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Ministero  
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Italiadomani  
PIANO NAZIONALE  
DI RIPRESA E RESILIENZA



ISTITUTO NAZIONALE  
DI GEOFISICA E VULCANOLOGIA

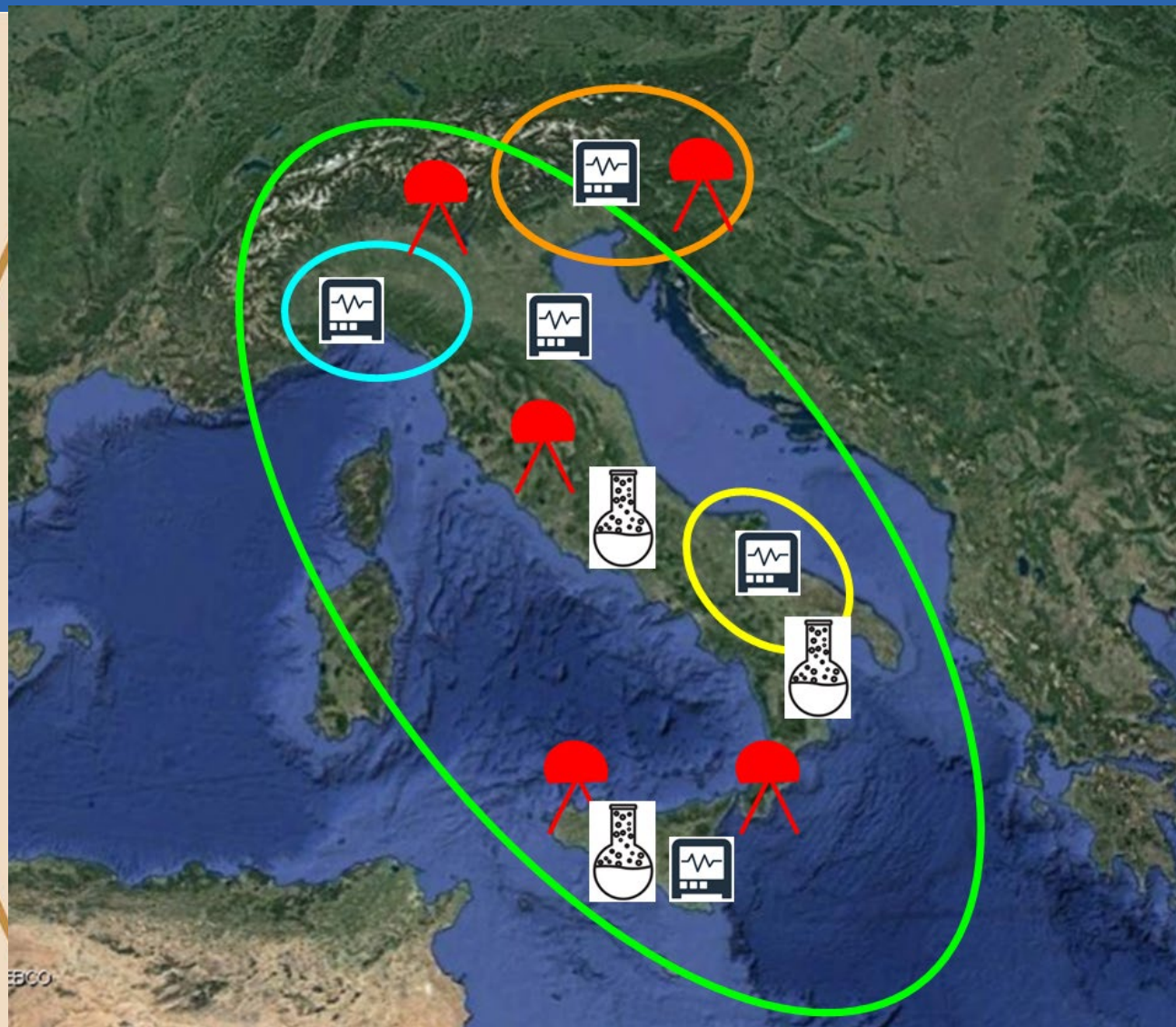
# WP 1

## Coordinator

### Antonio Avallone

**RENEW:**  
**stREngthening the**  
**National nEtWorks**  
**data production**

Assigned Budget: 5 M€





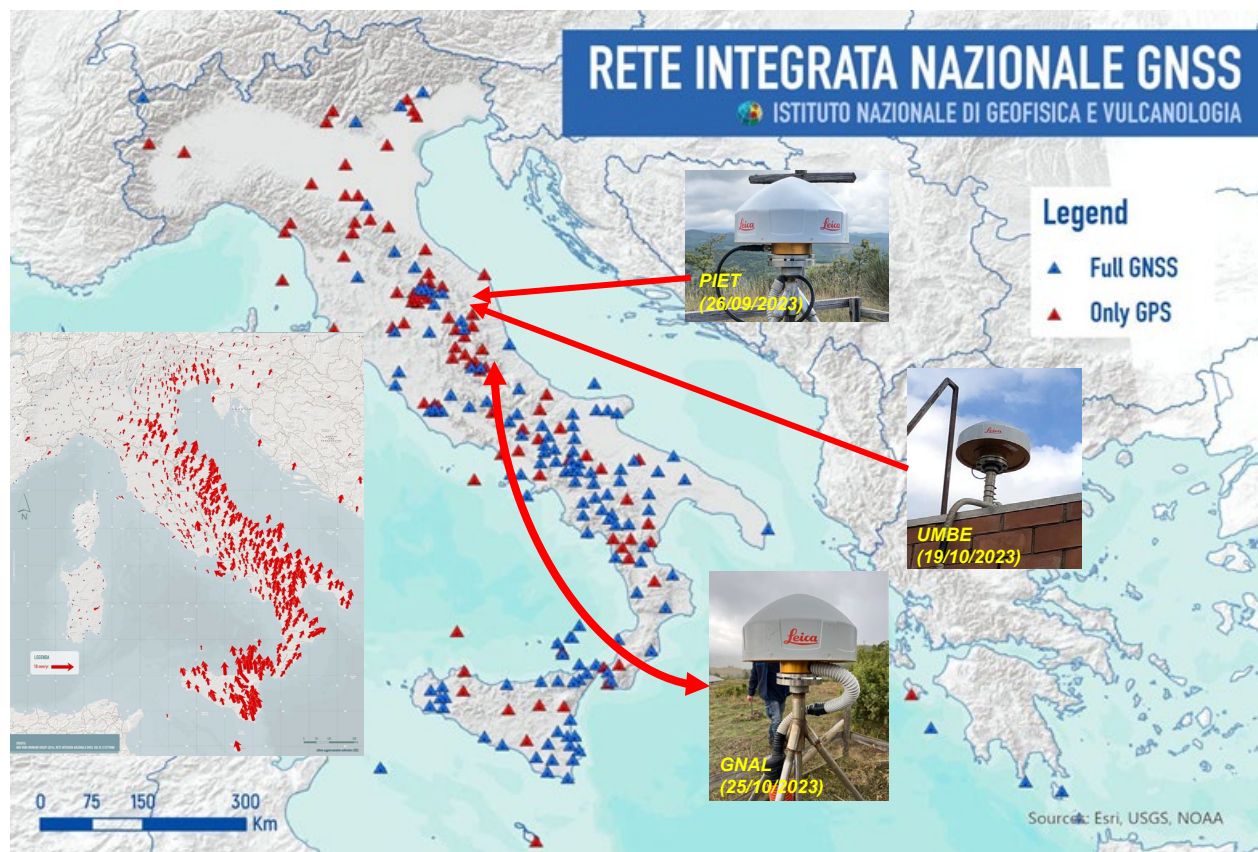
## SUMMARY of Operational Units (OU) and Activities

OU Short Name	Activity	OU Name	Applicant
OU-06	1.1	<b>INGV Sezione Irpinia - IRP</b>	APPLICANT: INGV
OU-14	1.2	<b>Istituto Nazionale di Oceanografia e di Geofisica Sperimentale - OGS</b>	CO-APPLICANT: OGS
OU-01	1.3	<b>INGV Osservatorio Nazionale Terremoti - ONT</b>	APPLICANT: INGV
OU-15	1.4	<b>University of Genova, DISTAV (Department of Earth, Environment and Life Sciences)</b>	CO-APPLICANT: UNIGE
OU-16	1.5	<b>University of Bari, DiSTeGeo</b>	CO-APPLICANT: UNIBA
OU-09	1.6	<b>INGV Sezione di Palermo - PA</b>	APPLICANT: INGV
OU-11	1.7	<b>ISPRA 01 - Geological Survey of Italy and DG-SINA</b>	CO-APPLICANT: ISPRA





## Activity 1.1 - Strengthening the RING network (Ref. Vicari, INGV-IRP)



- **Personnel:**

Hiring of a Technologist and a CTER has been fully and successfully completed

- **GNSS stations:**

Tender successfully completed for **58 multi-GNSS** instruments and software licences. Instruments have been delivered and checked.

A few instruments have already been installed and **data production already started**

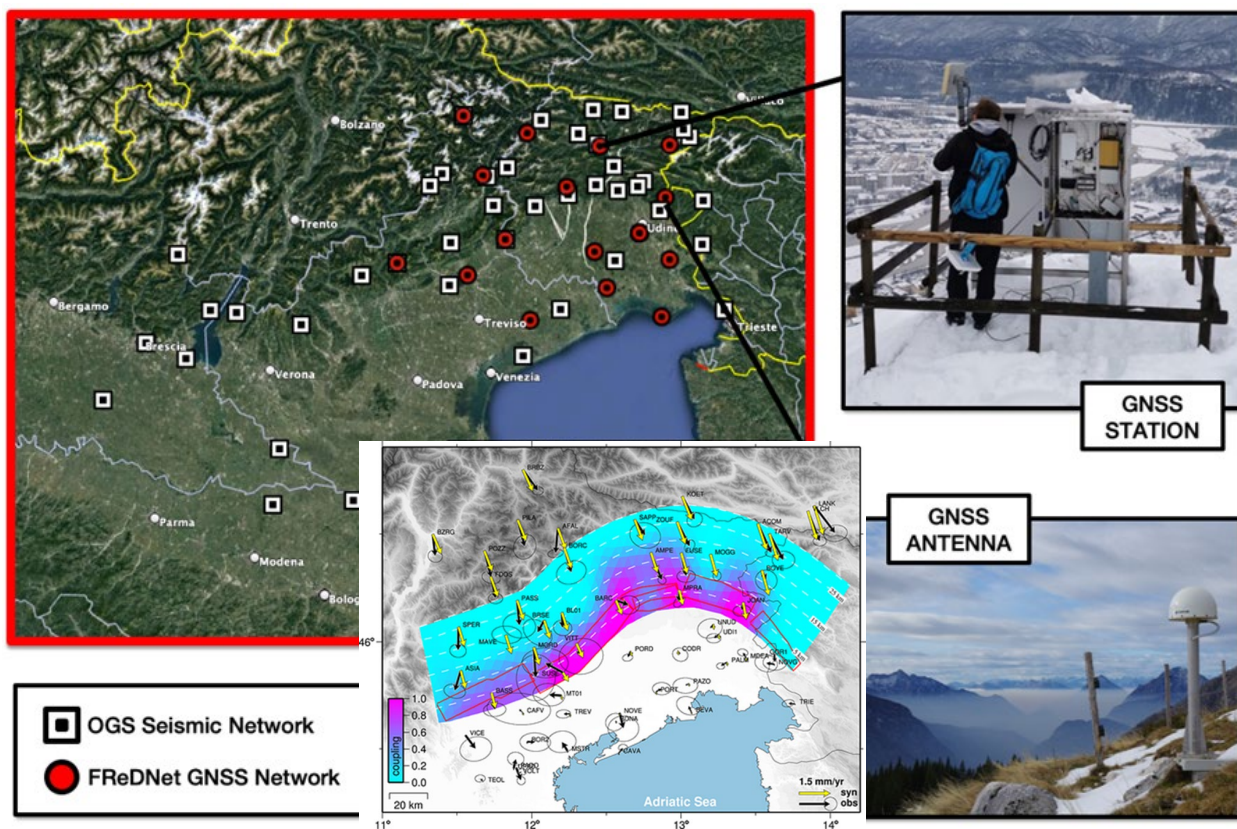
Some instruments are planned to be installed for **Campi Flegrei emergency scientific response**

- **NAS server for GNSS data:**

Funds transferred at INGVIRP. **Procedure hopefully finished within Dec 2023**



## Activity 1.2 - Strengthening the FReDNet GNSS network & OGS seismic network (Ref. Zuliani, OGS)



- **GNSS instrumentation:**  
purchased and delivered (DNSH OK)
- **Server for GNSS data:**  
purchased and delivered (DNSH OK)
- **Power and connectivity for GNSS stations:**  
Procedure started
- **OGS seismic stations:**  
Procedure almost at the end





## Activity 1.3 – Strengthening the INGV seismic networks (ref. D'Alessandro/Zuccarello)

### RSN



- **Personnel for RSN:**

Hiring of a Technologist has been fully and successfully completed. Giuseppe Ruzza started from 01/07/2023

- **Broadband stations for RSN & RSM:**

Tender has been completed and assigned. Delivering and check will start around February 2024.

- **Nodal array for RSM:**

Tender has been completed and assigned. Delivering and check will start around February 2024; A new purchase of 1/5 is following;

- **Server for RSN data acquisition:**

Consign purchase has been successfully carried out. Delivering and checking will be in January 2024.

- **Rotational Seismometers & Gyroscopic Compasses:**

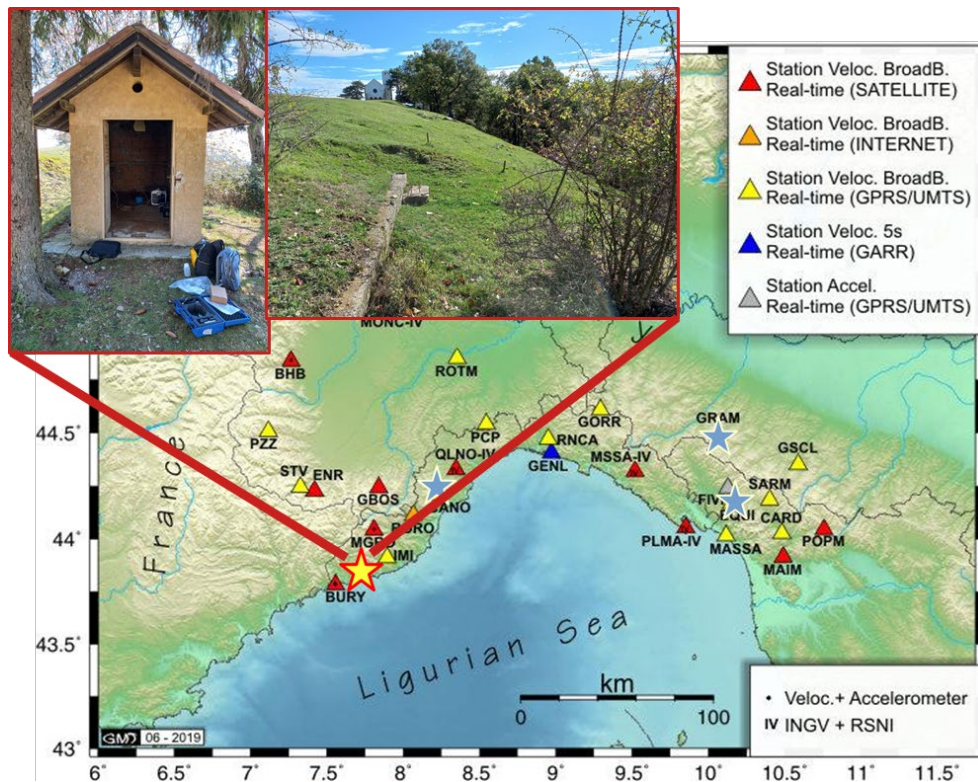
Tender was unsuccessful. New purchases will be tried within Dec 2023.

### RSM





## Activity 1.4 - Strengthening the UNIGE seismic network (Ref. Spallarossa, UNIGE)

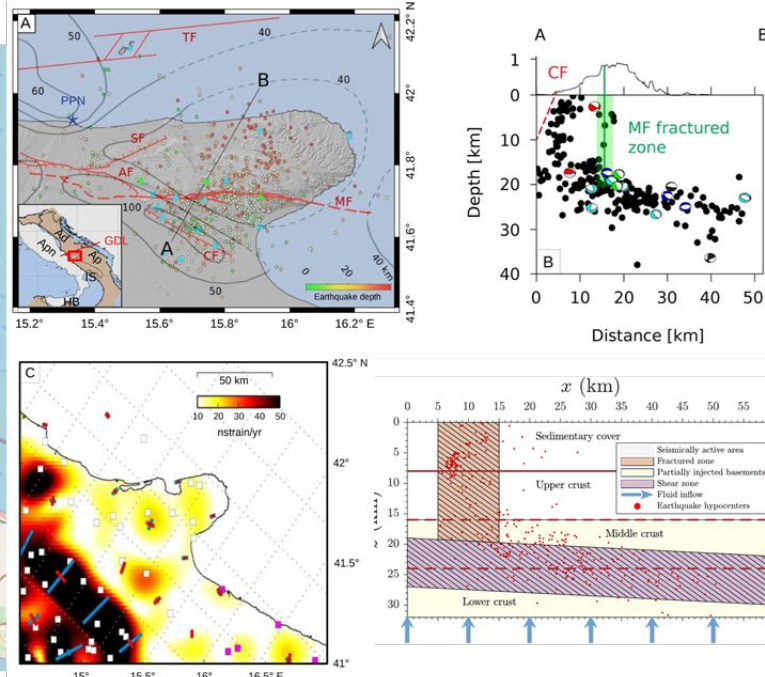
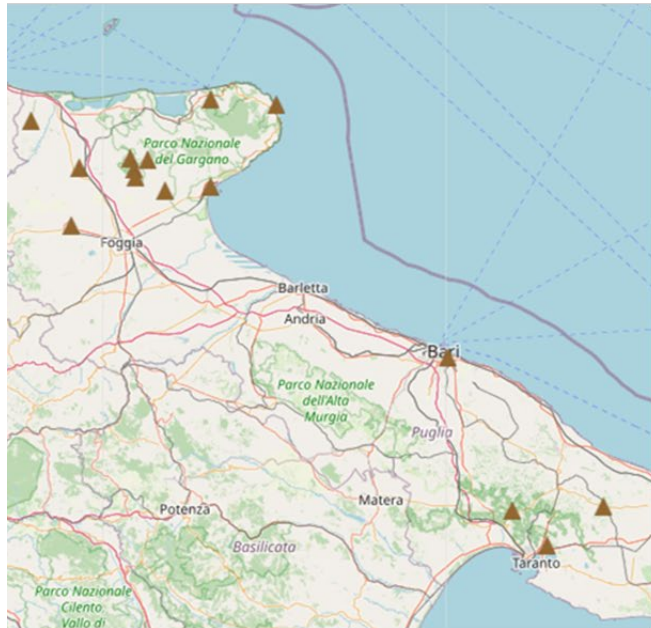


- **Siting successfully completed**  
A new site in western Liguria (M.te Bignone – IM, photo on the left) for a permanent seismic station (code GU\_BIGN);
- **Finalized siting for a seismic well;**
- **Renew seismic stations:**  
Tender started and almost at the end;
- **Renovation damaged seismic well:**  
Procedure started and almost at the end;





# Activity 1.5 - Strengthening the OTRIONS seismic network (Ref. Tallarico, UNIBA)

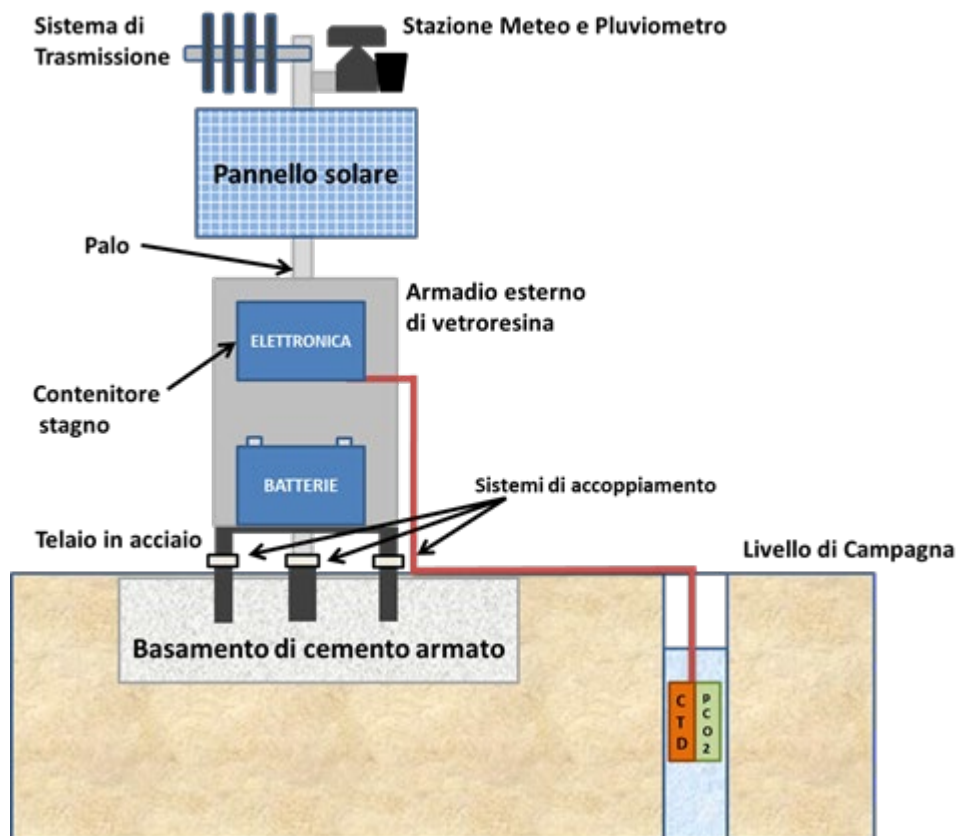


Lavecchia et al., 2022

- **Personnel:**  
Hiring of a Technician has been fully and successfully completed
- **Broadband seismic stations:**  
4 stations Purchased and delivered;
- **Broadband seismic stations installation:**  
Tender ended. Works planned to finish within Feb 2024



## Activity 1.6 - Developing the Hydrogeochemical network (Ref. Pecoraino, INGV-PA)

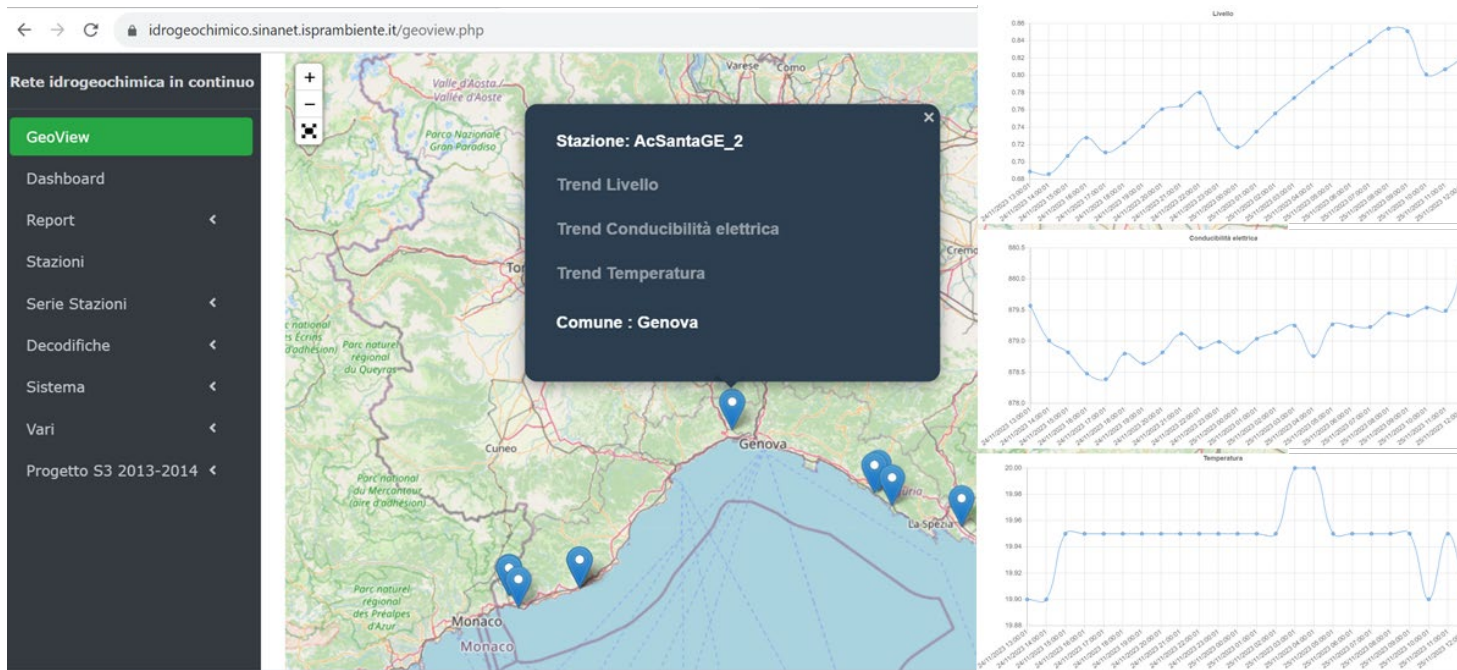


- **Personnel:**  
Hiring of a Technician has been fully and successfully completed
- **Hydrogeothermal stations:**  
Tender completed for 23 modular stations. Equipment should be delivered within a few months
- **Quadrpole:**  
Funds transferred at INGVPA. Procedure hopefully finished within Dec 2023





# Activity 1.7 - Strengthening the Hydrogeochemical data management Platform (Ref. Comerci & Cipolloni, ISPRA)



The current SNPA Hydrogeochemical platform

- **Personnel:**

Hiring of a CTER has been unsuccessful. A new call will be published today (6:00 pm); planned start in March 2024;

- **Hydrogeochemical Data Management platform:**

The MongoDB application data platform was purchased, as well as a data backup and archiving system for the hydrogeoch. platform.

- **FAIR principles implementation:**

A training and specialist assistance service for the development of APIs for MongoDB Database and for the creation of a FAIR hydrogeochemical data management and visualization platform was awarded.



## WP1 Instruments budget state of the art

Institute	Orig. Budget (VAT incl.)	Used Budget (VAT incl.)	Residual Budget (VAT incl.)
INGV	3.231.297,69 €	2.823.743,52 €	407.554,17 €
OGS	249.856,77 €	214.921,82 €	34.934,95 €
UNIGE	71.916,50 €	71.916,50 €	0 €
UNIBA	114.842,90 €	110.000,00 €	4842,9 €
ISPRA	345.175,00 €	340.671,87 €	4503,13 €
<b>Total</b>	<b>4.013.088,86 €</b>	<b>3.561.253,71 €</b>	<b>451.835,15 €</b>

Some purchases (activities INGV 1.3, 1.6; OGS, UNIGE, UNIBA) have some delays but most of the budget should be used within Dec 2023

Criticalities

## WP1 Personnel state of the art

Most of the planned hiring (2 Technologists, 2 CTERs, 1 Graduate Technician) have been successfully completed.

Only two positions' calls failed: 1 CTER for INGV ONT & 1 CTER for ISPRA. For the latter the call has been opened again.