Restoration of Degraded Land for Food Security and Poverty Reduction in East Africa and the Sahel: Taking Successes in Land Restoration to Scale

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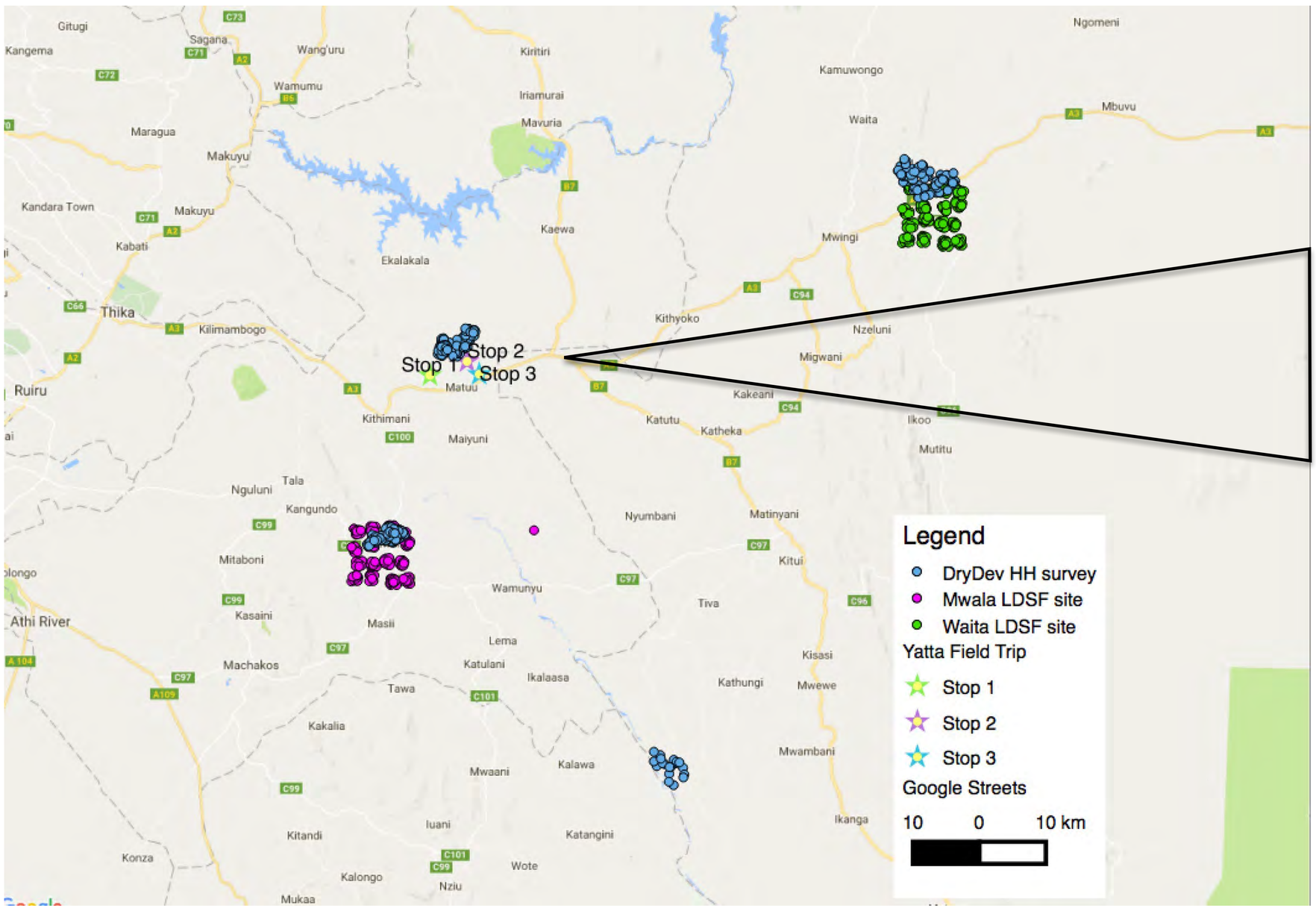
Field visit to Yatta, Machakos - January 17th, 2017



We will visit three farms in Yatta sub county within Machakos county to discuss with farmers, community facilitators, extension officers and NGO partners.

Introduction

This project is implementing the research 'in' development model, through a 'co-learning' engagement cycle with development partners in the action areas. For example, this project collaborates with the Drylands Development Programme (DryDev), which operates in Yatta through its implementing partner,WorldVision. A number of interventions have been implemented by DryDev, including: water harvesting, greenhouses, poultry production, land reclamation, water and sanitation and child sponsorships.

The IFAD land restoration project is implementing land restoration activities and monitoring these through real-time electronic data entry platforms, such as Open Data Kit (ODK). The IFAD-funded project is implementing planned comparisons of Zai pits with maize, tree planting with over six species of locally favored trees, and bio-pesticides. We engage community facilitators, lead farmers as well as development actors to implement the research in development model.

We will interact with development actors, ICRAF staff, community facilitators, PhD students, extension agents and farmers to observe on-the-ground activities! The last rainy season (2016 short rains) were well below average, meaning that farmers are worried about their yields. The plan is to engage and monitor over 2,000 farmers in Kitui, Machakos and Makueni counties in 2017, in collaboration with DryDev.

Three Farm Visits

David Mwanzia
zai basins and tree planting

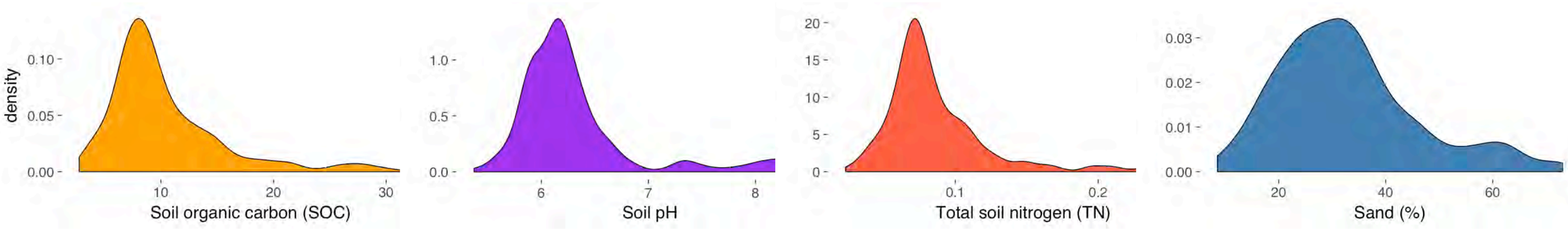
Christine
zai basins and tree planting

George Makau
Dry Dev interventions, FMNR

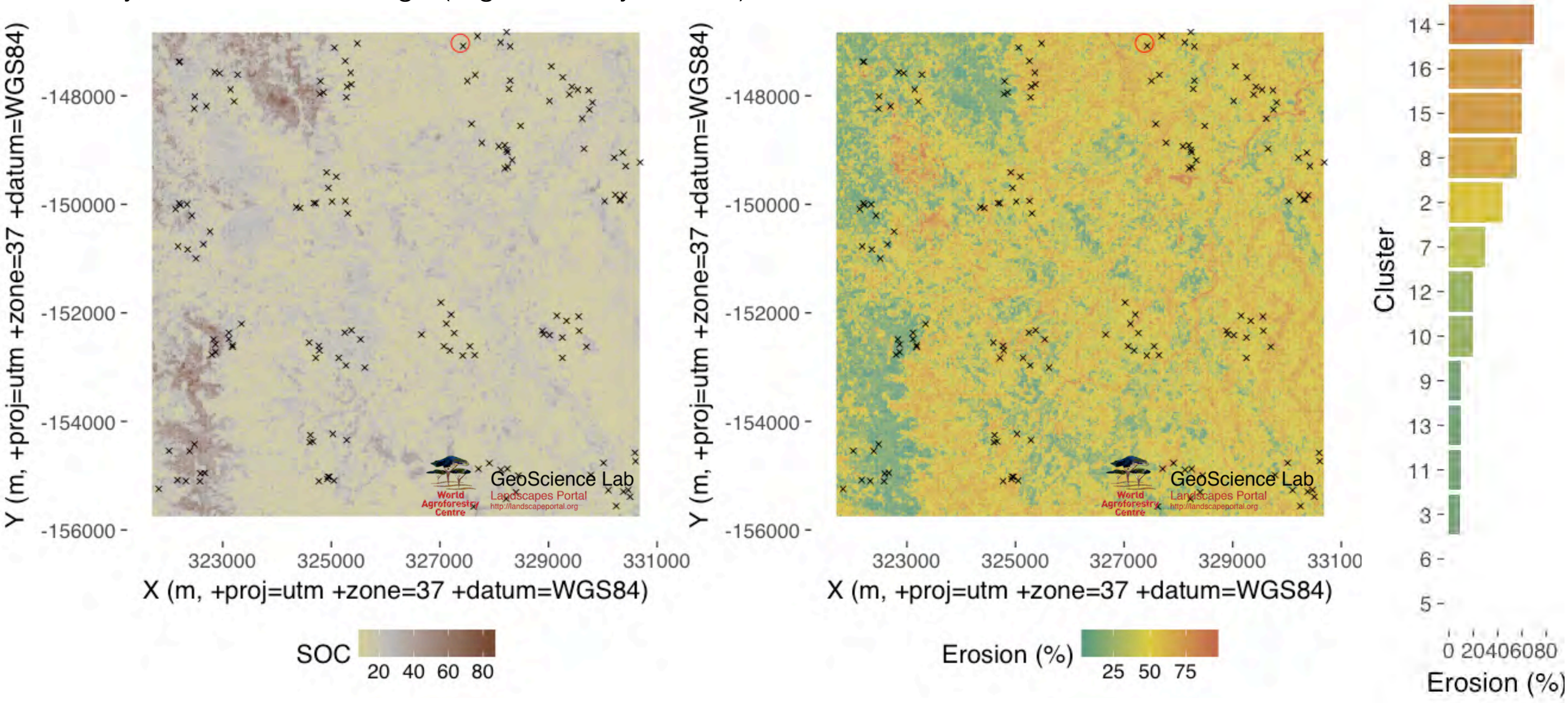
Mwala
Soil Health Assessment

By co-locating Land Health surveys conducted using the LDSF with sites where land restoration interventions are being implemented on farms, soil maps and land degradation assessments can be made at scales relevant to the farmers involved in the project. Also, this allows for monitoring of changes over time as a result of the restoration efforts being made.

The map on the left shows LDSF plots as black circles and the location of one of the farms included in the project (red marker) - the farm is located in Cluster 12 of the Mwala site.



By assessing and mapping a range of indicators of land degradation, soil and rangeland health in drylands, at both local and regional scales, it is possible to produce consistent estimates at multiple spatial scales. The maps can identify hotspot areas in agricultural and rangeland systems, provide rigorous baselines for land degradation indicators, target interventions more effectively, and monitor change (e.g. recovery of land) over time.



The maps above show soil organic carbon (SOC) predicted for the Mwala sentinel site on the left and predicted soil erosion prevalence (%) on the right. These maps are generated using Landsat imagery from February, 2016.

Areas with higher SOC (brown) are mostly on hillsides where there are remnants of forests and natural vegetation, while many of the agricultural areas have SOC values below 15 g/kg, which is generally considered low. Soil erosion prevalence is variable, with a mean of about 45% for the whole site and about 44% of the site having high erosion. *Soil organic carbon decreases with increasing erosion in the site, meaning that managing erosion is of critical importance for management to soil health.*