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

Author: Dr. Maria girolamo Daraio
Italian Space Agency (ASI), Italy, mariagirolamo.daraio@est.asi.it

Dr. Maria Libera Battagliere
Italian Space Agency (ASI), Italy, maria.battagliere@asi.it
Mr. Alessandro Coletta
Italian Space Agency (ASI), Italy, alessandro.coletta@asi.it

COSMO-SKYMED MISSION: SOCIAL AND ECONOMIC BENEFITS

Abstract

Satellite technology enabling Earth Observation (EO) and imaging services constitutes a small but very important part of the global space economy, providing a wide spectrum of applications in different fields. Earth Observation applications are playing a never greater role to support actions at local and global scale. They are aimed to provide data and services essential to the sustainable development of countries, the environmental protection and the disasters management support. The economic benefits arising from development and exploitation of EO monitoring system should not be taken solely in terms of EO data selling or services selling to end user. It shall be also calculated in terms of reduction of damages inducted by management through such systems in the context of situations as pollution emergencies, illegal operations, weather forecasting, environmental monitoring, etc. These situations drive operational services such as the European environmental monitoring program known as Copernicus, which consists of a complex set of systems collecting data from multiple sources, among which COSMO-SkyMed. Copernicus processes these data and provides users with reliable and up-to-date information through a set of services related to environmental and security issues. These services fall into six main categories: land management, the marine environment, atmosphere, emergency response, security and climate change. In these fields, the COSMO-SkyMed system offers an efficient response to actual needs of institutions, scientific users, industrial players, technicians and politician decision makers. COSMO-SkyMed system can allows them to build reliable thematic change detection services and applications, thanks to its asset characterized by full global coverage, all weather, day/night acquisition capability, high resolution, high accuracy (geo-location, radiometry, etc.), fast revisit/response time, interferometric/polarimetric capabilities. These elements are directly connected to the data exploitation. In addition, in the economic benefits argumentation, it should be taken into consideration that EO data can support the development of useful applications for a number of different industry segments (e.g. agriculture, insurance, transport and energy) creating value-added services market. The aim of this paper is focused on the economic return and contribution of the COSMO-SkyMed mission in the EO field, in terms of data exploitation and ASI's initiatives, highlighting aspects related to social and economic benefits.