

EARTH OBSERVATION SYMPOSIUM (B1)
Earth Observation Applications and Economic Benefits (5)

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COSMO-SKYMED DATA UTILIZATION AND APPLICATIONS

Abstract

Italy covers worldwide a leadership position in the field of Earth Observation with radar satellites, thanks to the realization of the COSMO-SkyMed constellation (4 satellites in X-band), fully operational starting from 2011. COSMO-SkyMed is a dual-use program for both civilian and defense use resulting from an agreement between the Agenzia Spaziale Italiana (ASI), the Italian Ministry of Defense and the Italian Ministry of Research. Based on its dual-use conception, the system can be accessed both by Civilian (Institutional and Commercial) or Defence users. Among the institutional users there are international partners, national and international Administrations, Agencies, Research Centres, etc.. A clear evidence of the Italian leading role in the Earth Observation sector is represented by the number of the on-going international cooperations and agreements: with France (ASI-CNES agreement), with Argentina (ASI-CONAE cooperation), with Japan (ASI-JAXA cooperation), with USA (ASI-JPL projects), with Canada (joint Announcement of Opportunity ASI-CSA), with European Space Agency (ESA). A fundamental feature of COSMO-SkyMed system is its expandability, interoperability with other missions and capability to manage different sensors. COSMO-SkyMed system provides data in several application domains such as risk and emergency management, multi-temporal acquisition for agriculture monitoring, ship detection, interferometry, landslides monitoring, maritime surveillance, rapid mapping and security. Considering the overall user community interest and their future needs, a useful archive is also under population through the maximize exploitation of the system (Background Mission). ASI manages either a number of owner projects such as Announcement of Opportunity, Open Call, etc. or several projects based on significant national and international cooperations. The first COSMO-SkyMed Announcement of Opportunity involved hundreds of national and international scientists in various topics and it was closed in 2012. In 2013 Italian and Canadian Space Agencies joint effort to stimulate the scientific utilization of Earth Observation data acquired by their respective national missions, COSMO-SkyMed and RADARSAT-2, with an Announcement of Opportunity seeking for basic and applied research and focused on the synergic use of both sensors. In 2014 a channel of access to COSMO-SkyMed data will be opened through the Open Call mechanism for innovative projects based on the exploitation of COSMO-SkyMed system . This paper aims to show some of the results obtained by the utilization end application of COSMO-SkyMed dat during the last years.