

## Creating an Open data Portal for Citizens: the MISTRAL Project

Andrea Montani (1), Estibaliz Gascon (1), Tim Hewson (1), Tiziana Paccagnella (2), Davide Cesari (2), Gabriella Scipione (3), Giuseppe Trotta (3), Renata Pelosini (4), Alessia Zurlo (4), Luisa Renier (4), Massimo Milelli (4), Carlo Cacciamani (5), and Luigi Zanella (6)

(1) ECMWF, Reading, UK, (2) Arpa-SIMC, Bologna, Italia, (3) CINECA, Casalecchio di Reno (BO), Italia, (4) Arpa Piemonte, Torino, Italia, (5) DPCN, Roma, Italia, (6) DEDAGROUP, Casalecchio di Reno (BO), Italia

The **MISTRAL** (Meteo Italian SupercompuTing poRtAL) project is funded by the EU program «Connecting Europe Facility (CEF) – Telecommunication Sector», for two years, from October 2018 to September 2020.

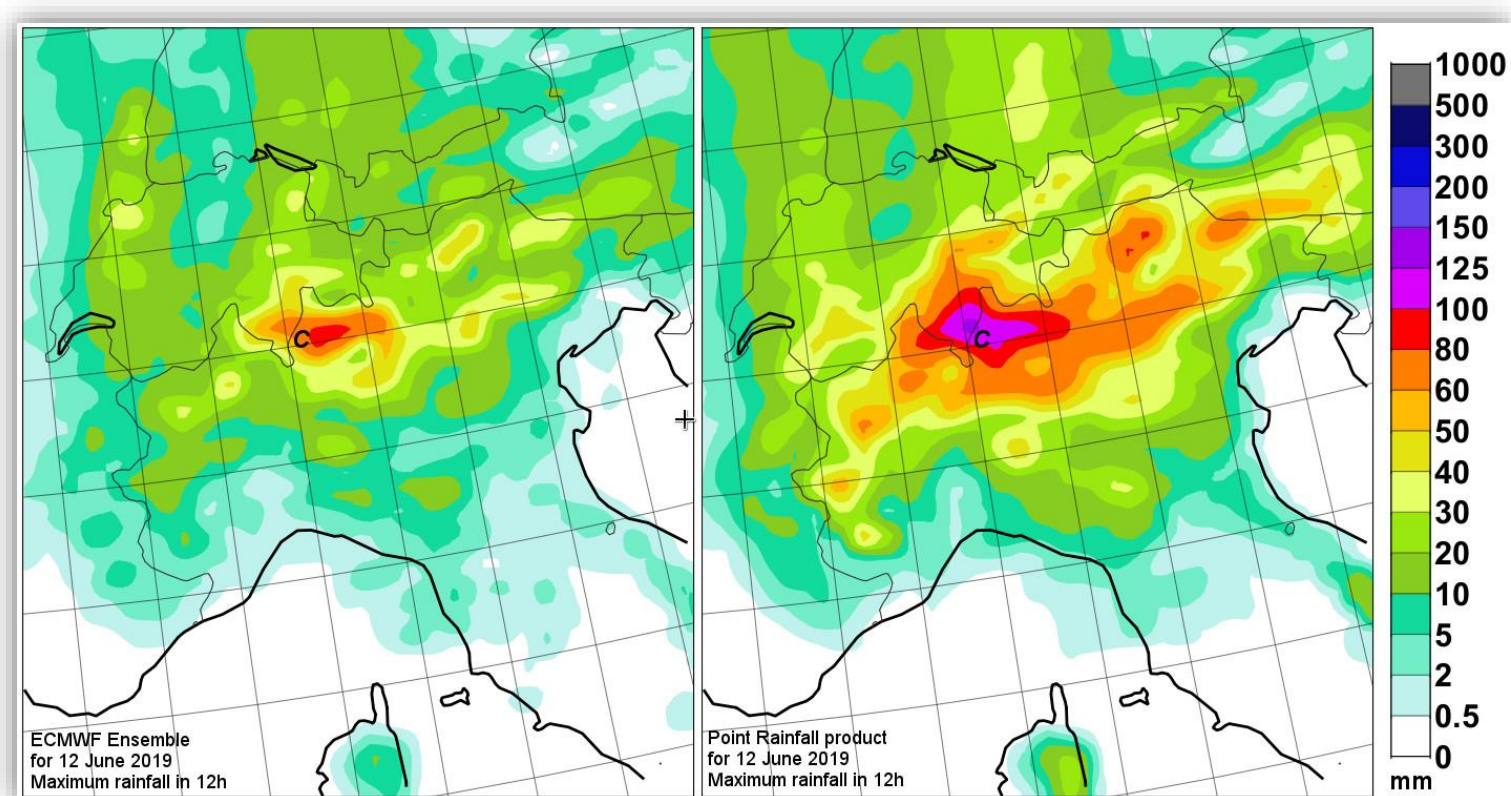


Fig 1. “Point Rainfall” product, a key component in ECMWF’s contribution to MISTRAL



Fig 2. CINECA Supercomputer



Fig 3. MISTRAL partners in the MISTRAL Hackathon

The **MAIN GOAL** of the project is to create a **National Meteorological Open Data Portal** to provide citizens, public administrations and national and international private organizations with high accuracy meteorological data from observational networks and historical and real-time analyses and forecasts.

The **MISTRAL** portal will facilitate and foster the **re-use** of the datasets by the weather community, as well as by other cross-cutting communities, to provide added value **services** through the use of HPC resources, and creating also new business opportunities.

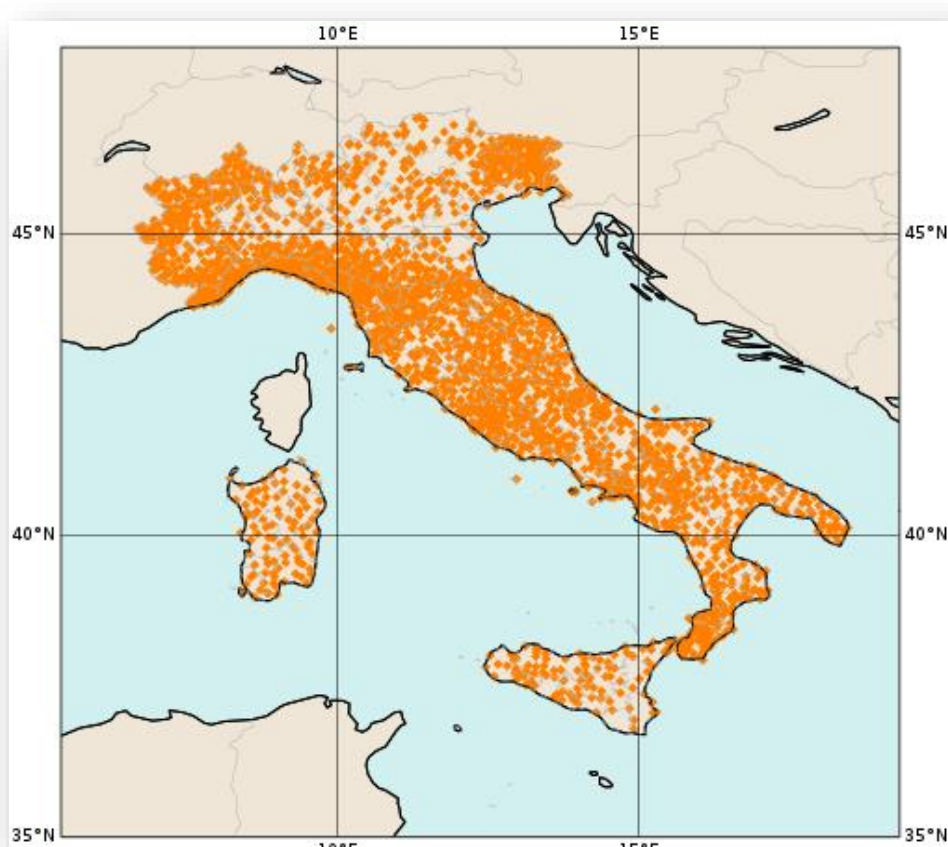
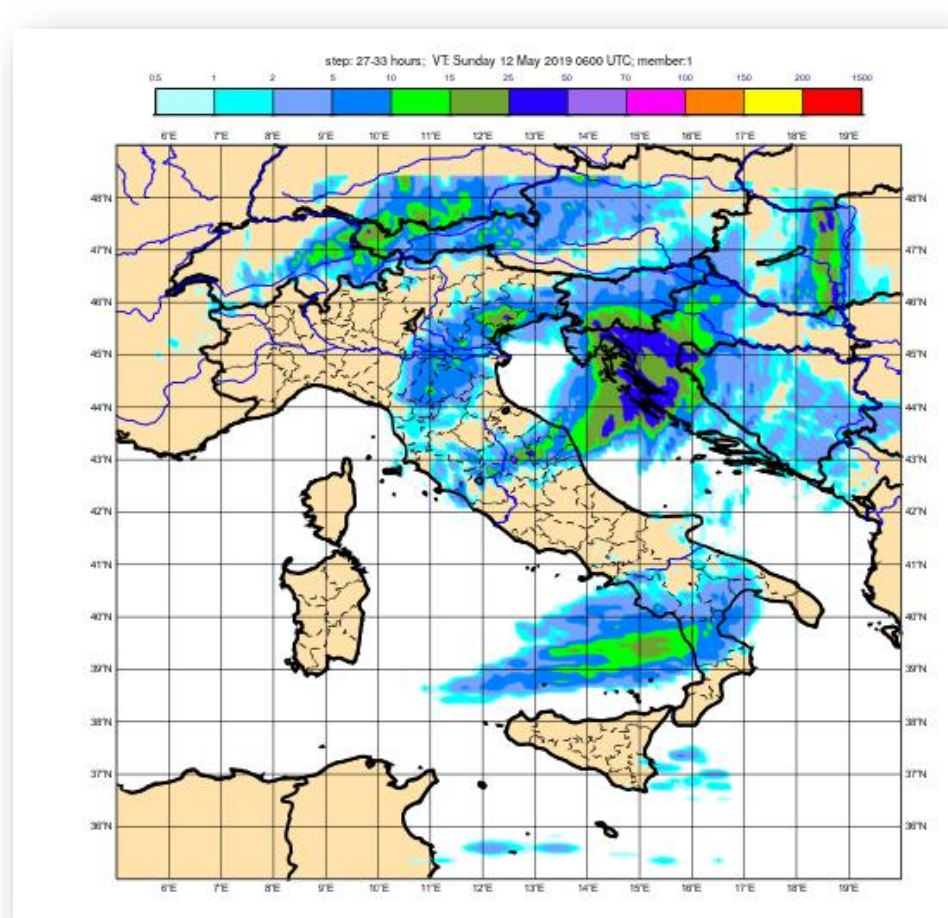


Fig 4. Example of COSMO-21 2.2 km 6-h total precipitation forecast (top) and the Italian High-density observation network (bottom)

### ACTIVITIES

1. **Improve access** to large **datasets** of public weather institutions;
2. **Unleash** creative exploitation of **massive weather datasets** using supercomputers;
3. Create a new service at the **Italian national level**, to exploit the massive amounts of public open data that are available (Big Data Challenge);
4. Exploit supercomputing facilities to analyze complex combinations of large public weather datasets to **make the forecasts more valuable**;
5. **Improve the interoperability of weather regional data providers** using international standards;
6. **Directly upload the data generated by the supercomputers onto the Italian National Data Open Portal and also onto the EU Open Data Portal**, assuring trans-European access;
7. **Provide official and certified data and services** to foster data re-use in accordance with Public Sector Information and Open Government initiatives;
8. Provide **citizens with free access** to the weather observations and to forecast data visualizations;
9. Implement **new ways of displaying and visualizing datasets and metadata**, tailored to users’ needs;
10. **Identify viable business models** that can support sustainable use of weather datasets and exploit valuable Italian public weather institution resources in European repositories.