

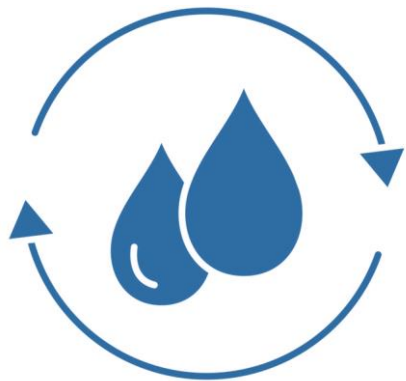
2nd INTERNATIONAL SCIENTIFIC CONFERENCE ON ECOLOGICAL AND ENVIRONMENTAL ENGINEERING

30 June - 1 July 2021

WROCLAW, POLAND



**Environmental Protection
and Development**



**Water and Wastewater
Technology**



Hydrology and River Ecosystems



**Waste Management
and Renewable Energy**

**2nd INTERNATIONAL SCIENTIFIC CONFERENCE ON
ECOLOGICAL AND ENVIRONMENTAL ENGINEERING**

CONFERENCE PROGRAM

Day 1
30th June 2021

10:00-10:30

Conference opening

Organizing Committee Chair
Scientific Committee Chair

Rector of the Wrocław University of Environmental and Life Sciences
Rector of the University of Life Sciences in Lublin

Plenary session

Moderators: Annabela Durão, Wojciech Janczukowicz

- 10:30-11:00** Jan Vymazal: *The history of the use constructed wetlands for wastewater treatment.*
- 11:00-11:30** Robert Kasperek: *Environmental and technical conditions of hydropower development in Poland.*
- 11:30-12:00** Fátima Carvalho: *New strategies in wastewater treatment for reuse.*
- 12:00-12:30** Klaudia Borowiak: *Rare not always means rare - the story of research on rare earth elements in the environment of urban areas.*

12:30-12:45  **Discussion**

12:45-13:00  **Coffee break**

Diagram of the course of thematic sessions at the COEE21 Conference





Ia. European Cooperation in Science and Technology

Moderators: Jan Vymazal, Jan Kazak

13:00-13:15

Nature-based solutions for addressing circularity challenges in cities

G. Langergraber, J. A.C. Castellar, B. Pucher, G. Baganz, D. Milosevic, G. Zeeman, M.B. Andreucci, K. Kearney, R. Pineda-Martos, N. Atanasova

13:15-13:30

Closing water cycles in the built environment through nature-based solutions: The contribution of building greening with vertical greening systems and green roofs

B. Pucher, D. Pearlmutter, C. Calheiros, A. Aicher, K. Hoffmann, T. Nehls, P. Pinho

13:30-13:45

Natural-based solutions for urban water management in circular cities

H. Volkan Oral, Matej Radinja, A. Rizzo, K. Kearney, T.R.Andersen, P. Krzeminski, G. Buttiglieri, D.Cinar, J. Comas, M. Gajewska, M. Hartl, D. Ch. Finger, J. K. Kazak, H. Mattila, P. Vieira, P. Piro, S. A. Palermo, M. Turco, B. Pirouz, A. Stefanakis, M. Regelsberger, N. Ursino, Pedro N. Carvalho

13:45-14:00

Potential integration of nature-based solutions as building blocks for resource recovery systems in cities

E.D. van Hullebusch, G. Zeeman, J. Kissler, M. Vaccari, S. Di Lonardo, M. van Eekert, T. Griessler Bulc, A. Bani, S. Melita, D. Istenič, M. Djolic, A. Schoenborn, M. Carvalho, B. de Gusseme, M. Wirth, B.Z. Haznedaroglu, D. Pavlova, Z. Cetecioglu, E. Plaza, P. Krzeminski

14:00-14:15

Nature-based solutions for urban agriculture in circular cities: challenges, gaps and opportunities

A. Canet-Martí, **R. Pineda-Martos**, R. Junge, T. A. Paço, K. Bohn, C. Delgado, C. M. G. Pedras, G. Alencikiene, S. L. G. Skar, G. F. M. Baganz

14:15-14:30



DISCUSSION

14:30-15:30



Lunch break



Parallel sessions I



Ib. Environmental Protection and Development

Moderators: Mariusz Sojka, Iryna Vaskina

13:00-13:15 *Important places in landscape – investigating the determinants of perceived landscape value in the suburban area of Wrocław*

I. Solecka, T. Rinne, R. Caracciolo Martins, C. Albert, M. Kytta

13:15-13:30 *Climate Change: what takes for everybody to be safe?*

I. Abreu dos Santos, A. Raposo, A. Durão, L. Vasconcelos

13:30-13:45 *Critical ethnography towards environmental protection and sustainable development*

S. Franco, M. Mesquita

13:45-14:00 *Identification and assessment the intensity of transformation of protected landscapes in Lower Silesia region in Poland*

P. Krajewski, I. Solecka

14:00-14:15



DISCUSSION

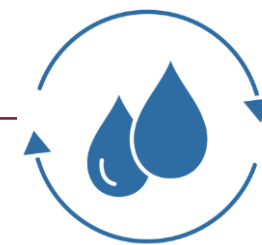
14:30-15:30



Lunch break



Parallel sessions I



Ic. Water and Wastewater Technology

Moderators: Magdalena Kuśnierz, Adam M. Paruch

13:00-13:15

Use of the vertical flow constructed wetland for tuning slaughterhouse wastewater pretreated by immediate one-step lime precipitation

L. Madeira, F. Carvalho, M. Ribau Teixeira, H. Chaves, C. Ribeiro, **A. Almeida**

13:15-13:30

Use of floating beds to improve the quality of surface water mass

T. Borralho Carvalhos, A. Durão, D. Santos, A. Almeida

13:30-13:45

Application of constructed wetlands to treat domestic wastewater in Indonesia a case study and a country-wide perspective

M.C. Perdana

13:45-14:00

The occurrence of chloroacetanilide herbicides in tile drainage and their removal in constructed wetlands

J. Vymazal, **A. Sochacki**, P. Fučík, M. Šereš, M. Kaplická, T. Hnátková, Z.Chen

14:00-14:15



DISCUSSION

14:30-15:30



Lunch break



IIa. Environmental Protection and Development

Moderators: Klaudia Borowiak, Anabela Cândida Ramalho Durão

15:30-15:45

Level of major and trace elements in honey and bee pollen samples from the region of Peja, Kosovo

G. Kastrati, M. Paçarizi, F. Sopaj, K. Tašev, T. Stafilov, R. Šajn

15:45-16:00

The assessment of the level of accumulation of rare earth elements in relation to urban landscape - a case study

M. Lisiak-Zielińska, A. Hanć, A. Budka, A. Cakaj, K. Borowiak

16:00-16:15

The assessment of landscape quality of Polish landscape parks based on the indicators framework

B. Sowińska-Świerkosz, Joan García

16:15-16:30

Water-sediment physicochemical dynamics in a large reservoir in the Mediterranean region under multiple stressors

P. Palma, A.M. Penha, M. H. Novais, S. Fialho, A. Lima, C. Mourinha, P. Alvarenga, A. Rosado, M. Iakunin, G. Rodrigues, M. Potes, M.J. Costa, M. Morais, R. Salgado

16:30-16:45

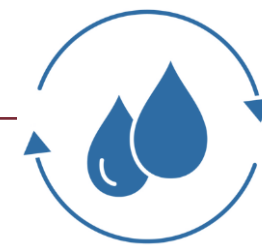


DISCUSSION

End of Day 1



Parallel sessions II



I**ib.** Water and Wastewater Technology

Moderators: Adam Sochacki, Agnieszka Bus

15:30-15:45

Intensification of anaerobic conversion of wastewater and sewage sludge: trends analysis

V. Chubur, M. Balintova, **Y. Chernysh**, V. Shtepa, S. Demcak

15:45-16:00

*Possibility to use of crude peroxidase from *Bjerkandera adusta* CCBAS 930 to industrial dyes biodegradation*

K. Rybczyńska-Tkaczyk

16:00-16:15

Organic fouling of strongly basic anion exchange resin by image and FTIR analyses

P. Wiercik, P. Fassa, M. Kuśnierz, T. Garbowski, P. Chrobot

16:15-16:30

Quantitative analysis of the bacteria from activated sludge

M. Domańska, J. Kamińska

16:30-16:45

Processing of beach wrack in reed beds system to close the nutrient cycle

A. Kupczyk, K. Kołecka, **M. Gajewska**

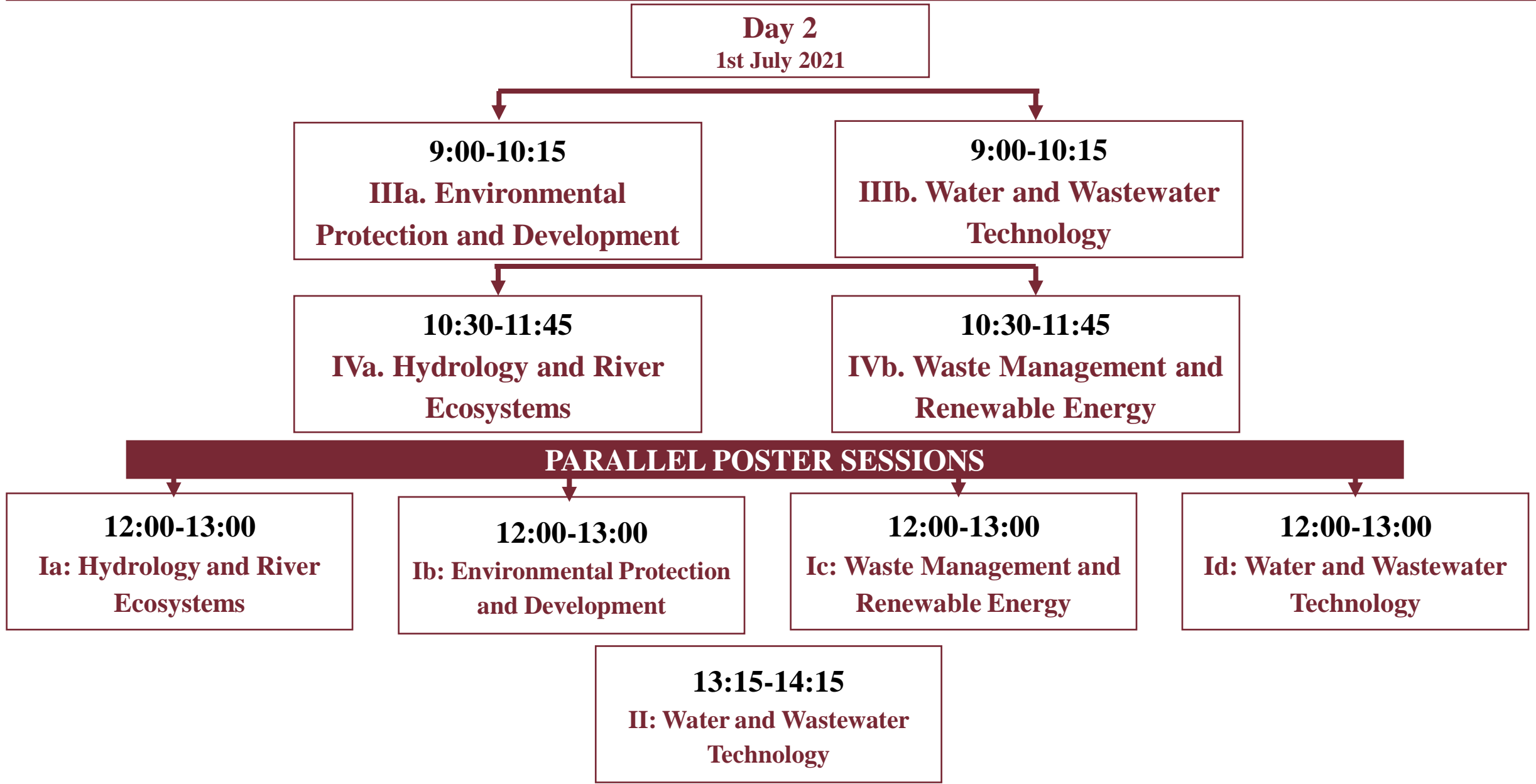
16:45-17:00



DISCUSSION

End of Day 1

Diagram of the course of thematic sessions at the COEE21 Conference





Parallel sessions III



IIIa. Environmental Protection and Development

Moderators: Robert Kasperek, Guenter Langergraber

9:00-9:15

City's Climate Action Plan: EU experience for Ukraine

I. Vaskina, O. Melnyk, V. Skliar, I. Kovalenko, M. Sherstiuk

9:15-9:30

Evaluation of landscape quality along three roads categories – a case study

K. Borowiak, A. Abdelmajeed, M. Lisiak-Zielińska, A. Budka, A. Cakaj, Z. Jankowska

9:30-9:45

The influence of the edge effect on carbon sequestration in forest ecosystems

J. Czaja, Z. Wilczek

9:45-10:00

Urban water footprint and water scarcity index to support water governance in cities: a Polish case study

E. Burszta-Adamiak, **W. Fiałkiewicz**

10:00-10:15



DISCUSSION

10:15-10:30



Coffee break



Parallel sessions III



IIIb. Water and Wastewater Technology

Moderators: Agnieszka Operacz, Lisa Paruch

9:00-9:15

Relationship between floc morphology and solid-liquid separation using an intelligent detection method

M. Kuśnierz, J. Stańczyk, P. Wiercik

9:15-9:30

Agro-industrial water reuse in fertigation: a small comparative study

T. Correia, C. Paiva, M. Regato, **F. Carvalho**

9:30-9:45

Landfill leachate treatment by immediate one-step lime precipitation, coagulation-flocculation and absorption with powdered activated carbon

A. Afonso, A. Pinto, A. Lopes, A. Fernandes, A. Almeida, **F. Carvalho**

9:45-10:00

The importance of a water management plan in airports – case study for the new international airport in Florianopolis/SC, Brazil

J.M.R. Tavares, C.F. Flor, R.A. Mohedano

10:00-10:15



DISCUSSION

10:15-10:30



Coffee break

Parallel sessions IV

IVa. Hydrology and River Ecosystems

Moderators: Tomasz Tymiński, Maria de Fátima Nunes de Carvalho

10:30-10:45

Impact of Kaunas Lagoon on the Nemunas River status

L.Česonienė, M. Dapkienė

10:45-11:00

Modelling of Tesla Valvular Conduit as an energy dissipation system in fish pass pools

J. Błotnicki, **M.F. Gruszczyński**

11:00-11:15

Comparative analysis of the loads of nutrients in the waters of the Turawa Dam Reservoir within the installation improving water quality

B. Buta, M. Wiatkowski, Ł. Gruss, P. Tomczyk

11:15-11:30

Influence of the installation improving the water quality of the Turawa reservoir on the concentration of phosphorus compounds

Ł. Gruss, B. Buta, M. Wiatkowski, K. Pulikowski, P. Tomczyk, R. Kasperek

11:30-11:45



DISCUSSION

11:45-12:00



Coffee break





Parallel sessions IV



IVb. Waste Management and Renewable Energy

Moderators: Alina Kowalczyk-Juško, Yelizaveta Chernysh

10:30-10:45

Door-to-door waste collection: case study of the municipality of Alvito, Portugal

A. Pardal, C. Monteiro, T. Delgado

10:45-11:00

Assessment of irrigation water quality of Kosovo during the year 2015

S. Rizani, F. Feka, B. Durmishi, H. Çadraku, K. Lluga-Rizani

11:00-11:15

Involvement of keratinolytic fungi derived from rookery soils in the management of poultry industry post-production waste for practical use

J. Bohacz, M. Możejko, I. Kitowski, J. Bednarz

11:15-11:30

Environmental aspects of discharging food waste into the sewage system

J. Rodziewicz, A. Mielcarek, W. Janczukowicz, K. Bryszewski

11:30-11:45

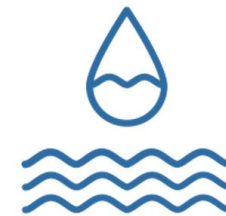


DISCUSSION

11:45-12:00



Coffee break



Ia. Hydrology and River Ecosystems

Moderators: Maciej Gruszczyński, Laima Cesoniene

12:00-12:05

The Macrophyte Index for Rivers (MIR) to running water assessment in river Klina to Republic of Kosovo

P. Bytyçi, A. Shala-Abazi, M. Hyseni-Spahiu, F. Feka, O. Fetoshi, G. Bonifazi, F. Millaku

12:05-12:10

The role of autochthonous organic matter production in the process of suspended sediment aggregation in retention reservoirs

M. Cieśla, R. Gruca-Rokosz, L. Bartoszek

12:10-12:15

Hydraulic effect of vegetation zones in open channel – an experimental study on the turbulence distribution

T. Tymiński, K. Wolski

12:15-12:20

Spatio-temporal changes of water pollution, and its sources and consequences in the Bug River, Poland

A. Grzywna, U. Bronowicka-Mielniczuk, K. Połec

12:20-12:25

Assessment of the impact anthropogenic sources and natural processes on the river bottom sediments chemistry in Poland

M. Sojka, J. Jaskuła

12:25-12:30

Assessment of heavy metals concentration in bottom sediments and their ecological risk in two the biggest rivers in Poland

J. Jaskuła, M. Sojka, R. Wróżyński

12:30-12:35

Risk Assessment of pesticides quantified in the Lage reservoir (Alqueva project, Southern of Portugal)

A. Catarino, I. Martins, C. Mourinha, P. Palma

12:35-12:40

Surface water ecological potential assessment using ecotoxicological endpoints: the case study of Lage reservoir (Southern of Portugal)

A. Catarino, I. Martins, C. Mourinha, P. Palma

12:40-12:45

The role of the sediments of the river-lake system and the microbiological activity in the hyporheic zone

A. Kuriata-Potasznik, S. Szymczyk, A. Bęś, M. Sidoruk, A. Skwierawski, S. Kobus

12:45-12:50

Groundwater level time series prediction in areas threatened by water deficits

J. Kajewska-Szkudlarek, I. Kajewski, J. Kubicz

12:50-13:00



DISCUSSION

13:00-13:15




Coffee break



Ib. Environmental Protection and Development

Moderators: Barbara Sowińska-Świerkosz, Magdalena Domańska

12:00-12:05	<i>Eco-citizenship as a way of responding to the challenges of the 2030 agenda</i> A. Durão , Z. Campos, F. Afonso, A. Raposo
12:05-12:10	<i>Environmental education for sustainability - some actions carried out at IPBeja</i> A. Durão , A. Almeida, I. Patanita, A. Pardal, M. Silveira, A. Raposo
12:10-12:15	<i>Through methodology to reach environment</i> A. Raposo , A. Durão
12:15-12:20	<i>The role of soil in natural attenuation processes of heavy metals migration to the groundwater</i> A. Operacz , A. Bigaj, K. Kurek, P. Bugajski
12:20-12:25	<i>Sorption of heavy metals by sewage sludge and their mixtures with soil</i> R. Kowalik , M. Widlak, A. Widlak
12:25-12:30	<i>Anatomical responses of taraxacum officinale l. to heavy metal pollution</i> A. Cakaj , M. Drapikowska, M. Lisiak-Zielińska, K. Borowiak, K. Wojciechowicz
12:30-12:35	<i>Correlation of agronomic parameters and agricultural practices in permanent crops of a Mediterranean irrigated area in Southern Portugal</i> I. Martins , A. Catarino, C. Mourinha, P. Alvarenga, J. Dores, M. Patanita, A. Tomaz, P. Palma
12:35-12:40	<i>Ecotoxicological evaluation of olive grove soils in an irrigated area of Alentejo region (Southern of Portugal)</i> I. Martins , A. Catarino, C. Mourinha, P. Alvarenga, J. Dores, M. Patanita, A. Tomaz, P. Palma
12:40-12:45	<i>Multifunctional roofs as a tool for mitigation of effects of climate change - MCER case study</i> A. Baryła, A. Karczmarczyk
12:45-13:00	 DISCUSSION



Ic. Waste Management and Renewable Energy

Moderators: Kamila Rybczyńska-Tkaczyk, Gabriel Borowski

12:00-12:05

Composting with the addition of fly ash from thermal combustion of sewage sludge

P. Wichowski, J. Czajkowska, M. Malarski

12:05-12:10

Spatial factors affecting biogas and biomethane investments planning

P. Pochwatka

12:10-12:15

Selection of the location of an agricultural biogas plant - legal, technical and environmental aspects (case study)

A. Kowalczyk-Juśko, A. Misztal

12:15-12:20

Energy potential of hydrotechnical constructions on the Włodawka River

A. Mazur, A. Kowalczyk-Juśko, A. Grzywna

12:20-12:25

Assessment of waste-derived materials as amendments of soils degraded by mining activities

C. Mourinha, A. Catarino, I. Martins, P. Alvarenga, P. Palma, C. Alexandre, N. Cruz, F. Silva, A.P. Gomes, L.A.C. Tarelho, S.M. Rodrigues

12:25-12:30

Building materials as sources of micropollutants - an overview of the literature

S. Ziembowicz, M. Kida, P. Koszelnik

12:30-12:35

Influence of microplastic decomposition conditions on the emission of pollutants in the aquatic environment

M. Kida, S. Ziembowicz, P. Koszelnik

12:35-12:40

Methodology for energy efficiency improvement of WWTP operating under uncertainties through heat integration of the processes

R. Vladova, N. Vaklieva-Bancheva

12:40-12:50

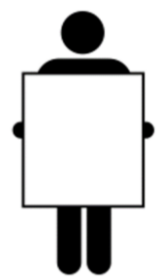


DISCUSSION

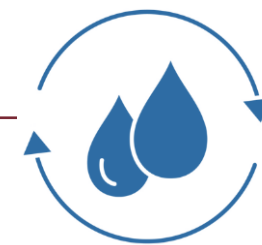
13:00-13:15



Coffee break




Parallel POSTER sessions I

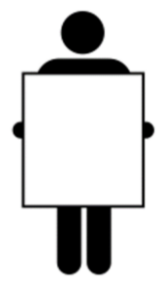


Id. Water and Wastewater Technology

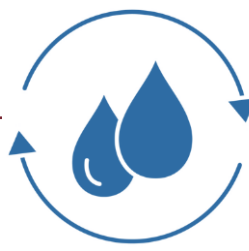
Moderators: Karolina Kurek, Agnieszka Karczmarczyk

12:00-12:05	<i>Comparison of selected sorption materials for removal of toxic metals from water</i> S. Moravčikova , R. Biela
12:05-12:10	<i>Post-treatment of coke wastewater using a new generation flocculent</i> A. Popena , M. Włodarczyk-Makuła, W. Bajdur
12:10-12:15	<i>The impact of different disinfectants on bacteria in drinking water</i> A. Siedlecka , M. Wolf-Baca
12:15-12:20	<i>Use of by-products of nitrates reduction by ZVI for removal of phosphates from industrial wastewater</i> E. Wiśniowska , M. Włodarczyk-Makuła
12:20-12:25	<i>Impact of atmospheric precipitation on the volume of wastewater inflowing to the wastewater treatment plant in Nowy Targ in terms of the costs of their treatment</i> P. Bugajski , E. Nowobilska-Majewska, M. Majewski
12:25-12:30	<i>Evaluation of the possibility of using natural wastewater treatment methods to improve the quality of water discharged from fish farms</i> M. Sidoruk
12:30-12:35	<i>Changes in the structure of activated sludge biocenosis of MBR reactors</i> M. Polus , Z. Mucha
12:35-12:40	<i>Effectiveness of the innovative installation for dewatering and neutralization of sewage sludge from home sewage treatment plants</i> M. Gizińska-Górna
12:40-12:50	 DISCUSSION

13:00-13:15  **Coffee break**




POSTER session II



II. Water and Wastewater Technology

Moderators: Justyna Czajkowska, Piotr Bugajski

13:15-13:20	<i>The analysis of sewage quality and reliability of biological wastewater treatment process</i> K. Kurek , P. Bugajski, A. Operacz, A. Almeida, P. Śliz, K. Józwiakowski
13:20-13:25	<i>Efficiency and technological reliability of contaminant removal in household WWTPs with activated sludge</i> A. Micek , K. Józwiakowski, M. Marzec, A. Listosz, T. Grabowski
13:25-13:30	<i>Efficiency of phosphorus removal by reactive filters treating on-site wastewater treatment plant effluent - preliminary results</i> A. Karczmarczyk , E. Ptasńska, A. Bus, A. Baryła
13:30-13:35	<i>How wastewater temperature and organic compounds content shape the efficiency of ammonium nitrogen removal in a small wastewater treatment plant?</i> P. Bugajski, K. Józwiakowska
13:35-13:40	<i>Suspended reactive filters (SRFs) for phosphorus harvesting - ecological and economic analysis</i> A. Bus , A. Karczmarczyk, A. Baryła
13:40-13:45	<i>Sorption of copper from model solution by natural and MnO₂ coated zeolite</i> S. Demcak , Z. Kovacova, M. Balintova, L. Stofejova, Y. Chernysh
13:45-13:50	<i>Suitability of ceramic membranes for removal of natural organic matter from water</i> B. Malczewska
13:55-14:00	<i>Assessing the impact of household filters on Natural Organic Matter (NOM) removal</i> B. Malczewska
14:00-14:05	<i>Use of the Electro Biological Reactor (EBR) for tomato cultivation wastewater treatment</i> A. Mielcarek , K. Bryszewski, J. Rodziewicz, W. Janczukowicz
14:05-14:15	 DISCUSSION

14:15 – 14:45 Closing of the COEE21 Conference