



FLOWERED

FLOWERED is coordinated by the Department of Chemical and Geological Sciences - University of Cagliari and it involves 14 Partners of 7 different Countries : Ethiopia, Italy, Kenya, Spain, Tunisia, Tanzania, United Kingdom

Partnership

- Department of Chemical and Geological Sciences University of Cagliari, Italy
- Desertification Research Centre University of Sassari, Italy
- Centro di GeoTecnologie; University of Siena, Italy
- Departament de Cristallografia, Mineralogia i Dipòsits Minerals Facultat de Geologia - Universitat de Barcelona, Spain
- Institute of Biological Environmental and Rural Sciences University of Aberystwyth, UK
- College of natural Sciences University of Addis Ababa, Ethiopia
- Department of Chemistry and Biochemistry, School of Science, University of Eldoret, Kenya
- Nelson Mandela African Institution of Science and Technology, Tanzania
- Oikos East Africa, Tanzania
- Observatoire du Sahara et du Sahel International, Intergovernmental Organization operating in Africa's Sahara-Sahel Region
- Hydro Technical Engineering S.r.l., Italy
- Planetek Italia S.r.l., Italy
- D D'Enginy Biorem S.L., Spain
- Geomatrix PLC, Ethiopia



de-Fluoridation technologies for imprOving quality of WatEr and agRo-animal products along the East African Rift Valley in the context of aDaptation to climate change
Ethiopia, Kenya and Tanzania



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FLOWERED OBJECTIVE

Is to contribute to the development of a sustainable water management system in areas affected by fluoride contamination in water, soil and food in the African Rift Valley (Ethiopia, Kenya and Tanzania), thus to improve living standards of its population.



FLOWERED aims to study, test and implement innovative defluoridation technologies for drinking and irrigation water that will mainly operate at small village scale and to develop an integrated, sustainable and participative water and agriculture management at a cross-boundary catchment scale.

On the basis of the complexity of the issue of water de-fluoridation, the proposed scientific approach in FLOWERED is based on a detailed knowledge of the geological and hydrogeological setting that controls contamination of water that constitute the prerequisite for the implementation of a sustainable water management and for the proposal of sustainable and suitable strategies for water sanitation and agricultural system.

Innovative agricultural practices are being assessed, aiming to mitigate the impacts of fluoride contamination of water and soil on productivity of selected food and forage crops and dairy cattle health and production. The development of an innovative and shared Geo-data system support the integrated, sustainable and participative management system.

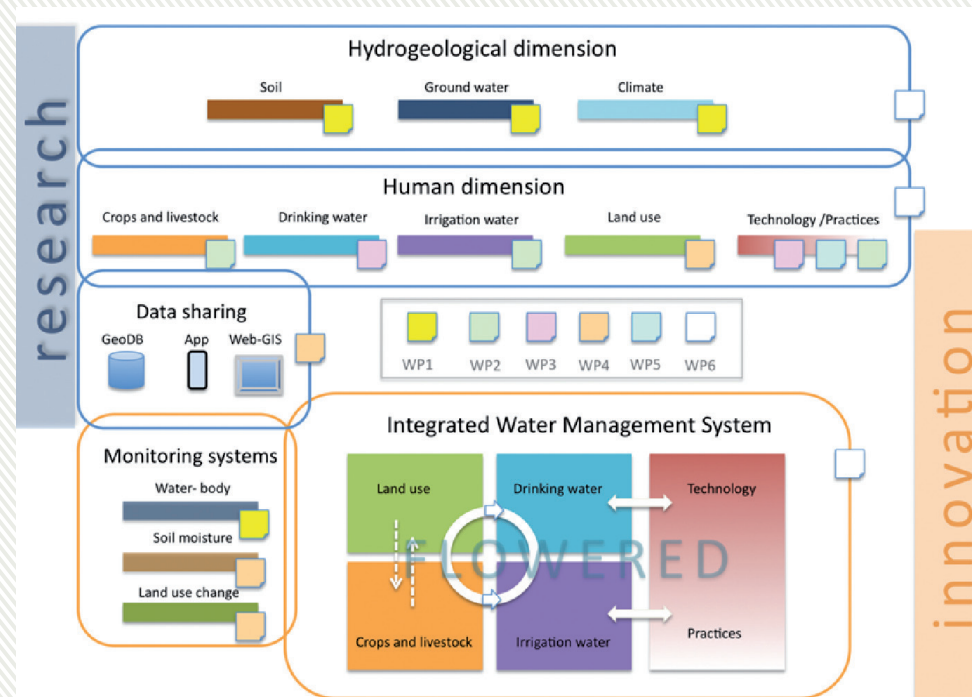
FLOWERED, focusing on innovative technologies and practices and taking into account local experiences, in implementing an integrated water and agriculture management system and will enable local communities to manage water resources, starting from using efficient de-fluoridation techniques and applying sustainable agricultural practices.

The integrated approaches improve knowledge for EU partners, local researchers, farmers and decision makers. The Project through the involvement of SMEs will strengthen the development co-innovative demonstration processes as well as new market opportunities.



FLOWERED METHODOLOGY

The FLOWERED methodology is planned to answer to the need to achieve an Integrated Water Management System based on the deep knowledge of the natural and human dimension of the study areas: research (blue boxes) and innovation (orange boxes) activities are overlapped to demonstrate the relationship between them.



IMPLEMENTATION OF 8 WORK PACKAGES (WP) TO ACHIEVE THE FLOWERED OBJECTIVE

- WP1** - Advancing hydrogeological knowledge
- WP2** - Developing mitigation options for fluoride contamination in agriculture and livestock system
- WP3** - Developing innovative water defluoridation technologies
- WP4** - Innovative Geo-Data system for knowledge management
- WP5** - Socio-economic Analyses
- WP6** - Dissemination and Exploitation of results and Communication activities
- WP7** - Management
- WP8** - Ethics requirements