



OGS
Istituto Nazionale
di Oceanografia
e di Geofisica
Sperimentale



7° Scientific Diving Summer School 20-25 September 2023 Panarea (Aeolian Islands, Italy)



ECCSEL NatLab-Italy Panarea



ORGANIZED BY:

OGS (Trieste), Sapienza University (Rome), CO₂GeoNet and
diving center AMPHIBIA

IN COLLABORATION WITH:

Zoological Station Anton Dohrn (Naples)
INGV (Palermo and Rome)

ENDORSEMENT: AIOSS

CO-FUNDING: Blue Marine Foundation



OPEN CALL FOR APPLICATIONS

The school is open to undergraduate, graduate, doctoral and PhD students in scientific disciplines, as well as professionals involved in the study and management of land and sea. Topics include the geological features of the unique active volcanic area of the island of Panarea, its biological components adapted to naturally acidified vents systems, and the characterization of hydrothermal fluids.

Participants will be trained in multi-parameter monitoring techniques and the definition of experimental protocols for the sampling and study of CO₂-rich fluids and benthic communities, with particular emphasis on assessing the effects of climate change and ocean acidification on organisms, communities, and ecosystem/habitat, especially on the seagrass meadows of *Posidonia oceanica*.

TEACHING PROGRAM

The course consists of 5 scientific dives, 10 multidisciplinary theoretical lessons and 4 practical lessons.

Lectures cover topics in physical, chemical, and biological oceanography, marine ecology, and earth sciences, with special emphasis on marine geology and volcanology, marine hydrothermal systems, effects of climate change and ocean acidification, experimental design, and sampling strategies.

Diving activities include mapping techniques, hydrothermal water, gas, and seawater sampling (using Niskin bottles and benthic chamber), sediment sampling, multiparametric probe positioning, gas flux measurements, visual census techniques, benthic composition, and measurements of coverage, shoot density, plant phenology, and epiphytes of *Posidonia oceanica* meadows.



TEACHING STAFF

OGS Trieste

Cinzia De Vittor - Maria Cristina Gambi - Rocco Auriemma
Valentina Esposito

Sapienza University – Roma

Sabina Bigi

INGV

Marco Anzidei (Roma) - Manfredi Longo (Palermo)
Cinzia Caruso (Palermo) - Gianluca Lazzaro (Palermo)



REQUIREMENTS

Any type of diving license with at least 20 certified dives (including recreational dives) is accepted, as well as a medical certificate of physical suitability for the diving activity not older than 1 year, and DAN (or equivalent) insurance for underwater activities.

REQUIRED EQUIPMENT

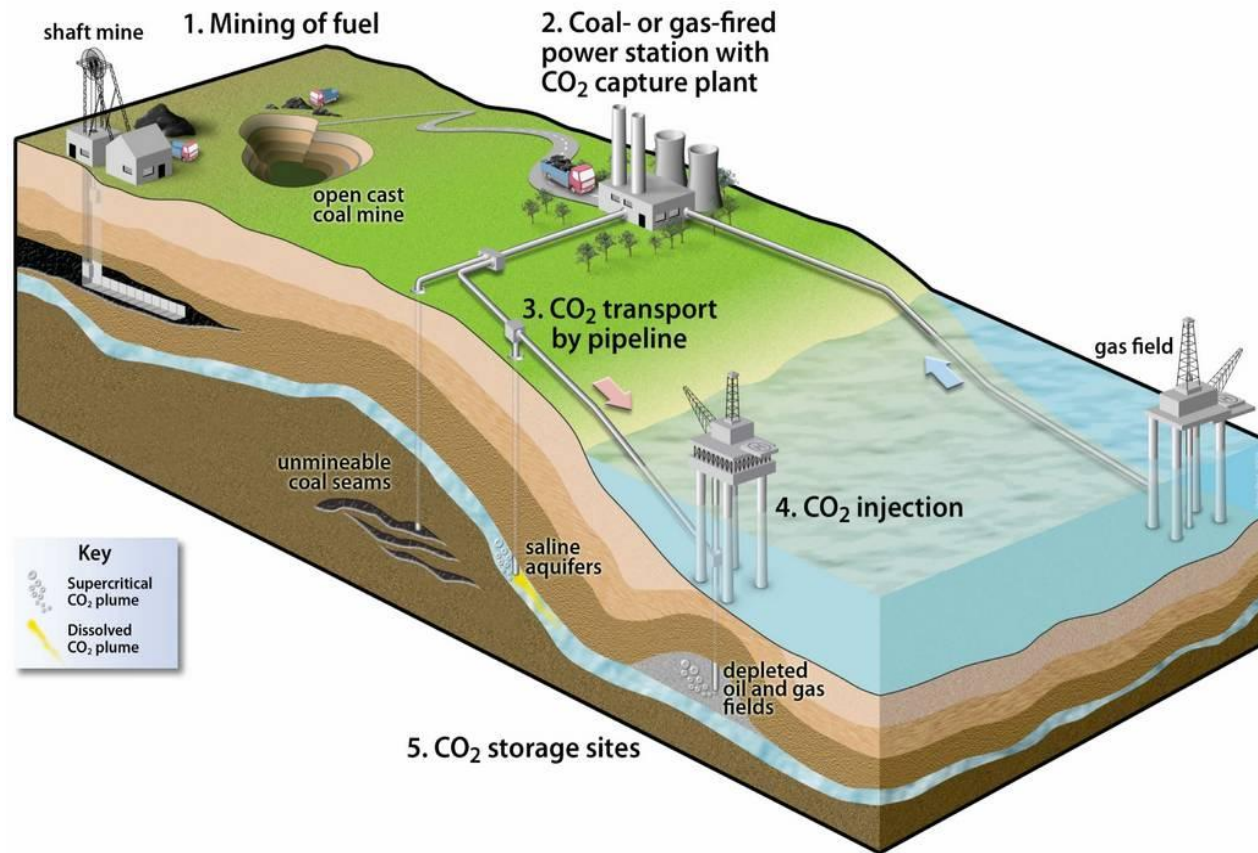
Participants must bring full scuba equipment, a jacket, 2 regulators or octopus, an underwater whiteboard and a net. Above all, **do not forget to bring your dive computer.**

Dive tanks and weight belt are included in the participation fee. If necessary, the required equipment (except dive computers) can be rented at the Amphibia Diving Center

WORKSHOP ON CCUS

(Carbon Capture, Utilization and Storage)

20th September



The first day of the school will be dedicated to a workshop on CCUS.

From 10:30 a.m. to 4 p.m., students will attend lectures on these important technologies for mitigating climate change reducing atmospheric CO₂ emissions, as well as on the mission and challenges of ECCSEL-ERIC (European Carbon Dioxide Capture and Storage Laboratory Infrastructure), the European initiative aiming to create a network of top quality research laboratories dedicated to the development of CCUS technologies.

Special attention will be given to ECCSEL-NatLab Italy and the research activities carried out using the natural CO₂ venting of the Panarea volcanic complex to test new high-tech instruments and monitoring programs in CCUS projects.

A coffee break and lunch will also be provided



LOCATION AND LOGISTICS

The school will be held in the island Panarea (Aeolian Archipelago, Italy) at the ECCSEL ERIC NatLab Italy laboratory of OGS, in San Pietro Street.

The island of Panarea can be easily reached by ferry from Naples or by bus and hydrofoil from Catania, where there is an international airport.


More information about travel and accommodation in Panarea will be sent to applicants by e-mail.




COSTS

THE SCHOOL IS FREE

 Lodging in an affiliated hotel is €55 (single room/day), €70 (double room/day).

 Dinner in an affiliated restaurant costs €31 (two main courses + side dish) or €20 (second course + side dish) or €14 (first course).

 Payments are to be made by participants directly to the affiliated structures, and an advance payment (100 euros) is due on September 2, 2023, after official admission to the course.

HOW TO APPLY

Please scan the QR-code to download the registration form, fill it out with all the information about yourself and your education, and send it to divingschoolpanarea@gmail.com, along with a CV, that specifically addresses your diving experience, no later than **July 31**.

The maximum number of participants is 10.

Admission to the summer school is subject to the above requirements and the evaluation by the organizers and teaching staff.

Admitted participants will be contacted directly at the email address they provide.

A certificate of participation will be issued and the scientific dives will be considered valid for the granting of the certificate with the European Scientific training standards by the Italian Association of Scientific Diving (AIOSS), according to the level of competence demonstrated.

REGISTRATION FORM

