

Abstract template for the conference “A century of national forest inventories – informing past, present and future decisions”

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On page two, you are asked to fill in your abstract in the format and font size indicated. Please remember to include authors affiliation information in the footer section of page two. The length of the abstract may not be more than one page including references.

Abstract title:		Management and economic potential of private forests at national level – Croatia case study
Take-home message:		<i>Please provide a short take-home message from your study and your results' implications.</i>
Presenter name:		Karlo Beljan
Presenter contact info:		kbeljan@sumfak.hr
General topic, see website: <small>(please double click on the check box and activate the relevant one)</small>	<input type="checkbox"/>	Improving future NFIs by learning from the past
	<input checked="" type="checkbox"/>	NFIs today and in the future
	<input type="checkbox"/>	Cutting edge and futuristic inventory techniques and technologies
Preferred presentation form:	<input checked="" type="checkbox"/>	Oral presentation
	<input type="checkbox"/>	Poster
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Management and economic potential of private forests at national level – Croatia case study 14

Karlo Beljan, Krunoslav Teslak, Marijana Žunić, Stjepan Posavec, Jura Čavlović

Introduction: Privately-owned forests in the Republic of Croatia are currently the only forest areas that can be found on the free market for sale or concession, while the selling or concession of state-owned forests is not possible, at least for now. An economic potential of private forests has been object of study in many countries (Pukkala et al., 2003, Schiberna et al., 2011, Moss and Hedderick 2012, Toscani and Sekot 2015). The first national forest inventory in the Republic of Croatia conducted between 2006-2009 (Cavlovic et al., 2016) provide relevant data for research investment potential of private forests on the national level. The main goal was to study real potential of the investment and management of continental private forests with the assumption that there are private forest areas which can generate stream of positive net cash flows to such an extent as to satisfy rational (risk averse) investors in the long term.

Materials and methods: Based on the NFI data base data on the private forests were stratified and provided according to 7 forest categories (even-aged and multi-aged of Sessile oak/European beech forests, and selection understocked/stocked/overstocked European beech-Silver fir forests). An average forest/stand structure (age-class and diameter-class distributions) and assumed theoretical forest area of 100 ha for each forest category were used for simulation research of stand/forest development and management during 30-year period using MOSES, a single tree-growth computer program (Hasenauer 2006). Apart from stand/forest development (DBH-class, age class), silviculture (regeneration, thinning, cutting structure), for each forest category were included also analyses of transportation and processing of process timber, and the maintenance of forest roads. Economic analyses included estimation of investment costs, operating costs and income, net cash flows and terminal value and discount rate.

Results: Results showed expressed temporal dynamics of wood products between researched forest categories. Rate of fire wood and cut residue would be highest (48-82 %), sawn-wood would varies between 15-48 %, while rate of veneer products would be between 1 and 5 %. Analysis of expected return of investment and net present value showed that purchase of European beech multi-aged forests would be the best possible investment, while European beech-fir overstocked selection forests would be the worst investment.

Conclusion: Results of the study can be used as general guidelines for investing in private forests in Republic of Croatia for a longer period (30 years), and can also be upgraded in any case-study of an area larger or smaller than the one presented in this research.

References:

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Moss and Hedderick, 2012, *Small-scale Forestry*, 11, 101-117

Pukkala, et al., 2003, *Forest Policy Econ*, 5, 285-296

Schiberna, et al., 2011, *Small-scale Forestry*, 10, 245-253.

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