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CELLULOSE-BASED MATERIALS –
FROM SCIENCE TO TECHNOLOGY

Kapun T¹, Zule J² and Šinkovec A³

Untapped potentials of invasive alien plant species

1 Dr. Tea Kapun, Pulp and Paper Institute, Bogišičeva 8, 1000 Ljubljana, Slovenia,
tea.kapun@icp-lj.si

2 Dr. Janja Zule, Pulp and Paper Institute, Bogišičeva 8, 1000 Ljubljana, Slovenia,
janja.zule@icp-lj.si

3 Andrej Šinkovec, Pulp and Paper Institute, Bogišičeva 8, 1000 Ljubljana, Slovenia,
andrej.sinkovec@icp-lj.si

Abstract

Invasive alien plant species (IAPS) are one of the biggest challenges in European ecosystems. They displace local vegetation, destroy agricultural land and cause damage to European economy in billions of euros every year. They are found mainly in abandoned construction sites and agricultural lands, along the roads, railways and river banks. Today IAPS are managed in a traditional linear way, which means that they are collected, stored and transported for incineration, landfilling or composting. In 2015, 40 IAPS were identified in the Ljubljana region. Ljubljana now experiments new circular approach to IAPS management. Once pre-treated, they can be used as input material for several products, including craft and machine paper production. The role of our Institute was to test seven different IAPS for chemical mechanical and morphological tests at laboratory scale. These results were crucial for subsequent machine paper production and development and design of different products ^[1].

References

- 1 <https://www.ljubljana.si/sl/moja-ljubljana/applause/>



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KEYWORDS:

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Circular economy
Chemical composition of IAPS
Cellulose fibers
Paper production
Innovative products

Biography

Tea Kapun was born in 1980. She got her Bachelor's degree in 2004 at University of Ljubljana, Faculty of Natural Sciences, Department for textiles. After that, she was young researcher at "Jozef Stefan" Institute and in 2011 she successfully defended her PhD at University of Ljubljana, Faculty of Natural Sciences, Department for Material and Metallurgy. She started to work as a researcher at Pulp and Paper Institute in 2012. She is a leader of the project Applause – from harmful to useful with citizens' led activities. She is also involved in untapped potential of different biomass and wastes.

