UNOSAT
satellite imagery for all

e-news

JULY 2007

SPACE BASED SOLUTIONS FOR EARLY WARNING, CRISIS RESPONSE, SUSTAINABLE RECOVERY, VULNERABILITY REDUCTION AND LOCAL CAPACITY BUILDING FOR UN AGENCIES AND MEMBER STATES

UNOSAT on the move

In June, UNOSAT regrouped its office locations by relocating into a new office building on the CERN premises. The building was re-furnished according to the specific requirements of UNOSAT and includes a larger GIS and map production facility to respond to the growth in demand. This building also has space available for advanced training and meetings. UNOSAT will also maintain some office space in the International Environment House (IEH) premises in Geneva.

Inter-agency support capacity for uses of satellite applications in disaster risk reduction

On 15 June, the United Nations Committee On Peaceful Uses of Outer Space (COPUOS) endorsed the proposal of the Swiss Confederation towards the setting up of a UN SPIDER liaison office in Geneva. The UN SPIDER programme was established last December to "Ensure that all countries have access to and develop the capacity to use all types of space-based information to support the full disaster management cycle". There was indeed an important need for the establishment of such a liaison office in Geneva, where several key players including UN OCHA, UN ISDR secretariat, and the GEO secretariat are located.

The Government of Switzerland decided to contribute to the creation of this liaison office by funding UNOSAT for support to UN SPIDER, building on the UNOSAT installed operational capacity. As a first step in the direction of supporting the work of UN SPIDER, UNOSAT and ISDR have agreed to create an inter-agency support capacity for the uses of satellite applications for disaster risk reduction. As part of the strengthening of the Global Platform for disaster risk reduction announced at the occasion of the first session of the GP/DRR held early June in Geneva, this joint initiative will be dedicated to supporting the National Platform on Disaster Risk Reduction to benefit more fully from space technologies in the implementation of their operational vulnerability reduction projects. This support will be carried out through the facilitation of access to satellite applications, and related training and capacity development activities, in line with the principles and objectives of UN SPIDER.

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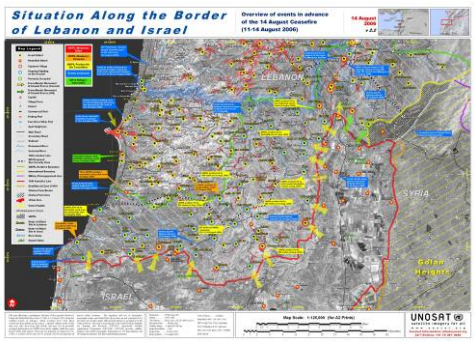
UN21 Honouring outstanding staff initiatives AWARDS

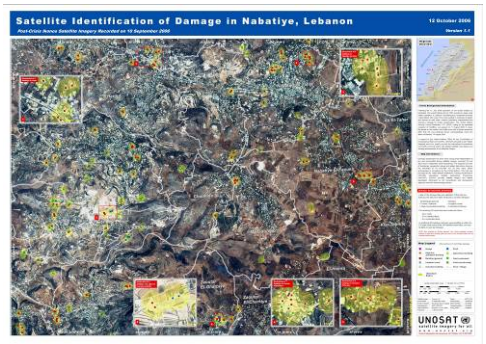
Humanitarian rapid mapping – Middle East crisis

Beside the coordination mechanism put in place by OCHA during the Middle East crisis in July and August 2006, UNOSAT delivered detailed damage assessments over Lebanon derived from very high resolution satellite imagery. These included a wide range of products ranging from situation maps during the conflict to damage overview maps for most affected areas, statistics and detailed damage assessment atlases were used by the humanitarian community and Lebanese civil defense. The work done by UNOSAT for OCHA and the UN Environment Programme (UNEP) was also useful for early recovery planning and implementation.

Given the complexity of the situation and the issues as stake, the UN needed to undertake an independent and transparent analysis feeding into the UN decision making process, with particular focus on direct support to teams working to provide humanitarian relief on the ground as well as various environmental assessments (by UNEP). The work done by UNOSAT was complementary to that of the joint European Union Satellite Centre (EUSC) and to the European Commission Joint Research Centre (JRC) study, which looked more at aggregating information on structural damage to be used in allocating funds and taking decisions within EU/EC structures. Both the UN and EU/EC were in need of independent analysis to assess the situation according to their needs. A tri-partite review showed the complementing results from the UNOSAT and EU/EC assessments.

In parallel to the satellite imagery based damage assessment, a ground verification process was launched collecting damage ground data (photos, descriptions and GPS coordinates of more than 100 visited sites). A Geographic Information System (GIS) based methodology was developed to incorporate these ground data in order to validate the results. The field assessment by UNOSAT staff verified the results of the image analysis to be accurate.





Illustrations source: UNOSAT

Data server for PREVIEW

In the PREVIEW project, UNOSAT has developed a web server to provide the scientific community with a database of satellite imagery acquired in the context of the International Charter "Space and Major Disasters". This has been done to encourage and allow scientists to develop and validate new image processing methods in the area of risk management (for example change detection, object recognition etc.). 152 satellite imagery datasets covering a total of 20 disasters have been available as of 1 January 2007. See www.unosat.org/preview

Online map service in progress

The project for the development of an online map service for emergencies was initiated last year and has progressed substantially in 2007. The online map service, developed thanks to the support of the Government of Denmark, will be based on the newly released ArcGIS Server 9.2 technology by ESRI. Once operational, the online map service will provide decision makers and early responders in humanitarian crises with a dynamic and updated common operations picture complementing other UNOSAT information products. The online map service managed by UNOSAT will be accessible by the humanitarian community via the Virtual OSOCC and the Global Disaster Alert and Coordination System (GDACS). Data for the online service will be stored in a geographic database at CERN. The service is currently being tested at the Danish National Survey and Cadastre in Copenhagen.

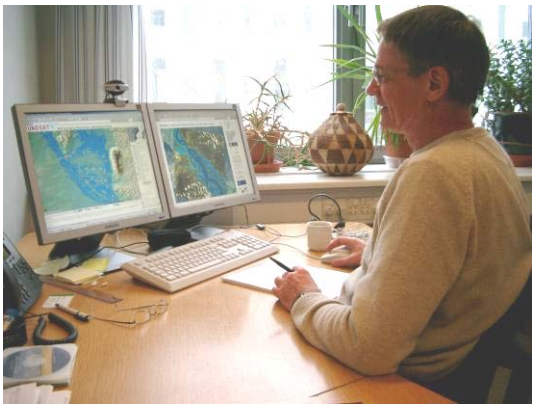


Illustration source: UNOSAT

UN Geographic Information Working Group

In support to UN colleagues and to contribute to coordination and the efficient use of resources, UNOSAT is currently entering information on its data archive on very high resolution imagery for easy access by the UN community. This is also a key task of the UNOSAT-led UNGIWG Remote Sensing Task Group. Other actors, such as the OCHA ReliefWeb map centre will also contribute to this task. Meta-data about image characteristics and accessibility will be available through the GeoNetwork, an open source software supported by FAO and several other UN entities.

See www.ungiwg.org and www.fao.org/geonetwork

UNGIWG