7

NEWSLETTER

MEDSAL

PRIMA
PARTNERSHIP FOR RESEARCH AND INNOVATION IN THE MEDITERRANEAN AREA

MEDSAL PROJECT

Salinization of critical groundwater reserves in coastal Mediterranean areas: Identification, risk assessment and sustainable management with the use of integrated modelling and smart ICT tools.

Newsletter subjects

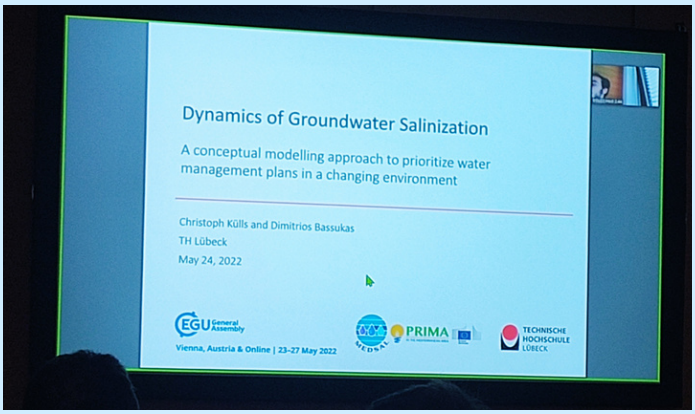
EGU Conference in Vienna (Austria) (May 2022)

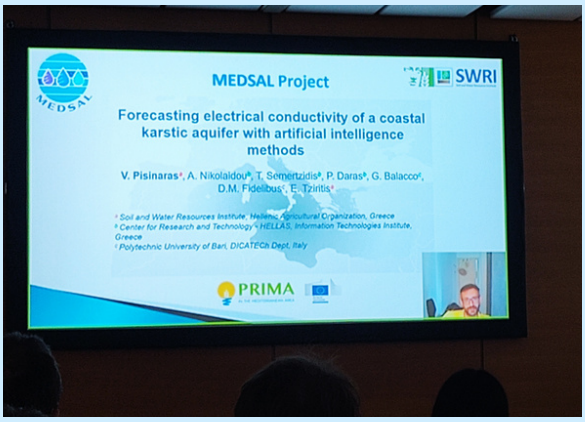
In the context of the EGU General 2022 Assembly, held in Vienna (Austria) on 23-27 May 2022, the MEDSAL Project consortium organized the special session “Dynamics of Groundwater Salinization”(Hydrological Science, HS8.2.10)

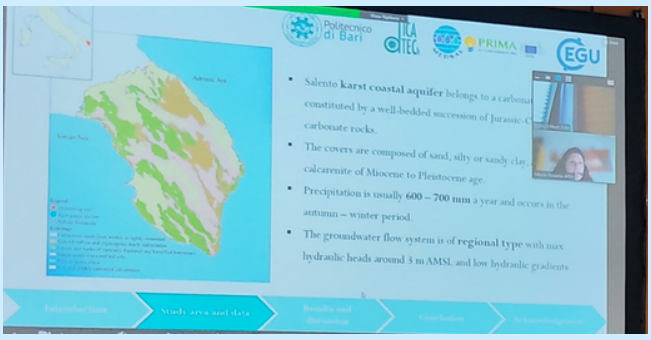
The session was dedicated to the exploration of the dynamics of groundwater salinization addressing temporal variations at all time scales and spatial or even combined spatial-temporal dynamics. It was chaired by Prof Christoph Kulls (convener) and Dr Evangelos Tziritis (co-convener), Prof Maria-Dolores (co-convener), Prof Fadoua Hamzaoui (co-convener), and Prof Gabriella Balacco (co-convener).

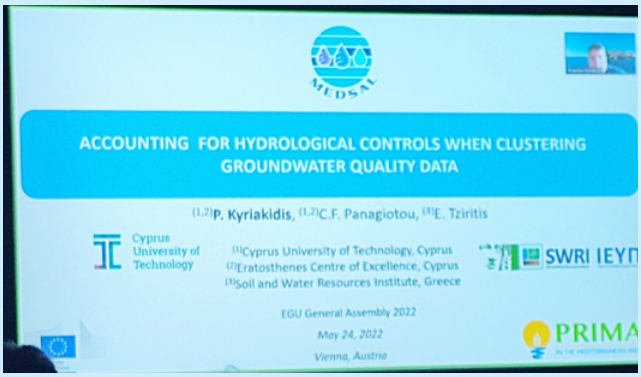
The session aimed at synthesizing and fostering a better understanding of common principles in the dynamics of the progression or recession of groundwater salinization. Several contributions from different countries and various scientific fields were presented. Scientists demonstrated experiences and knowledge related to groundwater salinization issues from different perspectives. The session was offered in a hybrid mode (in person and remotely) and was divided into two parts, during which 19 presentations took place.

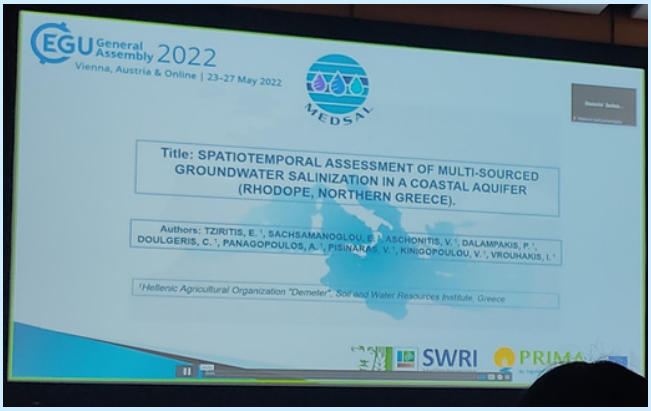
The MEDSAL research teams presented part of their outcomes with great success, covering a broad spectrum of topics related to groundwater salinization





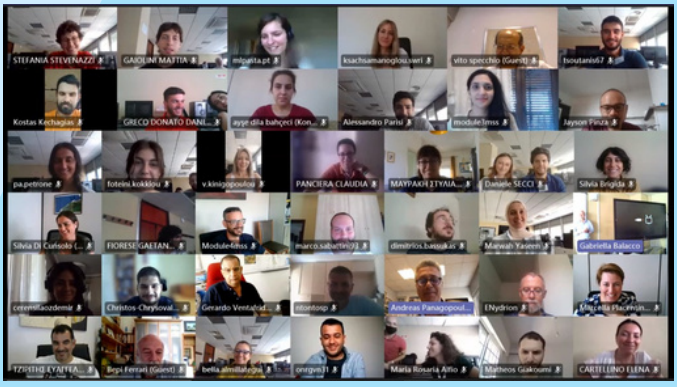






MEDSAL's Summer School in Bari (Italy) (June 2022)

The MEDSAL summer school was a 4-day hybrid workshop held from 27th to 30th June 2022 and hosted by the Polytechnic University of Bari (Bari – Italy). The workshop was focusing on innovative tools and methods developed in the framework of the MEDSAL project. Young scientists and researchers seeking advanced, state-of-the-art knowledge and orientation on the addressed subjects were welcomed. Stakeholders were also invited to attend the theoretical sessions remotely.

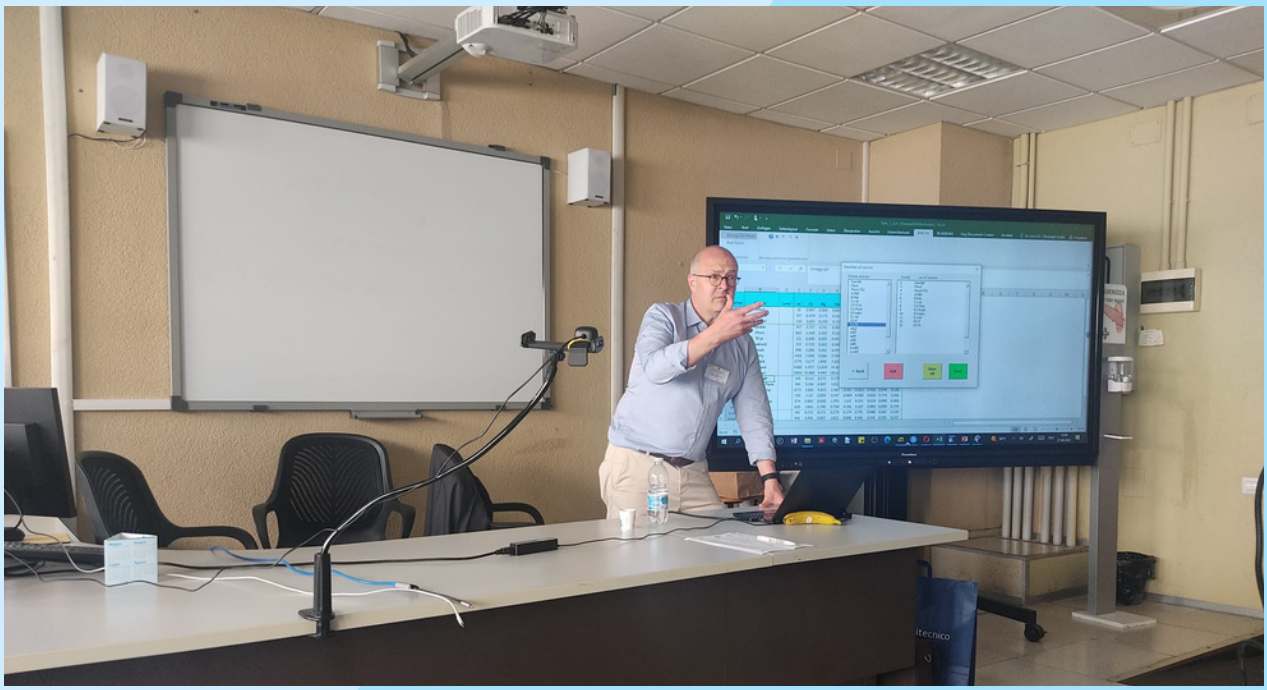


The curriculum is the result of 3 years of intensive research and development carried out by a well-coordinated multi-national team of experienced scientists

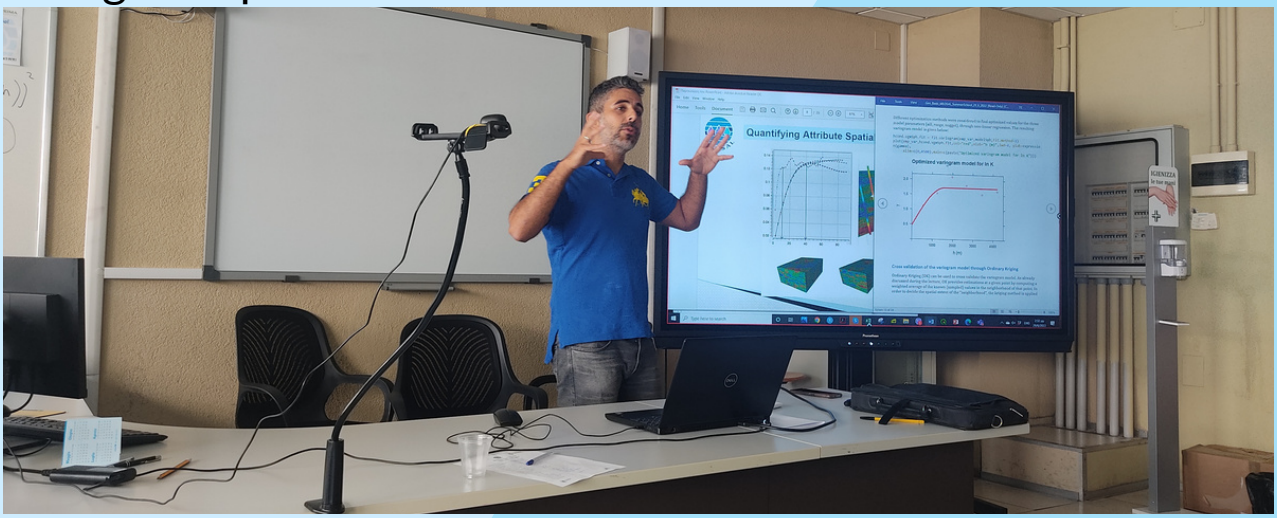
The scientific subjects to be addressed were structured in 4 modules, each comprising a theoretical and a practical session where attendees were expected to actively participate in exercises, problem-solving, and case study analysis. The presentations of the theoretical session are available for viewing on the official YouTube channel of the MEDSAL Project.

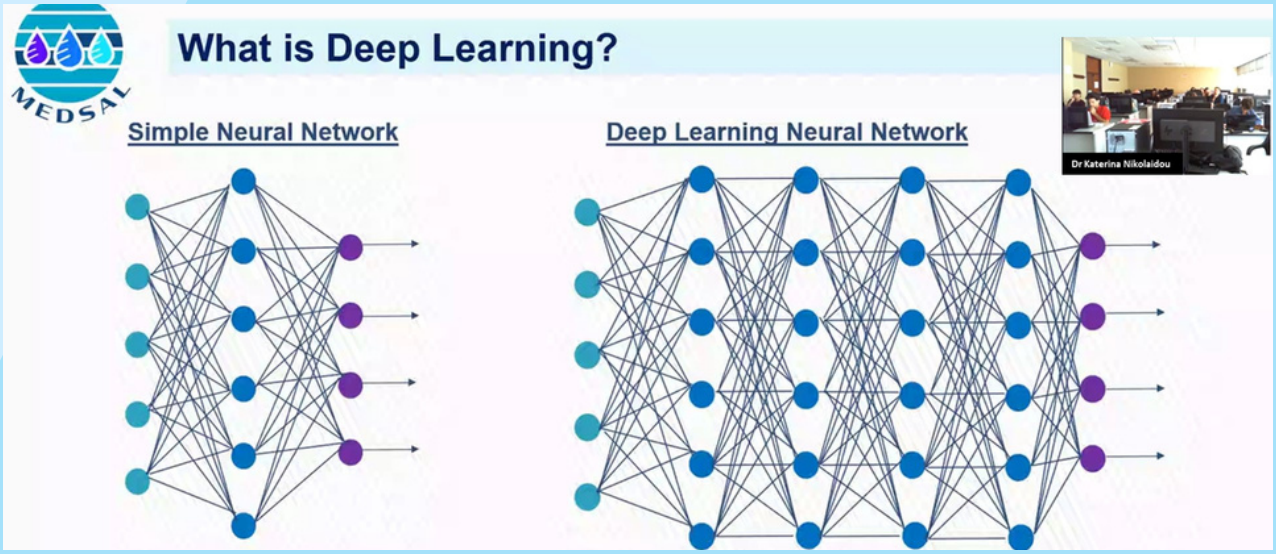
MODULES		TUTORS
1	Application of environmental isotopes in groundwater salinization identification and assessment	Prof. Christopher KÜLLS - *THL* **(Key Tutor)** Prof. Maria Dolores FIDELIBUS - *POLIBA* Dr. Evangelos TZIRITIS - *SWRI*
2	Hydrogeological and hydrogeochemical modelling in groundwater salinization problems	Prof. Cüneyt GÜLER - *MEU* **(Key Tutor)** Dr. Charalampos DOULGERIS - *SWRI* Prof. Christopher KÜLLS – *THL* Dr. Evangelos TZIRITIS - *SWRI*
3	Application of novel methods of geostatistics and artificial intelligence in hydrogeology, with emphasis on salinization issues	Prof. Phaedon KYRIAKIDIS - *CUT* **(Key Tutor)** Dr. Katerina NIKOLAIDOU - *CERTH* Dr. Constantinos PANAGIOTOU - *CUT* Dr. Vassilios PISINARAS - *SWRI* Dr. Theodoros SEMERTZIDIS - *CERTH*
4	Compilation, operation and maintenance of monitoring networks with a focus on coastal zones	Dr. Vassilios PISINARAS - *SWRI* **(Key Tutor)** Prof. Gabriella BALACCO - *POLIBA* Prof. Fadoua HAMZAOUI - *FST* Dr. Andreas PANAGOPOULOS - *SWRI*

Tutors are well-established professionals in their disciplines, sharing long and in-depth experience from their involvement in numerous successful R&D projects and consultancies.



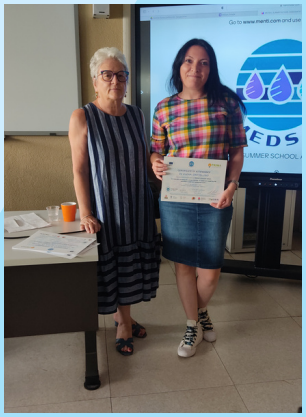
The structure of the workshop aimed to ensure a stimulating event that couples deep theoretical specialization with real-life case studies: State-of-the-art brought to practice.





At the end of the workshop a certificate of attendance was offered to every participant that successfully attended the 28 hours of training activity (theoretical and practical sessions).





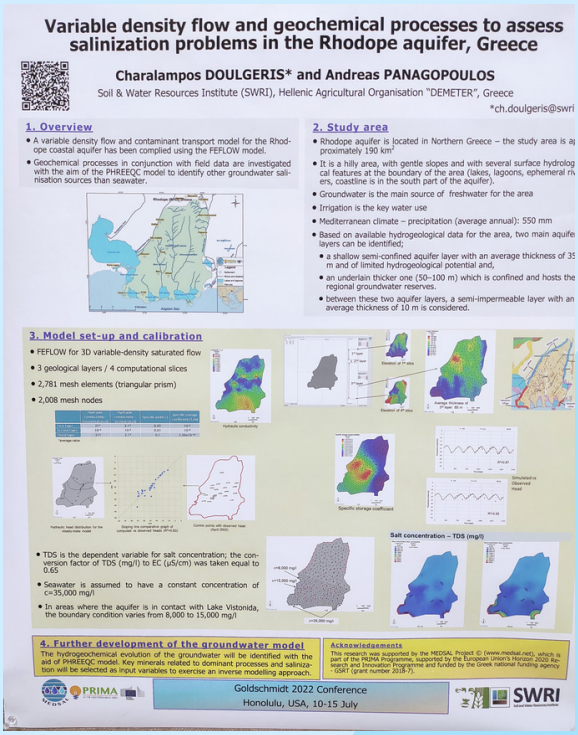


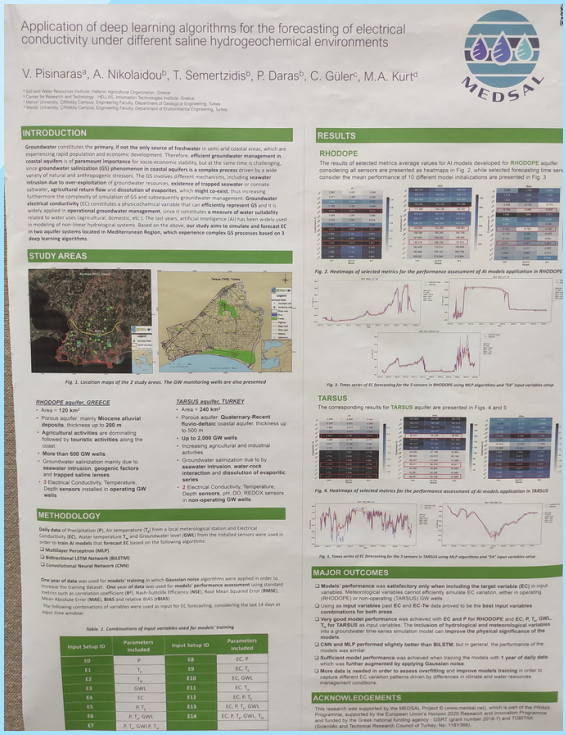


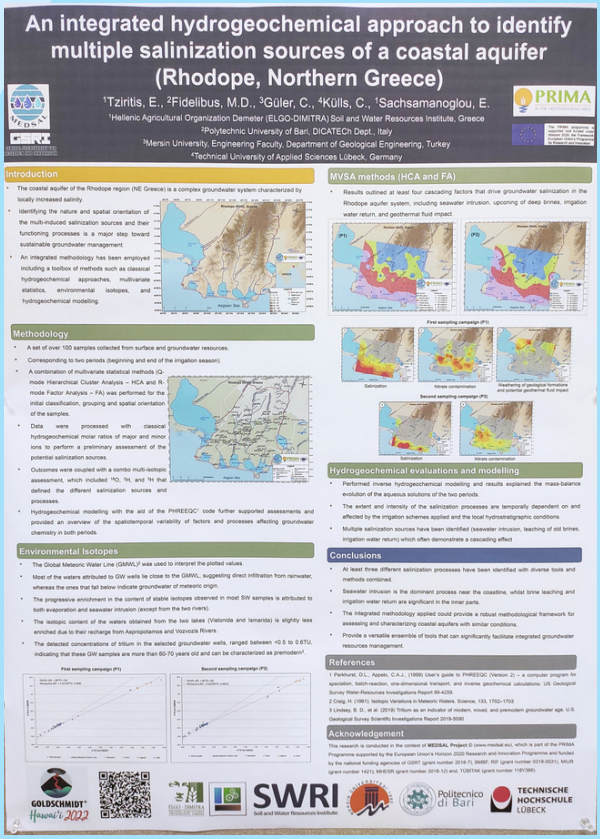
International Goldschmidt Geochemical Conference in Hawaii (USA) (July 2022)

The annual International Goldschmidt Geochemical Conference, held in Hawaii (USA), between 10-15 of July 2022. The conference focuses on geochemistry and related subjects, and it is organized by the European Association of Geochemistry and the Geochemical Society.
Members of the MEDSAL team attended the conference and presented the core outcomes of the project.

The poster presentations focused on groundwater salinization from the aspects of groundwater modelling, machine learning methods and hydrogeochemistry.



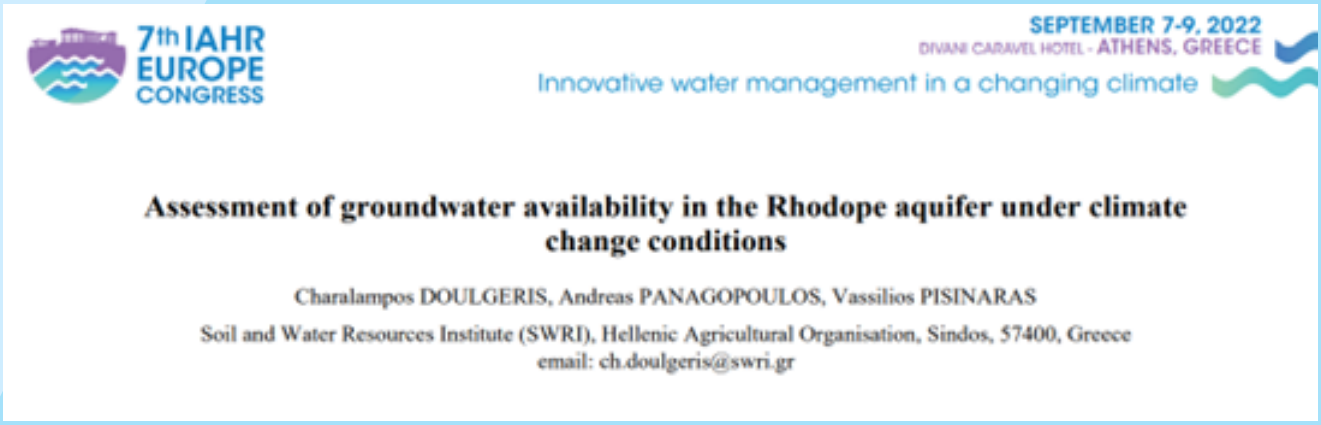




7th IAHR Europe Congress (Special Session) in Athens (Greece) (September 2022)

The 7th IAHR Europe Congress (Special Session) held in Athens (Greece) between 7-9 September 2022. The aim of the conference was to provide a platform for renowned professionals, researchers, scientists, and engineers, to explore innovative ways to face the challenges of hydro-environmental sciences and their practical applications, and share their research and practical experiences.

Dr. Charalampos Doulgeris, research scientist of the Soil and Water Resources Institute (ELGO-DIMITRA, Greece), and a member of the MEDSAL Project attended the conference and gave a presentation on the groundwater modelling applied in the Rhodope (RHO) pilot site.


7th IAHR EUROPE CONGRESS

SEPTEMBER 7-9, 2022
DIVANI CARAVEL HOTEL - ATHENS, GREECE
Innovative water management in a changing climate

Assessment of groundwater availability in the Rhodope aquifer under climate change conditions

Charalampos DOULGERIS, Andreas PANAGOPOULOS, Vassilios PISINARAS
Soil and Water Resources Institute (SWRI), Hellenic Agricultural Organisation, Sindos, 57400, Greece
email: ch.doulgeris@swri.gr

Common (Sustain-COAST and MEDSAL, PRIMA Projects) International Conference in Chania (Greece) (September 2022)

The Common International Conference on "Integrated Groundwater Management of Mediterranean Coastal Aquifers" took place in Chania (Greece) from 27th to 30th September 2022. The Conference aimed to summarize the main outcomes so far of both MEDSAL and Sustain-Coast PRIMA Projects and invite external contributions in several fields of coastal aquifer management. The technical sessions of the joint Conference were offered as hybrid sessions as well for the online participants. In total, 85 participants from 18 different countries from all over the world attended the Conference in person and online.

For further information, scan here!

The conference aimed to incorporate and cover comprehensively the principal objectives of both PRIMA projects and to invite contributions from a broad spectrum of expertise. Scientists and researchers submitted their papers according to specific themes and topics of the Conference. In total 31 papers were presented during the technical sessions.

Themes & Topics

- Tools and methods for groundwater monitoring at coastal aquifers
- Tools and methods for groundwater salinization and/or overall quality assessment
- Pollution migration in dependent ecosystems
- Assessment and modelling of coastal aquifer susceptibility to salinization and/or other pollution
- Numerical flow and transport modelling for groundwater assessment and sustainable management of coastal aquifers
- Best practices and innovative technologies for sustainable water management
- Water governance, conflicts and stakeholder analysis