

FAO E-LEARNING ACADEMY: MONITORING FOREST AND LANDSCAPE RESTORATION

Dr. René Zamora Cristales

Monitoring and sustainable financing for forest landscape restoration



WORLD
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Food and Agriculture
Organization of the
United Nations

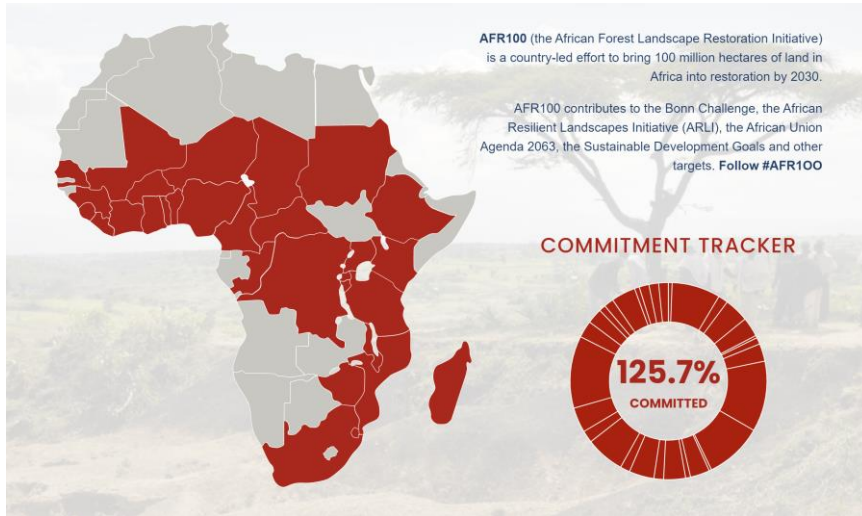


FAO eLearning
ACADEMY



UNITED NATIONS DECADE ON
**ECOSYSTEM
RESTORATION**
2021-2030

UN Decade, Bonn Challenge and Regional Initiatives

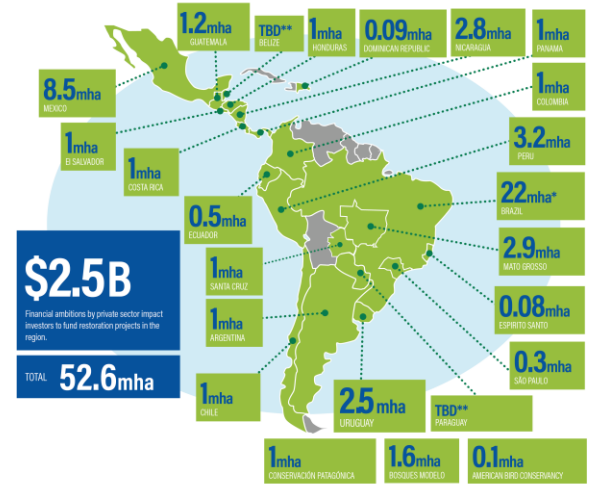


Initiative 20x20

Beginning to protect and restore 50 million hectares of land in Latin America & the Caribbean by 2030.

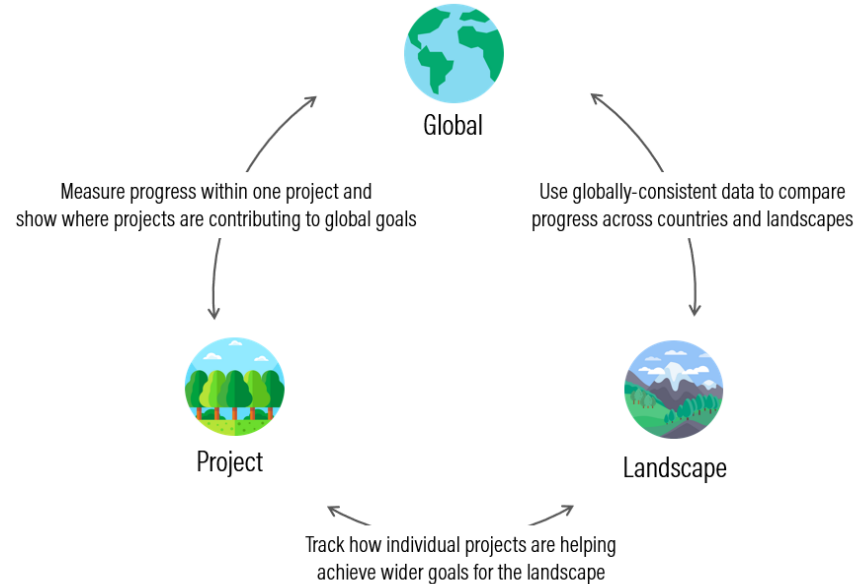
COMMITMENTS
52.6 M ha by governments
\$2.5 B of private sector capital

Notes:
*Goals to be accomplished by 2030
**Commitment to define a national restoration strategy



Different scales of Restoration monitoring

Three Scales, One Vision: Monitoring Forest and Landscape Restoration



E-learning course



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Monitoring forest and landscape restoration



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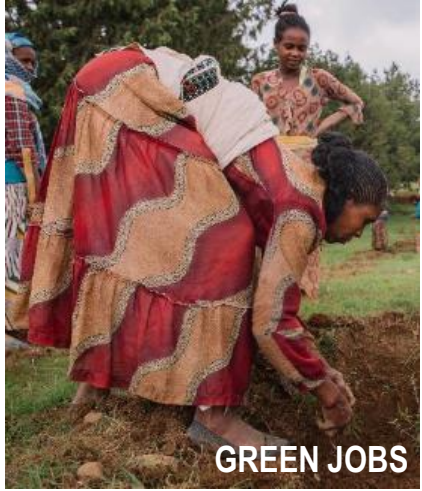


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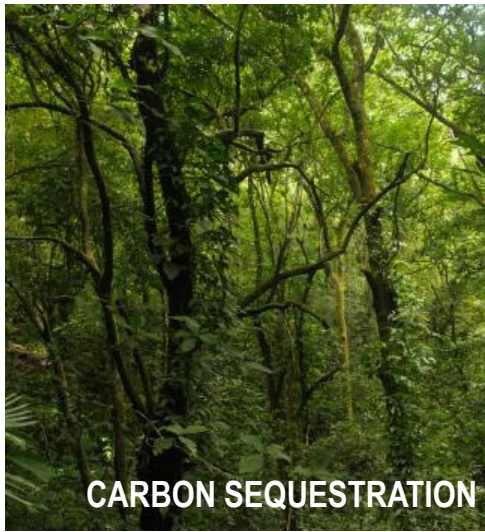


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Why restore?



GREEN JOBS



CARBON SEQUESTRATION



CLEAN WATER



LANDSLIDE PROTECTION



ECOTOURISM



FOOD SECURITY



RESILIENCE



INCOME



NUTRITION

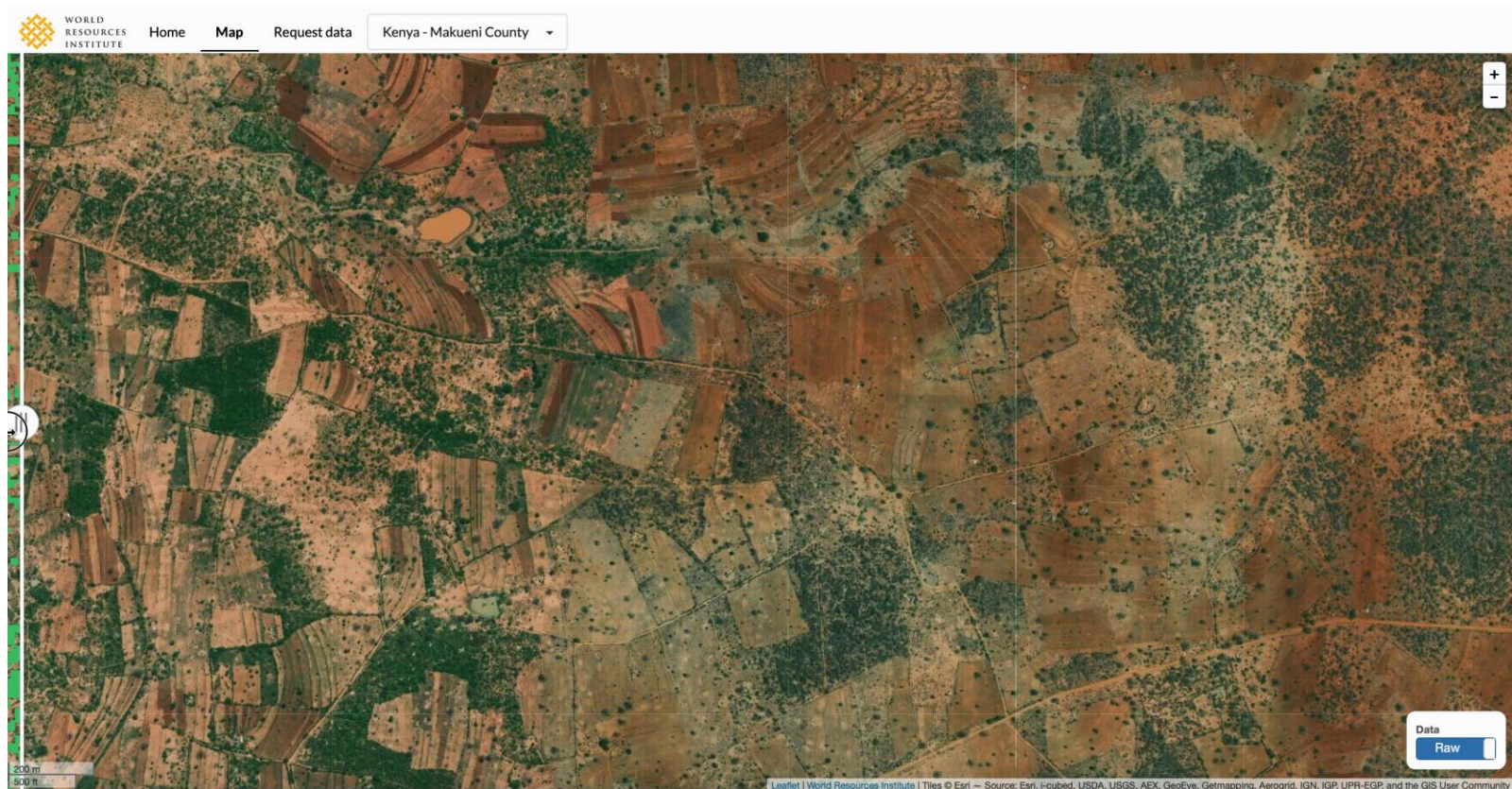


FUELWOOD

Restore into what?



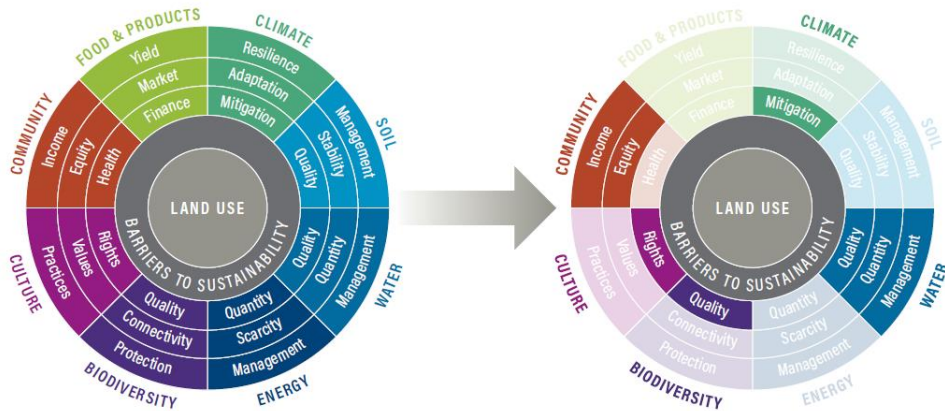
Monitoring beyond biophysical aspects



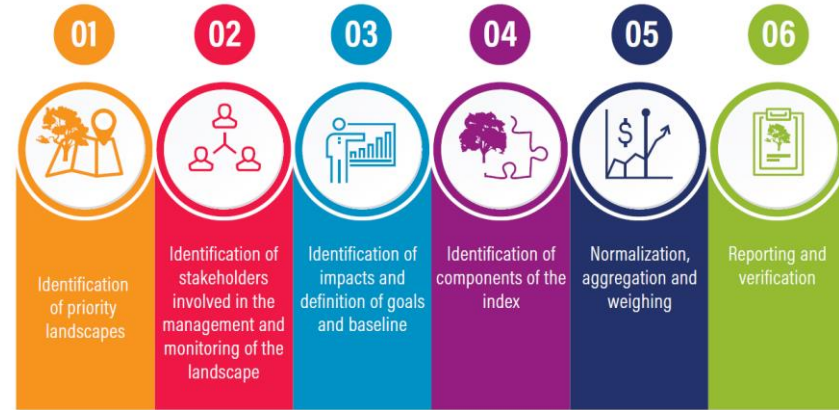
Land Use Categories



A Roadmap for Monitoring



Source: Authors.



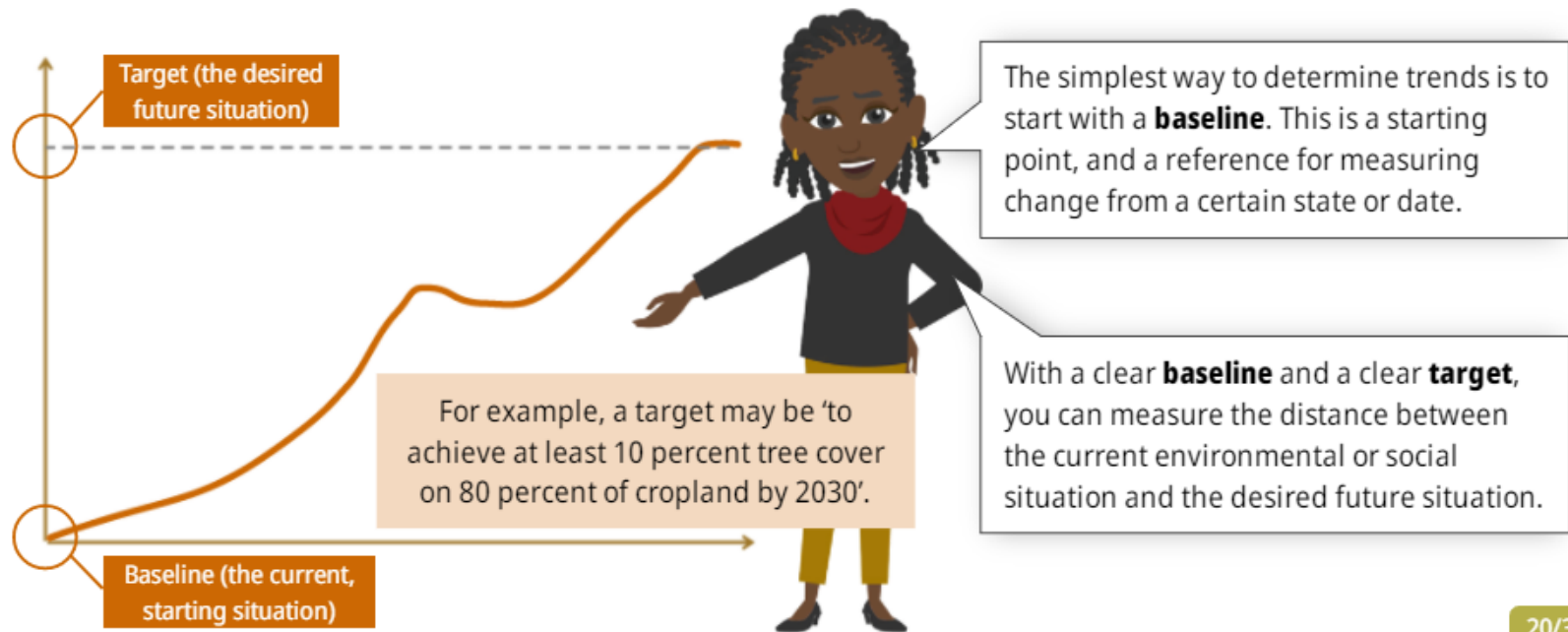
Source: WRI and PRISMA, 2019.

Baseline, Indicators and Targets

make goals **actionable**

provide **milestones** for measuring progress

define the **focus areas** for indicators and metrics



20/32

Indicators




	Sustainability	Area and type of degradation - Landslides	ha	Reduce	0 - N/D	+
	Biodiversity	Average distance between patches of habitat	m	Reduce	0 - N/D	+
	Biodiversity	Area in biological corridors	ha	Increase	0 - N/D	+
	Biodiversity	Shanon Index	ninguno	Increase	0.5 - 5	+
	Water	Water Flow during the dry season (main River)	m3/s	Increase	0 - N/D	+
	Water	Acidity/Alcalinity	pH	Increase/Disminuir	0 - 14	+
	Water	Turbidity	NTU	Increase/Disminuir	0 - 5	+
	Soil	Organic carbon on soil	%	Increase	0 - 100	+

Constraints

1 **does not meet** the criteria

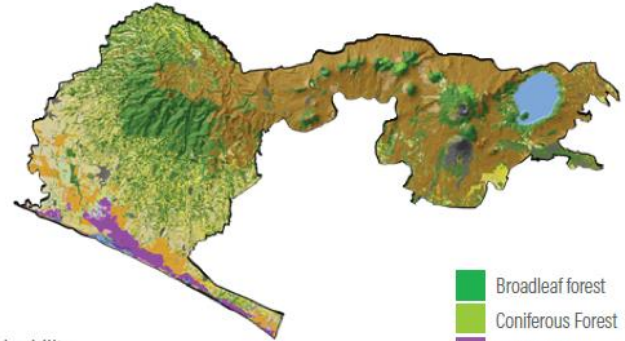
2 **partially meets** the criteria

3 **meets** the criteria

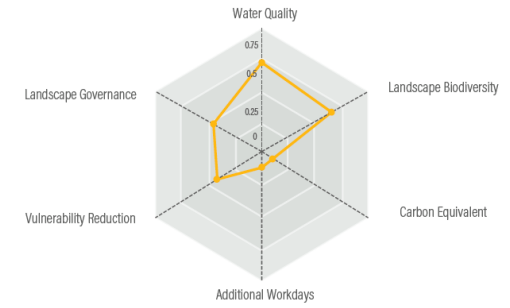


INDICATOR	METRIC	EASE OF COLLECTION	AFFORDABILITY	QUALITY	COMPREHENSIVENESS	SENSITIVITY	AVERAGE SCORE
SOIL QUALITY	Soil organic carbon	1	2	3	3	3	2.4
	Nutrient concentrations	2	2	3	1	2	2
	Soil pH	2	2	3	1	1	1.8
	Amount of fertilizer applied	3	3	1	1	1	1.8
	Soil fauna density and richness	2	2	2	3	3	2.4
	Soil respiration	2	2	3	1	1	1.8
	Decomposition rate	1	2	3	1	2	1.8

Sustainability Index for Landscape Restoration



- Broadleaf forest
- Coniferous Forest
- Salty Forest
- Coffee
- Sugarcane
- Basic Grains
- Grass
- Shadeless Coffee
- Shrubs
- Fruit Trees
- Other Crops



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NATURALES

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Monitoring forest and landscape restoration



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Relevant publications



<https://www.wri.org/publication/sustainability-index-landscape-restoration>



<https://www.wri.org/publication/restoration-monitoring-guide>

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