

## WP3-A6. Sudjelovanje na kongresu radi objave rezultata WP3.



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## 1. UVOD

### Ciljevi

Zadatak A6 unutar WP3 proveden je kako bi se osiguralo da se međurezultati proizvedeni u okviru Radnog paketa 3 učinkovito distribuiraju i akademskoj zajednici i relevantnim profesionalnim publikama. Osim same vidljivosti, sudjelovanje na kongresu korišteno je kao strukturirani mehanizam za potvrdu pristupa projektu i pozicioniranje RockChaina u aktualne međunarodne rasprave o održivosti, kružnom gospodarstvu i digitalnoj transformaciji praksi upravljanja otpadom.

U tom kontekstu, međunarodni kongresi smatrani su posebno prikladnima jer su objedinjavali multidisciplinarne profile—od pravnih i političkih stručnjaka do inženjera i stručnjaka za okoliš—čime su odražavali međusektorsku prirodu WP3 izlaza (tehničke inovacije, regulatorno oblikovanje i praktične implikacije). Cilj stoga nije bio samo komunicirati nalaze WP3, već i potaknuti informirani dijalog s vanjskim dionicima te dobiti znanstvene povratne informacije koje mogu ojačati jasnoću, relevantnost i prenosivost rezultata prikazanih u ovom radu.

### Aktivnosti

Kako bi ostvario te ciljeve, konzorcij je proveo ciljane aktivnosti širenja i angažmana. Prvo su identificirani i odabrani prikladni kongresi na temelju tematske usklađenosti s prioritetima WP3, uključujući održivost, građevinski i ruševni otpad, putove implementacije kružnog gospodarstva, inovativne tehnologije (s naglaskom na blockchain) i povezane pravne perspektive.

Nakon odabira, projektni partneri pripremali su i predali sažetke i konferencijske radove temeljene na WP3 međurezultatima, osiguravajući da su doprinosi oblikovani na način pristupačan raznolikim publikama, a da pritom ostanu znanstveno rigorozni. Sudjelovanje u znanstvenim sesijama potom se odvijalo kroz formalne prezentacije članova projektnog tima, uz profesionalne aktivnosti razmjene poput umrežavanja, rasprava s istraživačima i praktičarima te mogućnosti razmjene znanja koje su poticale vidljivost i potencijalnu buduću suradnju.

Kao što je dokumentirano u odjeljku Rezultati ovog izvješća, ove su mjere provedene kroz konkretne konferencijske priloge koji se bave (i) pravnim aspektima upravljanja građevinskim i rušenjem otpada te (ii) blockchainom vođenim okvirom za kružno upravljanje otpadom u građevinarstvu.

Ukratko, poduzeti su sljedeći koraci:

- identifikaciju prikladnih kongresa usklađenih s temama WP3 (održivost, građevinski otpad, kružna ekonomija, inovativne tehnologije (blockchain) i pravne perspektive);
- pripremu sažetaka i konferencijskih radova;
- sudjelovanje u znanstvenim sesijama, uz prezentacije članova projektnog tima;
- umrežavanje i razmjena znanja s međunarodnim istraživačima i praktičarima.

## Utjecaj

Sveukupno, Zadatak A6 povećao je vidljivost rezultata WP3 u međunarodnim akademskim i profesionalnim forumima te ojačao njihovu vjerodostojnost kroz prezentaciju u uspostavljenim kanalima distribucije. Također je ojačao širenje pravnih i tehnoloških perspektiva o upravljanju građevinskim i ruševinskim otpadom, podržavajući integriranije razumijevanje regulatornih zahtjeva uz digitalna rješenja za sljedivost.

Važno je napomenuti da je format kongresa potaknuo interdisciplinarni dijalog između stručnjaka za pravo, inženjerstvo i održivost—rezultat izravno usklađen s RockChainovim međusektorskim opsegom—te pružio prilike za prikupljanje vanjskih znanstvenih povratnih informacija koje mogu informirati usavršavanje, komunikaciju i prihvaćanje WP3 rezultata. Time su ove akcije širenja podržale šire Erasmus+ ciljeve promicanjem strukturirane razmjene znanja i uključivanjem izazova održivosti i tema digitalnih inovacija u međunarodna istraživanja i profesionalne agende. Zaključno: postignuti su sljedeći učinci:

- povećana vidljivost rezultata WP3 na međunarodnim akademskim forumima;
- ojačao širenje pravnih i tehnoloških perspektiva o upravljanju građevinskim i rušenjem otpada;
- poticao interdisciplinarni dijalog između stručnjaka za pravo, inženjerstvo i održivost;
- podržao je ciljeve Erasmus projekta promicanjem razmjene znanja i integracijom izazova održivosti u međunarodne istraživačke agende.

## 2. REZULTATI

### 2.1. 17. međunarodna konferencija Istraživanje, obrazovanje i napredak u trećem tisućljeću: izazovi u pravu i javnoj upravi

**Naslov:** *Pravne perspektive vezane uz upravljanje građevinskim i ruševskim otpadom.*

Predstavljeno na 17. međunarodnoj konferenciji Istraživanje, obrazovanje i napredak u trećem tisućljeću: izazovi u pravu i javnoj upravi (15.-16. svibnja 2025., Galați, Rumunjska – online).

**Sažetak:**

Zaštita okoliša ostaje jedna od gorućih želja našeg vremena, a ljudi su sve više zabrinuti za pronalaženje konkretnih rješenja u smjeru prepoznavanja, prikupljanja i recikliranja različitih vrsta otpada, uključujući građevinski i ruševinski otpad. Sve ove javne politike temelje se na načelu Europske unije prema kojem je zagađivač taj koji plaća, želeći odgovornost za sve koji stvaraju ostatke. Stoga su u okviru ove analize identifikacija i predavljanje glavnih pravnih propisa vezanih uz upravljanje građevinskim i rušenjem otpadom nužni koraci za podizanje javne svijesti o tom pitanju.

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**Program konferencije:**

[https://www.fdsa.ugal.ro/images/UPDATE\\_DANA/Program\\_EEP\\_2025\\_6.pdf](https://www.fdsa.ugal.ro/images/UPDATE_DANA/Program_EEP_2025_6.pdf)



"Dunarea de Jos" University of Galați, Romania,  
The Faculty of Law and Administrative Sciences  
Universite Paris-Est Créteil, France,  
Cahul State University "Bogdan Petriceicu Hasdeu", Republic of Moldova  
Galați County Council, Romania  
Faculty of Law, State University of Moldova, Republic of Moldova  
Aleksandër Moisiu University of Durrës, Albania  
Faculty of Law University of Tirana, Albania  
Academy of Legal Sciences from Romania

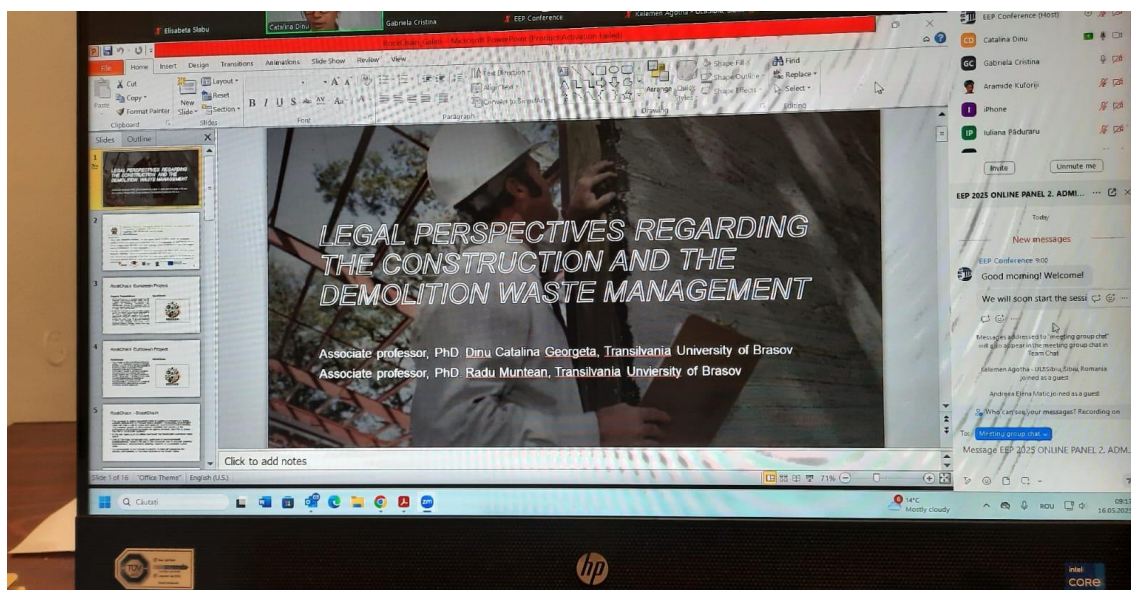
17<sup>th</sup> INTERNATIONAL CONFERENCE  
EXPLORATION, EDUCATION AND  
PROGRESS IN THE THIRD  
MILLENNIUM: CHALLENGES IN LAW  
AND PUBLIC ADMINISTRATION

Galati  
15-16<sup>th</sup> MAY 2025

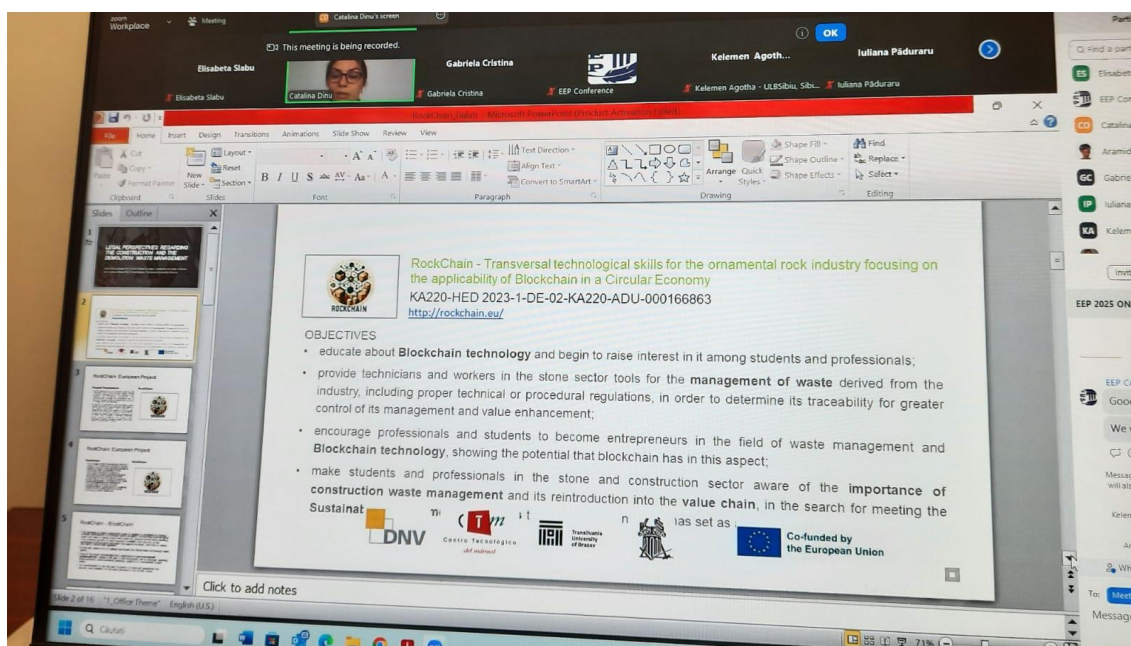
Slika 1: Program konferencije 17. međunarodne konferencije Istraživanje, obrazovanje i napredak u trećem tisućljeću

### Vremenska crta izlaza

| Naslov                                                                  | Vrsta              | Datum                   | Status        | Kanal za distribuciju    |
|-------------------------------------------------------------------------|--------------------|-------------------------|---------------|--------------------------|
| Pravne perspektive vezane uz upravljanje građevinskim i rušenjem otpada | Konferencijski rad | 15. - 16. svibnja 2025. | Predstavljeno | EEP konferencija, Galați |



Slika 2: Slike online prezentacije.



Slika 3: Slike online prezentacije.



**INTERNATIONAL CONFERENCE  
EXPLORATION, EDUCATION AND  
PROGRESS IN THE THIRD MILLENNIUM:  
CHALLENGES IN LAW AND PUBLIC  
ADMINISTRATION  
(EEP 2025)**



**THE CHALLENGES OF  
PUBLIC ADMINISTRATION**

09:00-11:00

**KEYNOTE SPEAKERS:**

**VASILICA NEGRUȚ**, "Dunărea de Jos" University of Galati, Romania

**MĂDĂLINA ELENA MIHĂILESCU**, "Dunărea de Jos" University of Galati, Romania

**ELISABETA SLABU**, "Dunărea de Jos" University of Galati, Romania

*Theoretical and Practical Aspects regarding the Duties of the Ethics Advisor*

**Andreea Elena Matic**, "Dunărea de Jos" University of Galati, Romania

*Rule of Law, Politics and Governance in Nigeria's Fourth Republic*

**Cletus Egugbo**, Department of Public Administration, Olabisi Onabanjo University, Ago-Iwoye, Nigeria

*Rethinking Contractual Risk in Public Administration: Lessons from Microsoft ECIF Operations*

**Constantin Plamadeala**, University of Debrecen, Debrecen, Hungary

*Legal Perspectives regarding the Construction and the Demolition Waste Management*

**Catalina Georgeta Dinu**, Transilvania University of Brasov, Romania

**Radu Muntean**, Transilvania University of Brasov, Romania

*Citizens' Right to Freedom of Expression vs. States' Obligation to Combat Disinformation*

**Elisabeta Slabu**, Dunărea de Jos University of Galati, Faculty of Law and Administrative Sciences, Legal and Administrative Research Center, Galati, Romania

*Slika 4: Dnevni red prezentacije.*

**Citat iz članka:**

Dinu, C. G. i Muntean, R. (2025) "Pravne perspektive vezane uz izgradnju i upravljanje otpadom od rušenja", *Annali Sveučilišta "Dunărea de Jos" u Galatiju. Pravne znanosti. Fascikl XXVI*, 8(1), str. 184-193.



PRIVATE LAW  
Legal Perspectives Regarding the  
Construction and the Demolition Waste Management

Catalina Georgeta DINU<sup>1</sup>

Radu MUNTEAN<sup>2</sup>

**Abstract:** *Protecting the environment remains one of the burning desires of our times and people has begun more and more concerned with finding concrete solutions in the direction of identifying, collecting and recycling different types of waste, including construction and demolition waste. All these public policies are based upon a principle in the European Union according to which the polluter is the one who pays, wanting responsibility for all those who generate residues. Therefore, in the framework of this analysis, the identification and the presentation of the main legal regulations regarding the construction and demolition waste management are necessary steps for improving the public awareness on the matter.*

**Keywords:** *waste; management; construction; demolition; rock materials*

### 1. Argumentation

Protecting the environment remains one of the burning desires of our times and people has begun more and more concerned with finding concrete solutions in the direction of identifying, collecting and recycling different types of waste, including construction and demolition waste.

All these public policies are based upon a principle in the European Union according to which the polluter is the one who pays, wanting responsibility for all those who generate residues.

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ALS, Vol.8, no.1, pp. 184-193

Construction and demolition waste is among these types of debris left over from various construction site activities and many others, emerging the need to collect and recycle them in order to be reused and to successfully replace natural resources. Local public authorities, sanitation operators and economic operators must know the legislation and how to manage construction and demolition waste, so that nature does not suffer.

Construction and demolition waste results from the construction of buildings, roads, from the total or partial demolition of some buildings, but also from the activities of renovation, rehabilitation, repair or consolidation of various civil or industrial constructions or dredging and unclogging activities. The composition of these wastes is heterogeneous (material scraps, chemical products, auxiliary materials). In recent times, there is a growing emphasis on recycling and reuse, because they save the natural resources.

In this context, the concept of circular economy and waste management appears as an opportunity to change the current production and consumption model.

This is where Blockchain technology finds its utility. It initially appeared within electronic payment systems, but currently, the advantages of applying the technology can also be found in other sectors, such as insurance, healthcare, transport and logistics, industry (waste management, product quality, process verification, etc.) and many others, as it can help improve company management and find new business models.

For example, The RockChain is a co-funded project by the European Union that proposes basic training in waste management in the building stone industry, for students, technicians and professionals, through the combined use of new technologies such as Blockchain, Internet of Things (IoT) and Big Data.

In the EU, construction and demolition waste (CDW) represents approximately one third of all waste generated. The situation is exacerbated when this waste is not properly treated and managed, making it impossible to re-enter the value chain. Proper management of CDW and recycled materials, including proper waste handling, can bring major economic benefits, increase quality of life and reduce environmental impact.

## 2. Types of Construction and Demolition Waste according to Legislation

In order to manage waste as well as possible, it is mandatory to know closely all types of residues that come from constructions and demolitions. Thus, the following types can be highlighted:

improvements since its implementation, but it must be constantly modernized to adapt it to the circular economy and the digital era.

The increase in waste generation rates is leading to problems in finding suitable destinations to manage waste properly. Introducing technological tools that help to obtain more data does not ensure correct data handling. The massive growth of data requires credibility and security in the exchange of information between the agents involved. And this is where the role of Blockchain appears.

In the last years a lot of utilities has found the Blockchain technology being useful.

One of the most remarkable is its application in environmental sustainability, where it will play a very important role in strategic planning improvements, environmental planning, logistics or sustainable supply chain.

Its involvement in the Circular Economy of cities will guarantee the security and reliability of the data obtained in the Smart Cities.

#### **4. Objects of the European project "RockChain - Transversal technological skills for the ornamental rock industry focusing on the applicability of Blockchain in a Circular Economy"**

The project educates about Blockchain technology and begin to raise interest in it among students and professionals.

It provides technicians and workers in the stone sector tools for the management of waste derived from the industry, including proper technical or procedural regulations, in order to determine its traceability for greater control of its management and value enhancement;

It encourages professionals and students to become entrepreneurs in the field of waste management and Blockchain technology, showing the potential that blockchain has in this aspect;

The project makes students and professionals in the stone and construction sector aware of the importance of construction waste management and its reintroduction into the value chain, in the search for meeting the Sustainable Development objectives that the European Union has set as a goal.

## 5. Conclusion

Builders, individuals or legal entities, must be guided to know and apply the legal regulations regarding the management of waste from constructions and demolitions. We note that Romania has implemented the European legislation on the matter, but it must improve its application by developing procedures for builders, in order to indicate the steps they must follow. Identifying the transposition of European legislation in the national legislation of the other member states that are participating to the project needs to be analyzed.

## 6. Acknowledgement

RockChain - Transversal technological skills for the ornamental rock industry focusing on the applicability of Blockchain in a Circular Economy, KA220-HED 2023-1-DE-02-KA220-ADU-000166863, <http://rockchain.eu/>

## 7. References

Botezatu, E. (2016). The industrial NORM residues - radioactive waste or building material? *Proceed of the 8th EANNORM WORKSHOP. Three years into the new EU BSS: How far have we come with the transposition and what is the impact on NORM industrial activities?* Stockholm, Sweden, 5-7 December 2016.

Meita, V. (n.d.). *Planning, Architecture, Seismic, Construction and Energy-Related Criteria for Sustainable Spatial Development in the Danube Delta Biosphere Reserve Area*, [https://www.academia.edu/105763507/Planning\\_Architecture\\_Seismic\\_Construction\\_and\\_Energy\\_Related\\_Criteria\\_for\\_Sustainable\\_Spatial\\_Development\\_in\\_the\\_Danube\\_Delta\\_Biosphere\\_Reserve\\_Area](https://www.academia.edu/105763507/Planning_Architecture_Seismic_Construction_and_Energy_Related_Criteria_for_Sustainable_Spatial_Development_in_the_Danube_Delta_Biosphere_Reserve_Area)

*Swelling and shrinking soils* [Internet]. British Geological Survey. Available from: <https://www.bgs.ac.uk/geology-projects/shallow-geohazards/clay-shrink-swell/>

[https://environment.ec.europa.eu/topics/waste-and-recycling/construction-and-demolition-waste\\_en](https://environment.ec.europa.eu/topics/waste-and-recycling/construction-and-demolition-waste_en)

## 2.2. Međunarodna konferencija "Biološke znanosti i okolišna rješenja za postizanje ciljeva održivog razvoja (SDGs)"

**Naslov:** *RockChain: Tehnološki okvir za kružno upravljanje otpadom u građevinarstvu temeljeno na blockchainu.*

Prijavljeno na međunarodnu konferenciju "Biološke znanosti i okolišna rješenja za ostvarenje ciljeva održivog razvoja (SDGs)" – Sveučilište u Jerevanu.

### Sažetak:

Građevinska industrija značajno doprinosi globalnoj potrošnji resursa i stvaranju otpada, predstavljajući značajne ekološke izazove. Tradicionalne prakse upravljanja otpadom (WM) često ne uspijevaju osigurati transparentnost, sljedivost i učinkovitost, što je ključno za napredak održivosti. Ovaj rad predstavlja "RockChain", tehnološki okvir koji koristi blockchain tehnologiju za poticanje kružnog upravljanja otpadom u građevinarstvu. Integracijom blockchaina s načelima kružnog gospodarstva (CE), predloženi okvir rješava ključne prepreke poput fragmentacije podataka, nedostatka odgovornosti i ograničene međuindustrijske suradnje. Studija pregledava trenutno stanje upravljanja građevinskim otpadom, istražuje potencijal rješenja podržanih blockchainom i ističe sinergiju između blockchaina i digitalnih inovacija poput modeliranja informacija o zgradama (BIM) i Interneta stvari (IoT). Rezultati pokazuju da blockchain može povećati transparentnost, automatizirati praćenje otpada i olakšati sigurnu razmjenu informacija, čime podržava prijelaz na kružno izgrađeno okruženje. Rad zaključuje da usvajanje sustava upravljanja otpadom temeljenim na blockchainu može značajno smanjiti utjecaj na okoliš, potaknuti učinkovitost korištenja resursa i potaknuti održive prakse u građevinskom sektoru.

### Autori:

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### Poveznica na konferenciju:

<https://www.ysu.am/en/conference/869>



The first "Biological Sciences and Environmental Solutions for the Achievement of Sustainable Development Goals (SDGs)" conference serves as a global platform to address the urgent need for sustainable solutions to the world's most pressing environmental and developmental challenges. The "BSES-SDGs" International Conference is dedicated to the 90th anniversary of the Faculty of Biology, as well as the 10th anniversary of the Research Institute of Biology at Yerevan State University.

Established in 1935, the Faculty of Biology traces its origins to the founding of the university. It serves as a leading scientific and educational center in Armenia, training highly qualified specialists in various fields of biology. Alumni of the faculty are working in leading educational and research institutions all over the world. Biological and environmental sciences play a transformative role in tackling critical issues such as climate change, biodiversity loss, food insecurity, water scarcity, and public health crises, all of which are central to the United Nations Sustainable Development Goals (SDGs). This conference will bring together leading scientists, educators, policymakers, and practitioners from diverse disciplines to explore the intersection of biological processes, environmental management, and technological innovation. Through insightful discussions, groundbreaking research presentations, and collaborative sessions with a focus on practical applications and policy implications that align with the achievement of specific SDGs.

Key themes of BSES-SDGs conference include all aspects of biological research: Cell Biology, Genomics, Proteomics, Metabolomics, Systems Biology, Plant and Fungi Secondary Metabolites, Immunology, Neuroscience, Structural Biology, Animal and Plant Physiology, Bioengineering, Biotechnology, Evolutionary Biology, Bioethics, Plant Science, Microbiology, Zoology, Mycology, Molecular Biology, Biomedicine, Developmental Biology, Biostatistics, Biochemistry, Biophysics and Bioinformatics. The key themes related to environmental solutions are: Climate Science, Environmental Policy and Governance, Ecological Restoration, Ecological & Conservation Biology, Sustainable Land Management, Environmental Economics, Renewable Energy and Sustainability, Geospatial Science and Remote Sensing, Hydrology and Watershed Management, Environmental Toxicology, Energy Systems and Sustainability, Environmental Law, Waste Management and Resource Recovery, Eco-innovation and Green Technologies, Environmental Impact Assessment (EIA), Carbon Management and Climate Finance, Air and Water Quality Management, Sustainable Fisheries and Marine Conservation, Agricultural and Crop Science, Environmental Health Science, Ecotourism and Sustainable Development for achieving the Sustainable Development Goals (SDGs).

The conference delves into interdisciplinary approaches to sustainable development, fostering global collaboration, and bridging the gap between research and practice. By inspiring actionable strategies and driving impactful change, this event seeks to harness the transformative power of the biological and environmental sciences to address pressing global challenges and achieve SDGs.

High-quality short papers, following rigorous peer review, will be published in esteemed outlets, including books by *KGI Global (USA)*, *De Gruyter Germany*, *AAP*, *CRC Taylor and Francis (USA)*, and *Wiley-Scrivener (USA)*. Selected papers will also be considered for publication in special issues of prestigious journals, including *Frontiers in Plant Science* (Impact Factor: 4.8) (Q1) and the *Egyptian Journal of Soil Science* (Impact Factor: 3.4) (Q3). All publications will be indexed in world-renowned databases, including *Scopus*, *Web of Science*, *Google Scholar*, and *ORCID*.

Join us in the vibrant city of Yerevan from September 24-26, 2025, as we celebrate the remarkable 90-year legacy of the Faculty of Biology and the 10th anniversary of the Research Institute of Biology at Yerevan State University, Armenia—a legacy built on excellence, innovation, and impact. Together, let us explore the transformative power of biological and environmental sciences in shaping a sustainable future for our planet and generations to come.

#### About the Conference

Conference Organizing Committee

Conference Scientific Committee

Keynote speakers

Conference Agenda

Conference Topics

Submission and Presentation Types

Registration & Fees

Important Deadlines

Venue



Slika 9: Web stranica Međunarodne konferencije.

## Vremenska crta izlaza

| Naslov                                                                     | Vrsta              | Datum                 | Status  | Kanal za distribuciju        |
|----------------------------------------------------------------------------|--------------------|-----------------------|---------|------------------------------|
| RockChain: Kružno upravljanje otpadom u građevinarstvu vođeno blockchainom | Konferencijski rad | 24. - 26. rujna 2025. | Predano | YSU konferencija o SDG-ovima |

### Parallel Session 3

Topic: Environmental Solutions for the Achievement of Sustainable Development Goals

**Moderator:** Syuzanna Esayan

**Venue:** Faculty of Oriental Studies, 2<sup>nd</sup> floor, Ferdows hall, Yerevan State University

|             |                                                                                                                                                                                                                               |
|-------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 13:45-14:00 | <b>Presentation 6:</b> Green synthesis of Silver Nanoparticles with Antimicrobial Activity Using Biomass of Microalgae<br><b>Speaker:</b> Lilit Gabrielyan, Yerevan State University, Armenia                                 |
| 14:00-14:05 | <b>Flash talk 7:</b> Influence of Intercropping and Arbuscular Mycorrhizal Fungi (AMF) on Growth and Yield of Cauliflower<br><b>Speaker:</b> Nikhil Malav, ITM University Gwalior, India                                      |
| 14:05-14:10 | <b>Flash talk 8:</b> RockChain: A Technological Framework for Blockchain-Driven Circular Waste Management in Construction Sector<br><b>Speaker:</b> Moutaman Mohammed Ahmed Abbas, Transilvania University of Braşov, Romania |
|             | <b>Flash talk 9:</b> Assessing Soil Quality Using Minimum Data Set Under Prevalent Cropping Systems in Low Hills Subtropical Zone of                                                                                          |

Slika 10: Dnevni red konferencije.



Slika 11: Fotografije prezentacije.

### Citat iz članka:

RockChain: Tehnološki okvir za kružno upravljanje otpadom temeljeno na blockchainu u građevinskom sektoru. (2025). *Časopis za inovativna rješenja za ekološku održivost*, 123.

Abstract Accepted – Early Bird Registration Link for BSES–SDGs 2025 Conference



From Bio Env  
to mohammed.abbas@student.unitbv.ro

vin. 13.06.2025 11:51

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## RockChain: A Technological Framework for Blockchain-Driven Circular Waste Management in Construction Sector

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### ABSTRACT

The construction industry is a major contributor to global resource consumption and waste generation, posing significant environmental challenges. Traditional waste management (WM) practices often fall short in ensuring transparency, traceability, and efficiency, which are essential for advancing sustainability. This paper introduces "RockChain," a technological framework that leverages blockchain technology to drive circular waste management in construction. By integrating blockchain with circular economy (CE) principles, the proposed framework addresses critical barriers such as data fragmentation, lack of accountability, and limited cross-industry cooperation. The study reviews the current state of construction waste management, explores the potential of blockchain-enabled solutions, and highlights the synergy between blockchain and digital innovations like Building Information Modeling (BIM) and the Internet of Things (IoT). The results demonstrate that blockchain can enhance transparency, automate waste tracking, and facilitate secure information sharing, thereby supporting the transition to a circular built environment. The paper concludes that adopting blockchain-driven circular waste management systems can significantly reduce environmental impacts, promote resource efficiency, and foster sustainable practices in the construction sector.

**Keywords:** blockchain, circular economy, waste management and recycling, construction waste, sustainability

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