



# Gmes 4 REGIONS

AND LOCAL AUTHORITIES

DORIS\_Net and the network of GMES Regional Contact Offices (RCOs)



[www.gmes4regions.eu](http://www.gmes4regions.eu)

- 1. *Short summary on DORIS\_Net (objectives – RCO network)***
- 2. *Achievements***
- 3. *Draw backs***
- 4. *Measures of success***
- 5. *Sustainability***
- 6. *Conclusions - Lessons learnt***

***DORIS\_Net: “Downstream Observatory organised by Regions active In Space – Network,, - Coordinated Action SPA.2010.1.1-07, FP7 Space, Feb 2011-Jan 2013***

**Objectives**

***To create GMES Regional Contact Offices (RCO) in DORIS\_Net (Core) Regions with people expert in GMES to support regional actors (companies, research, end-users, regional authorities, ...) in***

- 1. being aware of the opportunities of GMES***
- 2. being trained and guided in developing new products***
- 3. participating in dissemination events on GMES***

***To link RCOs in a network, sharing knowledge, tools, events and practices***

***To spread knowledge from the network to the interested public in the regions, countries, Europe (e.g. GMES, CoR)***

### Tasks of a Regional Contact Office:

- Maintaining a detailed and updated picture of the regional actors in GMES (**inventory of capacities and needs**)
- Creating **events** to inform actors **on GMES** and leverage their **awareness**
- Participating in the shared activities of the network; in particular
  - producing **market observatories** (catalogue of services, review of needs)
  - **dissemination** (production of success stories, fact sheets, presentations, research briefs)
- Tutoring new regions in their activities on GMES, **recruiting new RCOs**

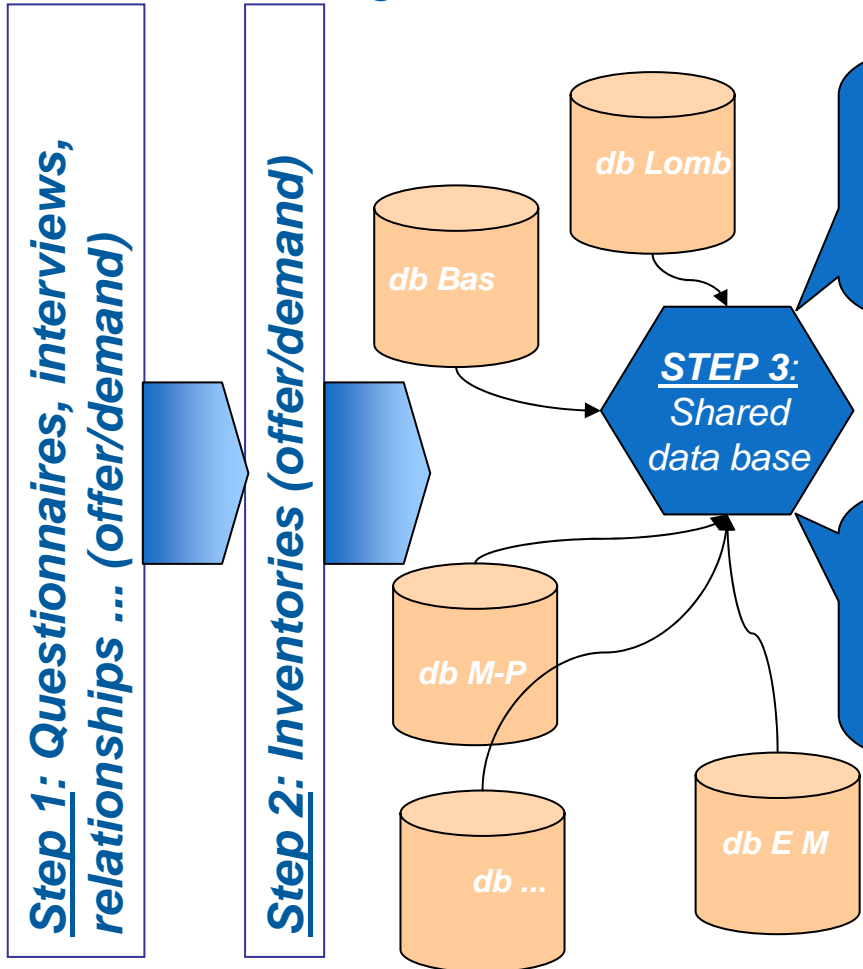
### RCOs established in:

- CNR IREA, **Lombardia**, (It) Coordinator
- CEON, **Bremen** (D)
- CETE, **Midi Pyrénées + Aquitaine** (Fr)
- G-STEP, Univ of Leicester, **East Midlands** (UK)
- SRCTE, **Azores** (Pt)
- TERN, **Basilicata** (It)
- POLE MER + GIS-BreTel, **Bretagne** (Fr)



DORIS\_Net is the first project fully mobilised on the **NEREUS platform**; it has been appointed “**NEREUS flagship project**”

RCOs monitor regional capacity in GMES (*inventory*)  
 a knowledge base for the network



ID_Provider	Organization	Type	Address	...	Main activity	Contact person
Progressive Code	Name of the organization	Possible topic: Company, Research Center, Public Authority, Consultancy, NGO		...	Brief text describing main provider activity	
P1	Text	Code				
P2	Text	Code				
P3	Text	Code	Text		Code	Text
...						

**Provider-service link**

ID_Service	G4R Sector	EARSC Sector	Description	Current User	Type of data	...	ID Provider
Progressive Code	G4R taxonomy 2nd level sector	EARSC taxonomy 2nd level sector	EARSC_TAXO user view	specifies the user, when possible	Satellite, ground based, in situ...		link between provider table and service table
S1	Floods monitoring	Emergencies_Natural disaster management	Public Authorities_Emergency Service	Text	Code		P1
S2	...	...	Text	Text	Code		P1
S3			Text	Text	Code		P2
...							P3

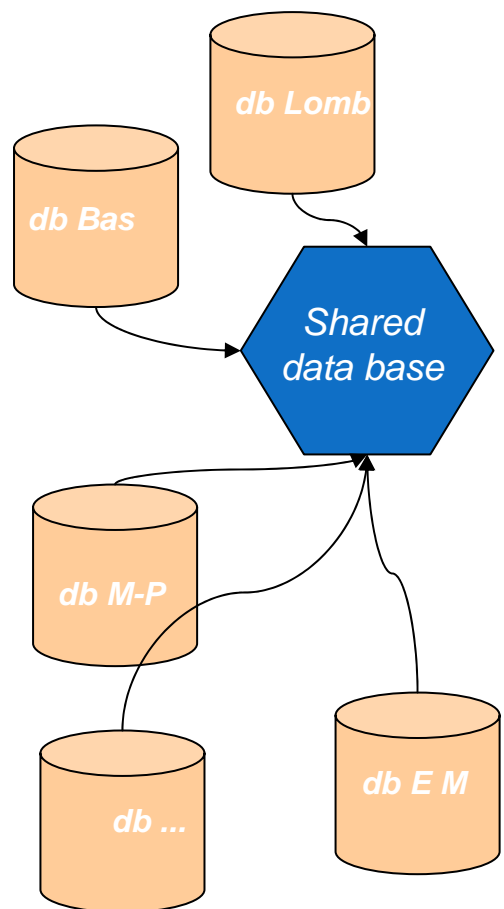
**Service-need link**

ID_Need	G4R Sector	EARSC Sector	Description 1	...	ID_User expressed this need	ID_Potential /Current service answering this need	Source of this need expression
Progressive Code	G4R taxonomy 2nd level sector	EARSC taxonomy 2nd level sector	EARSC_TAXO user view		This ID creates a link between Needs table and User table	This ID creates a link between Needs table and Service table	Precise how this need was collected
N1			Text		U1	S1	Text
N2			Text		U2	S2	Text
N3			Text		U3	S3	Text

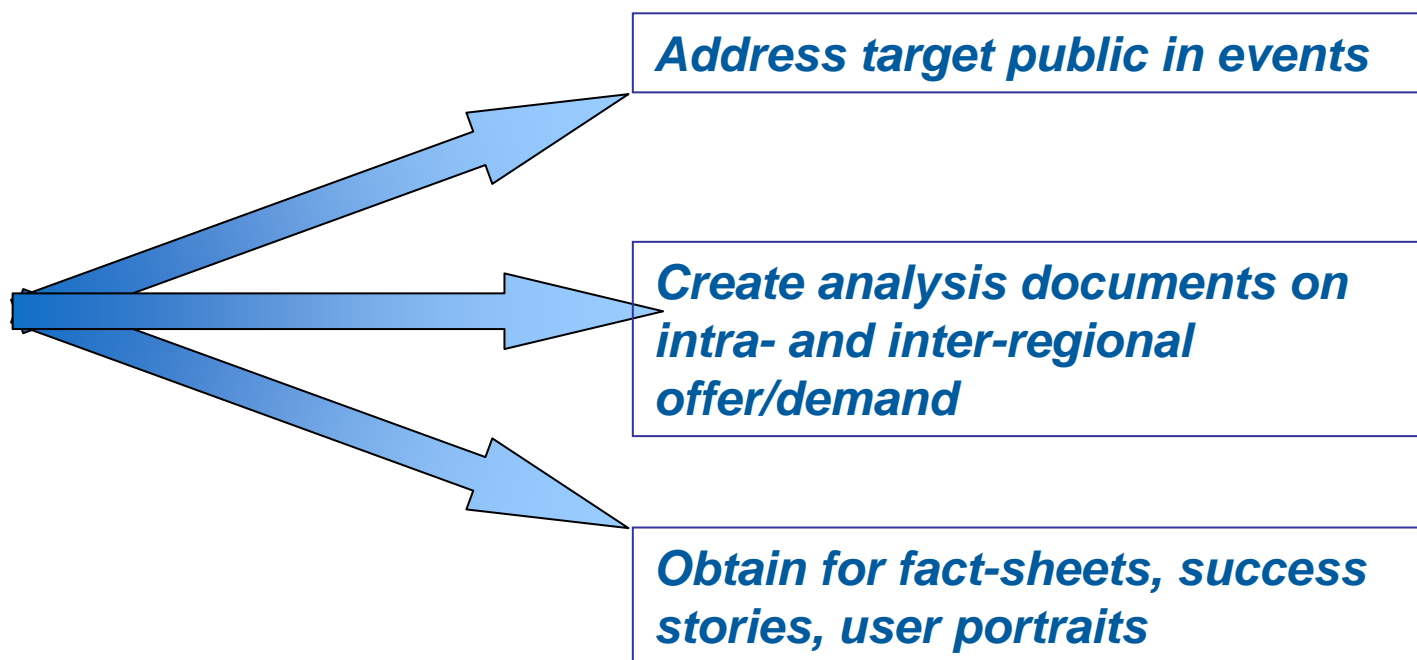
**User-need link**

ID_User	Organization	Type	Address	Main activity	Contact person	...
Progressive Code	Name of the organization	Possible topic: Company, Research Center, Public Authority, Consultancy, NGO		Brief text describing main user activity		...
U1	Text					
U2	Text					
U3	Text					
...						

*From the knowledge base to dissemination and results*



*Information is searched and extracted to:*





## Creating events in and to regions

### Different level of involvement:

- Core regions (Azores, Aquitaine+Midi-Pyrénées, Bremen, East Midlands, Lombardia)
- Fast track regions (Baden-Wuerttemberg, Basilicata, Brittany, Castilla y Leon, City of Madrid, French Guyana, Mazovia)
- Outreach regions in Estonia, Finland, France, Greece, Hungary, Ireland, Latvia, Portugal

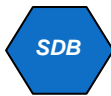
### Different dimensions:

- From business breakfast ... to large meetings

### Different aims and target:

- To leverage actors awareness on GMES (in particular SMEs, regional decision-makers and clerks)
- To encourage demand-offer meeting
- To encourage SMEs-research meeting
- To perform synergic action between regions with similar priorities
- To recruit new RCOs





**Creating events in and to regions:** *more than 50 events held*







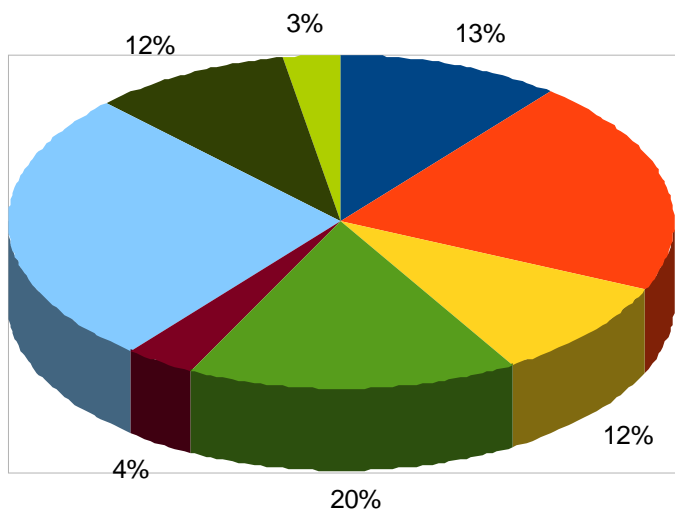
**Producing market observatories: catalogue of services, review of needs**

**D3.4: “Downstream Service Catalogue”** a public report aimed at regional end-users

• Introduction

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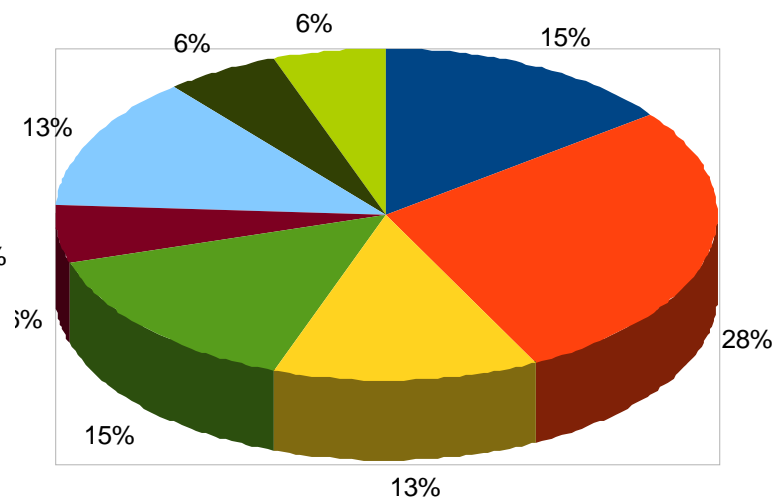
Services in all regions



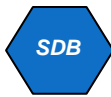
**D3.5: “Report on segmentation of user needs”** a public report aimed at potential providers of services to inform them on users’ needs

• Introduction on IRAs, their priorities and interests, the

Needs in all regions



- R1 Management of Urban areas
- R2 Sustainable development and nature protection
- R3 Regional and local planning
- R4 Agriculture, Forestry and Fisheries
- R5 Health
- R6 Emergencies
- R7 Infrastructure, Transport and Mobility



## Dissemination: within GMEs4regions



## Information on each RCO

### Bringing Regions and GMEs closer: the network of GMEs Region al Contact Offices (RCO)

The European network of GMEs Regional Contact Offices (RCO) exists to raise awareness and strengthen regional involvement in GMEs & GMEs Regional Contact Offices (RCO) acts as a focal point with regard to assist regional authorities to raise awareness in the framework of mobility GMEs (services providers, research and development actors, regional users and RCOs) members.

It is led by an independent entity and mandated by its regional authority. A RCO serves as a regional centre of GMEs expertise.

The main tasks of the RCO are to:

- Identify potential users of GMEs services;
- Raise awareness of the benefits offered by GMEs and Earth Observation based services;
- Identify business opportunities for local GMEs actors;
- Build business opportunities for the GMEs portfolio and new services; assist users in the expression of their needs on the basis of services assessing their needs;
- Facilitate dialogue between users and service providers;
- Coordinate new services developed by regional actors;
- Support training in the field of Earth Observation.

GMEs RCO network in Europe consists of actors on the Earth Observation stage exchanging information, supporting small enterprises in GMEs and satellite applications and support on market opportunities, innovation, and participating in ongoing projects.

The idea of setting up a European network came to life out of the aim of strengthening regional and entrepreneurial dialogue, linking regional and local authorities, service providers, local RCO institutions and policy makers. Such a network is organized by the regional framework.

The benefits of having an RCO in a region are manifold and arise from various possible impacts on the economy, environment and the quality of life of the citizens, but also from the fact that regional strategic objectives, including regional development, strengthening innovation and collaborations, and increasing the visibility of the region at European level.

Since July 2011, an RCOs have been established in the following regions that are all members of HERST (www.herst-eu.org):

- Aquitaine - Midi Pyrénées (PR) at CETE Sud-Ouest
- Ariège (PR) at SICTE
- Bretagne (PR) at SICTE
- Bas-Rhin (PR) at G-STEP, University of Lorraine
- Lombardia (PR) at CNR-IREA
- Lombardia (PR) at CNR-IREA

RCOs are in preparation in another fifteen European regions (see map on left of the RCO network).

This Window on GMEs issue presents several GMEs User Portraits collected by the following RCOs:

- RCO Lombardia** hosted by CNR-IREA, a public research centre in service serving small and medium enterprises. With its satellite services activities of space system development, agriculture, industry, and services, currently offers perfect framework conditions to promote and integrate the services of GMEs. Priorities are: agro-food, climate change, health and environment, and data and cost reduction.
- RCO Aquitaine - Midi Pyrénées** hosted by South West CETE services from the French Ministry in charge of the environment, territorial GMEs and satellite applications in its regions since July 2011. It works in the coordination between various exchange of information and observation known actors involved in satellite applications in GMEs: Aerospace Valley, Airbus, C2C, Meniscus, small and medium sized businesses (GMEs) and research centres (CNRS, IRI, etc.). It has organized events and actions with end-users to raise their awareness on the benefits of GMEs and satellite applications, especially in agriculture and land agriculture. Key domains of competences for their priorities are: Agriculture region.
- RCO Bas-Rhin** hosted by G-STEP at the University of Lorraine. It aims to boost the development of GMEs applications into urban planning and agriculture. By promoting space technologies within the region, the RCO assists collaboration between academics, local authorities and SMEs. Through the organization of regional events to build awareness of GMEs, raise data and information capabilities on remote sensing, environmental mapping, land power, land management and GIS, the RCO creates networking opportunities between users and providers and facilitates the link to develop new applications for end-users.
- RCO Basilicata**, run by SICTE - Technological Cluster of the Basilicata Earth Observation and Natural Hazard Technology Consortium. Its mission is to increase the use of space and satellite products for the benefit of civil and business users. The RCO provides technical support, training, and business opportunities addressing regional needs. Lorraine stage from monitoring mapping of existing GMEs services in regional level, supporting the transformation of research results into applications, services and products. In the training of potential users to foster the demand for added value products and space applications.
- Pole Mer Bretagne** (run by G-STEP) - Based in one of the most beautiful coastal regions, the G-STEP initiative promotes the emergence of innovative projects that will satisfy the demands of local authorities, in the coastal and inland to respond to the demand for "safety and security" and the need for "territorial development". The Pole Mer Bretagne shared its mission to become an RCO. This initiative, along with the Brittany region expansion within HERST, the French & European Region using Space Technology, will help to enhance the already existing regional GMEs capabilities and skills and facilitate the development of maritime services for end users.

For more information on the Regional Contact Offices network: [www.gmes4regions.eu](http://www.gmes4regions.eu) - Access your Regional Contact Office

## Users' portraits on "Window on GMEs" (launched Dec 2012)

**Landslide and Natural Risks Monitoring**

**Keywords:** Disaster Management and Prevention, EO data software



**Application field:** MORFED (Morphed) is a pilot project of the Italian Space Agency experimenting the use of Earth Observation technologies to obtain useful information to the management of landslides risk in the pre-event (after alert) and post-event. In the frame of MORFED project, IRISA-CNRS proposes an approach to model landslide susceptibility of a territory, based on a supervised learning technique that mines fuzzy emerging patterns on a set of classified data used as training data (Copic and SAR EO data, ground-based data). In the approach the training set contains positive and negative examples of homogeneous areas, slope units of a given territory, unstable or stable to the occurrence of landslides. The correlative knowledge base of fuzzy rules exploit the main characteristics of the slope units that are stable and unstable to landslides and are then used for classifying other slope units of the same territory. **Methodology used / workflow:** MORFED has designed a system to support the civil protection activities on landslide risk through the use of techniques already established and the definition of new methodologies based on satellite data. In the context of the project were carried out researches to test the integration of technology and data EO maps in support of Italian Civil Protection Defense Department.

**Key Results:** The multi-disciplinary team comprises research institutes, university departments and Italian enterprises collectively experts in landslide identification and mapping, slope monitoring, landslide and environmental hazards and risk assessment and mitigation, and in the innovative exploitation of EO data and technologies.

**Innovative Impact:** For the purpose, MORFED implements five specific functionalities: identification and mapping of landslides, including dynamic 3D visualization; Landslide monitoring; Landslide susceptibility; Forecasting of rainfall induced landslides; Landslide vulnerability and damage assessment. The system includes three sub-systems: EO products elaboration (Optical and SAR data). Final Users products generation, Infrastructure for data integration and exchange.

**Research Brief of the Virtual GMEs Academy**

## Research briefs



POWERED BY




What?

Advanced Search

Sort by: Type | display: 20 | page 1 of 2

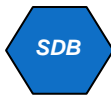
- ▶ Hepul Solar Energy
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- ▶ Campania: sustainable use of water in th...
- ▶ Farmers' Cooperatives
- ▶ Basilicata Fire Risk
- ▶ Energy audits of photovoltaic power plan...
- ▶ GMEs ed il monitoraggio
- ▶ GMEs and land monitoring
- ▶ Fiby S.r.l.
- ▶ CHELVS
- ▶ Starlab
- ▶ Planetek Italia
- ▶ Planetek Italia
- ▶ SIG2 (Geographical Information Systems)
- ▶ GDI GISDATA d.o.o.
- ▶ R3 GIS srl
- ▶ ACRI-ST
- ▶ ACRI-ST
- ▶ GeoSpazio Italia
- ▶ Exelis Visual Information Solutions



**University of Basilicata - School of Engineering**

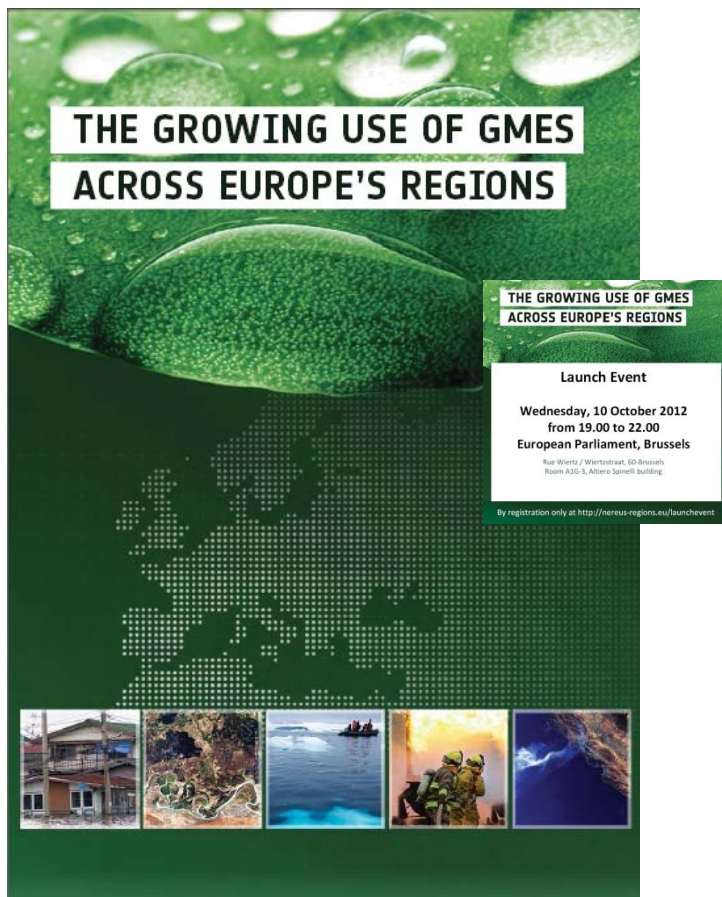
University of Basilicata has been active in the field of training and research since 1963. It is located both in Potenza and Matera. The University has 7 faculties (Engineering, Agronomy, Letters, Natural Sciences, Economy, Pharmacy, Primary Educational Sci.....)

Web: <http://www.unibas.it>



**Dissemination:** beyond regional events and GMES4regions channels

Fact sheets on **ESA-NEREUS brochure** presented at Eu Parliament:



Special issue of the  
**Eu J. of Remote Sensing**  
on

**“Satellite Remote Sensing in the Service of Regional and Local Authorities” (vol. 45, 2012)**

Linking GMES Space Component to the development of **land policies in Outermost Regions– the Azores (Portugal) case-study**

Monitoring urban development consolidation for **regional management on water supply** using remote sensing techniques

Use of satellite remote sensing for **coastal conservation** in the Eastern African Coast: advantages and shortcomings

Synergy between **GMES and regional innovation** strategies: Very High Resolution images for local planning and monitoring

Ten years of **local water resource management**: Integrating satellite Remote Sensing and Geographical Information Systems

A hybrid multi-step approach for **urban area mapping in Milan Province, Italy**





Remote sensing supports the definition of the **water quality status of Lake Omodeo (Italy)**

An application of COSMO-SkyMed to **coastal erosion studies**

Portability of neural nets modelling **regional winter crop acreages** using AVHRR time series

Optimised Pattern Size for **land cover–land use** information conversion

## Tutoring new regions in their activities on GMES, recruiting new RCOs

### How to become a GMES Regional Contact Office

Before starting, what is **GMES**?

GMES (Global Monitoring for Environment and Security) is the European Earth Observation programme for the delivery of products and services to manage and protect the environment and natural resources, and ensure civil security.

Concretely, GMES is delivering spatial data, images and mapping services derived from satellite, airborne and in situ sensors.

Applications of GMES extend over many fields, ranging from environment monitoring, marine safety and transport, to urban responsibility of public and industrial player

**About the network of**

If services are well implemented continues to be rather unknown


The goal of the network of GMES at the regional scale GMES based services in these innovative tools which can have a significant impact on the economy, environment and quality of life of citizens

It is with the aim of and strengthening intra-regional and inter-regional dialogue that the idea of setting up a European network<sup>1</sup> linking regional and local authorities, service providers, local R&D institutions and policy makers came to life. Such a network is organized by the regions themselves. In each region, the network is materialized by a Regional Contact Office.

**WHAT is a GMES Regional Contact Office?**





A GMES Regional Contact Office (RCO) acts as a focal point in its region, at the interface of industry (GMES services providers), R&D actors, regional users and policy makers.

Hosted by an independent entity and mandated by its regional authority, it serves as regional centre of GMES expertise.



<sup>1</sup> The network has been initiated in the frame of DORIS Net, a Coordination Action project funded under the 7<sup>th</sup> Framework Programme for Research & Development, specifically targeted at fostering knowledge, structuring and awareness of GMES and its potential at the regional level.

## Information on the RCOs, their benefits and 'How to become a RCO' (requirements, commitments)

### Memorandum of Understanding between the European network of GMES Regional Contact Offices (DORIS\_Net) and (insert the name of the organization joining the network) acting as new RCO for the Region (insert the name of the endorsing Region)

**Background**

DORIS\_Net is a Coordination Action project funded under the 7<sup>th</sup> Framework Programme for Research & Development (project number 262789; Feb 2011 - January 2013), specifically targeted at fostering knowledge, structuring and awareness of GMES and its potential at the regional level.

This overarching goal can be divided into three high level objectives:

- The improvement of regional participation in the GMES programme;
- The regional provision of tailor-made Education and Training;
- The establishment of an observatory of the GMES downstream sector providing a Tool supporting regions in their role as users, service providers and government.

In the frame of the project, the partners have set up a network of GMES Regional Contact Offices (RCOs) through which GMES data, services and best practices can be exchanged across and between regions. The network has been tested by a nucleus of European pilot regions and is now open to all Regions wishing to join and enjoy its advantages.

**Objective and scope**

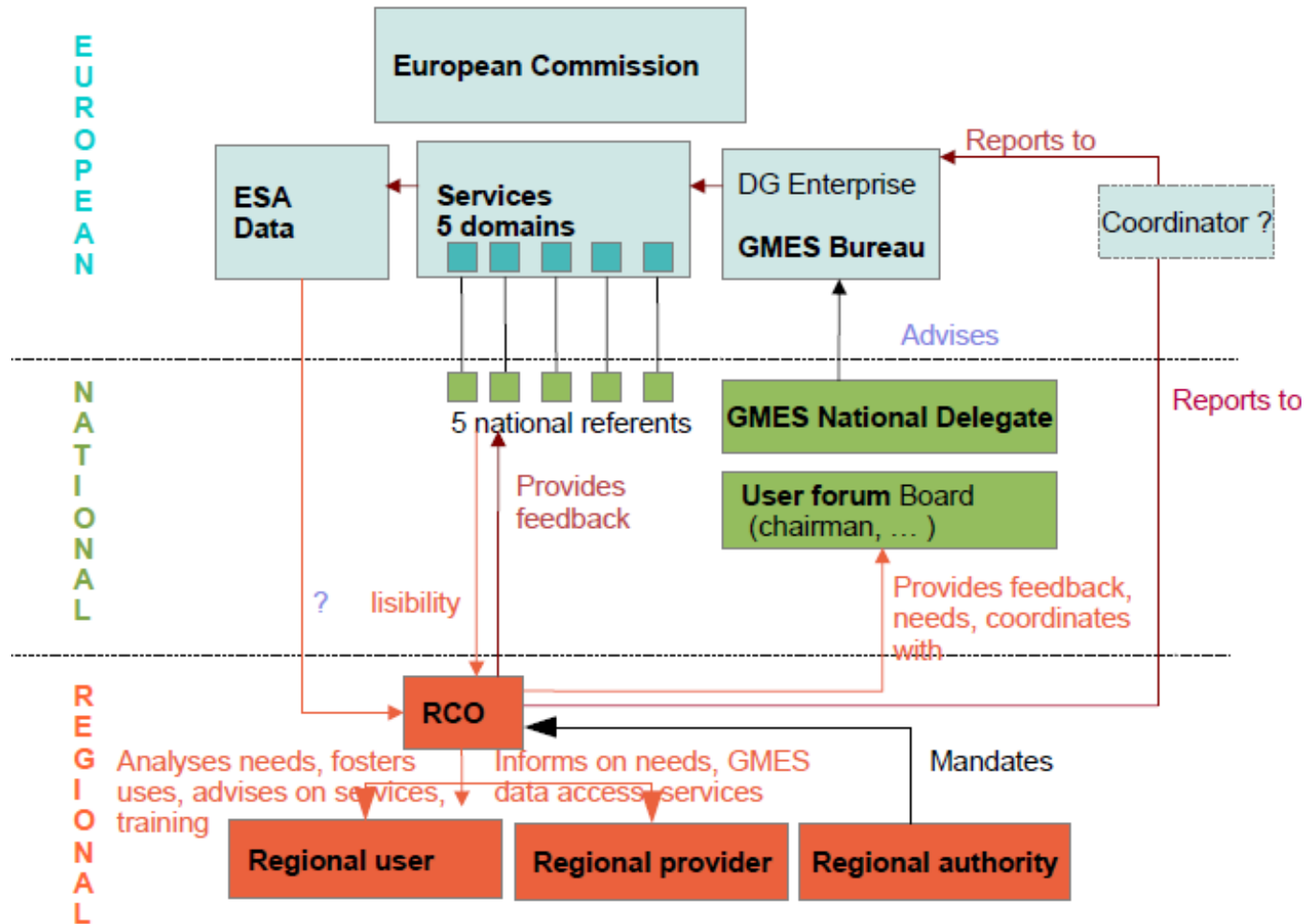
The purpose of this Memorandum of Understanding (MoU) is to establish a framework of cooperation between the European network of GMES Regional Contact Offices (DORIS\_Net) (from now on 'the Network') and (insert the name of the organization joining the network) acting as new RCO for the Region (insert the name of the endorsing Region) in working towards a higher participation of regional public and private stakeholders in the GMES programme.

In particular, this MoU identifies the Network's offer or commitments that can be expected by the new Regional Contact Office and the commitments it should take to join the network.

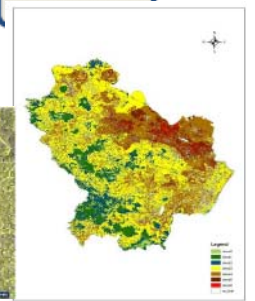
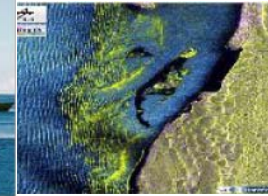
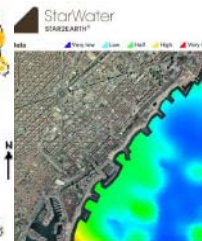
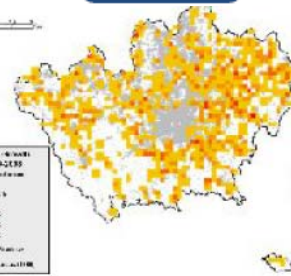
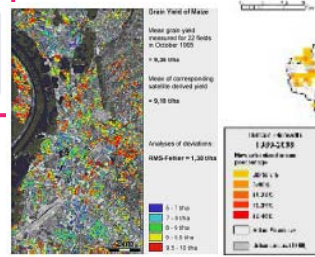
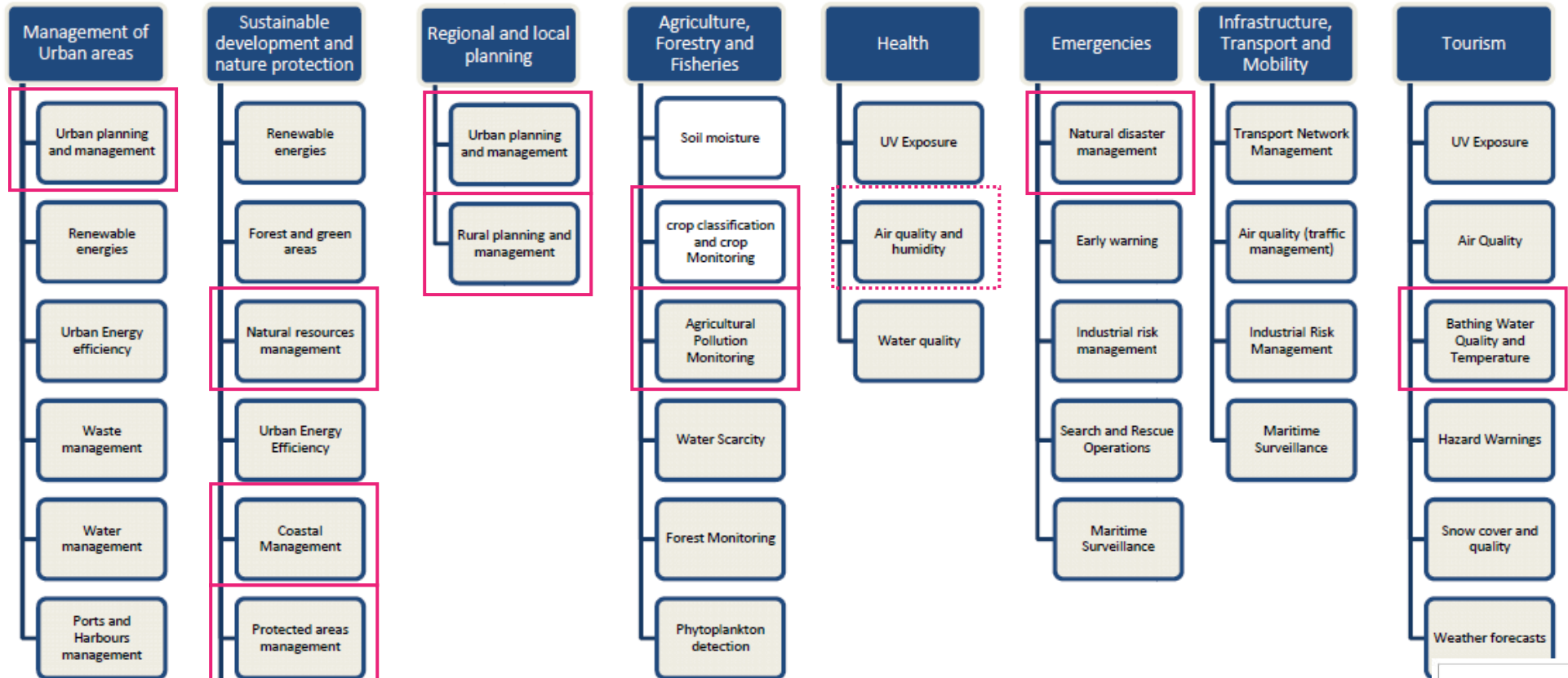
**Principles of cooperation**

The signatories to this MoU share the strategic and operational objectives and commit themselves to collaborate towards these aims.

*Report on recommendations to include regions in the GMES Governance*



### Report on correlations between SMEs capability and user needs



- **Change of coordination:**

- *about 2 months delay: major impacts on administrative tasks, tutoring events in regions, transfer and completion of the IT platform (and consequent deliverables)*
- *Joint events in GMES4regions continued!*

- **A regional network is a dynamic body:** RCOs are strictly depending on regional economy and politics: situations, reliability, people ... change rapidly (see coordination)

- *Need of governance rules*
- *Robustness of the shared IT platform*

- **GMES? What?** Regional awareness of GMES is poor!

- **Mmh ... Satellite images are toys for research ...** Local end users are cautious on the integration of GMES in real-life processing (overselling of remote sensing products?)

- *Raising awareness of regional actors*
- *Success stories with objective indicators of impact and commercial evaluation*
- *Create trust, establish personal relationships -----> TIME is necessary*

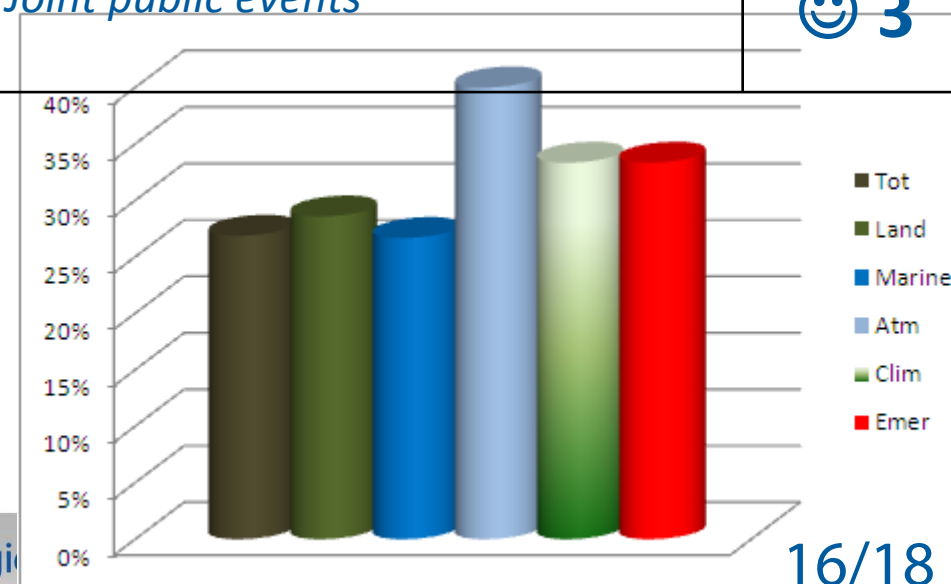


### ... within the RCO network

Establishment of foreseen RCOs	😊
New RCOs	😊
Creation of regional inventories (demand/offer)	😊
Creation of a shared platform structure	😊
Tools for expansion and governance of the network	😐
Contributions in the ESA-NEREUS brochure from all RCO 7/47 (12%) in all GMES domains	😊 18/67 (26%)

### ... in GMES4regions

VA: descriptions of research bodies	😊 3
VA: provided research briefs	😊 12
WonG:users' portraits	😊 8
Joint public events	😊 3





- **Ongoing actions:**

*each RCO is developing a sustainability strategy to place the RCO network on an operational basis. The outline Business Plan predicates funding support from three possible sources:*

- *In - house Institutional Support,*
- *Co - funding from EC sources,*
- *Direct revenue and service charges*

*The NEREUS Management Board has endorsed a DORIS Net position paper which sets out this Business Plan*

*The GMES4regions is an integral part of the DORIS - Net Business Plan for sustainability*

*But its maintenance will require specific funding resources from 2013 onwards*

*Funding to support GMES4regions would not be available from Institutional resources  
RCOs are looking for perspectives ....*

## **Conclusions**

- *DORIS\_Net, soon ending, raised interest in many regions and organizations*
- *It seems to be one of the more lively communities in NEREUS*
- *RCOs are pursuing a promising activity to the benefit of GMES (regional awareness, local market development) and regions (innovation, end users federation, ...) -> they deserve trust and breath!*

## **Lessons learned**

- *We learned that acting as a network is not easy nor fast, but it creates precious synergies*
- *... that GMES awareness and potential is higher in regions hosting a RCO*
- *... that RCO job and success is based on person-to-person relationships and deep knowledge of its own territory -> **it takes time to grow! We're still at the beginning!***



# THANK YOU

# ANY QUESTIONS?



Contacts:  
<http://www.doris-net.eu>



[www.gmes4regions.eu](http://www.gmes4regions.eu)