



Context: The richness of African soil resources need to be protected for future generations. A number of threats are affecting the functioning of African soils, not only for the purpose of agricultural production, but also for other important environmental services that soil delivers to all of us. This is of particular importance once we know that many health-related problems in Africa are indirectly related to the services of soils.

Aim: To raise the awareness of the general public, policy makers and other scientists to the importance of soil in Africa, the Joint Research Centre of the European Commission is to produce the first ever Soil Atlas of Africa. This is in collaboration with the African Union Commission, the Food and Agriculture Organization of the United Nations (FAO), the Africa Soil Science Society, ISRIC – World Soil Information and scientists from both Europe and Africa. The Atlas links the theme of soil with rural development and, at the same time, supports the goals of the EU Thematic Strategy for Soil Protection in conserving a threatened natural resource that is vital to human existence.

Content: The Atlas compiles existing information on different soil types as easily understandable maps (both at regional and continental scales) covering the African continent (Figures 1 and 2). The Soil Atlas of Africa intends to produce derived maps at continental scale with descriptive text (e.g. vulnerability to desertification, soil nutrient status, carbon stocks and sequestration potential, irrigable areas and water resources) (Figure 3) as well as specific maps to illustrate threats such as soil erosion for instance. For each regional overview, large scale examples of soil maps and derived products are presented too.

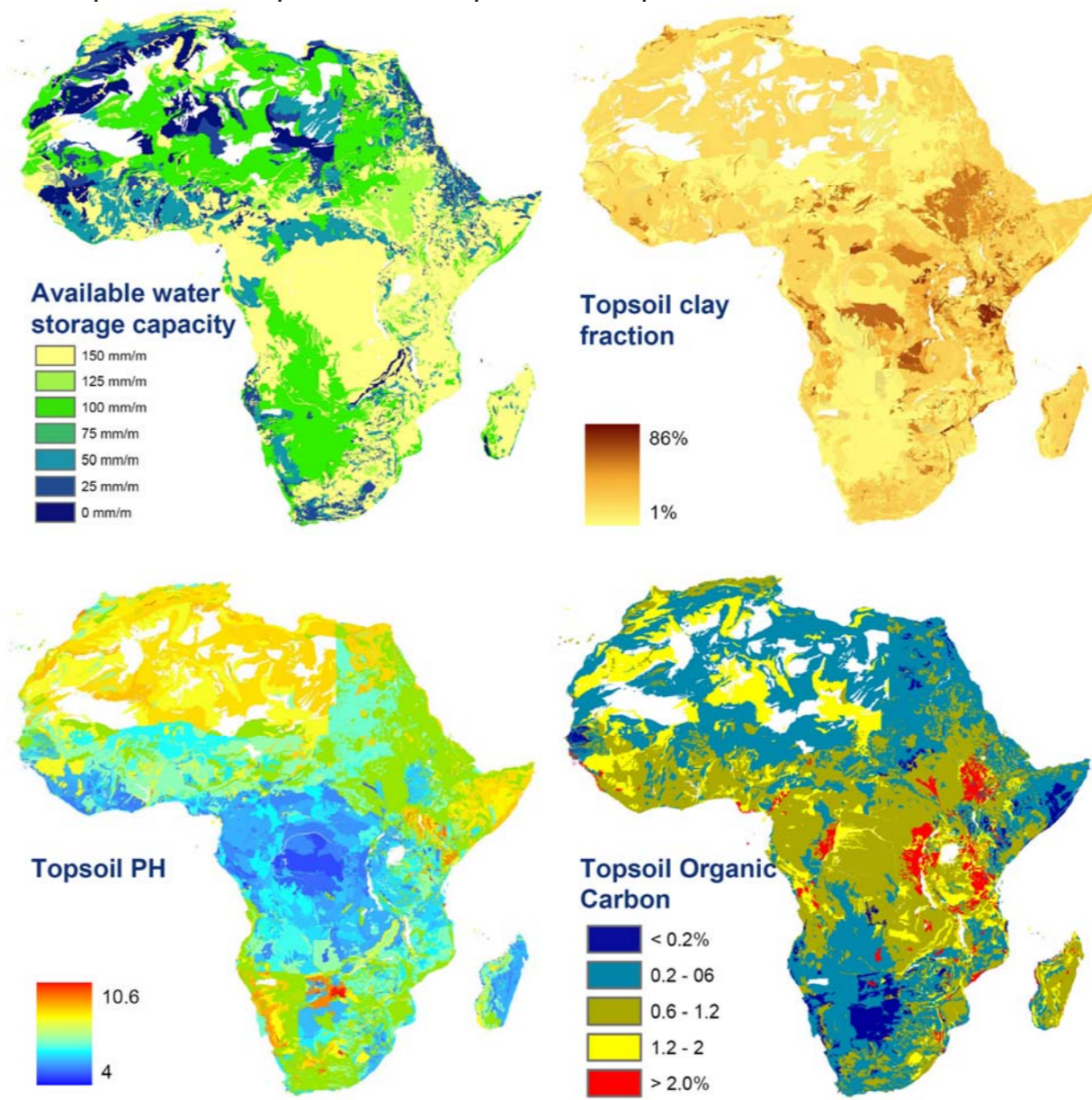


Figure 3. Examples of soil property maps derived from the database used for the Soil Atlas of Africa. The derived soil properties (provided for topsoil (0-30 cm) and subsoil (30-100 cm) separately) have been derived from analyzed profile data obtained from a wide range of countries and sources.

The database: The maps that make up this atlas are primarily derived from the **Harmonized World Soil Database (HWSD)** that has been developed by the Land Use Change and Agriculture Program of IIASA (LUC) and the FAO in partnership with the ISRIC – World Soil Information and with the European Soil Bureau Network (ESBN). The database we used in the Atlas is an update version of the HWSD, according to the World Reference Base for Soil Resources 2006 classification system (WRB2006).

The HWSD original data for Africa combines existing regional and national updates of soil information (SOTER and SOTWIS databases) with the information contained within the 1:5 000 000 FAO-UNESCO Soil Map of the World. The spatial resolution varies by region depending on the source data (from 1:1 million to 1:5 millions). The HWSD raster database has a resolution of about 1 km (30 arc-seconds).

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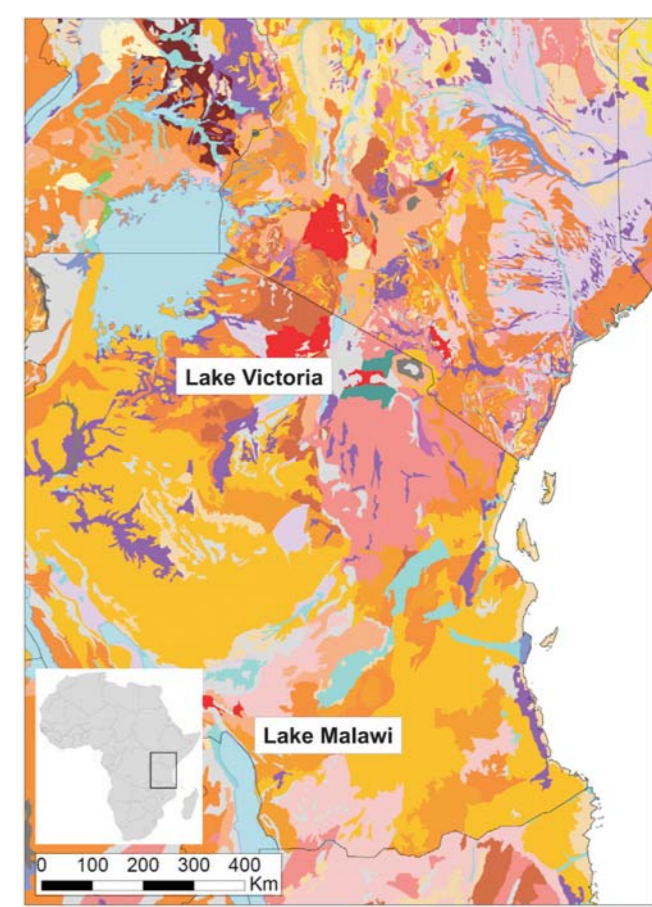
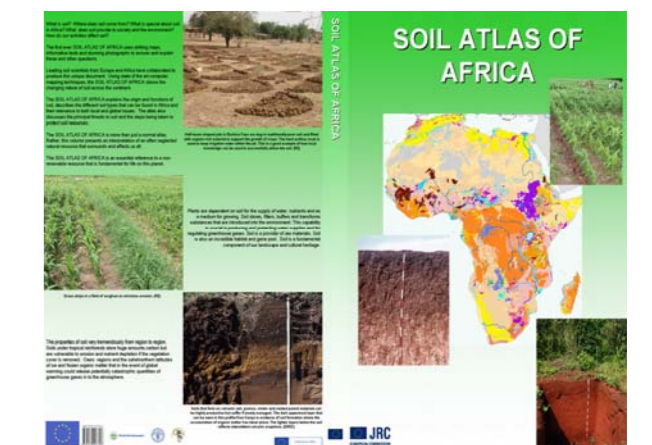


Figure 2. Example of a regional view of the dominant soil types as it is presented in the Atlas (actual display scale in the Atlas: 1:3 000 000). The classification system is that of the World Reference Base for Soil Resources 2006 (see Figure 1 for legend).

Outputs: The Atlas will be published as a **hardcover book** containing 174 A3 pages, which will allow soil maps to be displayed at the A2 scale. Both French and English versions of the Atlas will be edited. The Atlas will be sold at a low cost and will be for free for educational purpose (Schools and Universities). A digital version on CD and eventually freely downloadable on internet will also be available.



Together with the publication of the Atlas, associated **datasets on soil characteristics for Africa will be made available**. These datasets will be useful for making broad distinction among soil types and provide general trends at the global and regional scales. The datasets will be made accessible for **free downloading** from the portals of the SOIL Action and the ACP Observatory for Sustainable Development.

<http://eusoiils.jrc.ec.europa.eu/>
<http://acpobservatory.jrc.ec.europa.eu>

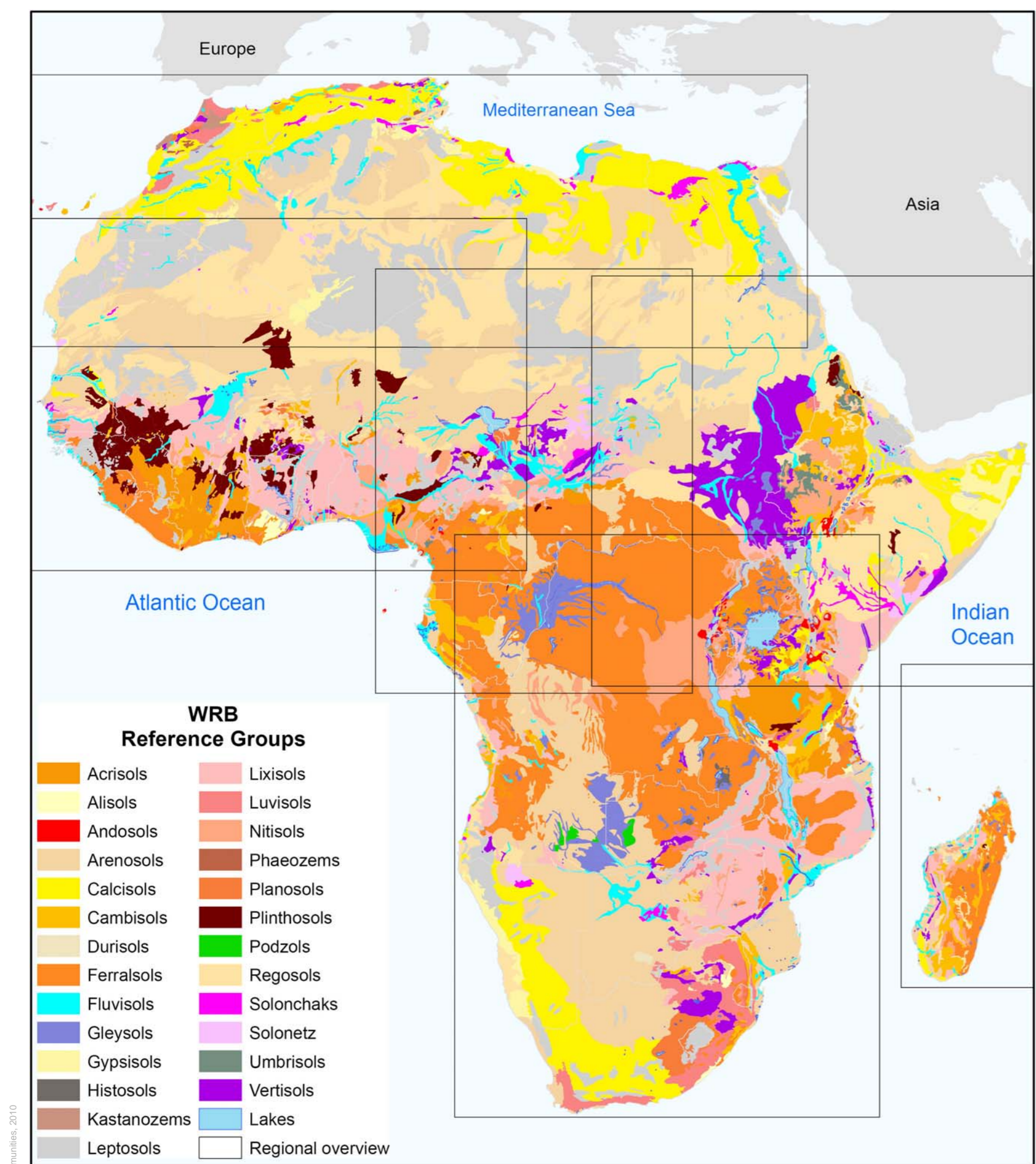


Figure 1. Distribution of the major soil types in Africa with the main regional overviews the Atlas focuses on (open rectangles). The map shows the dominant Reference Soil Groups according to the WRB2006 classification and correlation system for Africa (IUSS Working Group WRB, 2007). The map clearly shows the zonal arrangement of soils in Africa.