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WP8 Virtual Research Environments and Cross-disciplinary Activities

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ITINERIS Italian Integrated Environmental Research Infrastructures System



WP8: Main participating infrastructures



WP8: Main participating institutions

- CNR-IGG
- CNR-IRET-FI
- CNR-IRET-LE
- CNR-IRET-Montelibretti
- CNR-IBE-FI
- CNR-IMAA
- CNR-ISMAR-Lerici
- OGS-OCE Trieste

supporto tecnico-modellistico di CNR ISTI



WP8: What we do

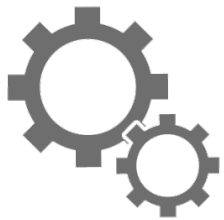
The activities of WP8 use data, information and knowledge generated by the individual RI to create **a system of Virtual Research Environments (VRE)**, and provide **services where RIs from different domains are harmonized to deal with scientifically and societally relevant topics.**

This systemic approach will support the Italian role in several RIs and help taking a leading role to address complex, multi-disciplinary challenges.

What is a Virtual Research Environment?

An e-Science online environment favouring collaborations and shared solutions **to answer specific scientific and/or management questions** that require an ensemble of data, analysis tools, modelling solutions and graphical tools, in the spirit of the **open science principles**.

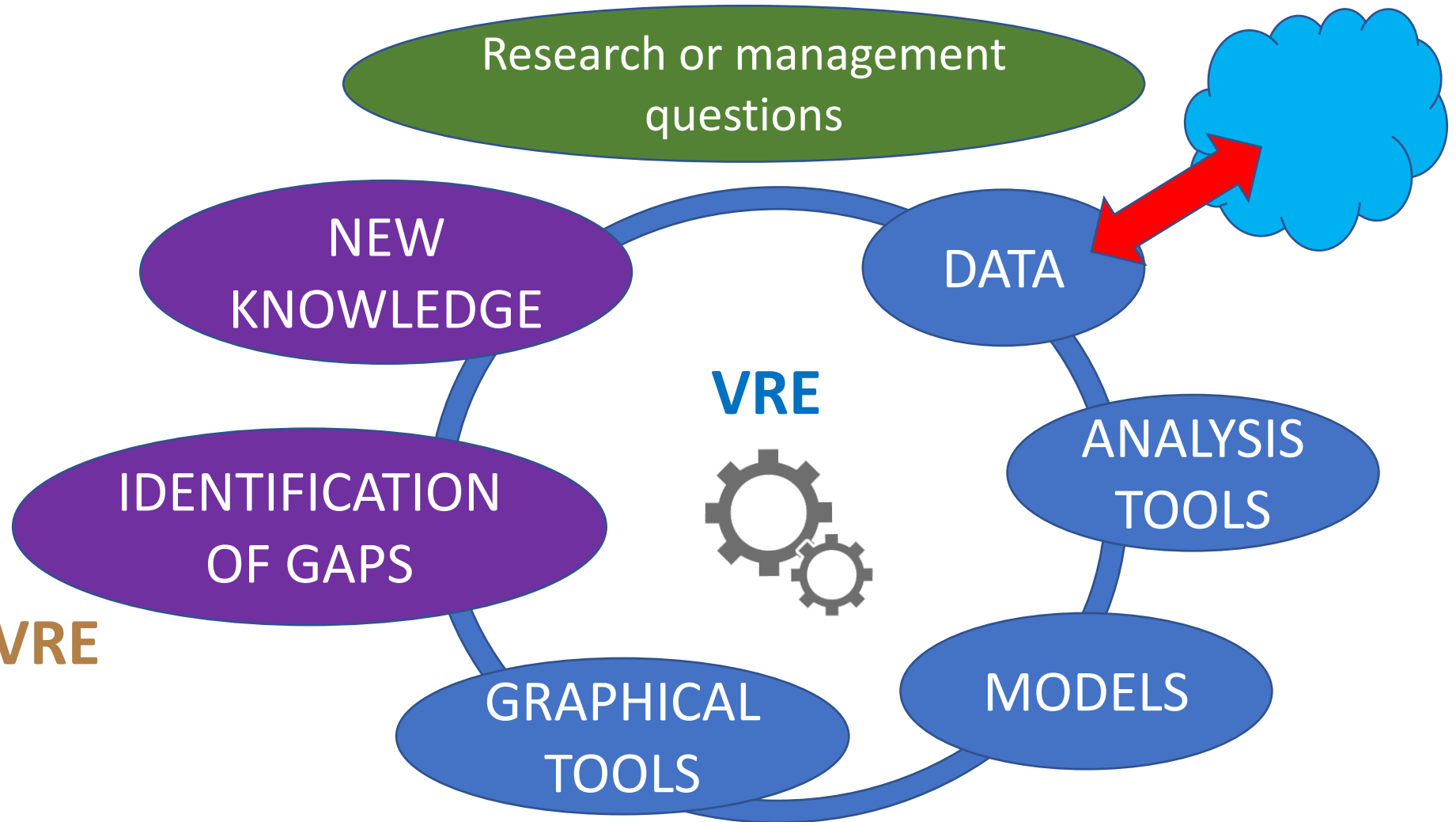
VRE



Researchers can upload/download and share knowledge, contributing to the construction of the VRE. **Users** can access to a simplified version of the VRE to tackle specific issues

What is a Virtual Research Environment?

Approaches:
LifeWatch ERIC VRE
D4Science VRE



8.1 Virtual Research Environment for Critical Zone services (**CZ VRE**).

Addresses Critical Zone processes, soil, groundwater, droughts in face of climate and environmental change.

(Matia Menichini and Brunella Raco, CNR-IGG, LifeWatch ERIC)

8.2 Virtual Research Environment for aquatic biomass services (**BIOMASS VRE**).

Addresses the response of aquatic ecosystems, and in particular of the standing biomass, to environmental change. (Alberto Basset, CNR-IRET-LE, LifeWatch ERIC)

8.3 Crop, Plants and Pests VRE (**CPP VRE**). Addresses crop production, plant phenology, pest and disease spread, and cropping system management.

(Dario de Nart and Marcello Donatelli, CREA, AnAEE ERIC)

8.4 Essential Variables VRE (**EV VRE**). It will build a VRE based on the Essential Climate (ECV) and Biodiversity (EBV) Variables produced by observatories and field campaigns. (Alessandro Oggioni and Paolo Tagliolato, CNR-IREA, eLTER RI)

8.5 Aerosol-biosphere Virtual Research Environment (**AERO VRE**). It will include information on aerosol types and the desert dust; atmospheric boundary layer properties, to support research activities on the atmosphere-biosphere-geosphere continuum. (Lucia Mona and Nikolaos Papagiannopoulos, CNR-IMAA, ACRIS ERIC)

8.6 Carbon cycle VRE (**CARBON VRE**). It will provide services on the main carbon reservoirs (atmosphere, oceans, terrestrial biosphere and geosphere) and on direct anthropogenic emissions.

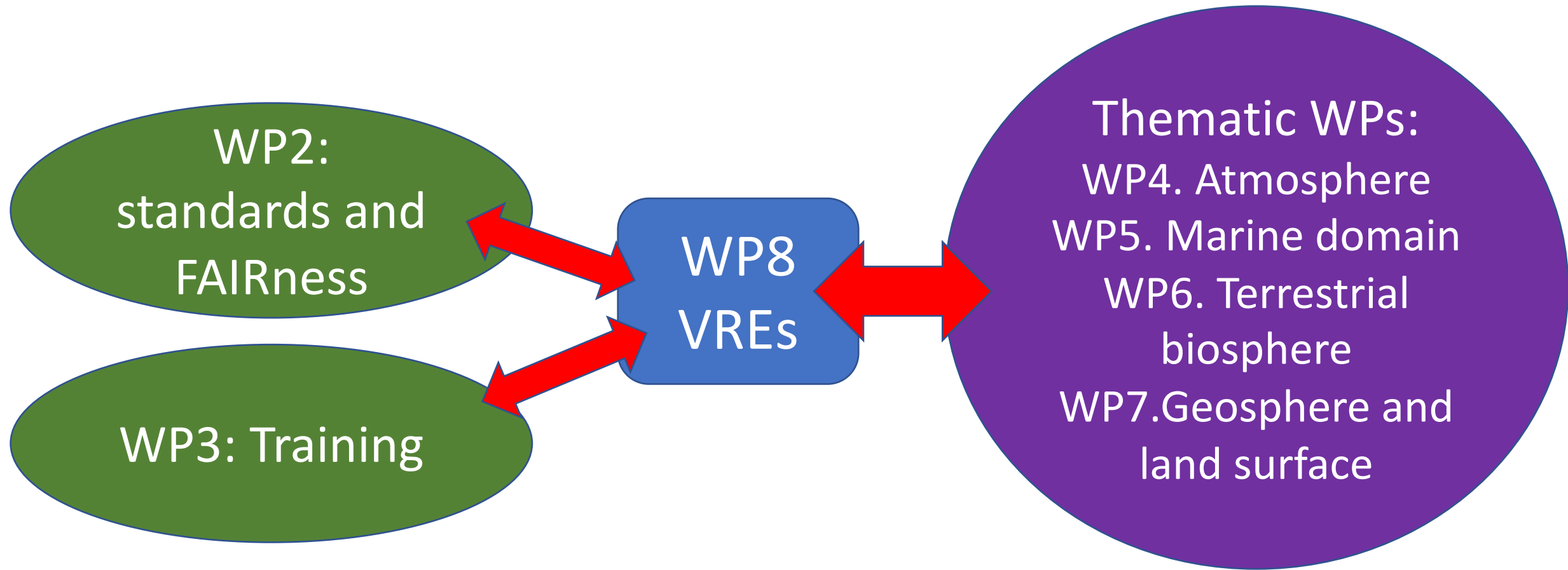
(Gabriele Guidolotti and Andrea Scartazza, CNR-IRET-Montelibretti, ICOS ERIC)

8.7 Virtual Research Environment on indicators of climate change (**CLIMA VRE**). It will gather climatic variables from different domains for providing proper indicators. (Marcello Magaldi and Carlo Mantovani, CNR-ISMAR-Lerici, JERICO RI)

8.8 Virtual Research Environment VRE on downstream effects of environmental change (**DOWNSTREAM VRE**). It will address the nexus of climate and environmental change effects, carbon, and Earth System response. (Alessandra Giorgetti and Cosimo Solidoro, OGS-OCE, ECORD and Atlas)

8.9 Virtual Research Environment on isotopic information (**ISOTOPE VRE**). It will create a national VRE service to retrieve information and analysis tools to fill the gaps in the current ability to analyze isotopes from different matrices. (Samuele Agostini and Eugenio Trumpy, CNR-IGG, LifeWatch ERIC)

WP8: interactions with other WPs

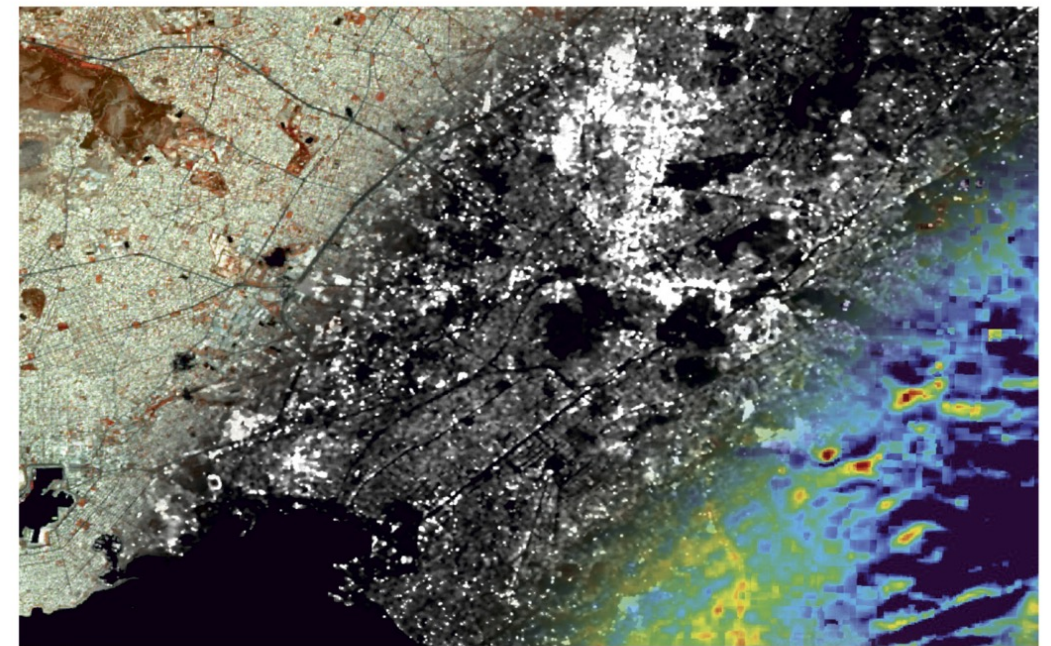


WP8: Networking activities



EMODnet

European Marine Observation and Data Network



PROGRAMME OF THE EUROPEAN UNION

