EUROPEAN WATER RESOURCES ASSOCIATION

12th World Congress of EWRA

on Water Resources and Environment

27 June - 1 July 2023, Thessaloniki, Greece

AUTh Research Dissemination Center (KEDEA)

"Managing Water-Energy-Land-Food under Climatic, Environmental and Social Instability"

CONGRESS PROGRAMME

Principal Organiser
Aristotle University of Thessaloniki
Faculty of Engineering
School of Rural and Surveying Engineering

Co-Organiser
Technical Chamber of Greece
Section of Central Macedonia

Under the auspices of:
Hellenic Republic
Ministry of Climate Crisis and Civil Protection

http://ewra2023.ewra.net

12th WORLD CONGRESS
on Water Resources and Environment
"Managing Water-Energy-Land-Food under Climatic, Environmental and Social Instability"

Preliminary Detailed Congress Programme

Tuesday, 27 June 2023

15:00-18:30	Registration

	Auditorium I
16:00-16:30	Congress Opening *Moderators:* *A. Loukas (Chair of EWRA2023) - G. Tsakiris (President of EWRA)*
16:30-17:30	Inaugural Speeches
17:30-18:30	**Water and the Question of Sustainability and/or Growth** Keynote Speaker: Angelos Nikolaos Findikakis *Bechtel Corp./Stanford University, U.S.A.*

18:30-20:30	Ice Breaker – Cocktail Party

Detailed Congress Programme

Wednesday, 28 June 2023

	Auditorium I		
09:00-10:00	**Flood management challenges in the framework of the SDG 13** Keynote Speaker: María del Carmen Llasat Botija *University of Barcelona, Spain*		
	Auditorium I	**Auditorium II**	**Auditorium III**
	Conference I: Session I.1 *Moderators:* *R. Maia & V. Bellos*	Conference VI: Session VI.1 *Moderators:* *A. Panagopoulos & A. Pagano*	Conference III: Session III.1 *Moderators:* *H. Kim & I. Kagalou*
10:00-10:15	Evaluation of climate change impacts on the hydrometeorological variables of the Ceira river basin, in Portugal [0102] *M. Costa, J. Mendes, R. Maia*	Stakeholders' perceptions on water-ecosystem-food nexus challenges in a Mediterranean rural agricultural region [0122] *A. Panagopoulos, D. Malamataris, A. Chatzi, K. Babakos, E. Hatzigiannakis, V. Pisinaras*	Environmental Assessment of Nif Creek in Terms of Microplastics: A Mathematical Modeling Approach [0105] *Y. Kazanci, O. Gündüz, N. Baycan*
10:15-10:30	Cost-Benefit Analysis and Prescriptive Decision Tree Model for Planning Flood Risk Mitigation Measures [0076] *J. Napolitano, M. Di Francesco, G.M. Sechi*	Climate risk assessment for the food system in Pinios River basin, Greece [0158] *C. Papadaskalopoulou, D. Tassopoulos, M. Antoniadou*	Residues of polycyclic aromatic hydrocarbons (PAHs) in waters of the Ili-Balkhash Basin, arid Central Asia [0132] *B. Shen, J. Wu*

10:30-10:45	The potential of nowcasting floods at street-level detail [0204] *V. Bellos, C. Costanzo, J. Kalogiros, P. Costabile*	A participatory approach for water-energy-food nexus analysis and management: the Isonzo-Soča river basin [0139] *V.R. Coletta, A. Imbò, A. Pagano, F. Lombardo, F. Zaffanella, M. Ferri, U. Fratino, R. Giordano*	Sustainable Decentralized Domestic Wastewater Treatment Unit Using Hybrid Treatment System [0198] *M.K. Younes, A.S. Alshdiefat, I. Al-Smadi*
10:45-11:00	Quantifying uncertainty in future runoff estimation based on SSP scenarios [0067] *J.H. Kim, S.T. Chae, J.Y. Song, Y.H. Song, E.S. Chung*	The Remote Sensing-based Agricultural Water Accounting and Footprint (RS-AWAF) for different river basins and crop management conditions [0175] *J. Garrido-Rubio, J. González-Piqueras, A. Ossan, A. Calera*	Estimating Water Quality Index of Effluent Water with Artificial Neural Network [0174] *H.T. Gültas, Ç. Coşkun Dilcan, D.D. Köksal, Y. Ahi*
11:00-11:15	Controls of preferential flow along hillslopes: a case study in a small forested Mediterranean catchment [0200] *K. Kaffas, M. Verdone, F.S. Manca di Villahermosa, A. Dani, J. Klaus, C. Segura, M. Macchioli Grande, C. Massari, D. Penna*	Strengthening Water-Food-Ecosystem Nexus Management through Learning and Action Alliances: Insights from REXUS and LENSES Projects [0185] *B.Willaarts, R. Giordano, I. Portoghese, A. Pagano, M. Bea, E. López-Moya*	Evaluation of Microplastic Pollution from Treated Wastewaters in Terrestrial Inland Waters: A Case Study from Nif River [0137] *N. Baycan, N. Alyürük, N. Kara, C. Alpergün, Y. Kazancı, O. Gündüz*
11:15-11:30	Assessing the impacts of potential climate change on watershed *hydrologic response using FDCs* [0075] *A. Manekar, M. Ramadas*	Crop suitability projections in Pinios Region [0157] *J.M. Galve, J. Gonzalez-Piqueras, J. Garrido, M. Llanos López, E. Henao, Ch. Papadaskalopoulou, M. Antoniadou, D. Tassopoulos*	Architecting Fe^0/Fe_3C with Fe_3O_4 redox sites for electrochemical detection of 4-nitrophenol in environmental water [0026] *A.F. Baye, H. Kim*
	The presenting author is underlined	Each presentation will be followed by a 3-minute discussion	

11:30-12:00	Coffee break

	Conference I: Session I.2 *Moderators:* *M.M. Portela & M. Neves*	Conference VI: Session VI.2 *Moderators:* *G. Bottaro & J. González Piqueras*	Conference III: Session II.2 *Moderators:* *V.G. Ioannidou & K. Davididou*
12:00-12:15	A novel flow-based multi-model ensemble for runoff simulation using CMIP6 GCMs [0036] *S.T. Chae, E.S. Chung, J.H. Kim*	The REXUS project: from nexus thinking to nexus doing [0187] *J. González-Piqueras, A. Osann*	Evaluating the metal removal efficiency of coal mine water treatment schemes across the UK [0190] *O. Okeleji, V.G. Ioannidou*
12:15-12:30	Generalised Increasing Frequency and Intensity of Tmax Heatwaves in Portugal in the Last Four Decades (1980-2021) [0070] *L.A. Espinosa, M.M. Portela*	The use of Nature-Based Solutions to support sustainable Water-Ecosystems-Food NEXUS management: the LENSES approach [0155] *S. Vanino, A. Di Fonzo, V. Baratella, F. Pucci, N. Nikolaidis, M. Bea, A. Pagano, R. Giordano, S. Fabiani*	Treatment of table olive processing wastewater by means of electrocoagulation: effect of key operating parameters [0156] *K. Davididou, A.G. Kapagiannidis, D. Gkelezis, A. Chatzimpaliotis, E. Amanatidou*
12:30-12:45	Links between GRACE water storage and NAO-EA-SCAND climate patterns in Iberia [0136] *M.C. Neves, R.G.M. Neves*	Unravelling the complexity of water-ecosystems-food nexus through integrated modelling: the Doñana case study in SW Spain [0166] *C. Panciera, A. Pagano, R. Giordano, I. Portoghese, P. Vergine, M. Bea, M. Najar, M.C. Gunacti, G. Onusluel Gul*	Origins of water mineralization in a coastal area: The case of Annaba-Echatt-El Hadjar region. (N.E. Algerian) [0051] *L. Djabri, H. Bouguerre, Ch.E. Fehdi, S. Bouhsina, N. Boughuerira, H. Chaffai, A. Hani*
12:45-13:00	Climate Change Impact on Reservoir Inflows Using Arc-SWAT Model [0151] *M.M. Mushtaq, M.U. Rashid, M. Zia, A.N. Nadeem, T. Ashfaq, R. Ahmad*	Fuzzy cognitive mapping of stakeholders' perception of water resources management [0060] *M.C. Gunacti, C.P. Cetinkaya, A. Gul, G. Onusluel Gul, F. Barbaros*	Wastewater recycling for industrial applications using membrane technology; case study, Bandar Abbas wastewater treatment [0037] *S. Shojaie, V. Alipour, S. Binaei*
13:00-13:15	Implementation of nature-based solutions (NBS) for flood protection in Naxos Island [0063] *S.M Kapiris, A.P. Theochari, E. Baltas*	Socioeconomic assessment of Nature-based Solutions to support Water-Energy-Food-Environment Nexus challenges: an ecosystem-based approach [0111] *G. Bottaro, C. Righetti, M. Masiero, D. Pettenella*	Evaluation of human health (neurodegenerative) risks in rice cultivation based on heavy metal and pesticide load in water [0146] *F. Dökmen, Y. Ahi, T.T. Dündar, İ. Doğan, Z. Vryzas*

13:15-13:30	Temporal variability of annual daily extreme minimum flows in southern Quebec (1930-2020) [0030] *A.A. Assani*	Evaluating Migration effects in Greece through a Water, Energy, and Food Nexus approach [0100] *K. Pappas, C.S. Hamie, B. Daher, S. Williams, T. Rocabado-Apuri*	Optimizing the wastewater treatment method for industrial use: a case study of Bandar Abbas city [0173] *Sh. Shojaie, S.A. Sajadi, M. Mollaei, H. Amiri*
	The presenting author is underlined	Each presentation will be followed by a 3-minute discussion	

13:30-15:30	Light lunch

	Conference XI *Moderators:* *L. Garrote & M. Spiliotis*	Conference VI: Session VI.3 *Moderators:* *E. Baltas & K. Pappas*	Conference VIII *Moderators:* *B. Bonaccorso & N. Bougherira*
15:30-15:45	Robustness and effectiveness of Mediterranean drought regulatory framework [0182] *A. Iglesias, A. Sordo-Ward, P. Bianucci, L. Garrote*	The role of hydrogen in the storage of renewable energy sources for small non-interconnected islands [0042] *M. Bertsiou, E. Baltas*	Water Resources Management Scenarios under Climate Change in the Mediterranean Almyros Basin, in Greece [0029] *A. Lyra, A. Loukas*
15:45-16:00	Water resources in England & Wales: the rise again of national planning [0045] *A. Leonard, J. Amezaga, R. Blackwell, E. Lewis, C. Kilsby*	The use of non-conventional water resources for agricultural irrigation in the Segura basin in Spain [0038] *C. Villacorta, I. Blanco, A. Gómez, P. Esteve*	Laboratory methods for estimating the hydraulic properties of undisturbed soil samples [0074] *E. Chrysanthopoulos, C. Pouliaris, K. Markantonis, I. Tsirogiannis, A. Kallioras*
16:00-16:15	Determination of criteria's weights via IFWA operator and DEMATEL [0008] *T. Bakas, C. Papadopoulos, D. Latinopoulos, M. Spiliotis, I. Kagalou, B. Papadopoulos*	A Novel Methodology to Predict the Thermal Powerplants' Water Consumption in the context of Water-Electricity-Climate Nexus [0056] *C. Coskun Dilcan, M. Aydinalp Koksal*	Groundwater resources hydrochemical evaluation in Ooeides Aquifer System, NE Greece [0018] *A. Adamidis, A. Kallioras, I. Gkiougkis, P. Angelidis, F.-K. Pliakas*
16:15-16:30	SIGRIAN and DANIA to promote measurement of agriculture water use [0062] *V. Manganiello, M. Ferrigno*	Development and Implementation of a HRES in Leros Island [0178] *S. Skroufouta, A. Lemonis, E. Baltas*	Hydrological Modelling of a fractured volcanic aquifer for understanding the role of climate and anthropic uses of water resources on the natural system [0170]

			M.Silipigni, I. Borzì, C. Di Salvo, E. Preziosi, B. Bonaccorso
16:30-16:45	Impact of the Covid-19 on water poverty in Alicante, case study [0047] *R. Abad*	Discourse over the sustainability of irrigation with desalinated water in light of the water-energy-food nexus [0048] *B. Zolghadr-Asli, N. McIntyre, S. Djordjevic, R. Farmani, L. Pagliero, D. Aitken*	Pollution risk assessment and vulnerability of aquifer due to nitrates using the DRASTIC LU and Canter LU methods in Almyros, Thessaly, Greece [0035] *S. Lepuri, A. Loukas, A. Lyra*
16:45-17:00		Assessment of a Hybrid Renewable Energy System to meet water and energy demands in Serifos island [0177] *C. Lagaros, A.-F. Papathanasiou, E. Baltas*	Numerical Simulation of Seawater Intrusion under the Influence of Groundwater Exploitation in the Annaba Aquifer System, Algeria [0025] *S. Hani, N. Bougherira, I. Shahrour, F. Toumi, A. Hani, L. Djabri, H. Chaffai*
	The presenting author is underlined	Each presentation will be followed by a 3-minute discussion	

17:00-17:30	Coffee break

	Auditorium I
17:30-19:00	**General Assembly of EWRA** *Moderators:* *A. Loukas (Chair of EWRA2023)* *G. Tsakiris, R. Maia, A. Cancelliere, L. Garrote (EWRA Executive Committee members)*

09:00-19:00	Registration desk will remain open during Congress activities

Detailed Congress Programme

Thursday, 29 June 2023

	Auditorium I		
09:00-10:00	**Coupled Human-Nature Systems: Greater Than the Sum of Their Parts?** Keynote Speaker: Kaveh Madani Larijani *Institute for Water, Environment and Health, United Nations University, Canada*		
	Auditorium I	**Auditorium II**	**Auditorium III**
	Conference I: Session I.3 *Moderators:* *A. Cancelliere & A. Spyridis*	Conference VI: Session VI.1 *Moderators:* *N. Nikolova & D. Pumo*	Conference IV: Session IV.1 *Moderators:* *E. Getahun & H. Vangelis*
10:00-10:15	Estimation of rainfall intensity-duration-frequency curves in future climate change scenarios based on hourly climate model projections [0171] *G. Buonacera, N. Palazzolo, A. Cancelliere, D.J. Peres*	Understanding the impacts of droughts on winter wheat growth in the Po Valley (Italy) through vulnerability curves [0073] *I. Borzì, B. Monteleone, M. Arosio, B. Bonaccorso, M. Martina*	Methodology for flood forecasting and management in a regularized river basin. The case of the Mondego River [0094] *J. Mendes, R. Maia*
10:15-10:30	Non-Stationary Frequency Analysis of Annual Maximum Standard Duration Precipitation [0064] *A. Yarci, T. Baran*	Crop Switching Optimization in the Indo-Gangetic Plain for Water and Food Sustainability [0124] *R. Chakraborti , S. Ghosh*	Comprehensive hydrologic modeling of a watershed with managed reservoirs for assessing water availability [0019] *E. Getahun, A.F. Prada, Z. Zhang, L. Keefer, G. Qie*

10:30-10:45	Extreme hydrometeorological events and the role of reclamation works and irrigation - drainage systems in the era of climate crisis [0201] *D. Tigkas, N. Proutsos, G. Sofou, D. Papalexis, A. Kitsos, H. Vangelis, G. Tsakiris, E. Papadiamantopoulou, K. Stournaras*	Covering heating and summer air conditioning needs of school buildings through (Natural) Swallow Geothermal (Open Loop System) installation [0084] *E. Argyropoulou, A. Adamidis, M. Vrachopoulos , I. Diamantis*	Systematic parameterization of a trans-Himalayan river basin using SUFI-2 and Particle Swarm Optimization algorithms [0163D] *B. Kalita, S. Barman, W.R. Singh, R. Kumar Bhattacharjya, M. Kumar Dutta*
10:45-11:00	Spatial distribution of Mean Annual Precipitation in Crete using geostatistical methods [0130] *G. Kampouris, S. Kontinis, A. Loukas, A. Spyridis*	Drought impact on agriculture in Northwest Bulgaria [0140] *S. Matev, N. Nikolova, J. Svetozarevic*	Is ERA5 able to reproduce flood inundation at the regional scale? A systematic analysis using LISFLOOD-FP [0144D] *H. Singh, M.P. Mohanty*
11:00-11:15	Trend analysis of gridded daily rainfall indices in Savitri River basin, India [0065] *E.S. Namitha, V. Jothiprakash, B. Sivakumar*	Time-scale comparative analysis of hydrological alteration by hydropower generation in the Cheakamus and Squamish rivers, Canada [0176] *M.D. Bejarano, F. González, D. Tuzlak, F. Poulsen, F. Knight*	A novel framework for Low Impact Development (LID) planning and runoff control in urban watersheds [0092] *A. Roozbahani, A.H. Nazari , S.M. Hashemy Shahdany*
11:15-11:30	Assessment of upstream backwater length on account of extreme inflow events [0106] *A. Sahu, I. Ahmad*	Monitoring and modelling multilayer green roofs effectiveness for thermal insulation of buildings: the experimental blue-green roof of Palermo [0071] *D. Pumo, G. Brucato, F. Alongi, L.V. Noto*	
	The presenting author is underlined	Each presentation will be followed by a 3-minute discussion	

11:30-12:00	Coffee break

	Conference I: Session I.4 *Moderators:* *A. Gül & D. Tigkas*	Conference V: Session V.1 *Moderators:* *Y. Ahi & Y. Zhao*	Conference IV: Session IV.2 *Moderators:* *E. Tzanou & L. Vasiliades*
12:00-12:15	The increasing frequency of heatwaves and extreme droughts in the Lisbon Area, Portugal [0066] *M.M. Portela, L.A. Espinosa*	An analysis of quality parameters changes in agricultural water systems with Wavelet Transform Model [0088] *O. Deniz, Y. Ahi, Z. Aslan, A.H. Orta, F. Dökmen*	Incorporating uncertainties in streamflow estimation using two monthly rainfall-runoff models [0123] *L. Vasiliades, I. Mastraftsis*
12:15-12:30	Economic benefits of including drought information in water resources management [0181] *A. Sordo-Ward, P. Bianucci, A. Iglesias, L. Garrote*	Estimation of storage capacity with the Gould-Dincer's normal approach using fuzzy and possibility theories [0131] *N. Mylonas, C. Tzimopoulos, G. Papaevangelou, B. Papadopoulos*	Developing and stabilizing a multivariate mutual information estimator to compute the available information of hydrological datasets [0128] *E. Findanis, A. Loukas*
12:30-12:45	Propagation of meteorological to hydrological drought: An example of the Middle Struma Valley, Bulgaria [0138] *N. Nikolova, R. Stoyanova, K. Radeva*	Development of agrohydrology in relation to critical zone science [0050] *Y. Zhao, Y. Wang, E. Jobbagy*	Turbidity source analysis of the urban lakeside river network [0110] *R. Yan, J. Gao*
12:45-13:00	Investigating alternative approaches to drought visualisation [0194] *H. Vangelis, V. Krassanakis, I. Kourtis, D. Tigkas*	Use of gridded data for the evaluation of ten radiation-based potential evapotranspiration models in a forest ecosystem in Greece [0010] *A. Bourletsikas, N. Proutsos, I. Argyrokastritis*	Assessment of Porsuk River Basin by Using the DPSIR Approach [0113] *H.C. Çetin, Y. Şahin*
13:00-13:15	Land use and climate change impacts on streamflow and droughts in Küçük Menderes Basin, Türkiye [0142] *G. Onuşluel Gül, A. Kuzucu, M. Najar, M. Günaçtı, A. Gül*	A WebGIS-based decision support system for leakage control and water quality monitoring in the water supply system of Paramythia city in Greece [0057] *K. Panitsidis, S. Tsitsifli, N. Mantas, D. Theodorou, T. Kyriakidis, M. Louta, A. Chasiotis*	Impact of the Grand Ethiopian Renaissance Dam on the Lower Nile under different operating scenarios [0161] *A. Kurigi, E.M. Ramadan, I. Abd-Elaty*

13:15-13:30	Multivariate analysis of meteorological drought using the D-vine copula in western Iran [0162] *N. Jahannemaei, P. Khosravinia, H. Sanikhani, R. Mirabbasi*		Methodological approach for the elaboration of transboundary flood protection action plans [0186] *E. Tzanou, C. Skoulikaris, A. Chatzigiannis*
	The presenting author is underlined		Each presentation will be followed by a 3-minute discussion

13:30-15:30	Light lunch

	Conference IX *Moderators:* *P. Sidiropoulos & D. Tigkas*	General Session *Moderators:* *M. Gitau & H. Vangelis*	EWRA E.C.
15:30-15:45	Fusion of MODIS TERRA and SENTINEL SLSTR Land Surface Temperature Products for Minimizing Gaps in Basin Scale Hydrological Studies [0054] *O.G. Şahin, O. Gündüz*	Availability and Accessibility of Climate and Water Data: Implications for Water Resources Decision Making and Management in East Africa [0050] *M. Gitau, V. Garibay, N. Kiggundu, S. Munishi, D. Moriasi, B. Mati, J. Kisekka, V. Kongo*	Reserved for EWRA Executive Committee Meeting
15:45-16:00	Multi-Criteria Analysis in GIS environment to identify suitable areas for surface water storage in the Pinios River basin, Thessaly, Greece [0129] *E. Koutsimari, A. Loukas, D. Fotakis*	Developing a smart integrated platform for Leakage Detection on water supply Network of Municipality of Argos, Greece [0072] *A. Chasiotis, S. Chasiotis, P.T. Nastos, E. Feloni, M. Bousdeki, T. Manthos, E. Minakaki, C. Theodorakis, K. Sakellariou, T. Kyriakidis, M. Louta*	
16:00-16:15	The complexity of the deep uncertainty in hydro-economic models: Assessment using a multi-model ensemble [0014D]	Multi-criteria analysis and characterization of the integrated water resources management model in the Annaba region [0020]	

	H. González-López, C.D. Pérez-Blanco, F. Sapino, A. Hrast-Essenfelder, J.M. Bodoque	*A. Hani, D. Nechem, S. Hani, N. Bougherira, F. Toumi, L. Djabri, H. Chaffai*	
	The presenting author is underlined	Each presentation will be followed by a 3-minute discussion	

16:15-16:45	Coffee break

	Poster Session Foyer
	Poster Session A *Moderators:* *G. Papaioannou & P. Sidiropoulos*
16:45-17:45	Conference I
	Coupling machine learning algorithms with the tunable q-factor wavelet transform in forecasting the SPEI at the Bogra station in Bangladesh [0053] *S.A. Osmani, R. Narimani, J. Baik, J. Lee, C. Jun*
	Preliminary analyses of changes in intense precipitation in FVG, northeastern Italy [0068] *E. Arnone, D.Treppiedi, V. Zoratti, L.V. Noto*
	Runoff study of the upper Torysa sub-basin [0082] *P. Nagy, M.Hlinková, M. Dobranský*
	Characterization of 1-hour maximum rainfall values in Calabria, southern Italy, by means of the ERA-5 reanalysis [0135] *F. Chiaravallloti, R. Coscarelli, T. Caloiero*
	Precipitation estimation using weather radar data in Thessaly, Greece during medicane Ianos [0179] *G. Karoutsos, N. Tzonichakis, N. Rammos, E. Chrisovergis, P. Sidiropoulos, N. Dalezios*
	Sequential meteorological-hydrological-hydraulic modeling as a flash flood forecasting tool: The January 2023 flooding incident in Evrotas river [0189] *G. Papaioannou, G. Varlas, A. Papadopoulos, V. Markogianni, L. Vardakas, E. Dimitriou*
	Forecasting drought based on projected climate change scenarios [0197] *H. Vangelis, I.M. Kourtis, D. Tigkas, I. Nalbantis, V.A. Tsihrintzis*
	Evaluation of Climate Change Impacts on a basin in Northern Greece [0199] *I.M. Kourtis, C-A. Papadopoulou, M. Papadopoulou, N. Melios, C. Laspidou, V.A. Tsihrintzis*

Conference III
Current state and physic-chemical characterization of the waters of Oued Gueridjima: drain of domestic liquid effluents (NE Algeria) [0031] *N. Bougherira, D. Nechem, H. Bouguerra, L. Djabri, H. Chaffai, A. Hani, N. Sedrati*
Preliminary data on antibiotic resistant bacteria in surface waters in Albania [0081] *E. Hamzaraj, B. Parllaku, S. Zhubi*
Treatment of contaminated water containing two triazole fungicides in pilot-scale horizontal subsurface flow constructed wetlands [0098] *P. Parlakidis, I. Gounari, A. Georgiou, G. Adamidis, Z. Vryzas, G.D. Gikas*
Conference VIII
Groundwater resources evaluation in a mountainous aquifer system in NE Greece [0011] *I. Emplioukk, F.-K. Pliakas, A. Kallioras, D. Kaliampakos, T. Tzevelekis*
Assessment of groundwater vulnerability to seawater intrusion in River Lissos Coastal Aquifer System, NE Greece [0021] *I. Gkiougkis, M. Lappa, A. Adamidis, I. Emplioukk, D. Karasogiannidis, C. Pliaka, F.-K. Pliakas, T. Tzevelekis*
Application of the GALDIT method for the study of groundwater vulnerability in River Laspias Coastal Aquifer System, NE Greece [0022] I. *Gkiougkis, E. Tzini, D. Karasogiannidis, C. Pliaka, I. Emplioukk, A. Adamidis, F.-K. Pliakas, E. Evangelou, T. Tzevelekis*
Anthropogenic sources and hydrogeochemical characteristics of groundwater in Mediterranean regions [0085] *M.M. Ntona, K. Kalaitzidou, M. Mitrakas, G. Busico, M. Mastrocicco, N. Kazakis*
Assessment of groundwater vulnerability to agricultural pollution in River Lissos Coastal Aquifer System, NE Greece [0109] *V. Karahontzitis, A. Papadopoulou, I. Gkiougkis, A. Kallioras, A. Panagopoulos, F.-K. Pliakas*
Estimating groundwater recharge from precipitation in a coastal Mediterranean aquifer: The case of Marathon [0150] *M. Perdikaki, A. Kallioras*
SEAWAT application to implement the climates change induced impacts and responses of the Neretva coastal aquifer system in the south-eastern Croatia [0154] *I. Aljinović, V. Srzić*
Assessment of the hydrochemical status through the application of AkvaGIS tool for an alluvial aquifer in Greece [0160] *K.S. Panagiotaropoulos, M. Perdikaki, C. Pouliaris, A. Kallioras*
Using integrated methods of artificial aquifer recharge in dry regions with direct participation of stakeholders [0172] *S.A. Sajadi, M. Ranjbar Minab, M. Mollaei*

	Spatiotemporal analysis of historical groundwater drought in a regional UK aquifer based on numerical modelling and the SGI index [0203] *V. Christelis, M.M. Mansour, C. Jackson, L. Wang*
	Comparison of physics-based and data-driven surrogate models in coastal aquifer management [0208] *G. Kopsiaftis, M. Kaselimi , A. Voulodimos, E. Protopapadakis, I. Rallis, A. Doulamis, N. Doulamis, A. Mantoglou*
	Prediction of seawater intrusion using the LSTM Deep Learning method [0209] *G. Kopsiaftis, M. Kaselimi, A. Voulodimos, E. Protopapadakis, I. Tzortzis, I. Rallis, A. Doulamis, A. Mantoglou*
	Please note that the authors are requested to be available during the scheduled poster sessions for questions on their poster

21:00-24:00	**Gala Dinner** *The Gala Dinner will take place at "REMVI" Restaurant* *(Buses will transfer the participants from the City center to the Restaurant)*

09:00-19:00	Registration desk will remain open during Congress activities

Detailed Congress Programme

Friday, 30 June 2023

	Auditorium I		
09:00-10:00	**Sustainable coastal groundwater management through innovative governance in a changing climate** Keynote Speaker: George Karatzas *Technical University of Crete, Greece*		
	Auditorium I	**Auditorium II**	**Auditorium III**
	Conference II: Session II.1 *Moderators:* *A.R. Scorzini & C.P. Cetinkaya*	Conference V: Session V.2 *Moderators:* *C. Evangelides & M. Ferrante*	Conference VII: Session VII.1 *Moderators:* *M.J. Diamantopoulou & A. Psilovikos*
10:00-10:15	Estimating flood damage to crops and implications for flood risk assessment [0013] *A.R. Scorzini, C. D'Eramo, M. Di Bacco*	Modeling leakage and optimizing PRV settings for NRW reduction [0120] *N.P. Chela, G. Moraitis, Ch. Makropoulos*	The Habitats' State in the Natura 2000 site "GR2310001" in River Acheloos Delta [0191] *A. Psilovikos, T. Papathanasiou*
10:15-10:30	Fidelity of Machine Learning models in capturing flood inundation through geomorphic descriptors over Ganga sub-basin, India [0145D] *V. Tripathi, M.P. Mohanty, H. Singh*	Analysis of risks related to transients in water distribution systems [0023] *M. Ferrante, F. Casinini*	Machine learning in environmental modeling: A case study with ground-truth data from Seich–Sou suburban forest, Greece [0125] *M.J. Diamantopoulou*

10:30-10:45	Outlining a master plan framework for the design and assessment of flood mitigation infrastructures across large-scale watersheds [0044] *P. Dimas, G.K. Sakki, P. Kossieris, I. Tsoukalas, A. Efstratiadis, C. Makropoulos, N. Mamassis, K. Pipili*	Agrometeorological simulation and Sentinel-2 images for monitoring maize water demands in Thessaly region (Central Greece) [0188] *G.A. Tziatzios, P. Sidiropoulos, M. Spiliotopoulos, N. Alpanakis, I. Faraslis, S. Sakellariou, G. Karoutsos, N.R. Dalezios, N. Dercas*	Investigation of harmful cyanobacterial proliferations in Lake Sevan, Armenia [0033] *G. Gevorgyan, A. Hovsepyan, T. Khachikyan, A. Hayrapetyan, M. Schultze, K. Rinke*
10:45-11:00	Evaluation of drought risk mapping by Kaplan-Meier method [0055] *C.P. Cetinkaya, M.C. Gunacti*	A new approach to find the economic pipe diameters in a pressurized irrigation network [0058] *A. Gravani, N. Samarinas, C. Evangelides, A. Loukas*	Assessment of environmentally minimum level in Lake Volvi based on morphological features [0108] *Ch. Doulgeris, R. Nikolaidou, D. Bobori*
11:00-11:15	Evaluation of precipitation variability with an entropy-based approach [0059] *F. Barbaros, T. Baran*	Multi-objective robust optimization design of water distribution networks under 'scenario uncertainty' of demand [0061] *R. Magini, M.C. Cunha, J. Marques, E. Ridolfi*	Decadal-Scale Reconstruction of Water Storage Changes of the Chagan Lake of China Ramsar wetland Using a Machine Learning Approach [0205] *B. Hu, Y. Wu, G. Zhang*
11:15-11:30	Agricultural drought risk and vulnerability assessment in Maharashtra, India [0133] *G. Ganjir, M.J. Reddy, S. Karmakar*	Evolutionary, swarm-based, and hybrid metaheuristic algorithms for the optimal design of water distribution network: A comparative study [0104] *S.N. Poojitha, V. Jothiprakash*	Influence of soil properties on soil bulk electrical conductivity readings using EMI and FDR technology in non-saline soils of Greece [0017] *P.A. Petsetidi, G. Kargas, K. Sotirakoglou*

11:30-12:00	Coffee break

	Conference II: Session II.2 *Moderators:* *T. Pilevneli & Y.J. Xu*	Conference V: Session V.3 *Moderators:* *P.E. Georgiou & M. Ballesteros-Olza*	Conference VII: Session VII.2 *Moderators:* *N. Dercas & G. Onusluel Gul*
12:00-12:15	Climate change related risks on agricultural water availability in Turkiye [0167] *T. Pilevneli, G. Capar, C.S. Cerda*	An investigation by laboratory experiments of the impact of intermittent water supply [0027] *M. Ferrante, D. Rogers, J. Mugabi, F. Casinini*	An approach for assessing the sustainability of Mediterranean wetlands through a tailored handling of drought indices [0183] *A. Kuzucu, M. Najar, A. Gul, G. Onusluel Gul, C.P. Cetinkaya*
12:15-12:30	Resilience optimization of water quality sensor designs in water distribution networks against cyber-physical attacks [0086] *D. Nikolopoulos, G. Moraitis, G. Karavokiros, D. Bouziotas, C. Makropoulos*	Treated Wastewater in Precision Agriculture: Performance Evaluation of AUGEIAS Ecosystem [0016] *M. Louta, F. Papathanasiou, C. Papadopoulos, T. Kyriakidis, K. Banti, I. Karampelia, D. Theodorou, V. Lazaridis, D. Pantelakis, S. Lappos, E. Bagkavou, T. Adamidis, I. Ganatsa*	Wetland mitigation functions on hydrological droughts [0206] *Y. Wu, J. Sun, L. Chen, M. Blanchette, A.N. Rousseau, Y. Jun Xu, B. Hu, G. Zhang*
12:30-12:45	Large river diversion effects on downstream sediment transport and channel dynamics: A case from the lowermost Mississippi River [0118] *Y.J. Xu*	Risk management of agricultural water supply and distribution systems using FDBN model and MULTIMOORA technique [0093] *A. Bozorgi, A. Roozbahani, S.M. Hashemy Shahdany, R. Abbassi*	Impact of fertilizer management practices and land cover dynamics on nitrate transport to surface waters [0052] *M.C. Gunacti, H. Boyacioglu, F. Barbaros*
12:45-13:00	Flood mapping using remote sensing and geographical information systems in Karditsa region, Greece [0127] *G. Karoni, E. Tzimika, L. Vasiliades, M. Spiliotopoulos, N. Mylopoulos*	Runoff prediction in a tropical agricultural watershed: a comparison between machine learning-based and conceptual hydrological models [0101] *S. Barbhuiya, M. Ramadas, G.M. Kartick, S. Swarup Biswal*	
13:00-13:15	Extreme rainfall and 2D flood modelling in urban catchments to assess flood exposure of buildings. A case study in Thessaloniki city, Greece [0149]	Using Key Performance Indicators and benchmarking techniques to evaluate the use of reclaimed water in irrigation agriculture [0153]	

	C. Iliadis, P. Galiatsatou, V. Glenis, P. Prinos, C.G. Kilsby	*M. Ballesteros-Olza, A. Gómez-Ramos, I. Blanco-Gutiérrez, P. Saiz-Valle*	
13:15-13:30	Estimation of non-stationary flood frequencies for coastal-fluvial flooding of west-flowing rivers in Kerala, India [0134] *S. Bhere, M.J. Reddy*		

13:30-15:30	Light lunch

	Poster Session Foyer
	Poster Session B *Moderators:* *G. Papaevangelou & I.M. Kourtis*
15:30-16:30	Conference II
	Strategic assessment of causal and preference relations between criteria in water management using the DEMATEL methodology [0009] *B. Srdjevic, Z. Srdjevic*
	Fluctuation of bacterial indicators in coastal water at Durrës and Jala beaches [0032] *M. Bakalli, I. Malollari, J. Selama*
	Retain for resilience: Natural water retention measures contribution to hydro-meteorological hazards risk reduction at the river basin level [0079] *B.B. Matić, B. Karleuša*
	A study on the reservoir system operation to reduce flood discharge at a downstream junction [0117] *Y. Choi, S. Yoon, H. Shin, M. Park*
	Drought analysis using SPI under climate change conditions: Application in Chalkidiki Region (Greece) [0193] *S. Zacharoudi, D.K. Karpouzos, P.E. Georgiou*
	The role of meteorological factors in recent advances on drought identification in agricultural and forest ecosystems: A short review [0196] *N. Proutsos, D. Tigkas, H. Vangelis, G. Tsakiris*

Conference IV
Future space-temporal and seasonal changes of mean monthly discharges in selected basins of Slovakia [0039] *Z. Sabová, A. Liová, Z. Németová, S. Kohnová*
Hydrological modelling for flood forecasting in the Douro River Basin [0097] *M. Ferreira, J. Mendes, R. Maia*
The decadal changes in climate and streamflow in the Balkhash Lake Basin [0143] *G. Gan, J. Wu*
Setting for long-term analysis of the hydrological water budget components in a north-eastern Italian basin [0148] *V. Zoratti, G. Formetta, E. Arnone*
Conference V
Investigating vulnerability of urban drainage networks using novel network theory centrality metrics [0087] *N. Akbari, B. Omidvar*
A Generic Participatory Decision Support System for Irrigation Management for the case of Cotton [0168] *A. Christofides, I.L. Tsirogiannis, N. Malamos, C. Myriounis*
Conference VI
Applying the Farm Process for assessing irrigation demand and water management in Arta, Greece [0164] *K.S. Panagiotaropoulos, C. Pouliaris, E. Chrysanthopoulos, M. Perdikaki, K. Markantonis, A. Kallioras*
Evaluation of rainwater and greywater as sustainable water sources in central European countries [0207] *A. Stec, D. Słyś*
Conference VII
Estimation of soil hydraulic conductivity from disc infiltrometer [0015] *I. Logothetis, D. Koka, G. Kargas, P.A. Londra*
Analysis of the relevant legal setting, processes, and actors on Climate Change in Albania [0028] *E. Keci*
Impact of Solar net radiation input data source on accuracy of Penman-Monteith Reference Evapotranspiration values [0041] *V. Rattayová, M. Garaj, K. Hlavčová, K. Mikulová*
Application of eDNA in fisheries: the case of Polifitou dam-lake (Greece) [0165] *A. Laggis, K. Gkagkavouzis, O. Petriki, C. Ntislidou, T.M. Perivolioti, K. Michailidis, D. Petrocheilou, A. Kouletsos, A. Triantafyllidis, D. Bobori*

	Conference IX
	CN-panEU: Development of a pan-European Curve Number (CN) dataset [0195] *I.M. Kourtis, M. Perdikaki, I. Zotou, H. Vangelis, A. Kallioras, V.A. Tsihrintzis*
	Conference X
	Green Infrastructure and Agro-environmental Measures for Water Quality Management at the River Basin Scale [0112] *G. Ćosić-Flajsig, B. Karleuša, M. Glavan*
	Conference XI
	Group preference of criteria for selecting the location of pump stations: better understanding of criteria interrelation through Bayesian BWM [0089] *Z. Srđević, B. Srđević, S. Ždero, M. Ilić*
	Please note that the authors are requested to be available during the scheduled poster sessions for questions on their poster

	Auditorium I
16:30-17:30	Congress Closure *Moderator:* *A. Loukas (Chair of EWRA2023)*

09:00-16:00	Registration desk will remain open during Congress activities

Detailed Congress Programme

Saturday, 1 July 2023

	Technical Visit / Field Trip
08:00-20:00	Expected departure at 08:00 **Aliakmon River Reservoirs** **Vergina Archeological Site, Vergina Royal Tombs Museum, New Museum of Aigai** For details please see the "Technical Visit Programme" Expected return to Thessaloniki at 20:00

	Participants have to register the Technical Visit / Field Trip prior to the Congress start The Technical Visit is available at extra fee

Detailed Congress Programme

Guide to sessions

Conferences

I. Hydrological Extremes and Hazards under Climatic Instability
II. Water Related Hazards and risks
III. Water Quality and Advanced Water Treatment
IV. Hydrological Modelling of Complex River Basins
V. Urban and Agricultural Water Systems
VI. Water-Energy-Land-Food Nexus
VII. Ecosystems and Environmental Processes
VIII. Groundwater Contamination and Management
IX. Geoinformatics, Remote Sensing and Big Data Handling
X. Transboundary River Basin Management and Hydro-diplomacy
XI. Socioeconomic Aspects and Water Resources Policies and Governance
XII. Global Water Security

Presentations

- Oral presentations duration: 10 min
- Questions following each oral presentation: 3 min
- During poster sessions authors are requested to be available for questions on their poster

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