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THE MAPITALY ACQUISITIONS PLAN OVERVIEW AND THE NEW MAPITALY PORTAL

**Abstract**

This paper highlights the MapItaly Acquisitions Plan. The role of COSMO-SkyMed Constellation, the most important SAR satellites constellation of the Italian Space Agency (ASI), will be shown with regard to the recurring satellites acquisitions planned on Italy. Furthermore, will be analysed the MapItaly Portal developed to distribute the processed satellite images from these planned acquisitions.

MapItaly Acquisitions Plan, established in 2011 with the four COSMO-SkyMed First Generation satellites (CSK), aims at obtaining a full and systematic coverage of the Italian region every 16 days. CSK data are collected in StripMap mode, single polarization on the Italy's territory.

Starting 2019, the first two satellites of COSMO-SkyMed Second Generation (CSG) have been deployed. Gradually replacing the First Generation satellites, CSG acquisitions are planned to ensure continuity and compatibility with CSK acquired data. In the MapItaly Acquisitions Plan, CSG satellites are also tasked to collect data, still in StripMap mode but with dual polarization.

Images acquired as part of the MapItaly Acquisitions Plan, as well as being used to support the activities carried out by the Italian Civil Protection in case of emergency, have been successfully exploited by the scientific community, through for example interferometric and change detection analyses, in applications such as infrastructure monitoring in rural and urban areas or to assess land morphological changes due to instability.

After more than 10 years of acquisitions, archived data on the Italy's territory has reached a remarkable size both in terms of size and number.

In order to provide an easier and immediate access for users to this archive of images, from December 2023 ASI has released the MapItaly Portal.

The MapItaly Portal provides the possibility to search the entire catalogue of images, filtering the archive on a user-defined area or according to a set of parameters, also allowing results to be grouped into interferometric stacks. The images provided through the Portal, are tiles 40km x 40km wide, obtained from cutting the whole StripMap image, that are already processed to the 1A level and ready for an immediate download.