

USE OF COPERNICUS EMERGENCY MANAGEMENT SERVICE DURING SLEET IN SLOVENIA

Slovenia was hit by severe sleet followed by floods in January 2014.

The challenge

The frequency and intensity of natural disasters in Slovenia is unfortunately still rising. Rapid technological development of remote sensing services enables improvement in the control and monitoring of extraordinary phenomena, thus allowing the relevant services to provide a faster and more effective disaster response whilst on the other hand supports analysts in their work. The Slovenian national contact point for Copernicus Emergency Management Service, the Administration for Civil Protection and Disaster Relief of the Republic of Slovenia, has been involved in monitoring the development of the European Commission and European Space Agency initiative for global monitoring of the environment from its beginning being aware of the benefits the solution can bring.

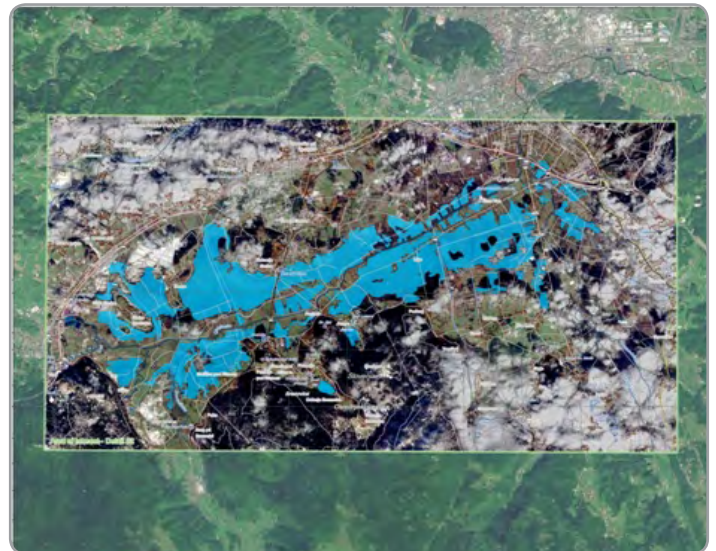
The space based solution

On Friday, January 31st 2014, the majority part of Slovenia was affected by extremely unfavourable weather conditions with heavy snow and sleet affecting the southwest of Slovenia the most. This situation continued until February 6, when the temperature rose above the freezing point and caused quick melting, which combined with the rain and debris of the destroyed trees in the water courses caused the flooding of Karst fields and Ljubljansko barje. Experiences from the previous Copernicus activations showed that due to the time lag between sending the request and the actual scanning, especially in the case of flash floods, it was not able to provide a satisfactory picture of the situation of the pick of the flood. Thus, the Administration of the Republic of Slovenia for Civil Protection and Disaster Relief cooperated closely with the Slovenian Environment Agency which monitored the development

of the weather and assessed the likelihood of flooding. According to the Slovenian Environment Agency experts, after several days of monitoring the weather and weather forecasts and the situation on the ground, the floods of the Cerknica and Planinsko polje, the Ljubljansko barje and the surroundings of Knežak were expected to reach their peak on 12 and/or 13 March. The completed order form was sent to the Emergency Response Coordination Center in Brussels on Tuesday, 11 February, at 13.43, with the attached kml-files of the sites and in accordance with the harmonised protocol.

Benefits to Citizens

The first maps, which were available within two to three hours after the scan, were used by the responsible authorities for the first assessment of the situation on the ground which, in combination with data received from other sources, led to more reliable response of the teams on the ground.



Ljubljansko barje flooded on 14 February 2014 at 9.39 UTC with SPOT-6 optical satellite with a local resolution of 1.5 meters.

Source: Copernicus Emergency Management System

Thematic Area



CIVIL PROTECTION

Region of Application



SLOVENIA

Sentinel mission used



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Copernicus Service used



CEMS

Usage Maturity Level

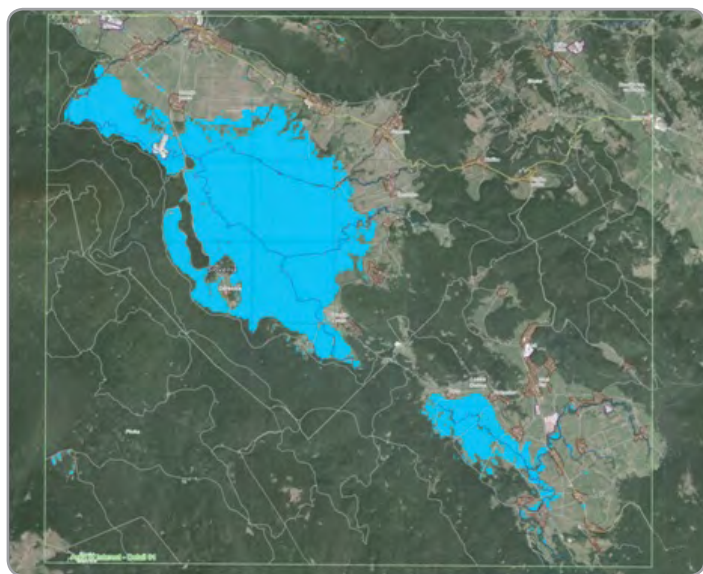


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Although the Copernicus licensing policy did not permit the public distribution of raw satellite imagery to users for further analysis, the vector data prepared on their basis was publicly available for use in the further processing of national public and research institutions. The results of the analysis allowed decision makers to support their decisions. Both above mentioned uses of Copernicus data also contributed to the safety of the citizens of Slovenia in both NUTS 2 regions (Eastern and Western Slovenia).

Outlook to the future

With new Sentinel missions and other functional improvements of Copernicus Emergency Management Service the provided data will be more accurate and delivered with shorter timeframe between order of the service and scanning of the terrain. With more precise and reliable maps also the response of the rescuers and other services would be more efficient.



Flooding of Cerknica Field, shot with COSMO-SkyMed satellite in radar spectrum, 13 February 2014 at 4.50 UTC, local resolution 3 meters; background: air digital orthophoto recordings (2009-2012) © ARSO

“This application has contributed a small but important part to the safety of the citizens of Slovenia.”

Katja Banovec Juroš, Administration of the Republic of Slovenia for Civil Protection and Disaster Relief of the Slovenia

Acknowledgements

Copernicus has provided a valuable contribution to the implementation of the Sendai Framework for Disaster Risk Reduction 2015-2030. Also in this way, we all build a society that is more resilient to disasters and contribute to a world that is a safer place to live in.

Katja Banovec Juroš
Administration of the Republic of Slovenia
for Civil Protection and Disaster Relief, Slovenia

ABOUT COPERNICUS4REGIONS

This Copernicus User Story is extracted from the publication “**The Ever Growing use of Copernicus across Europe's Regions: a selection of 99 user stories by local and regional authorities**”, 2018, Edited by NEREUS, the European Space Agency and the European Commission.

The model cases focus on local and regional authorities who successfully applied Copernicus data in 8 major public policy domains. The views expressed in the Copernicus User Stories are those of the Authors and can in no way be taken to reflect the official opinion of the European Space Agency or of the European Commission.

Funded by the European Union, in collaboration with NEREUS. Paging, printing and distribution funded by the European Space Agency. IPR Provisions apply. Copernicus4Regions material may be used exclusively for non commercial purposes and provided that suitable acknowledgment is given.