European Union

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EARSC
European Association of Remote Sensing Companies

THE GREEN LAND

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FLOOD MANAGEMENT IN IRELAND

What it is about

A succession of Atlantic Storms hit Ireland in the winter of 2015-2016 resulting in the heaviest flooding in the country's history. In response to the flooding, the Irish flood management authorities triggered for the first time in December 2015 the Copernicus Emergency Management Service. Using Sentinel-1 and other satellite data, this service provided all actors involved in flood management with flood delineation maps. These maps have enabled informed decision-making and produced significant economic and social benefits for all actors involved in flood management, from national coordination level down to individual citizens.

What we found

- The use of satellite-based flood delineation maps enabled improved flood management and resulted in an overall economic benefit.
- The maps enabled enhanced situational awareness, which contributed to reduced damages and reduced disruption.
- The communicative power of the satellite-based flood maps is also fundamental. Authorities, citizens and media communicate using a commonly understood framework.

Funded by the EU and ESA

Layout by ESA EO Graphics Bureau

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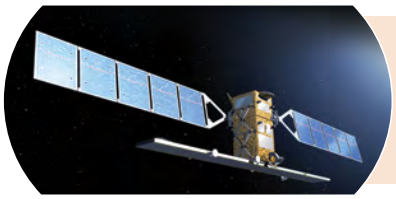

The Satellite Data
Copernicus Sentinel-1 provides free-of-charge frequent all-weather, day-and-night C-band radar images over Ireland.

The Service Provider
The Copernicus Emergency Management Service provides delineation maps for floods (and other types of disasters) based on data from the Copernicus Sentinel-1 mission and from other types of satellite data from the Copernicus Contributing Missions.

The Primary User
The Irish National Coordination Authorities use the flood delineation maps to more timely activate the national emergency management mechanism and coordinate response efforts. The maps help to monitor the evolution of flood events and dispatch any available information to involved government agencies and departments.

€3.61m

Secondary Beneficiaries
The maps support local and regional authorities in continuously monitoring forecasts to scale the appropriate response measures, implement flood response measures and crucially communicate on the same basis with the public in affected areas.

€0.61m

End User Beneficiary
The Service has helped manage flood events in Ireland more effectively by taking more informed decisions and reducing the impact of floods on businesses and the general public, ultimately saving lives.

€2.27-26.08m

Total benefits: €6.5-30.3m (benefits are limited to floods of 2015-2016)

About the project

Through a series of case studies, EARSC aims to gather quantitative evidence that the usage of Copernicus Sentinel data provides an effective and convenient support to various market applications. These studies are undertaken in the frame of the project "Showcasing the benefits brought by the usage of Sentinels data to society, environment and economy: a bottom-up assessment based on traceable impacts along selected value chains", under an assignment from the European Space Agency (ESA) funded by the European Union as part of the Copernicus Programme.

Download the full report from the project website

http://earsc.org/sebs