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1. The European Parliament approved the proposal for a regulation on GMES programme and its initial operations 2011–2013

On 11 May 2010 the final draft report on the Commission's legislative proposal for a regulation on GMES programme and its initial operations 2011–2013 (COM(2009)0223) was unanimously approved by the Parliament's Committee on Industry, Research and Energy (ITRE).

Subsequently, the Parliament adopted on 16 June 2010 its position at first reading by approving in plenary the Committee's report. The amendments adopted by the whole Parliament are the result of a compromise reached between the ITRE Committee and the Presidency of the Council by the end of April 2010.

As regards funding, the operative clauses are not amended. However, the fund should be, if possible, further increased so that commitment appropriations can be allocated for the space component during the current Multiannual Financial Framework (MFF). In this respect, the Commission should, in the context of the mid-term review of the current MFF, and before the end of 2010, examine the possibility of additional funding for GMES, within the overall EU budget during the MFF 2007-2013.

The allocation of any additional funding to this regulation, besides the EUR 107 million already allocated, should be considered within the debate about the future of the European space policy, notably on procurement and governance. In its financial planning, the Commission should ensure that data continuity is guaranteed both during and after the end of the period of the initial GMES operations (2011-2013), and that the services can be used uninterruptedly and without restrictions.

The wording in the initial Commission's proposal is also amended to state that the regulation establishes the European Earth monitoring programme and the implementation of its initial operations during the 2011-2013 period.

Moreover, Parliament added to the initial proposal that the service component of the GMES programme should comprise access to information in support of the following areas: atmosphere monitoring; climate change monitoring to help adaptation and mitigation policies; emergency management; land monitoring; marine environment monitoring and security. GMES initial operations may cover these areas, as well as support for in-situ data collection (the in-situ component should ensure coordination of in-situ data collection and in-situ data access for GMES services).

Concerning organisational arrangements, the amended text stipulates that the Commission must coordinate the GMES programme with activities at national, EU and international level, notably the Global Earth Observation System of Systems (GEOSS). Implementation and operation of GMES shall be based on partnerships between the EU and member states.

The Commission has the responsibility to set up a transparent mechanism for regular user involvement and consultation in order to identify user requirements at European and national level, and to ensure coordination with relevant public sector users in member states, third countries and international organisations. MEPs asked service data requirements to be established independently by the Commission after consultation of the User Forum.

According to the text adopted by the Parliament, technical coordination and implementation of the GMES space component should be the responsibility of the European Space Agency (ESA), relying on

the European Organisation for the Exploitation of Meteorological Satellites (EUMETSAT) where necessary.

A new article provides that the Commission must ensure effective competition in the provision of GMES services (which should be decentralised where appropriate), to promote the participation of SMEs and to develop the downstream sector. Additionally, the Commission, taking into account the opinion of the User Forum, may define or validate appropriate procedures for the certification of the production of data within the framework of the GMES programme.

Regarding GMES data and information policy, the Commission may adopt measures establishing registration and licensing conditions for GMES users, and measures defining criteria for restricting access to the information produced by the GMES services and to data collected through the GMES dedicated infrastructure.

The Commission is granted also with implementing powers to adopt specific measures; coordinate the voluntary contributions of member states and the potential synergies with relevant national, EU and international initiatives; adopt measures laying down the technical requirements for ensuring the control and integrity of the system within the GMES space component; and adopt the annual work programme of GMES.

With a view to following-up the GMES programme, the Commission must submit an interim evaluation report by 31 December 2012 and an ex-post evaluation report by 31 December 2015.

In the context of governance, the GMES Committee may meet in specific configurations to deal with concrete issues, notably those relating to security ("Security Board"), while a User Forum should be established to advise the Commission on user requirements, and the coordination of the GMES programme with its public users. Chaired by the Commission, the Forum will consist of GMES public sector users appointed by the member states. The GMES Committee should be fully informed of the advice of the User Forum for the implementation of the GMES programme.

As a next step under the co-decision procedure, the legislative proposal is currently waiting for the Council first reading approval which is expected for this autumn. If approved by the Council, the proposal will become an EU law which provides a legal basis for the governance of the GMES programme.

More information at:

<http://www.europarl.europa.eu/sides/getDoc.do?pubRef=-//EP//TEXT+TA+P7-TA-2010-0214+0+DOC+XML+V0//EN&language=EN#BKMD-7>

2. Vice-President Tajani foresees future cooperation between Galileo and GMES

In the June edition of the Enterprise and Industry online magazine, published every month by DG ENTR, Vice-President Tajani puts a strong emphasis on Galileo, the European SME Week 2010 and on promoting e-skills. When mentioning Galileo, the new Commissioner in charge of Industry and Entrepreneurship also discusses about the role of GMES.

For instance, when asked about what are the results to expect from European space initiatives, such as Galileo and GMES, Commissioner Tajani foresees cooperation between both space flagship programmes.

Mr Tajani emphasizes how space is one of the major challenges for Europe and how Galileo is an important project. He mentions how Americans, Russians, Chinese and Indians have or are developing their own systems and how Europe needs its very own. In addition, Vice-President Tajani stresses how the Galileo system is very useful and how it can be considered as a big challenge for European companies and the economy.

The Commissioner outlines as well how Galileo will bring about a good number of practical benefits that outweigh the challenges. Mr Tajani added that from 2014 Galileo will provide the EU with new opportunities and services for citizens.

He refers to the importance of GMES when earthquakes and tsunamis happened, since the images that were used by civil protection services to help the victim came from GMES.

The Commissioner also supports the joint use of Galileo and GMES in a wide range of fields, including disaster response, agriculture, the reduction of pollution, as well as lots of practical applications that improve the quality of life for Europeans.

More recently, on 27 July 2010, Mr Tajani visited ESA Center for Earth Observation in Rome. This was Tajani's first visit to an ESA establishment since assuming its role as Commissioner for Enterprise and Industry. Welcomed by ESA's Director of Earth Observation Programs, Mr Volker Liebig, the Commissioner was given an overview on GMES and of ESA itself, with a particular emphasis on the benefits that ESA's activities bring to Europe's industry and society.

Since GMES is part of the Vice-President's portfolio on space, the visit provided an opportunity to hear first-hand information about the progress that has been made in the development of the GMES space component and the challenges that lie ahead.

The Enterprise and Industry June Magazine can be found at:

http://ec.europa.eu/enterprise/e_i/pdf/magazine_ei_07_en.pdf

3. First GOCE dataset made available

The Earth Observation satellite GOCE (Gravity field and steady-state Ocean Circulation Explorer) was launched into orbit on 17 March 2009 in order to map the Earth's gravity field over a 20-month period, with a high level of accuracy. The data acquired by GOCE will be used for producing a global, homogenous and detailed picture of the Earth's gravity field. In order to meet this ambitious goal, GOCE orbits at the lowest altitude ever seen for a scientific satellite, where the gravity signals are strong and the risk to fall out of the sky is high. The satellite is also the first to carry out a gravity gradiometer - a state-of-the-art instrument which is based on the principle of differential acceleration measurement.

On 9 June 2010 ESA made the first products based on GOCE satellite data available online, through ESA's Earth Observation user services tools.

However, before turning the raw data into suitable products for users, a number of steps has to be undertaken. First of all, raw data are generated from GOCE to ground stations in northern Sweden and Norway. Afterwards they are immediately forwarded to the Flight Operations Segment at ESA's European Space Operations Centre (ESOC) in Darmstadt, Germany, which are then sent to the ESA's European Space Research Institute (ESRIN) in Frascati, Italy. At that place the data undergo an important transformation from telemetry to 'level-1b' data products through a process of calibration and validation. These level-1b data are made available free of charge to scientific and non-commercial users.

Secondly, the level-1b data have to be processed to level-2 through the High-level Processing Facility (HPF), which is operated by a number of selected European universities and research facilities, under ESA's control. This structure will be operational throughout GOCE's lifetime.

The first global gravity field model (level-2 data) was presented at ESA's Living Planet Symposium which took place on 28 June-2 July 2010 in Bergen, Norway. Based on two months of data, from November and December 2009, the model has proved GOCE's capability to map tiny variations in Earth's gravity. According to ESA GOCE Mission Manager, Rune Floberghagen, the gravity model will improve as more data are captured by the GOCE's unique measurement techniques.

The final gravity map and model of the geoid based on GOCE data will provide users with well-defined products that will be of great value for a broad range of disciplines, including oceanography (environmental researchers will be for the first time enabled to establish the surface circulation of the oceans), geophysics (scientists could have a glimpse into the Earth's interior and define topography of the sea floor), as well as ocean level and ice dynamics studies.

GOCE is the first in a series of ESA's highly specialised satellites that will deliver accurate data about processes taking place in the atmosphere, oceans and on land, which could lead to new insights into global environmental change.

More information at:

http://www.esa.int/esaEO/SEMB1EPK2AG_index_0.html

http://www.esa.int/SPECIALS/GOCE/SEMY0FOZVAG_0.html

4. Earth Observation in the spotlight at the Oslo Science Conference

On 7-12 June 2010 the Oslo Science Conference celebrated the end of the International Polar Year (IPY), which is a large scientific programme focused on the Arctic and the Antarctic from March 2007 to March 2009. The two-year IPY program set out to improve our understanding of the intricacies of the polar regions and examine the relationships between these fragile environments.

The Conference gathered together around 2300 scientists, policy makers, teachers and students, who attended one or more of the 1800 presentations that have been held during the IPY-OSC week. More than 750 early career scientists submitted oral or poster presentations to the conference. Twelve of them received awards for outstanding presentations.

“Satellite observations have revolutionised our understanding of the cryosphere and the critical role it plays in shaping Earth’s climate system”, said Dr Ghassem Asrar, Director of the World Climate Research Program.

ESA provided coordinated observations of the Arctic and Antarctic from its Earth Observation satellites, including ERS-2 and Envisat. Professor Kenneth Jezek from the Byrd Polar Research Centre of Ohio State University said “I credit the success of this first-ever attempt to use the international constellation of Earth-Observing satellites to the efforts of the space agencies, and in particular ESA, which played a crucial role in leading GIIPSY”.

The impact of climate change has been definitely noted during the IPY period. For instance, Envisat’s radar monitored the collapse of an ice bridge and the destabilisation of Wilkins Ice Shelf in Antarctic last year, and highlighted the lowest recorded extent of summer sea ice in the Arctic in 2007. One of the main topics of discussion in the conference has been the extent of Arctic sea ice because today’s sea ice cover has fallen below the recorded extent in June 2007, which could mean that summer ice might fail to a new low.

A new satellite that ESA can now use is the CryoSat-2 satellite, aiming at mapping ice-thickness change. Thanks to this satellite, it will be possible to put new evidence on the table to work out how fast the volume of ice is changing, not only for ice floating in the polar oceans, but also in the large sheets blanketing Greenland and Antarctic.

ESA will continue supporting its efforts through its family of Earth Explore satellites and the series of Sentinel missions for the GMES initiative.

The next Polar Science Conference will be held in Montreal in April 2012.

More information at:

http://www.esa.int/esaEO/SEMETLQVEAG_index_0.html

5. Successful launch of the German Radar Satellite TanDEM-X

After TerraSAR-X, which is in space since June 2007, the second Earth Observation satellite of Germany, TanDEM-X (TerraSAR-X add-on for Digital Elevation Measurement), was successfully launched into orbit on 21 June 2010, from the Baikonur Cosmodrome in Kazakhstan. The German Aerospace Center (DLR) manages TanDEM-X via its ground segment, and is in charge of the mission operations, as well as the generation and utilisation of scientific data. Astrium GmbH built the satellite, while its subsidiary Infoterra GmbH is responsible for the commercial marketing of the TanDEM-X data.

TanDEM-X will fly in formation with its twin satellite, TerraSAR-X, in order to survey the entire land surface of the Earth (a total of 150 million square kilometres) several times over. This will be done from an altitude of 514 kilometres within three years. The operation will result in a first globally standardised 3D digital elevation model of the Earth, which will be of unprecedented accuracy.

Currently, for large areas of Earth there exist only approximate, non-standardised or incomplete elevation models. To address this gap, TanDEM-X and TerraSAR-X will fly just a few hundred metres apart and will constitute the first configurable synthetic aperture radar (SAR) interferometer in space. Differently from a conventional SAR, the interferometer SAR will image a geographical area from two different viewing positions thanks to the two radars that are on the satellite duo, giving thus different perspectives.

Compared with aircraft-based measurements, satellite-based Earth measurement has the advantage to create a globally homogeneous terrain model without interruptions at national borders or other inconsistencies. Furthermore, radar can see through bad weather and operates regardless of lighting conditions.

Digital elevation models are useful for a huge range of applications such as hydrology, geology and oceanography which require precise and up-to-date information on the properties of the Earth's surface. Digital elevation models can also contribute to better exploitation of natural resources, relief planning in the wake of natural disasters, as well as security deployments.

Furthermore, digital elevation models can be used in initiatives and programmes such as ZKI (Center for Satellite-Assisted Crisis Information at DLR), GMES and GEOSS (Global Earth Observation System of Systems), and may be incorporated in security-related cooperation treaties and agreements.

As regards the data processing, a network of three TanDEM-X ground stations in Sweden, Canada and the Antarctic will process the huge amount of raw data to be generated by the two satellites. These data will be processed in three main steps: firstly, the data transmitted by TanDEM-X to these ground stations will be examined; secondly, the results will be evaluated at the DLR's German Remote Exploration Data Center (DFD) in Oberpfaffenhofen, Germany, and processed into raw versions of elevation models; finally, the global digital elevation model will be then generated by a unit known as the mosaicking and calibration processor. Adaptation of the final product to the needs of commercial users and its worldwide marketing will be handled exclusively by Infoterra.

On 24 June 2010, or 3 days after it was launched, TanDEM-X sent its first image data to the ground station of DFD. These data cover northern Madagascar (showing the ups and downs of the waves in the Indian Ocean), Ukraine (showing how a radar satellite perceives fields and forests) and Moscow

(showing runways and airports). The acquired images prove that the radar satellite is functioning properly.

TanDEM-X is currently in the first part of the commissioning phase, during which the satellite is 'put through its paces' for a period of three months in order to prepare it for operational use. In October this year, the two satellites will fly in formation with a distance of only some 200 metres separating them as they orbit the Earth. This will mark the second part of the commissioning phase, during which the approach and control of both satellites will be in focus.

TanDEM-X is designed for a service life of minimum five years and should overlap the life of TerraSAR-X for at least three of those five years. The first official three-dimensional image acquisition by the twin satellites is planned for January 2011. Lastly, the TanDEM-X/ TerraSAR-X elevation model is expected to be available in 2013.

More information at:

http://www.dlr.de/en/DesktopDefault.aspx/tabid-1/86_read-25113/

http://www.dlr.de/en/DesktopDefault.aspx/tabid-1/86_read-25278/

6. Krakow Declaration on INSPIRE

The INSPIRE Directive came into force on 15 May 2007 and should be fully implemented by EU member states by 2019. The Directive aims to create an EU spatial data infrastructure which will enable the sharing of environmental spatial information among public sector organisations, and facilitate public access to spatial information across Europe.

A European INSPIRE conference is organised every year with a view to providing a forum for stakeholders from government, academia and industry to hear about and discuss the latest developments of the INSPIRE Directive.

The 4th INSPIRE Conference was centred on the theme 'Spatial Data Infrastructure as a framework for cooperation' and took place on 23-25 June 2010 in Kraków, Poland. Organised by the European Commission and the Polish Head Office of Geodesy and Cartography, the event gathered around 670 scientists, engineers, educators, entrepreneurs, managers, administrators, and representatives of civil societies from 50 countries.

The Conference was run through a series of plenary sessions addressing common policy issues, and parallel sessions focusing, in particular, on applications and implementations of Spatial Data Infrastructure (SDIs), research issues and new and evolving technologies and applications, as well as poster presentations.

At the opening of the conference, the European Commissioner for Environment, Janez Potočnik, addressed the INSPIRE community by highlighting the importance of the INSPIRE Directive in EU environmental policies.

The following presentations within the Conference programme were related to GMES:

- Opening and context for Global Dimension Stream - 'INSPIRE and GMES Services';
- International cooperation – 'SAFER, the GIGAS Effect: How INSPIRE, GMES and GEOSS are influencing EC projects';
- Education and awareness raising – 'How to integrate bottom up approaches and voluntary initiatives, with INSPIRE based SDI, GMES, GEOSS and SEIS activities';
- European Research Projects for GEOSS – 'The new EU-DEM for the Initial GMES Service for Geospatial Reference Data Access';
- European Research Projects for GEOSS – 'Geoland2 SDI: A Spatial Data Infrastructure component for the GMES Land Monitoring Core Service'.

Furthermore, opportunities for convergence and innovation for interoperability between INSPIRE, GEOSS, GMES, SEIS and SISE were discussed in one of the workshops of the conference.

The Krakow Declaration on INSPIRE was approved at the closing session of the Conference. After underlying the multiple benefits of the INSPIRE spatial data infrastructures, the Declaration recognises the progress made by EU member states for the implementation of INSPIRE, its positive contribution to research and technological development, and the attractiveness of INSPIRE to international organisations, non-EU countries in Europe and beyond.

Finally, the Declaration recommends governments and organisations to:

- Maintain their efforts and investments for reaping the societal benefits that INSPIRE provides;
- Increase their international collaboration efforts to create an INSPIRE information society without obstacles or borders;
- Support the implementation of INSPIRE spatial data infrastructures in non-EU countries in Europe and beyond.

More information at:

http://inspire.jrc.ec.europa.eu/events/conferences/inspire_2010/conf_skd.cfm

The Krakow Declaration on INSPIRE can be found at:

http://inspire.jrc.ec.europa.eu/documents/INSPIRE_/Krakow_INSPIRE_2010_Declaration.pdf

7. Global Forest Monitoring service to support the GMES Africa initiative

The world's forests form a significant stock of carbon, which can be released into the atmosphere as CO₂ when forests are impacted by human intervention. Launched in September 2008, the United Nations initiative REDD (Reducing Emissions from Deforestation and Degradation) aims to place a value on intact forests by assisting governments in developing countries to prepare and implement national

REDD+ strategies which prevent forests destruction. REDD+ readiness activities are currently supported in nine pilot countries from Africa, Asia and the Pacific, and Latin America.

In order to be efficient, national REDD+ strategies need reliable and timely information on the state of the forests. Satellite imagery is the only effective way of mapping such vast areas on a regular basis, but it can take a long time for individual satellites to build up a complete regional picture, especially as tropical rainforests are often covered by clouds. In the past, forest maps could only be updated every five to ten years, leaving them of limited practical use. Nowadays, high-frequency satellite surveys for operational forest monitoring are required for adequate forest management.

By the end of June 2010 DMC International Imaging (DMCii), a UK based supplier of remote sensing data products and services for international Earth Observation markets, launched a new service, specifically tailored to help conserve global forests. This service, called DMCii's Global Forest Monitoring, uses satellite imagery to produce easily-understood maps of forest cover change. The service's wide-area forest surveys can be updated annually, monthly or more often for areas of high risk, delivering thus the timely data necessary for operational management.

DMCii's Global Forest Monitoring service is based around a constellation of six satellites known as the Disaster Monitoring Constellation (operated for the Algerian, Nigerian, Turkish, British and Chinese governments by DMCii), which is designed to provide rapid mapping services. Each satellite observes in three spectral bands compatible with Landsat (the world's longest running Earth-Observing satellite series), therefore long term forest changes and many types of degradation can be identified.

Data derived from the satellites are used to provide maps of forest/non-forest regions, clear cut areas, logging roads and forest degradation. This up-to-date information will substantially help decision makers to target ground surveys, and create accordingly operational forest monitoring programmes that are needed for the REDD+ process.

DMCii is supporting, among others, the GMES Africa initiative to map all of sub-Saharan Africa during 2010, including the dense, rarely-charted forests of the Congo Basin, the world's second largest rainforest ecosystem after the Amazon basin.

The DMCii's Global Forest Monitoring service was presented to the Commonwealth Forestry Conference that took place on 28 June-2 July 2010 in Edinburgh, Scotland, UK. Discussions during the Conference focused on how to conserve current forested areas and restore lost forests as a means of benefiting regional habitats and communities, as well as tackling global climate change.

More information at:

<http://www.earsc.eu/news/dmci-launches-global-forest-monitoring-service-for-redd>

<http://www.cfc2010.org/>

8. The programme of the EU Belgian Presidency

On 1 July 2010 Belgium took over the six-months rotating EU Council Presidency with a caretaker government in charge. The Presidency's programme has been presented to the European Parliament on 7 July.

The goals identified by Belgium largely echo the priorities of the previous Spanish EU Presidency for the first half of 2010 and closely match the joint 18-month programme, which Belgium presented along with Spain and Hungary in the new 'trio' presidency format.

The programme highlighted a few different issues, like socio-economic, social, environment and climate change, justice and home affairs, external relations.

Innovation policy is expected to be one of the highlights of the Belgian Presidency, which plans to devote the autumn European summit to the issue.

EU leaders are due to debate a new "Research and Innovation Plan" when they meet in Brussels on 28-29 October, with the focus likely to be on intellectual property, research funding, public procurement and innovation infrastructure.

R&D will be a hot-button issue, as member states are due to sign off on individual national targets for research spending. The Commission wants governments to spend an average of 3% of GDP on R&D, but advanced member states will face higher targets than those with traditionally lower levels of investment.

In the programme there is a specific mention to the space sector. The Belgian presidency highlights its will to ensure progress in the definition of a European vision for space exploration and for the implementation of competence in the space sector.

About climate change, the Presidency commits to the implementation of the Copenhagen Treaty with a view to the 16th Conference of Parties to the Convention on Climate Change, scheduled to be held in Cancun from 29 November to 10 December 2010.

The Belgian Presidency favours the adoption of measures to set firm European climate change targets.

2010 has also been declared the International Year of Biodiversity. The Presidency will prepare for the EU's participation in the 10th Conference of Parties to the Convention on Biological Diversity to be held in Nagoya in October 2010. The aim of the conference is the development of a new policy on biodiversity, based on adapted targets.

The programme of the EU Belgian Presidency can be found at:

http://www.eutrio.be/files/bveu/media/documents/Programme_EN.pdf

9. Shanghai World Expo 2010 “Let’s embrace space”

On 2 July 2010 the thematic event “Let’s embrace space” held at the Shanghai World Expo 2010 saw the participation of the European Commission.

In line with the World Expo 2010 theme “Better cities, better life”, the conference focused on how space research furthers enhanced climate monitoring and improved air quality, contributing thus to the development of better and more sustainable cities.

During the conference new possibilities for enhancing EU-China space research cooperation in Earth Observation and space science were explored, following the foreseen publication on 30 July 2010 of the 4th call for proposals under the EU's seventh framework programme for research and technological development (2007-2013).

The topics addressed during the conference included the progress of Earth Observation and Space Science and Technology in China, and the cooperation on space technologies and air quality between the European Space Agency (ESA) and China.

The European Commission outlined areas where research cooperation between China and Europe might be increased, in particular as regards the fields of Earth Observation and Space Science. Whilst such cooperation is already extensive in Earth Observation, the European Commission also highlighted the will to expand international space science cooperation and respond more effectively to the challenges of climate change.

In the field of Earth Observation, Europe is already cooperating with China in three major projects aimed at improving monitoring of the marine environment, monitoring of atmospheric pollution and carbon monitoring.

The DRAGONESS project aims to establish a strategic mechanism for exchange of knowledge and expertise in marine monitoring for environment and security between Europe and China, while the AMFIC project addresses an issue particularly urgent for China today, namely increasing atmospheric pollution. Finally, CARBONES provides for enhanced reanalysis of Essential Climate Variables from terrestrial and oceanic carbon cycles.

The state of play of the above-mentioned projects have been presented at the conference by representatives from the European Commission, ESA, the National Remote Sensing Center of China and other relevant Chinese organisations.

More information on the Shanghai World Expo 2010 and on the thematic event can be found at:

<http://www.euatshanghai2010.eu/news/eu-china-space-embrace-safer-world>

http://ec.europa.eu/enterprise/policies/space/research/embrace_space_shanghai_en.htm

More information on the EU-China space project can be found at:

<http://www.euatshanghai2010.eu/international-co-operation-space-%E2%80%93-improving-our-vision-world>

10. A new website to provide real-time information of sea ice in the Antarctic

An award-winning new website is using real-time imagery from ESA's Envisat satellite to provide information on sea ice to aid safe passage through the waters of the Antarctic.

The Southern Ocean, situated south of the Antarctic Convergence, is an increasingly busy route for sea traffic, since its seas are used to conduct scientific research, transport freight and even carry tourists. However, the threat caused by the ever-changing pack ice and icebergs pose a serious danger to marine safety.

In this context, satellite imagery offers the only real practical means of obtaining timely information, because of the remote and inhospitable nature of the Southern Ocean. The European Space Agency (ESA) has been providing these key data to help navigation, but the 'Polar View' ice-monitoring service in the Antarctic greatly improved since a new interactive website made satellite images accessible.

'Polar View' is an international consortium of companies, government agencies and research institutes that provide Earth Observation services and data products for environmental monitoring and safety in the polar regions. In this capacity, 'Polar View' can provide ice-monitoring services for GMES.

'Polar view' provides access to a multitude of real-time satellite images coming mainly from ESA's Envisat's Advanced Synthetic Aperture Radar.

The website works by providing an interactive map displaying the latest satellite imagery and sea-ice information. Simple tools allow users to zoom into areas of interest and download the information they require.

While Envisat is currently the main provider of images for the Polar View's website, the Sentinel satellites being developed by ESA for GMES will soon be offering more data for services in the polar regions.

In particular, Sentinel-1 will ensure a continuous supply of radar data for the next 15 years that will be used in a wide range of GMES services, including routine sea-ice mapping. The first Sentinel-1 satellite is scheduled for launch in 2012 and will be followed by a second a few years later.

More information at:

http://www.esa.int/esaEO/SEMRJ0ZNZBG_index_0.html

GMES Projects' Corner

11. First G-MOSAIC User Workshop

The pre-operational security service of GMES is currently provided through the FP7 project G-MOSAIC. The first G-MOSAIC User Workshop took place at the Joint Research Centre of the European Commission in Ispra, Lago Maggiore, Italy on 23-25 June 2010. The event aimed at increasing awareness about the value of Earth Observation data for security applications, enlarging the knowledge and upgrading the capacities of new technologies for geo-information products, as well as showing the added value of the GMES security service for the decision making and managing actions.

The workshop was intended to gather representatives from institutions and organisations involved in security-related activities, European institutions, national ministries of EU member states, intelligence centres, armed forces, international along with national civil organisations, NGOs in particular.

The main objective was to encourage interaction and fruitful dialogue between security stakeholders and G-MOSAIC consortium partners, as well as within the Users Community itself.

On Wednesday, 23 June, the programme focused on G-MOSAIC in the framework of the EU Security topics. On 24 June the programme included a training activity in which five parallel sessions, in five security domains, took place. The domains of interest were: Natural resources and conflicts; Migration and Border monitoring; Nuclear and Treaties monitoring; Critical Assets; Crisis Management and Assessment.

On 25 June a follow-up of the training sessions took place, together with a presentation of the final conclusions of the workshop itself.

This first G-MOSAIC User Workshop is framed within the set of actions addressed to the G-MOSAIC Users Community to gain a deeper and global understanding of all the GMES security related services and to provide hands-on experience of the tools developed by the partners.

More information at:

<http://www.gmes-gmosaic.eu/home/programme.html>

12. SAFER anticipates production of geo information

The pre-operational emergency service of GMES is currently provided through the FP7 project SAFER. Within the Emergency Response Service (ERS), SAFER aims to create an archive of mapping products of areas identified vulnerable to disasters, which will be readily available in case of a disaster.

In this respect, hotspot areas have been identified from a number of different sources, such as WFP's Global Hazard Calendar, and analysis of the results of the collaborative study performed by Columbia University and the World Bank, entitled 'Natural Disaster Hotspots: A global risk analysis'.

However, these areas are on a large regional scale and now need further refinement to determine priority areas as required by the Users Community, which can be realised through ERS-SAFER.

SAFER calls therefore the different agencies and organisations to provide their priority areas, in order to utilise the mapping capacity of the project most effectively.

ERS standard preparedness "hotspots" mapping products, which are made in advance of a disaster, are produced at three scales: an overview map at 1:100,000 scale which covers about 3000 km²; a detail map at 1:25,000 scale which covers about 250km²; and a 1:10,000 scale map covering about 40km². However, SAFER's production is flexible and other specifications can be accommodated to suit users' needs.

The advantage of creating maps outside the demanding time constraints of an ongoing crisis is that products with a higher degree of accuracy, associated with a more rigorous and less time dependent process, can be delivered rapidly at the onset of a disaster.

This strategy has proved very effective in the aftermath of Cyclone Nargis, where maps of Myanmar had been produced a few months before the disaster and were distributed immediately following the disaster.

More information at:

http://www.emergencyresponse.eu/site/FO/scripts/myFO_contenu.php?noeu_id=30&article_id=54&lang=EN&popup=1