

# SIRIUS

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

### GROWING FOOD IN HOT AND DRY ENVIRONMENTS

Climate change directly impacts food production. As temperatures rise, irrigation water is increasingly needed to keep crops growing during the warm summer months. Yet water too is a scarce resource. Therefore efficient water resource management is paramount to sustainable agriculture. The SIRIUS project takes on this challenge.

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. Water for food production represents by far the largest share among all uses and its demand keeps growing with increasing population and changing diets. Lack of water can adversely affect the economic and social stability of entire regions.



Campo irrigato con riflesso di colore © Robbic - Fotolia.com

**SIRIUS will develop efficient water resource management services in support of food production in water-scarce environments.**

In the coming decades, dealing with the effects of climate change is foreseen to become a significant challenge for Europe's farmers. Dealing with hot and dry forecasts for the summers ahead, the agricultural industry needs irrigation water to keep food production at its current levels. However, in Europe as in other parts of the world, water is increasingly a scarce resource. Getting the balance right between rising demand and a limited supply of water is a major challenge. Indeed, efficient water resource management in water-scarce environments is key to the long-term sustainability of Europe's agricultural sector.

The SIRIUS project is set to provide new insights and operational tools into this particular field of resource management, addressing the water challenge in accordance with the vision of bridging and integrating sustainable development and economic competitiveness.

The project will develop new services for water managers and food producers, including maps detailing irrigation water requirements in different areas, crop water consumption estimates, and a range of additional further products for sustainable irrigation, water use and management under conditions of water scarcity, and drought.

Applying an integrated approach, SIRIUS will develop a GMES service that takes into account the economic, environmental, technical, social and political dimensions of the food-water challenge.



**ANNA OSANN**  
IS PROJECT COORDINATOR

### QUESTIONS & ANSWERS

#### What do you want to achieve with this project?

SIRIUS will implement innovative water saving technologies, using methodologies and tools that encourage local participation. It seeks to improve irrigation management using adaptive measures to safeguard food security, revitalize the irrigation sector and boost agribusiness.

#### Why is this project important for Europe?

SIRIUS will contribute to the sustainability and competitiveness of value-adding services, including developing European GMES business infrastructure. Europe's water footprint is significantly externalised, and increasing self-sufficiency is therefore a desirable goal.

#### How does your work benefit European citizens?

SIRIUS will make GMES more visible to Europe's citizens with regards to food security in the context of increasing water scarcity in many parts of Europe. A participatory process will involve local communities, decision-makers, water managers, agribusinesses and farmers.

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### LIST OF PARTNERS

- Integrated Resources Management (IRM) Company Limited, Malta
- Fundação da Faculdade de Ciências e Tecnologia, Universidade Nova de Lisboa, Portugal
- Infoterra Limited, United Kingdom
- Istituto Nazionale di Economia Agraria, Italy
- ARIESPACE SRL, Italy
- Universidad Politécnica de Valencia, Spain
- Diputación de Alicante, Spain
- Institut de Recherche pour le Développement, France
- Institutul National De Cercetare - Dezvoltare Pentru
- Imbunatatiri Funciare - I.N.C.D.I.F. - "ISPIF" Bucuresti, Romania
- Institute of Agricultural Economics, Romania
- Sveriges Meteorologiska och Hydrologiska Institut, Sweden
- EA-TEK Uluslararası Arastırma Gelistirme Mühendislik Yazılım ve Danışmanlık Limited Şirketi, Turkey
- Ministry of Water Resources and Irrigation, Egypt
- Colegio de Postgraduados, Mexico
- Servicios de Estudios en Ingeniería y Sistemas S.A. de C.V., Mexico
- Bangalore University, India
- Instituto Nacional de Pesquisas Espaciais, Brazil

### COORDINATOR

Universidad de Castilla-La Mancha, Spain

### CONTACT

**Dr. Anna OSANN**  
Tel: +34 967 599286  
E-mail: Anna.Osann@uclm.es

### PROJECT INFORMATION

Sustainable Irrigation water management and River-basin governance: Implementing User-driven Services (SIRIUS)

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