

CarboAfrica WorkPlan

The work is organized in a multi-disciplinary integrated research approach through the division of main tasks in seven complementary work-packages.

- WP1: Observation system and data integration and consolidation
- WP2: Ecosystems processes understanding of carbon fluxes
- WP3: Modelling for up-scaling to region and continent
- WP4: Fire-Climate-Carbon cycle interactions
- WP5: Communications and Capacity Development
- WP6: Evaluation of a sustainable carbon sequestration potential
- WP7: Project Management

Expected Results

1. increased network of carbon observations in SSA
2. better quantification of the terrestrial carbon budget of SSA
3. improved understanding of the SSA role in the global carbon cycle
4. estimation of the potential of SSA for carbon sequestration and emission reduction



Photo: @CarboAfrica

Contacts

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Quantification, understanding and prediction of carbon cycle and other green house gases in Sub-Saharan Africa

The Project

CarboAfrica is an international project funded by the European Commission under the 6th Framework Programme.



Photo: @Elisa Grieco



Duration: 3 years (01/10/06 - 30/09/09)
Total funds: 2.8 M €

Project Consortium

The CarboAfrica partnership includes 15 Institutions from Europe and Africa, and the Food and Agriculture Organization of the United Nations.

An agreement has been signed with the AMMA (African Monsoon Multidisciplinary Analyses) EU consortium in order to establish a link between these two initiatives.



Directly involved African countries are:
Benin, Botswana, Burkina Faso, Ghana, Ivory Coast, Mali, Niger, Congo, South Africa, Sudan and Zambia.

WHY CarboAfrica?

Africa plays a significant and increasing role in the global carbon cycle, and thus in the global climate system.

About 50% of interannual variability of global atmospheric CO₂ is attributed to the variability of the African carbon balance.



Photo: ©Eric Ceschia

There are still insufficient studies on the carbon cycle in most African ecosystems.

Africa's Emissions

Africa emissions respect to global are dominated by the biogenic component.

Fossil fuel	< 4%
Fires	40%
Deforestation	17%



Photo: ©Sally Archibald

Africa and Climate

Africa is a region highly vulnerable to climate change. The projected increase in temperature and possible decreased rainfall, could lead to a significant decrease in terrestrial ecosystem carbon stocks.

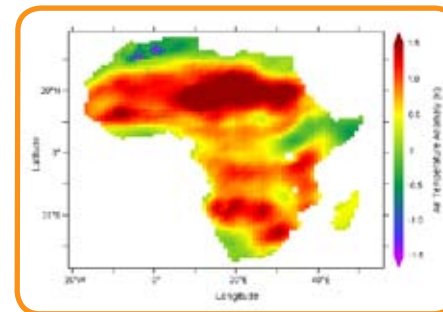
The potential for Africa to help mitigate climate change through carbon sequestration in land ecosystems and avoidance of emissions, including by reduced deforestation, is substantial.



Photo: ©Jonas Ardö

CarboAfrica Objectives

- 1) to support and expand a network of continued and enhanced observations of carbon stocks, fluxes, atmospheric concentrations and ecological processes in sub-Saharan Africa (SSA);
- 2) to improve biogeochemical models representing the main African ecosystem types;
- 3) to better understand the role of fire emissions from SSA in the global carbon cycle;
- 4) to enhance African capabilities to undertake mitigation and adaptation actions.



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