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ITINERIS HUB: the unified access point to Italian environmental facilities, FAIR data and related services

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The Italian Integrated Environmental Research Infrastructures System (ITINERIS) Project coordinates a network of national nodes from 22 RIs.

ITINERIS has been designed looking at synergy with the European RI framework, and it will support the participation of Italian scientists in pan-European initiatives (like ENVRI-Hub NEXT and EOSC). ITINERIS will have significant impact on national environmental research, providing scientific support to the design of actionable environmental strategies.

To this end, ITINERIS will build the Italian HUB of Research Infrastructures in the environmental scientific domain providing a single and unified access point to facilities, FAIR data and related services available within the Italian RIs network through an easy-to-navigate interface.

Through the ITINERIS HUB all users will have access to data and services, with a complete catalogue of data and services and a proper access management system. ITINERIS will not duplicate existing data provided by European RIs, but will make them discoverable in a unique place together with other National RI resources. Additionally, ITINERIS HUB will make accessible data resulting from specific ITINERIS project activities like campaign data and novel data products.

ITINERIS will also offer a system of Virtual Research Environments (VRE), that will provide new services to address scientifically and societally relevant issues starting from an ensemble of cross-disciplinary actions on the data, information and knowledge generated by the different RIs in the different environmental subdomains.

State-of-the-art applications and custom-made tools will be integrated in the HUB to respond to the needs of: collecting and preparing information on products, resources and services to be advertised in a way that users can easily discover and access them and the RIs; facilitating the management of user access requests through the automated workflows and specific features that are peculiar to the online submission and management systems.

The main concept includes a GeoServer with the possibility of discovery, visualization and plotting RI data available. To be more precise, a scalable infrastructure for the provision of mapping services compliant with the standards of the Open Geospatial Consortium (OGC) WMS (Web Map Service), WFS (Web Feature Service), WCS (Web Coverage Service) will be implemented. A Metadata

Service will be responsible for providing OGC CSW services. It will therefore offer a data discovery service through metadata consultation, corresponding to the most common metadata profiles. A stack of support services (REST/SOAP interfaces) for queries on geographic databases will be provided.

The ITINERIS HUB is candidate to become the integrated system of the Italian Environmental RIs to be connected to European initiatives like ENVRI-Hub NEXT and EOSC, fostering the ability to address current and expected environmental challenges at National level and beyond.

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