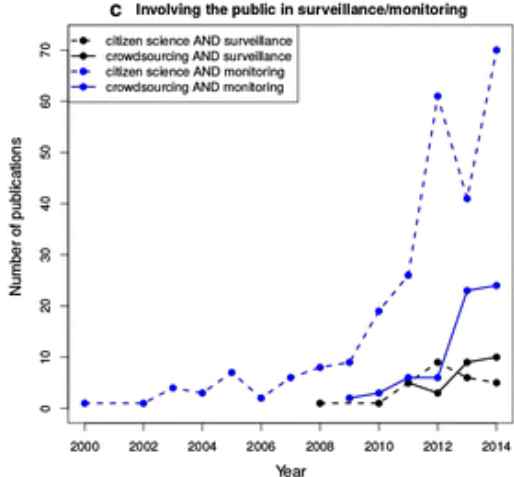
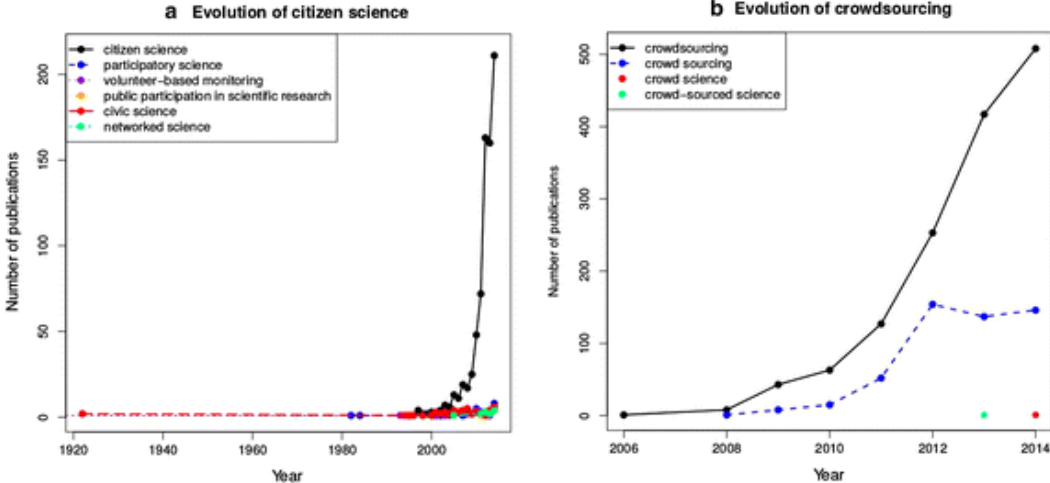


# Integrating citizen surveillance and systematic data collection in monitoring of land restoration

Tor-G. Vågen



“Citizen surveillance as any type of activity conducted by volunteers, recruited or not, that results in monitoring or surveillance data”



citizen science has become popular in many scientific areas

can be structured or unstructured (i.e. crowdsourcing)

trade-off between data quality and data quantity



Welvaert, M., Caley, P. Citizen surveillance for environmental monitoring: combining the efforts of citizen science and crowdsourcing in a quantitative data framework. SpringerPlus 5, 1890 (2016). <https://doi.org/10.1186/s40064-016-3583-5>



# Structured or systematic data collection and monitoring

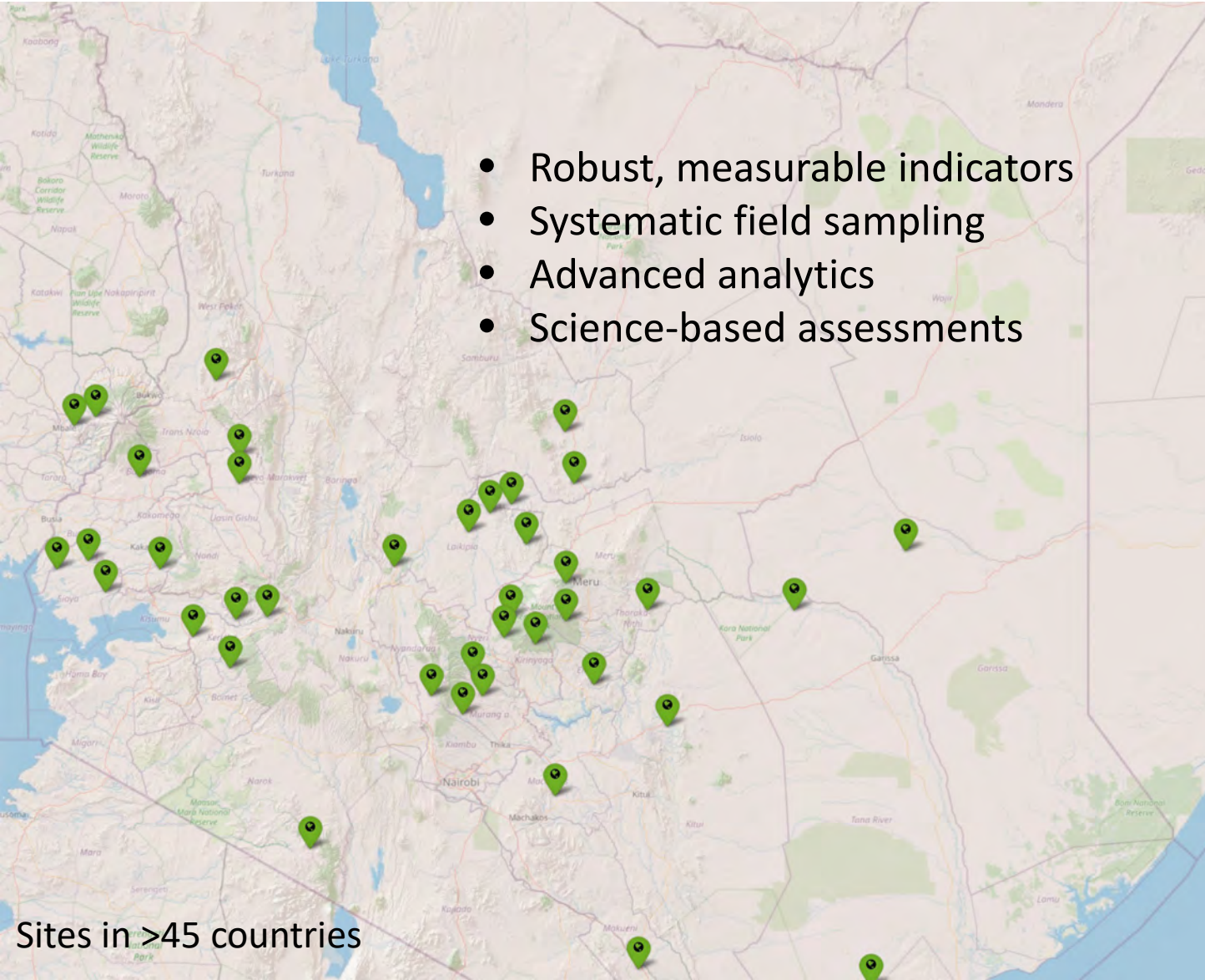
more costly

more challenging to scale

data quality high(er)



# The Land Degradation Surveillance Framework (LDSF)



- Robust, measurable indicators
- Systematic field sampling
- Advanced analytics
- Science-based assessments



# Regreening Africa App

Start

About

Help

View completed data

Send completed data

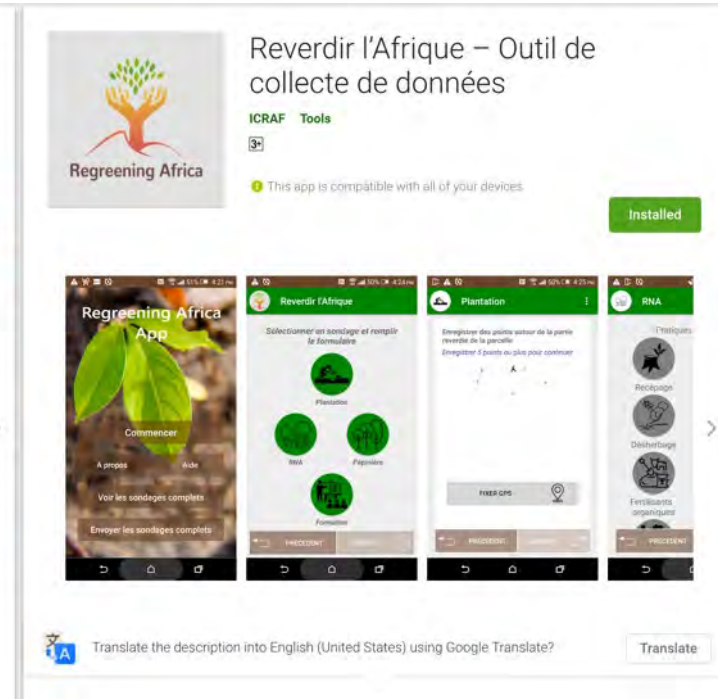
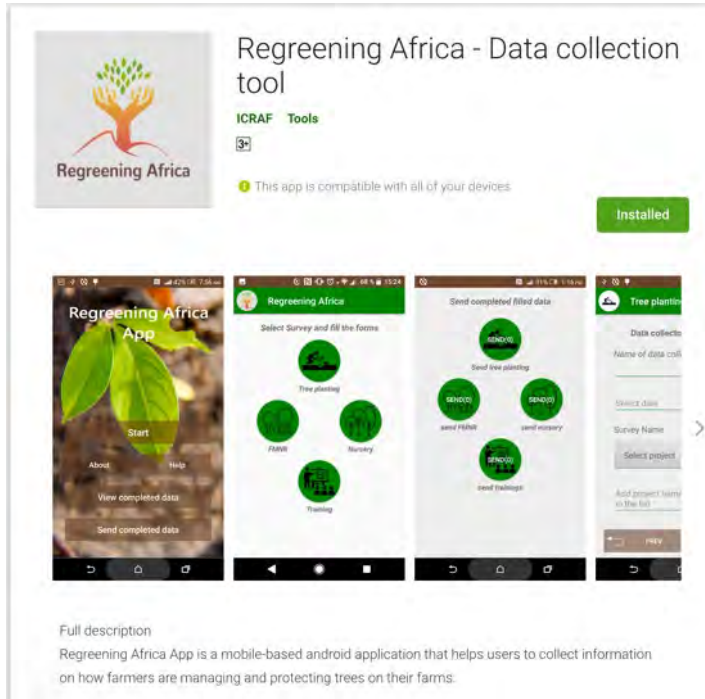
# Citizen science data collection using the Regreening Africa App

Used by (among others):

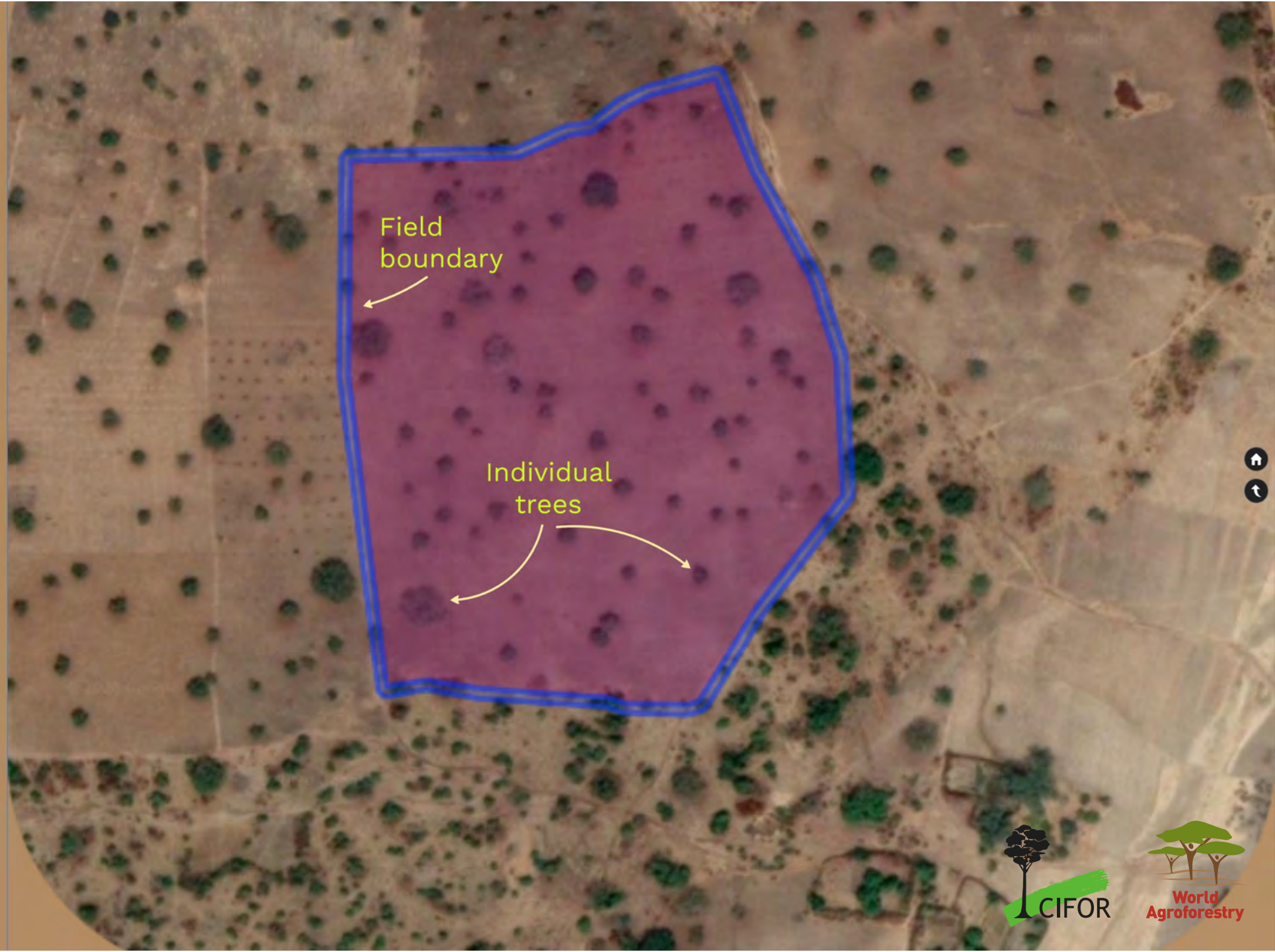
- Implementing partners
- Scientists
- Extension agents
- Lead farmers
- Nursery managers

Modules:

- Tree planting
- FMNR
- Nurseries
- Training



- Field boundary delimited
- Number of trees planted
- Date(s) planted
- Species planted
- Location of trees planted
- Survival of trees



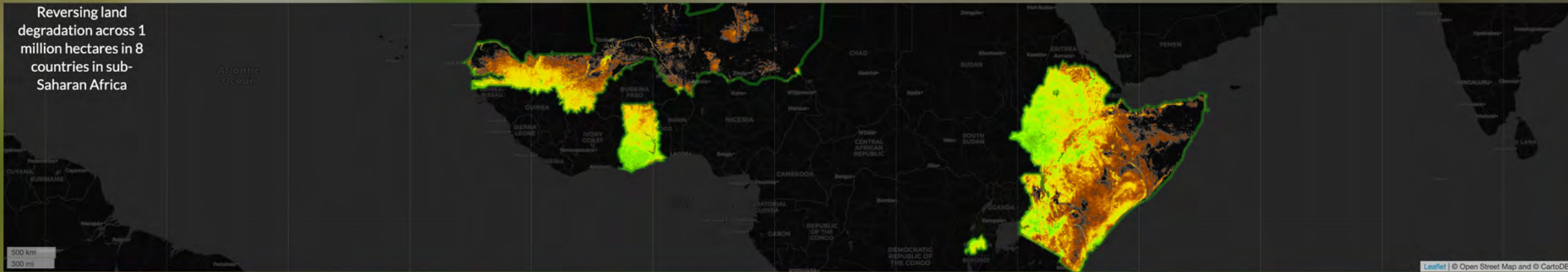
# Regreening Africa

[Home](#) [Rwanda](#) [Ghana](#) [Senegal](#) [Kenya](#) [Ethiopia](#)

Welcome to the Regreening Africa Restoration Hub

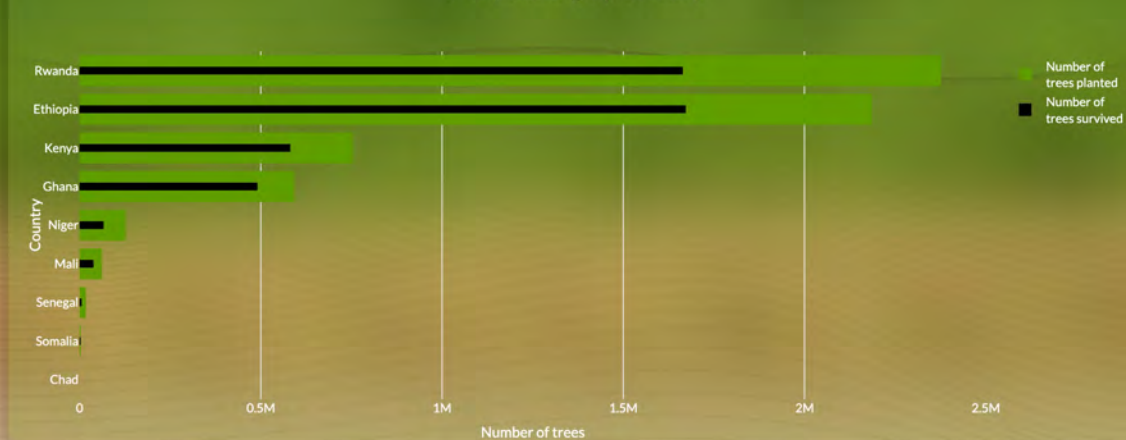
[View this page in French? / Afficher cette page en français?](#)

Map of project countries

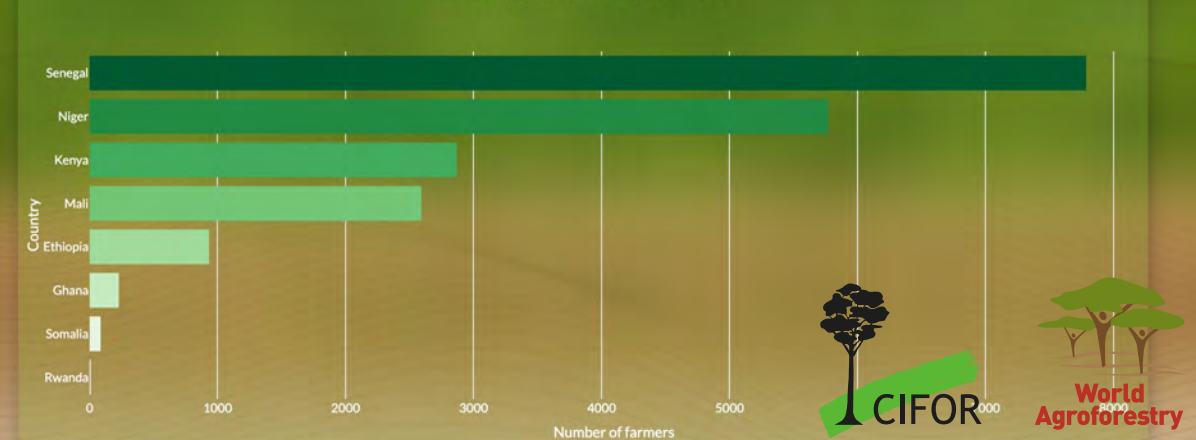


Summary of data collected using the Regreening Africa App across project countries

Tree planting by country



FMNR practices by country







Select the project area you would like to explore!

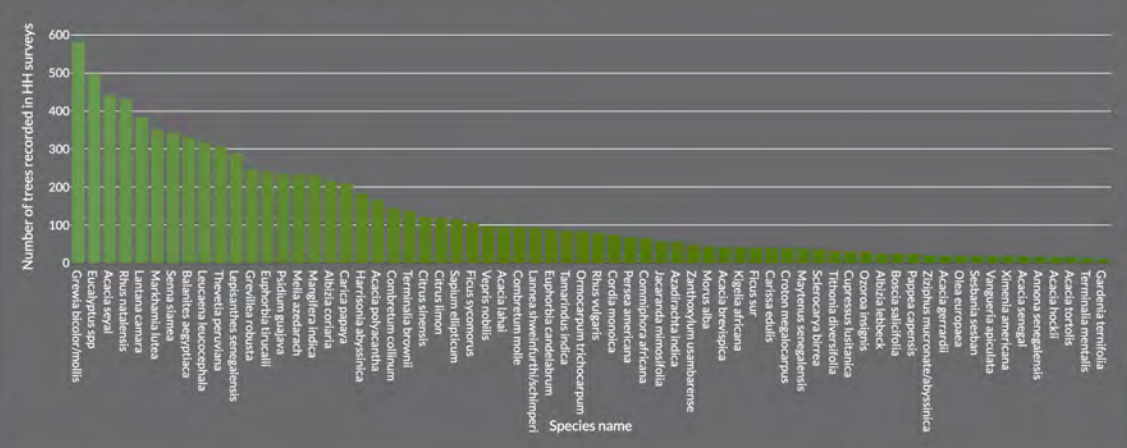
All

When you select a project area from the dropdown list above, a heatmap will also be shown on the map. This shows where the Regreening Africa App is being used to track tree planting activities. Also, other graphics on this page will update to reflect the area selected (if data is available for this area).

Explore household survey and tree planting data

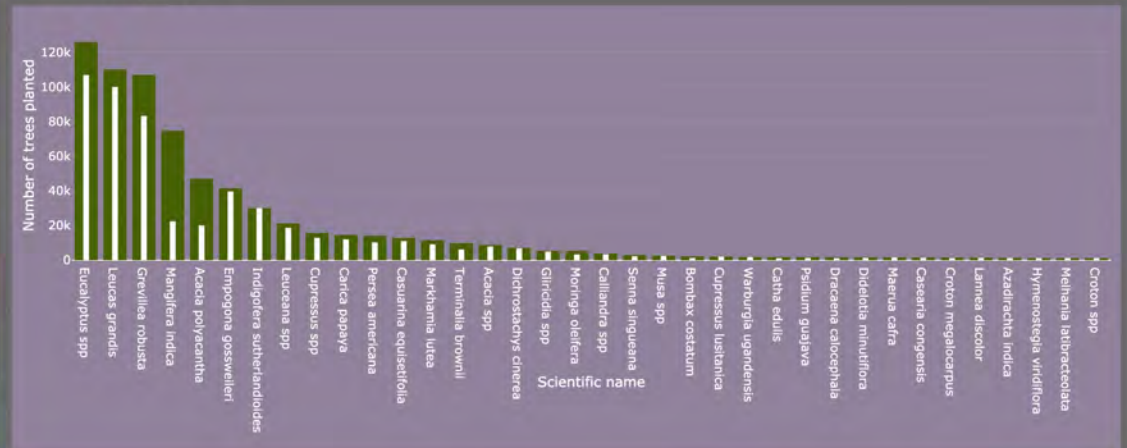
- Tree species
- Regreening action
- Restoration activities

Most common tree species on farm based on project baseline surveys



- Tree species planted
- Tree species in nurseries

Most common species planted

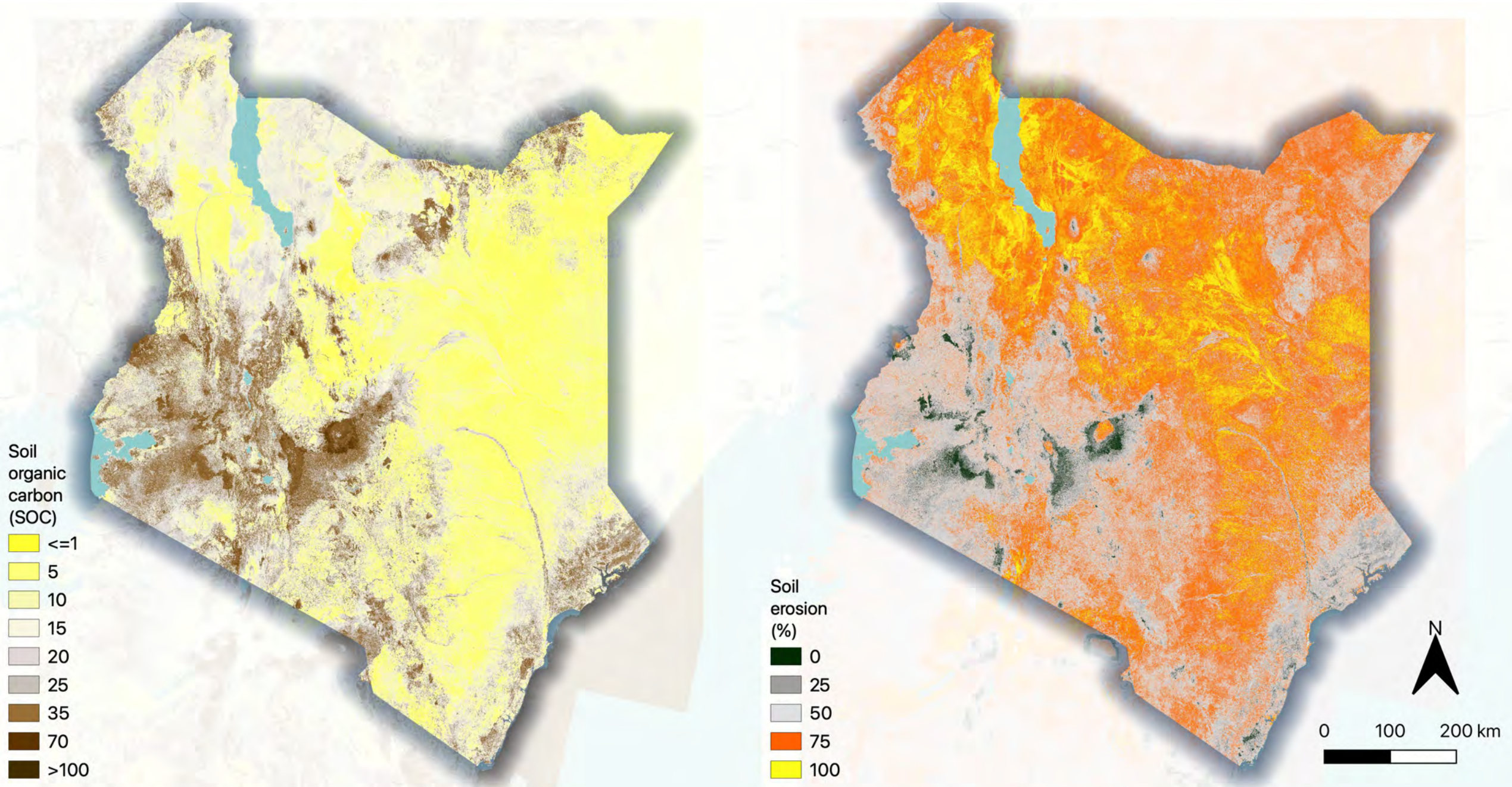


Structured data collection as part of monitoring and evaluation baseline surveys



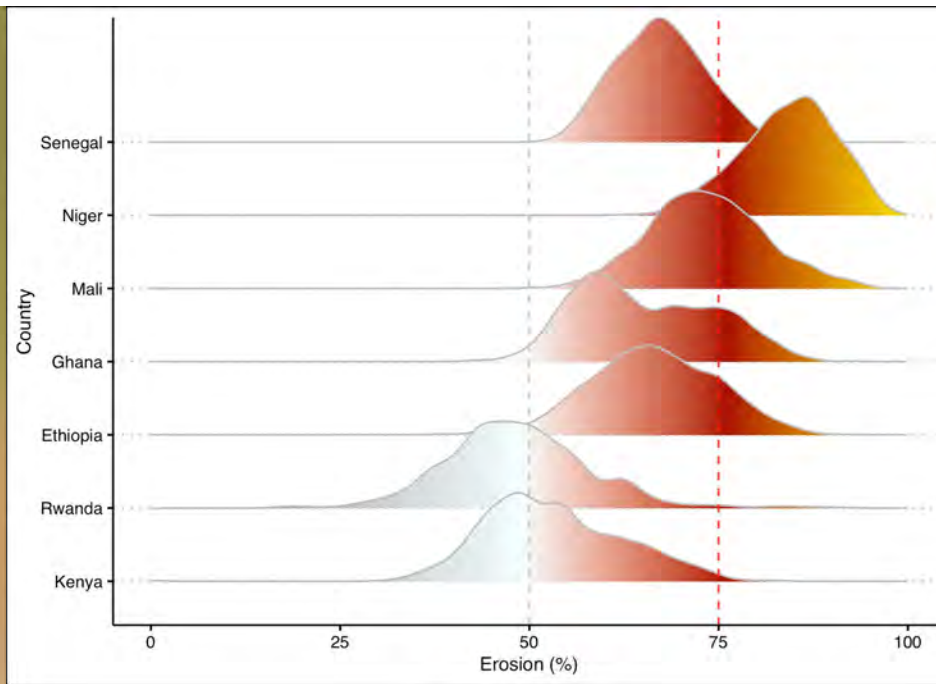
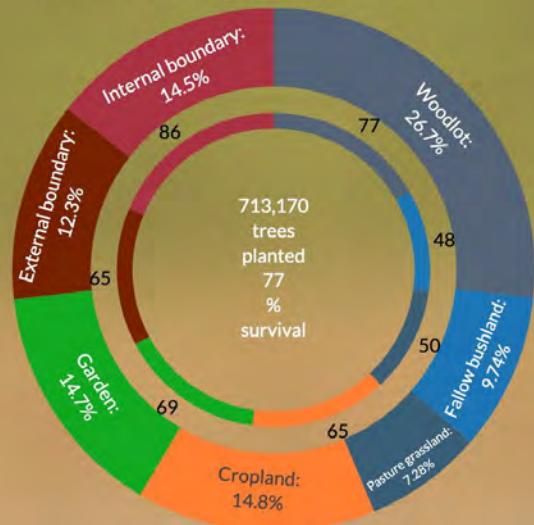
Citizen science data collection using the Regreening App

# Mapping soil and land health using LDSF data coupled with earth observation



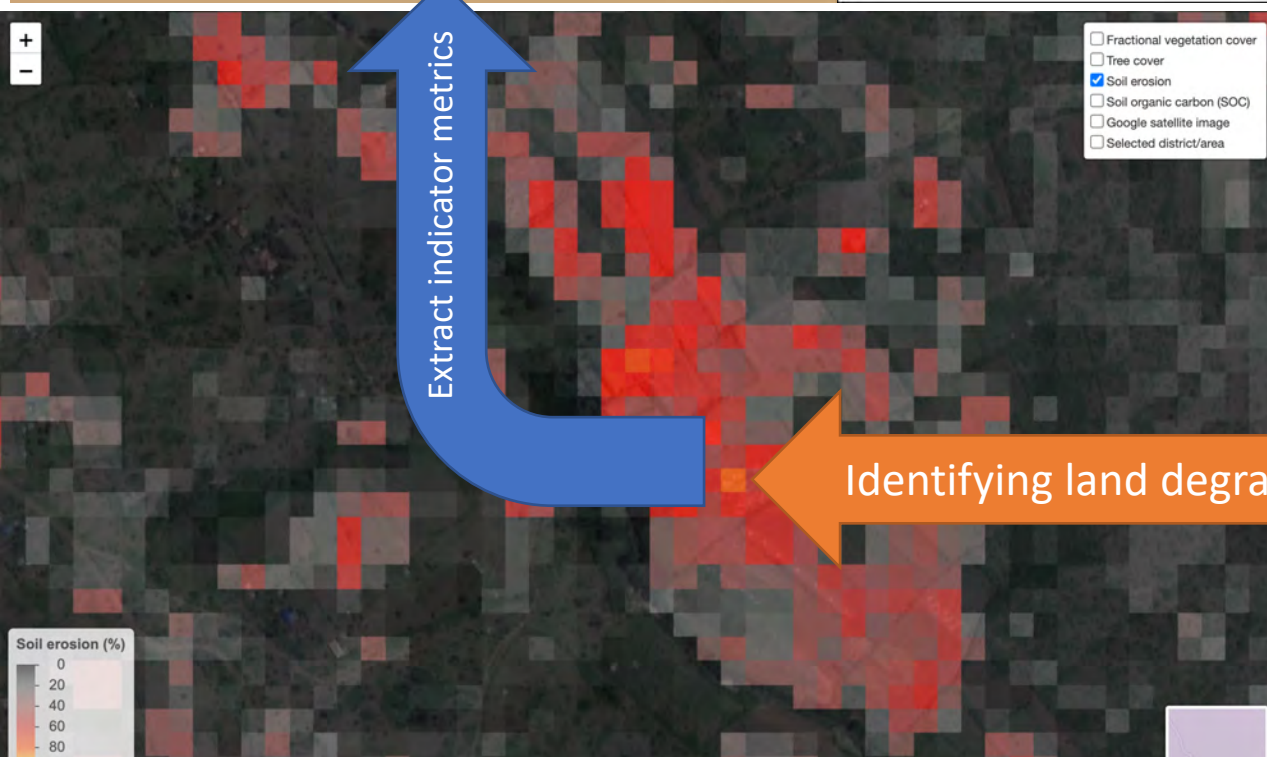
Tree planting efforts recorded with the Regreening Africa App

Locations of trees planted on farm



Integrating citizen surveillance with science-based (structured) data collection and analytics to

- Target restoration interventions
- Assess the effectiveness of restoration interventions across scales



# Thank You!

