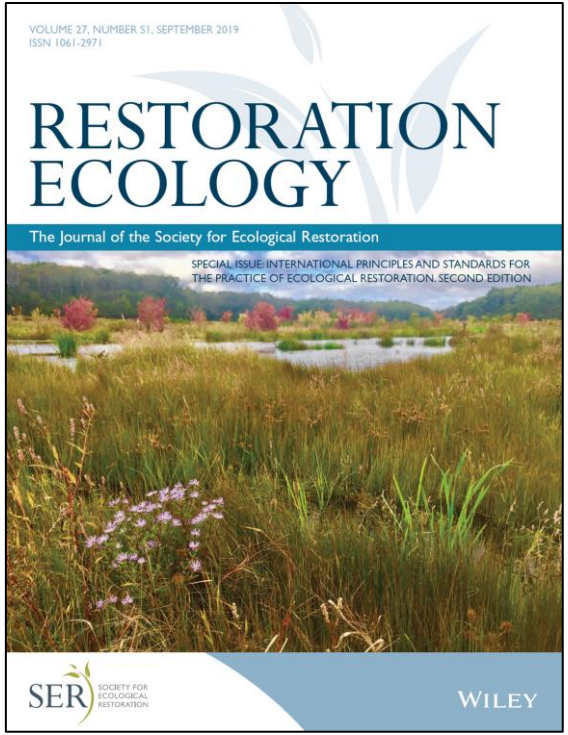
- Effective implementation helps achieve global goals and targets
- Encourages the full and effective participation of indigenous and local communities at all stages of restoration
- Calls for improved effectiveness of restoration programmes through capacity-building, training, and technology transfer
- Calls for identification of cost-effective implementation measures
- Calls for implementation in the most cost-effective and coordinated manner possible
- Describes some attributes of effective restoration monitoring, and suggests that remote sensing may also be a cost-effective monitoring technique in some ecosystems

Effectiveness in SER Standards for Ecologial Restoration



Linked to 3 Keenleyside Principles

19 mentions

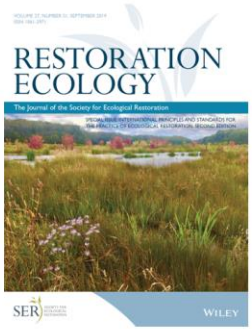


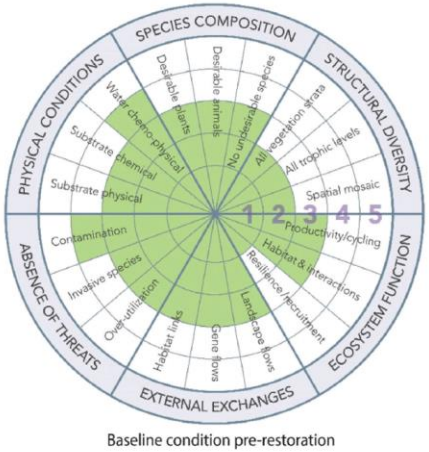
Eight Principles defined

27 mentions

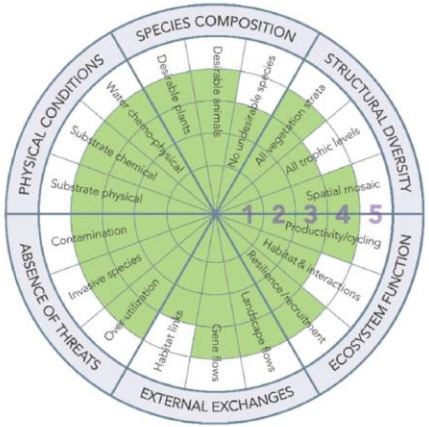

Eight Principles Underpinning Ecological Restoration
1 ENGAGES STAKEHOLDERS
2 DRAWS ON MANY TYPES OF KNOWLEDGE
3 IS INFORMED BY NATIVE REFERENCE ECOSYSTEMS, WHILE CONSIDERING ENVIRONMENTAL CHANGE
4 SUPPORTS ECOSYSTEM RECOVERY PROCESSES
5 IS ASSESSED AGAINST CLEAR GOALS AND OBJECTIVES USING MEASURABLE INDICATORS
6 SEEKS THE HIGHEST LEVEL OF RECOVERY POSSIBLE
7 GAINS CUMULATIVE VALUE WHEN APPLIED AT LARGE SCALES
8 IS PART OF A CONTINUUM OF RESTORATIVE ACTIVITIES
SER
SOCIETY FOR ECOLOGICAL RESTORATION

SER Tools used in Global Biodiversity Standard



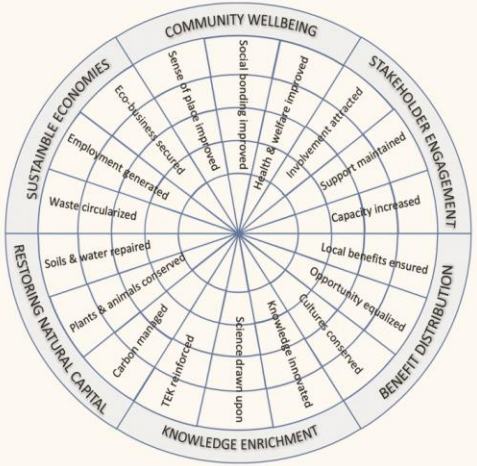


Baseline condition pre-restoration



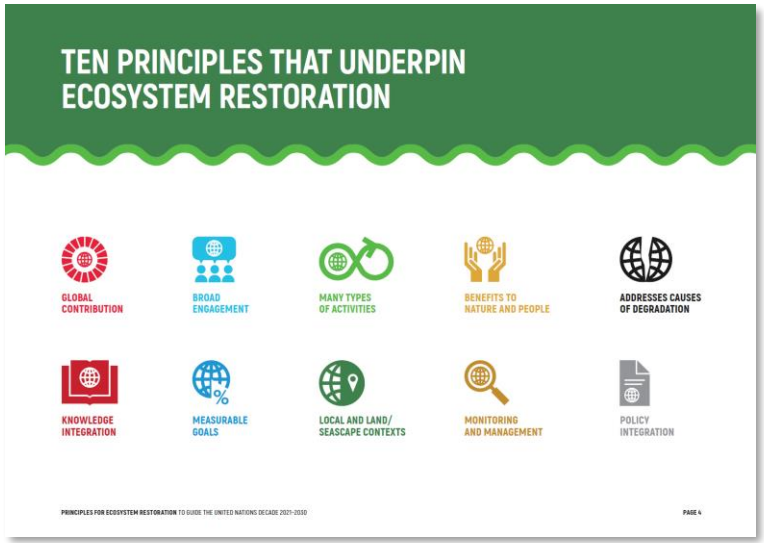
10-years post-treatment

5-star System and Ecological Recovery Wheel

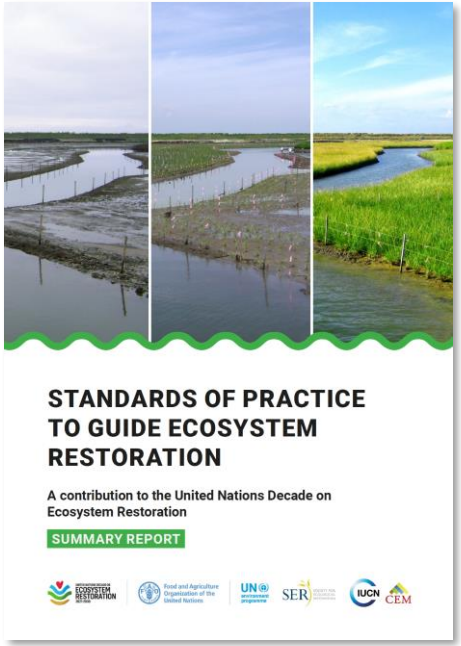


Social Benefits Wheel

Effectiveness in UN Decade on Ecosystem Restoration

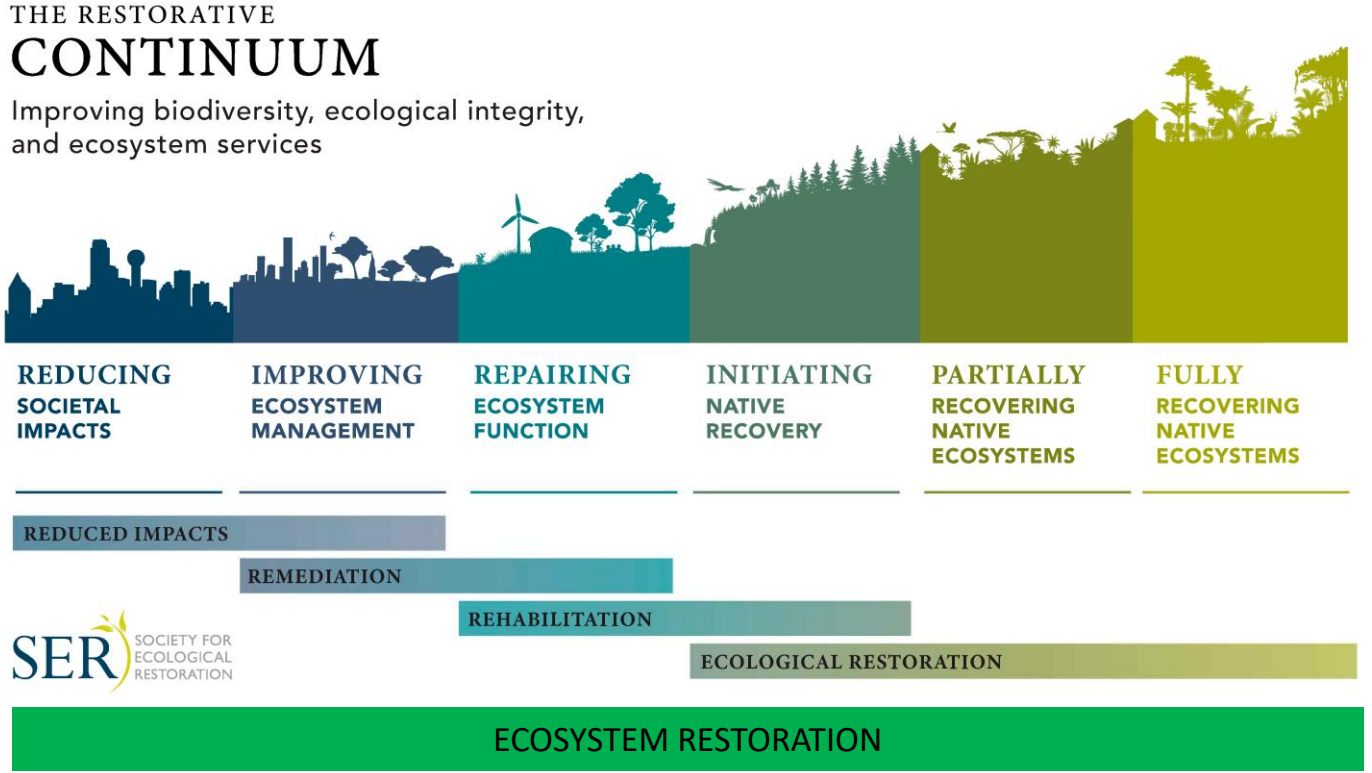


10 Principles
9 mentions



Near Final Draft
5 components
45 subcomponents
65 mentions

“Under Effective Restoration” – Across the Continuum of Types and Activities

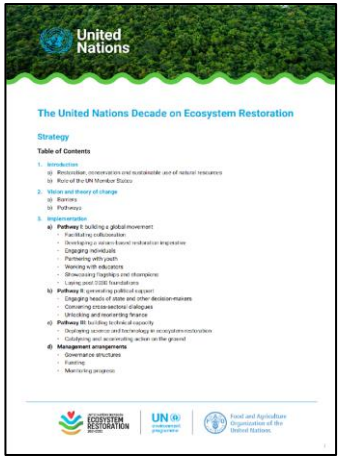


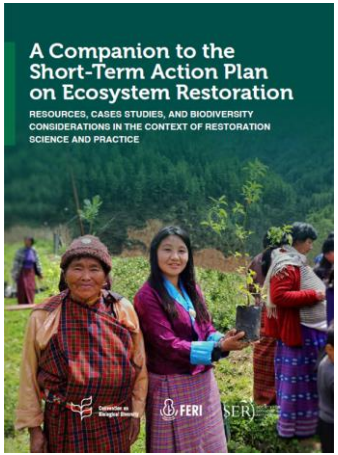
Potential Components in Definition of Effective Restoration

Effective Restoration is Standards-based Restoration, which is underpinned by agreed Principles.

- It addresses both process and outcomes
- It addresses values of both nature and people
- It addresses the concept of net gain, and avoidance of collateral damage whether onsite or off
- It addresses the concept of achieving multiple benefits for GBF T2 (biodiversity, ecosystem services, connectivity, resilience) while acknowledging that different types of restoration accomplish different things
- It is assessed against clear goals and objectives using measurable indicators
- It encourages the development and use of appropriate standards for specific restoration types (e.g., ecological restoration), sectors (e.g., mining), major biomes (e.g., marine), or precise circumstances (e.g., IUCN Red-listed ecosystem)

High-Level Guidance Increasing to Help





- There is a growing body of guidance to support restoration at the national level
- Using agreed principles and standards can improve restoration outcomes and reduce uncertainly
- Technical support is key to assist parties in translating commitments into restoration plans

International Forum facilitated by the Forest Ecosystem Restoration Initiative:

Workshop on ecosystem restoration-related planning and capacity-building needs for the implementation of the Kunming-Montreal Global Biodiversity Framework

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2020 UN BIODIVERSITY CONFERENCE
COP 15 - CP/MOP10 - NP/MOP4
Ecological Civilization-Building a Shared Future for All Life on Earth
KUNMING – MONTREAL

UN environment programme

Convention on Biological Diversity

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WePlan – Forests: A decision support platform for spatial planning of forest ecosystem restoration

INSTITUTE FOR CAPACITY EXCHANGE IN ENVIRONMENTAL DECISIONS

WePlan FORESTS

CONABIO

Convention on Biological Diversity

Korea Forest Service

FERI

INSTITUTE FOR CAPACITY EXCHANGE IN ENVIRONMENTAL DECISIONS

CONABIO

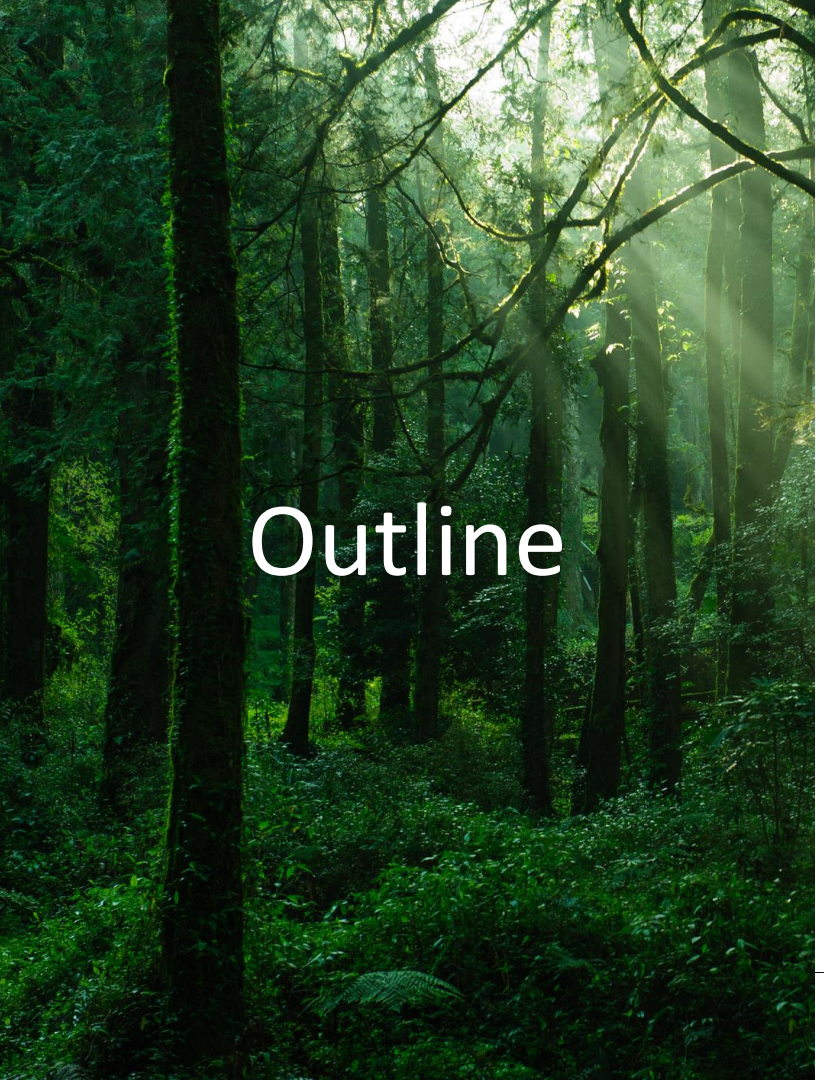
Robin Chazdon

Institute for Capacity Exchange in Environmental Decisions

Forestoration International

Wolke Tobón

Comisión Nacional para el Conocimiento y Uso de la Biodiversidad (Conabio)

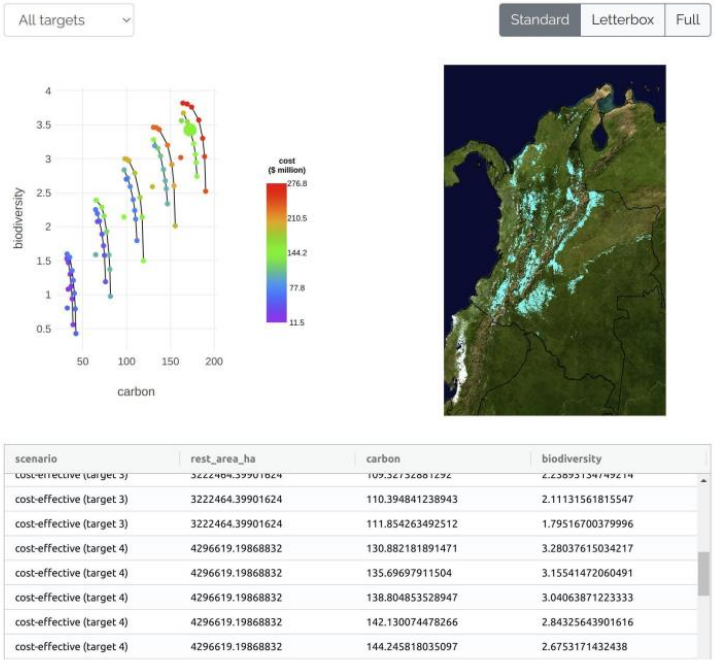


Outline

- Introduction to WePlan-Forests
- Mexico case study and application

WePlan – Forests

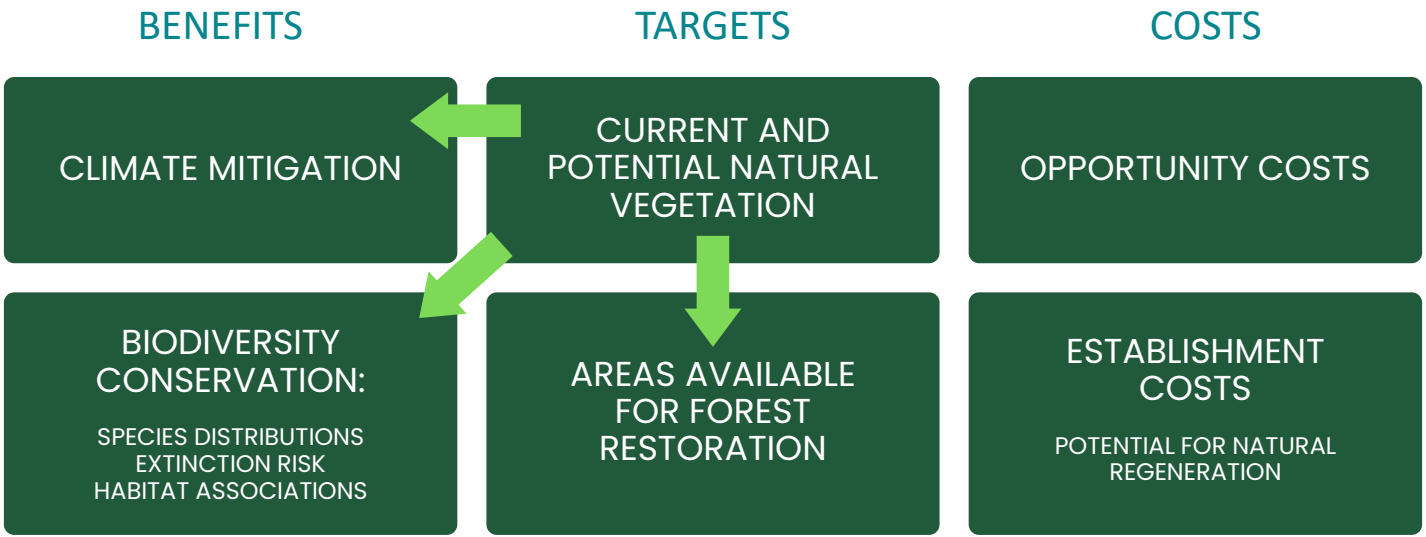
- Decision support platform
- Maximise restoration benefits for biodiversity and climate change mitigation while minimising costs.
- User-friendly web-based interface
- No spatial modelling or optimization expertise needed
- Results presented in an interactive web interface and as a PDF report (detailed information)



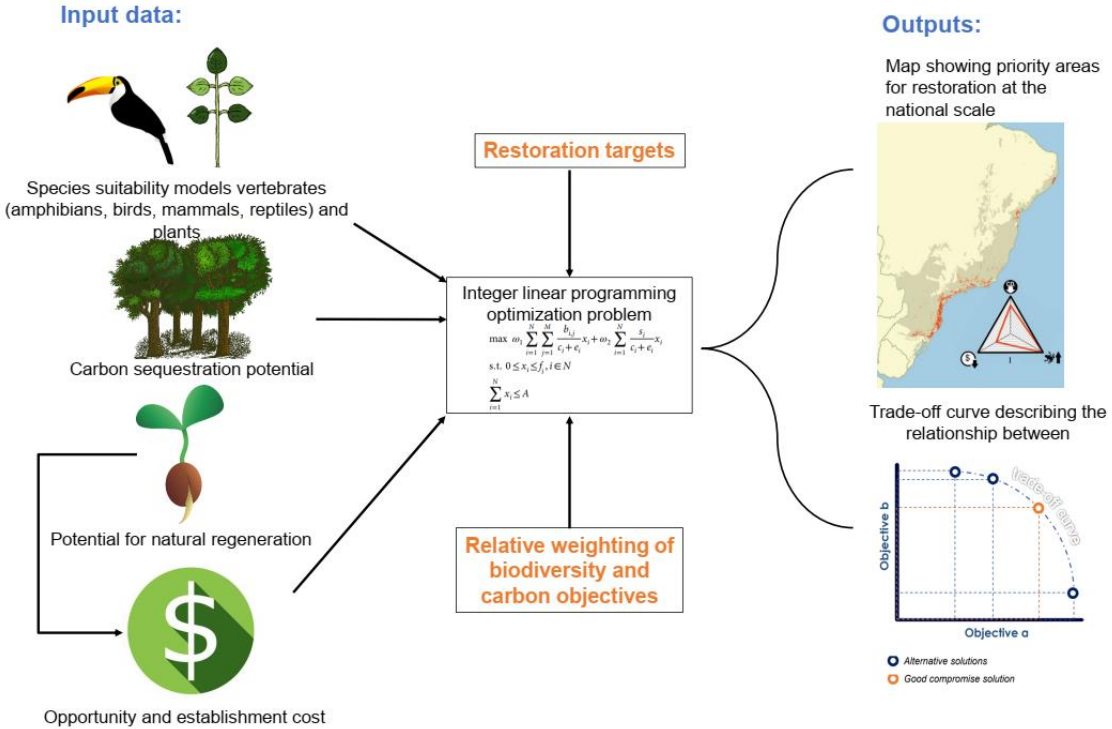
scenario	rest_area_ha	carbon	biodiversity
cost-effective (target 3)	3222464.39901624	110.394841238943	2.11131561815547
cost-effective (target 3)	3222464.39901624	111.854263492512	1.79516700379996
cost-effective (target 4)	4296619.19868832	130.882181891471	3.28037615034217
cost-effective (target 4)	4296619.19868832	135.69697911504	3.15541472060491
cost-effective (target 4)	4296619.19868832	138.804853528947	3.04063871223333
cost-effective (target 4)	4296619.19868832	142.130074478266	2.84325643901616
cost-effective (target 4)	4296619.19868832	144.245818035097	2.6753171432438

http://weplan-forests.org

WePlan – Forests modelling framework



Opitimisation framework



The framework is flexible and can be adapted to consider different benefits and constraints, at scales other than national, as long as proper data is available.

WePlan-Forests Mexico

Mexico's restoration interests regard biodiversity conservation, climate change mitigation, and livelihood improvements.

Restoration targets

Initiative 20x20: 8.5M ha target

Aichi Target 15: restoration of 15% of degraded areas

Kunming-Montreal Global Biodiversity Framework: restoration of 30% of degraded terrestrial ecosystems by 2030

WePlan-Forests Mexico

ICEED assessment

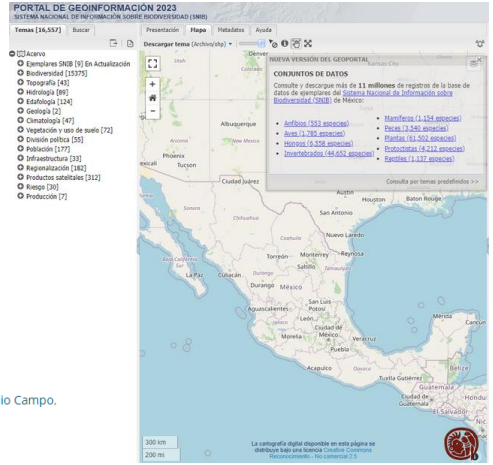
- well-developed restoration, biodiversity and climate change policies and regulations
- extensive experience with systematic planning and use of decision-support tools
- data availability
- high technical and technological capacity, including access to a high-performance computer
- restoration assessment and prioritisation previously assessed (IUCN and WRI 2014, Tobón et al. 2017)

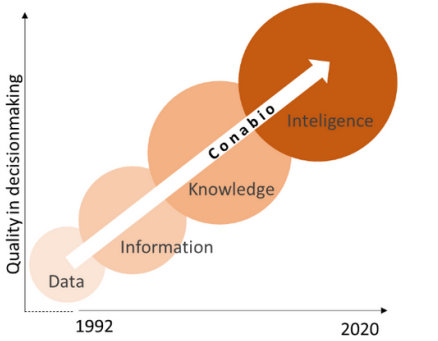
Conservation Biology / Volume 31, Issue 5 / p. 1086-1097
Contributed Paper | Open Access

Restoration planning to guide Aichi targets in a megadiverse country

Wolke Tobón, Tania Urquiza-Haas, Patricia Koleff, Matthias Schröter, Rubén Ortega-Álvarez, Julio Campo, Roberto Lindig-Cisneros, José Sarukhán, Aletta Bonn

First published: 24 February 2017
https://doi.org/10.1111/cobi.12918



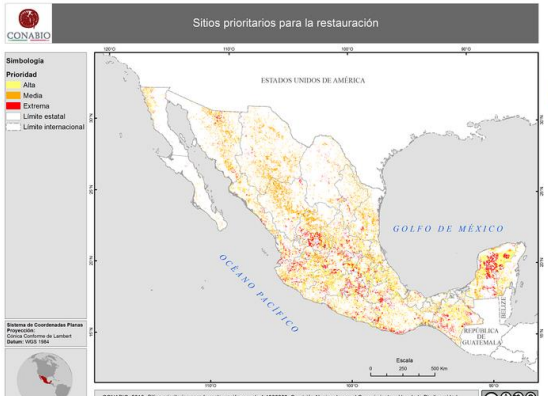


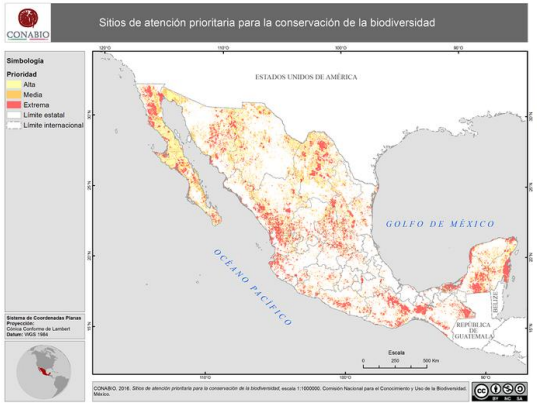
Academy
Stakeholders, decision makers
Society
Users

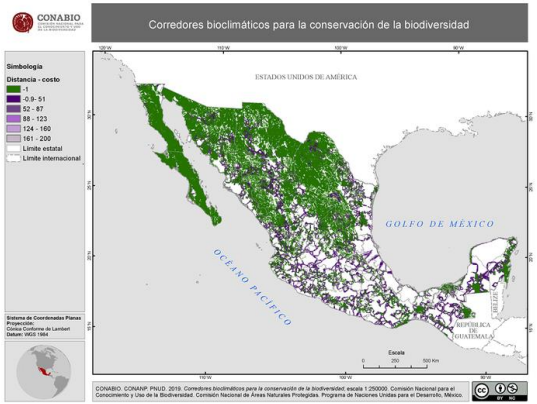
WePlan-Forests Mexico

National planning products

- > 3,500 biodiversity surrogates (species and ecosystems)
- systematic conservation planning concepts (e.g. representativeness, irreplaceability, threats), and tools (multicriteria analysis and optimization algorithms)
- priority sites for biodiversity conservation and ecosystem restoration
- bioclimatic corridors to address connectivity planning under climate change

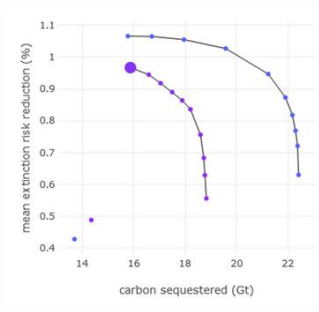


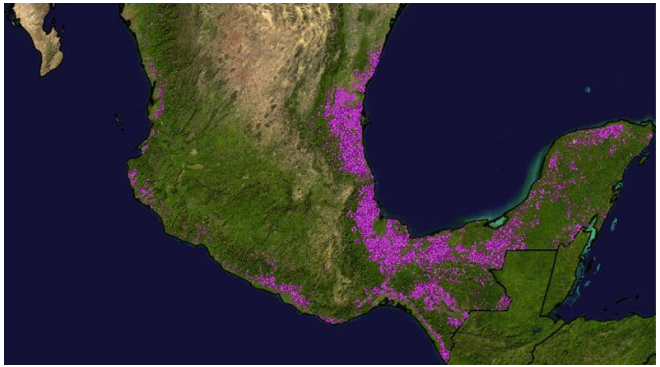




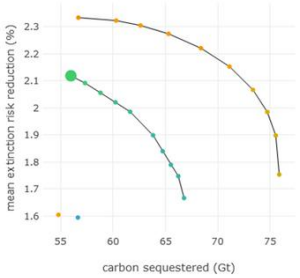
WePlan-Forests Mexico

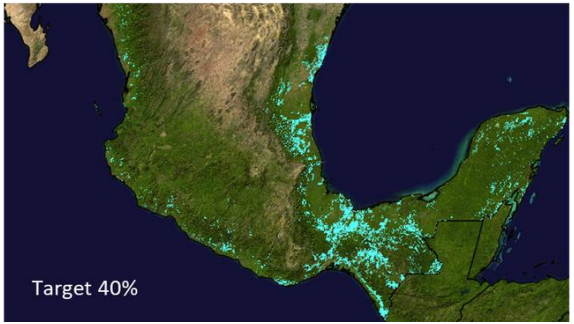
80 solutions for restoration in Mexico, considering:
5 different target levels (10%, 20%, 30%, 40% and 50% of the area available for restoration), and
4 different scenarios (minimum cost, cost-effective maximum benefit, and random)



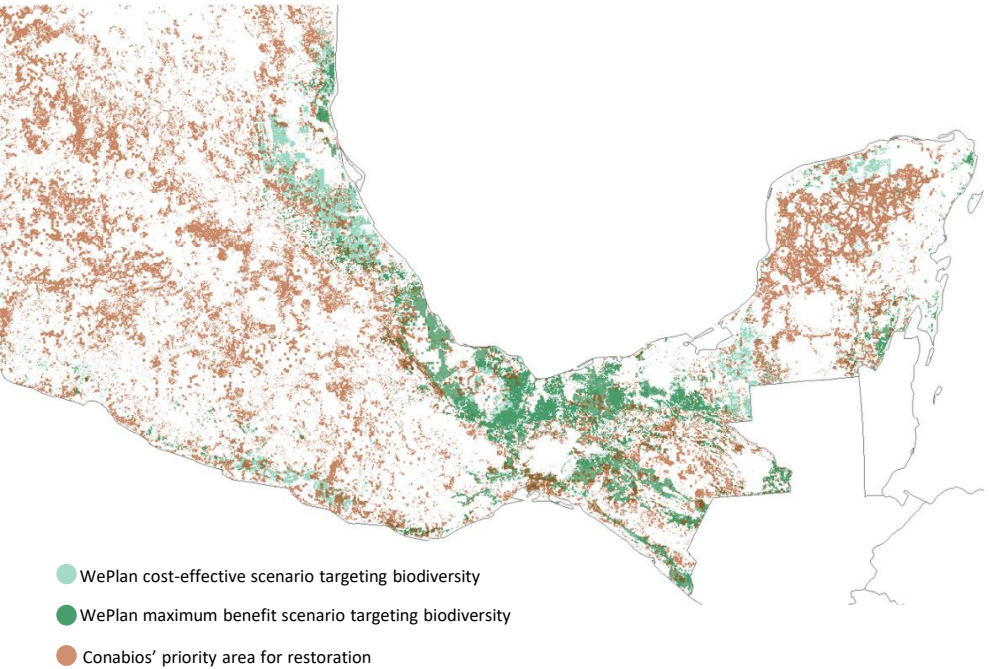


Total area available for forest restoration = 9.1 M ha





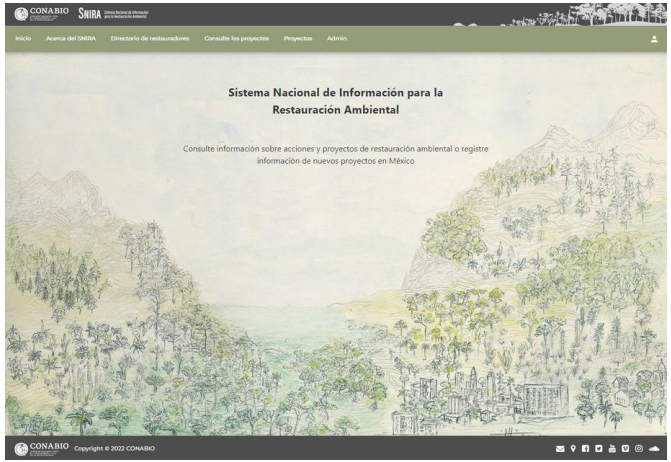
WePlan-Forests Mexico



How can WePlan-Forests be used to assist Mexico's restoration planning?

- Generate restoration scenarios to complement existing ones.
- Be customized to incorporate national-level data, other types of ecosystems and social-ecological trade-offs.
- Include data on restoration costs to reduce the cost of achieving restoration targets.
- Discuss planning and implementation with stakeholders and evaluating alternative scenarios trade-offs (benefits and costs).

WePlan-Forests Mexico



National Information System on Environmental Restoration (Sistema Nacional de Información para la Restauración Ambiental) - launch planned for end of 2023

- integrates and synthesizes information related to restoration initiatives and programs in Mexico
- includes wide continuum of practices in terrestrial, freshwater and marine ecosystems and environments
- highlights restoration initiatives for biodiversity conservation and community participation
- designed to inform future restoration projects and catalyze restoration action based on scientific evidence

WePlan
FORESTS

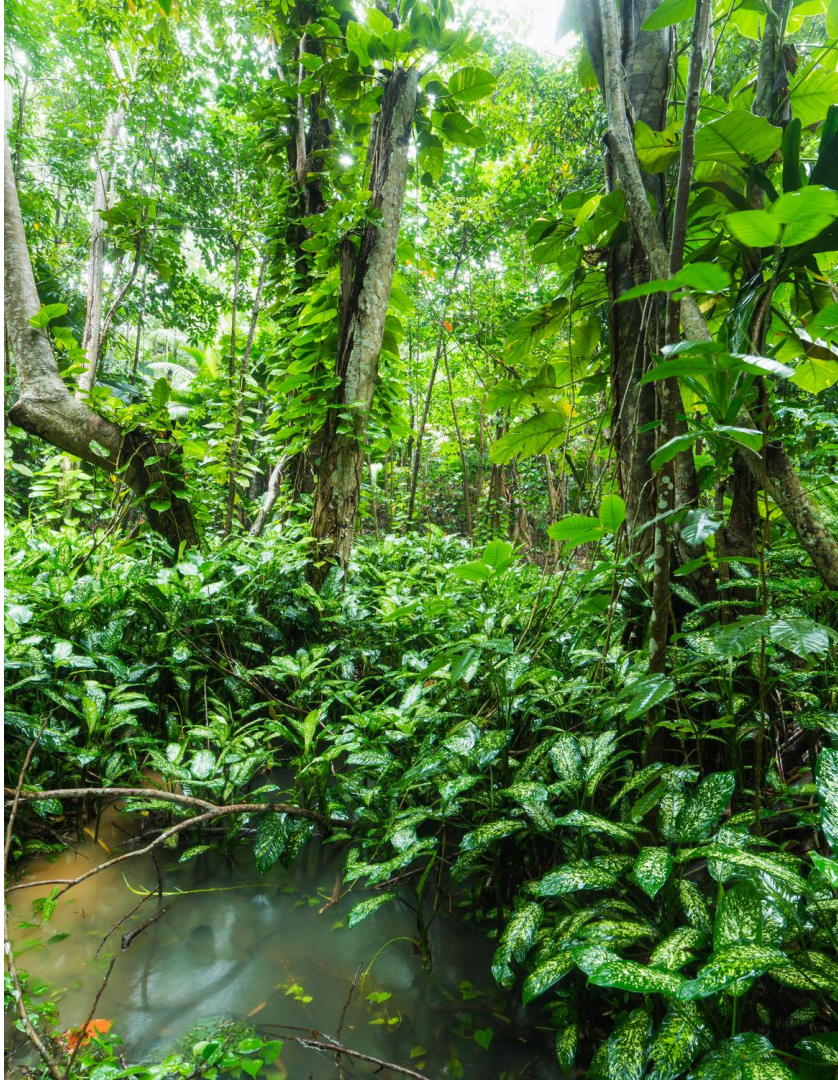
Contact

Website

iceed.au
contact@iceed.au

Social media

@iceed
@iceed_au
@iceed
@iceed_au
@iceed_au



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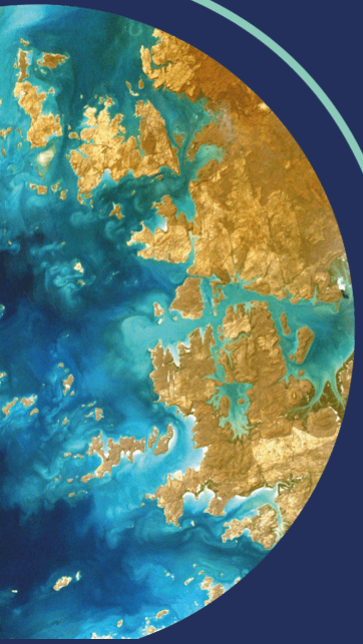


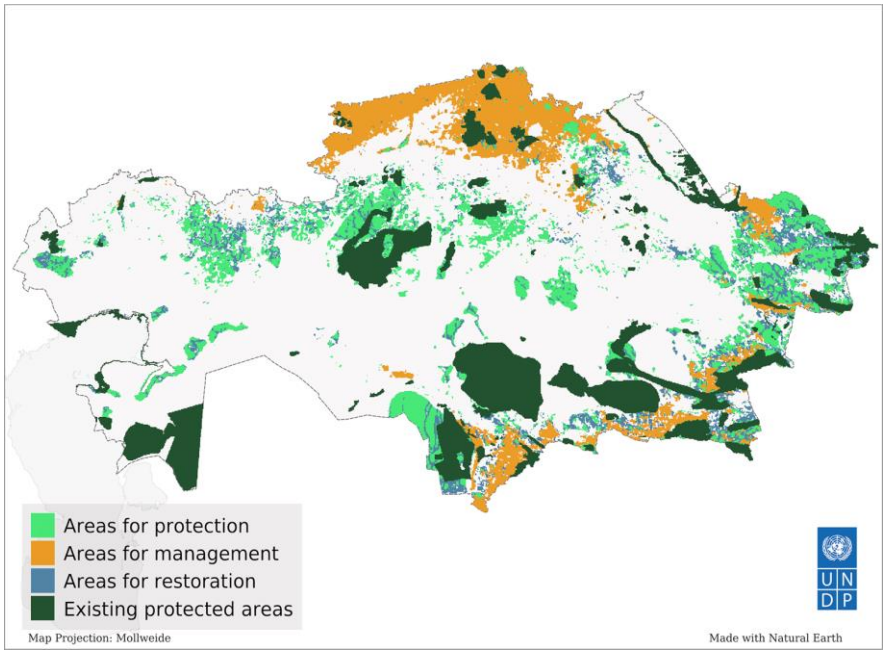
Restoring hope project

Enrique Paniagua
Senior Policy Expert
Global Program on Nature for Development
UNDP

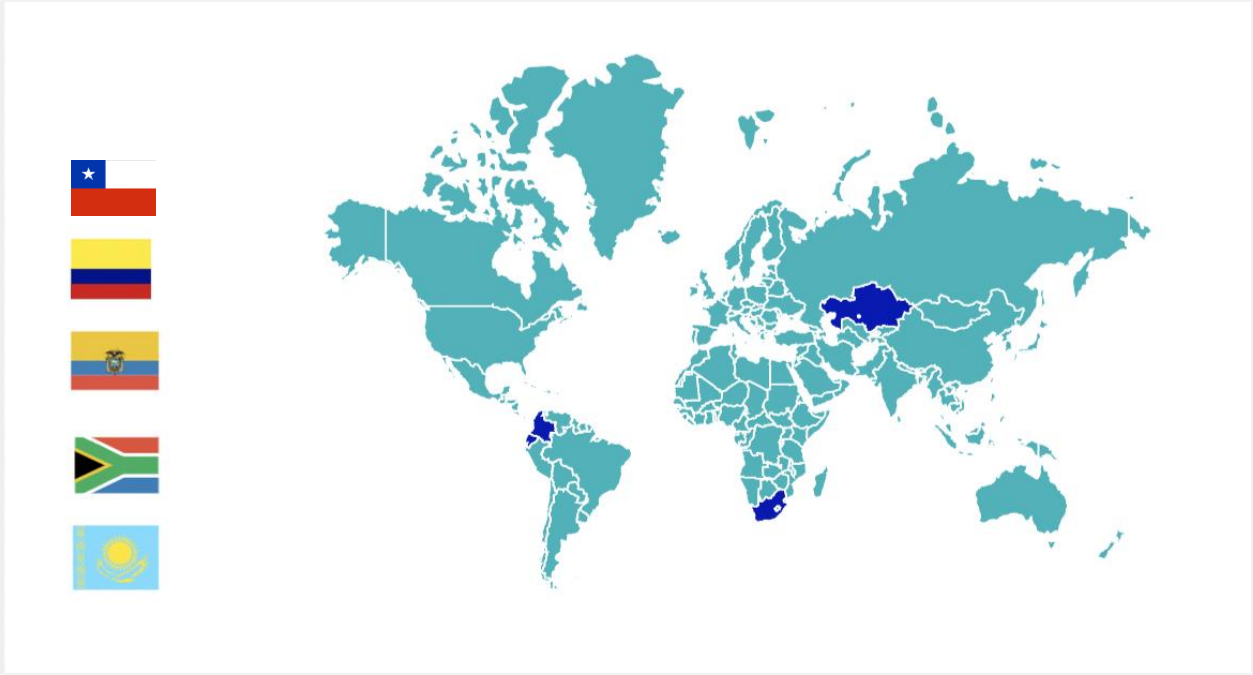
Introduction

- Convention on Biological Diversity - CBD
- Global Biodiversity Framework - Target 2
- Objective: to help countries optimize their restoration targets through geospatial information and public policy analysis.
- Collaboration with Convention to Combat Desertification - UNCCD

Essential Life Support Areas Maps
ELSA Maps



Pilot countries



Project's components

Synthesis of restoration approaches

Review and analyze international and national approaches for ecosystem restoration and land degradation neutrality

National consultation process

Facilitate dialogue between national stakeholders to obtain feedback and motivate stakeholders to define co-created restoration priorities

National restoration dossiers

The dossiers will provide: (a) national overview on restoration approaches and challenges, (b) a policy analysis around restoration, and (c) key geospatial information for restoration actions

Restoration approaches

1. Governance & challenges

#	Regulatory framework	Item	Approach
1	Constitution of the Republic of Kazakhstan	Article 31	Ecosystem approach, precautionary principle
2	Convention on Biological Diversity	Articles 6, 8, 9	Ecosystem approach
3	Convention on International Trade in Endangered Species of Wild Flora and Fauna	Articles 2-5	Polluter pays principle
4	Ramsar Convention on Wetlands of International Importance, Especially as Waterfowl Habitat	Articles 2-6, 8	Ecosystem approach
5	Convention on the Conservation of Migratory Species of Wild Animals	Articles 2, 4-6	Ecosystem approach

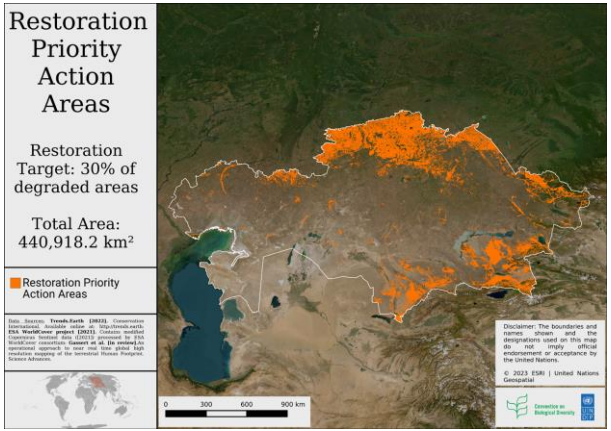
2. Policy priorities

Republic of Kazakhstan
Ministry of Agriculture

National Land Degradation Neutrality Targets

Astana, Kazakhstan
2017

3. Indicators, metrics and methods



4. Engagement with national autorities...

Policy priorities

1. Land Degradation Neutrality Voluntary Targets 2018 (LDN Targets)
2. First National Determined Contribution 2016 (NDC)
3. Bonn Challenge
4. The strategic plan of the Ministry of Ecology, Geology and Natural Resources of the Republic of Kazakhstan for 2017 - 2021
5. Strategic plan Ministry of Energy of the Republic of Kazakhstan for 2017 -
6. 2021 years
7. The Concept of Conservation and Sustainable Use of Biological Diversity in the Republic of Kazakhstan until 2030
8. On approval of the Predictive scheme of spatial development of the country until 2030
9. Concept for the transition of the Republic of Kazakhstan to the "green economy", 2013
10. The strategic development plan of the Republic of Kazakhstan until 2025, dated February 15, 2018 No. 636

Policy	Targets
LDN Targets	The country aims to achieve a neutral balance of land degradation by 2030: • Restoration of 610 thousand hectares of irrigated land. • Restoration of collector-drainage systems. • Restoration of estuary irrigation lands with a total area of 368 ths. Ha. • Soil surveys on an area of 33 mln. Ha of agricultural land. • Geobotanical surveys on an area of 33 mln. Ha of pasture lands. • soil quality surveys on agricultural land of 30 mln. Ha.
NDC	Kazakhstan pledged to restore at least up to 1.5 million ha of degraded land through afforestation and reforestation until 2030
Bonn Challenge	1,500,000 ha (0.56%) restored land by 2030
National Action Plan for the implementation of the Address of the Head of State to the people of Kazakhstan dated September 1, 2020 "Kazakhstan in a new reality: time for action"	It aims to ensure planting of more than 2 billion trees in the forest fund and 15 million in settlements within five years (contributing to with Boon Challenge)

Comprehensive spatial data - indicators

UNCBD GBF			
Target	**Indicator name**	**Adopted/proposed**	**Metrics/proxies**
Target 2. Ensure that by 2030 at least 30 per cent of areas of degraded terrestrial, inland water, and coastal and marine ecosystems are under effective restoration, in order to enhance biodiversity and ecosystem functions and services, ecological integrity and connectivity.	Area under restoration (headline indicator)	Headline Indicator adopted in decision 15.5/COP.15	Global Ecosystem Restoration Index
	Extent of natural ecosystems by type (component indicator)	Indicator adopted in decision 15.5/COP.15	Status of Key Biodiversity Areas Biodiversity Habitat Index
	Maintenance and restoration of connectivity of natural ecosystems (component indicator)	Indicator adopted in decision 15.5/COP.15	Index of Species Rarity Sites, High Biodiversity Areas, Large Mammal Landscapes, Intact Wilderness and Climate Stabilization Areas Forest Landscape Integrity Index

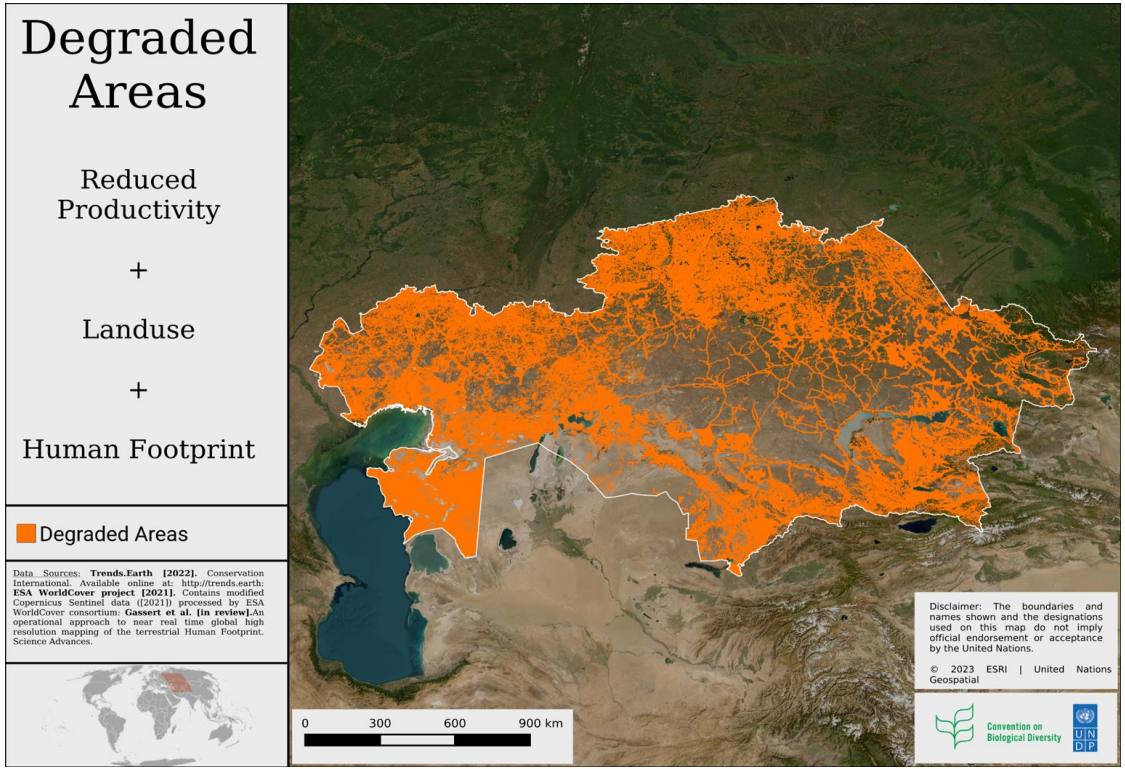
PRIAS4			
Objective	**Indicator name**	**Metrics/proxies**	**Adopted/proposed**
SO 1: To improve the condition of affected ecosystems, combat desertification/land degradation, promote sustainable land management and contribute to land degradation neutrality;	Trends in land cover	Land use	Indicator adopted in decision 7/COP.13
	Trends in land productivity or functioning of the land	Land use change	Indicator adopted in decision 7/COP.13
	Trends in carbon stocks above and below ground	Soil organic carbon stock	Indicator adopted in decision 7/COP.13
	Proportion of land that is degraded over total land area	-	Background for indicator adopted in decision 9/COP.13

Also national indicators...

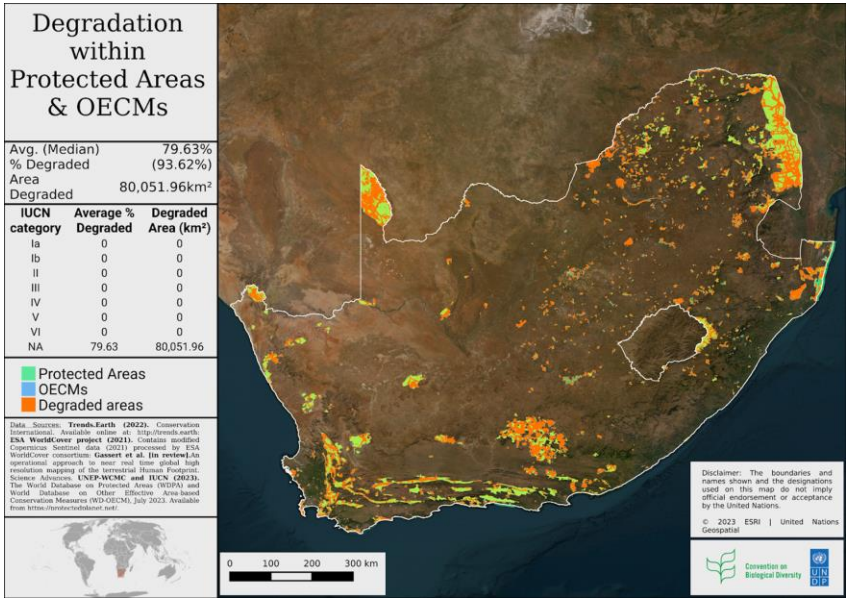
Comprehensive spatial data – metrics & data stacks

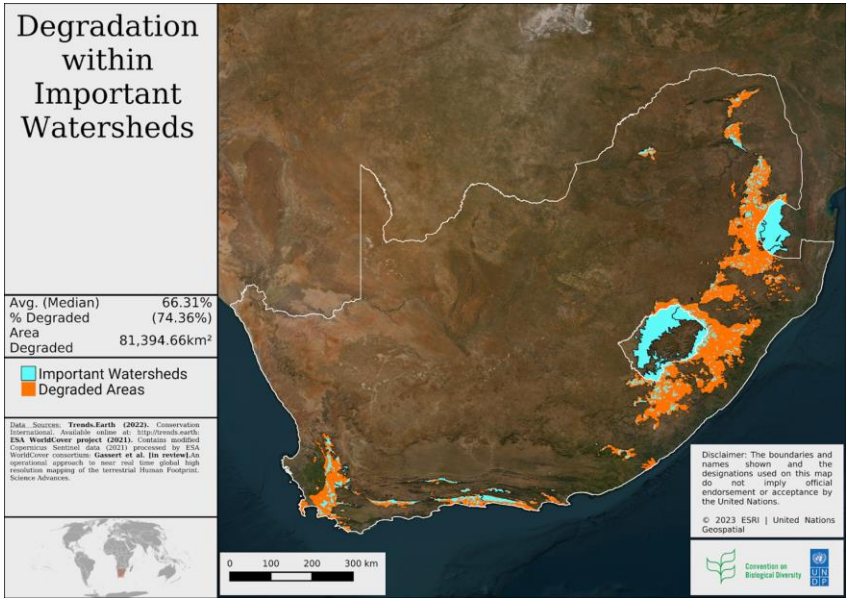
Basemap							
Planning Unit		buffered 1 pixel out to cover more mangroves					
Features	Native forest in	land cover 2018		Biodiversity	Native forest	Biodiversidad	Bosque nativo
Features	Distribution of	combined mainland and Galap		Biodiversity	Mangroves	Biodiversidad	Manglares
Features				Biodiversity	Paramos	Biodiversidad	Páramos
Features	Wetlands of international importance declare			Biodiversity	RAMSAR	Biodiversidad	RAMSAR
Features	Priority conservation areas: Identification of p Restoration agreement: Lands with restoratior			Biodiversity	Forest restorati	Biodiversidad	Tierras priorita
Features	Capacity of the land to be exploited under a ca			Biodiversity	Capacity of lan	Biodiversidad	Capacidad del l
Features	Priority biodiversity areas in Ecuador			Biodiversity	Priority biodive	Biodiversidad	Áreas prioritari
Features	Key Biodiversity Area (Key Biodiversity Area). i			Biodiversity	KBAs	Biodiversidad	ACB
Features	Conservation gaps in the national protected ar			Biodiversity	Conservation g	Biodiversidad	Brechas de con
Features	Areas of Ecuador representative of terrestrial			Biodiversity	Biosphere rese	Biodiversidad	Reservas de bic
Features	Areas of presence and absence of birds in Ecu			Biodiversity	Birds species ri	Biodiversidad	Riqueza de esp
Features	Ecosystems: Vegetation communities connecti			Biodiversity	Vegetation con	Biodiversidad	Conectividad d
Features				Biodiversity	Vulnerable agri	Biodiversidad	Friontier agríco
Features	Walker et al. defined NCS opportunity (500m)			Climate Change	Carbon deficit	Mitigación del cambio	Carbono de bic
Features	Carbon found in the form of slightly altered or			Climate Change	Soil organic car	Mitigación del	Carbono orgán
Features	Areas susceptible to desertification threats at			Climate Change	Susceptibility t	Mitigación del	Susceptibilidad

First results: Ecosystem degradation maps

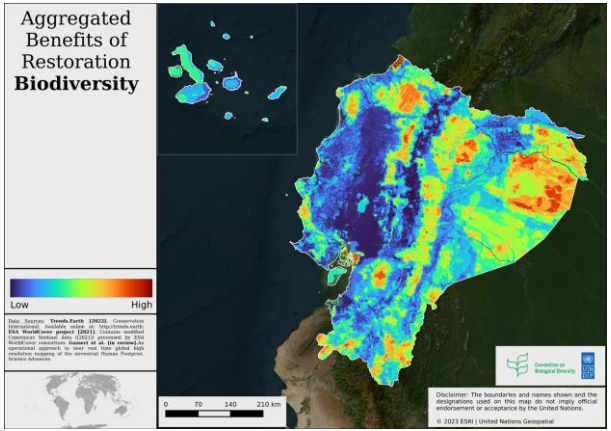


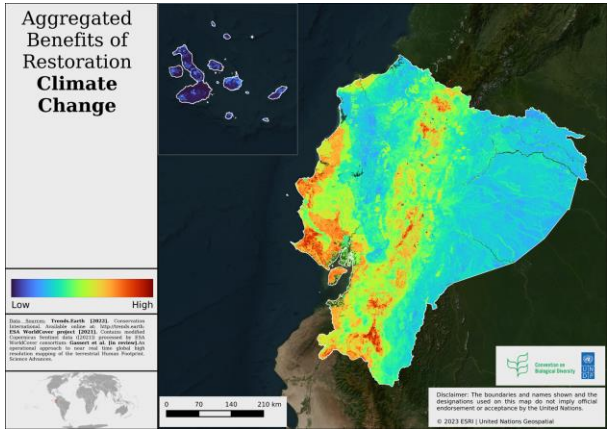
First results: Degradation in PA and Watersheds

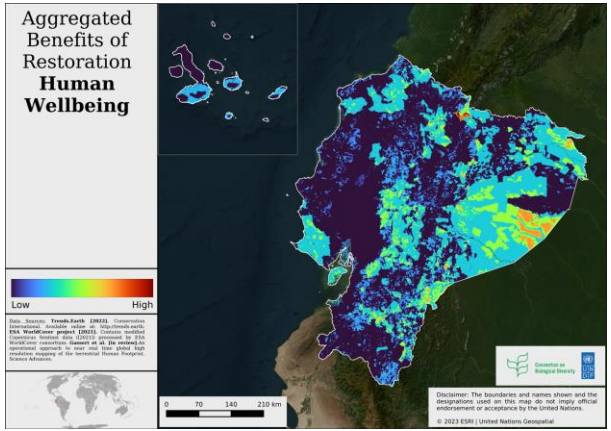




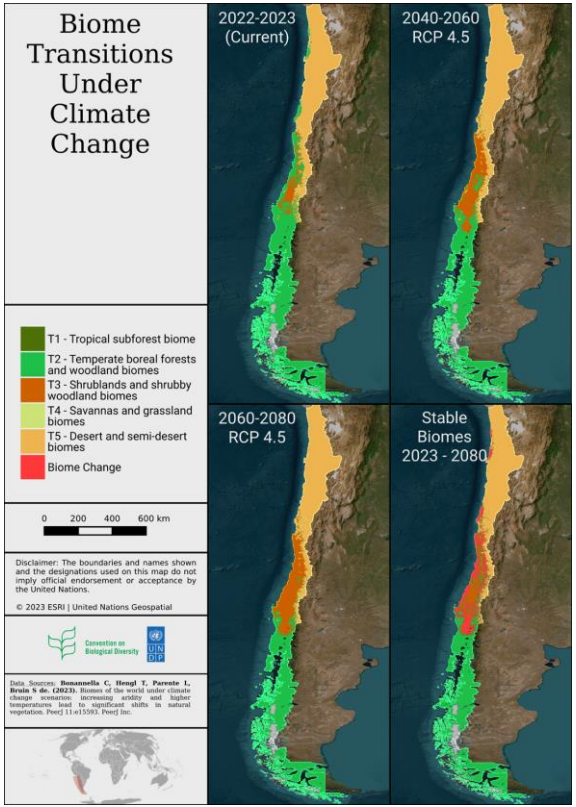
First results: potential benefits



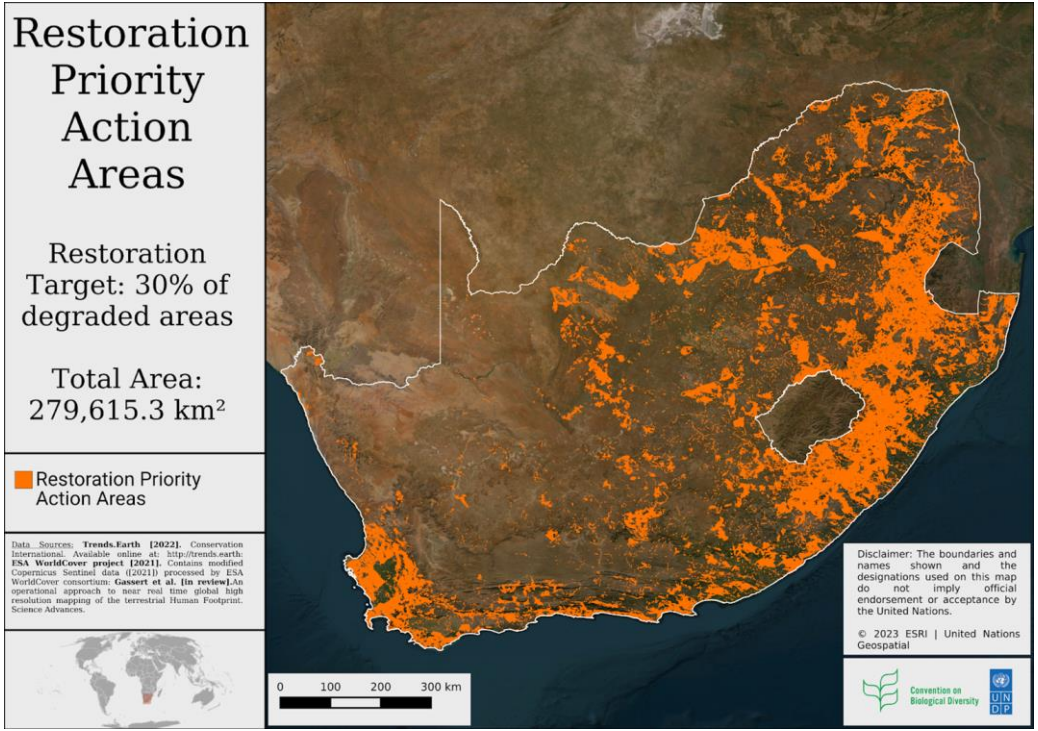




First results: Climate change & degradation



First results: Restoration priority areas



Draft ecosystem restoration dossier

1. Overview of Ecosystem Restoration :
   - Ecosystem restoration governance
   - Challenges of ecosystem restoration
   - Public policy priorities

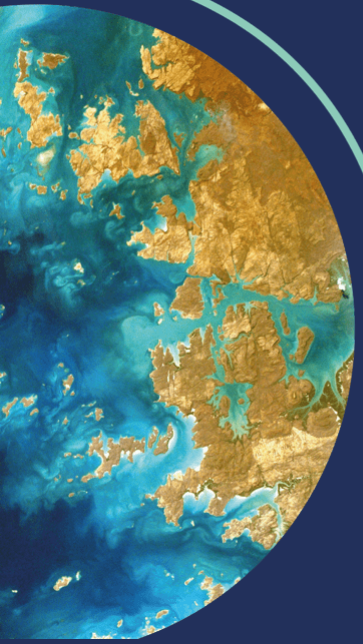
1. Mapping hope: spatial data for ecosystem restoration
   - Current state
   - Opportunities for restoration
   - Potential benefits
   - Climate change and restoration
   - Restoration priorities

Next steps


National consultation 1
National consultation 2
Integrate feedback

Convention on Biological Diversity

UNDP



Thanks!

enrique.paniagua@undp.org

International Forum facilitated by the Forest Ecosystem Restoration Initiative:

Workshop on ecosystem restoration-related planning and capacity-building needs for the implementation of the Kunming-Montreal Global Biodiversity Framework

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12 September, 10 am - 12 pm EDT

2020 UN BIODIVERSITY CONFERENCE
COP 15 - CP/MOP10 - NP/MOP4
Ecological Civilization-Building a Shared Future for All Life on Earth
KUNMING – MONTREAL

UN environment programme

Convention on Biological Diversity

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