



The LifeWatch ERIC Biodiversity
& Ecosystem eScience Conference
PLOVDIV, BULGARIA 7-10 JULY 2026

The ITINERIS project in a nutshell

Presenter: Alberto Basset

09 July 2026





ITINERIS is the *Italian Integrated Environmental Research Infrastructures System*

ITINERIS has also an emotional meaning: *journey, pathway, route, on the road, on the way.*

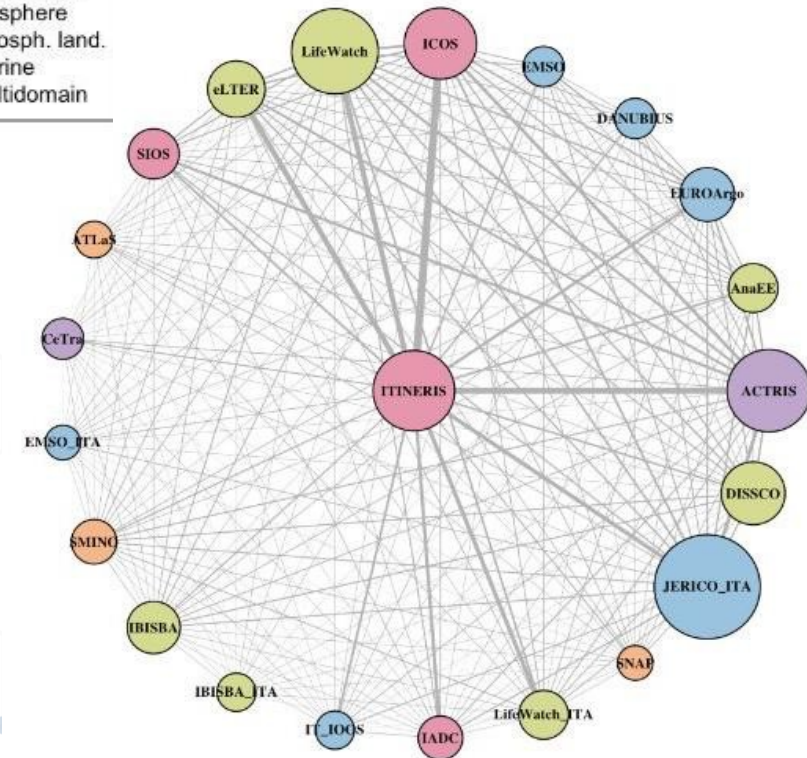
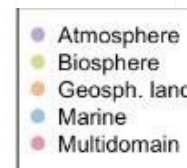
It means that we know **where we want** to go, that it is **very demanding** to complete the journey and that we **have the grit** to keep going until the end.



ITINERIS IN NUMBERS

7 project partners

22 research infrastructures



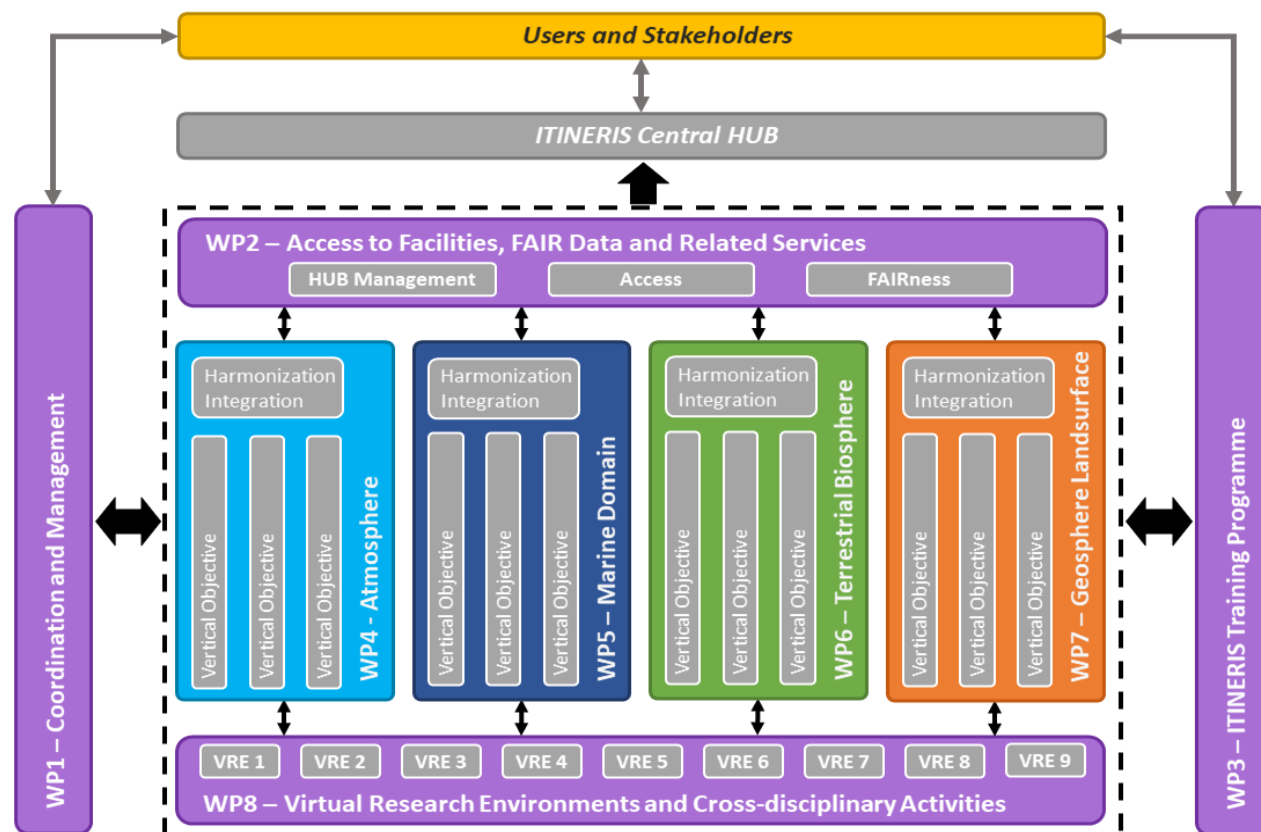
Overall budget: 155,2 M€

Personnel hired: 190 TD + 44 PhD

Time duration: from November 2022 to June 2026

Aims: Reinforcing the national nodes of the Environmental Research Infrastructures; Getting **unity** from the **diversity** of the Environmental Research Infrastructure thematic niches.

Coordination: G. Pappalardo





ITINERIS KEY OUTCOMES

Welcome to the **ITINERIS HUB**

The single gateway to the wide range of data, cutting-edge facilities, analytical tools, and services provided by the Italian environmental Research Infrastructures



What are you looking for?

 Insert keywords here

 Dataset 40711

 Service 68

 Research Infrastructure 22

 Research Product 305

 Provider 21

 VRE 8

 Training Resource 1



ITINERIS KEY OUTCOMES

Features and applications of the **ITINERIS HUB**



MetaData HUB

Explore geospatial-rich metadata and access connected datasets



Virtual Research Environments

Turn data and models into actionable insight with powerful tools



Training Platform

Find courses, events and learning resources.



Access Platform

Discover opportunities to access environmental RIs and their services



Terminology Service

Search, browse and use standard terminologies in Environmental Sciences

(G. Gargano 2026)



ITINERIS TERMINOLOGY SERVICE



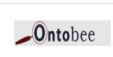
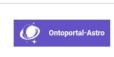
<https://terminologyservice.itineris.cnr.it/#/home>

A unique access point to semantic artefacts managed and/or used by Italian environmental RIs

Search, access and use semantic artefacts distributed across **28 catalogues**

Widgets and APIs for integration into (meta)data management systems – search and annotation tasks

Catalogues of SAs connected to the Terminology Service

 A framework for ontology-based access to biological data and semantic resources.	 Repository of ontologies and semantic artefacts in agri-food domains.	 Research Vocabularies Australia helps you find, access, and reuse vocabularies.	 Database of Knowledge Organization Systems.
 Repository of ontologies for biodiversity domains.	 The world's most comprehensive repository of biomedical ontologies.	 Open source curated registry and identifier resolver.	 Ontologies for Earth System and environmental domains.
 Semantic resources for ecology domains.	 Access to the latest ontology versions.	 Central access to European open data.	 Single access point to biological terminologies.
 Terminologies for semantic variable descriptions.	 A common ontology portal for industry and related domains.	 Multidisciplinary terminological resources.	 Linked Open Vocabularies for standardized descriptions.
 The ontology repository for materials science.	 Chinese biomedical terminologies repository.	 Create, update, access, map ontologies.	 Centrally managed terms in marine science domains.
 Interoperable ontologies for biological sciences.	 Linked data server and browser for ontology terms.	 A vocabulary and ontology repository for astronomy and related domains.	 Ontologies for engineering and technology.
 Controlled vocabularies for data discoverability.	 Terminologies from multiple science domains.		

More at July 8° Room C session

ITINERIS THE VIRTUAL RESEARCH ENVIRONMENTS

Thematic VREs



Critical Zone
Services



Aquatic Biomass
Services



Crops, Plants,
and Pests



Essential
variables



Aerosol-
Biosphere



Carbon Cycle
Services



Climate Change
Indicators and Impacts



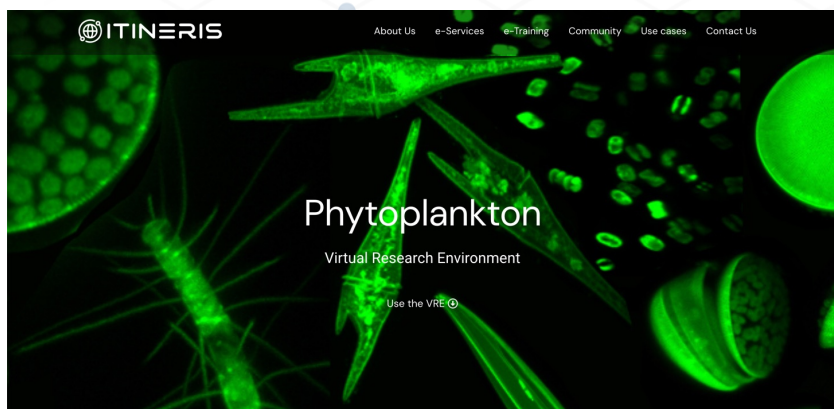
Downstream
Effects



Isotope Database

<https://catalogue.itineris.cnr.it/dataset/?systemtype=VRE>

ITINERIS THE VIRTUAL RESEARCH ENVIRONMENTS



<https://phytovre.itineris.cnr.it/>

Six use cases were developed to demonstrate the applicability of the workflows within the Phytoplankton VRE. The full list is provided below. These use cases illustrate how different workflows and e-services can be used to address diverse ecological questions in phytoplankton and ecological studies.

- **Use case WF 1: Influence of environmental management actions and seasonal dynamics on phytoplankton in the Ria d'Aveiro lagoon.**
- **Use case WF 2: Taxonomic and Functional approaches to temporal phytoplankton dynamics in Umbrian Lakes**
- **Use case WF 3: Guild organization in marine phytoplankton, niche partitioning between and within phytoplankton size classes**
- **Use case WF 4: Role of Rare Species on Phytoplankton Size–Density Relationships across Different Biogeographical Areas**
- **Use case WF 5: Spatial and temporal distribution patterns of phytoplankton from Mediterranean and Black Sea lagoons**
- **Use case WF 6: Forecasting future phytoplankton dynamics using predictive models**

ITINERIS TRAINING PROGRAMME



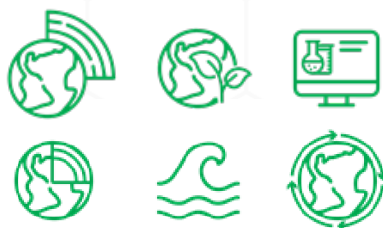
70

training courses



close to

1,000
participants



6

thematic areas

3.6

36

Current RIs staff and user communities

3.7

24

Future RIs research staff

3.8

10

RIs staff on communication and engagement

Participants' Evaluation

4.3



Course Goals and Overall Evaluation

4.5



Teaching Quality

4.3



Teaching Materials and Resources

4.4



Organizational Aspects



ITINERIS Training Centre



ITINERIS TRAINING PLATFORM

<https://training.itineris.cnr.it/en/>

The screenshot shows the ITINERIS Training Platform interface. At the top, there's a header with the ITINERIS logo, language selection (English), and navigation links (HOME, E-CAMPUS, TUTORIAL, OUR DOMAINS, COURSES CALENDAR, CATALOGUE, CONTENTS MAP, NEWS AND EVENTS, ITINERIS HUB, CONTACTS). Below the header, the main content area is divided into two columns: 'e-Campus' and 'Tutorial'. The 'e-Campus' column features icons for 'Researchers and Technicians', 'PhD and Masters', and 'RI Material'. The 'Tutorial' column has an icon for 'RI Material'. Below these, there's a section for 'Our Domains' with icons for Atmosphere, Biosphere, E-science, Geosphere, Marine, and Trans-domain. A search bar is present with the text 'Search in our Courses' and a placeholder 'Type here a keyword or a topic'. At the bottom, there's a calendar for July 2025 showing various training activities and their durations.

Mon	Tue	Wed	Thu	Fri	Sat	Sun
30	1	2	3	4	5	6
Data mining and machine learning for Geophysics						
7	8	9	10	11	12	13
Data mining and machine learning				Ship-based training initiatives in marine-related sciences - ITINERIS EYES Expedition - 1		
Science communication in the Digital Era: Social Media				+2 more		
+2 more				+3 more		
14	15	16	17	18	19	20
Ship-based training initiatives in marine-related sciences - ITINERIS EYES Expedition - 1				+2 more		
Mastering Communications in RIs: from strategy to implementation				+2 more		
Atmospheric Remote Sensing observe				+2 more		
21	22	23	24	25	26	27
Ship-based training initiatives in marine-related sciences - ITINERIS EYES Expedition - 1				Ship-based training initiatives in marine-related sciences - ITINERIS EYES Expedition - 1		
Anthropogenic activities and effects on the living environment and human health				+2 more		
+2 more				+3 more		
28	29	30	31	1	2	3
Ship-based training initiatives in marine-related sciences - ITINERIS EYES Expedition - 1				+2 more		

The ITINERIS training platform has been operational for just over a year and is organized into several key sections, including:

E-Campus: list of courses with dedicated sections for research infrastructure personnel and PhD students;

Tutorial: hub for sharing resources like user manuals, installation guides, and technical specifications for new equipment and research instruments;

Our Domains: a thematic area where courses and digital training objects (DTOs) are grouped by scientific domain;

Catalogue: access to the metadata catalogue for the DTOs.



ITINERIS TRAINING PLATFORM

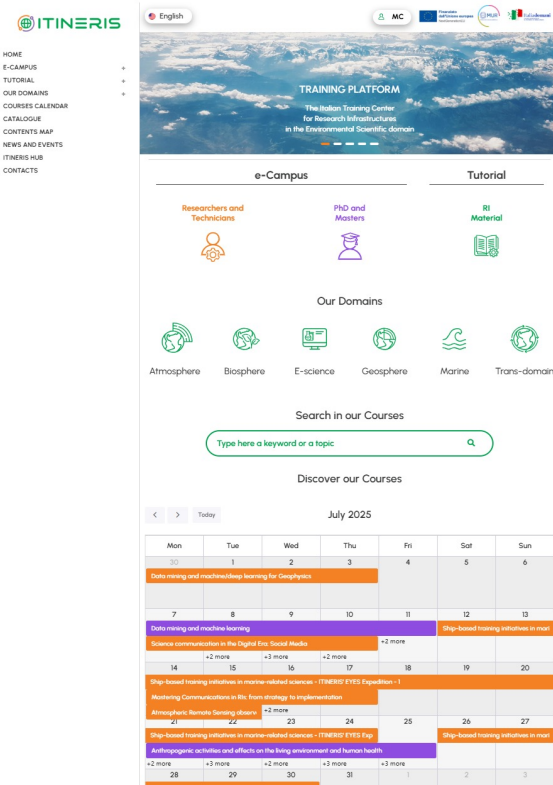
To date, close to **1000** participants have been trained in WP3.





ITINERIS TRAINING PLATFORM

The ITINERIS training platform has already has **1224** resources uploaded, **603** of which are Digital Training Objects, and **800** users.



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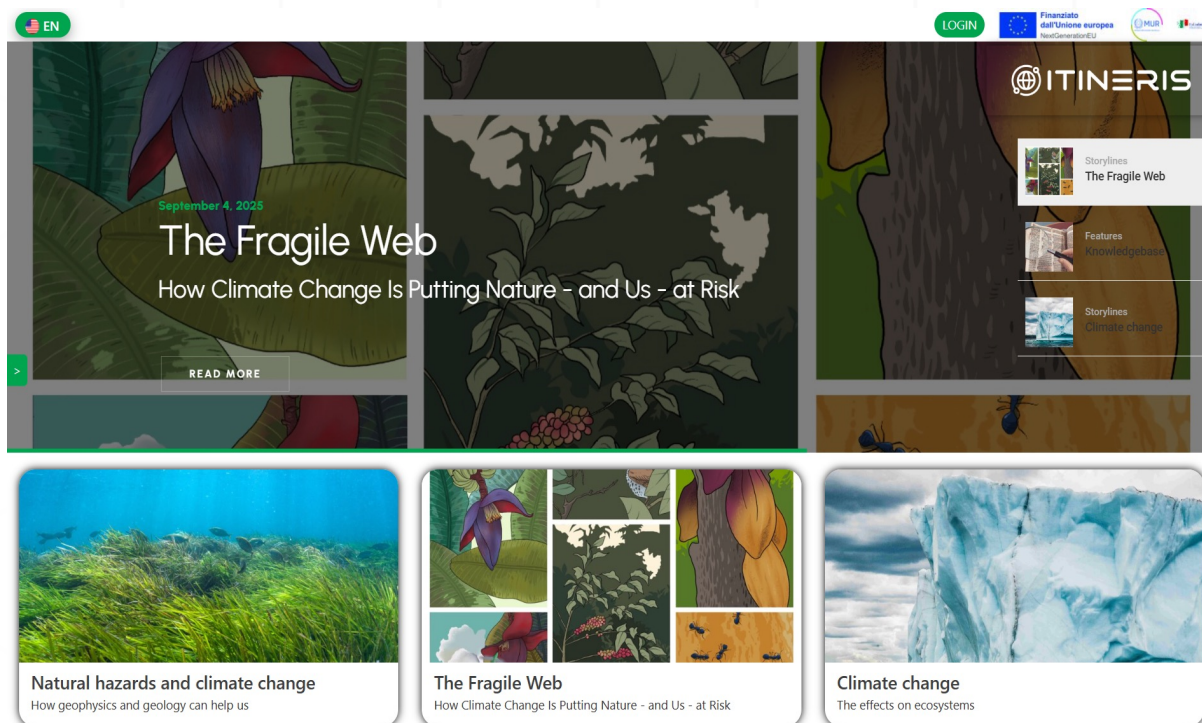


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ENVI KNOWLEDGE LIBRARY



The platform is **designed** to optimize the use of training materials (DTO) by different categories of users: scientists, environmental monitoring and conservation operators, politicians, students, environmentalists, and citizens..

It **offers** semantic tools for searching for DTOs on user-interest topics and services for organizing these DTOs in a personal area for the user within the platform and **much more**.



ENVI KNOWLEDGE LIBRARY

A few examples of what users can do in their **Personal Area** are:

- Upload from the platform and store DTOs;
- Organize, read and manage their uploaded DTOs;
- Publish DTOs they have produced or collected elsewhere;
- Propose the publication of DTOs they have produced in the public area and, if accepted, check the publication with a notification.

The screenshot shows the user profile page for 'Mario Rossi'. At the top, there is a navigation bar with the Italian flag, a notification bell, a user icon 'MR', and logos for the Italian Republic, the European Union, and the Ministry of University and Research. Below this is a green header with the title 'Profilo' and a breadcrumb trail 'Home | Utente | Profilo'. A secondary navigation bar contains links for 'Profilo', 'Risorse caricate da me', 'Risorse suggerite per me', and 'Notifiche'. The main content area features a profile card for 'Mario Rossi' with a placeholder for a profile picture. Below the name are three input fields: 'Nome' (containing 'Mario'), 'Cognome' (containing 'Rossi'), and 'Tag' (containing 'Es: mare; ecosistema:...'). There are 'APPLICA' and 'ANNULLA' buttons. A note states: 'La tua password è gestita dal sistema di autenticazione centralizzato. Per cambiarla, verrai reindirizzato al portale dedicato.' Below this is a 'MODIFICA LA PASSWORD' button. The footer is a green bar with the 'ITINERIS' logo on the left, and links for 'Itineris', 'Contatti', 'Cookie policy', 'Privacy policy', and 'Terms and conditions' on the right.

ITA

MR

Profilo

Home | Utente | Profilo

Profilo Risorse caricate da me Risorse suggerite per me Notifiche

Mario Rossi

Nome Mario

Cognome Rossi

Tag Es: mare; ecosistema:...

APPLICA ANNULLA

La tua password è gestita dal sistema di autenticazione centralizzato. Per cambiarla, verrai reindirizzato al portale dedicato.

MODIFICA LA PASSWORD

ITINERIS

Itineris

Contatti

Cookie policy
Privacy policy
Terms and conditions



What's next...NATURE (starting soon)

**Thanks to the whole
ITINERIS team, and ...
THANK YOU!**

Questions?

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