



Soil Erosion and TOrrential Flood
Prevention: Curriculum Development at the
Universities of Western Balkan Countries



SETOF CONFERENCE

ABSTRACT BOOK

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Editor in chief:	Nada Dragović, Full professor, Faculty of Forestry, University of Belgrade
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Editorial Office:	University of Belgrade, Faculty of Forestry, Kneza Višeslava 1, 11030 Belgrade, Republic of Serbia Phone: +381 11 3053 990 Fax: +381 11 2545 485 e-mail: biblioteka@sfb.bg.ac.rs www.sfb.bg.ac.rs
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PREFACE

Soil erosion and torrential floods are destructive processes, with serious consequences on the economy, society, and environment. Compared to large river floods, torrential floods occur suddenly, for a couple of hours after the rains of high intensity and therefore the defense against torrential floods is much more complex than in the case of large rivers. Due to climate change, which is also pronounced in the region of the Western Balkans, the intensity of erosion, and frequency and intensity of torrential floods will increase in the future.

Considering these facts, there is a need for a more detailed study of the problems of erosion and torrential floods and opportunities for the control of these destructive processes. For graduates to know the necessities for soil and torrent control, it is necessary to improve and modernize the existing study programs and develop a new master's program. This goal is achieved through the implementation of the Erasmus+K2 project "Soil Erosion and Flood Prevention: Curriculum Development at the universities of Western Balkan countries (SETOF)".

THE LEAD PARTNER of the SETOF project is the University of Belgrade (Faculty of Forestry). Members from partner countries are the University of Novi Sad, the University of Niš, the University of Banja Luka, the University of Sarajevo, and the Institute for Forestry (Belgrade). Members from program countries are BOKU University (Austria), University of Mediterranean, Reggio Calabria (Italy), and University Ss. Cyril and Methodius in Skopje, Hans Em Faculty of Forest Sciences (North Macedonia), and Forest Research Institute at the Bulgarian Academy of Sciences (Bulgaria). Associated members are the Serbian Chamber of Engineers, Forest Management Unit "Donjevrasko" Banja Luka, and Cantonal Public Company "Sarajevo-forests". Five universities from Serbia and Bosnia and Hercegovina are participating in the development and implementation of a joint master study program "Soil Erosion and Torrential Flood Prevention".

At the final conference of the SETOF project, the scientific papers of the project participants and other experts dealt with the study of soil and water resources. The Conference is organized into four topics. The participants of this conference deal with problems related to soil erosion assessment (mechanism/processes, modelling, and mapping), torrential floods (genesis, impacts, risks), prevention and management of soil erosion and torrential floods, and management of sustainable development in degraded are.

Nada Dragović

SOIL EROSION AND TORRENTIAL FLOOD PREVENTION: CURRICULUM DEVELOPMENT AT THE UNIVERSITIES OF WESTERN BALKAN COUNTRIES

SETOF

LEAD PARTNER – UNIVERSITY OF BELGRADE



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Шумарски факултет

Members from partner countries



Members from programme countries



Associated members



DRIPPING RAINFALL SIMULATORS DESIGN FOR SOIL RESEARCH

Vukašin RONČEVIĆ^{1*}, Nikola ŽIVANOVIĆ¹, Ratko RISTIĆ¹, John VAN BOXEL²,

Milica KAŠANIN-GRUBIN³

¹University of Belgrade, Faculty of Forestry, Belgrade, Serbia

²University of Amsterdam – Institute for Biodiversity and Ecosystem Dynamics (IBED), The Netherlands

³University of Belgrade – Institute of Chemistry, Technology and Metallurgy, Serbia

*Correspondence: vukasin.roncevic@sfb.bg.ac.rs

Abstract: Dripping rainfall simulators (DRS) are important instruments in soil research. However, a large number of non-standardized simulators have been developed, making it difficult to combine and compare the results of different studies in which they were used. To overcome such a problem, it is necessary to become familiar with the design and performances of the current rainfall simulators applied. It has been conducted a search for scientific papers describing dripping rainfall simulators and papers that are thematically related to soil research using DRS. Simulator design analysis was performed integrally, for simulators with more than one dripper (DRS>1) and with one dripper (DRS=1). Descriptive and numerical data were separated from the papers and sorted by proposed categories, according to which the types and subtypes of used simulators are determined. The six groups of elements that simulators could consist of have been determined, as well as their characteristics, representation, and statistical analyses of their available numerical parameters. The characteristics of simulators are analyzed and presented, thus is facilitated the selection of simulators for future research. Description of future simulators in accordance with the basic groups of simulator elements should provide all data necessary for their easier replication and provide a step closer to the reduction of design diversification and standardization of rain simulators intended for soil research.

Keywords: dripping rainfall simulator, drippers, rainfall simulators review, soil research, rainfall simulator construction

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