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BOOK OF ABSTRACTS

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RESTORATION OF DEGRADED FOREST STANDS – REVIEW OF SCIENTIFIC STUDIES RELATED TO INDIRECT AND DIRECT CONVERSION PRACTICES IN CROATIA

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Abstract:
Research on conversion of coppices and other degraded forest stands into high forests have become more prominent with adoption of Rural development programme for Republic of Croatia for the period 2014 – 2020. Programme has opened numerous possibilities through EU funding. Even though coppice management is regarded as the oldest silvicultural system, such activities received little attention in Croatia until recently. The main reasons are low production and profitability of existing coppices together with their poor quality (e.g. old stumps, species shift towards commercially less interesting tree species, etc.), negative biotic and abiotic forcing and the lack of modern silvicultural solutions aimed at enhancement of coppice management. Regarding the high share of coppices and their neglected ecological and commercial potential, the aim of silvicultural activities is to convert stands into higher/high silvicultural form to increase their landscape and commercial value. Conversion is silvicultural activity by which one silvicultural form is transformed into the other. Two basic conversion types can be distinguished in Croatian scientific studies: indirect and direct conversion. Indirect conversion is transformation of coppices to high silvicultural form through cleaning, thinning and regeneration under the canopies of old stand and by application of seeding cuts. This requires a longer period and more complex silvicultural activities if compared to direct conversion. Direct conversion presents transformation of coppices into high silvicultural form through cleancut, which is immediately followed by planting/seeding with the same or other commercially interesting tree species. Paper presents results of successful long-term research on indirect stand conversion. Included case study of Holm oak coppice conversion under the principles of seeding cuts has been done under the auspices of „Croatian forests“ Ltd. Paper also provides first results of direct conversions based on Conversion plans for two trials in private forests: conversion of high European hornbeam stand and Black locust coppice. The aim of presented research results is to provide insight into the structure and potential of young tree generation. In addition, it aims to suggest efficient and adequate conversion methods and activities, which should result with increase of ecosystem services, enhancement of stand structure, stability and resilience of forest ecosystems to climate change and altogether long-term increase of their commercial value.

Key words: afforestation, Black locust, conversion, European hornbeam, Holm oak, seeding cut