



FLOWERED

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*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*



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.

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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.

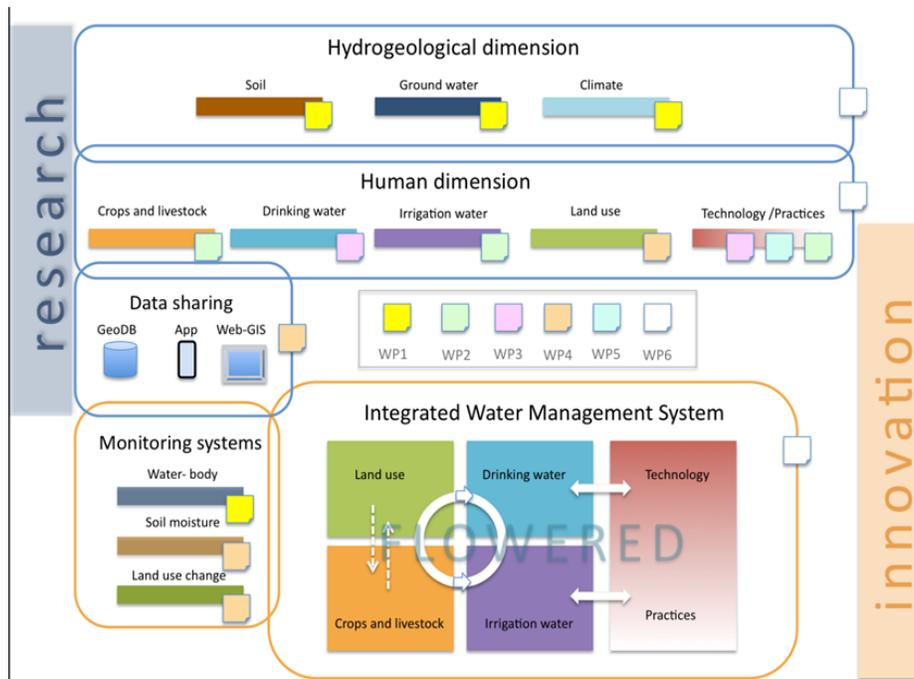
Innovative agricultural practices will be assessed, aiming to mitigate the impacts of fluoride contamination of water and soil on productivity of selected food and forage crops and dairy cattle health and production. The development of an innovative and shared Geo-data system will support the integrated,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

FLOWERED, focusing on innovative technologies and practices and taking into account local experiences, will implement an integrated water and agriculture management system and will enable local communities to manage water resources, starting from using efficient defluoridation 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

FLOWERED is coordinated by the Department of Chemical and Geological Sciences - University of Cagliari and it involves 13 Partners of 7 different countries: Ethiopia, Italy, Kenya, Spain, Tunisia, Tanzania, UK.



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PARTNERSHIP

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