

The 5th International Symposium on Water
Resources and Environmental Impact
Assessment in North Africa

المؤتمر العالمي الخامس للموارد المائية و تقييم التأثيرات البيئية بشمال افريقيا



Conference Scientific Program WREIANA 2025

Organized by :



International Association of
Water Resources in the
Southern Mediterranean Basin

الجمعية العالمية للموارد المائية
بالحوض الجنوبي للمتوسط



30-10-2025
31 01



Sousse, Tunisia ©

Edited by:

- Prof. Younes Hamed, University of Gafsa- Tunisia
- Prof. Rihab Hadji, University of Sétif 1- Algeria
- Prof. Salem Bouri, University of Sfax-Tunisia



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**Phd Prof Full. GeoAI, GIS and remote
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Speakers



Dr. Sonia Hassini
McMaster University, Hamilton, Canada
Communication title : Adapting Urban Water Management to Climate Challenges: Insights from Probabilistic Models



Prof. Inas Gaballah, Professor and head of the Occupational and Environmental Medicine department Kasr-ALAIiny Hospital
Faculty of Medicine Cairo University, Egypt
Communication title : Exposome Concept: Interplay of Environment Effects and Health



Prof. Dr. Ramla Gheith
Phd in energy engineering Professor (Assistant) at University of Monastir Tunisia
Communication title : From heat transfer optimization to green hydrogen production: towards a circular energy economy

Speaker

Eng. Foued Baghachi – Société SolTest-Calfond – Algeria
Specialist in Artificial Intelligence

Communication title : *Réalisation d'un logiciel pour le traitement des données géologiques, cartographiques, parasismiques et géotechniques pour l'implémentation des études en BTPH*

Workshops



Dr. Houda Hachem

*Habilitation Assistant Professor (HDR) at Technology
Centre of Energy, CRTEn*

*Specialist in energy recovery, sustainable materials, and
the optimization of industrial and environmental
processes*

Communication Title: Drying Methods and Quality Preservation in Prickly Pear Fruits

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Publications

Selected works presented at WREIANA2025 will be invited for submission to the following collaborating Springer journals for consideration in dedicated special issues, subject to peer review:

- *Euro-Mediterranean Journal for Environmental Integration (Impact Factor: 2.1)*
- *Arabian Journal of Geosciences (Impact Factor: 1.3)*
- *Journal of Water Engineering and Environmental Sciences (newly launched)*

In addition, high-quality papers will be encouraged to submit to:

- *Water (Impact Factor: 3.5)*



Mass Media

Monastir Radio



CONFERENCE PROGRAM

Day Time	Wednesday October, 29th, 2025	Thursday October, 30th, 2025	Friday October, 31th, 2025	Saturday November, 1st, 2025
8:00-9:30		Registration Opening ceremony	Workshops/ KEYNOTE 4	Panel discussion, Closure and Departure
9:30-10:00		KEYNOTE 1		
10:00-10:30		KEYNOTE 2		
10:30-11:00		Coffee break		
11:00-11:30		KEYNOTE 3	Slots 4, 5 and 6 Oral	
11:30-12:30		Post Poster Session P1/Stands		
12:30-14:00		Lunch		
14:00-16:00	Registration	Slots 1, 2 and 3 Oral	Slots 7, Oral	
16:00-17:00		Poster Session P2/ Stands	Poster Session P3/ Stands	
19:00-21:00	Diner			
➤ 21:00				



مقدمة

تعاني دول شمال أفريقيا من ندرة المياه، والإدارة غير المستدامة لمواردها المائية، والتأثر بتغير المناخ، والتلوث، ونقص البنية التحتية للصرف الصحي وتقنيات المعالجة المناسبة. وكثيراً ما تتفاقم هذه المشاكل بسبب نقص الحوكمة والأدوات التشريعية الداعمة. وقد أدى التطور التدريجي في جميع القطاعات، والسياسات المائية الحالية في العديد من دول شمال أفريقيا، إلى تلوث المياه الحالي، وندرة المياه، والإدارة غير المستدامة لموارد المياه، ونقص البنية التحتية للصرف الصحي وتقنيات المعالجة المناسبة. ويواجه العالم تحديات متزايدة على موارد المياه، منها: تحديات اجتماعية واقتصادية، وتحديات علمية وبيئية وتقنية، وتحديات حوكمة، وتحديات تتعلق بالاستقرار والصحة... سيُتيح تنظيم الندوة الدولية حول موارد المياه وتقييم الأثر البيئي في شمال أفريقيا " WREIANA " منبراً للتبادل والنقاش حول معارف قضايا المياه.

ويمثل هذا المؤتمر الدولي فرصة للحوار بين العلماء والقطاعات الصناعية والخبراء لمعالجة التحديات وإلهام الجهات الفاعلة في مجال المياه. ويهدف إلى توسيع نطاق تبادل الخبرات ونتائج البحوث والسماح ببدء مبادرات التعاون الإقليمي، وجمع الخبراء من دول شمال أفريقيا مع العلماء من دول أخرى لمناقشة القضايا المتعلقة بتأثير المناخ على الموارد المائية لتحديد الملوثات الأكثر أهمية وآثارها الخطيرة المحتملة على البيئة وعلى صحة الإنسان....

لقد تفاعلت مراكز البحوث المحلية العلمية و الدولية مع دعوة الجمعية لعقد هذا المؤتمر و تم قبول ما ينوف عن مائتين ورقة علمية بالإضافة إلى أربعة محاضرات رئيسية و ورشتي عمل.

رؤساء المؤتمر وريانا 2025

أ.د يونس حامد - جامعة قفصة/ تونس
أ.د رحاب حاجي - جامعة سطيف/ الجزائر
أ.د سالم بوري - جامعة صفاقس/ تونس

PREFACE

The North Africa countries are suffering from water scarcity, unsustainable management of water resources, vulnerability to climate change, pollution and lack of sanitation infrastructure and suitable treatment technologies. These problems are often worsened by lack of governance and supporting legislative tools. The progressive developments of all sectors and the present water policy in several countries of North Africa have resulted in the current water pollution, water scarcity, unsustainable management of water resources, lack of sanitation infrastructure and suitable treatment technologies. Increasing pressure on water resources in the region encompasses various challenges: Socio-economic challenges, Scientific Environmental, and technical, Governance challenges, Stability and Health challenges...

The organization of the International Symposium on Water Resources and Environmental Impact Assessment in North Africa « WREIANA » will create a forum for exchange and debate on the knowledge of water topics. This International Conference is an opportunity of dialogue between scientists, industries and experts to address challenges and to inspire actors in the field of water. It aims at expanding the exchange of experiences and research results and allowing to initiate regional cooperation initiatives, Gathering the experts from the North Africa countries together with scientists from other countries to discuss issues related to the climate impact on water resources to identify the most relevant pollutants and their potential hazardous effects on the environment and on human health...

Local and international scientific research centers responded to the association's invitation to hold this conference, and more than two hundred scientific papers were accepted, in addition to four main lectures and two workshops.

WREIANA2025, Chairmen

Prof. Younes Hamed - Univ.Gafsa/Tunisia

Prof. Rihab Hadji - Univ.Sétif/Algeria

Prof. Salem Bouri - Univ.Sfax/Tunisia

CONFERENCE TOPICS

- **Topic 1:** Artificial intelligence application on water resources management.
- **Topic 2:** NEXUS Water-Food-Energy.
- **Topic 3:** Hydro-Geophysical exploration and hydrogeology modelling.
- **Topic 4:** Radioactivities contamination, anthropogenic activities and health risks.
- **Topic 5:** Transboundary Water Management and Hydro Diplomacy.
- **Topic 6:** Hydrogeology, Hydrology and risks impact.
- **Topic 7:** Innovative techniques in water treatment and water reclamation.
- **Topic 8:** Organic, inorganic, nanomaterials and their technological application for water resources management.
- **Topic 9:** Isotopes in water resources modelling and paleoclimate reconstruction.
- **Topic 10:** Biotechnology, food security, green chemistry and smart agriculture.
- **Topic 11:** Watering and dewatering.
- **Topic 12:** Remote sensing and GIS application in natural hazard.
- **Topic 13:** Phosphate and petroleum-natural gas resources and their environmental impact.
- **Topic 14:** Environmental and climate change impacts on water resources.
- **Topic 15:** Desertification, water, food and health security.
- **Topic 16:** Air, soil and water depollution.



Conference Program (30 /10/2025)
Principal Room 1

8:00-9:30	<i>Opening ceremony</i> <u>Moderator</u> Prof. Salem Bouri, Sfax University, Tunisia Prof. Younes Hamed, Gafsa University, Tunisia Prof. Riheb Hadj, Setif University Algeria
9:30-10:00	KEYNOTE 1 Prof. Sonia Hassini, McMaster University, Hamilton, Canada <u>Communication title</u> : <i>Adapting Urban Water Management to Climate Challenges: Insights from Probabilistic Models</i>
10:00-10:30	KEYNOTE 2 Prof. Inas Gaballah - Cairo University, Egypt <u>Communication title</u> : <i>Exposome Concept: Interplay of Environment Effects and Health</i>
10:30-11:00	Coffee break
11:00-11:30	KEYNOTE 3 Prof.Dr. Ramla Gheith - Phd in energy engineering Professor (Assistant) at University of Monastir Tunisia <u>Communication title</u> : <i>From heat transfer optimization to green hydrogen production: towards a circular energy economy</i>



Conference Program (31 /10/2025)

Principal Room 1

08:30-10:00	WORKSHOP <u>Communication title : Drying Methods and Quality Preservation in Prickly Pear Fruits</u> Prof. Houda HACHEM. Technology Centre of Energy, CRTEn, Borj-CedriaTechnopark, B.P No. 95, 2050, Hammam Lif, Tunisia Specialist in energy recovery, sustainable materials, and the optimization of industrial and environmental processes.
10:00-10:30	KEYNOTE 4 Eng. Foued Baghachi - Société SolTest-Calfond – Algeria Specialist in Artificial Intelligence <u>Communication title : Réalisation d'un logiciel pour le traitement des données géologiques, cartographiques, parasismiques et géotechniques pour l'implémentation des études en BTPH</u>
10:30-11:00	Coffee break



Thursday (30/10/2025)

Room 1 (14:00 – 16:00) – Slot 1
Moderators: Riheb Hadji, Zaaraoui Faïçal

14:00-14:15

An eco-responsible approach to mercury removal: adsorption on activated carbon derived from olive pomace

Imad Alouiz, Mouhssine Benhadj, Dahmane Elmontassir, Mohamed Sennoune, Mohamed Yassine Amarouch, Driss Mazouzi

14:15-14:30

Treated Wastewater Reuse for Agricultural, Industrial and Urban Purposes by 2045 in Algeria: Challenges, Outlook, and Roadmap

Mouhoub Mohammed

14:30-14:45

Statistical refinement of Lanthanum recovery in nitrate medium by nanofiltration process

Feriel Ghitri, Nasreddine Belkhouche, Nacera Benyahia, Zyneb Sefrou and Meryem Mesli*

14:45-15:00

Hydro-geophysical characterization of aquifers in kef area (northern Tunisia) from 3D gravity inversion and VES

Ramdhane Benassi and Sofien Al Yahyaoui

15:00-15:15

Tracking Long-Term Changes in Land Use and Land Cover using Landsat Time-Series in Gafsa Basin, Southern Tunisia

Hadhami MCHICH, Bouajila ESSIFI, Virginia ELENA GARCIA MILLAN, Elisabeth CARPINTERO GARCÍA and Mohamed OUESSAR

15:15-15:30

Assessment of PTE Contamination in Gafsa South-El-Guettar Shallow Aquifer, Tunisia

Naima HIDOURI, Fadoua HAMZAOUI-AZZAZA, Zouhour MOUSSAOUI, Noomene SLEIMI, Younes HAMED

15:30-15:45

Predicting heavy metal adsorption from water using machine learning algorithms

S. Lamsiah, M. Benhadj, I. Alouiz, M. Bouhadda, M. Y. Amarouch, D. Mazouzi and M. Sennoune

15:45-16:00

From life to crystal: Archaea as key players in halite biocrystallization in the hypersaline Sfax Solar Saltern

Najoua Gharsalli, Fatma Karray, Chokri Yaich

16:00-16:15

Upper Tithonian-Berriasian calpionellid biozonation and regional correlations of the Oued Soubella reference section in NE Algeria

Ichrak Cherif, Abdallah El Khazri, Rachid Touansa, Houaida Sallouhi, Fouad jaiz, Mabrouk Boughdiri



Thursday (30/10/2025)

Room 2 (14:00 – 16:00) – Slot 2
Moderators: Elimame Elaloui, Soumaya Hajji

14:00-14:15

Assessment of Soil Infiltration in the Oued Fekan Watershed (Algeria) Using Experimental Measurements and Modeling Approaches

Imène BENSTAALI, Amel TALIA , Malika ABBES , Laouni BENADELA , Belkacem BEKKOUSSA

14:15-14:30

Etude spatiale de la qualité des eaux phréatiques à Oued M'Zab, Algérie

Hadjira BENHEDID, Mansour ACHOUR et Mustapha DADDI BOUHOUN

14:30-14:45

Comparative Performance of Non-Activated and Chemically Activated Posidonia oceanica-Based Carbons for Congo Red Removal

Samia Ahmadi, Najah Mahjoubi, Nawel Tlili, Elimame Elaloui

14:45-15:00

Traitement des eaux par méthode biologique

Karima Gharsallah, Leila Rezig, Rabeb Lassoued et Salma Laabidi

15:00-15:15

Urban Expansion and Groundwater Salinization in Gwale, Kano State, Nigeria: Implications for Sustainable Water Management in African Cities

Ahmad Muhammad, Bem Shadrach, Marwa Ali, Jibrin Gambo, and Garba Ahmed

15:15-15:30

Characterization and stabilization of urban soils to create a new geo-material (concrete block)

Adel Djellali, Aya Gastel, Zied Benghazi, Zoubir Aoulmi and Ala Houam

15:30-15:45

Tectonic Evolution of the Northern and Southern Chotts Chains: Insights from Sedimentary, Seismic, and Gravimetric Data“

Soulef AMMARIA, Islem FARES, Mohamed Sadok BENSELEM

15:45-16:00

Assessment of Seasonal Effect on the Groundwater Quality: Statistical Approach

Garba Ahmed, Zakariyya Idris and Amina Ibrahim Muhammad

16:00-16:15

Water resources management under impact of users pressures in sfax aquifer using the weap model

Nabila Allouche , Soumaya Hajji, Emna Boughariou and Salem Bouri



Thursday (30/10/2025)

Room 3 (14:00 – 16:00) – Slot 3
Moderators: Inas Gaballah, Benkaraache Taoufik

14:00-14:15

Predictive Modeling and Spatial Analysis of Irrigation Water Quality in the Tozeur Oasis Region: An ANN-Based Approach
Fatma BEN BRAHIM, Zouhour MOUSSAOUI, Salem BOURI

14:15-14:30

Comparative Performance of Non-Activated and Chemically Activated Posidonia oceanica-Based Carbons for Congo Red Removal
Samia Ahmadi, Najah Mahjoubi, Nawel Tili, Elimame Elaloui

14:30-14:45

Characterization and recovery of process and utility water discharges
Rabeb Lassoued, Amel Abdi and Brahmi Wejden

14:45-15:00

Artificial Intelligence for Water Resources Management: Forecasting, Operations, and Monitoring
El Aachab Yassine and Kaicer Mohammed

15:00-15:15

Potential recharge assessment of the Mostaganem (Algeria) plateau aquifer using fuzzy logic and GIS
Hafida Boukrentach

15:15-15:30

The Impact of Climate Change on Water Security in North Africa: Environmental Challenges and Sustainable Governance Prospects
Manel Sakhri

15:30-15:45

Assessment of Relative-Active Tectonics In Cheria Basin (NE Algeria) – Observations From The Morphometric Indices and Hydrographic Features Obtained By The Digital Elevation Model
Hassan Taib, Khaoula BEDRI, Chams Abid

15:45-16:00

An Integrated Approach to Assessing Groundwater Quality, Soil Salinization Risks, and Fertility in Central Tunisia: Case of the Maknessy Basin
Zouhour MOUSSAOUI, Fatma BEN BRAHIM, Naima HIDOURI, Younes HAMED, Salem BOURI

16:00-16:15

AI integration in groundwater quality ranking and sustainability
Soumaya Hajji, Nabila Allouche, Emna Bougharriou and Salem Bouri



Friday (31/10/2025)

Room 1 (11H00' - 12H30') - Slot 4
Moderators:., Youness Jouilil, Manel Sakhri

11:00-11:15	Surface ozone in Tunisian urban/suburban areas: regime, photolysis and (local/regional) contributions of oxidants <i>Fatma Sellami and Chafai Azri</i>
11:15-11:30	Evolution of Neotectonic Deformation in Southeastern Tunisia: Interpretations and Modeling <i>Mohamed Sadok BENSALEM, Mohamed BEDCHICH, Soulef AMMARIA</i>
11:30-11:45	Analysis of the trajectory representation modes and reflection on the process of the drilling trajectory - GIS approach in the mapping of the drilling trajectory <i>BRAHMIA Nadjet, Dehni Abdellatif, Meguenni Bouhadjar</i>
11:45-11:00	Groundwater overexploitation and land subsidence assessment using SAR Interferometry: acase study of El Malabiod watershed, northeast Algeria <i>Rayene Sirine Ramdani, Chemseddine Fehdi, Nour El Houda Gueraidia, Saida Gueraidia and Ilhem Abdeslam</i>
11:00-11:15	Predictive modeling of wheat yield under water flooding stress: a decision tree approach <i>Hoceme DEGAICHIA, Sara HEZIL, Khadidja BOUSSAID and Ahcène HAKEM</i>
11:15-11:30	Geophysical approachfor the identification of the structure of the neritic limestone aquifer of Hammam Bradaa (average Seybouse) N.E. Algerian <i>Abdelhamid Khedidja, Rahma Khadri, Mohammed Khelifa</i>



Friday (31/10/2025)

Room 2 (11H00' - 12H30') – Slot 5
Moderators: Maamar Boumediene, Hicham Zerrouki

11:00-11:15	Modelling and optimization of intermittent drying of Strawberries <i>Houda Hachem, Jihen Touati, Daoued Mihoubi</i>
11:15-11:30	Transtensional salt-tectonics in northeastern Tunisia: Case of Jebel Ain Krime aborted diapir <i>Ramzi Azizi, Anis Barhoumi and Alessandro Mancini</i>
11:30-11:45	Joint-Common Methodology for Satellite-Ground Correlation in Critical Infrastructure Monitoring: Preliminary Results Dam Case Study <i>Fatima Zohra Tebbi, Ouassila Bahloul, Moufida Belloula and Abdelmoumen Merdassi</i>
11:45-12:00	Development of optimized 3D trajectory wells tool based on geometric, mechanic, hydraulics, geophysics and hydrogeology parameters implication for water resource planning and exploration –NW of Algeria <i>Dehni Abdellatif, Meguenni Bouhadjar, Brahmia Nadjet, Saidi Kamel</i>
12:00-12:15	Innovative bio-material for efficient methylene blue removal from aqueous solution <i>Emna Melliti, Nesrine Kamoun, Fatma Ounis, Hamza Elfil</i>
12:15-12:30	Caractéristiques géoélectriques de sous-sols de Hammam Sokhna W. Setif Algérie <i>Samir Djenba, Sonia Adjroud, Abdelhamid Khedidja</i>
12:30-12:45	Foraminifer distribution in the Barremian-Albian organic-rich series of the Sidi Medien reference section (Zaghouan Area, NE Tunisia): Depositional setting and regional correlations <i>Abdallah El Khazri, and Mabrouk Boughdiri</i>



Friday (31/10/2025)

Room 3 (11:00 – 12:30) – Slot 6
Moderators: Sonia Hassini, Romdhane Benassi

11:00-11:15	Olive Waste-Based Activated Carbon in Mixed Matrix Membranes for Sustainable Lead Removal from industrially contaminated stream <i>Roua Gmati, Rim Ben Amor, Carlo Limonti, Alessio Siciliano and Catia Algieri</i>
11:15-11:30	Reaction of a coastal aquifer after a period of intense drought in water scarcity regions: case of Lebna dam influence zone (Cap Bon, Northeast Tunisia) <i>Mohamed Neji, Ghassen BenZid, Sameh Chargui, Olivier Grunberger, Claude Hammecker, I.M.H.R Antunes and Fethi Lachaal</i>
11:30-11:45	From Data to Downpour: Comparing Machine Learning Models for Urban Rainfall Forecasting <i>JOUILIL YOUNESS, Belhaj Naoufel, Adraoui Mohamed</i>
11:45-12:00	Integrated Assessment of Groundwater Quality for Irrigation in an Arid Context: Application of the IWQI Index and Artificial Intelligence Models to the Southern Gabès Aquifer (Tunisia) <i>Khyria Wederni, Boulbaba Haddaji, Younes Hamed, Salem Bouri</i>
12:00-12:15	Assessment and prediction of irrigation groundwater suitability in northern Gabès aquifer system ORAL <i>Amna Bouri, Fatma Ben Brahim, Zied Haj-Amor, Adel Kharroubi and Salem Bouri</i>
12:15-12:30	Integrating Remote Sensing and Machine Learning for Water Stress Monitoring in Arid Ecosystems: A Case Study Using Random Forest and LSTM Models in North Africa <i>Moemen Gaiji</i>
12:30-12:45	Integrating WQI and Fuzzy Logic in GIS for Groundwater Irrigation Suitability: Case Study of the Souassi Aquifer, Tunisia <i>Ghada Nasri, Fatma Benbrahim and Salem Bouri</i>



Friday (31/10/2025)

Room 1 (14H00' - 16H00') – Slot 7
Moderators: , Moncef Chabbi, Abedhakim Bouajila

14:00-14:15

Spatio-temporal Dynamics of Agricultural Drought: An Integrated Monitoring Framework for Tunisia's Upper Medjerda Valley

Sahar Abidi, Islam Hamad Eljack Elameen and Diego Pons

14:15-14:30

Predicting Groundwater Depth in the Chebika Zone of Central Tunisia: A Machine Learning Approach

Mohamed Abdelhedi, Hakim Gabtni and Habib Abida

14:30-14:45

Gelatin Extraction from Sepia officinalis: Characterization and Potential Applications for Food Security

BENCHEGRAK, LAMARA S. C., GHERRAM M., KHERRAZ Djazia, BENSAHLA TALET L. and ABI-AYAD S.-M. E.-A.

14:45-15:00

As climate change exacerbates urban flooding, combined sewer overflows (CSOs), and water resource challenges, traditional stormwater management strategies are no longer sufficient

Sonia Hassini

15:00-15:15

Contribution of Electrical Resistivity Tomography to the Understanding of the Hydrogeological Controls of Spring Emergence

Hicham Zerrouki, Feyrouz Hafid, Badreddine Saadali, Haythem Dinar, and Mazouz El Hadi

15:15-15:30

The impact of hydromagnetic treatment of irrigation water on water, soil and agronomic parameters of greenhouse tomato cultivation

Naima Anayed, Wiem Mbarki, Béchir Chaouachi, Ali Benhmidène, Nedja Ebdelli and Rachid Boukhchina

15:30-15:45

Estimating wheat water needs using machine learning and vegetation indices in the Setif region of Northeastern Algeria

Tarek Bouregaa

15:45-16:00

Environmental Migration to Britain: From Climate Crisis to Cultural Displacement and Identity in Motion – The Case of Bangladeshi immigrants

Bassem Hidouri

16:00-16:15

Landslide Susceptibility Assessment in the Edough Massif Region: Utilizing Geospatial Platforms and the Weights of Evidence Method

Djamel Eddine Abbas, Riadh Boukarm, Mohamed Fredj, Abderrazak Saadoun, Hadji Riheb



Poster Session P1 (11H30' - 12H30')
Moderators: Mohamed Sadok BENSALAM, Maamar Boumediene

P1	Potential of Dam Sediment Valorization in Cement Production <i>Amel TALIA, Imene BENSTAALI, Laouni BENADELA, Belkacem Samir BEKKOUSSA</i>
P 2	Enhancement of Mechanical and Antibacterial Properties of Polymer Inclusion Membrane: Application for Nickel Extraction from Acidic Effluents <i>Sana Ncib, Kemla Othman, Hayet Mahmoud, Afef Barhoumi, Lasaad Dammak, Elimame Elaloui, Wided Bouguerra</i>
P3	Evaluation of the Water Quality of Seybouse Wadi for Agricultural Irrigation: An Index-Based Approach <i>Hamza BOUGUERRA, Moncef BOUROUGA, Salah Eddine TACHI and Mohamed GUETTAF</i>
P4	Towards Sustainable Agriculture: Valorization of Treated Wastewater and Risk Assessment <i>BOUROUGA Moncef, BOUGUERRA Hamza, TACHI Salah Eddine, Rania SAIDI, Majda FOUGHALI</i>
**P5	Clay-Based Barrier Systems for Sustainable Management of Phosphogypsum <i>Ines Benaoun, Aidi Marzouki, Arif Ismail, Nouredine Hamdi</i>
P6	Study of the coastal ecohydrology of the Ghar El Melh lagoon, Gulf of Tunis, Mediterranean, for sustainable water management <i>Chaima KACHBOURA, Oula AMROUNI and Luis CHICHARO</i>
P7	Assessment of water quality in some Northeastern Algerian dams <i>Feyrouz Hafid, Badreddine Saadali, Hicham Zerrouki, Marwa Benslama, Chams Abid and Haythem Dinar</i>
P8	Modélisation 3D automatisée des surfaces de rupture et estimation des volumes de glissements de terrain par approche numérique <i>Khaber Larbi, Hadji Riheb</i>
P9	Cartographie de l'humidité du sol dans le bassin versant d'Oued Khelouia (Nord-Ouest Algérien) à partir des images satellitaires Aster et Landsat <i>NEHAL Laounia, HAMIMED Abderrahmane</i>
P10	Geophysical Techniques for Assessing Water and Geotechnical Parameters in Road Embankment Projects in Semi-Arid Regions: A Case Study from the Aures, Algeria <i>Serrai Mohcene, Kedidja Abdelhamid, Zighmi Karim, Farid Zahri</i>
P11	Groundwater Quality Assessment in the Setifian High-Plains, Algeria <i>Kaddour Benmarce, Maou Amel</i>
P12	Evaluating Climate Change Impacts on Semi-Arid Watersheds <i>Nour Charrouf, Maou Amel, Kaddour Benmarce</i>
P13	From Contamination to Remediation: A Comparative Study of Electromembrane and Conventional Extraction of Cadmium(II) as a Green Alternative <i>C. Jadlaoui, S. NCIB, W. BOUGUERRA</i>
P14	Effect of climate change on the Intensity-Duration-Frequency curves in the Seybouse watershed, Northeast Algeria <i>Moncef CHABI, Amina AMARCHI, Fares LAOUACHERIA and Lotfi ZEGHADNIA</i>

Poster Session P1 (16H00 - 17H00)
Moderators: Kaddour Benmarce, Salah Mahmoudi

P15	Contamination Géogénique des Eaux de la Zone Minière de Kherraza, Annaba (Nord-Est de l'Algérie) <i>Janet Bouguebrine, Ibtissem Chouaf, Habiba Major, Badra Attoui</i>
P16	Magnetic $\text{TiO}_2/\text{Co}_{0.6}\text{Cu}_{0.25}\text{Zn}_{0.15}\text{Fe}_2\text{O}_4$ Heterostructure for Photocatalytic Removal of Paracetamol under Sunlight <i>Rostom Lakhdar, Nahla Dhen and Kais Elghniji</i>
P17	Electromembrane Extraction of Cadmium (II) Using a Polymer Inclusion Membrane <i>C. Jadlaoui, S. NCIB, W. BOUGUERRA</i>
P18	Developing a Landslide Susceptibility Map for the Tellian Atlas, Algeria: A GIS-Based Approach <i>Zighmi Karim, Zahri Farid</i>
P19	Health Risks of Storing Drinking Water in Reused PET Bottles in North Africa <i>Difallah Besma and Hadji Ala</i>
P20	Assessment of Dust Pollution from Aggregate Quarry Operations in Southern Setif, Algeria <i>Maamri Roufaida and Zahri Farid</i>
P21	A method for rapidly assessing landslide hazard, taking the landslide in Biban mountain chain a case study <i>Ouadfel Oum El Kheir, Zighmi Karim</i>
P22	Multidimensional Assessment of Water Erosion, Sediment Transport, and Reservoir Siltation in the Senegal River Basin Using Geomatics Tools <i>Ali Mohamed Abdellahi, Hadji Riheb</i>
P23	Comprehensive Assessment of Rockfall Hazards at Cap Oukass Cliff, Northeast Algeria <i>Zahri Farid, Zohra Ladjel</i>
P24	Modélisation intégrée des impacts du changement climatique sur les ressources en eau: application du modèle SWAT, des scénarios CMIP5 et de la télédétection <i>Salhi Wafa, Hachmaoui Anouar, Abbes Malika, Otmane Cherif Abdelillah, Beloufa Nabil</i>
P25	Synthesis and characterization of a novel organic-inorganic composite for Congo Red dye removal <i>Fatma Ounis, Nesrine Kamoun and Hamza ELFIL</i>
P26	Contribution à l'étude qualitative des eaux souterraines de la plaine d'El taref (Nord-Est Algérien) <i>Chaoui W., Halimi F., Sedrati N et Chaoui K.</i>
P27	Evaluating Geotechnical Factors Influencing Slope Stability in the Algerian-Tunisian Atlas Mountain Range <i>Ismail Arif</i>
P28	Adsorption of a dye (methylene blue) in aqueous solution on different porous materials <i>Rabeb Lassoued, Wafa Najjar, Kaboudi Oumaima and Ayadi Samar</i>

Thursday (31/10/2025)

Poster Session P3 (16H00 - 17H00)
Moderators: Malika Abbes, Bassem Hidouri

P29	Raw Posidonia Oceanica Carbon As An Innovative And Sustainable Adsorbent For Congo Red Dye Removal <i>Samia Ahmad, Najah Mahjoubi, Nawel Tlili, Elimame Elaloui</i>
P 30	Activités biologiques et propriétés physiques de l'huile des graines de Moringa oleifera <i>Karima Gharsallah et Leila Rezig</i>
P31	Efficacité du traitement de l'azote dans une station d'épuration à boues activées: cas de la STEP de Maghnia <i>Maamar BOUMEDIENE</i>
P32	Hydrogeology and geochemistry of the karst aquifer in Tebessa basin –Algeria <i>Amor Hamad</i>
P33	Remote Sensing and GIS Analysis of Collapsible Soil Risk in Unsaturated Soils of Oued Souf, Algeria <i>Saida GUERAIDIA, Mohamed Salah LAOUAR, Djamel ATHMANIA, Nour El Houda Gueraidia, Rayene Sirine Ramdani, Chemseddine FEHDI</i>
P34	Impact of Anthropogenic Activities on Groundwater Quality and Irrigation Suitability in the Seriana Plain, Algeria <i>Nawel Benouara, Retima Nadjib, Boukhari Sofiane, Hamza Bouchahed, Essia Boudjebieur</i>
P35	Examination of the physical-chemical quality of the water from the Koudiet Medouar barrage – BATNA – Algeria <i>Retima Nadjib, Benouara Nawel, Boukhari Sofiane and Bouchahed Hamza</i>
P36	Assessment of groundwater quality and human health risks in arid and semi-arid regions using WQI and HQ-Nitrate Models: a case study of the Kairouan plain (Tunisia) <i>Ridha Khammari, Younes Hamed, Salem Bouri</i>
P37	Toxicological and epidemiological evidence integration for assessing human health risks to environmental chemical exposures <i>Amina Ben Sâad, Najet Mokni, Samira Othmani</i>
P38	Hydrogeochemical Assessment of Alluvial Aquifer Suitability: The Oued Biskra Wellfield Case Study <i>Sedрати Nassima, Halimi Fahima and Chaoui Widad</i>
P39	Etude de la vulnérabilité de la nappe karstique des Monts de Saïda, Nord Ouest Algerien <i>BENAMINA Benyekhlef, ABBES Malika, HAMIMED Abderrahmane, CHADLI Ahmed, GRINE Athmane</i>
P40	Groundwater resources: challenges and future opportunities in Northwestern Tunisia <i>Yosra Ayadi, Kaouther Ncibi, Malika Abbes, Younes Hamed</i>
P41	Low-cost ceramic membranes: Manufacturing methods, and application in wastewater treatment <i>Abir Taher, Kawther Yahia, Assia Ben Amor, Miguel A. Rodriguez, Noureddine Hamdi</i>



Thursday (31/10/2025)

Poster Session P3 (16H00 - 17H00)
Moderators: Salem Bouri, Yosra Ayadi

P42	The impacts of climate change on human health: an alarming fact <i>ABDERRAHMANE Djohar, Ait Habouche-Mihoub Ouahiba</i>
P43	Study of the temporal variation of water quality in the lakes of Touggourt region <i>Oumelkheir Bachi, Ahmed Bentría, Asma Thabet and Sofiane Saggai</i>
P45	Green economic circular in the industrial sector <i>Saida Dhaoui, Amel Tawil</i>
P46	Impact of urban expansion on valley flow in rural areas: A case study of Bartella villages, Northern Iraq <i>Asaad A. M. Al-Hussein, Mohammed A. M. Sulaiman</i>
P47	L'IntelligenceArtificielle au Service de l'IngénierieGéotechnique : Vers des Infrastructures Résilientes <i>Lamri Dahoua</i>
P48	Electro-driven direct lithium extraction from hydrothermal brines to generate battery-grade lithium hydroxide <i>Wisseem Zaaraoui1, Fateh Drifi, Younes Hamed, Elimame Elaloui, Rihab Hadji</i>
P49	Using nanoparticles for wastewater treatments <i>Nour El Houda Ben Salem, Saliha Khouari</i>
P50	Morphodynamic study of the Coastaldune After the setting-up of wind breakers : A Case of Ghar El Melh, Tunisia <i>Zahra SALLEMI, Oula AMROUNI, Abderraouf HZAMI, Essam HEGGY</i>
P52	Intégration des variables géomorphologiques et topographiques dans un Système d'Information Géographique pour la caractérisation de la pluviométrie annuelle dans le bassin versant de la Macta <i>NEHAL Laounia, HAMIMED Abderrahmane</i>
P53	Technologies de réalisation et d'équipement des ouvrages hydrauliques, cas des réservoirs surélevés et semi enterrés et des stations de pompages et de relevage <i>Ouzane Yazid, Arif Ismail, Hamdi Mohamed</i>
P54	Remote Sensing and GIS pro Applications to Climate Change <i>Malika ABBES, Imène BENSTAALI, Amel TALIA , Laouni BENADELA , Belkacem BEKKOUSSA</i>
P55	Assessment of Groundwater Quality and Health Risks in the Regueb Aquifer, Central Tunisia <i>Rim Missaoui, Younes Hamed, Salem Bouri</i>
P56	Création d'une Base de données spatiales et d'une application WEB Mapping à partir des données du levé topographique par Drone d'une carrière de Calcaire dans la Colline du Mormont (Suisse). <i>Radhia Ben Harb</i>



Poster Session P3 (16H00 - 17H00)
Moderators: Salem Bouri, Maamar Boumediene

P57	Enhancing Irrigation Efficiency for Date Palm Cultivation in Arid Environments: A Case Study Using Regulated Drip Systems in the Tozeur Oasis, Tunisia <i>Latifa Dhaouadi, Aya Ayouni, Houda Besser, Fatma Wassar</i>
P58	Système d'Information Géographique et ses applications en Chimie de l'Environnement <i>Radhia Benharb</i>
P59	L'art du terrassement, techniques, et technologies <i>Arif Nadir, Hamdi Mohamed</i>
P60	Assessing Flash Flood hazard in the WadiMellègue Basin: A GIS-Based Morphometric Analysis <i>Arif Ismail, Soumaya Hadji, Younes Hamed</i>
P61	Algeria's Strategic Response to Water Stress: Desalination and Sustainable Management <i>Hadji Riheb</i>
P62	Flood Risk on National Road N°6 in Sedjrara(western Algeria) under Climate Change. <i>Hachemaoui Anouar, Abess Malika, Beloufa Nabil, Fethallah Nourelhouda, Otmane Cherif Abdulillah</i>
P63	TEXTILE DYE ADSORPTION BY NATURAL PERLITE <i>Beloufa Nabil</i>
P64	Statistical analysis of Groundwater quality in Teleghma plain (North-East Algeria) <i>Mouna Dekakra, Khedidja Abdelhamid</i>
P65	Hydrogeochemical characteristics of groundwater in the Hassi Ameur area (North-West part of Algeria) <i>Mohammed Khelifa, Abdelhamid Khedidja, Hamidi Mansour</i>
P66	Phytoremediation efficiency of Arundo donax roots for cadmium and lead removal: Insights from response surface methodology <i>Boussaid Khadidja, Deghaichia Hossem, Lafri Imene</i>
P67	Applications of Chemical Sensors and Biosensors for Detection of Emerging Pollutants in Water <i>Aziz Amine</i>
P68	Chlorination Performance Assessment in Drinking Water Distribution Systems <i>Sirine Sallemi, Emna Melliti and Hamza Elfil</i>
P69	Impacts of water quality and irrigation frequency on soil characteristics <i>Rabah ATTAB, Imane KAMASSI, Souad BENDAOU and Sofiane SAGGAI</i>
P70	Qualité des eaux souterraines et leur utilisation en irrigation dans la wilaya de Souk-Ahras, en utilisant un SIG et un indice de qualité de l'eau d'irrigation <i>Rouaibia F, Bourouga M</i>



Thursday (31/10/2025)

Oral Communication - ONLINE (16H00 - 17H30)

Moderators: Salem Bouri, Yosra Ayadi

16H00-16H15	Assessment of the impact of climate change in Kairouan governorate, Tunisia <i>Ahlem Mastour, Mohamed Habib Sellami, and Sihem Jebbari</i>
16H15-15H30	AI-Guided mechanistic insights and optimization of heavy metal removal from industrial effluents using bioengineered chitosan <i>Afef Sai, Sonia Ben Younes, Younes Moussaoui, Assaad Sila, Ali Lafi and Mohamed Ali Borgi</i>
16H30-16H45	Study of the sedimentary archives of the Ghar El Melh lagoon in the context of climate change over the last two centuries <i>Ons JDAY, Oula AMROUNI, & Abderraouf HZAMI, Yoann COPARD</i>
16H45-17H00	Etude de la perméabilité d'une barrière d'étanchéité: cas du CET d'El KEURT (Algérie) <i>Chahira SAYAD GAIDI, Laouni GAIDI et Imane KHEDIM</i>
17H00-17H15	Level of methoxylated polybrominated diphenylethers in seabream (<i>Sparus aurata</i>) from Bizerte Lagoon, Tunisia <i>Walid Ben Ameer and Ali Annabi</i>
17H15-17H30	Water Contamination and Pollution due to Radioactive Materials, Natural and Anthropogenic Sources, and their Health Impacts: A Review <i>Suresh Aluvihara</i>





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بالحوض الجنوبي للمتوسط

*We hope to have a successful
symposium. We would be
honored to see you in Sousse,
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