

Mozambique

SPOTMaps for hazard management

Intermon Oxfam is an NGO working on humanitarian and development projects. It has acquired SPOTMaps of Mozambique for a project to manage natural disaster hazards in Marromeu District, where flooding by the Zambezi River is a constant threat. This project aims to:

- identify risk zones
- visualize housing and settlements, farmlands, community and healthcare infrastructures
- define emergency response scenarios
- identify evacuation routes
- define staging positions for first-responder equipment

SPOTMaps products

SPOTMaps are seamless, uniform, orthorectified territorial coverages produced with 2.5-metre colour imagery from the SPOT 5 satellite. SPOTMaps provide a visual product and basemap to view an entire territory, perform impact studies and produce or update zoning plans and maps. SPOTMaps coverage is steadily building: 52 million sq.km are currently available immediately, for more than 70 countries. For more information and to download demo products, go to our website at www.spotimage.fr.

Indian Ocean

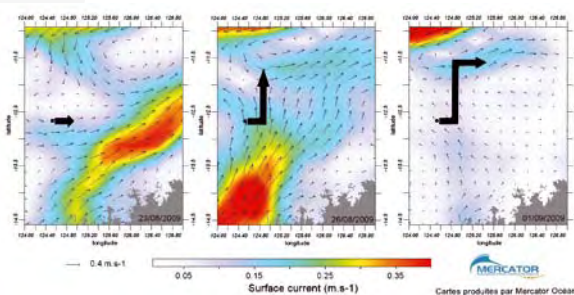
Oil spill in Timor Sea

Since end August 2009, crude oil has been leaking from the West Atlas drill rig in the Timor Sea, operated by PTTEP Australasia. Attention quickly focused on fears that the slick could pollute the Kimberley coast in the northern part of West Australia and its globally important barrier reef system.

An Envisat ASAR image acquired 8 September revealed that the oil slick was still a long way from the Kimberley coast, stretching for more than 150 km north-east of the drill rig.

Spot Image called on Infoterra UK to identify the oil slick and Mercator Ocean to explain and highlight its zigzag trajectory.

The small arrows on the charts indicate the direction of surface currents. The black dot marks the position of the drill rig. The thick black arrow shows the zigzag trajectory of the slick as it drifts north-eastward with the currents.



Orthorectification

New from KOMPSAT-2

KOMPSAT-2 imagery is now orthorectified automatically at Spot Image for production of mosaics. Two images were used to generate a mosaic of Barcelona, Spain, which stretches over more than 20 kilometres.

Bundle products were used to obtain a 1-metre colour mosaic by merging a 1-metre B&W image with a 4-metre colour image.



Natural disaster management

Aiding emergency response for a SAFER world

Major hazards and humanitarian crises are likely to become more frequent and more intense as a result of climate change. With the SAFER project (Services and Applications For Emergency Response) co-funded by the European Commission (EC), GMES emergency response services are moving one step closer to full-scale operational deployment.

Started in January 2009, SAFER is paving the way for Europe to provide more effective support in the event of natural and humanitarian disasters.



The SAFER consortium, coordinated by Infoterra France, comprises 54 partners from 16 countries, a core team of European industry and research institutes that have gained rich experience through previous EC and ESA GMES projects. The main European service providers (Infoterra France, SERTIT, Telespazio), space agencies (CNES, ROSA, DLR), small and medium enterprises (Keyobs, Magellium, etc.) and research teams (UNIFI, CNRS, INGV, LATUV) are all involved. This makes SAFER one of the largest GMES projects launched at European level, with users that include European civil protection authorities and international UN agencies.

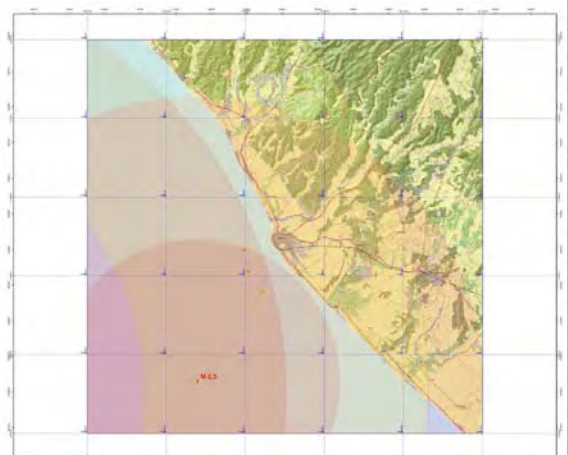
SAFER addresses hazards occurring in Europe and all over the world by delivering reference maps (within 6 hours), assessment and situation maps (within 24 hours in Europe and the Mediterranean basin, 36 hours elsewhere), crisis follow-up products and specific thematic products. Optimization of operational processes, including acquiring data to anticipate requirements, and information delivery to decision-makers and in-field operatives are key elements. Thanks to the support of Earth-observation data suppliers like Spot Image, satellite imagery can be acquired much more quickly to ensure on-time product delivery.

Experience gained from previous projects shows that to achieve the kind of responsive and time-critical service that SAFER is aiming at, an “operational coordinator” of the service is necessary. This role has been taken on by Infoterra France, which manages each operation end to end and coordinates all stakeholders contributing to the service, as well as the interface with users.

Since early 2009, SAFER has been activated more than 20 times in Europe and around the world. It sprang into action in response to flood, fire, earthquake and typhoon events—for example in Sumatra, Bangladesh, Philippines, Brazil, Yemen and Turkey—with a peak this summer during the large-scale wildfires in Europe, and in October in the Asia-Pacific region when heavy rainfall and cyclones led to major floods.

Reference and assessment maps were produced and delivered by SAFER in rush mode to end-users.

DURING THESE EMERGENCY SITUATIONS, THE SAFER OPERATIONAL MODEL WAS SUCCESSFULLY IMPLEMENTED AND VALIDATED. FOUR ACTIVATIONS WERE CONDUCTED IN CLOSE PARTNERSHIP WITH THE INTERNATIONAL CHARTER ON SPACE AND MAJOR DISASTERS, UNDER A COOPERATION AGREEMENT BETWEEN SAFER AND THE CHARTER BOARD.





Brazil

ENVISAT data for maritime surveillance

With very large oil deposits recently discovered off the coast of Brazil, Petrobras is funding a project to acquire satellite imagery for monitoring their offshore drill rigs, as well as other applications. The project got underway with the signature of a two-year agreement between Spot Image and FUNCATE, a foundation of INPE, the Brazilian space agency, to receive Envisat SAR data at the receiving station at Cachoeira Paulista. Envisat data are the best suited to Brazil's maritime surveillance requirements, notably for monitoring shipping traffic and tracking pollution. FUNCATE is a foundation working to promote science and applications of space technologies. It assists government research and development agencies engaged in mapping, processing and analysis of aerial and satellite imagery, and in setting up geographic information systems.

Russia

Multisatellite terminal enters service

Russian station operator ScanEx has acquired a latest-generation Spot-On terminal to archive and produce SPOT 5 and FORMOSAT-2 data from its four direct receiving stations covering Russia's huge territory. This contract was made possible by the expertise of the three main stakeholders:

- ScanEx, which Spot Image has been helping to develop its domestic market, has proven its engineering and operational excellence managing 12 direct receiving stations across Russian territory, where it receives data from 15 optical and radar satellites.
- EADS D&S built the ultra-modern terminal to the customer's requirements, with the capability to acquire data from multiple satellites (SPOT, Envisat, FORMOSAT-2, etc.)
- Spot Image offered innovative commercial, technical and operational solutions involving most of its teams.

ScanEx has been receiving FORMOSAT-2 data in Russia since 2008 and SPOT data since April 2006.

Turkey

Spot-On terminal

The Centre for Satellite Communication and Remote Sensing (CSCRS) at the Istanbul Technical University (ITU) has been operating a SPOT 2 and SPOT 4 receiving station since 2002.

This summer, a Spot-On terminal was installed at CSCRS to receive SPOT 5 data. End November, an official ceremony was held in Istanbul to inaugurate the new terminal, in

the presence of the Minister of the Environment and ITU's Chancellor. ITU is now the exclusive distributor of SPOT 5 data in Turkey. ITU will be using the SPOT 5 data for the TARIT crop yield forecasting project on behalf of the Ministry of Agriculture. The first initiatives already underway include a Planet Action Turkey programme, a structure supporting data requests from scientists and acquisition of SPOT 5 coverage of Turkey at the Istanbul receiving station.





19 May 2009



6 September 2009



22 November 2009

Online SPOTMonitoring

Online change detection made simple

SPOTMonitoring is a change-detection service that delivers accurate, current information for defence and security applications, large corporations and international organizations.

The SPOTMonitoring online service provides change information from multisource, multiresolution satellite imagery in three steps:


- customers open an account on line, where they can view all monitored sites of interest;
- they subscribe to receive e-mail alerts about monitored sites and can view archive data;
- and they can propose their own sites of interest.

Our experts analyse imagery on specialized software, produce reports and send them to subscribers via the online service. Each report is illustrated by an image annotated with arrows and colour-coded areas to highlight changes.

MONTHLY MONITORING OF AN INDUSTRIAL COMPLEX.

Military customers highly value the complementarity of TerraSAR-X, FORMOSAT-2 and SPOT imagery.

Busher Power Plant
11/09/2009 06:49



Observations

6 changes were observed at this site.

	New	Changes	Missing
Activity*		X	X
Building		X	X
Structure			

* Including: Vehicles, aircraft, helicopters, ships, materials, smoke, movement of water...

Comments

On September 11th, 2009, one change was observed on the infrastructures: one structure was missing into the workers accommodation area. Between 2009/08/17 and 2009/09/11, ship movements were visible into the South harbour. Finally, movements of vehicles and material were visible into the site.

Alert levels

- New construction
- Regular activity
- No activity

BUY THE IMAGE

Example change-detection report

corporations and lending institutions for business intelligence and infrastructure construction projects. SPOTMonitoring is a unique, innovative service that saves time and human resources, boosts competitiveness and makes it easy to acquire the right data at the right time.

The right place at the right time

Users define their area of interest, required resolution, frequency and duration of the service (for example, one image per day for 10 days). Spot Image then tasks the satellites to acquire imagery of requested sites of interest. Imagery is analysed in two stages: first, automatic processing highlights the main changes, and second, photointerpreters check and analyse the image and then add a graphic layer. When a change is detected, the user is alerted by e-mail and prompted to check the change-detection report. The source image can be downloaded.

The key advantage for users is the ability to acquire the right image as needed to fit their operational requirements.

A valued service

SPOTMonitoring was launched in 2007 using SPOT 5 and FORMOSAT-2 data to monitor 10 sites. Today, 60 sites are monitored to meet customers' operational requirements.

The service reached a new milestone in 2009 with the successful integration of TerraSAR-X data, from acquisition through to final analysis.

The service is geared in particular to military users who need to be alerted each time changes are detected at a monitored site, for example if new buildings are erected at an air base. It is also used by