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Investing in Ecosystem Restoration

for a MORE efficient, inclusive, resilient and sustainable agrifood systems transformation in Africa

Africa Open D.E.A.L :

A continental leadership on Environmental, Agricultural and Land Data

The Africa's biophysical baselines (2022)

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#ARC32

Investing in Ecosystem Restoration…

Some of the unique features:

- Requires long term commitment!
  - ✓ short-term returns could be relatively low;
  - ✓ but medium and long terms socio-economic and environmental benefits could actually be high; with accrued benefits addressing inter-generational and inter-temporal disparities; etc.

- Investment Decisions rely on data and information.

- "If we have data, let's look at data. If all we have are opinions, let's go with mine" *James Barksdale, former CEO of Netscape*.

- The Data needed may not be readily available, and the costs could be prohibitive.

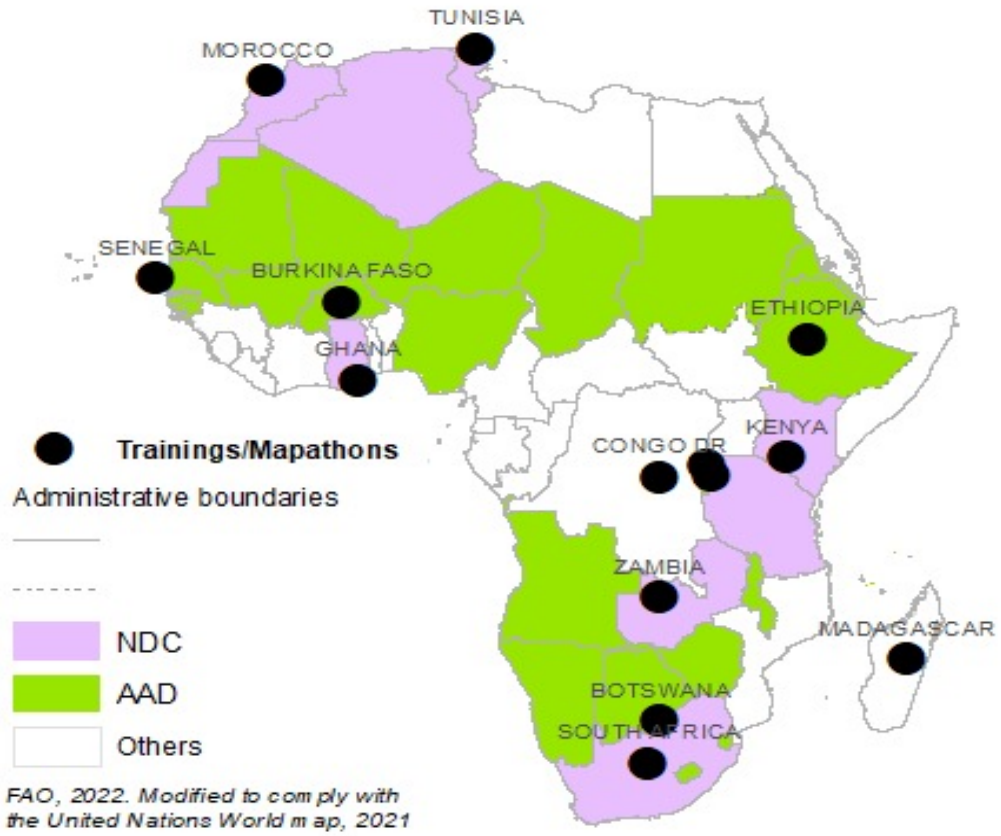
- Africa Open D.E.A.L. aims to address the information/data needs: reliable and accessible data

Investing in Ecosystem Restoration… the Africa Open D.E.A.L

It is a collaborative effort, a partnership between FAO, AUC, PAGGW, SADC

- Supports members in collection and analysis of Data on Environment, Agriculture, Land use and Climate.
- Provides a baseline for monitoring changes and reporting on Africa's agriculture, Forest, Land use and other uses.
- Data enables assessment and reporting on national and international commitments (SDGs, AU Agenda 2063, UN Decade on Ecosystem Restoration, etc.
- Uses tools – New Digital Geospatial technology and provides free access to Earth Observation and Climate Data, and free computational capacity
  - ✓ As such, it is the first Africa wide digital statistical sampling-based assessment
  - ✓ It is pioneering the digital collection of accurate, comprehensive and harmonized digital land use and land use change data on the continent.

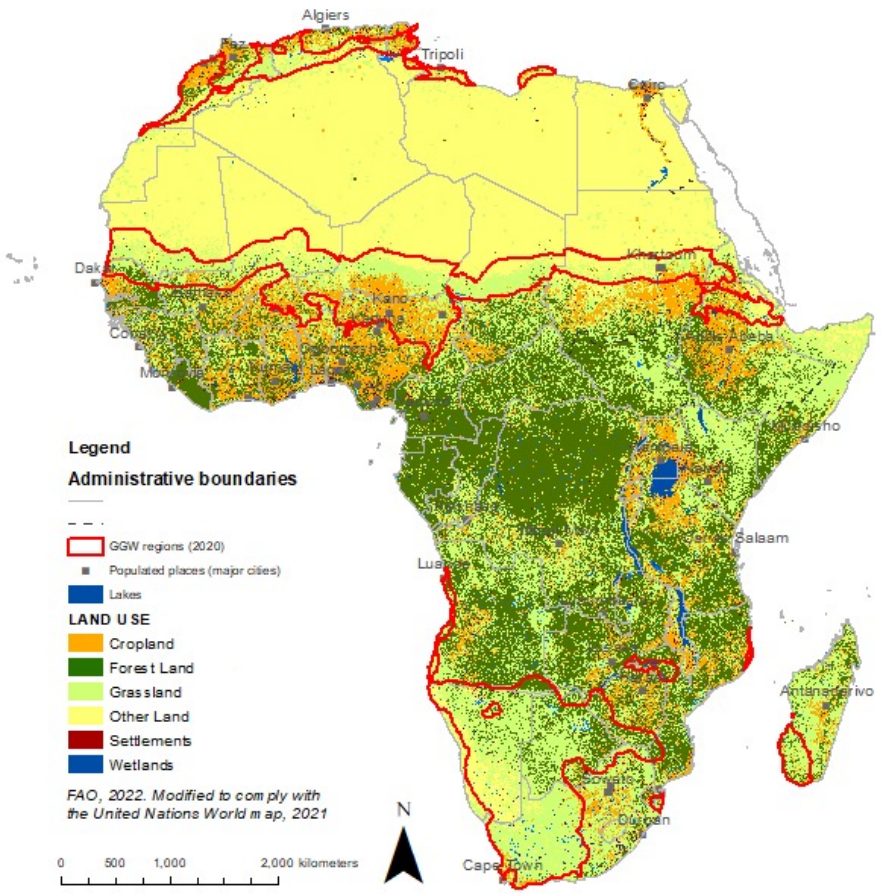
The Africa Open D.E.A.L – how has it been implemented?



- A series of trainings and mapathons for data collection sessions
- Working with hundreds of national experts, operators and country institutions – using FAO Collect Earth
- Assessment of 318,000 plots for information collection
- Data on 120 environmental variables and land parameters on each plot
- Strengthening capacities of the experts in the countries.

The Africa Open D.E.A.L – Key Findings

1. Land use in Africa: according to IPCC categories



Land use categories	Million ha	%
Cropland (arable and tillage land, and agro-forestry systems not forest)	356.30	11.9
Forest (FAO FRA definition)	777.35	26.0
Grassland (natural grassland, rangelands and pasture not cropland)	826.12	27.6
Other land (bare soils, rock, sand dunes, and all unmanaged land)	958.34	32.1
Settlement (infrastructures, villages and human settlements)	26.93	0.9
Wetland (land covered or saturated by water for all or part of a year)	43.83	1.5
Total	**2988.9**	**100**

The Africa Open D.E.A.L – Key Findings

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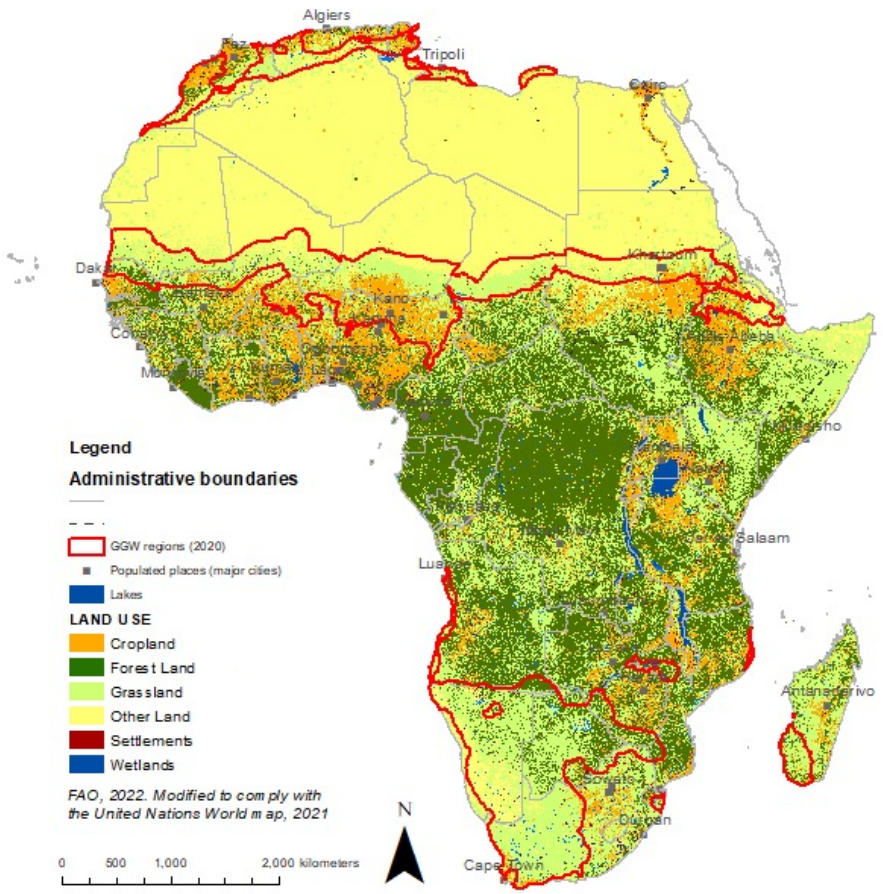
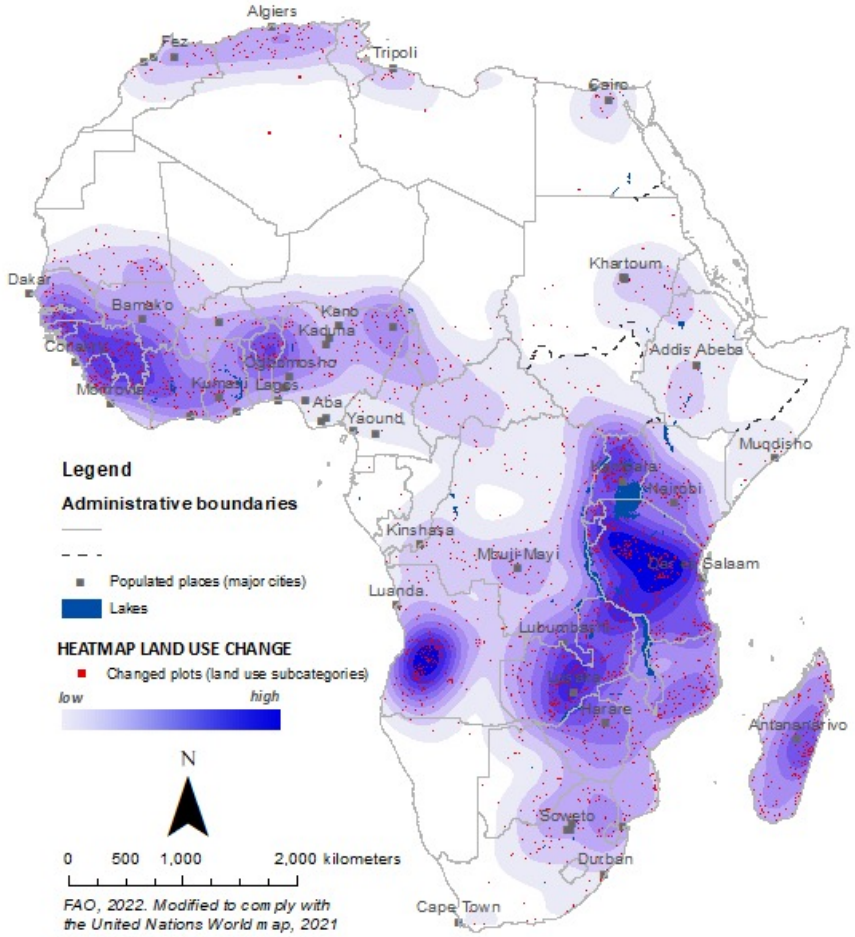


Some highlights:

- **356 million ha** of land in Africa are cultivated, more than two times the area cultivated in the European Union.
- **10 percent** of cropland are irrigated.
- **18 million ha** of new cropland since 2000, a **5 percent** increase.
- **26 percent** of land In Africa are classified as forest, more than **100 million ha** of what was previously reported by countries.
- **28 percent** of Africa is covered by grassland (shrublands and savannahs) with a total of **826 million ha**

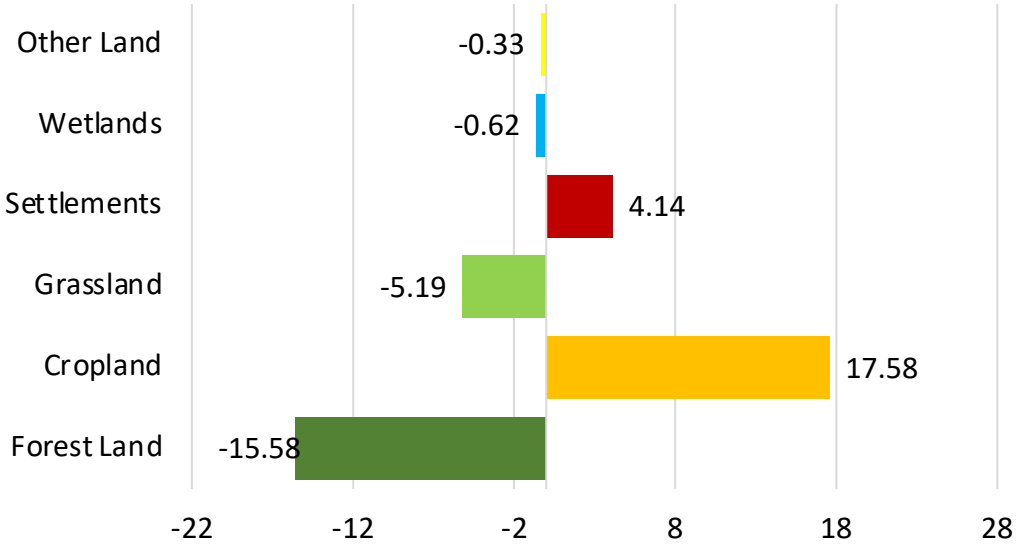
The Africa Open D.E.A.L – Key Findings

2. Land use Change … 2000-2019



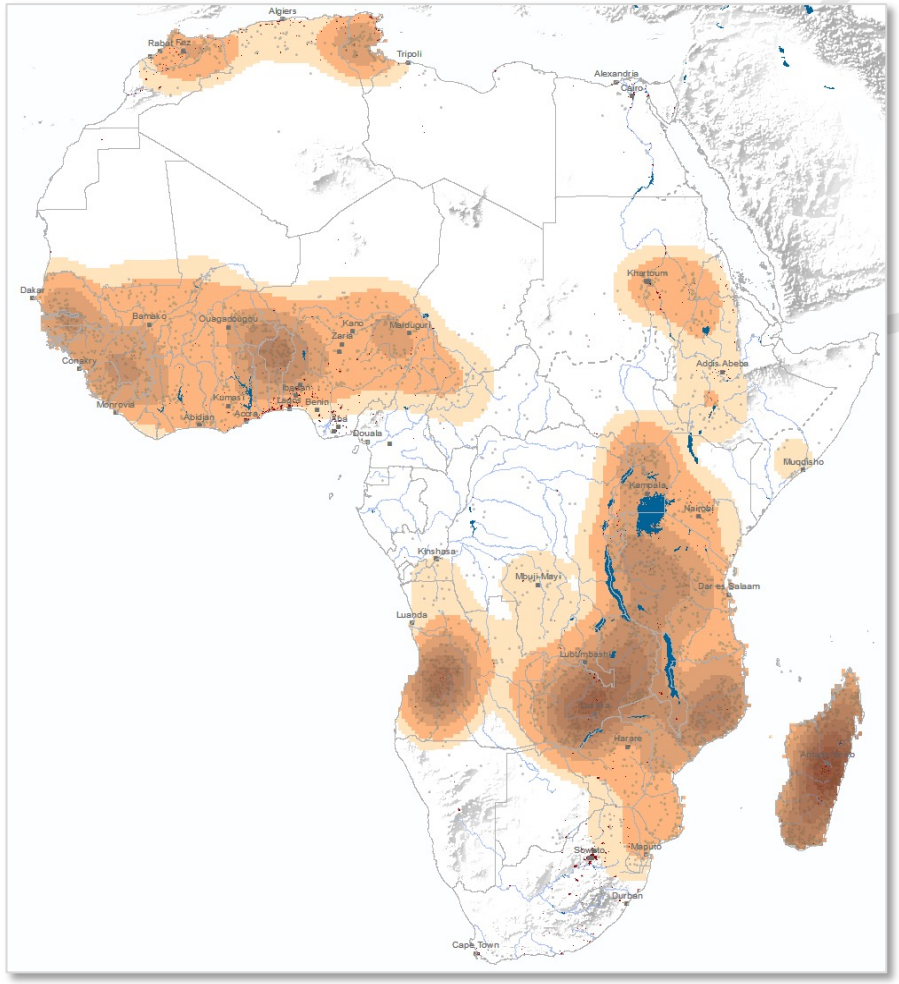
48 million ha (1.6%) of land has changed to another land use.

Of these: increase in cropland was 18%; reduction in Forest land was 16%). Source of agricultural production increase - expansionary



The Africa Open D.E.A.L – Key Findings

Land use Change to Cropland



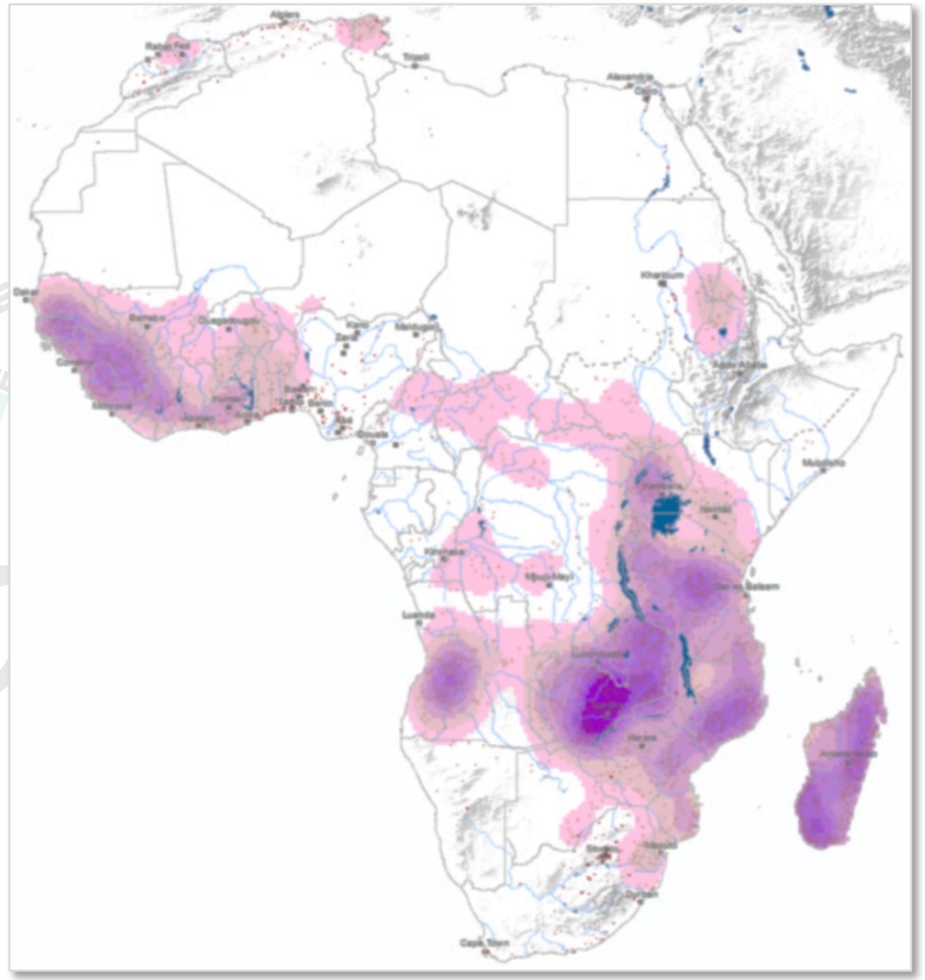
Increases of in croplands are quite correleated with lost forest lands.

Exceptions include Nigeria and in Northern Africa.

Qn: what is the source of agriculture growth?

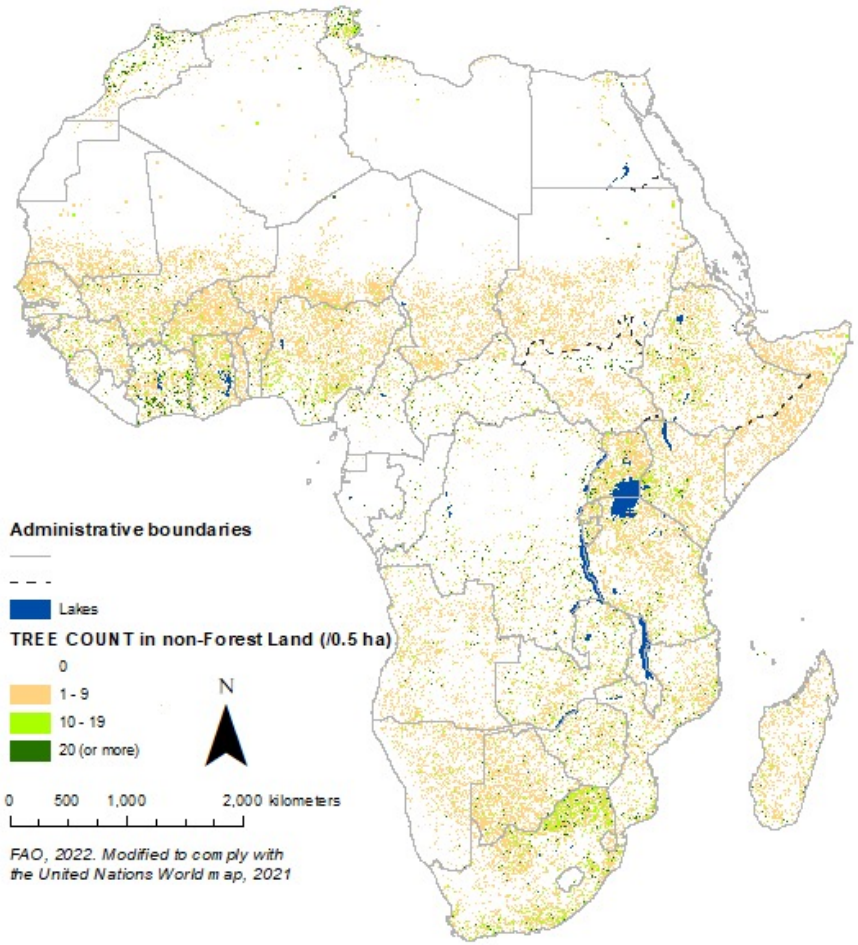
Nearly 30m ha of land degraded!

Land use Change from Forest land



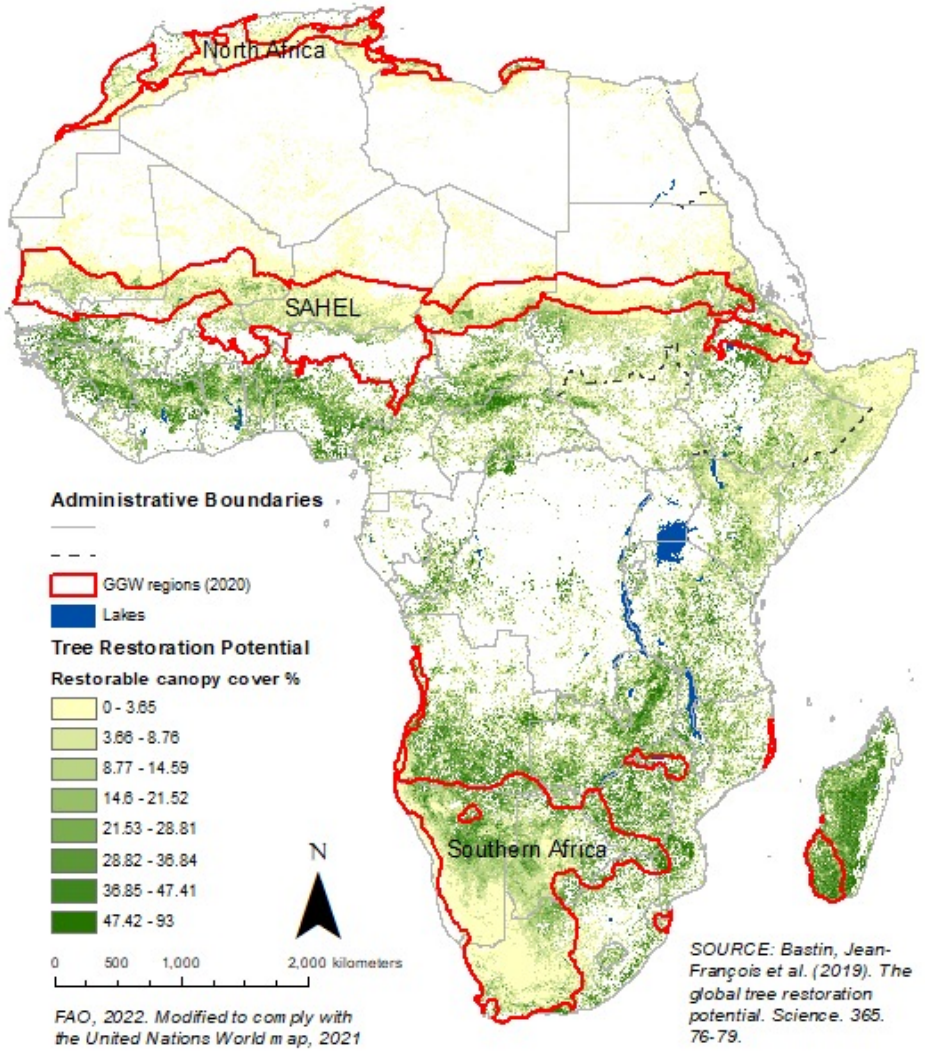
The Africa Open D.E.A.L – Key Findings

3. Forest … number of trees revealed!



	Total area	Total area with trees	Tree count	Tree density
Trees	*Mha*	*Mha*	*million*	*trees/ha*
In Forest Land	777.35	748.06	35,805	46.06
In non-Forest Land	2211.52	544.32	7,022	3.17
Total	**2,988.87**	**1,292.38**	**42,827**	**14.33**

Tree Restoration Potential in Africa

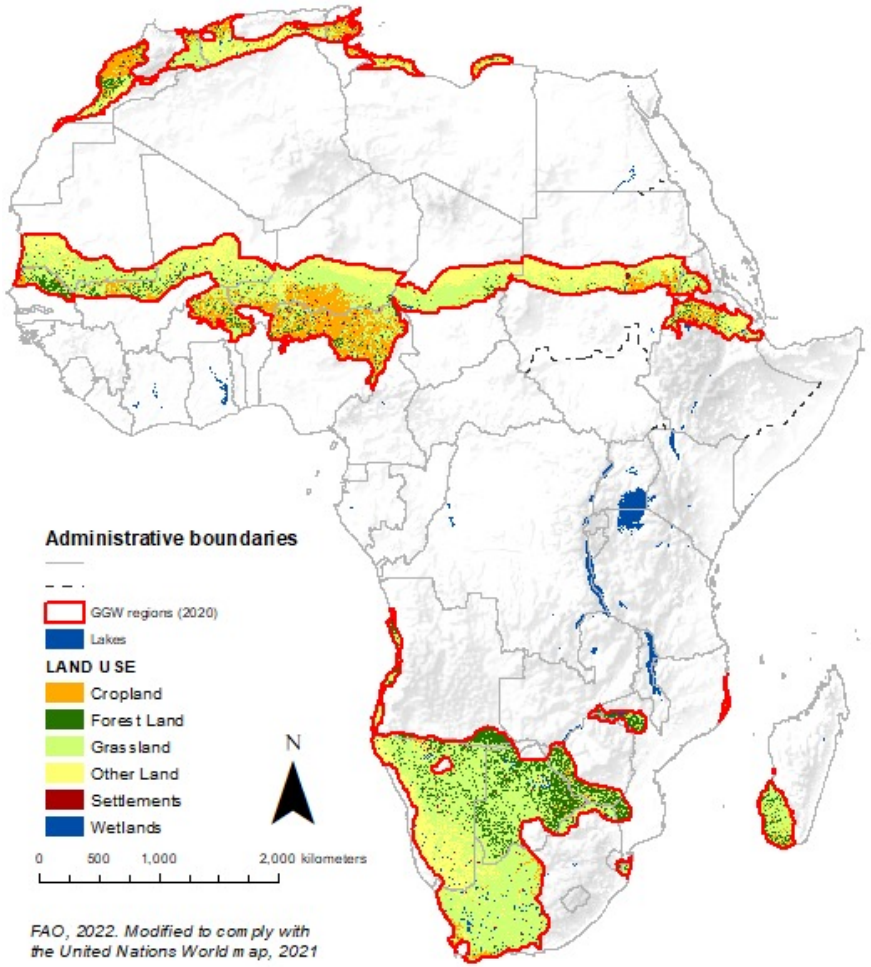


- In Africa there are more than **670 million** ha where it is partially possible to restore tree cover.
- **393 million ha** is the restoration potential and opportunities in the Great Green Wall areas, including **33 million ha** restorable in Northern Africa, **162 million ha** in the Sahara-Sahel countries and **198 million ha** in the Kalahari-Namib countries.

This is the largest anywhere else on Earth!

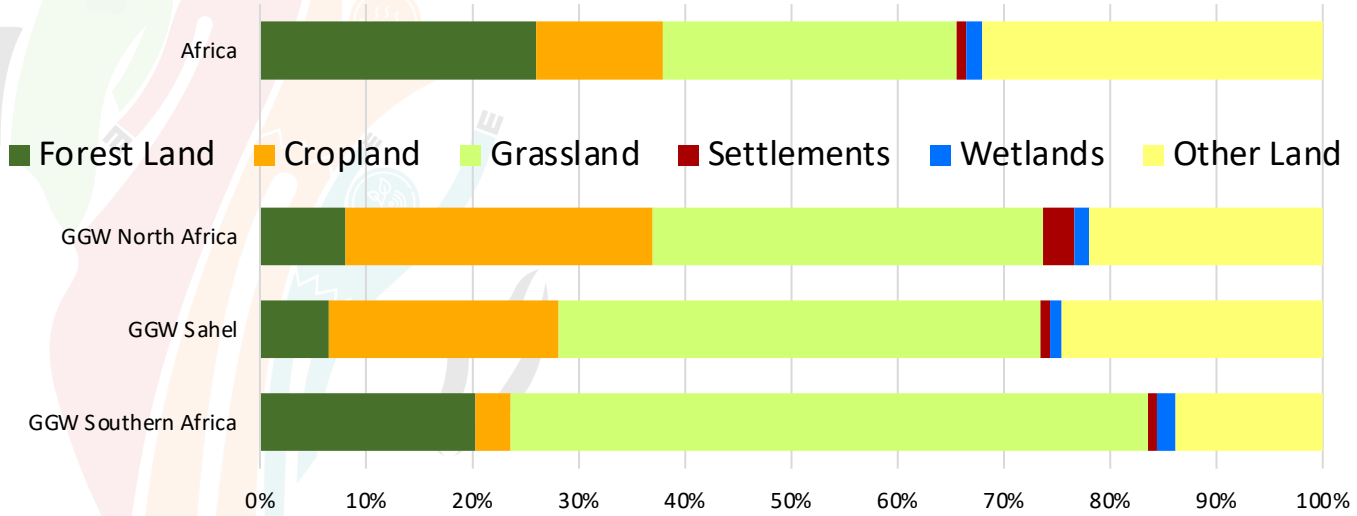
- **15 billion** additional trees can potentially be planted and grow in the GGW areas, with a net carbon sequestration ranging between **1.1** and **3.5** **Gigatons$C0_2$ equivalent.**

Africa's Great Green Wall



FAO, 2022. Modified to comply with the United Nations World map, 2021

- **Africa's Great Green Wall** is the core area of the **1 billion ha** of the continent drylands.
- **520 million ha** is the area defined of interest for the GGW: **50 million ha** in North Africa, **241 million ha** in the Sahel region and **228 million ha** in Southern Africa.



Impact of main land use changes in GGW, 2000-2019

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Investing in Ecosystem Restoration: Some take away messages

1. **Data and information needs could be huge and costly. The good news is that there is a solution!**

2. **Africa Open DEAL provides that solution (or greatly contributes to it):**

   - provides a geo-spatial platform for reliable, independently verifiable data and fact-based information, using readily and cost-effective imagery assessments and analysis - to guide restoration efforts and climate action and tracking progress on implementation and biophysical impacts and reporting on national, regional and international commitments.

   - supports the implementation of SDGs and Agenda 2063 - Africa's Great Green Wall and African Forest Landscape Restoration Initiative (AFR100) - both pledged to restore 100 million ha in Africa by 2030,

3. **Data reveals that Africa contains more restorable lands than any other region on Earth**.

   - There are 393 million hectares of restoration opportunities for Africa's Great Green Wall alone. This accounts for more than one third of the 1 billion hectares of global commitments to restore ecosystems on land and in water.

Investing in Ecosystem Restoration: Some take away messages

4. Complementarity of scientific and local knowledge:

- High quality geo-spatial data must be complemented with local knowledge and perceptions on what is most ecologically, socially and economically suitable to plant if restoration effects are to be long-lasting.

- Beyond the numbers, monitoring of tree diversity is equally vital for successful restoration interventions.

- Credible, satellite imagery assessments do not replace, but complement field ground-proof assessments, inventories and assessments of richness in biodiversity..

5. Investing in Ecosystem Restoration pays-off. It contributes to MORE efficient, inclusive, resilient and sustainable agrifood systems transformation!

Thank You!!