

Welcome to the Salt Water Intrusion Meeting 2025 Technical Programme

Last updated: 2026-04-27 12:08

Sunday, 01/06/2025

Sun, 01/06/2025 18:15 - 19:30

WC_SO - Welcome Cocktail

Monday, 02/06/2025

Mon, 02/06/2025 08:00 - 17:30

Main Auditorium

Reg_Mon - Registration

Mon, 02/06/2025 09:00 - 09:30

Main Auditorium

Op_Se - Opening Session

Mon, 02/06/2025 09:30 - 09:45

Main Auditorium

Introductory Lecture

Sea-Groundwater Relation in Legends of Mesopotamia Gods (~3500 Years BP) – A Lesson From Far Away History?

*Y. Yechieli, U. Gabbay

Mon, 02/06/2025 09:45 - 11:00

Main Auditorium

Monitoring coastal aquifers

Main Organizer: Ms. María Pool (Amphos 21 (RSK))

Chaired by: Ms. María Pool (Amphos 21 (RSK)), Dr. Perry de Louw (Deltares)

Integrating Direct and Indirect Salinity Measurements to Map the Evolution of the Freshwater Lens in the Amsterdam Water Supply
Dunnes

Keynote

*L. Rolf, P. Kamps

Influence of Meteo-Marine Forcings on Groundwater Level Fluctuations of a Coastal Multi Layer Aquifer

*Y. Caballero, F. Bouchette, G. Nadal, B. Ladouche, V. Robin, R. Philippe, D. Roubinet, S. Lanini, Y. Balouin

Dynamics Of Stratification And Turbulent Mixing In A Mediterranean Coastal Bay

*R. Peñas-Torramilans, M. Grifoll, M. Espino, M. Fernández, M. Balsells F-Pedra, Y. Chen, J. Sospedra, A. Sánchez-Arcilla

Real-time Flux Monitoring: The extra dimension for Coastal Groundwater Management

J. November, N. Van Putte, G. Verreydt, *I. Van de Moortel

Innovative approach to the monitoring of the freshwater-saltwater interface

M. Sapiano, M. Schembri, *C. Pisani, Y. Kim

Groundwater vulnerability to seawater intrusion in the coastal zone of Poland

*D. Potrykus, M. Lidzbarski, B. Jaworska-Szulc, A. Szymkiewicz, G. Busico, M. Mastrocicco

Mon, 02/06/2025 11:00 - 11:30

Vértex Garden

CBM_1 - Coffee Break

Mon, 02/06/2025 11:30 - 13:30

Main Auditorium

Monitoring Geochemical processes (I)

Chaired by: Dr. Itay Reznik (Geological Survey of Israel), Prof. Audrey Sawyer (The Ohio State University)

Dissolved organic matter mobility and retention in a High-energy subterranean estuary Keynote

*K. Amoako, A. Reckhardt, M. Roberts, R. Meyer, S. Brick, T. Dittmar, H. Waska

Influence of Tidal Loading on Submarine Groundwater Discharge: Ra Isotope and Nutrient Variability in Offshore Groundwaters along the West Florida Shelf

*A. Alorda-Kleinglass, A. Lindgren, C. Smith, A. Knapp, R. Boiteau, K. Buck, S. Caprara, C. Parente, T. Conway, P. Chappell, J. Tamborski

HKU Depthwise Hydrogeosystem for High-Resolution Groundwater Investigations and Its Application in Coastal Hydrogeology

*J. Jiao, W. Liang, Y. Liu, E. Ho, J. Cherry

Biogenic Carbonate Dissolution in Coastal Permeable Sediments Keynote

*L. Millán, X. Álvarez Salgado, N. Villaceros Robineau, J. Pino Ibáñez

Redox-sensitive trace metal mobility in the deep subsurface of a high-energy beach

*A. Reckhardt, M. Roberts, F. Auer, M. Holtappels, R. Meyer, M. Böttcher, K. Pahnke

Occurrence of As, Cd, Cr and Pb in a Mexican Coastal Aquifer Associated to Agriculture Activity: Implications for Risks to Human Health

*C. Green Ruiz, J. Rivera-Hernández

Rare Earth Element Patterns as Tracers of Geochemical Processes in Subterranean Estuaries

*A. Cobelo-García, J. P. Ibanhez, C. Mendoza-Segura, X. Álvarez-Salgado

Geochemical Behaviour of a Subterranean Estuary on the East Coast of India

*C. Ehlert von Ahn, S. Nayak, N. Gupta, M. Ramasamy, N. Raju, N. Moosdorf

Mon, 02/06/2025 13:30 - 14:30

Vértex Garden

LB_1 - Lunch Break

Mon, 02/06/2025 14:30 - 16:30

Main Auditorium

Monitoring Geochemical processes (II)

Chaired by: Dr. Paula Rodriguez-Escales (Universitat Politècnica de Catalunya), Dr. Michela Trabucchi (Universitat Politècnica de Catalunya)

Quantifying Long-Term Seawater Circulation Fluxes in Coastal Aquifers: Insights from Multi-Element Analysis and Field Applications

Keynote

*Y. Kiro, H. Michael, C. Duque Calvache

Physical, Chemical, and Microbial Processes of Salt Water Intrusion in Groundwater on the Southern Coast of Laizhou Bay, China

B. Hu, C. Zhi, F. Yang

Freshening of Paleo-Salinity in the Cubango Megafan, Namibia – a Large Scale Natural Ion Exchange Experiment

G. Houben, K. de Vriendt, R. Bäumlle

Phytoplankton Dynamics in Fangar Bay: Model vs. Observation

*M. Balsells, M. Grifoll, M. Espino, A. Sánchez-Arcilla, M. Fernández-Tejedor

Radiocarbon Age Dating of Coastal Seawater Intruding beneath a Large Freshwater Lens Keynote

*P. Stuyfzand, P. Nienhuis, V. Post

Groundwater Age and Mixing Patterns in the Deep Subsurface of a High-Energy Beach

*R. Meyer, A. Reckhardt, J. Greskowiak, S. Seibert, N. Skibbe, J. Sültenfuß, G. Massmann

Estimation of Groundwater Discharge and Nutrient Loads to Puck Bay Using Coupled Hydrological Models

D. Potrykus, *A. Szymkiewicz, B. Jaworska-Szulc, A. Gumu?a-Kaw?cka, L. Dzierzbicka-G?owacka

Identification of Submarine Groundwater Discharge (SGD) and Saline Water Intrusion (SWI) in the Coastal Andhra Pradesh, India

*J. NANDIMANDALAM

Qualitative Approaches Unveiling the Evolution of Seawater Intrusion into Karst Aquifers of The Adriatic Coastline, SE Italy.

*M. Mostafa, I. Liso, M. Parise

Mon, 02/06/2025 14:30 - 16:30

Sala d'Actes

Coastal aquifer management and MAR

Chaired by: Dr. Cristina Valhondo (Consejo Superior de Investigaciones Científicas), Prof. Yoseph Yechieli (Geological Survey of Israel)

Coastal Aquifers Management Evaluation and Climate Change Adaptation in Libya Keynote

*N. Alfarrak, K. Walraevens

Feasibility and Environmental Impacts of Shallow Brackish Groundwater Abstraction and Brine Reinjection in the Coastal Netherlands

*I. Farias, G. Oude Essink, P. de Louw, M. Bierkens

LIFE REMAR Project, Renaturalizing Treated Wastewater through Managed Aquifer Recharge

*S. Bagés Estopà, T. Chantal Anderbouhr, J. Campos Ferré, M. González Rodríguez, S. Díaz Cruz, J. Carrera Ramírez, C. Valhondo González, L. Martínez Landa, X. Sánchez Vila, L. Luquot, J. Martínez Vilar

ASR systems in Saline and brackish groundwater: well(field) design considerations for optimizing the injection and recovery of freshwater

*N. Hartog, G. Schout, L. Brokx

Fresh Water from a Saline Subsurface: The Potential for Regional Scale Implementation of ASR to Alleviate Water Stress in the Agricultural Area of Wolphaartsdijk, The Netherlands

*L. Brokx, G. Schout, N. Hartog

Reclaimed water for MAR in Barcelona a tool for water security

*B. Loma, M. Minoves

Enhancing Freshwater Supply for Agriculture on Texel Island: Aquifer Storage and Recovery in a Saline Aquifer Using Horizontal Wells

*H. van den Berg, S. Kreipl, H. Merton, A. van Doorn

Innovative Drainage as a Source of Fresh Water for Agriculture in Brackish Areas

*V. Kaandorp, T. van Woerkom, N. Mulder, A. Roelandse

Mon, 02/06/2025 16:30 - 17:00

Vértex Garden

CBT_1 - Coffee Break

PS_Mon - Poster Session

Coastal and Offshore Groundwater Investigations for Prince Edward Island, Canada

B. Kurylyk, H. Michael, V. Maselli, M. Nedimovi?, I. Pavlovskii, S. Yu

Tracing the Source of Mineralization and Groundwater Recharge in a Semi-Arid Coastal Region in Morocco

A. Rafik

FloaTEM Survey of the Vertical Structure of Groundwater-Seawater Mixing at the Hanko SGD Site, Finland

J. Virtasalo, C. Patzer, N. Sanila, M. Sahiluoto, L. Rinne

Fresh Submarine Groundwater Discharge in Belgium: an overview

***M. Paepen**, E. Vrancken, K. Walraevens, T. Hermans

LIFE REMAR Project, Treated Wastewater Renaturalization using Soil-Aquifer Treatment with Reactive Barriers

***M. González Rodríguez**, T. Chantal Anderbouhr, J. Campos Ferré, S. Bagés Estopà, S. Díaz Cruz, J. Carrera Ramírez, C. Valhondo González, L. Martínez Landa, X. Sánchez Vila, L. Luquot, J. Martínez Vilar

An Integrative Approach to Submarine Groundwater Discharge and Seawater Intrusion: Insights from the Odisha Coast, India

***S. Nayak**, N. Raju

Geophysical investigation of submarine groundwater discharge (SGD) at Königshafen (Sylt)

***M. Ronczka**, J. Igel, M. Müller-Petke, T. Wunderlich, E. Erkul, U. Mallast

Understanding Hydrogeological Controls on seafloor Olivine Weathering for atmospheric Carbon dioxide removal

***M. Ramasamy**, N. Moosdorf

12 Years of Monitoring Controlled Artificial Recharge and Drainage (CARD) in Zeeland, The Netherlands; Insights and Significance to Increase Freshwater Availability for Irrigation.

***P. Pauw**, V. Klap

Sand tank experiments in coastal hydrogeology - how to do them and how to do them better

***L. Stoeckl**, G. Houben

Evaluation of managed aquifer recharge to prevent seawater intrusion using "interface-egg"

***Y. Kim**, J. Bang, K. Song

Using Borehole and Surface Geoelectrical Methods for the Optimal Locating Coastal Observation Well and Salinity Monitoring at the Michmoret Test Site, Israel

***E. LEVI**, Y. Wolonsky, O. Sivan, E. Shalev

Visit1_SO - Visit CosmoCaixa - Science Museum Barcelona

Tuesday, 03/06/2025

Tue, 03/06/2025 08:00 - 17:30

Main Auditorium

Reg_Tue - Registration

Tue, 03/06/2025 08:30 - 11:00

Main Auditorium

Biogeochemical dimension of SGD: Part I

Chaired by: Dr. Valentí Rodellas (Universitat Autònoma de Barcelona), Dr. Beata Szymczycha (Institute of Oceanology Polish Academy of Sciences)

Microbial Community Structuring and Nitrogen Transformations along a Mediterranean Subterranean Estuary **Keynote**

***D. Romano-Gude**, C. Mena, M. Diego-Feliu, B. Almillategui, A. G. Bravo, M. Montero-Curiel, J. Carrera, A. Folch, J. Garcia-Orellana, A. J. Székely, S. Bertilsson, V. Rodellas, C. Ruiz-González

The Overlooked Role of Terrestrial Groundwater in Coastal Wetland Resilience **Keynote**

***J. Guimond**, E. Grande, H. Michael, B. Arora

Biogeochemical Transformations of Anthropized Versus Pristine Continental Groundwaters in Subterranean Estuaries

***E. Calvo-Martin**, X. Álvarez-Salgado, V. Rodellas, M. Pazó, V. Vieitez, S. Pino Ibánhez

Drivers Of Nitrogen And Phosphorous Transformations In Submarine Groundwater Discharge (SGD) Of A Mediterranean Coastal Aquifer

***B. Almillategui**, M. Diego-Feliu, M. Muñoz-Pinyol, J. Tur-Piedra, C. Ruiz-González, D. Romano-Gude, M. Saaltink, S. Bergeler, F. Willert, V. Rodellas, A. Folch

Spatiotemporal Variability and Ecological Impact of a Mediterranean Subterranean Estuary on Coastal Microbial Communities

***L. Matthys**, N. Gallois, M. Mendes, B. Misson, V. Sanial

Digging into the Role of Microorganisms in Mediterranean Coastal Aquifers

***C. Ruiz-González**, D. Romano-Gude, C. Mena, A. Bravo, A. Illa-Oviedo, N. Arandia-Gorostidi, L. Palacin Tyson, J. Garcia-Orellana, M. Diego-Feliu, A. Folch, V. Rodellas

The Effect of Salt Water Intrusion and Submarine Groundwater Discharge on Dissolved Oxygen Concentrations in Estuarine and Coastal Waters

***W. Moore**

Groundwater Discharge and Hydrological Connections in a Coastal Fishpond

***H. Dulai**, V. GIBSON, K. Falinski, K. BOSWORTH, N. MACHADO, J. ROBERTSON, K. KOTUBETAY, H. KAWELO, K. PI?IOHI?A, K. Hawai?i, K. WINTER, Y. RII

Assessing the Role of Submarine Groundwater Discharge in Coastal Ecosystems Using Compositional Data Analysis: Insights from the Catalan Coast

***M. Ortego**, M. Sanchis, A. Folch, E. Garcés

Impact of Submarine Groundwater Discharge on Microbial Plankton in a Tidal Crystalline Coastal System

***E. Teira**, S. Martínez-García, M. Pérez-Lorenzo, A. Fuentes, C. COstas-Selas, R. Blanca-Sújar, C. Ruíz-González, J. Gasol, J. Ibánhez, X. Álvarez-Salgado, E. Fernández

Identification of submarine groundwater discharge zones as thermal refugia for eelgrass restoration

***J. Tamborski**, M. Taylor, J. Haddock, B. Peterson, J. Novack

Tue, 03/06/2025 11:00 - 11:30

Vértex Garden

CBM_2 - Coffee Break

Tue, 03/06/2025 11:30 - 13:30

Main Auditorium

Biogeochemical dimension of SGD: Part II

Chaired by: Dr. Clara Ruiz-González (Institut of Marine Sciences (ICM-CSIC)), Dr. Céline Lavergne (Institut de Ciències del Mar - CSIC)

Global Fluxes of Recirculated Submarine Groundwater Discharge Individual Components **Keynote**

Y. Levy, *Y. Kiro

Groundwater-Driven Nutrient Inputs To Mar Menor Coastal Lagoon: An Overlooked Driver Of Ecosystem Degradation **Keynote**

*J. Rodríguez-Puig, M. Diego-Feliu, C. Ruiz-González, I. Alorda-Montiel, A. Alorda-Kleinglass, D. Romano-Gude, A. G. Bravo, J. Dordal-Soriano, C. Mena, C. Green-Ruiz, M. Manzano, J. Gilabert, J. García-Orellana, V. Rodellas

Submarine Groundwater Discharge a Source of Total Mercury at Cabrera Archipelago National Park and Ría de Vigo

*A. G. BRAVO, G. CASAS, M. MONTERO CURIEL, D. ROMANO-GUDE, J. RODRÍGUEZ PUIG, V. RODELLAS-VILA, C. RUIZ-GONZÁLEZ, J. M. GASOL, X. ÁLVAREZ-SALGADO, J. PINO IBÁNHEZ

Unveiling hidden mercury and methylmercury sources: the role of submarine groundwater discharge in the largest western Mediterranean Sea coastal lagoon

*C. Lavergne, J. Rodríguez Puig, C. Ruiz-González, M. Montero-Curiel, G. Casas, D. Romano-Gude, I. Alorda-Montiel, J. Dordal-Soriano, A. Alorda-Kleinglass, M. Diego-Feliu, J. Gilabert, A. Campillo, C. Romera-Castillo, L. Heimbürger-Boavida, J. García-Orellana, V. Rodellas, A. G. Bravo

Inflow of Metals through Submarine Groundwater Discharge in the Vigo Estuary and Influence on the Levels Found in Receiving Waters

*J. Santos Echeandía, P. Bernárdez, P. Sánchez Marín, J. P. Ibanhéz

Quantifying Porewater Exchange: Understanding Nutrient and Metal Cycling in Mar Menor Lagoon

*S. Bergeler, M. Diego Feliu, J. Rodríguez Puig, A. Alorda Kleinglass, I. Alorda Montiel, A. García Bravo, C. Ruiz González, G. Casas Papell, J. Gilabert Cervera, J. Santos Echeandía, V. Rodellas Vila

Quantifying Submarine Groundwater Discharge Contributions to the Oceanic Carbon Budget

*N. Weber, Y. Kiro

Using Radium Isotopes to determine Seawater Intrusion Rates

*Y. Weinstein

The Influence of Lake Kinneret Level Fluctuations on Saltwater Intrusion Through Lacustrine Groundwater Discharge

*S. Stein, G. Sharabi, T. Zilberman, E. Levy

Tue, 03/06/2025 13:30 - 14:30

Vértex Garden

LB_2 - Lunch Break

Tue, 03/06/2025 14:30 - 16:30

Main Auditorium

Management of coastal aquifers

Chaired by: Dr. Maurizio Polemio (CNR IRPI, Italy), Ms. Núria Ferrer (UPC)

Development of a variable-density numerical model for groundwater management in Laura, Majuro atoll, Republic of the Marshall Islands

Keynote

*T. Goyetche, M. Pool, E. Abarca

Multi-Method Approach for Quantifying the Fresh Saline Interface Dynamics in Confined Sub-Aquifers due to a Negative Hydraulic Barrier

Keynote

Y. Wolanski, *Y. Geller, I. Reznik, E. Levy, S. Stein, E. Shalev, N. Naveh, O. Sivan

Implications of Aquifer Type for Hydro-Economic Management of Seawater Intrusion

*P. Reinelt

Impacts of Subsurface Dam Construction on Downstream Groundwater Levels and Salinity Dynamics in Coastal Aquifers

*J. Liu, P. Brunner, T. Tokunaga

Integrated Strategies for Mitigating Saltwater Intrusion in the Coastal Aquifer of Muravera (Southeastern Sardinia)

*F. Pisccedda, R. Wanty, C. Arras, M. Porru, R. Biddau, E. Musu, F. Podda, A. Sessini, C. Nieddu, V. Fancello, S. Vacca, S. Da Pelo

Observation and Numerical Modeling of Reversibility of Seawater Intrusion in a Coastal Carbonate Aquifer

*D. Han, G. Cao

Impact of Urbanization on Groundwater Availability in the Masingini–Mwanyanya Catchment Forest, Unguja – Zanzibar (Tanzania)

S. Bakari, S. Kyonda, K. Kombo, *F. De Filippi, G. Sappa

Origin of Shifting Chloride Concentrations Near a Well Field

*O. Ebbens, R. van der Velde, F. Schaars, M. van Baar

A Management Modelling Approach of Groundwater Coastal Resources at Salinisation Risk Under Global Change

M. Polemio

Advances in modeling coastal groundwater

Chaired by: Mr. Daniel Fernandez-Garcia (UPC), Dr. Barret Kurylyk (Dalhousie University)

Large-scale 3D groundwater modelling using imod-wq and global datasets - a case study for the Australian continent and Papua New Guinea

Keynote

***D. Zamrsky**, G. H.P. Oude Essink, J. King, M. F.P. Bierkens

Reduced-Order Seawater Intrusion Modeling With A New Formulation For Interface Flow In Multi-Layer Systems **Keynote**

***M. Bakker**, S. Panday, R. Falta, A. Lemon, C. Patterson

Requirements for Modeling Well Salinization With Variable-Density Submodels Derived From Density-Invariant Regional Models

***D. Brakenhoff**, F. Schaars, V. Post

Off to a Good Start: Finding the Initial Concentration in Groundwater Models

***F. Schaars**, M. Groen, A. Rapiti

Management of Coastal Aquifers in the Mediterranean using Innovative Modeling and Data Collection Techniques

***G. Oude Essink**, G. Nogueira, J. King, M. Faneca Sanchez, D. Zamrsky

Modeling seawater intrusion in coastal aquifers with physics informed neural networks

M. MANSOUR, M. Rajabi, F. Lehmann, A. Younes, ***M. Fahs**

Modeling Tidal Influence in Groundwater Models With Large Time Steps

***R. Caljé**

Tidal area morphology and the impact of sea level rise on groundwater systems

***P. de Louw**, E. Schoonderwoerd, H. Kok, T. Davids

SEA WATER INTRUSION ON THE LLOBREGAT DELTA: THE IMPACT OF UNDERGROUND INFRASTRUCTURE AND HYDRAULIC BARRIER

***C. Castro**, D. Fernandez Garcia, G. Sole Marí, N. Ferrer Ramos

CBT_2 - Coffee Break

PS_Tue - Poster Session

Microbial Contributions to the Fate of Organic Contaminants in Subterranean Estuaries: a Case Study in Marseille

N. Gallois, L. Matthys, J. Boudenne, V. Sanial, B. Misson

Mineralogy and Multi-Isotope Geochemistry of a high-energy Subterranean Estuary in the temperate Climate Zone

M. Böttcher, A. Reckhardt, P. Roeser, M. Roberts, I. Schmiedinger, S. Plewe, K. Pahnke

Submarine Groundwater Discharge as a Source of Nutrients to La Ventana Bay, Mexico, From a Coastal Aquifer Influenced by Agricultural Activity.

***D. Alvarado Zambrano**, C. Green Ruiz

Understanding the Hydrogeological Interaction Between Railway and Port Infrastructures in Terms of Their Effects on Sea Water Intrusion in an Urban Coastal Aquifer

***C. Perez-Castro**, N. Ferrer-Ramos, D. Fernandez-Garcia

Dynamic Drivers of Marsh Migration in the Coastal Critical Zone: Untangling Temporal and Spatial Variability

***D. Pratt**, J. Guimond, H. Michael

Experiences with Managed Aquifer Recharge for Agriculture in a Salinized Flemish Polder Area

D. Vandeveld, ***V. Kaandorp**, P. de Louw, J. Lermytte

Comparing the Effects of Sea- and Rainwater on the Release of Dissolved Organic Matter and Nutrients from Beach Wrack

***H. Waska**

Open Access Tools: Towards a Better Management of the Underground Resources

***L. Schorpp**, N. Egli, J. Straubhaar, P. Renard

Management Of Coastal Aquifers And Related Ecosystems In Heavy Pumped Areas During Aquifer Dewatering Operations

***A. Nawal**

assessing the impact of aquifer heterogeneity on coastal groundwater flow and salt distribution under tidal forcing

***A. zonshine**, Y. kiro

The Relevance of Metal Inputs Into Mar Menor Coastal Lagoon (Spain) Through Submarine Groundwater Discharge

R. Gutiérrez Tirado, ***R. Gutiérrez Tirado**, C. Green Ruiz, V. Rodellas, J. Rodríguez-Puig, P. Bernardez, A. Bravo, M. Diego-Feliu, I. Alorda-Montiel, J. Santos Echeandía

Links Between Land Cover and the Chemical Characteristics of Groundwater in a Tidal Crystalline Coastal Environment

***E. FERNÁNDEZ**, S. IBÁÑEZ, P. URBIETA, G. MÉNDEZ, E. TEIRA, P. SÁNCHEZ-MARÍN, J. SANTOS-ECHEANDÍA, P. BERNÁRDEZ, M. NIETO-CID, X. ÁLVAREZ-SALGADO

The inputs of solutes through SGD over a tidal cycle in a coastal system

S. P. IBÁÑEZ, X. ÁLVAREZ-SALGADO, E. BARBER-LLUCH, R. GONZÁLEZ-VILLANUEVA, M. NIETO-CID, ***P. BERNÁRDEZ**, J. SANTOS-ECHEANDÍA, P. SÁNCHEZ-MARÍN, A. COBELO-GARCÍA, E. TEIRA, E. FERNÁNDEZ, S. MARTÍNEZ-GARCÍA, P. URBIETA, G. MENDEZ, A. G. BRAVO, G. CASAS, C. ROCHA

Compatibility between harbour infrastructures and strategic aquifers for the drinking water supply in Barcelona. Catalonia.

***J. Massana**

Barite in Freshwater Sediments of the Baltic Sea Crystallises in a Diffusive Salinisation Gradient

***P. Roeser**, M. Böttcher, L. Lapham, S. Halas, C. Pretet, T. Nägler, M. Prieto, U. Struck, H. Huckriede

Small-Scale Variability of Microbial Communities and Their Functional Potential in a Mediterranean Beach Aquifer

***L. Palacin-Tyson**, D. Romano-Gude, A. Illa-Oviedo, N. Arandia-Gorostidi, B. Almillategui, M. Munoz-Pinyol, F. Willert, A. Campillo, C. Roemera-Castillo, V. Rodellas, M. Diego-Feliu, A. Folch, C. Ruiz-Gonzalez

FM_SO - Football Match

Wednesday, 04/06/2025

Wed, 04/06/2025 08:20 - 16:00

Visit2_SO - Field Trip Hydraulic barrier / Agbar Museum

Thursday, 05/06/2025

Thu, 05/06/2025 08:00 - 17:00

Main Auditorium

Reg_Fri - Registration

Thu, 05/06/2025 08:30 - 11:00

Main Auditorium

Aquifer salinization (I): processes and environments

Chaired by: Ms. Gudrun Massmann (Universität Oldenburg), Dr. Maarten W. Saaltink (Universitat Politècnica de Catalunya (UPC))

Untangling Complexity of the Critical Zone at the Land-Sea Margin **Keynote**

*H. Michael

Ancient Seawater Trapped Within a Tectonically Uplifted Chalk Formation **Keynote**

*I. Reznik, N. Rabinovitch, L. Netzer, Y. Livshitz, B. Lazar, O. Bar, Y. Yecheili

Groundwater Floodings, Storm Surges and Wind Direction: a silent threat in coastal areas

*A. BLANCO-CORONAS, C. DUQUE, M. LÓPEZ-CHICANO, M. CALVACHE

Seawater Flooding and Sea-Level Rise Increase Inland Groundwater-Surface Water Exchanges and Saltwater Intrusion

*J. Cantelon, B. Kurylyk

Impacts of Flood Mitigation Facilities on Groundwater Salinization in the Low-lying Coastal Estuary of Kujukuri Plain, Japan

*C. Tsai, J. Liu, Y. Ito, T. Tokunaga

Influence of Tree Mortality on Salt Distributions in Changing Coastal Environments

*C. Chen, A. Paldor, D. Pratt, H. Michael

Salinity Intrusion in a Tropical Agricultural Wetland of India

*S. Nair

Salt Marsh Vegetation as an Indicator of the Controls on Migration of the Freshwater-Saltwater Interface

*A. Wilson

Feedbacks Between Saltwater Intrusion, Permafrost Thaw, and Soil Thermal Properties in an Arctic Coastal System

*A. Spera, J. McClelland, C. Demir, M. Cardenas, J. Guimond

Assessment of Groundwater Salinisation and Nitrate Pollution Through Statistical and Hydrogeochemical Approaches

*G. Fiorese, M. Alfio, A. Nawaz, V. Specchio, G. Balacco, M. Fidelibus

Thu, 05/06/2025 11:00 - 11:30

Vértex Garden

CBM_3 - Coffee Break

Thu, 05/06/2025 11:30 - 13:30

Main Auditorium

Modeling coastal aquifers and Geochemical Processes

Chaired by: Mr. Carlos Duque (University of Granada), Prof. Holly Michael (University of Delaware)

The Netherlands Nationwide Variable Density Groundwater Model LHM Fresh-salt: Insights From 5 Years of Application **Keynote**

*J. Delsman, G. Oude Essink

Implications of Inland Boundary Conditions When Modeling Sea-Level-Rise Scenarios

*V. Srinivasan, R. Sadhasivam, P. Clement

Multi-Millennia Reactive Transport Modelling To Elucidate Seawater Intrusion Dynamics In The Amsterdam Water Supply Dune Area

*V. Post, P. Stuyfzand, P. Nienhuis

Saltwater Intrusion Modeling on Small Islands: Insights Into Submarine Groundwater Discharge as a Major Nutrient Pathway for Phosphate Accumulation Affecting Coral Reefs

*C. Leong, J. Yasumoto, R. Minami, M. Taniguchi, R. Shinjo

Bedrock Weathering Controls on the Geometry of the Freshwater Lens in Small Tropical Volcanic Islands: Case Study of Wallis Island, South-West Pacific

*J. Comte, P. Irz, A. Malau

Simulation of hydrobiogeochemical processes within the subterranean estuary at a real high-energy beach

*J. Greskowiak, S. Seibert, A. Reckhardt, G. Massmann

Contaminant Transport and Chaotic Mixing in Heterogeneous Coastal Aquifers under Tidal Forcing

*S. Tajima, M. Dentz

Modeling Saltwater Intrusion Scenarios for Coastal Aquifers in Northern Germany and Turkey

*A. Schneider, H. Zhao, J. Wolf, D. Logashenko, S. Reiter, M. Howahr, M. Eley, T. Langmann, H. Wiederhold

Stable strontium and Magnesium isotopes behavior in coastal aquifers during long-term seawater circulation

N. Shalev,, Y. Kiro, A. Cohen

Thu, 05/06/2025 13:30 - 14:30

Vértex Garden

LB_3 - Lunch Break

Thu, 05/06/2025 14:30 - 16:15

Main Auditorium

Aquifer salinization (II): threats to fresh coastal groundwater

Chaired by: Prof. Adrian Werner (Flinders University), Dr. Gualbert Oude Essink (Deltares)

Assessing thin rainwater lens viability under changing climate conditions **Keynote**

*I. America-van den Heuvel, J. Delsman, N. Wanders, P. de Louw, G. Oude Essink

A New Groundwater Classification for Managing Seawater Intrusion in the Mediterranean Area

*M. Alfio, G. Balacco, M. Fidelibus, C. Güler, F. Hamzaoui-Azaza, C. Külls, A. Panagopoulos, E. Tziritis

Operation and Design of Infiltration Galleries in the Pacific

*A. Werner, A. Jazayeri

Uncertainties In Saltwater Intrusion Due To Model Physics And Parameter Decisions

D. Gonzalez-Duque, *A. Sawyer, C. Langevin, K. Adams, J. Reager, B. Hamlington

Detailed Monitoring and Simulation of Groundwater Salinity in Response to Extractions in a Coastal Aquifer, the Netherlands

*T. Hendrikx, M. Bierkens, P. de Louw, P. Pauw, G. Oude Essink

Simulating Groundwater Management Scenarios In The Salinized Luy River Aquifer System Under Climate Change

*L. Pham Dieu, D. Cong-Thi, M. PAEPEN, H. Ho Huu, F. NGUYEN, T. Hermans

Drone electromagnetics for groundwater investigations

B. Blanco Arrué, *M. Ronczka, R. Rochlitz, M. Müller-Petke

Thu, 05/06/2025 14:30 - 16:15

Sala d'Actes

Offshore fresh groundwater

Chaired by: Prof. Alicia Wilson (University of South Carolina), Prof. Nils Moosdorf (Leibniz Centre for Tropical Marine Research (ZMT))

Socio-Economic Perspectives On Offshore Freshened Groundwater: Insights From Off-Source Cost Action **Keynote**

*A. Thomas, J. Tschaikowski, C. Bertoni, H. Abdalla Hamid, E. Quiroga Jordan, J. Lofi, K. Schwalenberg, D. Gamboa, M. Giustiniani, H. Wazaz, A. Micallef

Integrated assessment of continental groundwater discharge in coastal crystalline basins

*J. Pino Ibánhez, E. Teira, E. Fernández, G. Méndez-Martínez, E. Barber-Lluch, P. Bernárdez, A. G. Bravo, G. Casas, A. Cobelo-García, R. González-Villanueva, S. Martínez-García, M. Nieto-Cid, C. Rocha, P. Sánchez-Marín, J. Santos-Echeandía, P. Urbieta, X. Álvarez-Salgado

Offshore Freshened Groundwater in The Levant Basin: Different Modes of Active Land-Sea Connectedness Dictate Different Hydrologic Functioning

A. Paldor, C. Bertoni, H. Michael

New Discovery of Offshore Freshened Groundwater off the Coast of South-East Spain

C. Duque, F. Sola, Á. Puga-Bernabéu, F. Lobo, M. Scientific Team

AI-quifer – Determining Offshore Freshened Groundwater Occurrences by the Application of Artificial Intelligence

*L. Haffert, T. Rödiger, M. Jegen, C. Siebert

Characterisation of Submarine Groundwater Discharge in the island of Gozo

*M. Sapiano, A. Cutajar, N. Spiteri, M. Gatt, M. Montebello

Identifying groundwater discharge towards the Mar Menor lagoon (SE Spain) combining geophysical and environmental tracer methods

*E. Morales, M. Manzano, M. Martínez-Segura, P. Martínez-Pagán, J. Gilibert, J. Rodríguez-Puig, V. Rodellas

Bridging Land-Sea to Investigate Saltwater Intrusion and Submarine Groundwater Discharge (Granada, SE Spain): the Meta Project

*J. Galindo-Zaldivar, C. Duque, M. TEAM

Thu, 05/06/2025 16:15 - 16:45

Main Auditorium

Next SWIM location vote

Thu, 05/06/2025 16:45 - 17:15

Vértex Garden

CBT_3 - Coffee Break

PS_Thu - Poster Session

Assessment of Aquifer Salinity Variations in the La Pletera Salt Marsh Area (NE of Catalunya) by Means of ERT

***E. Madaula**, G. Gonzalvo-Henry, M. Zarroca, C. Roqué, A. Menció

Multi-approach Study to Characterize Saltwater Intrusion Dynamics Affecting a Wellfield in a Context of Groundwater-river Exchange

***D. Neyens**

Climate Change Impacts to Coastal Aquifer Salinization by River Boundary Condition: River Neretva Delta

***J. ?arija**, V. Srzi?, I. Aljinovi?

Developing an Integrated Conceptual Model of Salinization Processes for Southwestern Coastal Bangladesh

***J. Zolezzi-López**, E. Muñoz-Vega, M. Shamsudduha, S. Schulz

Hydrogeological Modelling of the Red River and Mekong Deltas

***N. Egli**, L. Schorpp, P. Renard

Electrical Resistivity Tomography for the characterization of the Salt Water Intrusion in the Tordera's Delta (NE of Spain).

***A. Urruela**, A. Sendrós, C. Alonso, M. Himi, L. Rivero

A New Multiscale and Multisensory Approach for Coastal Groundwater Discharge – the SUBGEO Project

***G. Romano**, L. Capozzoli, M. Polemio, M. De Girolamo, G. De Martino, D. Di Gennaro, R. Giannuzzi, D. Patella

Seasonal oscillations and saltwater intrusions in the Roussillon aquifer

***R. Volland**, P. Renard, Y. Caballero

Assessing nearshore submarine groundwater discharge dynamics in contrasting geological settings using amphibious electric resistivity tomography

***J. Tur-Piedra**, M. Diego-Feliu, J. Ledo, M. Munoz-Pinyol, B. Almillategui, F. Willert, P. Queralt, A. Marcuello, V. Rodellas, A. Folch

Groundwater Temperature in Coastal Aquifers: Surficial Heat Sources and Geothermal Heating

***M. García-Gámez**, Á. Blanco-Coronas, C. Duque, M. López-Chicano, M. Calvache, C. Montoro-Paredes

All Things Flowing at the Coast - a Community Effort Proposal

***N. Moosdorf**, A. Breckwoldt

Impact of sea level rise on shallow groundwater in southern Baltic coast (Poland) based on 1D numerical model

***A. GUMU?A-KAW?CKA**, B. JAWORSKA-SZULC, A. SZYMKIEWICZ

Reactive-Transport Modeling of Carbonate Species in Seawater-Inflicted Coastal Aquifers: Implications for Aquifer Hydro-Geochemistry and Coastal CO₂ Sequestration

***S. Ganguly**, Y. Levy, Y. Kiro

Groundwater Modeling to Assess the Potential Impact of a Port Enlargement over a Coastal Wetland (South of Spain)

***C. Montoro-Paredes**, M. Calvache, M. García-Gámez, M. López-Chicano, Á. Blanco-Coronas, M. Rodríguez del Rosario, C. Duque

Increasing Use of Desalination along the Coast of Southern California, USA

***W. Danskin**, K. McPherson

High-resolution hydrodynamics modeling for managing coastal bay

***Y. Chen**, R. PEÑAS-TORRAMILANS, M. BALSELLS F-PEDRERA, M. GRIFOLL, M. ESPINO, M. FERNÁNDEZ

Friday, 06/06/2025

Fri, 06/06/2025 08:30 - 14:30

Main Auditorium

Reg_Thu - Registration

Fri, 06/06/2025 09:00 - 11:00

Main Auditorium

Field and modeling approaches to SGD and SWI

Chaired by: Dr. Joonas Virtasalo (Geological Survey of Finland (GTK)), Phd. Aaron Alorda-Kleinglass (Old Dominion University)

Assessment of Ocean Dynamics on Groundwater Discharge Across Aquifer Type Through Coupled Ocean-Groundwater Models

***J. Jin**, M. Espino, D. Fernández, A. Floch

Visualisation of Groundwater Dynamics at the Land-Sea Interface of the Heterogeneous Coastal Aquifers Using Physical Models

***R. Delwar**, N. Grünenbaum, J. Greskowiak, G. Massmann

Impact of Sea-Level Rise and Tidal Amplitude Variations on Submarine Groundwater Discharge in Coastal Aquifers

***H. Wu**, C. Lu

High-Rate Submarine Groundwater Discharge and Its Interaction With the Freshwater-Seawater Interface in a Coastal Limestone Aquifer

***J. Yasumoto**, O. Tanoue, C. Leong, K. Yasumoto, M. Iijima, T. Hosono, S. Nakaya, R. Shinjo, M. Taniguchi

Significance of submarine groundwater discharge in a semi-enclosed bay of the Baltic Sea

***B. Szymczycha**, M. Böttcher, K. Kuliński, M. Matciak, C. Ehler von Ahn, G. Siedlewicz, K. Pazdro

Coastal Oceanography Processes in a SGD-Affected Area: Analytical Models and Do-It-Yourself Sensors

***M. grifoll**, J. PUIGDEFÀBREGAS, M. MUNOZ- PINYOL, M. Diego-Feliu, A. FOLCH

A Regional-Scale Model for Estimating Fresh Submarine Groundwater Discharge in the Baltic Sea

***A. Vijayan**, B. Miller, L. Zou, Z. Kalantari

Experimental and numerical investigation of DNAPL transport in coastal aquifers

?. ?, C. Lu, A. Werner

Fri, 06/06/2025 11:00 - 11:30

Vértex Garden

CBM_4 - Coffee Break

Fri, 06/06/2025 11:30 - 13:30

Main Auditorium

Geophysical tools and insights on saltwater intrusion processes

Main Organizer: Dr. Marieke Paepen (Ghent University)

Chaired by: Dr. Jean-Christophe Comte (University of Aberdeen), Prof. Alex Marcuello (Universitat de Barcelona)

Combining Seepage Meters and Amphibious Electric Resistivity Tomography to Investigate Pathways of Submarine Groundwater Discharge

Keynote

***M. Munoz-Pinyol**, M. Diego-Feliu, J. Tur-Piedra, M. Trabucchi, A. Alorda-Kleinglass, R. González-Fernández, N. Ferrer, B. Almillategui, A. Sawyer, C. Green-Ruiz, J. Ledo, V. Rodellas, A. Folch

Time-Lapse Airborne EM for Monitoring the Evolution of a Saltwater Aquifer **Keynote**

***A. Signora**, T. Munday, M. Vonk, G. Fiandaca

An Integrated Approach to Investigate Seawater Intrusion Into a Coastal Freshwater Aquifer Using Electrical Resistivity Tomography and Vertical Electrical Sounding: A Case Study in Cape Coast, Ghana

***E. Amisshah**

Characterizing the Salinity Distribution at the Belgian Coastal Zone by Constraining Electrical Resistivity Tomography Inversions Using Cone Penetration Tests

***E. Vrancken**, M. Paepen, T. Hermans

Salt Water Intrusion Processes In The Gulf of Lion Passive Margin Coastal Aquifers from Downhole Geophysics; the Contribution of NMR Profiles.

***P. Pezard**, J. Lofi, E. Le Ber, G. Henry, Y. Caballero, R. Gee

High Resolution Downhole Resistivity Monitoring in Argentona (Catalunya, Spain) during the Gloria Storm (2020).

G. Henry, ***P. Pezard**, A. Folch, J. Carrera

Salwater-Freshwater interface: direct inversion of Airborne EM data in terms of hydraulic parameters

***G. Fiandaca**, J. Chen, F. Schaars

COST Action OFF-SOURCE: Marine Geophysical Exploration of Offshore Freshened Groundwater: Challenges and Innovations

***K. Schwalenberg**, E. Barison, M. Buseti, B. Campo, X. Garcia, M. Giustiniani, T. Hermans, I. Kotsev, F. Lobo, C. Pellegrini, V. Rossi, P. Tarits, G. Vignoli

Fri, 06/06/2025 13:30 - 14:30

Vértex Garden

LB_3 - Lunch Break

Fri, 06/06/2025 14:30 - 15:30

Main Auditorium

Round table: Int.Appr.to bridging the gap between SWI and SGD

On the interaction between SGD and SWI processes and researchers

***J. Carrera**, A. Folch, M. Feliu, V. Rodellas

Fri, 06/06/2025 15:30 - 16:00

Coastal Groundwater Network

Fri, 06/06/2025 16:00 - 16:15

Main Auditorium

CI_Se - Closing Session

Fri, 06/06/2025 16:15 - 16:45

Vértex Garden

CBT_4 - Coffee Break