

Executive summary:

GMES (from 2013 Copernicus) is the European Earth Observation Programme for Global Monitoring of Environment and Security, aimed at delivering accurate and timely information needed for managing biodiversity and natural resources, observing the state of the oceans, monitoring the chemical composition of atmosphere, supporting civil protection and helping to make citizens' lives safer.

DORIS_NET is a Coordination Action project funded under the 7th Framework Programme for Research and 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 is mainly reached through the implementation of the European Network of GMES/Copernicus Regional Contact Offices (RCOs). The network came to life to strengthen intra-regional and inter-regional dialogue in order to raise regional impact and interest on GMES/Copernicus. By linking potential end-users and providers, by analyzing and consolidating the user needs, the RCOs are assisting regional actors to use GMES/Copernicus based services in their daily work.

RCOs are points of contact and centres of expertise that contribute to reaching regional strategic objectives by:

- Improving co-ordination among regional actors and promoting and supporting GMES/Copernicus capabilities;
- Answering regional user needs;
- Boosting regional competitiveness and increasing the visibility of regions at European level;
- Fostering collaboration and stimulating innovation.

In the frame of the project, the partners have tested the network, its rules and tools by a nucleus of European pilot regions, belonging to NEREUS (Network of European REgions Using Space technologies); it is now open to all Regions wishing to join and enjoy its advantages. RCOs have shared experience and knowledge accumulated in the network via dedicated tools (database of services and needs, training material, web pages ...) and networking activities (forum, meetings, raising awareness events, fact sheets, popular/scientific publications ...).

In particular, DORIS_NET partners have defined and created the components of the DORIS_NET Regional User and Service Inventory, continuously reviewing the user requirements gathered by the RCOs deployed in the regions and likewise for the services looking at the supply side.

DORIS_NET inventory allows the network to set up a continuous link between the downstream service supply side and the regional demand side, favoured by the personal contact network of the RCOs and the networking activities promoted and performed by the network members.

The Regional Inventory is the cornerstone to create numerous outstanding results, such as:

- A Downstream service catalogue of the services available in the networked regions
- A report on the segmentation of the needs of regional users with respect to Earth Observation services, and recommendations to the development of new regional services

- Recommendations to other regions, wishing to join the network, and to GMES/Copernicus governance, to include regional perspective in its strategic development
- Selections of target public from the demand/offer side for dissemination and training events
- Extraction of material for users' portraits, success stories, fact-sheets, brochures, papers

DORIS_NET acted in connection with GRAAL (project number 263186) under the common brand of GMES4Regions; besides a common web site, the two projects conceived a shared taxonomy of GMES/Copernicus resources (particularly tailored on the regional users' point of view), European events and contributions to a special issue of Windows on GMES.

Project Context and Objectives:

The DORIS_NET project context

Europe maintains an active Earth observation Programme fostering the creation of Earth Observation monitoring services: Copernicus, previously known as the Global Monitoring for Environment and Security (GMES) programme as it is called herein, was initiated by the EU in 2005 and is continuously updated in partnership with EU Member States and the European Space Agency (ESA). It is a space-based Earth monitoring initiative that has greatly expanded to provide information services tailored to the needs of users.

Regional stakeholders are often not aware of its impressive repertoire of applications and benefits. Moreover, some results are well fitted to the continental or country scale, but miss the regional dimension. Organizations representing some European regions initiated the EU-funded project 'Downstream Observatory organised by Regions active In Space - Network' (DORIS_NET) to engage local and regional authorities (LRAs) in the process of refining data, products and services associated with GMES. Such cooperation is meant to maximise impact on the economy, environment and quality of life of EU citizens, while including the needs of those in the approximately 350 different EU regions.

All regions in the DORIS_NET project are also members of the LRA initiative, Network of European Regions Using Space Technologies (NEREUS). The representing organizations have established a network of GMES Regional Contact Offices (RCOs) to support regional users and service providers in creating the European GMES downstream service platform. In turn, the platform will enable effective coordination and communication of activities within and across regions, vital for growth in the GMES downstream service sector.

The project has partnered with a parallel project, 'Guidelines regarding architecture alignment' (GRAAL), to yield together the Copernicus4Regions portal (see <http://www.copernicus4regions.eu/> online), a gateway to GMES for European LRAs.

DORIS_NET signals a fully user-led approach for the establishment of a network linking European regional and local authorities, service providers and other GMES stakeholders on regional, national and European level, in order to increase regional awareness of GMES, improve regional capacities in the sector of GMES downstream services and leverage regional demand. DORIS_NET paved the way to a bottom-up approach for the development of GMES services that until now were focused on a top-down one. The latter was well suited to definition and implementation of the space infrastructure. However, development of downstream services and sustainable business requires a link to regional stakeholders and actors for operational success.

Regional capacities and demand are collected by the RCOs in their European GMES Downstream Service Platform. This Platform allows more effective coordination of individual activities both within and between the regions of Europe and European GMES governance which is vital for growth in the downstream service sector. The Platform is tested and verified by the nucleus of European pilot regions of DORIS_NET, which are already involved in GMES.

Objectives of DORIS_NET

Objective 1: To define and implement Regional Contact Offices in the participating regions. It is envisaged that Regional Contact Offices (RCOs) will be established and become operational in each participating region. They can be incorporated in existing facilities but will observe common requirements defined by DORIS_NET and will thus serve as examples of Best Practice for other regions wishing to coordinate regional GMES activities and encourage the growth of GMES downstream services.

Objective 2: To establish a GMES service downstream observatory able to foster contacts between Regional Contact Offices, GMES users and service providers. The Downstream observatory will continuously observe and survey the GMES portfolio on the one hand and iteratively cross check it with the user needs on the other hand. An added value is created by cross checking these observations and validating them with an interregional view to identify commonalities.

Objective 3: To enhance the participation of regional stakeholders through the provision of an educational and training framework and regional activities. This will comprise the conception and implementation of the projects Education and Training component as well as the setting up and implementation of the regional activities, running in parallel in the participating regions.

Objective 4: To disseminate the project results to the relevant communities at three levels (user, provider and political). The recommendations will aim at three levels

- Policy level: Recommendations for GMES governance/ steering
- Provider level: Recommendations for GMES service providers (e.g. new GMES products)
- User level: Recommendations for other regions

Objective 5: To derive and present a concept for ensuring a sustainable operational continuation of the project's achievements. It is the vision and aim of DORIS_NET to sustain the project's results and achievements beyond the lifetime of the FP7 project. In order to show a roadmap to achieving this goal, a concept shall be prepared on options and requirements how this can be implemented.

Project Results:

Summary: DORIS_NET has established the first seven Regional Contact Offices (RCOs) that are now operational and launched the project website and the first release of the DORIS_NET GMES Downstream Service Observatory Platform exploiting a user oriented GMES service taxonomy defined by DORIS_NET and GRAAL.

The Observatory Platform includes a wealth of knowledge on GMES downstream services, regional providers and users, the needs that are being expressed by potential users. All this amount of information has been collected by RCOs activating relationships in plenty of events, performed within the project. They range from business breakfasts to large conferences, with varying level and target audiences, adapting to regional needs. Most RCOs performed brokerage events and established contacts between regional small and medium-sized enterprises (SMEs), GMES representatives, regional authorities and local research bodies.

Results of the project, mainly sourcing from the Platform, include catalogues of regional services and a segmentation of users' needs, with analysis of the regional market emerging from the RCOs collection. They also provided recommendations to GMES, national and regional authorities to foster Earth observation market at local scale.

RCOs wish to continue their life, on the basis of a plan for sustainability approved by the NEREUS Management Board.

Results description

DORIS_NET produced 34 deliverables that are listed in the Final report. This section contains an index of the most outstanding ones and then a description of their content and achievements.

1. Building of the Regional Contact Offices
2. Report D2.3 Coordination of Regional Contact Offices
3. Report D5.1 Recommendations for other Regions
4. Report D9.1 Regional Training and Educational Workshops
5. Report D4.11 Educational Modules
6. Report D4.10 Regional Inventory
7. Report D3.4 Downstream Services Catalogue
8. Report D3.5 Report on segmentation of user needs
9. Report D4.5 Correlation between users' needs and small and medium-sized enterprises (SME) capabilities
10. Report D5.2 Recommendations for new GMES products
11. Report D5.3 Recommendations for GMES/Copernicus governance
12. Report D6.1 Sustainability concept

1. Building of the Regional Contact Offices

The focus of DORIS_NET has been the creation and test of a network of Regional Contact Offices (RCOs) located in European regions; they are meant as contact points, made by experts in GMES, able to leverage awareness on GMES, train in remote sensing application, map the regional offer and demand of GMES services.

Here following the list of RCOs which were established during the project.

RCO Azores

Hosting organization: GaTE, Space Technology office, was established in 2009 with the aim of informing and being a facilitator among regional, national and international actors in GMES.

Offer:

- To facilitate communication between potential service developers/providers and users in order to define "demonstrators"
- Dissemination of information materials on the opportunities offered by GMES
- Organisation of informative meetings
- Organisation of and participation in events and initiatives to promote regional and local demand of Earth Observation services

Email: gate@azores.gov.pt

RCO Basilicata

Hosting organization: TeRN, Technological Cluster of Basilicata, constituted in 2005 by public and private partners following an agreement between the Economy and Financial Ministry, the Research and University Ministry and the Basilicata Region. TeRN focuses on the development of innovative EO technologies and methodologies aimed at protection and prevention of environmental and natural hazards.

Offer: Our mission is to increase the use of space technologies for the benefit of potential users and developers of innovative applications and to help create business opportunities settling regional needs.

Offer to users:

- Information on and access to existing services and fulfilling your needs at local/European level.
- The possibility to voice your needs towards local/European service providers.

Offer to providers:

- Information on local/European demand in GMES services
- The chance to promote new GMES services
- The opportunity to reach new users and potential customers at regional and European level

Email: rco_basilicata@tern.it

RCO Bremen

Hosting organization: CEON was established in July 2009 as a non-profit organisation by the Government of the Free Hanseatic City Bremen. CEON's aim is to support and implement the objectives of GMES and GALILEO through the development of real applications and by raising the awareness of these systems at the regional level.

Offer:

- Logistics applications, especially in the fields of secure supply chain and goods monitoring
- Marine applications, with emphasis on maritime security and safety (e.g. Object detection, AIS applications, ship routing) and marine environment (e.g. ice monitoring)
- Climate gas monitoring and air quality
- Urban land applications and civil protection, especially with respect to ports, coastal areas and dikes
- Renewable energy (e.g. off-shore wind parks)

Email: info@ceon-bremen.de

RCO Bretagne

Hosting organization: PMB (Pôle Mer Bretagne), sea innovation and business cluster, is the driving force behind a cooperative enterprise involving major companies, small and medium-sized enterprises (SME), research centres and higher education institutions. Its mission is to identify and promote the emergence of innovative projects and technologies that will satisfy the demands of new markets.

Offer:

PMB has substantial assets in space technology: research teams, companies and infrastructure, such as a research remote tool VIGISAT. Brittany has shown its ambition to develop and master space technologies, and following this ambition, the Pole Mer Bretagne intends to step up to GMES activities offering the following services:

- Actively promote and disseminate information about maritime GMES services
- Set up a regional 'maritime space ecosystem' by federating the major regional players active in space
- Provide new opportunities of collaboration and innovation thanks to a network of over 300 members

Email: philippe.monbet@pole-mer-bretagne.com

RCO East-Midlands

Hosting organization: G-STEP, GMES Space Technology Exchange Partnership, is the satellite data solution service of the University of Leicester, established in 2009 with the aim of taking the benefits of space technology, specifically Earth Observation, to Small and Medium sized Enterprises (SMEs) and public sector organisations.

Offer:

G-STEP supports business and public sector organisations in the use of state of the art Earth observation information technology by providing training and offering research expertise in the use of GMES data.

- Appropriate levels of training for users to build awareness of GMES data capabilities
- Developing practical solutions and demonstration products for business needs
- Providing partnerships for developing business opportunities.
- Exploring supply chain solutions
- Providing expertise advice and solutions for intelligent traffic management
- Monitoring and assessment of air quality to address air pollution within urban environments

Email: hina.bacai@le.ac.uk

RCO Midi-Pyrénées and Aquitaine

Hosting organization: South-West CETE, the Satellite Applications and Telecommunication Center of the French Ministry in charge of Environment (MEDDE/METL), is acting at both national and regional levels to promote GMES and the use of satellite applications.

Offer:

South West CETE as DORIS_NET Regional Contact Office for Midi Pyrenees and Aquitaine ensures several missions:

- Organise events and face to face meetings to raise your awareness on GMES and satellite applications potential for your activities.
- Promote earth observation services developed by regional providers
- Assist users to express their needs and in their search for a service
- Enhance the relationship between users and service providers
- Develop opportunities to produce new services in line with identified needs

Email: christelle.bosc@developpement-durable.gouv.fr

RCO Lombardia

Hosting organization: CNR IREA Milan is a public research centre performing research activities in remote sensing and its application. It maintains strong connections with experts in the field of space research.

Offer:

The RCO Lombardia was established in July 2011. It offers a team of experts in GMES, and can be contacted to manage the following activities:

- Dissemination of information materials on the opportunities offered by GMES
- Organisation of informative events, workshops and bilateral talks
- Organisation of and participation in events and initiatives to increase regional and local demand of Earth Observation services
- Inventory of GMES downstream services requested and offered in Lombardy
- Initiation of pilot projects

Email: rcolombardia@irea.cnr.it

2. Report D2.3 Coordination of Regional Contact Offices

Public

Following the experience gained in the creation of DORIS_NET RCOs, this document provides guidelines to set up and to coordinate a Regional Contact Office (RCOs) within the framework of the DORIS_NET project. These guidelines are based on a set of terms of reference or requirements (such as aims, objectives, role, representation, human resources, form of financing, channels of communication), which have to be combined with the specific needs of each Region.

The document contains also a detailed description of what is a GMES Regional Contact Office, defines reasons behind setting up an RCO and lists which are the benefits.

It includes also guidelines to the certification process of a new RCO.

3. Report D5.1 Recommendations for other Regions

Public

Besides D2.3, this document is a further outcome of the RCOs creation experience in DORIS_NET; it aims to provide guidelines and recommendations to new regions resulting from lessons learnt during the establishment of the RCOs in the core and fast track regions but also after dealing with issues and questions arisen from some other regions. It illustrates the "Certification Process of setting up a Regional Contact Office" and discusses the governance of RCOs. It also presents 15 key messages for Regions regarding GMES and Regional Contact Offices, that is:

message 1. 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.

message 2. Despite successful technological developments, GMES has been showing a weak regional involvement with regards to the wide capacities and benefits it provides for the Environment and Security domains at Public and private level (mostly regarding SME's involvement).

message 3. During the DORIS_NET project, a methodology was successfully experienced to raise regional awareness on GMES potential with the concept of a Regional Contact Offices Network.

message 4. To encourage inter-regional cooperation between member regions, and to establish permanent communication, GMES RCOs are connected by a platform through which they share information on demand and capabilities, opportunities, events in progress etc. and exchange good practices.

message 5. A RCO is hosted by an independent entity (or more than one when it's cost-effective) and mandated by its regional authority, serving as regional centre of GMES expertise.

message 6. 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. The RCO's success is based on person-to-person relationships and deep knowledge of the territory.

message 7. The RCO should strongly participate and be involved by Regional Authorities in the conception and development of the Regional Research and Innovation Strategies for Smart Specialization (RIS3 strategy), as recommended by the European Commission in the Communication "Regional Policy contributing to smart growth in Europe 2020", in order to ensure that Space Technologies and GMES applications' cluster are assumed as a major strategic asset for the economic development of its region.

message 8. Despite being a regional entity, both European and national governance elements and levels can take benefit from RCO's actions in order to make the link between GMES and its region.

message 9. At the European level, the RCOs network provides more visibility to and liability on GMES products, improves the access and therefore the use of GMES products, fosters the use of satellite applications, favours environment and economic development and brings needs and feedbacks on GMES products, which is mandatory to the success of GMES.

message 10. At the national level, RCOs strongly contribute to needs collection difficult to get at the national level, and involve regional actors in User Forums.

message 11. The interest and success of RCOs' actions has been recognized by many relevant stakeholders (Regional Authorities' representatives, national advisors, GMES Bureau, ESA, DG REGIO, and the Committee of the Regions).

message 12. RCOs have made and still need to do significant efforts to secure funding at European, national and regional level to ensure a sustainable continuation of their activities. DORIS_NET experience showed that it would be easier to secure funding from the regional authorities if there were political signals coming from the European level.

message 13. The transfer of the RCO model from one region to another has been successfully demonstrated with some DORIS_NET partners, being able to be launched and run in every European region independently of its dimension, governance framework, geographic context and socio-economic features.

message 14. The RCO model can not only be exported to other regions but also to other sectors, such as the GNSS sector for instance.

message 15. Besides the current seven RCOs (Aquitaine-Midi-Pyrénées, Azores, Bremen, Basilicata, Brittany, East Midlands and Lombardia), 15 more could be established in further European regions [...] not restricted to NEREUS members [...].

4. Report D9.1 Regional Training and Educational Workshops Restricted

In the framework of the DORIS_NET project, Regional Contact Offices prepared and organized a range of activities in the participating regions (i.e. core regions, outreach regions and fast-track regions) over the period of 2 years. The type of activity was chosen by each RCO depending on the needs and the target audience.

The events were public and took place at various locations and time. This document is a summary of all regional activities.

The document discusses also lessons learned.

Achievements: Regional events organised by RCOs clearly confirmed the need to better inform the audience about the opportunities offered by the GMES at a regional level.

There is a need for "facilitators" who can act as interface between GMES and the users and providers at a regional level, in their native language.

The link to the national level should be very important; in fact, there is a need to ensure that the responsible actors on national level do not see the activities on regional level as a competition, but as an addition to what they are doing at national level.

It has been proved that a follow up with dedicated users who are focused on clearly defined topics is needed to make a more sustainable impact.

For educational activities, adaptation to each user (user group) and their needs is necessary.

5. Report D4.11 Educational Modules Restricted to Project Partners

Most of RCOs performed education events which were mainly based on the experiences gained at G-STEP, i.e. East Midlands RCO, which prepared this seminal deliverable to the benefit of other RCOs. In fact, the aim of this document is to provide information about setting up a mechanism for Education and Training modules using best practices and different delivery modes developed by the University of Leicester (G-STEP) designed to reach diverse audiences across wide geographic boundaries.

This was achieved by categorising three levels of training, namely

- (a) Introductory
- (b) Intermediate
- (c) Advanced.

Furthermore, these training levels can be delivered through a variety of mediums to reach wider audiences in the region. These were,

- (a) Face to Face meetings
- (b) E-mission
- (c) E-Learning.

This document describes each of these training levels and delivery modes in detail with specific examples given to highlight the best practice procedures that can be applied to reach a wide range of users in the downstream sector.

Achievements: The examples presented in the deliverable are specific cases for G-STEP expertise and the East Midlands region. However, it is important to understand the general nature of both the training and the modes of delivery exposed. By example the success of the 'Business Breakfasts' to build awareness of GMES tools and applications to small and medium-sized enterprises (SME) and downstream users was a key factor in being able to expand the Education and Training Programme. Similar scenarios have been used across other RCOs, showcasing the GMES capabilities within each region and targeting users in those local regions. Small focussed meetings have been organised in other RCO regions following the success of the demonstration of the hands-on workshop at the G-STEP offices (see D4.13 Educational and Training Workshop for DORIS_NET partners). Such training and small scale events have led to more intermediate level and advanced training sessions being developed. Details of the regional training workshops organised by other partners implementing the best practices and methodology presented here can be found in D9.2 Refined Portfolio of Regional Training and Educational Workshops.

6. Report D4.10 Regional Inventory

Restricted to Project Partners

Through their regional contacts and relationships, and through the events performed, RCOs collected information on the regional actors in the GMES sectors. They have been stored in a shared Inventory, i.e. the core of the DORIS_NET Platform. It was created by the efforts of RCOs during the second phase of the DORIS_NET project with the aim of providing a tool for matching the users, needs, providers and services across the regions. At the initial phase each RCO used a Questionnaire Template (D4.9) to collect the services and users in their region. These collections were combined into a single, reworked Inventory, a base of data that is filled in by RCOs and stored in the internal area of the DORIS_NET website.

To facilitate the matching and searching functions, services and needs are related to two taxonomies i.e.: the user-oriented taxonomy developed by GRAAL and DORIS_NET (GMES4Regions) and the company oriented taxonomy proposed by EARSC.

The main body of the base of data consists of 4 spreadsheets: Providers, Services, Users, Needs.

Providers: a table storing information on providers (name of organisation, address, type of organisation, etc.); 123 records collected at the end of DORIS_NET.

Services: a table storing information on the regional EO services (description of the service, type of data, geographical scale, resolution), including reference codes to the Taxonomies and a link to providers' table; 167 records collected at the end of DORIS_NET.

Users: a table storing information on users (name of organisation, address, etc.); 84 records collected at the end of DORIS_NET.

Needs: a table storing information on the regional needs (description, type of data, geographical coverage, resolution), including reference

codes to the Taxonomies and a link to the Users who expressed this needs; 75 records collected at the end of DORIS_NET.

Information contained in this shared Inventory comes from different sources:

- interviews to regional providers and LRAs by DORIS_NET RCOs
- providers' website
- answers to a questionnaire sent to regional providers in 2011 by DORIS_NET
- knowledge and expertise of DORIS_NET network collected during the project and before
- during the events performed to raise the awareness of potential users
- with questionnaire answers provided by potential users
- during face-to-face meetings with other users (local, regional or national actors in charge of Environment and/or security).

This Inventory is the basis to many other outcomes of the project and in particular Report D3.4 Downstream Services Catalogue, Report D3.5 Report on segmentation of user needs, Report D4.5 Correlation between users' needs and SMEs capabilities, Report D5.2 Recommendations for new GMES products.

7. Report D3.4 Downstream Services Catalogue Public

This document represents one of the main achievements of the RCO regional Inventory: it has been created thanks to Regional Contact Offices knowledge, in order to assess the dimension and spread of GMES and space applications portfolio for regions. In fact, it is a catalogue of downstream services useful for Environment and Security that can be particularly fitted to local, regional or national actors. All services have been extracted from the Inventory (D4.10). This catalogue is meant to assess the state-of-the-art of services in regions and to better disseminate GMES and downstream services in Regions.

This document contains:

- a description of each downstream service (objective of the service, geographical coverage, resolution, name of the provider, current user of the service, source of information ...)
- an analysis of the above described services (by thematics, region, coverage, temporal/spatial resolutions, type of users)
- indexes of services.

As in the Inventory (D4.10) the services are classified with regards to 2 taxonomies: the regional user-oriented taxonomy developed by GRAAL and DORIS_NET (GMES4Regions) and the company oriented taxonomy proposed by EARSC. GMES4Regions taxonomy represents thematic of interest of LRAs and public authorities in charge of environment.

Achievements: This downstream services catalogue gives an overview of available services in DORIS_NET Regions. Not all the services that have been identified by the RCO network are described in this catalogue, and RCOs can advise on other services depending on the needs of local and regional actors.

About 200 services are listed in the catalogue, thanks to a well mixed contribution of companies, research organisms, universities involved in GMES and space applications.

For each service, a table presents:

- "Service short name": the short name of the service
- "G4R Sector": the second level of GMES4Regions taxonomy the service refers to
- "EARSC Sector": the second level of EARSC taxonomy the service refers to
- "EARSC User view": the second level and user view of EARSC taxonomy the service refers to
- "Type of current user": Current user of the service or application
- "Type of data": type of data used to develop the service-application
- "Geographical coverage": the geographic scale covered by the service (Regional, local, ...) or the area in which the service is active
- "Provider": the name of the company, small and medium-sized enterprises (SME), Research institution that developed the service
- "Spatial resolution": the spatial resolution of the service, "VH" for Very High Resolution (less than5m), "H" for High Resolution (less than10m), "M" for Medium resolution (less than30m) and "L" for Low resolution (greater than30m)
- "Time resolution" : the frequency of update of the service
- "RCO": the name of the DORIS_NET Regional Contact Office that has provided information on the service, for contact.

Below each table, some more information or comments may be provided by RCOs:

- pictures to illustrate the service
- level of operativity of the service
- description of the service when needed
- interest of the service: possible uses
- source of information.

Overall, services span all the thematic of G4R and EARSC taxonomy and many (about 40) services cover several thematic in a row.

Some domains cluster more related services; they are mainly Sustainable Development (Environment, Agriculture, etc.) and Emergency, which are clearly related to public authorities needs.

Some regional specificity can be drawn: services for marine activities are well developed in Bremen, Bretagne, Midi-Pyrénées and Aquitaine; agriculture in Midi-Pyrénées, Lombardia, Basilicata, and land uses in Midi-Pyrénées, Lombardia, East Midlands, Basilicata. East Midlands presents well developed applications for Air quality whereas Emergency services are well developed in Midi-Pyrénées, Basilicata and Lombardia.

Downstream services in this catalogue are developed mainly at the regional or local level, with High or Very High resolution data (mixing different sources) and adaptable update frequency, which show a high level potential for GMES downstream services for regional actors needs. The reference to current local or regional users confirms the interest of those services.

Whatever the thematic or the Regional specificity, this catalogue shows that numerous services exist and they cover quite all domains of Environment and Security.

The downstream services catalogue provides description of about 200 downstream services with detailed and precise information not always easy to get. This has been possible thanks to the strict and continuous relationships established by DORIS_NET with regional providers and a deep

knowledge of regional capacities. Thanks to efforts and strong coordination between RCOs, this catalogue intends to provide homogeneous information between regions.

8. Report D3.5 Report on segmentation of user needs

Public

This document represents another main achievement of the RCO regional Inventory: the report on segmentation of user needs has been created within the DORIS_NET project in order to relate GMES portfolio to the regional authorities needs. The aim of this document is to understand the local regional authority (LRA) activities potentially related to GMES and identify their needs and the ones of other regional or national actors. This will help to better disseminate GMES awareness among the regional authorities, and will also help the GMES strategic orientation in better meeting the real needs of potential users at regional and local levels.

Like for D3.4 Downstream Services Catalogue, information on the needs have been extracted from the Inventory (D4.10).

The report is organized in the following main parts:

- Analysis of organization charts of each LRA of DORIS_NET Regions: it identifies regional departments and activities potentially interested in GMES and downstream services,
- Descriptions of each expressed needs (the need, type of user expressing this need, geographical coverage requested, etc.).
- Analysis of the listed needs following regional specificity, thematic of interest, etc.
- Then each RCO describes in detail one specific need: reason of the need, collection of the need, feedback and lessons learnt from user interviews. They are: Coastline monitoring (Aquitaine); Enviromental planning and land management (Azores); Off-shore wind energy production (Bremen); Air quality (Bremen); Agro-food (Lombardia); Spatial planning (Midi-Pyrénées).
- Indexes of needs.

As in the Inventory (D4.10) the needs are classified with regards to 2 taxonomies: the regional user-oriented taxonomy developed by GRAAL and DORIS_NET (GMES4Regions) and the company oriented taxonomy proposed by EARSC.

For each expressed need, a table presents:

- "Need short description": the short "name" of the need
- "G4R Sector": the second level of GMES4Region taxonomy the need refers to
- "EARSC Sector": the second level of EARSC taxonomy the need refers to
- "EARSC User view": the second level and user view of EARSC taxonomy the need refers to
- "Type of user expressed this need": type of user that expressed the need. For confidentiality, the exact name of the organization that expressed the need is not always provided.
- "Type of data" : type of data requested to develop the service-application meeting the need
- "Geographical coverage" : the geographic scale to be covered by the service (Regional, local, ...) meeting the need or the area in which the service should be developed
- "Spatial resolution": the spatial resolution requested "VH" for Very High Resolution (less than5m), "H" for High Resolution (less than10m), "M" for Medium resolution (less than30m) and "L" for Low resolution (greater than30m)

- "Time resolution": the frequency of update requested
- "RCO": the name of the DORIS_NET Regional Contact Office that collected and provided information on this need, for contact

Below each table, some more information or comments may be provided by RCOs:

- more description of the need
- the reason of the need
- the source of information

Achievements: This report shows that needs are present in all regions; in fact, more than 50 needs were described by Regional Contact Offices. The thematic for which the greatest number of needs were expressed are Sustainable development and nature protection, followed by Management of Urban Areas, Regional and local planning and Agriculture, Forestry and Fisheries). Less requests are present for Transport and tourism and health. Emergency needs are also numerous (not only regional but also national actors expressed their needs).

With respect to regional distribution, needs common to all regions are Management of Urban areas and Emergencies. Sustainable development appears only in East Midlands and Midi-Pyrénées Aquitaine. Transport is also common to all regions except French ones. This need has not been expressed but is an area of interest of Midi-Pyrénées Regional Council which has a dedicated department especially for railways and inter-modality. Regional and local planning appear only for Aquitaine, Midi-Pyrénées and Lombardia. Transports needs expressed by Bremen concern maritime transport.

All regions require a local coverage. It is the major need in most of them except in Lombardia where a lot of needs were expressed by regional actors that require regional coverage. Very few needs are required at global coverage in Midi-Pyrénées and Aquitaine.

High spatial resolution is required for most of the needs (65%) expressed. Medium and Very high resolution are also after required. Low resolution do not interest interviewed people.

The needs collection was made possible thanks to strong efforts form RCOs. Indeed, most of end-users (not to say all) do not know GMES (now Copernicus) and downstream applications. After long discussions, and actions to raise awareness (events, workshops, face-to-face meetings, etc.) and close relations established with local, regional and national actors, they expressed their interest in GMES and downstream application as a solution to their activities requirements.

With regards to thematic, all areas of interest are covered by GMES: Land (with agriculture, spatial planning, forest, water, etc.), Emergency (with landslides, forest fires, ..), Atmosphere ... It is the resolution of the products which has to be improved. For the marine domains, most of the needs expressed by local actors are Coastal which is not implemented in GMES.

This report shows that, with efforts in raising awareness and dialogue with users, needs are present, which confirm the interest in GMES to make the link with regions. This link established during DORIS_NET is at the beginning, and efforts have to be continuous so as to raise awareness of end-users and also collect feedback on products and needs for GMES and downstream applications.

9. Report D4.5 Correlation between users' needs and SMEs capabilities Restricted to Project Partners

This report presents the results of the analysis aiming at matching the users' needs identified by the DORIS_NET Regional Contact Offices with the capabilities of European small and medium-sized enterprises (SME) in the field of GMES and Earth Observation.

The analysis is based on the information collected in the frame of:

- DORIS_NET WP3 about users' needs and existing downstream services;
- and DORIS_NET WP4 about the capabilities of European small and medium-sized enterprises (SME) in the field of GMES and Earth Observation.

The report focuses on a set of 15 examples selected in 5 regions of the DORIS_NET network and spanning various sectors such as:

- urban planning and management;
- sustainable development and nature protection;
- regional and local planning;
- agriculture, forestry and fisheries;
- emergencies.

For each need presented in the report, the authors tried to identify the SME(s) that have developed a suitable service or that have relevant competences. It should be stressed that the 'matching proposals' do not mean to be exhaustive.

Achievements: RCOs have identified mature demands (see D3.5) coming from regional stakeholders across a variety of regions and sectors.

The examples of needs selected in this report to make the correlation work show that:

- Some needs can be answered easily with ready-to-be-used services;
- In some cases, no service was identified; this can be because the regional inventory of services is not yet exhaustive, or because there are no services at all. Instead, SMEs with relevant competences were recommended. In the case in point, this may represent opportunities for the development of new services.
- Some topics such as "monitoring ecological corridors" are complex topics that are for the moment only addressed at the academic level. Developments are still needed to come to mature solutions or products. This represents opportunities for new R&D projects which could benefit to small and medium-sized enterprises (SME).

Additionally, authors remarked that most GMES services are highly customised products. This may be due to that fact that service providers have developed their service offers starting from the needs of their regional niche markets. D3.5 deliverable has however demonstrated that there are commonalities of needs between various regions of the network. This means that SMEs can access other regional markets.

10. Report D5.2 Recommendations for new GMES products

Public

The aim of this document is to present the recommendations for new GMES services, containing a portfolio of products that are worth being developed in the GMES program.

In order to support the downstream users in meeting their needs and to assist providers in finding their regional market access, a list of new downstream GMES services is here proposed.

This deliverable is addressed to three main categories of stakeholders:

- DORIS_NET Regional Authorities and new regions interested in joining this network as main representatives of the demand side;
- the wide market of service developers/providers: the outcomes of this work could be a useful tool to assist them in their business development (strategic and operational marketing);
- GMES steering offices in order to plan future actions.

The report focuses on the needs extracted by the regional RCO Inventory (D4.10). The portfolio of products is intended to be an exhaustive response to the demand side in the DORIS_NET regions and it completes the analysis provided in the D4.5 Correlation between users' needs and SMEs capabilities.

Achievements: This work carried out in the DORIS_NET regions by the RCOs offers a first screening of the products that could be deployed in the market place.

The identification of needs has required much in terms of time and effort. In fact, users, even aware of the GMES opportunities, are rarely willing to reveal their needs and often are not available to collaborate in defining the products requirements. This task is not commonplace although the user/client involvement is mandatory for the successful of the process.

This leveraging action should be pursued in the future and could be performed by RCOs mediators. Due to their knowledge of the regional capacity and their deep link with regional actors, RCOs may conduct surveys and organize focus groups on specific fields to collect more detailed information and to better support the business (i.e. SMEs, spinoff, consulting, private organizations and consortia) in their marketing activities.

Also citizens should be engaged in this process: by means of targeted survey, it could be possible identify additional needs strictly concerned with health, environment and tourism, issues less present even among the FP7 projects.

11. Report D5.3 Recommendations for GMES/Copernicus governance Restricted

The GMES/Copernicus (Copernicus) programme successfully achieved its pre operational period. GMES/Copernicus products are technically well developed; they are known and used at the European level by European organisations. However GMES/Copernicus capacities are wider. Local, regional or even national actors are not aware of the GMES/Copernicus potential for their activities. In consequence, they do not express feedbacks on their needs or GMES/Copernicus products.

The objective of this document is to contribute to the evolution of the GMES/Copernicus governance by providing recommendations on how the European Commission can better stimulate the development of GMES/Copernicus at the regional level, and how RCOs could enrich the GMES/Copernicus governance and bring the GMES/Copernicus programme closer to regional stakeholders.

The document is organised as follow:

- The first part describes the GMES/Copernicus governance and its actual links with Regions

- The second part describes the added value that Regional Contact Offices can bring for different elements of GMES/Copernicus governance
- The third part will propose actions on how to integrate Regional Contact Offices in the GMES/Copernicus governance

Achievements: Despite successful technological developments, GMES/Copernicus deplores today a weak regional involvement with regards to the wide capacities and benefits it provides for the Environment and Security domains.

During the DORIS_NET project, a methodology was successfully experienced to raise regional awareness on GMES/Copernicus potential with the concept of a RCO Network. This deliverable identifies the added value of RCOs for the GMES/Copernicus governance and regional actors and propose a way how RCOs can be integrated in the GMES/Copernicus governance.

All governance elements and levels (European, national, regional) can take benefit from RCOs' actions in order to make the link between GMES/Copernicus and Regions.

- At the European level, RCOs network provides more visibility to and lisibility on GMES/Copernicus products, improves the access and therefore the use of GMES/Copernicus products, fosters the use of satellite applications, favours environment and economic development and brings needs and feedbacks on GMES/Copernicus products which is a key to the success of GMES/Copernicus. In its turn, the European level has to update RCOs on services, products, collaborative projects opportunities.
- At the national level, RCOs strongly contribute to needs collection difficult to get at the national level, and involve regional actors in User Forums.
- At the regional level, RCOs provide answers to local actors in charge of Environment, favour innovative network, economic development and visibility.

Actions of all RCOs should be coordinated by a RCO network coordinator to be defined.

With such collaboration between all elements of the governance, the RCO network should succeed to make the link between GMES/Copernicus and Regions. Multiple supports and requests during the DORIS_NET project (from Regions, National coordinators, the GMES/Copernicus Bureau, ESA, Core services providers, regional users, etc.) confirm the need for an entity to make the link between GMES/Copernicus and regions.

12. Report D6.1 Sustainability concept

Restricted

The aim of this document is to present the actions carried out by the partners for ensuring a sustainable and operational continuation of the project achievements beyond the end of the project.

One of the main tasks of the last part of the project has been to establish the RCO (Regional Contact Office) network on a sustainable basis.

Work has been done:

- to qualify the benefits that Regions could expect from a RCO with a view to convince Regional Authorities to support financially future RCOs activities and new Regions to join the network;
- to evaluate the resources needed to keep on running established RCOs;

- to search for funding at different levels (European, national and regional);
 - to expand the network.
- All these above actions are reported in the deliverable.

Achievements: DORIS_NET has raised interest in many Regions. In fact, RCOs are pursuing a promising activity to the benefit of GMES (regional awareness, local market development ...) and Regions (innovation, end users federation ...).

All during the project many stakeholders (Regional Authorities' representatives, national advisers [MEDDE, CNR, GEOLAND ...] but also European actors such as the GMES Bureau, ESA, DG REGIO, the Committee of the Regions), have recognized the interest and success of RCOs' actions, and more largely of the GMES4regions initiative.

RCOs have made significant efforts to secure funding to ensure a sustainable continuation of the RCOs' activities at different levels (regional first, national in some cases, and European).

The task turned out challenging though, especially at the regional level because RCOs are strictly depending on regional politics and economy (situations, people ... change rapidly). Besides, DORIS_NET's experience in this matter showed that it would be easier to secure funding from the regional authorities if there were political signals coming from the European level.

During the last Common Advisory Board (CAB) of the GRAAL and DORIS_NET projects on 20th November 2012, the GRAAL and DORIS_NET projects were deemed successful in many ways, and it was stressed that they would probably achieve their full potential after their completion.

The RCOs' successes are indeed based on person-to-person relationships and deep knowledge of the territory. This is a time-consuming process. A continuation of the GMES4regions initiative is therefore crucial. The Committee of the Regions emphasized the importance of a support from the Commission for this purpose.

As far as the expansion of the network is concerned, the members of the CAB indicated that more Regions should be involved. This has been one of the objectives of the partners during the project.

The transfer of the RCO model from one region to another has been successfully demonstrated with Basilicata and Bretagne regions. Partners have led mentoring actions resulting in advanced contacts with many Regions wishing to set up an RCO.

Generally speaking, it will surely be easier to convince Regions (and others too), and grow the network once all operational RCOs have secured their own sustainability.

Last but not least, it should be kept in mind on the future that the RCO model can not only be exported to other regions but also to other sectors, such as the GNSS sector for instance.

Foreground description

Contribution to the definition of a Taxonomy of GMES/Copernicus services tailored to the Local and Regional Authorities' realm (in cooperation

with the GRAAL project, i.e. within Copernicus4regions). It has been exploited in: classifications of GMES/Copernicus services; definition of end users' needs; identification of GMES/Copernicus strategic development with respect to regions.

Report on the "Recommendations for GMES governance" (D5.3). The objective of the report is to contribute to the evolution of the GMES governance. It contains recommendations on how the European Commission can better stimulate the development of GMES at the regional level, and how Regional Contact Offices could enrich the GMES governance and bring the GMES programme closer to regional stakeholders.

Report on "Recommendations for new GMES Products" (D5.2). The aim of the report is to present the recommendations for new GMES services, containing a portfolio of products that are worth being developed in the GMES program. It proposes a list of new downstream GMES services, in order to support the downstream users in meeting their needs and to assist providers in finding their regional market access.

Potential Impact:

The main result expected in DORIS_NET is to create a downstream regional strategy accessible to all volunteer regions

In fact, DORIS_NET proved that it is possible to establish a network linking European regional and local authorities, service providers, local R&D institutions and policy makers by

- Providing a European GMES Downstream Service Platform
- Ensuring a representative geographic coverage across Europe reflecting the width of the GMES service portfolio
- Implementing a robust methodology that is scalable with different options of participation

Cross cutting impacts of DORIS_NET:

- the network of RCOs tested in DORIS_NET is able to provide an effective regional link for the European GMES programme which is vital for ensuring operational success
- it can significantly contribute to growth in the regional market for GMES downstream services
- it can foster Regional and Interregional GMES dynamics at European level increasing the impact across European regions
- it can allow the benefits of GMES downstream services to be demonstrated increasing awareness in regions and thus opportunities for raising either public or private funds for further application/business development.

Impact on European Competitiveness:

- the network of RCOs is a point of entry to the regional markets for European service providers
- it can identify new regional markets and define new services needed in those regions (see deliverables and foregrounds)
- it can foster new partnerships for downstream service providers at an inter-regional level and stimulate the development of critical mass offers at the European if not global scale (see deliverables)
- it can improve the participation of (small) regional actors and small and medium-sized enterprises (SME) in GMES projects (see events and Deliverables D3.4, D3.5 and D4.5)

Impact on European regional users

Regional users of GMES services can benefit through facilitated identification of services and the service providers with a capacity to respond to their needs. See Deliverables D3.4, D3.5 for more details.

Impact on GMES Governance

Regional stakeholders will be connected to upper European GMES governance and vice versa. See Deliverable D5.3 for more details. Furthermore the matching of offer and demand in the RCOs inventory can drive to suggestion of new GMES products such as in Deliverable D5.2.

Impact on Science and Technology

In its numerous events and in dissemination, DORIS_NET facilitated close cooperation between local GMES related research and development of GMES downstream services and thus had a positive impact on scientific exploitation, the rate of innovation and growth of the downstream industry within a region.

Impact on society as a whole

GMES downstream services are typically "public goods" with wide ranging benefits to society as a whole; then DORIS_NET contributes to the spreading of knowledge on GMES to the general public within a region.

Impact on European regions

The benefits of RCOs for regions are manifold and arise from various possible impacts on the economy, environment and the quality of life of the citizens. Particularly, setting up a GMES RCO in a region will contribute to reaching its regional strategic objectives.

Improving coordination among actors: As an independent and mandated entity, the RCO is recognized in the region as a neutral and trustworthy contact point to promote and support GMES capabilities. Acting as an interface and facilitator between universities, research centres, enterprises and regional authorities, it will improve the coordination of these various stakeholders. RCO can be hosted by more than one organization in the same region, whenever it's cost-effective.

Improving regional users' knowledge: Being the regional centre of expertise, the RCO will raise awareness about the potentialities offered by GMES tools towards the users in the region. Besides, by developing and delivering tailored GMES training workshops and programmes, the RCO will increase the level of knowledge of users and thus facilitate the adoption of GMES services which will in turn have positive impacts on the economy and the environment.

Answering regional users' needs: Potential regional users will benefit from the facilitated identification of services that can answer their specific needs.

Boosting regional competitiveness: By favouring dialogue between users and providers, the RCO will create favourable conditions for local enterprises to develop GMES services or to behave as distributors, which will significantly increase regional competitiveness.

Besides, the network of RCOs will create focal points for the regional providers that can be used as "entry points" to enter other regional markets.

Last but not least, the regional stakeholders and small and medium-sized enterprises (SME) will be able to gain a direct access to the information on GMES activities in other regions which can potentially boost their competitiveness.

Fostering collaboration and stimulating innovation: The RCO will facilitate close cooperation between local research actors and services developers which will have a positive impact on the exploitation of research work, the rate of innovation and growth of the GMES services industry within the region. The RCO will also improve opportunities for service providers to build up new partnerships for the development of innovative products on an inter-regional level.

Increasing the visibility of every region at the European level: Participating regions are represented by a common voice through the RCO network towards the GMES decision makers at the European level.

Accessing expertise at a European level: As all RCOs will share information, exchange experiences and best practices, there is a constant

gain of knowledge and capabilities for all people involved - a "win- win" situation!

Improving the quality of life of citizens: By raising the level of awareness at the regional level, the RCO will significantly contribute to the growth of the sector, which will ultimately benefit local citizens due the fact that GMES services are typically "public goods".

Regions can also expect clear representations on the services available from the information collected by the RCO Inventory: see by example the deliverable D3.4 and its analysis section; it can represent a fruitful analysis for the regional policy.

By documents such as the deliverable D3.5, regions can influence the development of the service market.

Dissemination - Public events

In the framework of the DORIS_NET project, Regional Contact Offices prepared and organized a range of activities in the core regions, outreach regions and fast-track regions over the period of 2 years. The type of activity was chosen by each RCO depending on the needs and the target audience.

The events were public and took place at various locations and times.

Regional activities - activities in Core regions

The types of events were defined by the proposed methodology: face-to-face meetings with LRA representatives, seminars or workshops in small groups, large conferences.

Lombardy

- Conference in Milan, 30 January 2012: New opportunities for small and medium-sized enterprises (SME) from space technologies / Lo Spazio per l'innovazione: Opportunità innovative e di mercato offerte dal telerilevamento da satellite alle aziende lombarde

Bremen

- GMES regional conference, Bremen, 25 January 2011: Importance of the European program 'Global Monitoring for Environment and Security' (GMES) at the regional level for offshore wind energy and climate change

Azores

- Ponta Delgada, 16 November 2011: GIS day and launch of the RCO, Introduction to GIS and GMES

East Midlands

- Regional conference, Leicester, 1 November 2011: Global to local: Space innovation in mapping

Aquitaine / Midi Pyrenees

- Conference in Toulouse, 13 October 2011: Spatial applications for collectivities

From February 2012 onwards the RCOs continued their activities in the core regions. GMES-focused workshops and seminars were run by SCRTE in Ponta Delgada, by CETE in Toulouse and Pessac, by CNR/TERN in Potenza, by CEON in Bremen, by G-STEP in Leicester. These events helped the RCOs in raising awareness of GMES amongst local actors, establishing new contacts with small and medium-sized enterprises (SME), and identification of regional needs.

RCOs took part in national events and raised awareness of GMES at exhibitions and national space conferences with posters, presentations and press briefings: World Space Week (Bremen, September 2012, over a 1000 visitors), 2nd National Strategy Forum for remote sensing and GMES (Düsseldorf, November 2012), Pollutec Show (Paris, November 2012), ASITA - National Italian Conference on cartography and remote sensing (Vicenza, November 2012), European Space Solutions Conference (London, December 2012, over 500 participants). Press briefing at the European Space Solutions Conference was presented by S. Ourevitch-GRAAL, with contributions from DORIS_NET.

Regional activities - activities in Fast-track regions

Fast-track regions are contractual partners in the project: Baden-Württemberg (LRBW), Basilicata (TERN), Brittany (Pole Mer Bretagne), Castilla Y León (ADE), French Guyana (Guyane technopole), Madrid (MPAE), Mazovia (IGIK).

Organisation of regional workshops in Fast-track Regions was planned for months 14-16 (March - May 2012).

Regional activities in the form of workshops were organised in fast-track regions in June 2012 (Matera, Basilicata), October 2012 (Warsaw, Mazovia), and December 2012 (Potenza, Basilicata). A conference (NEREUS event) was held in May 2012 in San-Malo, Brittany. In October 2012, LRBW president (representing Baden-Württemberg) participated as a key-note speaker in the Regional GMES4Regions event 'Bringing GMES and regions closer' in Brussels. In this event also a representative of IGIK participated and gave a presentation. CETE continued to be engaged in the tutoring process with the French Guyana. Tutoring activities of Castilla Y León and Madrid have been performed by CNR.

Overall summary of regional activities in fast-track regions: all core partners established contacts with their fast-track partners. Regional events were performed in most fast-track partners. Regional events were focused not only on raising awareness but also on introducing various GMES applications and their potential benefits for the regions. The success of the mentoring activities manifested itself in the establishment of two new RCOs.

Regional activities - activities in Outreach regions

Outreach regions: Ventspils (VNTP, Latvia), Tartu (Tartu Observatory, Estonia), Helsinki (Finnish Environment Institute, Finland), Cork (CMRC, Ireland), Madeira (Secretario Regional do Equipamento Social, Portugal), Debrecen (Eszak-Alfordi, Hungary), Cote d'Azur (Pole Mer PACA, France), Chania (Greece). These regions were targeted via dedicated measures led by core partners: workshops, invitations to events and meetings.

Regional activities in outreach regions were planned for July - August 2012. These deadlines were postponed to December 2012.

The main objectives of the activities were to raise awareness of the GMES in the regions and to introduce the RCO network and the DORIS_NET/GMES4Regions initiative. Contacts with outreach regions representatives were established relatively early in the life of the project. First steps were undertaken already in the first reporting period. For example, SCRTE had meetings with regional government institutions in Madeira in January 2012. Representative of CMRC (Cork)

took part in the Regional Event 'Bringing GMES and Regions closer' on 8 October 2012 in Brussels. CNR involved Debrecen (Hungary) in participating at the DORIS_NET meeting connected to Toulouse Space Show, in June 2012. TERN and CNR organized a workshop in Basilicata to involve Chania representatives in December 2012. With leadership from CEON, workshops were organised in the regions of Ventspils, Helsinki and Tallinn in January 2013.

Overall summary of regional activities in outreach regions: all core regions were involved in outreach activities with their dedicated regions, although the extent of the involvement varied. The activities ranged from face-to-face meetings and telephone contacts to organisation of GMES workshops.

Dissemination - scientific publications

Doi: 10.5721/EuJRS20124523

'Introduction to the special issue: Satellite Remote Sensing in the Service of Regional and Local Authorities', Paola Carrara, Alan Wells, Heiko Balzter, Etienne Bartholomé and Alain Podaire
Italian Journal of Remote Sensing / Rivista Italiana di Telerilevamento, vol 45, 2012, 261-262

Doi: 10.5721/EuJRS20124524

'Linking GMES Space Component to the development of land policies in Outermost Regions - the Azores (Portugal) case-study', Artur Gil
Italian Journal of Remote Sensing / Rivista Italiana di Telerilevamento, vol 45, 2012, 263-281

Dissemination - papers in national conferences and the popular press, brochures and flyers

'Regional Space: Connecting users', V.Schumacher, A.Wells, P.Carrara, 2011, International
Innovation Journal, Environment - October 2011

'Il Progetto Europeo DORIS_NET: creare il link regionale ai Servizi GMES', P. Carrara, ASITA 2010, Brescia, Italy

'A GMES initiative focusing on Educational and Training of the downstream user', H. Bacai, S. Zolotikova, K. Muthu A. Wells, R. Roth, J.R. Cowsill, and T. Smith, TSS 2012, Toulouse, France, June 2012

'The network of GMES RCOs' in Window on GMES Special Issue Dec 2012

'GMES services help Aquitaine to assess coastal retreat' Window on GMES Special Issue Dec 2012

'Tensift Hydraulic Basin Agency in Morocco' in Window on GMES Special Issue Dec 2012

'EO images help local communities to monitor lake water' in Window on GMES Special Issue Dec 2012

'Academia-Industry for the development of GMES services' in Window on GMES Special Issue Dec 2012

'GMES services for better management of subsidy to farmers' in Window on GMES Special Issue Dec 2012

'Supporting the EU Directive on the use of pesticides' in Window on GMES Special Issue Dec 2012

'Electromagnetic sensors for road infrastructures' in Window on GMES Special Issue Dec 2012

'Mapping the potential of roofs for solar panels with GMES' in Window on GMES Special Issue Dec 2012

'GMES service for timely detection of forest fires' in Window on GMES Special Issue Dec 2012

DORIS_NET flyer in English, printed by RCO Bremen, 1000 copies distributed in various events

DORIS_NET flyer in German, printed by RCO Bremen, 500 copies distributed in various events

Flyer of RCO Midi Pyrénées and Aquitaine, printed by RCO Midi Pyrénées and Aquitaine, 300 copies distributed in various events

Flyer 'GMES4Regions: Bringing GMES and Regions Closer', printed by RCO East Midlands, 500 copies distributed in various events

Flyer of RCO East Midlands, printed by RCO East Midlands, 500 copies distributed in various events

Flyer of RCO Lombardia (English and Italian), printed by RCO Lombardia, 200 copies distributed in various events

Web sites pages describing the RCOs of Azores, Basilicata, Bremen, Bretagne, East Midlands, Midi Pyrénées and Aquitaine, Lombardia

List of Websites:

<http://www.gmes4regions.eu>

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