

COSMO-SkyMed

A constellation
of radar satellites
for Earth Observation

COSMO-SKYMED OPENS THE ERA OF OPERATIONAL APPLICATIONS

With its involvement in this programme, Telespazio extends its range of innovative applications, integrating radar and high-resolution optical data, for unprecedented, cutting-edge operational monitoring services. COSMO-SkyMed data will feed a Geo-spatial Information

system, for emergency management services (earthquakes, fires, floods), environment, land administration services (landslides, subsidence, oil spill, cadastre applications) and natural resources monitoring (agriculture, forestry).



COSMO-SkyMed, the most innovative satellite system for environmental protection, emergency management, surveillance and homeland security.

ONE OF THE MOST INNOVATIVE PROGRAMMES IN EARTH OBSERVATION

COSMO-SkyMed, one of the most innovative Earth Observation programmes, is financed by the Italian Space Agency, the Ministry of Defence and the Ministry of Education, Universities and Scientific Research. The COSMO-SkyMed system involves a constellation of four satellites equipped with radar sensors that can operate under any weather conditions, visibility and with very short revisiting time.

COSMO-SkyMed was conceived as a dual-use programme

intended to meet civil (environment and civil protection) and defence objectives (surveillance). The overall features of the system allow it to interoperate with other systems and to be used within the context of international agreements. In particular, COSMO-SkyMed will be able to meet the stringent operating requirements of GMES (Global Monitoring for Environment and Security), the European Union and ESA's programme.

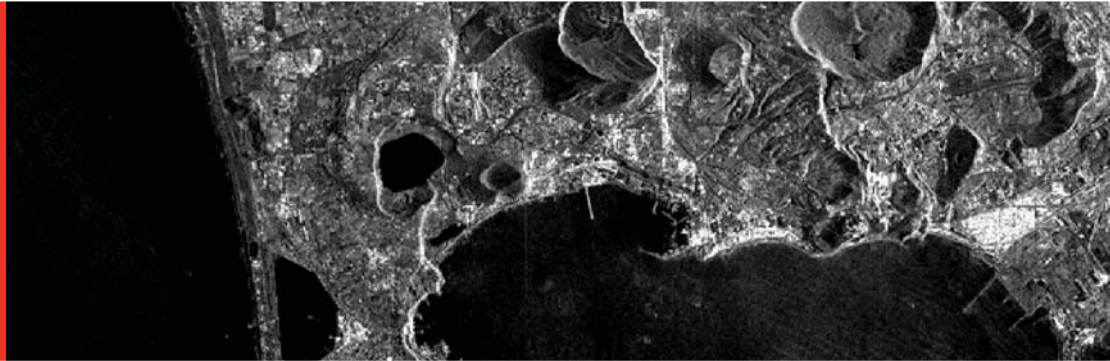


Telespazio, a Finmeccanica/Thales company, is a key player in the development of COSMO-SkyMed, with responsibility for the entire ground segment and the integrated logistic and operations segment. The Fucino Space Centre (L'Aquila) hosts the constellation Control Centre to ensure the acquisition of the satellite after the release from the launcher, and the execution of the LEOP (Launch and Early Orbit Phase) activities, to plan image acquisition requests, and to perform the command and control activities of the constellation. The Matera Space Centre is responsible for acquiring, processing and distributing the satellite data for civil applications.

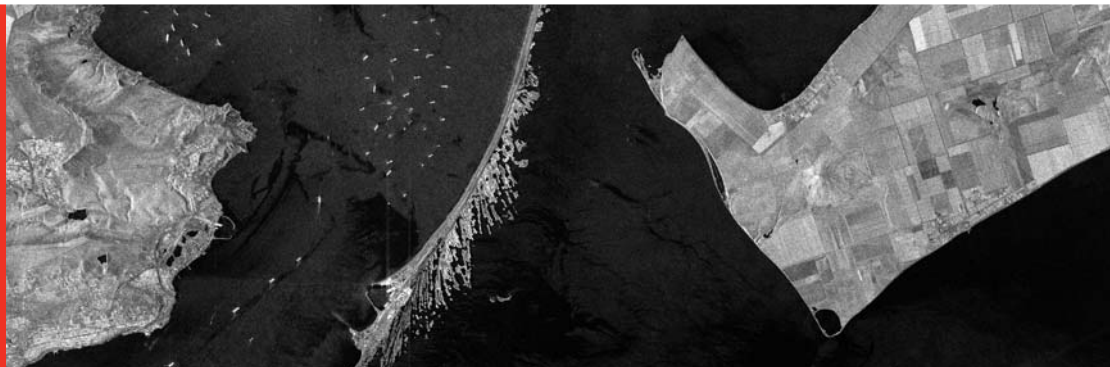
Emergency



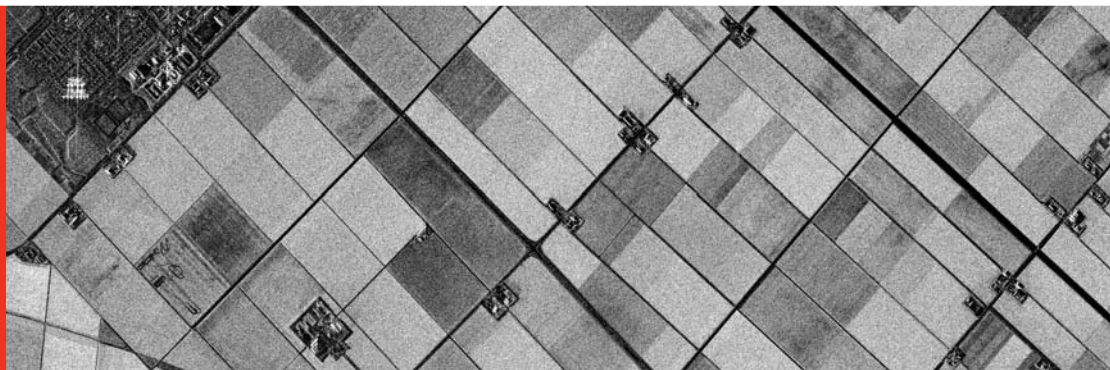
Subsidence



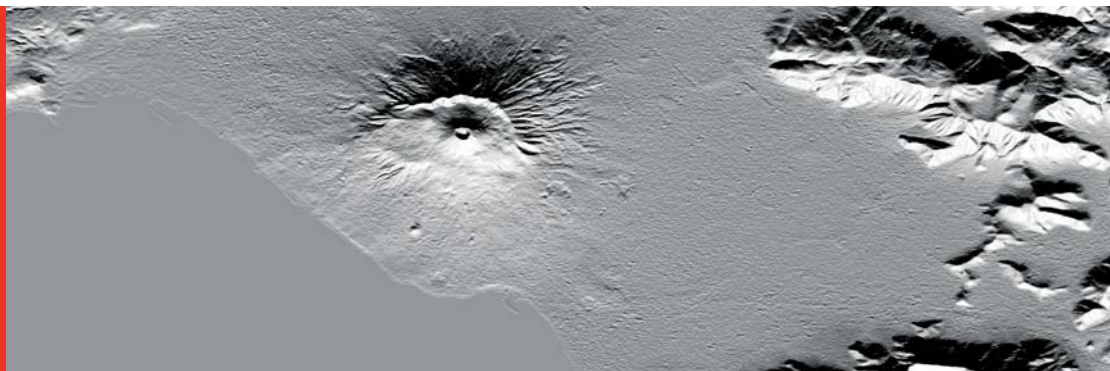
Maritime
Surveillance



Agriculture

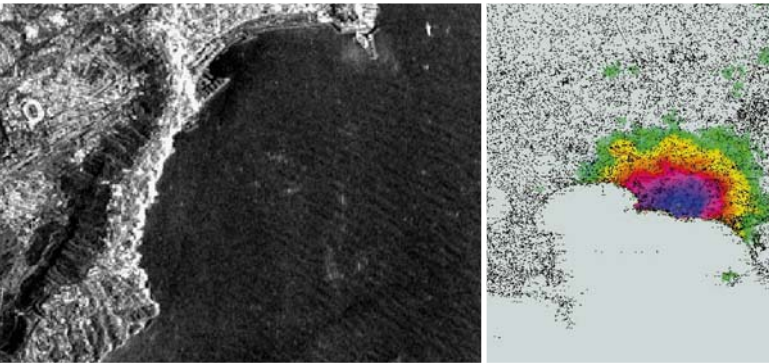


Digital
Elevation
Models

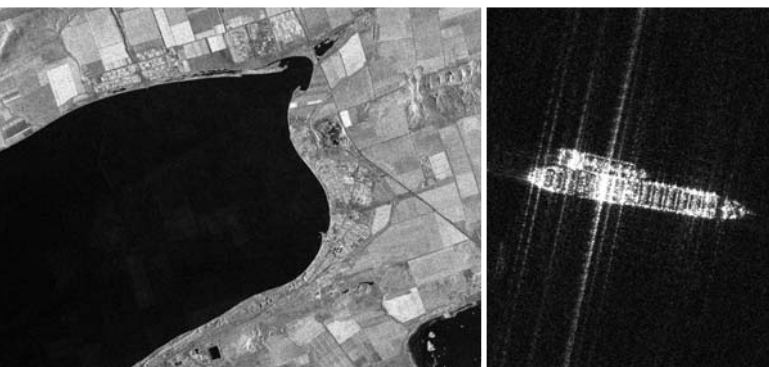




COSMO-SkyMed 2 StripMap HIMAGE acquisition (3 m resolution) over the city of Guan Xian in China and the Zipingpu dam, acquired on 13 May 2008, the day after the terrible earthquake hit this region. In detail, an image of the area of Beichuan, where large landslides blocked rivers and roads, acquired the following day by COSMO-SkyMed 1 satellite in Spotlight-2 mode.



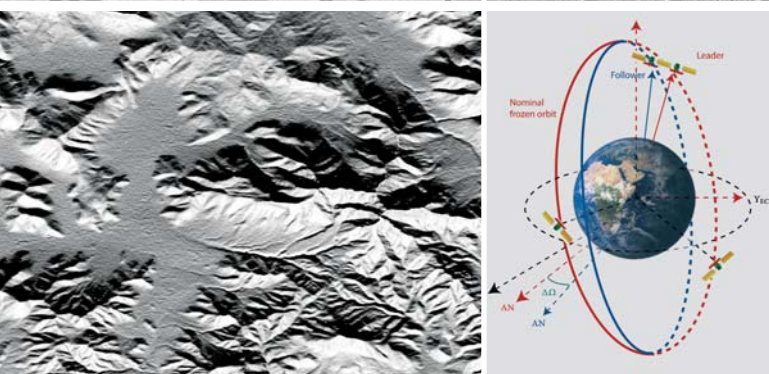
COSMO-SkyMed 1 StripMap HIMAGE scene (3 m resolution) acquired over Pozzuoli (7 March 2008); detail of a subsidence analysis in the Gulf of Naples, showing ground movements in the area of Pozzuoli.



COSMO-SkyMed 1 acquisition (StripMap HIMAGE at 3 m resolution) over the Kerch strait between Ukraine and Russia (13 November 2007); detail shows an oil tanker at 1 m resolution (Spotlight-2 acquisition mode).



COSMO-SkyMed 1 Spotlight-2 acquisition (1 m resolution) over the Flevoland region in the Netherlands (3 February 2008); in the details we can see olive trees plantations in the South of Italy.



2 COSMO-SkyMed satellites in "tandem configuration" will produce high accuracy Digital Elevation Models (DTED-3 at global level and DTED-4 on target areas) starting in early 2009.



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Telespazio is part of the
Space Alliance between
Finmeccanica and Thales