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FORS²D

FORESTRY SCIENCE FOR SUSTAINABLE DEVELOPMENT

BOOK OF ABSTRACTS

**"Perspectives of forestry and related sectors
as drivers of sustainable development in the post-Covid era"**

**Banja Luka, the Republic of Srpska / Bosnia and Herzegovina
29–30 September 2022**

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For publisher

Marijana Kapović-Solomun

Editors

Marijana Kapović-Solomun

Vojislav Dukić

Zoran Govedar

Vladimir Stupar

Milan Mataruga

Dane Marčeta

Danijela Petrović

Technical editors

Srđan Bilić

Đorđije Milanović

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Foreword

Dear participants and friends,

The International Scientific Conference "**Forestry science for sustainable development FORS²D – Perspectives of forestry and related sectors as drivers of sustainable development in the post-Covid era – FORS2D**" in Banja Luka is held on the occasion of important Jubilee (30 years) of the Faculty of Forestry, University of Banja Luka, and 30 years of PFE "Šume Republike Srpske" a.d. Sokolac, in cooperation with FAO (*United Nations Food and Agriculture Organization*). Considering global changes that we are facing, the importance of forests cannot be underestimated. We depend on forests for our survival, from the air we breathe to the wood we use, but without education and scientific research we cannot promise sustainable development or sustainable forestry. Besides basic functions of forests needed for humans, forests also offer climate change mitigation, watershed protection, prevent soil erosion and torrential floods that we are frequently facing in recent decades. Unfortunately, despite our dependence on forests, we are still allowing them to disappear.

This Conference will give an opportunity for participants to address important issues related to forestry, exchange recent research, knowledge and experiences in forestry and related fields, to establish functional international cooperation among institutions, to improve cooperation between forestry science and practice and finally to forestry as important sector for human well-being at local, national and global level.

The Conference is organized in nine sessions along different themes. Together there are five plenary lectures, 64 oral presentations and 64 poster contributions, with more than 120 participants.

As announced, authors, the reviewed and accepted papers are going to be published in the Bulletin of the Faculty of Forestry, University of Banja Luka (<http://glasnik.sf.unibl.org>).

We wish you a very successful Conference and pleasant stay in Banja Luka.

Chair of the Organization Committee

Marijana Kapovic Solomun

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Dragi učesnici i prijatelji,

Međunarodna naučna konferencija „Šumarska nauka za održivi razvoj FORS²D – Perspektive šumarstva i povezanih sektora kao pokretača održivog razvoja u post-kovid eri – FORS²D” se održava u Banjoj Luci povodom značajnog jubileja (30 godina) Šumarskog fakulteta Univerziteta u Banjoj Luci i 30 godina JPŠ "Šume Republike Srpske" a.d. Sokolac, u saradnji sa FAO (Organizacija Ujedinjenih nacija za hranu i poljoprivredu). Imajući u vidu globalne promjene kojima se suočavamo, značaj šuma mora biti posebno istaknut. Opstanak čovječanstva zavisi od šuma od vazduha koji udišemo do drveta koje koristimo kao materijal, ali bez obrazovanja i naučnog istraživanja ne možemo obećati održivi razvoj ili održivo šumarstvo. Pored osnovnih funkcija šuma potrebnih čoveku, šume takođe nude ublažavanje klimatskih promjena, zaštitu riječnih slivova, sprječavanje erozije zemljišta i bujičnih poplava sa kojima se često suočavamo poslednjih decenija. Nažalost, uprkos činjenici da zavisimo od šumskih ekosistema, mi i dalje dozvoljavamo da one nestaju.

Ova Konferencija će pružiti priliku učesnicima da se pozabave važnim pitanjima vezano za šumarstvo, razmijene novija istraživanja, znanja i iskustva u šumarstvu i srodnim oblastima, da uspostave funkcionalnu međunarodnu saradnju među institucijama, da unaprijede saradnju šumarske nauke i struke i konačno da istaknu šumarstvo kao važan sektor za ljudsko blagostanje na lokalnom, nacionalnom i globalnom nivou.

Konferencija je organizovana u devet sesija na različite teme. Učesnicima će se obratiti pet eminentnih plenarnih predavača, 64 usmenih izlaganja i 64 poster priloga, sa više preko 120 učesnika. Kako je najavljeno, recenzirani i prihvaćeni radovi biće objavljeni u Glasniku Šumarskog fakulteta Univerziteta u Banjoj Luci (<http://glasnik.sf.unibl.org>).

Želimo Vam uspješnu Konferenciju i ugodan boravak u Banja Luci.

Predsjednica Organizacionog odbora

Marijana Kapović Solomun

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1. Forest and sustainable development in light of climate change
2. Nature-based solutions
3. Let's green, be seen
4. A modern and competitive forestry sector
5. Innovative value chains and sociological aspects in forestry and related sectors

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УНИВЕРЗИТЕТ У БАЊОЈ ЛУЦИ
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THEMATIC AREA 2 Nature-based solutions

TEMATSKA OBLAST 2 Prirodom inspirisana rješenja



FORS²D
ŠUMARSKA NAUKA ZA ODRŽIVI RAZVOJ

BIOLOGICAL RECLAMATION OF DEPOSOLS AS THE MOST ECOLOGICALLY ACCEPTABLE WAY OF REVITALIZATION OF DISTURBED AREAS CAUSED BY EXPLOITATION IN COAL OPEN MINES

Milorad Veselinović^{1*}, Saša Eremija², Suzana Mitrović¹

¹ Institute of forestry, Department of Environmental Protection and Improvement, Belgrade, Serbia

² Institute of forestry, Department of Forest Establishment, Silviculture and Ecology, Belgrade, Serbia

Corresponding author e-mail: suzana.mitrovic@forest.org.rs

ABSTRACT

Of all energy sources, coal is still the most important energy resource in the world, as it makes up about half of the total reserves of all resources used for energy production. Large lignite basins in Serbia, as well as in many other countries, are an energy potential of strategic importance, which is mainly used for electricity production. The growing need for electricity means that the natural orography of the area above the coal deposits will continue to be disrupted and the destruction of existing ecosystems will continue. In order to mitigate the harmful consequences of the development of surface mines, it is necessary for mining works to be accompanied by biological reclamation by afforestation of landfills. Recultivation of degraded areas enables the re-establishment of various vegetation and other ecosystems on deposited tailings, deposols. Based on the agreement with the Kolubara Mining Basin and the Institute of forestry afforestation of the post-exploitation area covering over 1,000 hectares were performed. A large number of species have been used for afforestation of landfills not only due to the great variability of microecological conditions in small areas, due to non-selective tailings disposal, but also due to the difficulty of enriching the landscape aesthetics of newly created forest ecosystems. Today, these areas are remarkable anthropogenic forest ecosystems mostly with mixed forests. Research and work done through biological reclamation in the Kolubara Basin have proven that it is possible to create new agricultural, forest, aquatic, meadow and other ecosystems of higher functional values than natural ecosystems in the pre-exploitation period.

Key words: reforestation, surface mines, degraded areas