

# Expressions of interest of global regions

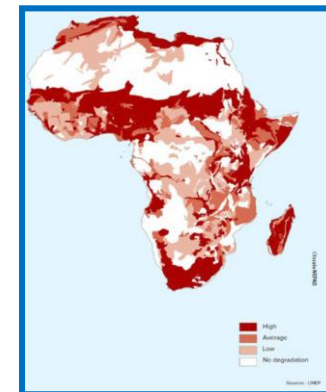
1. Prof. Tantely Razafimbelo, Antanarivo U., Madagascar
2. Prof. Hongmin Dong, CAAS, China
3. Dr. Beata Eموke Madari, EMBRAPA, Brazil
4. Prof. Pavel Krasilnikov, Lomonosov Moscow State University, Russia
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## Challenge(s) in our region

In Africa, degraded soils are estimated at 22% of the surface of the continent. There is a high need of innovations to restore these soils and to avoid SOC depletion. In addition, to document on their GHG emission, African countries need soil carbon data in AFOLU sector and need to put in place MRV.



## Pillars 1-2-3-4



## IRC in our region

IRC will provide a network allowing :

- support for African scientists (specific research, echoing data, results and diversity, data quality),
- capacity building for African countries on SOC and GHG MRV, on construction of shared databases,
- exchange of experiences and techniques on implementation of appropriate innovations to reduce SOC loss and restore SOC in depleted soils in Africa.

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### Challenge(s) in our region

Difficult to scale up existing technologies due to the small householder dominated agricultural production system in Asia, with average cropland area less than 0.3 ha per householder in China. Innovation technologies will provide solutions.



## Pillar 3



### IRC in our region

- Share knowledge and practices to promote soil carbon sequestration, improve soil health, ensure food safety and farmer's benefits.
- Learn the experience and mechanism to incentivize private sector to invest nature positive agricultural production system.
- Enhance the establishment of national network under the framework of global network.

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## Challenge(s) in our region

Knowledge and technology transfer, technical support and financial incentives as well as raising awareness about soil organic carbon's importance for sustainability of production is of vital importance. Research should provide best regional and system specific solutions for all farm sizes and business models.



Source: Portal Embrapa

## Pillars 1, 2, 3, 4



Source: Embrapa Carbioma pr.

## IRC in our region

A global research network with an active regional hub

- Should support and make incentives for regional and sub-regional collaboration, including institutional, administrative and financial terms
- Should help identify regional and sub-regional specific issues, priorities, challenges (research and policy)
- Should identify and help set up networks to support information flow (existing solutions) and to solve problems.

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### Challenge(s) in our region

Russia has a big proportion of soils with initially high SOC concentration, which are subjected to intensive C loss under cultivation. Soils with lower SOC stock are located in cold areas, and their use in agriculture is limited.



## Pillar 1



### IRC in our region

The contribution from the IRC to the research in Russia may include:

- improvement of models used for the prediction of SOC dynamics under various climatic scenarios;
- introduction and implementation of novel low-carbon technologies for C sequestration in soils;
- joint action aimed at awareness raising.

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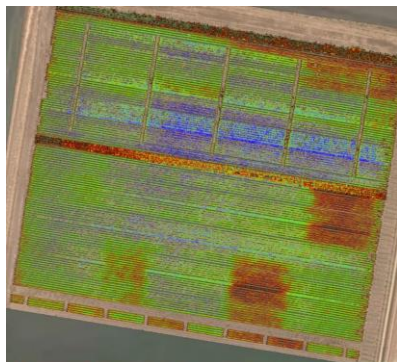
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### Challenge(s) in our region

The development of measurement technology and modelling approaches to critically assess management practices that modify the terrestrial ecosystem carbon cycle.



## Pillars 1-2



### IRC in our region

The Australian Federal Government has set a stretch goal for soil carbon measurement of under \$AU3 per hectare per year. Research links to the IRC will help deliver the goal by improving remote and proximal sensing technologies, regional soil carbon datasets and the development of the next generation of soil carbon computer models.