



Monday, 18 May			
10:00	Opening Session Chaired by: Dr. Manuel Abrunhosa and Prof. Helder I. Chaminé	11:15	Side-Event Address of the APPBG - João Oliveira » Dr. João Oliveira
10:00	Opening session - Manuel Abrunhosa » Dr. Manuel Abrunhosa	11:30	Before the last drop - Viva la Geoethics » Mx. 11ºB - 2018/2019 EBS - Fontes Pereira de Melo
10:15	Address of the IAH President - António Chambel » Prof. Antonio Chambel	11:30	Keynote Session - Theme 1 Chaired by: Dr. Giuseppe Di Capua and Prof. José Teixeira
10:30	Address of the Secretary-General of IAPG - Silvia Peppoloni » Dr. Silvia Peppoloni	11:30	Relational Value as an Argument to Protect Geological and Hydrogeologic Goods » Prof. Alexandra Aragão
10:45	Address of the Representative of ISEP P.Porto - Helder I. Chaminé » Prof. Helder I. Chaminé	12:00	Hommage: in memoriam Professor Partha Sarathi Datta
11:00	Address of IAH - Spanish Chapter: Bartolomé Andreo-Navarro » Prof. Bartolomé Andreo-Navarro	12:00	Hommage: in memoriam Professor Datta » Dr. Manuel Abrunhosa
11:15	Address of the IAH Past President - Manuel Ramón Llamas » Prof. M. Ramón Llamas	12:15	Keynote Session - Theme 1 Chaired by: Dr. Giuseppe Di Capua and Prof. José Teixeira
11:30	Address of the IAH Past President - Ken Howard » Prof. Ken Howard	12:15	Ethical and moral issues relative to groundwater » Prof. Emilio Custodio
11:45	Grupo de Fados do ISEP I: Cidade de Ferro [Iron City] - Porto » Mr. Grupo Fados do ISEP	14:00	Oral Session - Theme 1 Chaired by: Dr. Giuseppe Di Capua and Prof. José Teixeira
11:00	Side-Event Chaired by: Dr. Manuel Abrunhosa and Dr. Ana Isabel Andrade and Prof. Clara Vasconcelos	14:00	Geoethics for Operating in the Human Niche » Dr. Martin Bohle
11:00	Side-Event Address - Clara Vasconcelos » Prof. Clara Vasconcelos	14:15	Cross-cutting role of groundwater in achieving the SDGs and an ethical approach » Dr. Emilia Bocanegra
		14:30	Inclusion of Indigenous Communities in Water Resources Management in The Middle West of Brazil: A Proposal » Dr. Sandra Gabas , Dr. Giancarlo Lastoria, Dr. Denise Uechi



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14:45	Ganga River: A Paradox of Purity and Pollution in India due to Unethical Practice » Dr. Dalchand Jhariya
14:50	Evaluating public opinion on groundwater extraction from public comment submissions and Google Trends » Mr. Simon Gautrey
15:05	Keynote Session - SS3 Chaired by: Ms. Raquel Sousa
15:05	The importance of geoethics in groundwater education: an international perspective » Dr. Tibor Stigter
15:35	Oral Session - SS3 Chaired by: Dr. Tibor Stigter
15:35	Address of the Convenor of the Special Session SS3. Geoethics in Groundwater Education » Dr. Tibor Stigter
15:37	And if the Spring that Provides the Farm with Water Should Run Dry? - A Geoethical Case Applied in Higher Education » Mrs. Alexandra Cardoso , Prof. Nir Orion, Dr. Cristina Calheiros, Prof. Clara Vasconcelos
15:52	Geoethics Calls for Action: An Interactive Module to Communicate Geosciences » Mr. Tiago Ribeiro, Mrs. Alexandra Cardoso , Ms. Joana Silva, Mrs. Dulce Lima, Prof. Clara Vasconcelos
15:57	Training in Groundwater science and technology in Portuguese higher education (2018-2019) » Dr. Ana Isabel Andrade , Dr. Manuel Abrunhosa

16:12	Geoethics in higher education of Hydrogeology » Prof. José Azevedo
16:30	Oral Session - Theme 2 Chaired by: Prof. Rodrigo Lilla Manzione and Prof. José Manuel Marques
16:30	Ethical aspects of water use in the Campo de Cartagena and the associated impacts on the Mar Menor » Ms. María Feliciana Fernández García , Prof. Emilio Custodio, Prof. M. Ramón Llamas
16:45	Spatiality of Ethical Challenges in Use and Management of Groundwater in Coastal Regions, Sri Lanka » Mr. Ashvin Wickramasooriya, Ms. M.M.G.S. Dilini
17:00	Rural water supplies in Galicia » Dr. Acacia Naves , Prof. Javier Samper, Dr. Bruno Pisani
17:15	Assessment of Groundwater Balance and Importance of Geoethical Approach for upper Kabul sub-basin » Mr. Asadullah Farahmand , Mr. M. Salem Hussaini, Mr. Sayed Waliullah Aqili
17:40	Cultural Moment
17:40	Tuna Feminina do ISEP I: Recordar / Remember » Ms. Tuna Feminina do ISEP

Tuesday, 19 May

09:00	Keynote Session - Theme 2 Chaired by: Prof. Rodrigo Lilla Manzione and Prof. José Manuel Marques
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Continued from Tuesday, 19 May

09:00	Water resources management, under climate change pressure in Limpopo National Park buffer zone » Dr. Francesca Andrei, Prof. Maurizio Barbieri, Prof. Paulino Muteto, Dr. Lorenzo Ricolfi, Dr. Giuseppe Sappa, Dr. Stefania Vitale
09:30	Oral Session - Theme 2 Chaired by: Prof. Manuela Simões and Prof. Rodrigo Lilla Manzione
09:30	Water Level Dynamic and Hydro-Ecological Effects of Typical Karst Wetland in Southwest China » <u>Ms. Danni Zhu</u>
09:45	The Role of Temporary Groundwater Control Recharge Systems in Water Conservation » <u>Dr. Stephen Thomas</u> , Mr. James Watson, Mr. Thomas Goodfellow
10:00	Groundwater contribution to alpine ponds recharge in Serra da Estrela Natural Park, Portugal » Mr. Alexandre M. Almeida, Dr. Paula M. Carreira, Prof. José Manuel Marques, <u>Prof. Jorge Espinha Marques</u> , Mrs. Marina Paiva, Dr. Alexandra Carvalho, Dr. Catarina Mansilha
10:05	An Analysis of Spatio-Temporal Variability of Precipitation and Contours of Water Management in the Upper Teesta River Basin, India » <u>Mr. PAWAN KUMAR</u>
10:20	Analysis of phreatic levels in riparian forest and pasture in an agricultural watershed, Santa Catarina, Brazil » <u>Mr. Mateus Melo</u> , Dr. Adilson Pinheiro, Mr. Edson Torres, Dr. Gustavo Antonio Piazza, Dr. Vander Kaufmann
10:25	Keynote Session - SS5 Chaired by: Dr. Patrícia Ferraz de Matos

10:25	Groundwater-fed Plot-and-Berm Agroecosystems in Aeolian Sand in the Mediterranean basin » <u>Dr. Joel Roskin</u> , Dr. Itamar Taxel
10:55	Oral Session - SS5 Chaired by: Dr. Patrícia Ferraz de Matos
10:55	Address of the Convenor of the Special Session SS5. Groundwater: geological, legal, social, and ethical challenges of a unique natural resource - in memoriam Professor Luís Ribeiro (IST U.Lisbon) » <u>Dr. Patrícia Ferraz de Matos</u>
11:10	Music Inspired in Groundwater and other Components of the Hydrological Cycle » <u>Prof. Luís Ribeiro</u>
11:25	Revisiting Ancestral Groundwater Techniques as Nature Based Solutions for Managing Water » <u>Prof. Luís Ribeiro</u>
11:40	Ancestral techniques of Water Sowing and Harvesting in Ibero-America: examples of hydrogeoethical systems » Dr. Sergio Martos Rosillo, Dr. Alfredo Durán, Dr. Milka Castro, Dr. Jorge Julián Vélez, Dr. Gricelda Herrera, Dr. José María Martín-Civantes, Dr. Luciano Mateos, Dr. Juan José Durán, Dr. Jorge Jódar, Dr. Carlos Gutiérrez, Dr. Rosa María Hermoza Espejú, Mr. Fluquer Peña
11:55	Groundwater vulnerability mapping and ancestral systems of water-galleries (Porto urban area, NW Portugal): a design on natural-base solutions » <u>Dr. Liliana Freitas</u> , Prof. Maria José Afonso, Prof. Nicole Vareta, Prof. Alcides Pereira, Prof. José Martins Carvalho, Prof. Helder I. Chaminé
11:55	Cultural Moment
11:55	Tuna Feminina do ISEP III: Instrumental » <u>Ms. Tuna Feminina do ISEP</u>



Continued from Tuesday, 19 May

14:00	Keynote Session - SS1 Chaired by: Ms. Raquel Sousa	15:45 Public perceptions and attitudes towards groundwater and climate change. The case of the Barbate river basin » <u>Ms. Mercedes Vélez Nicolás</u> , Prof. Santiago García-López, Ms. María Jesús Pachecho-Orellana, Prof. Verónica Ruiz-Ortiz, Mr. Alex Fernandez-Poulussen
14:00	Socio-Hydrogeology and Geoethics. State of the Art and Future Challenges » <u>Prof. Viviana Re</u>	16:00 Ethical issues of intensive use of groundwater in stressed Spanish aquifers » <u>Prof. Emilio Custodio</u>
14:30	Oral Session - SS1 Chaired by: Prof. Viviana Re	16:15 Public Geospatial Data for Groundwater Governance: The Brazilian Case » Prof. Rodrigo Lilla Manzione, <u>Mr. Cesar de Oliveira Ferreira Silva</u>
14:30	Address of the Convenor of the Special Session SS1. Socio-Hydrogeology to Support Ethical Groundwater Management » <u>Prof. Viviana Re</u>	16:30 An initiative for protection of the transnational Guarani Aquifer System based on Geoethics » <u>Prof. Celso Dal Ré Carneiro</u> , Dr. Luciana Cordeiro de Souza-Fernandes
14:45	Responsible Water Scientists: bringing socio-hydrogeology in our daily life » <u>Prof. Viviana Re</u> , <u>Ms. Raquel Sousa</u> , Dr. Vincent Post, Ms. Chiara Tringali	16:45 Geoelectrical mapping to identify groundwater ecosystem services conflicts in a Brazilian municipality » <u>Mr. João Guerrero</u> , Dr. Alberto Gomes, Dr. José Augusto di Lollo, Dr. Reinaldo Lorandi, Dr. Luiz Moschini
15:00	Gender-Responsive Indicators to Close the Sex-Disaggregated Water Data Gap » <u>Ms. Michela Miletto</u> , Mr. Laurens Thuy, Ms. Paola Piccione	16:50 Current Status and Future of Groundwater Management in Japan » <u>Prof. Makoto Nishigaki</u>
15:15	PANI CHECK - THE SISTERHOOD OF WATER A transdisciplinary documentary film project. » <u>Ms. Theresa Frommen</u> , Ms. Katalin Ambrus	17:05 Oral Session - Theme 3 Chaired by: Prof. Maurizio Barbieri and Prof. Rosário Carvalho
15:30	PANI DOCTORS – JOIN THE SISTERHOOD OF WATER A participatory film project and an educational musical. » <u>Ms. Theresa Frommen</u> , Ms. Katalin Ambrus	17:05 Ethical issues on the use of Citizen Science approaches » <u>Prof. Antonio Dinis Ferreira</u> , Mr. Eduardo Barai, Mr. Inês Amorim Leitão, Mr. António Massena Abrantes Ferreira, Dr. Anne-Karine Boulet, Dr. Paulo Pereira, Dr. Maria de Fátima Oliveira, Dr. Carla Ferreira
15:45	Pani Doctors - Join the Sisterhood of Water » <u>Ms. Theresa Frommen</u> , Ms. Katalin Ambrus	17:20 Expedition Piracicaba - for a resilient and sustainable hydro-future of a watershed » <u>Dr. José Augusto Gonçalves</u> , <u>Dr. Paulo Rodrigues</u> , Mrs. Amanda Gonçalves, Mr. Geraldo Gonçalves
15:45	Oral Session - Theme 1 Chaired by: Prof. José Teixeira and Dr. Giuseppe Di Capua	



Continued from Tuesday, 19 May

17:35	Teaching geoethics and groundwater sustainability through a project-based approach » <u>Mrs. Marta Paz</u> , Mrs. Maria de Lurdes Abrunhosa, Prof. Clara Vasconcelos
17:40	Exploring Groundwater Management in La Galera and Tortosa Aquifers: A Geoethics Approach » <u>Dr. Francesc Bellaibi</u> , Dr. Alvaro Arasa
17:55	During and post COVID -19: challenges in water sector and ethical issues » <u>Dr. Gopal Krishan</u> , Dr. Umesh Kulshrestha

Wednesday, 20 May

09:00	Keynote Session - Theme 3 Chaired by: Prof. Maurizio Barbieri and Prof. Rosário Carvalho
09:00	Over fifty years of hydrogeological practice and geoethics: an intergenerational view of a changing world » <u>Prof. José Martins Carvalho</u> , Prof. Helder I. Chaminé
09:30	Oral Session - Theme 3 Chaired by: Prof. Susana Neto and Prof. Maurizio Barbieri
09:30	Teaching groundwater resources and geoethics in Portuguese secondary schools » <u>Prof. Gina P. Correia</u> , Prof. Hélder Pereira
09:40	Engaging Communities and Extending the Lives of Water Systems with Technology » Ms. Kathryn Bergmann, Ms. Sarah Evans, <u>Ms. Mary Hingst</u>

09:52	A regional initiative for the efficient transfer of groundwater knowledge between experts and stakeholders » <u>Prof. Alain Rouleau</u> , Prof. Julien Walter, Mrs. Mélanie Lambert, Prof. Romain Chesnaux, Dr. Anouck Ferroud, Mrs. Laura-Pier Perron-Desmeules
10:04	Groundwater contamination and extreme weather events: perception-based clusters of Irish well users » <u>Mr. Simon Mooney</u> , Dr. Paul Hynds, Dr. Jean O'Dwyer
10:17	Environmental isotopes as tools in sustainable groundwater management: essential or dispensable? » <u>Prof. José Manuel Marques</u> , Dr. Paula M. Carreira
10:30	Keynote Session - SS2 Chaired by: Dr. Liliana Freitas
10:30	Groundwater mismanagement: impacts on society due to a response lacking geoethics in Mexico. » <u>Dr. José Joel Carrillo Rivera</u> , Dr. Samira Ouysse, Dr. Gonzalo Hatch
11:00	Oral Session - SS2 Chaired by: Dr. José Joel Carrillo Rivera
11:00	Address of the Convenor of the Special Session SS2. Ethical issues in neglecting groundwater functioning, a costly lack of respect in decision making » <u>Dr. José Joel Carrillo Rivera</u>
11:15	Science and policy: how ethical is groundwater management in Mexico (1948-2018) » <u>Dr. Gonzalo Hatch</u> , Dr. José Joel Carrillo Rivera, Dr. Samuel Schmidt
11:30	Impacts of Unethical Practices on Groundwater Quality and Quantity in Raipur City, Chhattisgarh, India » Dr. Rubia Khan, <u>Dr. Dalchand Jhariya</u> , Dr. Yadao Kumar Mawale, Prof. Bhojram Parate



Continued from **Wednesday, 20 May**

11:35	What is the way forward to protect the ecological values of groundwater? » Dr. Elisabet Wehncke
11:50	Ethical dilemmas behind groundwater sampling, laboratory testing processes and data analysis outcomes » Dr. Samira Ouyse , Dr. José Joel Carrillo Rivera
11:50	Oral Session - Theme 1 Chaired by: Prof. Rute Saraiva and Dr. Giuseppe Di Capua
11:50	How im(moral) is the "Nimby" stand? Elements into the Ethics of "environmental" conflicts. » Prof. José Rodrigues dos Santos
12:05	Recharging groundwater security by ensuring polycentric governance and social learning strategies » Dr. Maria Paula Mendes , Dr. Barreiras Nuno
12:20	Sharing knowledge and data about groundwater in EU: the EIGR metadata inventory of the KINDRA project » Prof. Marco Petitta , Mr. Balazs Bodo, Mrs. Adrienn Cseko, Mrs. Isabel Fernandez, Mr. Clint Garcia Alibrand, Dr. Mercedes Garcia Padilla, Prof. Eva Hartai, Dr. Klaus Hinsby, Mrs. Viktoria Mikita, Prof. Peter Szucs, Dr. Peter van der Keur
12:35	Groundwater conjunctive use » Prof. Andrés Sahuquillo Herráiz
12:50	Enforcement of groundwater drilling & abstraction sites: Beyond the backyard » Mr. Jeroen November , Mrs. Rita Van Ham, Mrs. Sigrid Raedschelders
14:00	Keynote Session - Theme 2 Chaired by: Prof. Rodrigo Lilla Manzione and Prof. José Manuel Marques

14:00	Evaluation of Protective Capacity of Unconfined Aquifers Using Geoelectrics: A Case Study from North India for Supporting Sound Geoethics » Prof. Dinesh Chandra Singhal
14:30	Oral Session - Theme 2 Chaired by: Prof. Manuela Simões and Prof. Rodrigo Lilla Manzione
14:30	Variation of salinity levels in water bodies in and around Weligama bay due to effect of hydrological processes » Mr. Ashvin Wickramasooriya
14:45	Variation of Victoria reservoir water level and its effect on fluctuation of groundwater level closer to the reservoir » Mr. Ashvin Wickramasooriya , Mr. Nirmala Rajapaksha
15:00	Modeling short-term ground water level fluctuations using multi variate adaptive regression spline » Dr. Ozgur Kisi , Dr. Hadi Sanikhani
15:15	For a Better Understanding of Recharge and Salinization Mechanism of a Cenomanian-Turonian Aquifer » Mr. Otman El Mountassir , Prof. Mohammed Bahir, Prof. Driss Ouazar, Dr. Paula M. Carreira
15:30	Salinization as groundwater contamination in Estarreja shallow aquifer, Aveiro (Portugal) » Ms. Carolina Marques , Prof. Rosário Carvalho, Prof. Eduardo Ferreira da Silva
15:45	Oral Session - SS5 Chaired by: Dr. Patrícia Ferraz de Matos
15:45	Address of the Convenor of the Special Session SS5. Groundwater: geological, legal, social, and ethical challenges of a unique natural resource - in memoriam Professor Luís Ribeiro (IST U.Lisbon) » Dr. Patrícia Ferraz de Matos



Continued from **Wednesday, 20 May**

16:00	Rethinking the role of science in society? Groundwater science, critical reflections and learnt lessons. » Prof. Sofia Bento, Dr. Teresa Melo
16:15	The International Agreement of the Guarani Aquifer System: a transboundary aquifer » Prof. Luciana Cordeiro
16:20	Role of groundwater as a climate change adaptation strategy in dry zone farming systems, Sri Lanka » Ms. M.M.G.S. Dilini, Dr. S. Pathmarajah, Prof. E.R.N. Gunawardena
16:35	Safeguarding of Groundwater Abstractions by Enforcement of Source Protection Zones » Mrs. Jane Dottridge, Dr. Aidan Foley, Mr. Nick Walters
16:50	Sustainability and Management of the Menzel Habib Aquifer System, Southeastern Tunisia » Dr. Oussama Dhaoui, Prof. Isabel Margarida Horta Ribeiro Antunes, Prof. Belgacem Agoubi
17:05	Pani Check - The Sisterhood of Water Chaired by: Dr. Manuel Abrunhosa
17:05	Pani Check - The Sisterhood of Water » Ms. Theresa Frommen
17:50	Cultural Moment
17:50	Tuna Académica do ISEP: Dance » Mr. Tuna Académica do ISEP

Thursday, 21 May

09:00	Keynote Session - SS3 Chaired by: Dr. Tibor Stigler
09:00	The role of International Cooperation in sustainable Groundwater Development » Ms. Raquel Sousa, Dr. Fabio Antonio Fussi
09:30	Oral Session - Theme 2 Chaired by: Prof. José Manuel Marques and Prof. Rodrigo Lilla Manzione
09:30	How to control groundwater quality degradation in coastal zones using MAR optimized by GALDIT Vulnerability Assessment to Saltwater Intrusion and GABA-IFI models » Dr. João Paulo Lobo-Ferreira
09:45	Driving Factors of Karst Wetland Degradation from the Perspective of Hydrogeology: A Case Study in SW China » Dr. Liankai Zhang, Prof. Sheng-Zhang Zou, Dr. Lina Shen, Ms. Yi Zhao
10:00	Groundwater Vulnerability Assessment in the Naturtejo UNESCO Global Geopark, Portugal » Prof. Teresa Albuquerque, Dr. Natália Roque, Dr. Joana Rodrigues, Prof. Isabel Margarida Horta Ribeiro Antunes, Prof. Catarina Silva
10:15	Concentration of Chemical Species in Piezometers in An Agricultural Watershed, Santa Catarina, Southern Brazil » Mr. Mateus Melo, Dr. Adilson Pinheiro, Mr. Edson Torres, Dr. Gustavo Antonio Piazza, Dr. Vander Kaufmann
10:30	Effect of subsurface geological conditions on variation of groundwater quality in part of Kurunegala, Sri Lanka » Mr. Ashvin Wickramasooriya, Ms. Stella Gunarathne, Ms. Surangi Ekanayaka



Continued from Thursday, 21 May

10:30 Oral Session - Theme 2

Chaired by: Prof. Tiago Abreu and Prof. Rodrigo Lilla Manzione

10:30 Sustainability Resource of The Hydrogeosphere to Anthropogenic Impacts with Urbanization

» [Dr. Viacheslav legupov](#), Dr. Genadiy Strizhelchik

10:45 Tiber Middle Valley: hydraulic risk management and urban development of the areas

» [Dr. Giuseppe Sappa](#), Dr. Flavia Ferranti, Dr. Stefania VITALE

11:00 Risk Assessment for Groundwater: A Case Study from a Municipal Landfill In Southern Poland

» [Dr. Dominika Dabrowska](#), Mr. Wojciech Rykala

11:15 Effects of Nanoplastics, Lithium and Their Mixtures on Corbicula fluminea: Preliminary Findings

» Ms. Rafaela Costa, Dr. Patrícia Oliveira, [Prof. Lúcia Guilhermino](#)

11:20 Reuse of treated effluents in a food processing industry

» [Mr. Árias Lima](#), Prof. Tiago Abreu, Prof. Sónia Figueiredo

11:35 Diagnosis of a Conventional Water Treatment Station: Qualitative Analysis of Treatment Capacity

» [Ms. Anne Louise de Melo Dores](#), Mr. Allan Thiago de Oliveira, Prof. Felipe Corrêa Veloso Dos Santos

11:50 Combination of adsorption in natural clays and photocatalytic processes for winery wastewater treatment

» [Dr. Nuno Filipe Alves Jorge](#), Dr. Ana Rita Teixeira, Dr. Marco Sousa Lucas, Dr. José Alcides Peres

11:55 Keynote Session - SS5

Chaired by: Dr. Patrícia Ferraz de Matos

11:55 Protection and management of groundwater: an invisible vital resource

» [Prof. Carlos Almeida](#)

12:25 Cultural Moment

12:25 Tuna Feminina do ISEP II: Silenciosamente / Silently

» [Ms. Tuna Feminina do ISEP](#)

14:00 Keynote Session - SS4

Chaired by: Dr. Rui Hugman

14:00 Geoethical issues around water-security for Cape Town and groundwater resilience in uncertain circumstances

» [Dr. Christopher Hartnady](#), Ms. Rowena Hay

14:30 Oral Session - SS4

Chaired by: Dr. Rui Hugman

14:30 Address of the Convenor of the Special Session SS4. Geoethics of decision making under uncertainty

» [Dr. Rui Hugman](#)

14:45 Cycles of Uncertainty: An Exploration of 40 Years of The Atlantis Managed Aquifer Recharge Scheme Through a Geoethical Lens

» [Mr. Luke Towers](#), Dr. Rui Hugman

15:00 Geoethical Groundwater Modelling: Aligning Decision-Support Models with the Scientific Method

» [Dr. Rui Hugman](#), Dr. John Doherty

15:15 Geoethics of Bulk Groundwater Abstraction in An Ecologically Sensitive Area: Steenbras Wellfield (Cape Town)

» [Mr. Dylan Blake](#), Dr. Christopher Hartnady, Ms. Rowena Hay, Dr. Cornelius Riemann



Continued from Thursday, 21 May

15:30	Long-term planning during emergency response -a no-regrets approach and long-term vision for the development of the Cape Flats Aquifer (Cape Town) » Mr. David McGibbon , Dr. Rui Hugman, Mr. Luke Towers, Dr. Cornelius Riemann, Ms. Rowena Hay, Dr. Christopher Hartnady
15:45	The ethics of Groundwater Governance: Evaluating a Methodology in Philippi in Cape Town » Dr. Leanne Seeliger
16:00	Decision-making in groundwater management: where artificial intelligence can really lead geoscientists? » Prof. Rodrigo Lilla Manzione , Dr. Mariana Matulovic
16:15	The Geoethics of Using Geospatial Big Data in Water Governance » Mr. Cesar de Oliveira Ferreira Silva , Dr. Mariana Matulovic, Prof. Rodrigo Lilla Manzione
16:30	Oral Session - Theme 2 Chaired by: Prof. José Manuel Marques and Prof. Rodrigo Lilla Manzione
16:30	Nitrate pollution in groundwater of the Ouazi basin: case of Essaouira (Southwestern Morocco) » Mr. Otman El Mountassir , Prof. Mohammed Bahir, Prof. Driss Ouazar, Dr. Paula M. Carreira
16:45	Hydrochemical analysis and evaluation of groundwater quality in Ouazi basin (Essaouira, Morocco) » Prof. Mohammed Bahir , Mr. Otman El Mountassir , Prof. Driss Ouazar, Dr. Paula M. Carreira
17:00	Use of WQI and isotopes to assess groundwater quality of Coastal aquifers (Essaouira, Morocco) » Prof. Mohammed Bahir , Mr. Otman El Mountassir , Prof. Driss Ouazar, Dr. Paula M. Carreira

17:15	Tritium and carbon-14 content as a diagnostic approach in groundwater resources management and protection » Dr. Paula M. Carreira , Mrs. Dina Nunes, Prof. José Manuel Marques, Prof. Rosário Carvalho, Mr. Manuel Antunes da Silva, Dr. Augusto Costa, Dr. António Monge Soares
17:30	Impacts of irrigated cultures (paddy-rice) in groundwater quality in Tejo alluvial river basin, Portugal » Mr. David Ferreira , Prof. Manuela Simões, Mrs. Fernanda Pessoa, Mr. Fernando Reboredo, Mrs. Ana Almeida, Mr. Fernando Lidon
17:45	Geoethics from Geophysical Exploration to a Glass of Mineral Water, including Iberian Thermal Medicine » Ms. Carla Rocha
18:00	Oral Session - SS1 Chaired by: Prof. Viviana Re
18:00	Address of the Convenor of the Special Session SS1. Socio-Hydrogeology to Support Ethical Groundwater Management » Prof. Viviana Re
18:15	Transformative Art applied to the social hydrogeology of the Cape Flats, South Africa » Ms. Rowena Hay , Ms. Anni Snyman, Dr. Christopher Hartnady
18:30	Multisector collaborative groundwater-surface water modelling approach to improve resilience to hydrological extremes in the Limpopo River Basin » Dr. Syed Md Touhidul Mustafa , Prof. Anne Van Loon, Dr. Luis Artur, Dr. Zareen Bharucha, Dr. Annatoria Chinyama, Mr. Farisse Chirindja, Prof. Rosie Day, Prof. Fulvio Franchi, Prof. Josie Geris, Mr. Stephen Hussey, Prof. Edward Nesamvuni, Mr. Alcino Nhacume, Mr. Alfred Petros, Ms. Hanne Roden, Dr. Melanie Rohse, Dr. Sithabile Tirivarombo, Prof. Jean-Christophe Comte
18:45	Socio-hydrological analysis protocol adaptation to NW São Paulo State, Brazil » Mrs. Adriana Borges, Prof. Rodrigo Lilla Manzione , Prof. Viviana Re



Continued from Thursday, 21 May

18:50	A Comprehensive, up-to-date Evidence Base to Inform Public, Planning and Policy for Australia's Great Artesian Basin » Dr. Carlos Miraldo Ordens , Prof. Neil McIntyre, Prof. Jim Underschultz, Prof. Phil Hayes
19:05	Private groundwater supply management as a response to flooding events: perceptions of Irish well owners » Ms. Luisa A de Andrade , Dr. Cillian P McDowell, Dr. Jean O'Dwyer, Dr. Eoin O'Neill, Mr. Simon Mooney, Dr. Paul D Hynds
19:20	Cultural Moment
19:20	Tuna Académica do ISEP: Serenata ao Luar / Moonlight Serenade » Mr. Tuna Académica do ISEP

Friday, 22 May

09:00	Keynote Session - Theme 1 Chaired by: Dr. Giuseppe Di Capua and Prof. José Teixeira
09:00	Some Basic Considerations on The Applied Ethics to Water Resources Management » Ms. María Feliciana Fernández García , Prof. M. Ramón Llamas, Prof. Emilio Custodio, Prof. Javier Neila
09:30	Oral Session - Theme 1 Chaired by: Prof. Alexandra Aragão and Dr. Giuseppe Di Capua
09:30	On the relevance of environmental law evolution as a fundamental pillar of the European Union. » Prof. Antonio Dinis Ferreira

09:45	Geoethics in the Design and Implementation of Temporary Groundwater Control Systems » Mr. James Watson , Dr. Stephen Thomas
10:00	Remote Sensing for irrigation water use control. The case of the Benalup aquifer (Spain) » Mr. Alex Fernandez-Poulussen , Ms. Mercedes Vélez Nicolás , Prof. Verónica Ruiz-Ortíz, Ms. María Jesús Pacheco-Orellana, Prof. Santiago García-López
10:15	Considerations about wastewater reuse in areas subjected to strong pressures in the South of Spain » Mr. José Manuel Nieto López , Prof. Matías Mudarra Martínez, Prof. Bartolomé Andreo-Navarro
10:30	Stakeholder view of efficient risk communication in contaminated sites » Mr. Uilians Oliveira , Dr. Julians Freitas, Dr. Rosângela Costa
10:35	Urban planning and aquifer management using recession curves method. » Dr. Andre Celligoi , Ms. Giselly Peterlini
10:40	Keynote Session - Theme 1 Chaired by: Dr. Giuseppe Di Capua and Prof. José Teixeira
10:40	The Precautionary Principle and Groundwater » Prof. John Cherry , Prof. Ian Stewart
11:10	Closing Ceremony Chaired by: Dr. Manuel Abrunhosa and Prof. Bartolomé Andreo-Navarro
11:10	Closing ceremony - Manuel Abrunhosa » Dr. Manuel Abrunhosa
11:30	Grupo de Fados do ISEP II: Balada de Despedida / Farewell Ballad » Mr. Grupo Fados do ISEP