3rd International Conference on Sustainable Futures: Environmental, Technological, Social and Economic Matters

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Abstract. This paper represents a preface to the Proceedings of the 3rd International Conference on Sustainable Futures: Environmental, Technological, Social and Economic Matters (ICSF 2022) held at the Kryvyi Rih, Ukraine, 24–27 May 2022. Background information and the organizational structure of the meeting, program committee, and acknowledgments of the contributions of the many people who made the conference a success are presented.

1. Background

The International Conference on Sustainable Futures: Environmental, Technological, Social and Economic Matters (ICSF) is a peer-reviewed international conference, which is the premier interdisciplinary forum for life scientists, social scientists, engineers, and practitioners to present their latest research results, ideas, developments, and applications (figure 1).

Since 2020, ICSF occupies contributions in all aspects of sustainable development, focused on the intersection of sustainability, environment and technology, and their more significant
Implications for a corporation, government, education institutions, regions, and society both at present and in the future [1–3].

ICSF 2022 has two presentation levels, Pre-conference Workshops and Main Conference.

1.1. Sustainable Development of Mining Science and Industry (SusDevMiningSci’2022)
Sustainable development of Mining Science and Industry workshop (SusDevMiningSci’2022) is a peer-reviewed international workshop devoted to the latest scientific and technological achievements in mine safety, geological study, and safeguarding of mineral resources.

SusDevMiningSci’2022 Program Committee chair is Dr. Serhii Chukharev (figure 2).

1.2. Geography for Sustainable Development (GSD-2022)
Geography for Sustainable Development (GSD-2022) is a peer-reviewed international workshop. During the GSD-2022, the researchers who are committed to the problems of geography for sustainable development can present their latest research findings, ideas, developments and programs.

GSD-2022 main topics of interest are:

- Geographical bases of sustainable future: methodological bases
- Problems and prospects for the development of physical and socio-economic geography in the context of sustainable future
- Regional problems of sustainable future and local lore research of territories
- Cartographic research and geoinformatics: theory and practice
- Noosphere nature management is the key to a sustainable future
- The theory of sustainable future in geographical education

GSD-2022 Program Committee chair is Dr. Olga Bondarenko (figure 3).
Figure 2. SusDevMiningSci’2022 session chairs: Serhii Chukharev, Yulian Hryhoriev, Andrii Striuk, and Serhiy Semerikov.

1.3. Biodiversity and Ecosystems Sustainability (BiodES-2022)

Biodiversity and Ecosystems Sustainability (BiodES) is a peer-reviewed international workshop focusing on solving problems of biodiversity conservation and ecosystem sustainability from the point of view of applied science and education, which is the important basis for solving global problems of the mankind and sustainable futures.

BiodES-2022 contributes to all aspects of solving problems of biodiversity conservation and ecosystem sustainability by reflecting the environmental, technological, physiological and biochemical aspects of the problem; methods of application of modern information and communication technologies and mathematical approaches for their solution; discussion of modern educational concepts aimed at solving the problems of ecosystem sustainability with the purpose of sustainable development of the future.

BiodES-2022 main topics of interest are:

- Biodiversity in animals and plants as the indicator of ecosystem sustainability
- Ecological monitoring in preservation of biodiversity and ecosystem sustainability
- Physiological, biochemical and technological aspects of biodiversity and ecosystem
sustainability

- Sustainable development in the context of global climate change
- Biodiversity and ecosystem functioning
- Risks to human well-being from the degradation of ecosystems and species

BiodES-2022 Program Committee chair is Dr. Viacheslav Osadchyi (figure 4).

1.4. Water Management and Environmental Engineering (WaterManEnvE-2022)

*Water Management and Environmental Engineering* (WaterManEnvE-2022) is a peer-reviewed international workshop occupies contributions in all aspects of water management and environmental engineering, environmental education and modern educational technologies.

WaterManEnvE-2022 main topics of interest are:
• Water management and water resources use
• Monitoring of water resources
• Irrigation and drainage
• Water treatment and water supply
• Hydraulic engineering & hydraulics
• Hydropower, etc.

WaterManEnvE-2022 Program Committee chairs is Dr. Serhii Klimov (figure 5).

Figure 5. WaterManEnvE-2022 session chairs: Serhii Klimov, and Pavlo Nechypurenko.

1.5. Innovative Approaches for Solving Environmental Issues (IASEI-2022)

Innovative Approaches for Solving Environmental Issues (IASEI-2022) is a peer-reviewed international workshop focusing on advanced research in environmental science.

IASEI-2022 main topics of interest are:
• Environmental protection
• Nuclear and radiation safety
• Complex, economic and technological solutions
• Problems of training and advanced training of specialists in the field of energy and ecology

IASEI-2022 Program Committee chair is Dr. Andrii Iatsyshyn (figure 6).

1.6. Main Conference

Workshops and conference presentations are grouped into 7 tracks (figure 7):

• Sustainable Development of Mining Science and Industry [4–15]
• Innovative Approaches for Solving Environmental Issues [16–27]
• Geotechnical and Geoenvironmental Engineering, Sustainable Mining [28–39]
• Sustainable Environment and Environmental Management [40–50]
• Sustainable Energy, Building and Architecture, Materials and Technologies [51–58]
• Biodiversity and Ecosystems Sustainability [59–77]
• Sustainable Cities and Society. Governance, Legislation and Policy for Sustainability [78–87]
This volume contains the papers presented at ICSF 2022: 3rd International Conference on Sustainable Futures: Environmental, Technological, Social, and Economic Matters held on May 24-27, 2022 in Kryvyi Rih, Ukraine.

On the first stage, authors were invited to submit abstracts (https://www.morressier.com/call-for-abstracts/ICSF-2022). There were 169 submissions. Each abstract was reviewed by 2 program committee members. The committee decided to accept 152 abstracts [88].

On the second stage, authors of accepted abstracts were invited to submit full research papers including surveys, tutorials, perspective/colloquia articles in conference topics of interest (https://www.morressier.com/call-for-papers/6127d6ec0bfa8e001283d3a2). There were 125 submissions received. Each submission was reviewed by at least 3 program committee members. The committee decided to accept 84 papers.

The spread of the coronavirus that causes COVID-19 and the ongoing Russian invasion of Ukraine has changed the conference organization (figure 8). Therefore, the 3rd International Conference on Sustainable Futures: Environmental, Technological, Social and Economic Matters (ICSF 2022) took place on 24–27 May 2022 at the Kryvyi Rih National University, Ukraine, both in-person and online.

More than 130 attendees from 14 countries are joined to ICSF 2022 using Zoom. The presentation slots were defined as follows:

- invites talks (30 min): 20 min presentation, 10 min question answering and discussion,
- other talks (15 min): 10 min presentation and 5 minutes question answering and discussion.

The full program is available at the https://icsf.ccjournals.eu/2022/ where details of the sessions, usually headed by one or more invited presentations. Video records of talks are available at the Not So Easy Science YouTube channel (https://www.youtube.com/channel/UCH3gego79m-ofC1NEgEzMuA).

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**Figure 6.** IASEI-2022 session chairs: Valeriia Kovach, Anna Iatsyshyn, and Andrii Iatsyshyn.
2. ICSF 2022 program committee

- Dr. Rovshan Abbasov, Head of the Department of Geography and Environment at Khazar University and the Representative of the Pure Earth International Organization in Azerbaijan, Azerbaijan
- Assoc. Prof. Leon A. Abdillah, Associate Professor of Computer Science and Information Systems, Department of Information Systems, Universitas Bina Darma, Palembang, Indonesia
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Figure 8. Conference in Kryvyi Rih during the War (https://tinyurl.com/ynkyucf5).
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3. Conclusion

The vision of the ICSF 2022 is to create a leading interdisciplinary platform for researchers, practitioners and educators, to present and discuss the most recent innovations, trends, and concerns as well as practical challenges encountered and solutions adopted in the fields of sustainability.

3rd installment of ICSF was organized by the Academy of Cognitive and Natural Sciences (https://acnsci.org) in cooperation with Kryvyi Rih National University, Kryvyi Rih State Pedagogical University, National University of Water and Environmental Engineering, Bogdan Khmelnitsky Melitopol State Pedagogical University and State Institution “The Institute of Environmental Geochemistry of National Academy of Sciences of Ukraine”.

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We are looking forward to excellent presentations and fruitful discussions, which will broaden our professional horizons. We hope all participants enjoy this conference and meet again in a more friendly, hilarious, and peaceful further ICSF 2023. The next meeting in the series is the 4th International Conference on Sustainable Futures: Environmental, Technological, Social and Economic Matters, 2023, Kryvyi Rih, Ukraine (https://icsf.ccjournals.eu/2023/).

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