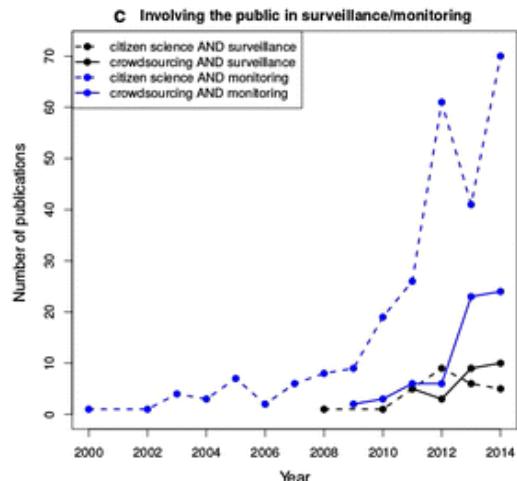
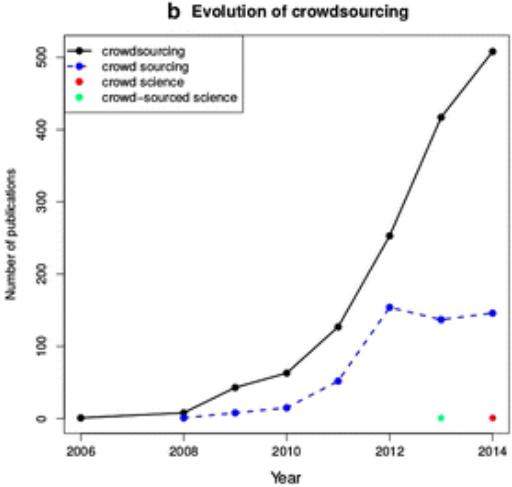
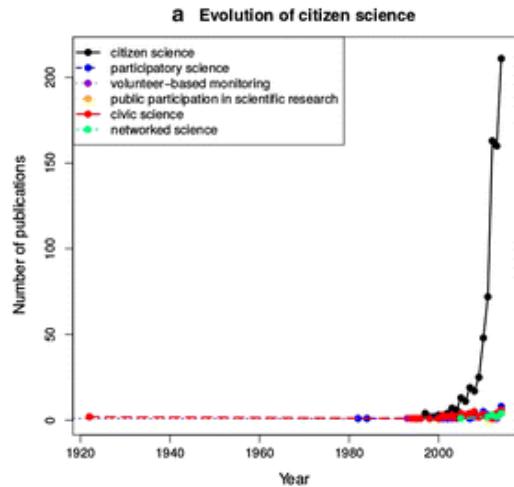


Integrating citizen surveillance and systematic data collection in monitoring of land restoration

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

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>

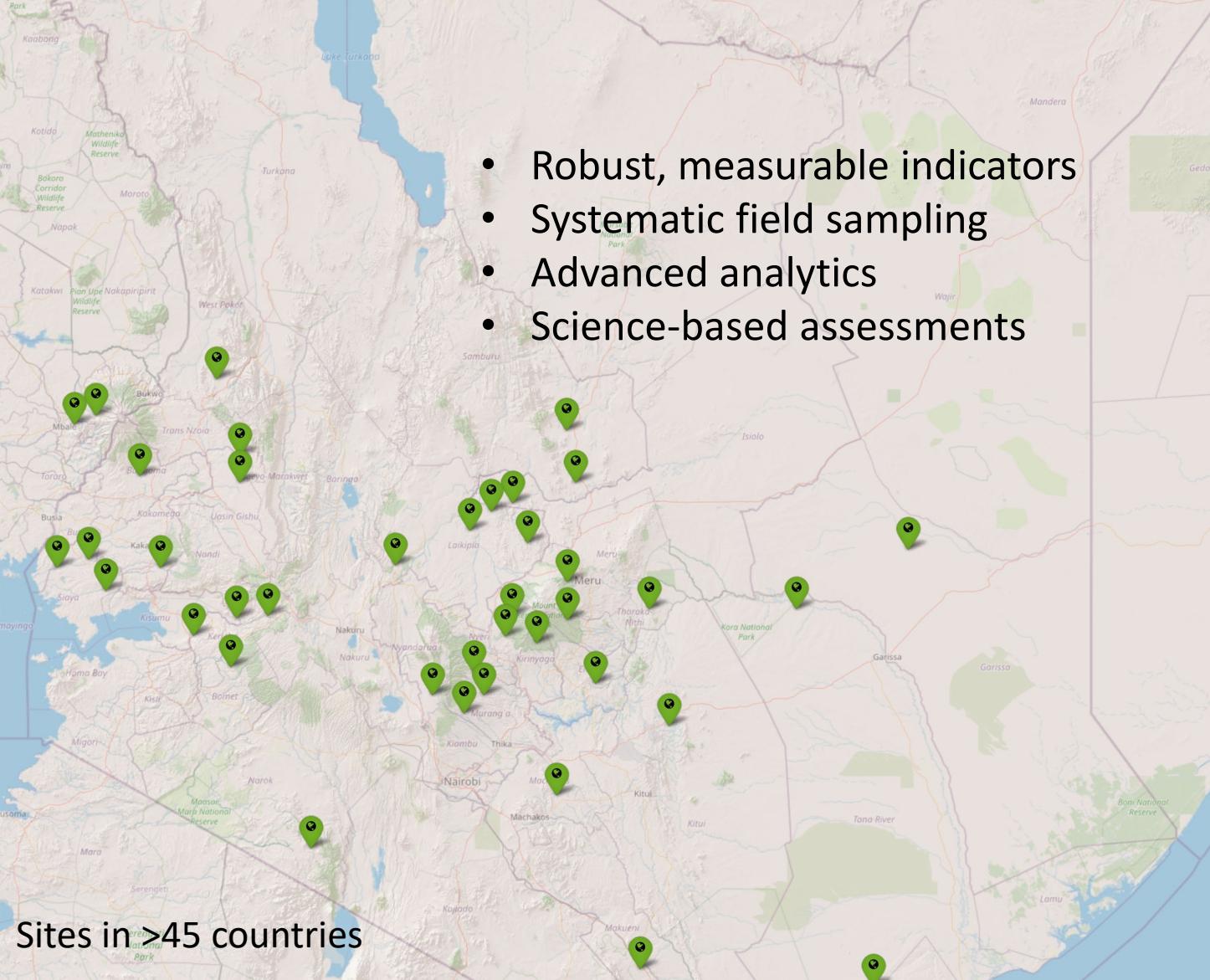


Structured or systematic data collection and monitoring

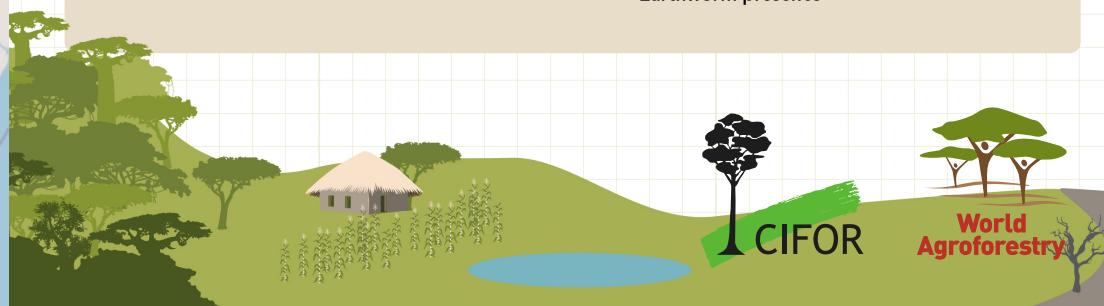
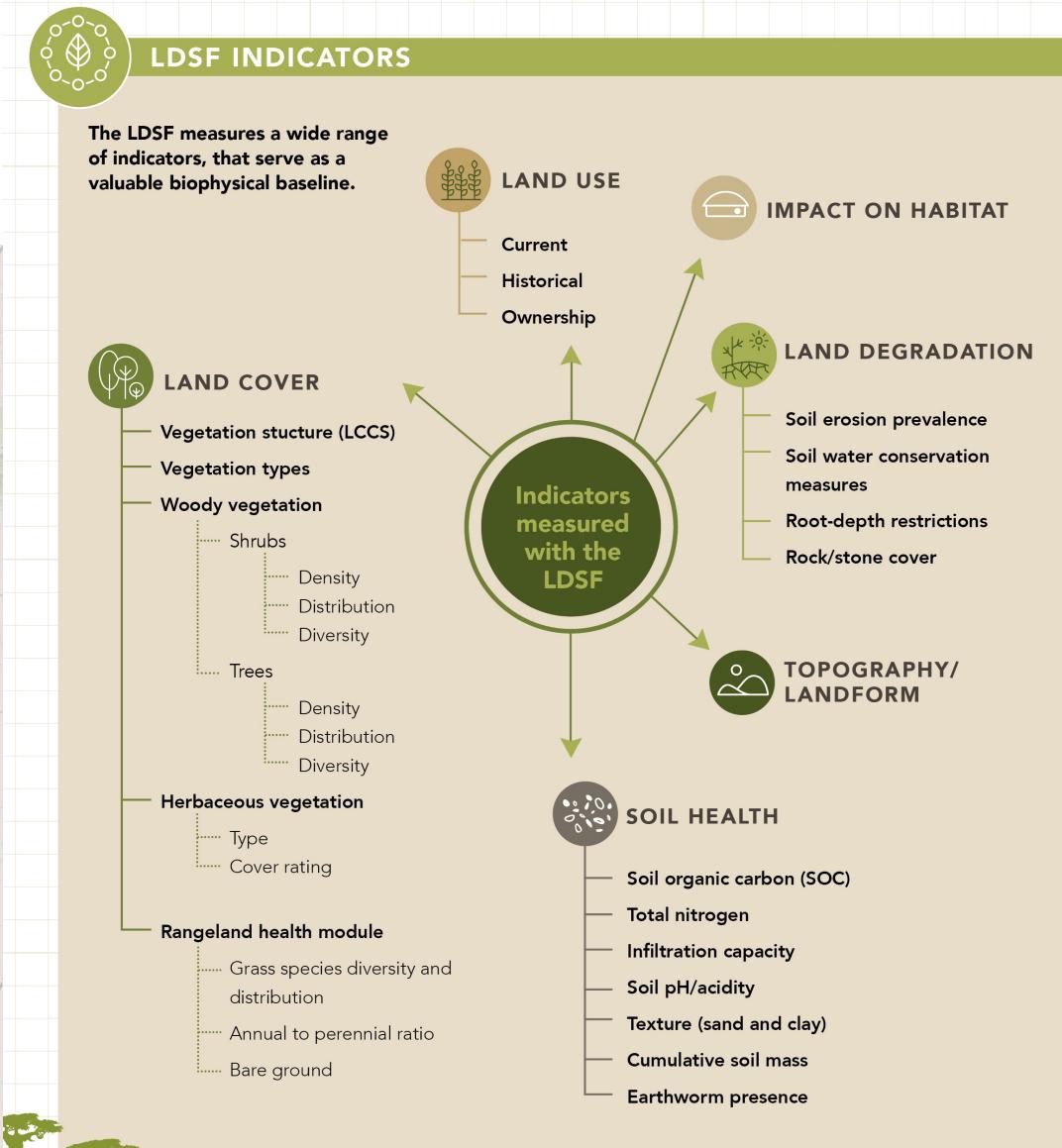
more costly
more challenging to scale
data quality high(er)

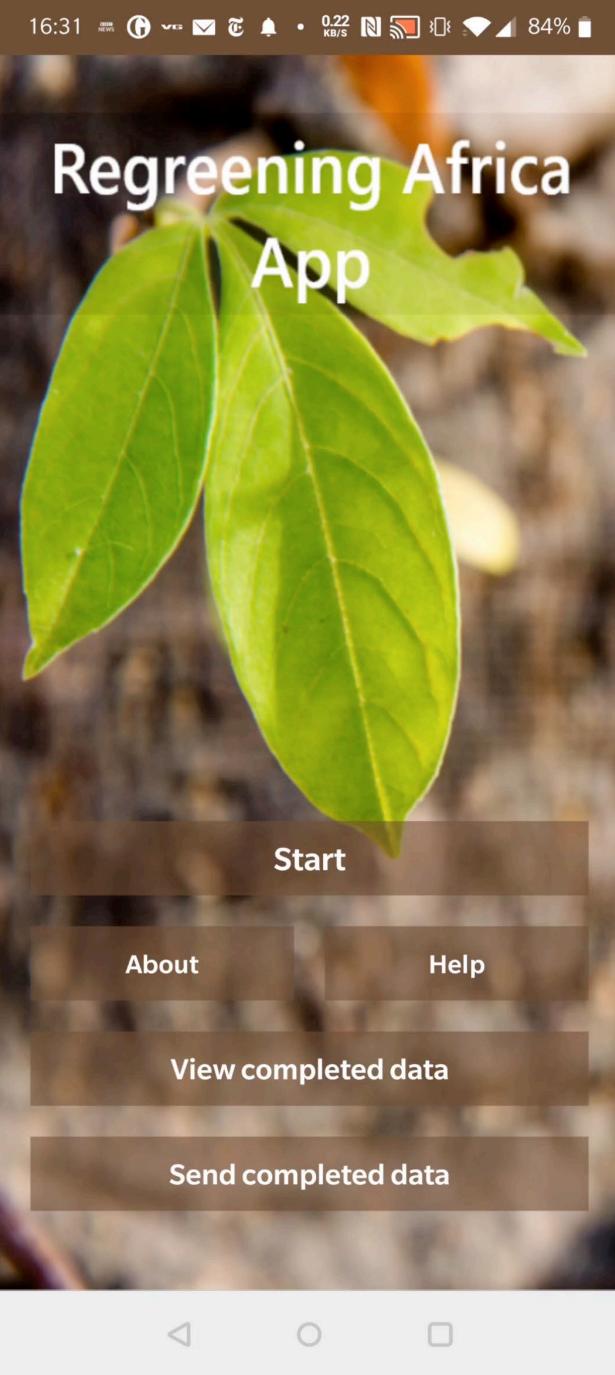


The Land Degradation Surveillance Framework (LDSF)



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





Citizen science data collection using the Regreening Africa App

Used by (among others):

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

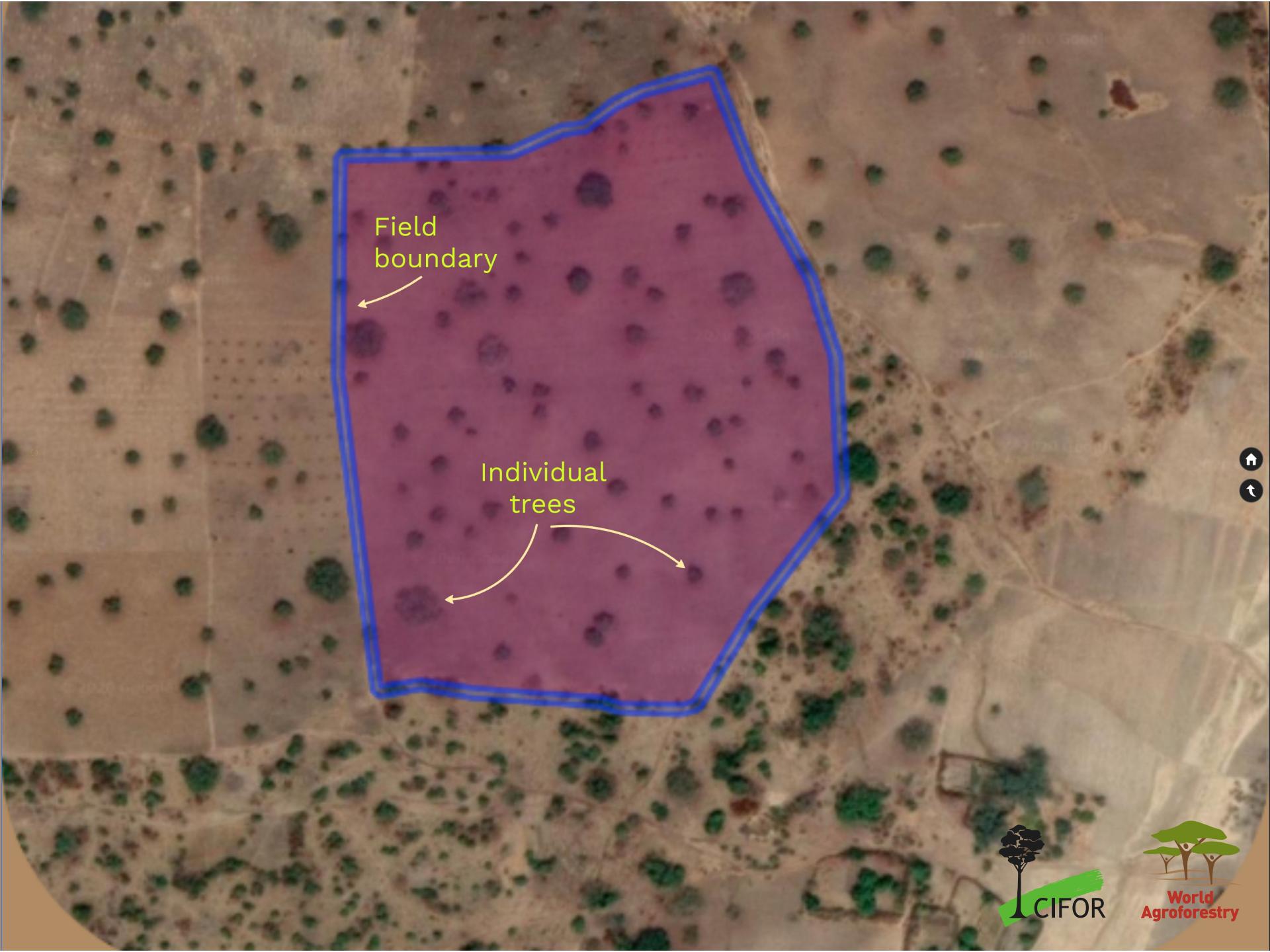
Modules:

- Tree planting
- FMNR
- Nurseries
- Training

The image shows two side-by-side screenshots of the app's main menu. The left screenshot is in English, and the right one is in French. Both screens feature the same layout with a logo at the top, followed by a navigation bar with 'Start', 'About', 'Help', 'View completed data', and 'Send completed data'. Below this is a list of modules: 'Tree planting', 'FMNR', 'Nurseries', and 'Training'. The English version has labels like 'Data collection tool', 'Survey Name', 'Select project', 'Add project name in the list', 'Fixer GPS', and 'PRÉCÉDENT' and 'SUivant'. The French version has labels like 'Reverdir l'Afrique – Outil de collecte de données', 'Sélectionner un sondage et remplir le formulaire', 'Plante', 'RNA', 'Pratiques', 'Récolte', 'Désherbage', 'Fertilisants organiques', and 'Péponier'. A small text at the bottom of the English version says 'Translate the description into English (United States) using Google Translate?' with a 'Translate' button.



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



Regreening Africa

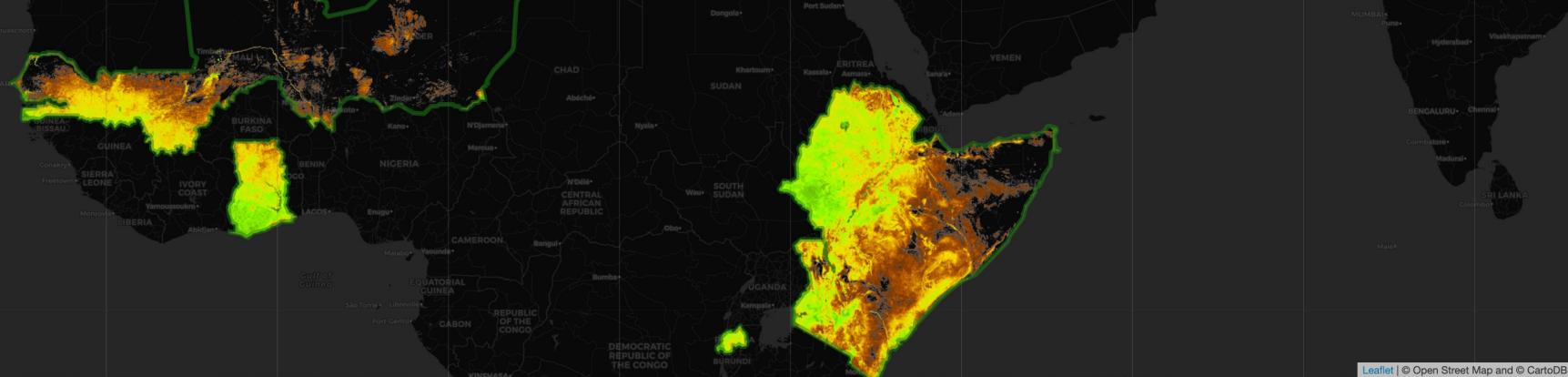
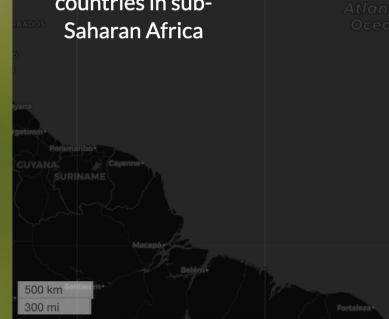
Home Rwanda Ghana Senegal Kenya Ethiopia

Welcome to the Regreening Africa Restoration Hub

View this page in French? / Afficher cette page en français?

Map of project countries

Reversing land degradation across 1 million hectares in 8 countries in sub-Saharan Africa



Leaflet | © Open Street Map and © CartoDB

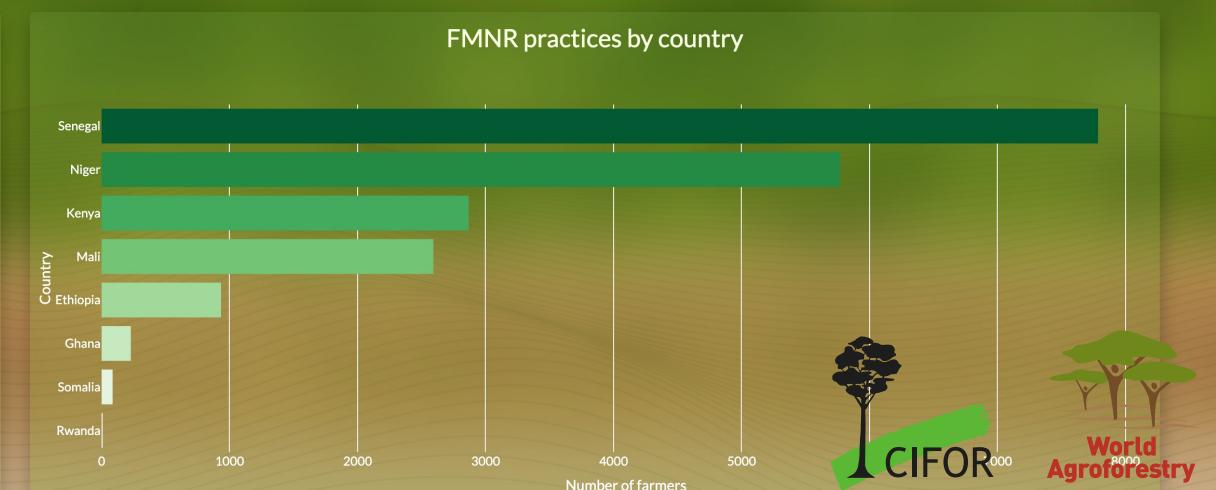


Summary of data collected using the Regreening Africa App across project countries

Tree planting by country



FMNR practices by country



CIFOR

World
Agroforestry



Kenya

Main map Explore monitoring and evaluation results Explore land health indicators and maps

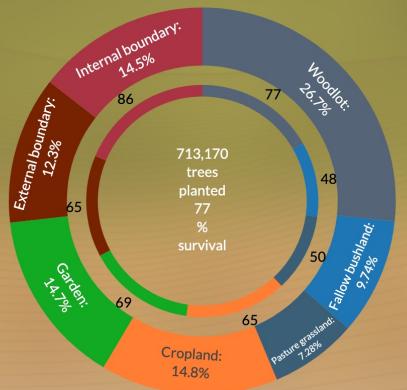
English/Français



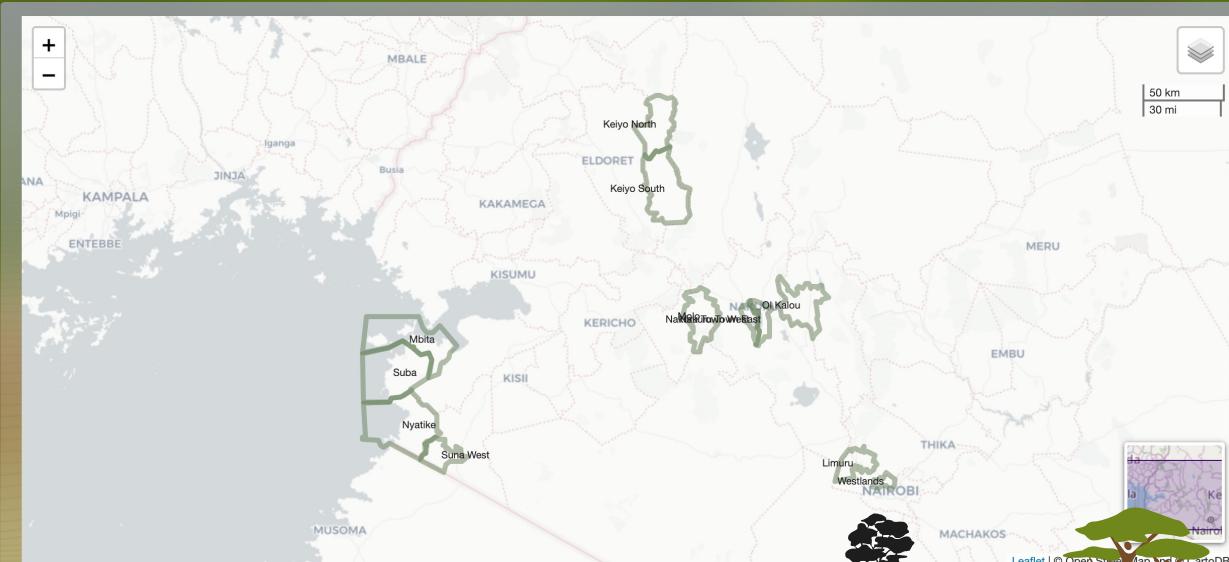
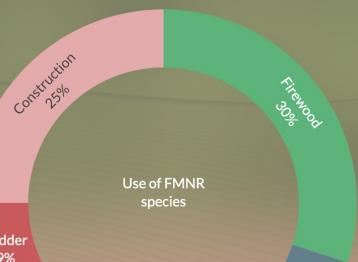
English

Tree planting efforts recorded with the Regreening Africa App

Locations of trees planted on farm



Farmer-managed natural regeneration (FMNR)



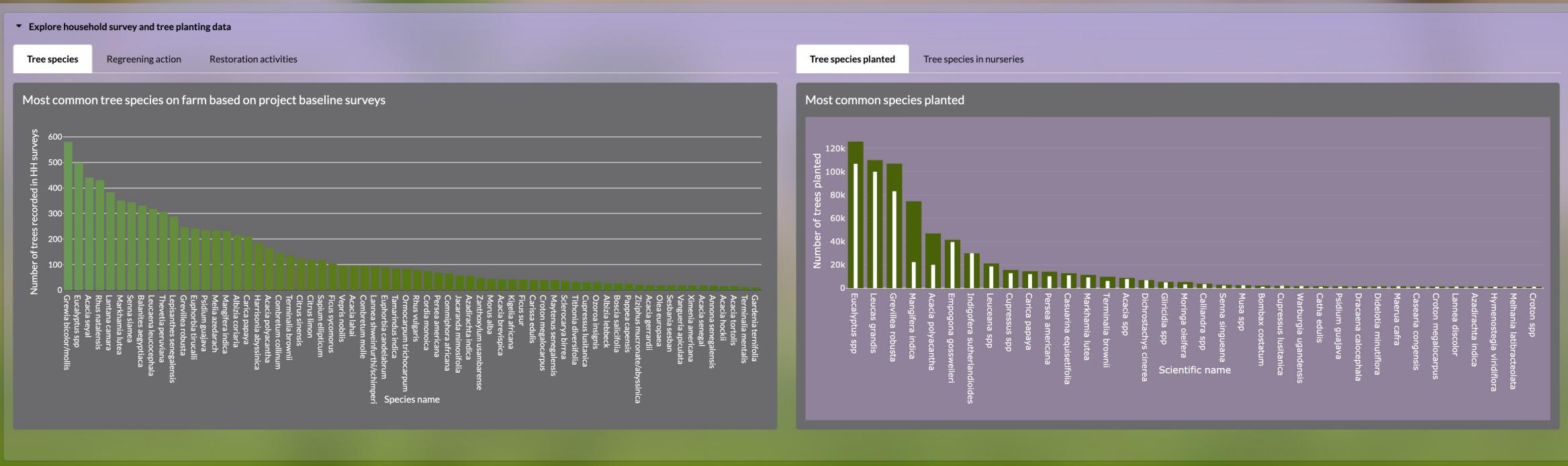
Integrating citizen surveillance and systematic data collection in monitoring of land restoration as part of the Regreening Africa Land Restoration Hub



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).

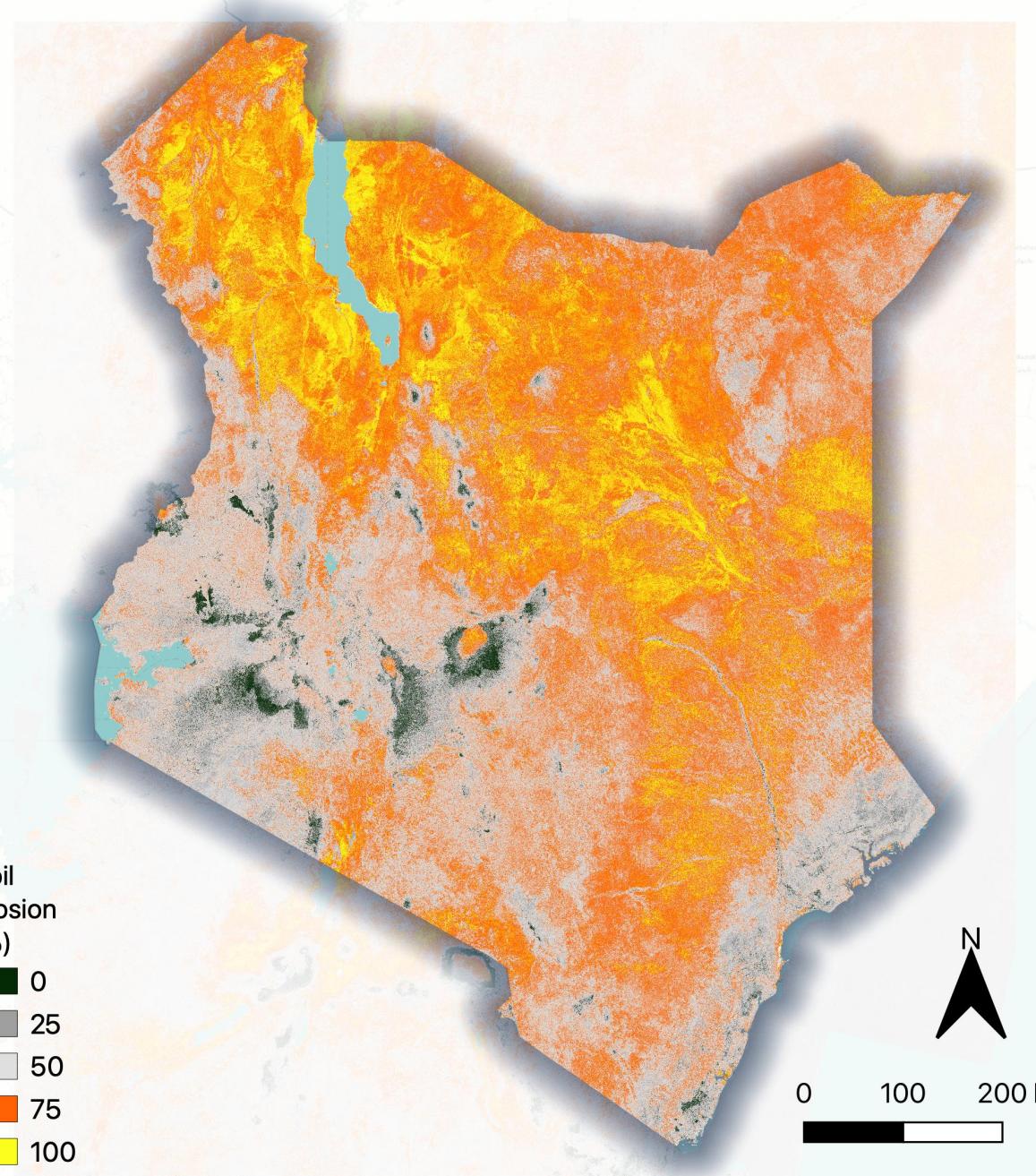
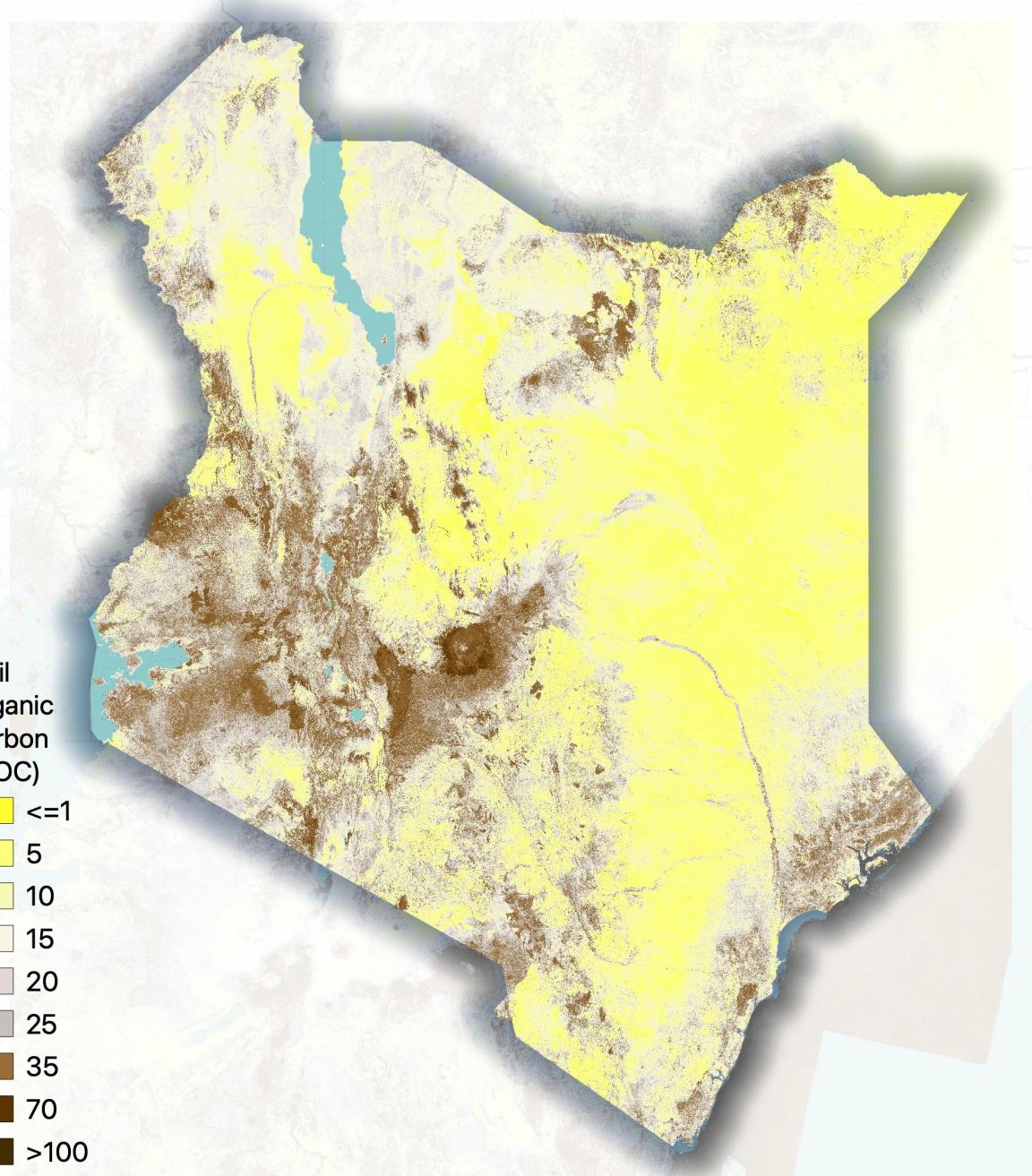


Structured data collection as part of monitoring and evaluation baseline surveys



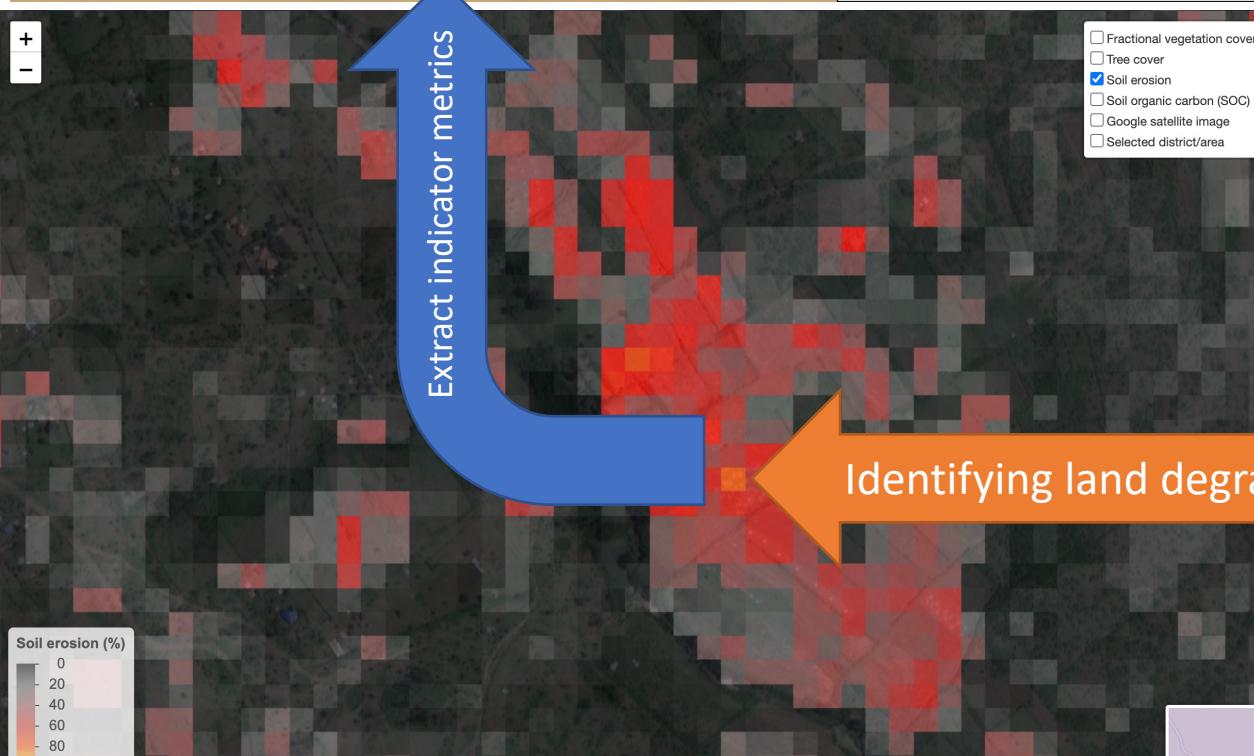
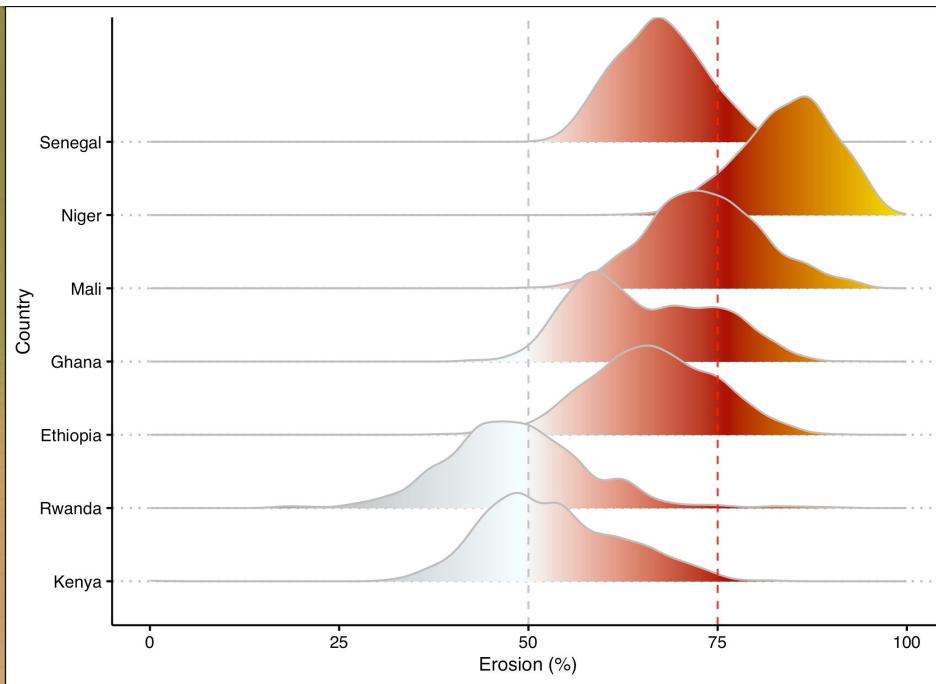
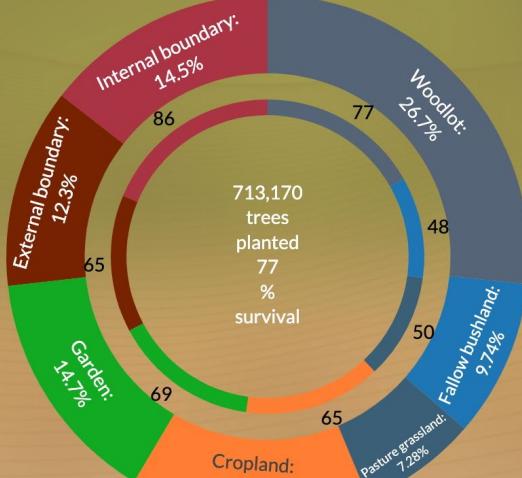
Citizen science data collection using the Regreening App

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!

