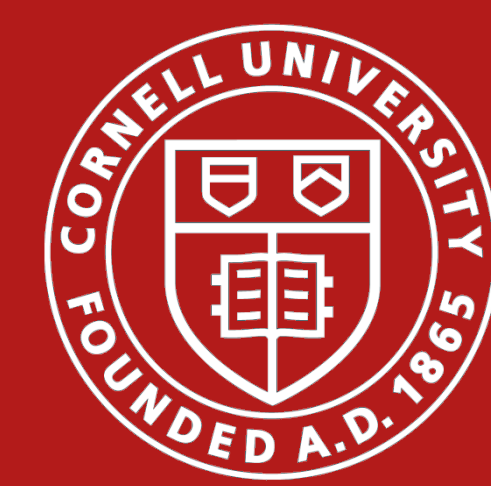


# Food-security interventions are a vehicle for climate change mitigation

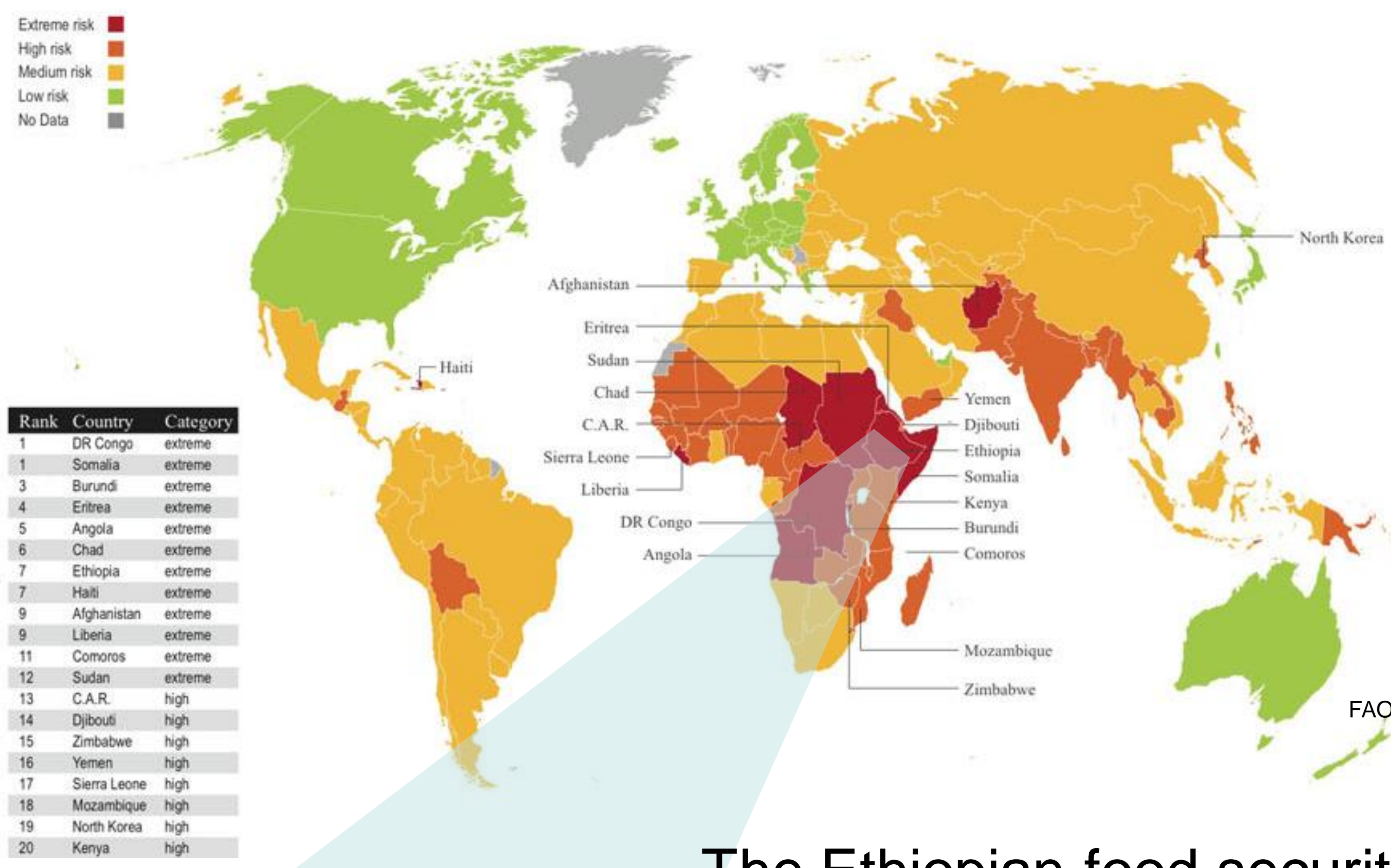
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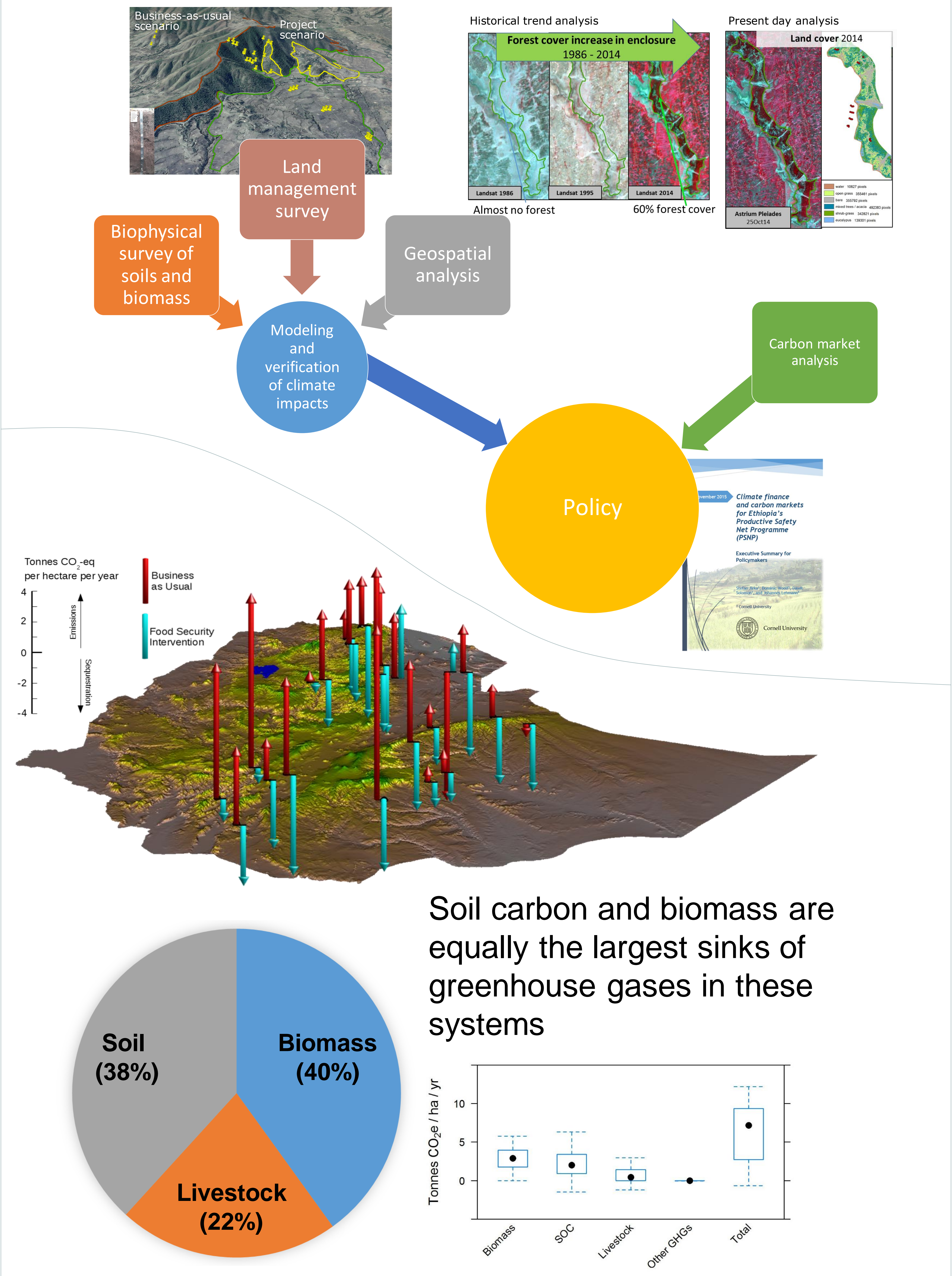
Chronic food insecurity and land degradation are global issues.



The Ethiopian food security program tackles endemic chronic food insecurity through a program\* that links food aid to land and ecosystem restoration projects designed to restore the productive capacity of rural communities.

\* The Ethiopian food security program (PSNP) is implemented by the Government of Ethiopia with support from the following development partners: Canadian International Development Agency, Irish Aid, European Commission, Royal Netherlands Embassy, Swedish International Development Cooperation Agency, UK Department for International Development, United States Agency for International Development, World Food Program and World Bank

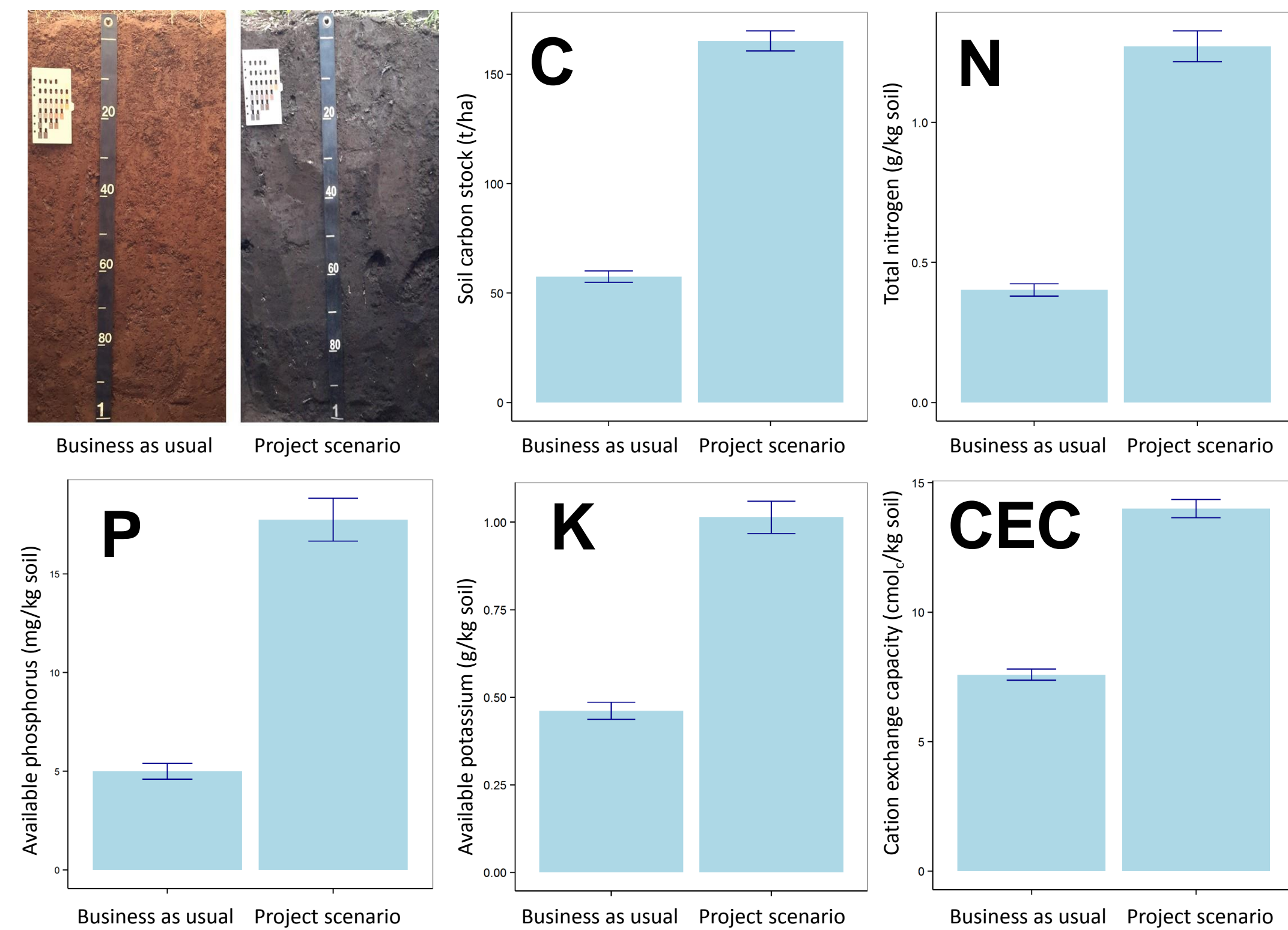
Cornell University is developing and applying novel *cost effective* methods for impact assessment, baseline data generation, monitoring, and verification, which are key to unlocking climate finance opportunities for landscape- and regional-scale projects.



More than 600,000 hectares already implemented!



In addition to providing improved livelihoods and food security, restoration of almost uninhabitable landscapes offers co-benefits in terms of carbon sequestration and improved soil fertility.



- Soil carbon stocks increased by a factor of up to three times.
- Soil nitrogen, phosphorus and potassium – three critical micronutrients - more that doubled with soil carbon.
- Soil plant nutrient retention and exchange capacity significantly enhanced.
- Other co-benefits include increased water holding and infiltration to mitigate droughts and floods.

But, further scaling up of these measures is limited by available finance for food security interventions.

Climate mitigation co-benefits of these food security interventions can help to support their scalability and sustainability through access to climate finance.

However, monitoring, reporting, and verification costs are currently prohibitive for scaling up AFOLU carbon finance projects.

## How national policy makers and development agencies can support such programs:

- Capitalize on land-based food security interventions as a vehicle for climate change mitigation and adaptation
- Integrate watershed management into food-security by promoting
  - Restoration of degraded (agro-)ecosystems
  - Building soil carbon and biomass greenhouse gas sinks
  - Synergies between mitigation, adaptation and resilience
  - Enhanced ecosystem services and co-benefits, such as enhancing soil fertility, combating desertification and conserving biodiversity
- Incentivize climate-smart food security interventions via climate finance to increase their scale and sustainability

## How international climate policy can support expansion of such programs.

Future compliance markets need:

- Streamlined and standardized greenhouse-gas accounting methodologies, designed to support the land use sector
- Below ground (both soil and biomass) carbon must be included in marketable carbon mitigation
- Jurisdictional or regional baseline and additionality accounting
- Cost-effective monitoring of carbon stocks using advanced geospatial and spectral reflectance methods



\*Presented and also displayed as a poster at the UN Framework Convention on Climate Change (UNFCCC) / 2015 Paris Climate Conference (COP21)

