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UNOSAT IS A PEOPLE-CENTRED PROGRAMME INTEGRATING SATELLITE SOLUTIONS FOR HUMAN SECURITY, PEACE AND DEVELOPMENT APPLICATIONS.

Local capacity building - Nicaragua

In the framework of our collaboration with the International Labour Organization (ILO) DelNet programme and the Secretariat of the UN International Strategy for Disaster Reduction (UN ISDR), UNOSAT assists local governments of three adjacent municipalities, Telica, Malpaisillo-Larreynaga and Quetzaguaque, all in the department of León, Nicaragua, with strategic planning for local development, improved environmental management and natural disaster risk reduction.



The region in focus has suffered economic setbacks due to the recent collapse of the cotton industry and related environmental problems in connection to mining activities. This area, frequently exposed to hydro-meteorological disasters, was devastated after hurricane "Mitch" in 1998. The region is also known for its seismic activities, requiring detailed risk assessments incorporated into local territorial management plans. For example, various human settlements in areas prone to exposure of volcanic eruption need to be reassessed.

Today's practice of extensive peanut farming is highly erosive to the soil, leaving little vegetation cover outside of the harvest-season, see example photos below.



All these issues have made the three municipalities realize that the best way to tackle the issues is through a common alliance to address the various problems. ILO DelNet, ISDR secretariat and UNOSAT provides technical assistance, local capacity building and guidance for the common vision of the local authorities: To find alternative solutions to the current economic and environmental crises by attracting public/private investors

to generate jobs without destroying natural resources.

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Example of eroded soil from peanut farming. After sowing (left) and prior to harvest (right).

While ILO DelNet and ISDR secretariat are assisting in political and social issues, UNOSAT is focusing on economic development and environmental management plans. The latter is implemented through the establishment of local techno-parks and extensive use of satellite imagery and geographic information system (GIS) analyses for diagnostics and prognosis.

Photos: UNOSAT

Humanitarian rapid mapping support, February 2008

During the month of February, UNOSAT provided humanitarian support to four major emergencies:

- [Bolivia floods](#)
- [Chad conflict](#)
- [Democratic Republic of the Congo \(DRC\) earthquake](#)
- [Ecuador floods](#)

Due to heavy floods in Bolivia, The UN Human Settlements Programme (UN-HABITAT) requested UNOSAT to trigger the International Charter Space and Major Disasters. A variety of satellite maps and analyses of flooded areas were provided to UN-HABITAT, as well as OCHA and the UNDAC team in the field. UNOSAT also provided GIS-ready flood layers to MapAction for in-field mapping. This was the first time we used the new very high resolution radar satellite TerraSAR-X, marketed by InfoTerra Germany. The capacity of imaging the situation on the ground in great detail, despite cloud

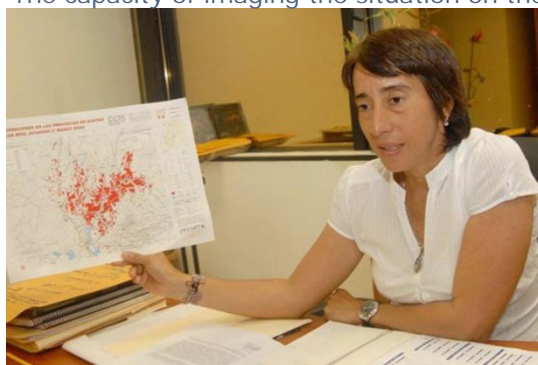


Photo: Angel Aguirre

coverage is an added asset to the suite of existing satellites from the Space Charter and other sources. Later the same month, UNOSAT was requested to again trigger the Space Charter – this time on behalf of the Food and Agriculture Organization (FAO) of the UN. Again, UNOSAT also provide its rapid mapping support to the deployed UNDAC team.

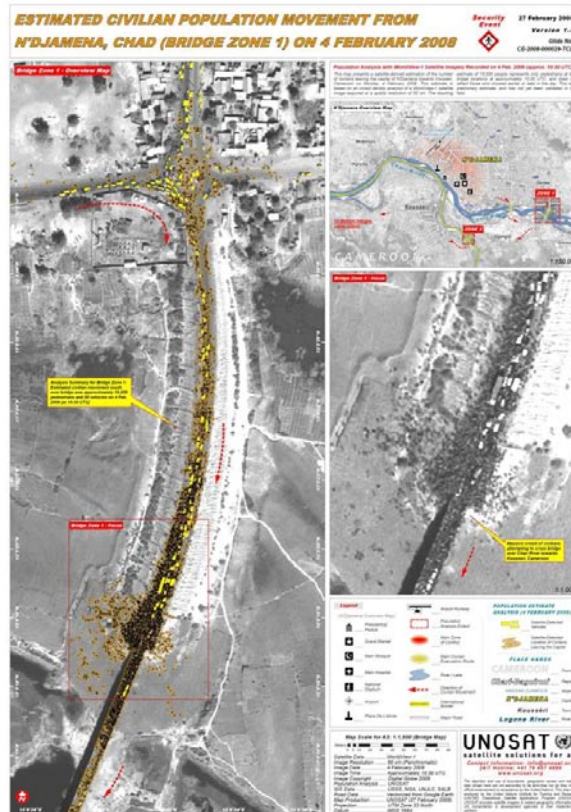
In both cases, Bolivia and Ecuador, UNOSAT worked with national entities involved in the management of the disastrous floods. For example, the Ecuadorian Minister for Coastal Regions (Minister del Litoral), Mrs Carolina Portaluppi, relied on UNOSAT

maps for managing the Governments' response and assistance to the affected population.

The 6.1 earthquake that struck the Democratic Republic of the Congo (DRC) and Rwanda on 3 February caused damage to public buildings and infrastructure in the city of Bukavu, DRC. An UNDAC team was deployed to assist in damage- and environmental assessments and related recommendations. OCHA and UNOSAT

activated the Respond project, Sertit, to produce satellite maps in support to the UNDAC mission. This was found to be highly useful both to the UNDAC mission and to the Goma Volcano Observatory.

Following civil conflict in Chad, a large number of people fled the capital N'Djamena and crossed into neighboring Cameroon. This was imaged by the WorldView-1 satellite, marketed by DigitalGlobe, on 4 March. This satellite acquires the most detailed imagery currently commercially available and is able to detect objects at a resolution of 50 cm. Using advanced image processing and statistical models for crowd estimates, UNOSAT was able to estimate the number of people leaving the capital and seeking refuge in Cameroon at the time of satellite overpass.



Talking to our users


We have initiated a new section of our e-news. This is dedicated to small interviews and discussions with various users of UNOSAT's satellite solutions. Through this section, we hope you, the readers of this e-news, will learn more about how satellite technologies are impacting UN agencies, their implementing partners, as well as organizations within Member States.

In this issue, we learn how Mr Nicolas Chavent, a GIS officer with the UN Joint Logistics Centre, used UNOSAT data during his recent emergency mission to Mozambique to assist in the logistics operations during the floods earlier this year.

Q: How did you use UNOSAT's satellite maps and data in support to the Mozambique floods response?

A: The various releases of satellite image derived flood extent in the Zambezi valley generated by UNOSAT and released as ESRI shapefile or personal geodatabase feature classes were integrated to the set of standard cartographic products UNJLC delivered in support to the Mozambique floods response. This theme was a central component of the UNJLC logistics general planning map, road condition, air operations, warehousing and river navigation hubs overview maps, and as such it was been kept up to date following each UNOSAT release.

Besides this product, UNOSAT supported the UNJLC GIS cell deployed in Caia through the provision of GIS-vector transportation features derived from satellite imagery and



data modeling to define flood prone areas in the Zambezi area. UNOSAT's expertise in this field of data modeling greatly supports a joint WFP ODAP and ITHACA contribution to support a contingency planning exercise run by the Mozambique government.

Q: How were UNOSAT's data integrated in your operational setting in-country?

A: UNOSAT floods extent data were used as a base layer integrated into each of the ArcMap projects used to generate the mapping products mentioned above.

Q: Were you satisfied with the support given by UNOSAT?

A: UNOSAT's service fully satisfied the UNJLC requirements during the Mozambique operation.