SERBIAN ACADEMY OF SCIENCES AND ARTS

8th DANUBE ACADEMIES CONFERENCE

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ПОДУНАВСКЕ РЕГИЈЕ

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П Р Е Д С Е Д Н И Ш Т В О

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PRESIDENCY

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WATERS INITIATIVE "PEOPLE AND WATER" COEXISTENCE IN THE SLOVAKIAN DANUBE REGION

Pavol SAJGALIK*

Water became strategic, not only as a global phenomenon with a great regional impact, but as a scientific object for a sustainable world.

According to OECD indicators (Environment at a Glance 2015), thanks to its geographic position, morphology and the specific geological structure, the Slovak Republic is one of the most important countries in Europe as a source of high quality and available freshwater.

Therefore, the strategic WATERS programme oriented to the water regime and a human-connected activity is an expected agenda of the Slovak Republic and the Slovak Academy of Sciences, as a national research institution.

As pointed out by the European Environmental Agency (2012), to maintain water ecosystems, farming, planning, energy and transport sectors need to actively engage in managing water within sustainable limits.

The main goal of the proposed WATERS programme is the assessment of the present status and prediction of water resources availability in terms of climate and land use changes. The broader context of water resources, environment and society will be addressed by multidisciplinary research based on complex modelling of water dynamics, transported substances and ecosystem services in relation to the society and its sustainable development.

The WATERS programme has a clear capacity to contribute to the complex synergy between the hydrosphere, landscape properties, human activities and societal needs, in terms of solving questions about water use efficiency, water management education, security issues and promotion. The suggested meth-

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odology will be applied to the Western Carpathians region and the Pannonian Basin (Vienna Basin / Danube Basin).

In the context of global changes affecting the water sector, three aspects are important: changes in climatic characteristics, changes in land cover, land use and change in the paradigm assessment in the management of flood hazard, water scarcity in terms of the vulnerability of society, influence on migration etc. Improper water use could limit opportunities for economic growth and job creation in the coming years and decades.

Changing models of water use in the Danube River Basin may influence the calls for water management among adjacent countries.

The total annual flow of Slovakian border rivers is estimated at 75 billion m^3 of water, which represents a remarkable amount of an important natural resource deserving international concern and agreements securing its safety and ecological stability for all involved nations. The transboundary level of water governance is important mainly in case of the Danube River.

Water poses significant risks and threats to society and the economy due to water degradation and environmental and climate change. Slovakia needs to assess these social and economic risks and address them through better water management and mitigation and adaptation measures. Water and water-related social and economic areas are becoming a vital source of development alternatives, and there are an increasing number of opportunities stemming from the water sector. These approaches point to the key importance of water for smart, sustainable and inclusive growth, and water as a cross-cutting theme in systematic research, in innovation policies and financing instruments.

There are socio-economic drivers such as population trends, the socio-economic structure of regions, industrial water consumption, or households' consumption, and there are benefits stemming from water, which are often not included into development analyses. In the first part we will describe and analyse trends in water consumption and water management. In the second part we will focus on water as a development factor.

One of the factors standing behind a paradigm shift is the idea that the negative consequences of natural disasters (floods, drought, earthquakes, and volcanic eruptions) are not only the result of the intensity of natural disasters, but also reflect the vulnerability of society.

Therefore, at least as much attention is to be paid to the assessment of the risks of natural disasters and evaluations of the vulnerability of society as to the assessment of natural hazards.