United Nations / Pakistan 4 th International Conference on the Use of Space Technology for Water Management
co-organized with the Prince Sultan Bin Abdulaziz International Prize for Water

SPACE APPLICATIONS FOR WATER AND DISASTER MANAGEMENT - SERBIA SPACE STRATEGY 2018-2024

Mr. Milan Mijovic, *Serbian office for Space sciences, research and development*
Ms. Marija Lazarevic, *Republic Water Direcorate*
Ms. Olivera Jankovic, *Republic Water Direcorate*
Mr. Jovan Rajic, *Renewables and Environmental Regulatory Institute*

Republic of Serbia
Ministry of Agriculture,
Forestry and Water Management
Republic Water Directorate

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Islamabad, Pakistan, 26 February – 2 March 2018

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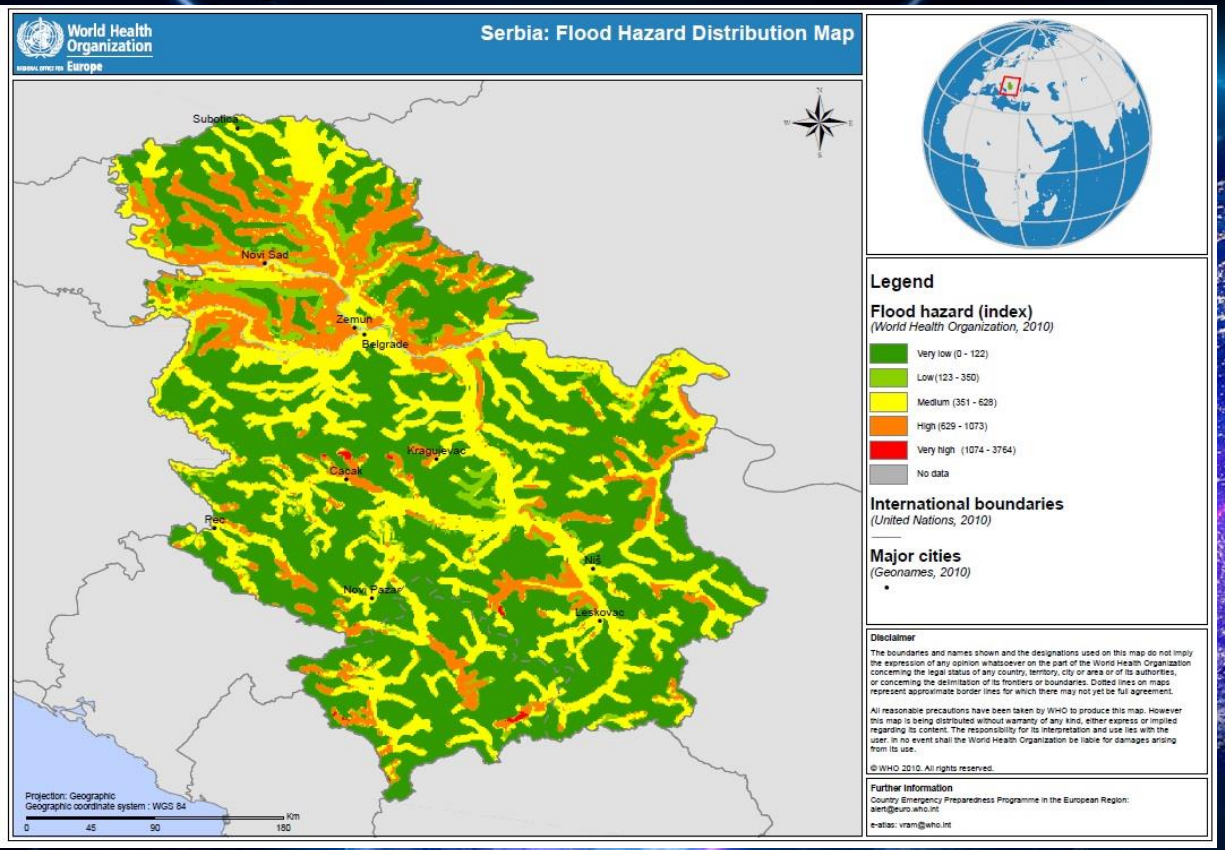

- Water Law
- Law on emergency situations
- **Executive Summary for the Water Management Strategy of the territory of the Republic of Serbia**

- EU Candidate
- 2030 Agenda for Sustainable Development

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Assessment of the present state of affairs

Advantages

- A water sector track record of more than 200 years;
- More than 90% of Serbia's territory falling within the Danube River Basin (although the Plan for Water Management within the Danube River Basin is not adopted yet);
- Rather extensive water infrastructure;
- A large number of water management companies which, with improved human and material resources, are prepared to continue to carry out water sector activities;
- A high-quality hub in scientific, research, planning, engineering and other fields, as the nucleus for future water sector development;
- Numerous universities providing a satisfactory level of knowledge, but able to perform even better once their curricula and teaching methods are updated, including those related to post-graduate studies.

Assessment of the present state of affairs

Disadvantages

- Considerably reduced water sector spending (some 300-350 million € per annum) over the past 30 years or so, much lower than needed (about 450 million € per annum on development and 550-600 million € on operating expenses) to improve the state of affairs in the water sector.
- Water fees assessed relative to inflation, not operating requirements, including maintenance. Additionally, for some time now water fees have been used out-of-purpose (outside the water sector).
- Very modest infrastructure, especially considering waste water treatment and water management in general, causing serious damage to environment and natural resources,
- Insufficient investment activity (modest number of new capital projects) and lack of capital improvement, resulting in devastation, affecting infrastructure capacities and making the water sector both acutely and chronically threatened in the areas of: Protection against the adverse effects of water: lowland river floods, flashfloods and erosion

Assessment of the present state of affairs

- The capacity of Serbia's Water Directorate insufficient to respond to all legal requirements set forth in the Water Law and other laws, particularly those the Water Directorate will face in the context of needed water sector development and intensified activities associated with accession to the EU;
- Only a small number of projects prepared in a way that would make it possible to seek funding internationally. Also, virtually no initiative from local administrations to furnish the higher-level design documents needed for project implementation;
- Very law level of knowledge and advantages of PPP projects which causes only small number of projects implemented through this model, although laws recognize this possibility;
- Although complied with Water Directive and Floods Directive in vast part, domestic legislation is not complied with the Directives on Habitats and Birds;
- Surface water and groundwater monitoring failing to provide sufficient data for prudent and efficient water management and compliance with EU water legislation. International cooperation, especially with neighboring countries, not satisfactory as there are no bilateral agreements with some of these countries (Bulgaria and former Yugoslav republics). Cooperation with Hungary and Romania based on agreements dating back to 1955.

EU Directives

Following the recommendations of the EU Floods Directive (2007/60/EC) and the requirements of the Water Law a three-step approach has been proposed which includes:

1) Preliminary Flood Risk Assessment;
2) preparation of flood hazard and flood risk maps;
3) development of the Flood Risk Management Plans.

The Preliminary Flood Risk Assessment for the Republic of Serbia (PFRA, adopted in 2012) resulted in the identification of 99 Areas with Potential Significant Flood Risk (APSFR), representing river sections along which floods are likely to occur and cause damage to society and environment (91 APSFR on 87 waters of the first order and 8 APSFR on the waters of the second order).

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Recent cases of natural disasters – Serbia floods 2014

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In Serbia, the floods affected some 1.6 million people and resulted in 51 casualties, of which 23 were due to drowning. Around 32,000 people were evacuated from their homes The majority of evacuees found accommodation with relatives, but some 5,000 required temporary shelters in camps established by the Government and the Serbian Red Cross. Health facilities, schools and agricultural lands were damaged. On 15 May the Government declared a state of emergency for its entire territory.

Satellite applications:

1) *Management information (water productivity, recycling effiency)*
2) *Water information (soil moisture, groundwater extraction)*
3) *Agricultural (cropping, biomass growth)*
4) *Water quality information*
5) *Basic water information (floods)*
6) *Water supply and Infrastructure*
7) *Landuse/Landcover*

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Contact: ***milan.mijovic@serbspace.rs***

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