
GGW LDM

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OSS

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Bienvenue dans la documentation de GGW Land Degradation Management

CHAPTER ONE

INTRODUCTION

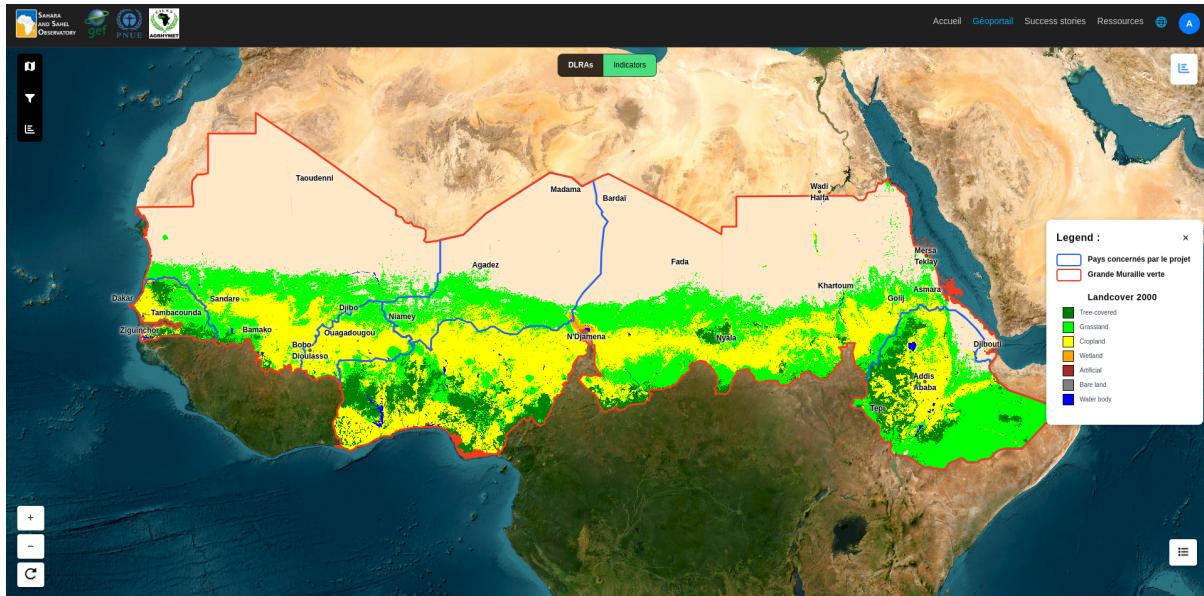


Fig. 1: Home page

La plateforme régionale de suivi de la dégradation des terres et de la gestion durable des terres (GDT) est développée dans le cadre du projet GEF-9825, mis en œuvre par le PNUE avec l'appui du FEM et coordonné par l'Observatoire du Sahara et du Sahel (OSS). Elle vise à appuyer les pays de la Grande Muraille Verte (Burkina Faso, Éthiopie, Niger et Sénégal) dans le suivi, l'analyse et la diffusion des informations sur la dégradation des terres et les pratiques de GDT. Hébergée par l'OSS, la plateforme permet de centraliser les données, visualiser les tendances, et faciliter la planification et la prise de décision en matière de restauration des terres.

1.1 Caractéristiques principales

- Calcul d'indicateurs environnementaux
- Accès à diverses sources de données
- Outils de cartographie avancés
- Interface utilisateur intuitive



1.2 Visitez la plateforme

Pour plus d'informations, veuillez consulter notre site web: <https://ggw-ldn.oss-online.org/>

CHAPTER
TWO

GEOPORTAL USER GUIDE

This guide explains the main features of the Geoportal interface and how to interact with the map, layers, and analytical tools.

- *Geoportal Overview Interface*
- *Change the Base Map*
- *Change Indicators*
- *Choose an Area of Interest*
- *Apply Filters*
- *Use the Legend*
- *View Statistics*
- *Zoom Controls*
- *Summary*

2.1 Geoportal Overview Interface

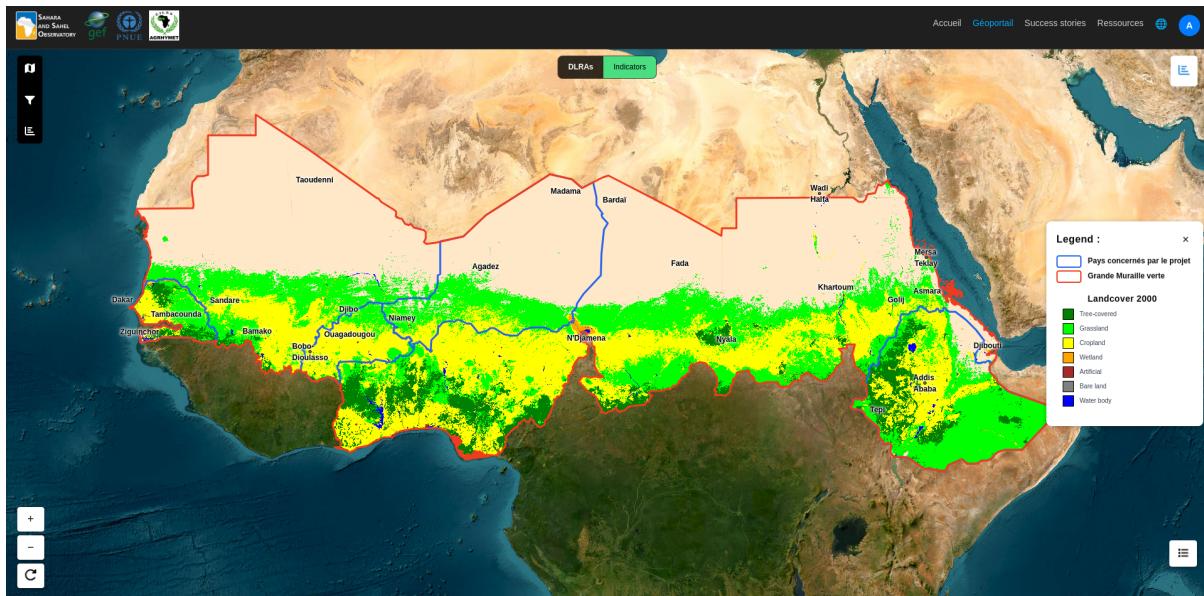


Fig. 1: Overview of the Geoportal interface

When you open the Geoportal, you will see the main map view, toolbar, and side panels for data and analysis. This layout allows easy navigation and quick access to both datasets and analytical tools.

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2.2 Change the Base Map

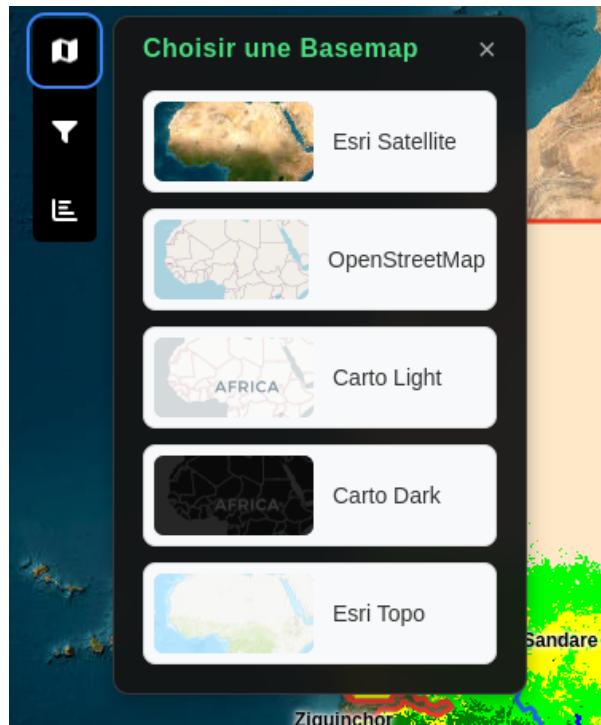


Fig. 2: Changing the base map

Users can switch between different base maps (e.g., satellite, topographic, street view) to visualize spatial information according to their preference. The base map selector is located on the right side of the toolbar.

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2.3 Change Indicators

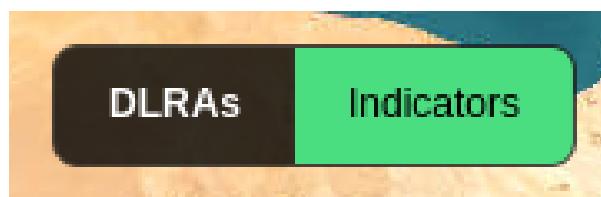


Fig. 3: Selecting an indicator

Click on the indicator panel to display available datasets, such as land degradation indicators or productivity layers. Indicators can be combined or compared visually on the map.

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2.4 Choose an Area of Interest

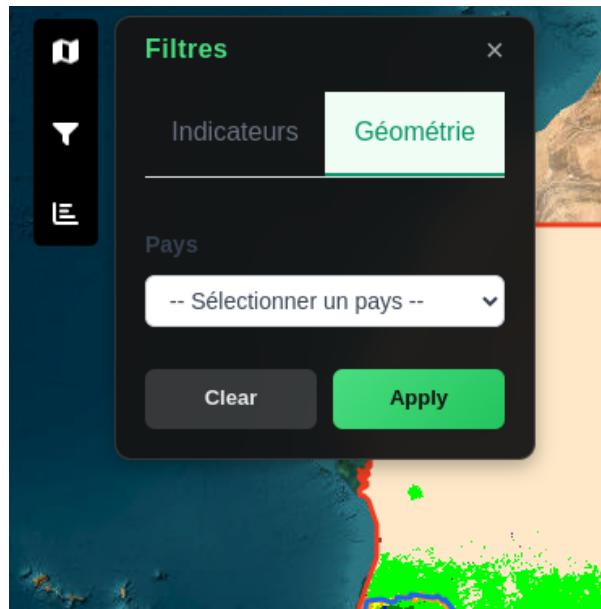


Fig. 4: Defining the area of interest

You can select a specific region or administrative boundary to focus the analysis. This helps restrict calculations and visualization to your study area.

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2.5 Apply Filters

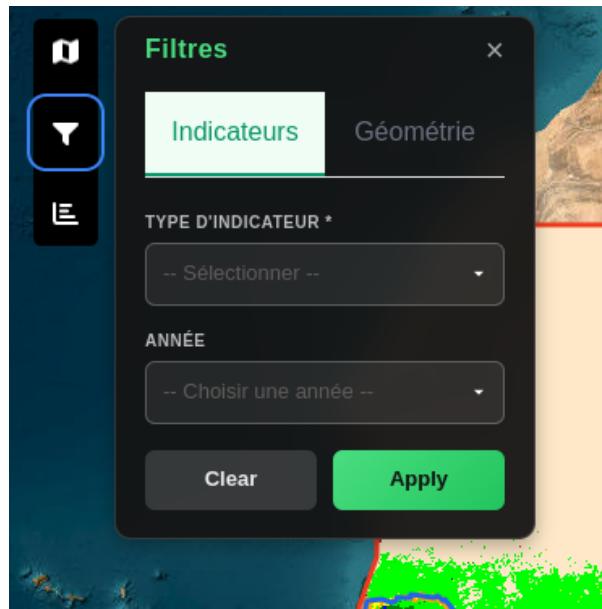


Fig. 5: Applying filters

Use the filter panel to refine your data selection (e.g., time period, indicator type, or data source).

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2.6 Use the Legend

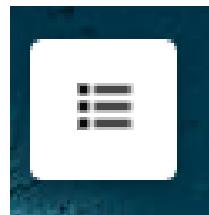


Fig. 6: Opening and understanding the legend

The legend explains the meaning of colors and symbols on the map, helping you interpret the spatial data correctly.

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2.7 View Statistics



Fig. 7: Viewing map statistics

The statistics panel displays charts and numerical summaries for the selected area or indicator.

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2.8 Zoom Controls

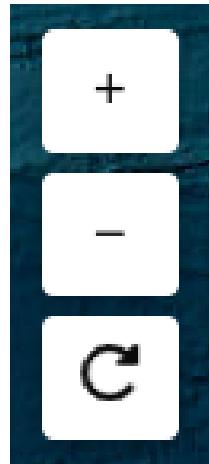


Fig. 8: Zooming in and out

Use the zoom buttons or mouse wheel to explore specific regions of the map more closely.

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2.9 Summary

This view summarizes all components of the Geoportal, including tools, panels, and map display.

CHAPTER THREE

SDG 15.3.1

The Sustainable Development Goal (SDG) 15.3 aims to **combat desertification** and **restore degraded land and soil**, striving to achieve a **land degradation–neutral world by 2030**.

Indicator **15.3.1** measures the **proportion of degraded land** over the total land area, using three key sub-indicators:

- *Land Cover*
- *Land Cover Change*
- *Land Productivity*
- *Carbon Stock*

3.1 Land Cover

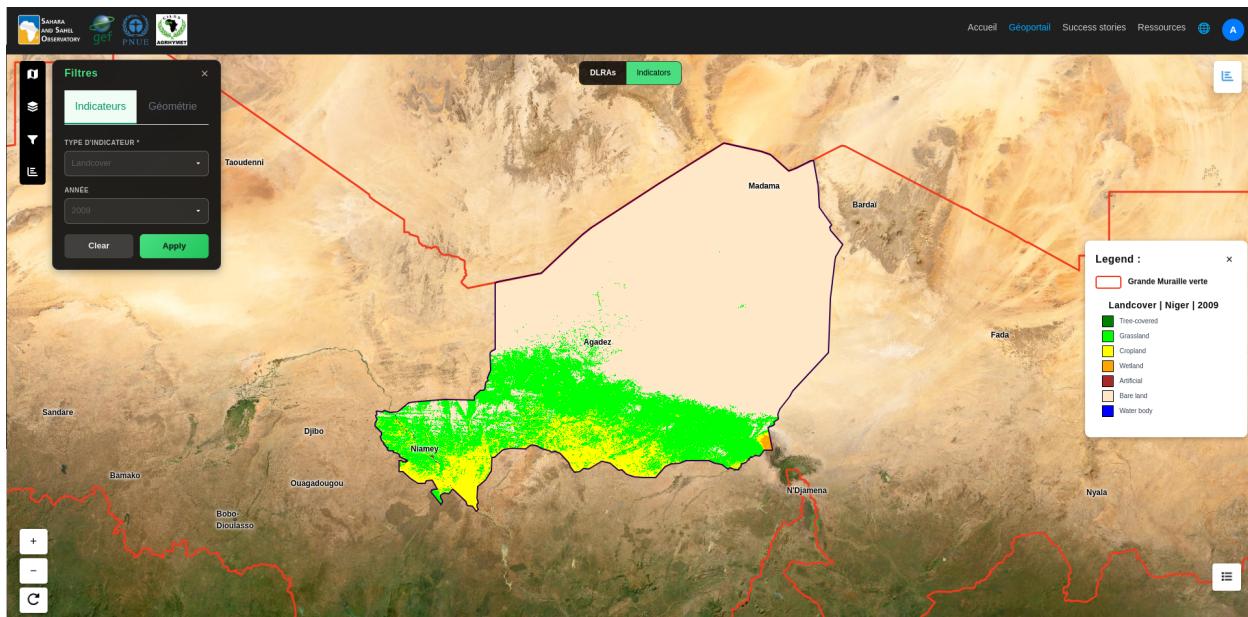


Fig. 1: Land cover map for Niger 2009

The land cover sub-indicator measures changes in the Earth's surface cover over time, detecting conversions between natural and human-modified land types. **Typical data sources:** - ESA CCI Land Cover

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3.2 Land Cover Change

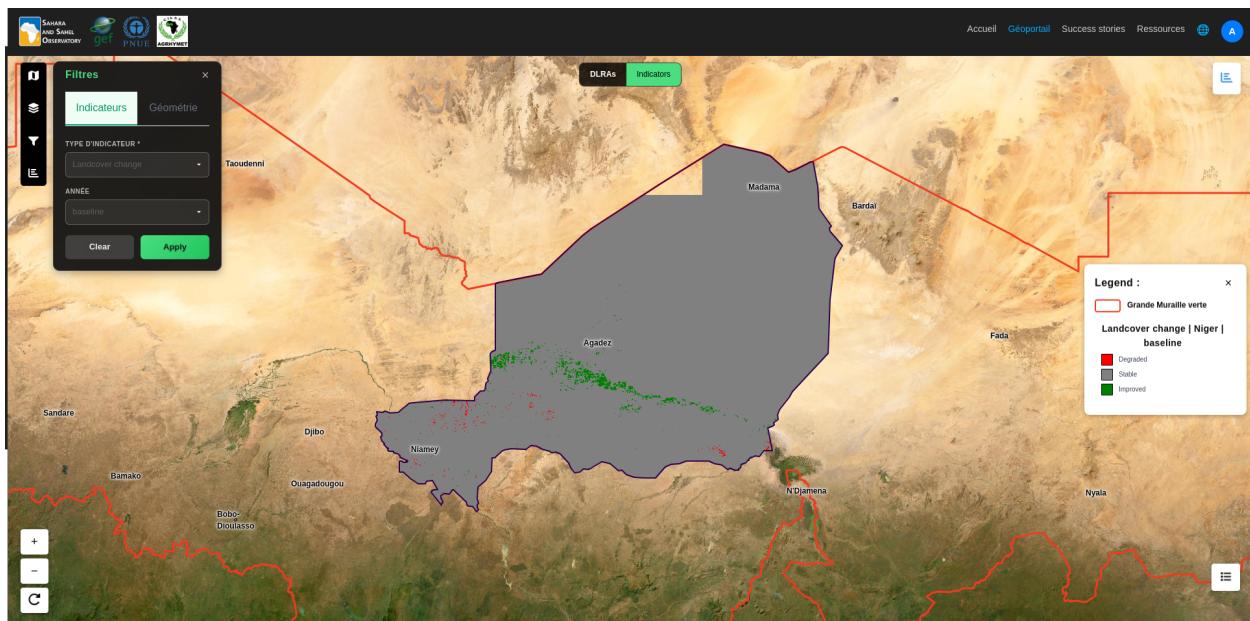


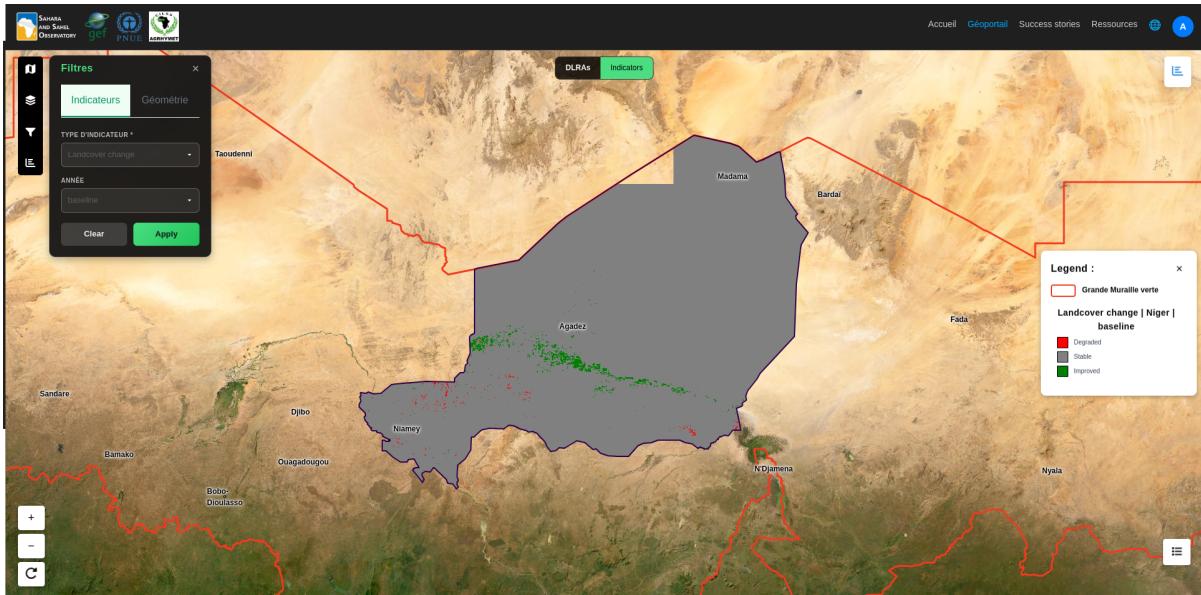
Fig. 2: Land cover map for Niger 2009

This sub-indicator assesses **changes in land cover** between two reference periods (e.g., 2000–2015 or 2015–2020). It helps detect transitions between land-cover classes (forest, cropland, grassland, built-up areas, etc.) and quantify **losses or gains of natural land**.

Typical data sources: - ESA CCI Land Cover

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3.3 Land Productivity



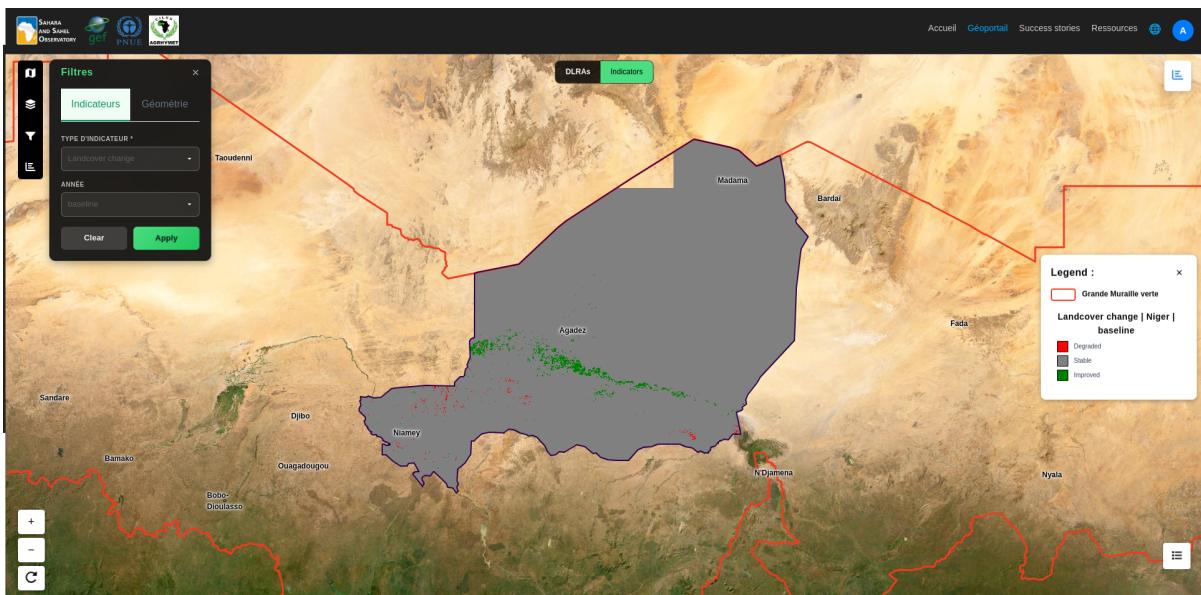
This sub-indicator analyzes **vegetation dynamics** (e.g., NDVI or EVI) to estimate **productivity trends**. A persistent decline in vegetation productivity can indicate **ecological degradation** or **human-induced land stress**.

Common methods: - NDVI trend analysis (Mann-Kendall, Theil-Sen) - Deviation from potential productivity - Land productivity state classification

Data sources: - MODIS NDVI/EVI - Landsat NDVI - Google Earth Engine analyses

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3.4 Carbon Stock



The **carbon stock** sub-indicator evaluates changes in **soil and biomass organic carbon**. Decreases in carbon storage often indicate **loss of organic matter, deforestation, or soil degradation**.

Components considered: - Soil Organic Carbon (SOC) - Above- and below-ground biomass carbon - Total change between two time periods

Data sources: - FAO GSOCmap - GlobBiomass - ESA CCI Biomass

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