

**6<sup>th</sup> International Scientific Conference on Water „6th ISCW 2023”**  
**15-16 June 2023, Szarvas, Hungary**



Hungarian University of Agriculture and  
Life Sciences  
Institute of Environmental Sciences,  
Research Center for Irrigation and Water  
Management and  
Research Center for Fisheries and  
Aquaculture  
Hungary



University of Life Sciences  
"King Michael I" from Timisoara  
Faculty of Agriculture and  
Faculty of Management and Rural Tourism  
Romania



**POLITECHNIKA  
BYDGOSKA**  
im. Jana i Jędrzeja Śniadeckich

Bydgoszcz University of Science and  
Technology  
Faculty of Agriculture and Biotechnology  
Poland



University of Novi Sad  
Faculty of Agriculture  
Serbia

**PROGRAM OF THE CONFERENCE**

# **6<sup>th</sup> International Scientific Conference on Water „6th ISCW 2023”**

## **15-16 June 2023, Szarvas, Hungary**

**15<sup>th</sup> June 2023. Thursday**

MATE HAKI Library - 5540 Szarvas, Anna-liget u. 35.

Time zone: UTC+2 / Central European Summer Time (CEST)

### **9.00 – 10.00 Registration**

Moderator: Dr. Béla GOMBOS, PhD. (MATE)

### **Opening Ceremony**

**10.00 – 10.05 Opening of the conference**

Prof. Dr. Erika MICHÉLI, Director of Institute of Environmental Sciences, MATE

**10.05 – 10.10 Welcome speech**

**Dr. Virág Katalin SIPOS**, Deputy director general of Szent István Campus, MATE

**10.10 – 10.15 Welcome speech**

**Dr. Zoltán FUTÓ**, Head of Department of Irrigation and Land Improvement IES, MATE

**10.15 – 10.20 Welcome speech**

**Dr. Laura SMULEAC**, vice dean for research, University of Life Sciences “King Mihai I” from Timisoara Faculty of Agriculture

### **Plenary session:**

**10.30 – 10.55: Jenő LÁBDY - Water resources of Hungary from the point of view of irrigation**

Technical deputy director general - General Directorate of Water Management, Hungary

**10.50 – 11.15: Jasna GRABIĆ - Wetlands in Serbia: Past, Present and Future**

University of Novi Sad, Faculty of Agriculture, Department of Water Management, Serbia

**11.15 – 11.40: Skúli SKÚLASON - Conservation of biodiversity and freshwaters - experience from Iceland**

Hólar University, Department of Aquaculture and Fish Biology,  
and Icelandic Museum of Natural History in Reykjavík, Iceland

**11.40 – 12.05: Raimondas ŠADZEVIČIUS - Elaborated dam removal projects in Lithuania**

Vytautas Magnus University, Academy of Agriculture, Faculty of Engineering,  
Department of Water Engineering, Lithuania

**12.05 – 12.30: Nataša KLJAJIĆ, Jonel SUBIĆ, Vesna PARAUŠIĆ - Comparative advantages of applying an innovative subsurface irrigation system in agriculture**

Institute of Agricultural Economics, Belgrade, Serbia

**12.30 – 12.45 Opening of Poster session**

Moderator: Dr. Ágnes KUN, PhD. (MATE)

**12.45 – 14.00 Lunch**

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### Oral presentations

- 14.00 – 14.15: DHIMAS SIGIT BIMANTARA, ANGURA LOUIS, ERIKA BUDAY BÓDI, ATTILA NAGY, JÁNOS TAMÁS, ZSOLT ZOLTÁN FEHÉR: Evaluation of the latent processes between crop, vegetation and water demand using machine learning approaches
- 14.15 – 14.30: EDIT GORLICZAY, ILDIKÓ ALEXANDRA NAGY, JÁNOS TAMÁS, ATTILA NAGY: Effect of different nutrient solutions on pigment content of common bean (*Phaseolus vulgaris* L.) cultivars grown under aeroponic conditions
- 14.30 – 14.45: VRANESEVIC MILICA: Inland excess water on drainage system within the framework of climate changes
- 14.45 – 15.00: AWS N. AL-TAYAWI, NIKOLETT SZ. GULYÁS, SZABOLCS KERTÉSZ: Exploring the potential of module integrated 3D printed elements for effective membrane fouling mitigation
- 15.00 – 15.15: BIANCA-DENISA CHEREJI, FLORENTINA-DANIELA MUNTEANU: Removal of heavy metals from industrial wastewater by filters based on sheep wool
- 15.15 – 15.30: ZOLTÁN JÁKÓI, SZABOLCS KERTÉSZ, CECILIA HODÚR, SÁNDOR BESZÉDES: Enhancing and monitoring the anaerobic digestion of concentrated sludge

### 15.30 – 15.45: Coffee break

- 15.45 – 16.00: ANGURA LOUIS, DHIMAS SIGIT BIMANTARA, NIKOLETT SZÓLLÓSI, TAMÁS MAGYAR, ATTILA NAGY, TAMÁS JÁNOS, ZSOLT ZOLTÁN FEHÉR: Stochastic parameterization of the Hydrus 3D model for uncertainty-based irrigation control
- 16.00 – 16.15: DOURAIED GUIZANI, ERIKA BUDAY-BÓDI, JÁNOS TAMÁS, ATTILA NAGY: Land cover modelling with Sentinel 2 in water balance calculations of urban sites
- 16.15 – 16.30: ANDREA SZABÓ, ÉVA NIKOLETT KISS, ADRIENN LILI MADAR, SÁNDOR KUN, JÁNOS TAMÁS, ATTILA NAGY: Stress effects of maize on different soil types
- 16.30 – 16.45: ZSOLT VIGH, ATTILA RÁKÓCZI: Drought issues - the experiences of farmers in Békés county with climate change
- 16.45 – 17.00: FEHER ANDREA, RUJESCU CIPRIAN IOAN, TOADER COSMINA-SIMONA, RAICOV MIROSLAV, BANES ADRIAN: Agricultural land market in Romania in the context of the European Union
- 17.00 – 17.15: ZOLTÁN EGRI: Local income convergence clubs in Hungary after the millennium

### Closing of the conference

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## Posters section

- ANDREEA ADRIANA PETCOV, DORA MANUELA ORBOI, ANA MARIANA DINCU, ARIANA VELCIOV, RAUL PASCALAU: Nitrate content present in the underground and in the surface waters collected from some places in Caras Severin county, Romania
- BOGLÁRKA BOZÓKI, GERGŐ PÉTER KOVÁCS, MÁRTA BIRKÁS, ZOLTÁN KENDE, CSABA GYURICZA: A short-term study of soybean (*Glycine max* L.) productivity under different tillage methods
- KOLOZSVÁRI ILDIKÓ, KUN ÁGNES, BÍRÓNÉ ONCSIK MÁRIA, VALKOVSZKI NOÉMI JÚLIA, JANCsó MIHÁLY, BOZÁN CSABA, GYURICZA CSABA: Changes in phenological parameters in a Sudan grass variety irrigated with agricultural effluent water
- FARAS GHAZIYA, ERIKA BUDAY-BÓDI, TAMÁS MAGYAR, ANDREA SZABÓ, ZSOLT ZOLTÁN FEHÉR, SOLANGE PAOLA ACOSTA SANTAMARÍA, JÁNOS TAMÁS, ATILA NAGY: Maize field analysis employing RS for vegetation condition assessment
- SOLANGE PAOLA ACOSTA SANTAMARÍA, ERIKA KUTASY, JÓZSEF CSAJBÓK, FARAS GHAZIYA, TAMÁS MAGYAR, ATILA NAGY, JÁNOS TAMÁS, ERIKA BUDAY-BÓDI: Evaluation of different foliar fertilization treatments on the response of winter oat to drought stress by drones' surveys
- TAMÁS DEMKU, FERENC NÁDOSY: Correlations between rainfall amount and plum fruit size based on the year 2022
- SINAZO AJIBADE, EBENEZER C. NNADOZIE, MIKLOS GULYAS, SIMON BARBARA: Cigarette butt as emerging water contaminants: Possible method for their remediation
- HANAA THARWAT, MOHAMED IBRAHIM: Effects of climate change on Sudan's water resources
- GYÖRGY KEREZSI, NORBERT TÚRI, JÁNOS KÖRÖSPARTI, BALÁZS KAJÁRI, CSABA BOZÁN: Delineating the reed associations in the Szarvas fish ponds with Sentinel-2 satellite imagery and unmanned aerial system
- MAIMELA MAXWELL MODIBA, SIMON BARBARA, DEKEMATI IGOR: Overview of conservation tillage practices for developing and sustaining climate change resilient soils in sub-Saharan Africa
- TIBOR ZSIGMOND, IMRE ZAGYVA, ÁGOTA HOREL: Catchment-based monitoring of vegetation indices for different land use types
- ÁGOTA HOREL, IMRE ZAGYVA, TIBOR ZSIGMOND: Monitoring hydrological and plant growth changes in different inter-row managed vineyards
- BEATRIX BAKTI, KESERŰ ZSOLT, MIHÁLY JANCsó, ILDIKÓ KOLOZSVÁRI, BARBARA SIMON, MIHÁLY ZALAI, CSABA GYURICZA, ÁGNES KUN: Examination of changes in soil quality in an agroforestry system irrigated with reused water and mulched
- NIKOLETT ÉVA KISS, ANDREA SZABÓ, EDIT GORLICZAY, JÁNOS TAMÁS, ATILA NAGY: Examination the effects of extraction time and temperature for compost tea's nutrient content

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SÁNDOR BESZÉDES, ZOLTÁN JÁKÓI, RÉKA DOBOZI, CECILIA HODÚR: Monitoring of organic removal efficiency of wastewater purification and anaerobic digestion processes by dielectric measurement method

GOMBOS BÉLA: Changes in seasonal precipitation conditions between 1951 and 2022 in Szarvas

NIKOLETT SZ. GULYÁS, AWS N. AL-TAYAWI, CECILIA HODÚR, SZABOLCS KERTÉSZ: Effect of 3D printed turbulence promoter on ultrafiltration of dairy wastewater

NICULA-NEAGU MARIOARA, DUMITRESCU GABI, BREZOVAN DIANA, PETCULESCU-CIOCHIN LILIANA, ȘTEF LAVINIA, DRONCA DOREL, AHMADI MIRELA, SILVIA ERINA, MARCU ADELA, MORARIU FLORICA, ZOICAN CATALIN, PEȚ IOAN: Spirulina - a "green" chelating agent in lead-intoxicated freshwater fish

ELDAWWY NADA: The followed strategies to face the limitation of water resources in Egypt

ZOLTÁN FUTÓ, GÁBOR BENCZE: Water utilization of different maize and sunflower hybrids under irrigated and non-irrigated conditions

BODNÁR KÁROLY, RAMONA CIOLAC: The history of an irrigation system in Derekegyháza

EMÍLIA SURI, VINICIUS DEGANUTTI DE BARROS, MAHROKH SHAFIEI, ISTVÁN WALTNER: Assessing the spatial variability of the water footprint of tomato in Hungary, for the years 2010 and 2022

GYÖRGYI GELYBÓ, BOJAN SRDJEVIC, ZORICA SRDJEVIC, PAVEL BENKA, VINICIUS DEGANUTTI DE BARROS, ISTVÁN WALTNER: Occurrence of dry periods in Hungary since 1971

CSENGERI ERZSÉBET: Possibilities of construction of the digital topography model

KÖRÖSPARTI JÁNOS, KAJÁRI BALÁZS, TÚRI NORBERT, BOZÁN CSABA: Sensitivity analysis of methodologies for excess water hazards

JANCSÓ MIHÁLY, SOMLYAI MÁRTA, SZABÓ ANIKÓ, HANYECZ KATALIN: Seasonal variation of groundwater level in the Szarvas Arboretum

MIRELA AHMADI, IOAN PET, LAVINIA ȘTEF, GABI DUMITRESCU, LILIANA PETCULESCU-CIOCHINA, DOREL DRONCA, MARIOARA NICULA-NEAGU, LAURA SMULEAC, RAUL PASCALĂU: Xenobiotic water and the metabolism in biological systems

KRIZSÁN PATRIK: The effect of foliar fertilization on increasing oil content in winter oilseed rape (*Brassica napus* L.) cultivation in the case of a dry season

HUDÁK ROLAND: The spatial variability of precipitation during the growing season of 2018-2019

ÁDÁM KOMLÓSI, GÁBOR BENCZE, ZOLTÁN FUTÓ: Investigation of the responses of different maize hybrids to drought and salt stress

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16<sup>th</sup> June 2023. Friday

9.00 – Visit to the Arboretum of Szarvas (optional)

We reserve the right to change the program.

## CONTACT:

Website of the conference with more details is available: [iscw.hu](http://iscw.hu)

For any additional information please feel free to contact: [info@iscw.hu](mailto:info@iscw.hu)

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