RTD project co-financed by the European Community's 7th Framework Programme (Grant agreement 262902)

SIRIUS

Sustainable Irrigation water management and River-basin Governance: Implementing User-driven Services

SIRIUS is developing satellite-assisted services for efficient water resources management in support of food production in water-scarce environments. It addresses water governance and management in line with the vision of bridging and integrating sustainable development and economic competitiveness.

A set of pilot Case Studies represents a sample of the wide range of conditions found in the world, covering Spain, Italy, Romania, Turkey, Egypt, Mexico, Brazil, and India.

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FUNDACAO DA FACULDADE DE CIENCIAS E TECNOLOGIA DA UNIVERSIDADE NOVA DE LISBOA

ASTRIUM, United Kingdom
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Start date 1 october 2010/ duration 3 years - Total cost 2,934,817.80€ / EU contribution 2,499,997€

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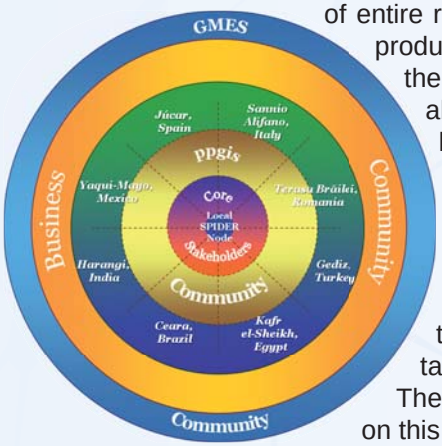
Objectives

SIRIUS is developing satellite-assisted services for efficient water resources management in support of food production in water-scarce environments.

Context

Water is a critical resource worldwide and water conflicts are arising in many regions, with available resources diminishing in quantity and quality and the range of uses in competing sectors increasing. Lack of water can adversely affect the economic and social stability of entire regions. Water for food production represents by far the largest share among all uses and its demand keeps growing with increasing population and changing diets. Therefore efficient water resource management is paramount to the long-term sustainability of agriculture. The SIRIUS project takes on this challenge.

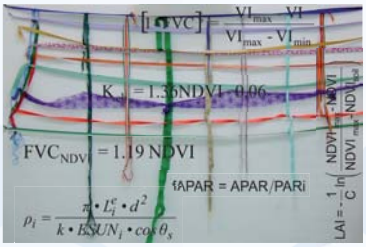


Pilot areas and Partners

SIRIUS-SPIDER is being implemented in eight pilot areas across four continents. It is being tested and evaluated by Core Stakeholders (those who are involved from the beginning in development and training) and embedded in the local community of ppgis (public participation geographic information system) and service providers.

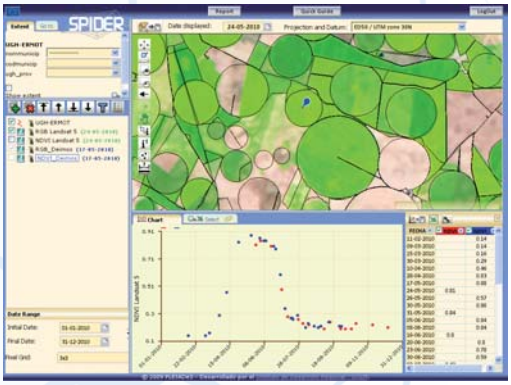
Vision and expected outcome

Earth observation provides an unprecedented wealth of information for optimized irrigation water management, allowing in particular to monitor crop types and to assess crop water consumption through modeling. We want to make this information accessible to all stakeholders (through smart information and communication technology) as the basis for transparent and collaborative management.
The SIRIUS project is set to provide new insights, new tools and new services for this particular area of resources management, addressing water governance and management in line with the vision of bridging and integrating sustainable development and economic competitiveness.



Science and community weaving

SIRIUS weaves a community of water managers, farmers, and service providers, all committed to sustainable irrigation water governance. Combining rigorous science and easy-to-use functionality, the SIRIUS tools, such as SPIDER, are the threads of this process.



What is SPIDER?

SPIDER (System of Participatory Information, Decision-support, and Expert knowledgs for River-basin governance) is a webGIS based on a multi-sensor constellation that provides information and data needed for water management of farms, irrigation schemes, aquifers and river-basins.

Benefits

Our tools contribute to creating a sustainable future for European irrigated agriculture and to increasing competitiveness of food products both in internal and external markets. They help involve all affected people in decision-making on the use of scarce water resources.
SIRIUS provides tools and instruments that facilitate the successful implementation of the Water Framework Directive and the Sustainable Development policies.