

15 Years Journal of Balkan Ecology

BALKANS AND EUROPE



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SOFIA, 25 – 26 OCTOBER 2012

PART ONE

15 Years Journal of Balkan Ecology

BALKANS AND EUROPE



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Forest Ecosystems as Basis for Recreational Valorisation of Sava and Danube Riverside Area in Belgrade Region

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Abstract. Unlike other European cities located on the banks of the rivers Danube and Sava that extensively exploit the benefits of their highly favourable location, Belgrade – the capital of Serbia, has not yet realised the potentials arising from its geographic position. In addition to adverse impact of numerous polluters (farms, slaughter houses), municipal and industrial waste landfills, illegal gravel pits on the banks, individual occupation and private end use of areas along watercourses through placement of boathouses or weekend houses, natural forest communities of long-lived tree species (oak, ash, linden, elm and other native tree species) have been largely destroyed, devastated or replaced by plantations of fast-growing Euro-American poplars. Furthermore, natural forests of black, grey and white poplar, willow and other accessory species have been significantly replaced by plantations and intensive cultures, renewed by clear cut after only 15-20 years. All the above-stated processes degrade and drastically impoverish the biodiversity of a forest biotope. The destruction of natural plant communities leads to a destruction of bird and mammal habitats, which is in discordance with the Ramsar Convention. In aesthetic terms, these anthropogenic plantations are monotonous and do not provide a pleasant ambience for visitors. For the purpose of evaluation of the study area's recreational suitability, a method, based on a detailed research of the condition of forest ecosystems in the riverside region of the Danube and Sava basin, has been applied. The results specify possible locations for particular recreational activities determine possible deficiencies of the area with respect to a particular recreational activity and propose intervention and rehabilitation measures that ought to be adopted with a view to meeting all preconditions for the selected purpose. In spite of a considerable potential of the study area for outing and recreational purposes, it is necessary to implement a variety of measures for its enhancement.

Key words: forest ecosystem, riverside area, Sava, Danube, recreation.

INTRODUCTION

"Sustainable development needs knowledge of the interrelations between urban conditions and the state of waters as well as instruments and techniques for their management. This is especially true for the industrial nations of Europe where much of the population live in cities and towns. Impacts on waters of sewage discharge, the high dynamics of storm water runoff, limited groundwater recharge, fragmentation, canalisation, culverting and others cause serious effects on aquatic organisms and the whole water ecosystems. In return, they lead to manifold influences on urban life like e.g. decrease of water supply, risk to public health due to chemical and bacteriological water pollution, threats by flooding or loss of quality of urban open spaces by reduced aesthetic value."

Aesthetic value also represents an important factor for the economic prosperity and social life in the riverine districts. To maintain the potentials for urban development in this areas degradation of urban waters should be avoided. Therefore, urban pressures on waters have to be minimised. In contrast to historical river modifications for various purposes of utilisation, current and future generations require an enhancement of the sustainability of European urban waters.

This altered perspective is especially exemplified by the European Water Framework Directive (WFD). As a main instrument of the European Water Policy, it has been introduced to avoid further deterioration of and, if possible, to improve all kind of waters. For surface waters it determines a "good surface water status" (Article 4/1/ii) and "good ecological potential", needs to be reached (Article 4/1/iii).

Additionally, urban waters are especially sensitive to climatic extremes such as droughts and heavy precipitation, which can be exacerbated by urban environment. Therefore, the rehabilitation of degraded urban waters including the creation of wetlands in future will be even more important in buffering adverse climatic impacts".

Apart from ecological and chemical state of water bodies, health and safety issues along with environmental quality of life in proximity of rivers ought to be taken into consideration. They refer to aesthetic values, amenities, accessibility and environmentally aware utilisation. Therefore, the design, planning and implementation of riverside valorisation measures require adequate participation of all stakeholders to ensure public acceptance of river enhancement. (9)