



BOOK OF ABSTRACTS

SERBIAN-CHINESE FORESTRY FORUM

FORESTS FOR THE FUTURE: CHALLENGES, OPPORTUNITIES AND INTEGRATED APPROACHES



BELGRADE, 2025



SERBIAN-CHINESE FORESTRY FORUM



**FORESTS FOR THE FUTURE: CHALLENGES, OPPORTUNITIES
AND INTEGRATED APPROACHES**

BOOK OF ABSTRACTS

Belgrade, 2025

BOOK OF ABSTRACTS

SERBIAN-CHINESE FORESTRY FORUM
FORESTS FOR THE FUTURE: CHALLENGES, OPPORTUNITIES AND INTEGRATED APPROACHES
December 10-12, 2025; Belgrade, Republic of Serbia

PUBLISHER

University of Belgrade – Faculty of Forestry, Kneza Višeslava 1, Belgrade, Republic of Serbia
For Publisher: Branko Stajić, dean
Print: CD print Information Technology Center of the Faculty of Forestry, Belgrade
Circulation: 100

EDITORS

Snežana Belanović Simić, PhD – Faculty of Forestry, University of Belgrade
Branko Stajić, PhD – Dean of the Faculty of Forestry, University of Belgrade

EDITORIAL BOARD

Marija Đurković, PhD – University of Belgrade, Faculty of Forestry
Ivana Bjedov, PhD – University of Belgrade, Faculty of Forestry
Mirjana Todosijević, PhD – University of Belgrade, Faculty of Forestry
Ivan Milenković, PhD – University of Belgrade, Faculty of Forestry
Marko Perović, PhD – University of Belgrade, Faculty of Forestry
Danijela Đunisijević Bojović, PhD – University of Belgrade, Faculty of Forestry
Tijana Vulević, PhD – University of Belgrade, Faculty of Forestry
Slobodan Milanović, PhD – Mendel University in Brno, Faculty of Forestry and Wood Technology;
Brno, Czech Republic
Branko Kanjevac, PhD – University of Belgrade, Faculty of Forestry
Jelena Beloica, PhD – University of Belgrade, Faculty of Forestry
Dragan Borota, PhD – University of Belgrade, Faculty of Forestry
Nikola Živanović, PhD – University of Belgrade, Faculty of Forestry

TECHNICAL EDITOR

Katarina Lazarević, PhD – University of Belgrade, Faculty of Forestry

LECTOR

Katarina Lazić, PhD – University of Belgrade, Faculty of Forestry

ORGANIZERS AND SPONSORS

University of Belgrade, Faculty of Forestry
College of Forestry and Biotechnology, Zhejiang A&F University

ISBN 978-86-7299-389-9

Citation

When referring to your abstract please use the following format: Author, A. (2025): Title. In: Belanović Simić, S., Stajić, B. (eds.) Book of abstracts of the Serbian-Chinese Forestry Forum "FORESTS FOR THE FUTURE: CHALLENGES, OPPORTUNITIES AND INTEGRATED APPROACHES"; 10-12th December, 2025; Belgrade, Republic of Serbia; Faculty of Forestry, University of Belgrade; pp.XX.

For the book reference please use the following format: Belanović Simić, S., Stajić, B. (eds.) Book of abstracts of the Serbian-Chinese Forestry Forum "FORESTS FOR THE FUTURE: CHALLENGES, OPPORTUNITIES AND INTEGRATED APPROACHES"; 10-12th December, 2025; Belgrade, Republic of Serbia; Faculty of Forestry, University of Belgrade; pp. 88.

ORGANIZING COMMITTEE

Snežana Belanović Simić, PhD – University of Belgrade, Faculty of Forestry, Republic of Serbia

Yuan Huwei, PhD – Associate Dean of the College of Forestry and Biotechnology, Zhejiang A&F University, People's Republic of China

Vladan Ivetić, PhD – University of Belgrade, Faculty of Forestry, Republic of Serbia

Mirjana Tešić, PhD – University of Belgrade, Faculty of Forestry, Republic of Serbia

Jovana Petrović, PhD – University of Belgrade, Faculty of Forestry, Republic of Serbia

Predrag Miljković, PhD – University of Belgrade, Faculty of Forestry, Republic of Serbia

Slavica Čepić, PhD – University of Belgrade, Faculty of Forestry, Republic of Serbia

Branko Kanjevac, PhD – University of Belgrade, Faculty of Forestry, Republic of Serbia

Katarina Lazarević, PhD – University of Belgrade, Faculty of Forestry, Republic of Serbia

Jovan Dobrosavljević, PhD – University of Belgrade, Faculty of Forestry, Republic of Serbia

Aleksandar Baumgertel, PhD – University of Belgrade, Faculty of Forestry, Republic of Serbia

Katarina Lazić, PhD – University of Belgrade, Faculty of Forestry, Republic of Serbia

Ivona Kerkez Janković, MSc – University of Belgrade, Faculty of Forestry, Republic of Serbia

Miljan Kalem, MSc – University of Belgrade, Faculty of Forestry, Republic of Serbia

Ivan Simić, MSc – University of Belgrade, Faculty of Forestry, Republic of Serbia

Stefan Miletić, MSc – University of Belgrade, Faculty of Forestry, Republic of Serbia

Milica Caković Milosavljević, MSc – University of Belgrade, Faculty of Forestry, Republic of Serbia

Ljubica Mijatović, MSc – University of Belgrade, Faculty of Forestry, Republic of Serbia

Marija Pešikan, MSc – University of Belgrade, Faculty of Forestry, Republic of Serbia

SCIENTIFIC COMMITTEE

Branko Stajić, PhD – Dean of the Faculty of Forestry, University of Belgrade, Republic of Serbia

Snežana Belanović Simić, PhD – University of Belgrade, Faculty of Forestry, Republic of Serbia

Marija Đurković, PhD – University of Belgrade, Faculty of Forestry, Republic of Serbia

Nevena Vasiljević, PhD – University of Belgrade, Faculty of Forestry, Republic of Serbia

Yixiang Wang, PhD – College of Forestry and Biotechnology, Zhejiang A&F University, People's Republic of China

Shen Yamei, PhD – College of Forestry and Biotechnology, Zhejiang A&F University, People's Republic of China

Tingting Mei, PhD – College of Forestry and Biotechnology, Zhejiang A&F University, People's Republic of China

Vojislav Dukić, PhD - Dean of the Faculty of Forestry, University of Banja Luka, Bosnia and Herzegovina

Zoran Trailović, PhD - Institute of Silviculture, University of Natural Resources and Life Sciences, Vienna (BOKU), Vienna, Austria

Anna Maria Palsdottir, PhD - Swedish University of Agricultural Sciences, Department of People and Society, Sweden

Slobodan Milanović, PhD - Mendel University in Brno, Faculty of Forestry and Wood Technology; Brno, Czech Republic

Ljubinko Rakonjac, PhD – Director of the Institute of Forestry, Belgrade, Republic of Serbia

Dragica Stanković, PhD – Director of the Institute for Multidisciplinary Research, University of Belgrade, Republic of Serbia

Ana Marjanović Jeromela, PhD – Institute of Field and Vegetable Crops, Novi Sad, Republic of Serbia

Jovica Vasin, PhD – President of the Serbian Society of Soil Science, Republic of Serbia

Ivana Bjedov, PhD – University of Belgrade, Faculty of Forestry, Republic of Serbia

Mirjana Todosijević, PhD – University of Belgrade, Faculty of Forestry, Republic of Serbia

Mirjana Šijačić-Nikolić, PhD – University of Belgrade, Faculty of Forestry, Republic of Serbia

Tanja Palija, PhD – University of Belgrade, Faculty of Forestry, Republic of Serbia

CONTENTS

PREFACE	1
<i>Topic 1</i>	3
<i>Slobodan D. Milanović, Zoran S. Trailović, Emilija S. Milanović</i> MACHINE LEARNING APPROACH TO WILDFIRE OCCURRENCE PROBABILITY MODELING IN SERBIA	4
<i>Wang Yixiang</i> BUILDING AN ADAPTIVE FOREST MANAGEMENT SYSTEM FOR CARBON NEUTRALITY: PATHWAYS AND IMPLEMENTATION	5
<i>Renata Gagić-Serdar</i> THE BASIC PARALLELS BETWEEN FORESTRY PRACTICES IN THE PEOPLE'S REPUBLIC OF CHINA'S HABIT, AS WELL AS THE BASIC DIAMETRICAL CONTRASTS WITH THE SAME IN THE ECONOMY AND NATURE PROTECTION IN SERBIA	6
<i>Marko Perović</i> TREE SPECIES NATIVE TO CHINA IN THE DENDROFLORA OF SERBIA	7
<i>Marko Marinković, Bojan Tubić</i> NATURE - BASED SOLUTION FOR ECOSYSTEM RESTORATION – THE CASE STUDY OF PROJECT REBIOFORESTS	8
<i>Rubei Hou, Rong Yu</i> SPATIOTEMPORAL DYNAMICS AND DROUGHT RESPONSES OF CHINESE FORESTS REVEALED BY KNDVI AND SIF	9
<i>Tingting Mei</i> STAND DENSITY AMPLIFIES DROUGHT VULNERABILITY VIA COMPETITION AND HYDRAULIC CONSTRAINTS IN MOSO BAMBOO	10
<i>Žaklina Marjanović, Lana Kukobat, Nikola Šušić, Goran Trivan, Slobodan Krnjajić, Zhun Mao, Lei Wang, Frank Berninger, Yong Pang, Tao Yu, Alexia Stokes</i> SERBIA IN THE EU-FUNDED PROJECT ECO2ADAPT — CONNECTING EUROPEAN AND CHINESE INSTITUTIONS IN FINDING SOLUTIONS FOR FOREST RESILIENCE IN THE CHANGING CLIMATE	11
<i>Aleksandar Golubović</i> METHODOLOGICAL FRAMEWORK OF THE NATIONAL FOREST INVENTORIES OF SERBIA AND CHINA	13
<i>Tijana Vulević, Katarina Lazarević, Mirjana Todosijević, Natalija Momirović, Vesna Nikolić Jokanović, Ranka Kovačević, Alexandre Nominé</i> ASSESSMENT OF FOREST CHANGE AND MINING EXPANSION USING HIGH-RESOLUTION LAND COVER DATA: THE CASE OF SERBIA	15
<i>Milica Caković Milosavljević, Katarina Lazarević, Jelena Beloica</i> ECOSYSTEM SERVICES OF NATURE PARK PALIĆ AND SPECIAL NATURE RESERVE LUDAŠ LAKE – BETWEEN NATURE PROTECTION AND SUSTAINABLE DEVELOPMENT	16

<i>Lide Pan</i>	
EARLY CHARACTERISTICS OF THE HYDRAULIC STRUCTURE AND CANOPY TEMPERATURE IN MASSON PINE AFFECTED BY PINE WILT DISEASE	17
<i>Topic 2</i>	18
<i>Milica Caković Milosavljević, Aleksandar Baumgertel, Sara Lukić</i>	
REMOTE SENSING–BASED ASSESSMENT OF SOIL EROSION AND THE EFFECTIVENESS OF BIOLOGICAL CONTROL MEASURES IN GRDELICA GORGE AND VRANJSKA VALLEY WATERSHED	19
<i>Susu Deng, Qi Xu, Yuanzheng Yue, Sishuo Jing, Yixiang Wang</i>	
INDIVIDUAL TREE DETECTION AND SEGMENTATION FROM UNMANNED AERIAL VEHICLE-LIDAR DATA BASED ON A TRUNK POINT DISTRIBUTION INDICATOR	20
<i>Predrag Miljković, Snežana Belanović Simić, Jelena Beloica, Nikola Živanović</i>	
MONTHLY DYNAMICS OF POTENTIALLY TOXIC ELEMENTS IN THE BEDLOAD IN ONE CATCHMENT IN CENTRAL SERBIA.....	21
<i>Niu Jinhua, Jiangbo Xie</i>	
A SYNTHESIS OF RECENT ADVANCES IN VISUALIZING LEAF HYDRAULIC FAILURE: LINKING WATER DYNAMICS TO PHOTOSYNTHETIC MORTALITY	22
<i>Sandra Mitrović, Dragana Čavlović, Luka Bajić</i>	
DESIGNING THE URBAN LANDSCAPES: PLANNING AND DESIGN CHALLENGES FOR URBAN FOREST LJEŠKOPOLJSKA GORICA IN PODGORICA, MONTENEGRO	23
<i>Stefan Miletić, Jelena Beloica</i>	
VEGETATION-BASED WILDFIRE RISK ASSESSMENT IN SERBIA: SPATIAL PATTERNS AND IMPLICATIONS FOR IMPROVING THE MEDALUS MODEL	25
<i>Yang Lv, Yan Jin, Caixian Tang, Yixiang Wang</i>	
STRIP CLEAR-CUTTING TRANSFORMATIONS INCREASE SOIL N ₂ O EMISSIONS IN ABANDONED MOSO BAMBOO FORESTS	26
<i>Mengyi Cai, Jiangbo Xie</i>	
SEEING VS. MEASURING: CONVERGENCE AND DIVERGENCE IN XYLEM CAVITATION RESISTANCE ESTIMATION	27
<i>Aleksandar Jovanović, Milica Mišić, Ivana Mikavica, Jelena Dimitrijević, Milena Obradović, Marija Koprivica, Miroslav Sokić</i>	
WASTE PEELS AS SOURCE FOR GREENER MATERIALS: TREATMENT OF DYE WASTEWATER .	28
<i>Snežana Belanović Simić, Predrag Miljković, Stefan Miletić, Jelena Beloica</i>	
THE IMPACT OF LONG-TERM AEROPOLLUTION ON FOREST SOILS IN THE MT. GOČ AREA ...	29
<i>Simiao Ni, Yixiang Wang</i>	
BENCHMARKING LIDAR-BASED APPROACHES FOR ESTIMATING ABOVEGROUND CARBON STORAGE IN CHINESE FIR PLANTATIONS	30
<i>Yirong Wang, Xueqin Jiang, Song Gao, Qi Jiang, Huaqiang Du, Ning Han</i>	
MULTI-SCENARIO CARBON STORAGE ANALYSIS BASED ON PLUS MODEL AND INVEST MODEL: A CASE STUDY OF ZHEJIANG PROVINCE, CHINA	31

<i>Nenad Šurjanac, Aleksandar Lučić, Ivana Živanović</i>	
INTEGRATED ASSESSMENT OF THE PHYSIOLOGICAL AND MECHANICAL CONDITION OF TREES USING MULTISPECTRAL UAV ANALYSIS, 3D PHOTOGRAMMETRY, AND ACOUSTIC TOMOGRAPHY (ARBOTOM): A LINDEN TREE CASE STUDY	32
<i>Topic 3</i>	33
<i>Kosta Djurica, Nenad Radaković, Branko Stajić, Marko Kazimirović, Vojislav Dukić</i>	
POTENTIAL OF SESSILE OAK FROM THE AREA OF THE NATIONAL PARK 'ĐERDAP' FOR VARYING DENDROCHRONOLOGICAL RESEARCH	34
<i>Jiacong Yu, XueJian Li, HuaQiang Dua, Fangjie Mao, YanXin Xu, Zihao Huang, Yinyin Zhao, Lujin Lv, Meixuan Song, Lei Huang, Dejin Dong</i>	
SOLAR-INDUCED FLUORESCENCE-BASED PHENOLOGY OF SUBTROPICAL FORESTS IN CHINA AND ITS RESPONSE TO CLIMATE FACTORS.....	35
<i>QIAO Yina, YANG Wei, SHI Mengdi, ZHANG Xitang, QIN Yuqian, HAO Xinzhong, SHI Changchun</i>	
STUDY ON DIAMETER AT BREAST HEIGHT (DBH)-HEIGHT GROWTH MODEL OF PINUS SYLVESTRIS PLANTATION IN YULIN SANDY AREA.....	36
<i>Siyang Liu, Junhong Zhang</i>	
MOLECULAR MECHANISMS UNDERLYING Pb-BLH74-MEDIATED MODULATION OF DROUGHT STRESS RESPONSES IN PHOEBE BOURNEI INDIGENOUS TO CHINA.....	37
<i>Li Jianwei, Yuanhao Gao</i>	
PHYSIOLOGICAL AND BIOCHEMICAL RESPONSES OF PECAN SEEDLINGS TO DROUGHT STRESS	38
<i>Chenlei Yang, Wenhui Shi</i>	
BIOLOGICAL COORDINATION STRATEGIES OF MOSO BAMBOO (<i>PHYLLOSTACHYS EDULIS</i>) IN RESPONSE TO LOW PHOSPHORUS STRESS	39
<i>Jiahua Chen, Wenzhe Dai, Haitao Shi, Yufeng Zhou, Guangsheng Chen, Sheng Yang, Xin Peng, Yongjun Shi</i>	
CHARACTERISTICS OF BIOMASS AND CARBON STOCKS ACCUMULATION AND BIOMASS ESTIMATION MODEL IN <i>KANDELIA OBOVATA</i> MANGROVES AT THE NORTHERN EDGE OF ITS DISTRIBUTION IN CHINA	40
<i>Yeqing Fan, Guomo Zhou, Huaqiang Du, Yufeng Zhou, Xiaojun Xu, Yongjun Shi</i>	
EFFECTS OF TERRAIN ON STAND STRUCTURE AND VEGETATION CARBON STORAGE OF <i>PHYLLOSTACHYS EDULIS</i> FOREST	41
<i>Qian Chen</i>	
ESTIMATING GLOBAL ANNUAL GPP BASED ON SATELLITE-DERIVED PHENOLOGY AND MAXIMAL CARBON UPTAKE CAPACITY	42
<i>Yibo Yan, Xueying Tu, Hui Zhang, Yang Lv, Yihui Zhao, Ao Hu, Yanping Wu, Caixian Tang, Yixiang Wang</i>	
FOREST TRANSFORMATION INCREASES SOIL N ₂ O FLUXES IN AN UNMANAGED MOSO BAMBOO FOREST	43
<i>Jingru Zhang, Xiaojuan Tong, Jinsong Zhang, Ping Meng, Jun Li, Peirong Liu</i>	
DYNAMICS OF PHENOLOGY AND ITS RESPONSE TO CLIMATIC VARIABLES IN A WARM-TEMPERATE MIXED PLANTATION	44

<i>Beilai Zeng, Weijiao Li, Zhuoyuan Li, Zihui Sun, Tingting Mei, Dongming Fang, Guomo Zhou, Guangsheng Chen, Rong Yu</i>	
HYDRAULIC-PHOTOSYNTHETIC COUPLING DETERMINES DROUGHT RESISTANCE DENSITY THRESHOLD IN MOSO BAMBOO	45
<i>Guo Haotian, Wang Yixiang</i>	
CHANGES IN SUITABLE HABITATS AND ECOLOGICAL NICHES OF <i>CUNNINGHAMIA LANCEOLATA</i> UNDER CLIMATE CHANGE SCENARIOS	46
<i>Huawei Wu, Huiru Lv, Guozhong Wang, Tingxiu Liu, Wu Chen, Yufeng Zhou, Yongjun Shi</i>	
SCALING EFFECTS OF STAND STRUCTURE CHARACTERISTICS AND CARBON STOCK ESTIMATION IN SUBTROPICAL VEGETATION: AN EXAMPLE FROM ZHEJIANG PROVINCE, CHINA.....	47
<i>Zhang Yi</i>	
RESISTANCE AND RESILIENCE OF MOSO BAMBOO OF DIFFERENT AGES TO RECURRENT SUMMER DROUGHTS OVER MULTIPLE YEARS	48
<i>Branko Kanjevac, Violeta Babić, Jovan Dobrosavljević, Janko Ljubičić, Miloš Račić, Nikola Martać, Branka Pavlović</i>	
RECOVERY AND RESTORATION OF ICE-STORM-DAMAGED FORESTS IN EASTERN SERBIA ...	49
<i>Danijela Đunisijević-Bojović, Marijana Milutinović, Marija Marković, Jasmina Popović, Vuk Maksimović, Ljiljana Kostić Kravljanac</i>	
PHYSIOLOGICAL RESPONSE OF INVASIVE SPECIES <i>Ailanthus altissima</i> TO LOW PHOSPHORUS AVAILABILITY IN ALKALINE SOIL.....	51
<i>Filip Maksimović, Mirjana Šijačić-Nikolić, Dragana Skočajić, Kristina Đorđević, Marina Nonić</i>	
CLONAL TRIAL OF FIELD ELM AS A BASIS FOR EX SITU GENE POOL CONSERVATION IN THE PROTECTED AREA “KOSMAJ” (BELGRADE, SERBIA).....	53
<i>Ljubica Mijatović, Ivona Kerkez Janković, Jovana Devetaković, Vladan Ivetić</i>	
OAK SEEDLING ESTABLISHMENT WITH TREE SHELTERS ON ABANDONED AGRICULTURAL LAND	54
<i>Ivona Kerkez Janković, Mirjana Šijačić-Nikolić, Filip Maksimović, Vladan Popović</i>	
EARLY MORPHOLOGICAL VARIATION OF <i>Salix alba</i> CLONES IN A CONSERVATION-ORIENTED PROGENY TEST.....	56
<i>Huiru Lv, Guozhong Wang, Wu Chen, Tuchun Zou, Yufeng Zhou, Yongjun Shi</i>	
IMPACTS OF STAND STRUCTURE CHARACTERISTICS OF THREE FOREST TYPES ON THE INTERNAL ENVIRONMENT AND CARBON SINK FUNCTIONS OF FORESTS	57
<i>Ruina Ju, Lei Jiang, Junhui Jiang, Yeqing Ying, Yufei Zhao</i>	
NUTRIENT DYNAMICS OF LEAF MIXTURES AND ABSORPTIVE-ROOT MIXTURES DURING DECOMPOSITION SYNCHRONOUSLY CHANGES UNDER DEPOSITION OF NITROGEN AND PHOSPHORUS	58
<i>Juan Xu, Hui Zhang</i>	
COMPARISON OF SOIL MICROBIAL BIOMASS CARBON AND NITROGEN STOICHIOMETRY BETWEEN DOMINANT WOODY PLANTS AND WIDESPREAD SPECIES ALONG PRECIPITATION GRADIENT	59

<i>Topic 4</i>	60
<i>Zoran Poduška, Snežana Stajić, Suzana Mitrović, Branka Pavlović, Jovana Cvetković, Milan Kabiljo, Jelena Nedeljković, Dragan Nonić</i> INTRAPRENEURSHIP IN PUBLIC FOREST ENTERPRISES AS LEVERAGE FOR EMPLOYEE INNOVATIVENESS	61
<i>Jelena Tomićević-Dubljević, Milena Trmčić, Ivana Bjedov, Marija Nešić, Dragana Čavlović, Ivana Živojinović, Oliver Tošković, Ivana Lozjanin, Anna Maria Palsdottir, Slavica Čepić</i> ASSESSING THE RESTORATIVE QUALITIES OF URBAN AND SUBURBAN FORESTS THROUGH A GUIDED NATURE-BASED INTERVENTION	62
<i>Ana Marjanović Jeromela, Efthymia Alexopoulou, Jelena Ovuka, Brankica Babec</i> AGROFORESTRY AND INTERCROPPING SYSTEMS ON MARGINAL LANDS: INSIGHTS FROM THE MIDAS HORIZON EUROPE PROJECT	63
<i>Milica Marčeta, Ljiljana Keča</i> REGIONAL DIFFERENCES IN THE PRODUCTION OF WOOD ASSORTMENTS IN SERBIA IN THE CONTEXT OF SUSTAINABLE BIOECONOMY	64
<i>Mirjana Tešić, Aleksandar Lisica, Nadežda Stojanović, Vesna Đukić, Tijana Milićević</i> ASSESSMENT OF THE POTENTIAL RISK OF SOIL CONTAMINATION BY HEAVY METALS: THE BELGRADE CASE STUDY	65
<i>Tijana Milićević, Mira Aničić Urošević, Gordana Jovanović, Predrag Vasić, Tatjana Jakšić, Aleksandar Popović</i> ASSESSMENT OF ENVIRONMENTAL AND HUMAN HEALTH RISKS OF POTENTIALLY TOXIC ELEMENTS IN SOILS AND MOSSES	66
<i>Jovan Dobrosavljević, Čedomir Marković, Slobodan Milanović, Ivan Milenković</i> PROACTIVE FOREST BIOSECURITY: THE ROLE OF SENTINEL PLANTATIONS AND CROSS-BORDER COLLABORATION	68
<i>Ljubica Simanić, Siniša Polovina, Ratko Ristić, Vukašin Milčanović</i> INFLUENCE OF LAND COVER CHANGES AND CLIMATE SCENARIOS ON THE SPATIAL PATTERNS OF SOIL EROSION IN THE STUBO-ROVNI BASIN	69
<i>Kaijie Zhu, Man Shi</i> CARBON SEQUESTRATION CAPACITY OF MOSO BAMBOO FORESTS	70
<i>Angelina Novaković</i> BALANCING PASTORAL TRADITIONS AND FOREST PROTECTION: INSIGHTS FROM TARA NATIONAL PARK, SERBIA	71
<i>Filip Vasić, Snežana Belanović-Simić, Jelena Beloica, Dragana Čavlović, Nikola Jovanović</i> RAMSAR SITES PROTECTION IN SERBIA: EVALUATION OF NATIONAL LAWS AND RECOMMENDATIONS FOR POLICY ENHANCEMENT	72
<i>Katarina Lazarević, Mirjana Todosijević, Tijana Vulević, Vesna Nikolić Jokanović, Milica Caković Milosavljević</i> FORESTS FOR THE FUTURE: ECOSYSTEM SERVICES POTENTIAL OF THE LIKODRA WATERSHED	74

<i>Milijana Cvejić</i> PROPOSAL FOR THE REVITALIZATION OF A PART OF THE ZVEZDARA URBAN FOREST BASED ON THE NORWEGIAN MODEL	75
<i>Marija Pešikan, Jovana Petrović, Nenad Stavretović</i> ANALYSIS OF RECREATION ACTIVITIES IN THE AREA OF OUTSTANDING NATURAL LANDSCAPE "ADA CIGANLIJA"	76
<i>Topic 5</i>	77
<i>Milica Glogovac, Mirjana Todosijević, Katarina Lazarević, Siniša Polovina</i> SUSTAINABLE LAND RESOURCES MANAGEMENT IN VALJEVO THROUGH GEOSPATIAL DATA ANALYSIS	78
<i>Sofija Parezanović, Jana Joksimović, Aleksandar Anđelković, Tijana Vulević, Vesna Nikolić-Jokanović</i> APPLICATION OF FIELD AND LABORATORY METHODS IN DETERMINING SOIL MOISTURE CONTENT IN FOREST ECOSYSTEMS.....	79
<i>Mihajlo Marković, Branko Kanjevac, Violeta Babić, Dragan Borota, Vanja Stojanović</i> DEFINING THE INITIAL SUCCESS OF FOREST REGENERATION THROUGH THE APPLICATION OF DIFFERENT METHODS AND CRITERIA	80
<i>Zhao Wenzhuo, Chen Yuhang</i> WHAT KIND OF FORESTS HAVE STRONGER COOLING AND SOIL STRUCTURE IMPROVEMENT FUNCTIONS	81
<i>Niu Junpeng</i> PINUS MASSONIANA ADAPTS TO LOW-PHOSPHORUS ENVIRONMENTS THROUGH INTERACTION WITH DICRANOPTERIS PEDATA (Houtt.)	82
<i>Jingyue Hu, Dan Hou</i> THE FORMATION OF MELANIN IN BLACK BAMBOO RHIZOMES.....	83
<i>Yufei Zhao, Xuejun Yu, Ruina Ju, Jingyue Hu</i> THE BAMBOO FOREST AS A FOOD RESERVE: A KEY CONTRIBUTOR TO THE FOREST "FOUR RESERVOIRS" STRATEGY	84
<i>Kristina Đorđević, Dragana Skočajić, Dragana Čavlović, Jovana Devetaković, Ivana Bjedov</i> MODEL FOR SECURING PLANTING MATERIAL OF NATIVE WOODY SPECIES USING THE EXISTING GREEN INFRASTRUCTURE AS A RESOURCE	85
<i>Marija Pešikan, Jovana Petrović, Nenad Stavretović</i> ENHANCING SOCIAL COHESION IN URBAN LANDSCAPE THROUGH THE GREENING OF URBAN RUINS	87

PREFACE

The University of Belgrade – Faculty of Forestry, in cooperation with the College of Forestry and Biotechnology of Zhejiang A&F University, organised the scientific conference Serbian–Chinese Forestry Forum “Forests of the Future – Challenges, Opportunities and Integrated Approaches.” Thanks to the initiative of colleagues from our partner institution, the national conference gained an important international dimension.

Collaboration between our faculties has so far taken place primarily through the mobility of master’s students from China, who attend one semester of the master’s programme Forestry and Natural Resources Management, in English, at the University of Belgrade – Faculty of Forestry. The visit of the delegation from Zhejiang raised new questions and opportunities for reciprocal student exchange, as well as for joint participation in international projects.

Numerous issues related to sustainable forest ecosystem management, biodiversity conservation, and the restoration of degraded habitats under climate change represent shared challenges for forestry scientists worldwide. Modern forestry connects tradition with new knowledge and technologies – from sustainable forest management and the protection of soil and water resources to the development of renewable materials and the creation of green spaces that enhance quality of life.

The Forum provided a platform for the exchange of knowledge and ideas among students, teachers, researchers, and professionals from various forestry-related sectors. Its goal was to strengthen academic cooperation, stimulate innovation, and promote the development of green, sustainable technologies, with special emphasis on students and young researchers.

With more than 220 participants and 71 submitted abstracts presenting research results and project activities, the content of the Forum was organised into five thematic sections:

1. The State and Challenges of Forestry in Serbia and China
2. New and Green Technologies and Knowledge in Forestry, Wood Technology, Landscape Architecture and Horticulture, and Ecological Engineering in the Protection of Soil and Water Resources
3. Responses and Adaptation of Trees and Forests to Environmental Stress
4. Forests and Human Well-Being (Interdisciplinary Perspectives on Ecological, Economic, and Social Dimensions)
5. The Role of Young Researchers and Innovation in the Future of Forestry (Student Projects, Start-up Ideas, and International Cooperation)

The Organising Committee will publish the full papers, after peer review, in a special issue of the Bulletin of the Faculty of Forestry. The Book of Abstracts will be available online, along with other activities carried out during the Forum. The programme was enriched by an excursion to the Bojčinska Forest, where participants were introduced to the management system of floodplain pedunculate oak forests (*Quercus robur* L.) and established agroforestry systems.

Finally, we wish to express our sincere gratitude to the College of Forestry and Biotechnology of Zhejiang A&F University for their support and cooperation in organising the Forum, as well as to everyone who contributed to preparing and publishing the Book of Abstracts.

Chair of the Organising Committee
Prof. Snežana Belanović Simić, D.Sc.

TOPIC 2

***New and Green Technologies and Knowledge in
Forestry, Wood Technology, Landscape Architecture and
Horticulture, and Ecological Engineering in the protection of
Soil and Water resources***

INTEGRATED ASSESSMENT OF THE PHYSIOLOGICAL AND MECHANICAL CONDITION OF TREES USING MULTISPECTRAL UAV ANALYSIS, 3D PHOTOGRAMMETRY, AND ACOUSTIC TOMOGRAPHY (ARBOTOM): A LINDEN TREE CASE STUDY

Nenad Šurjanac¹, Aleksandar Lučić¹, Ivana Živanović¹

¹Institute of Forestry, Belgrade, Republic of Serbia

Corresponding author: nenad.surjanac@forest.org.rs

ABSTRACT

Accurate assessment of the physiological and mechanical condition of trees in urban environments represents a key component of risk management and planning of protective measures. This study presents the integration of three methodological approaches—multispectral UAV (drone) analysis, a photogrammetrically-generated 3D model, and acoustic tomography (Arbotom)—applied to an old linden tree (*Tilia platyphyllos*) located in the courtyard of the Bishop's Palace of the Šabac Eparchy. The multispectral analysis was used to calculate the NDRE index of physiological activity, while the 3D trunk model served to precisely position the Arbotom sensors. Tomographic measurements at 40 cm and 200 cm revealed degradation zones with a reduction of load-bearing cross-sectional area of 27–39% (lower section) and 43–52% (upper section). The NDRE index indicated localized areas in the crown with reduced physiological activity, while the VTA method confirmed the presence of *Ganoderma* fungal infection. Integrated results show that the tree currently maintains a stable mechanical structure, with localized degradation zones that do not compromise its static stability. The presented multi-sensor approach demonstrates an effective tool for detection, evaluation, and risk management in urban forestry.

Keywords: NDRE, UAV, Arbotom, 3D model, photogrammetry, VTA, urban tree, risk management.

We gratefully acknowledge the support of:



Faculty of Forestry, University of Belgrade



The College of Forestry and Biotechnology, Zhejiang A&F University

CIP - Каталогизacija у публикацији Народна библиотека Србије, Београд

630(048)(0.034.2)

SERBIAN-Chinese forestry forum Forests for the future: challenges, opportunities and integrated approaches (2025 ; Beograd)

Book of abstracts [Elektronski izvor] / Serbian-Chinese forestry forum Forests for the future: challenges, opportunities and integrated approaches, December 10-12, 2025; Belgrade, Republic of Serbia ; [editors Snežana Belanović Simić, Branko Stajić]. - Belgrade: University, Faculty of Forestry, 2024 (Belgrade : CD print Information Technology Center of the Faculty of Forestry). - 1 elektronski optički disk (CD-ROM); 12 cm

Sistemski zahtevi: Nisu navedeni. – Nasl. sa naslovne strane dokumenta: SERBIAN-CHINESE FORESTRY FORUM: FORESTS FOR THE FUTURE: CHALLENGES, OPPORTUNITIES AND INTEGRATED APPROACHES - BOOK OF ABSTRACTS.

- Tiraž 100

ISBN 978-86-7299-389-9

a) Шумарство -- Апстракти

COBISS.SR-ID 183258121



ISBN 978-86-7299-389-9