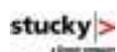




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# CONTENT

1. Results of IPF CR Serbia
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## IPF CR Serbia results: conditions

- Selected development scenario provides the conditions that:
  - can fit in the electricity production and consumption projections provided in the Energy Development Strategy of the Republic of Serbia
  - with minimal environmental and optimal socio-economic impact, estimated in line with other strategic documents of the Republic of Serbia.
- Scenario follows the objectives set in the Energy Development Strategy, National Sustainable Development Strategy in terms of structural options, as well as the Solid Waste Management Strategy.

## Description of Scenario

- The most favourable development scenario for Serbia based on the MCA is **Reduced/Optimised HPP Maximization Scenario**.
- Number of reservoirs to be constructed with total useful V of app 620 Mm3.
- All scenarios include extension and development of waste water drainage system (WWTP) in accordance with the national strategy.
- All development scenarios include closing and cleaning of municipal dumpsites in riverbank as well as sanitation of existing landfills and full implementation of regional solid waste management strategy.

### Reduced/Optimised HPP Maximization Scenario

New dams have multi-purpose Use

6 in total

(4 on Drina)

Rogacica" HPP, "Tegare" HPP, "Dubravica" HPP, "Kozluk" HPP,

(2 on Lim)

Broadarevo I HPP, and Rekovici SHPP

(1 PSHPP – Lim and Uvac Rivers)

## Non structural development options - Serbia

- The non-structural development options:
  - Reducing water use within all sectors, but especially agriculture by applying improved irrigation methods and water-saving technologies;
  - Reducing pollution of surface and groundwater by investment in wastewater collection and treatment;
  - Introducing a more restrictive policy on construction permits regarding housing especially in areas prone to flooding;
  - Improving waste management;
  - Reducing energy use to take away need for additional generating capacity;
  - Improve forest management practices and illegal logging in the area;
  - Environmental flow application and harmonization;
  - Improve technical education, training and capacity development;
  - Implement institutional and reporting processes within the Basin to improve efficiency of water resources management;
  - Preservation of protected areas and high aquatic ecosystem sections.

## Prioritisation for investments

- The following short term investment prioritisation is recommended for the selected scenario:
  - Based on costs per output (levelized cost of electricity – EUR/kWh) it is recommended to give the priority to investment in HPP Rogacica, HPP Tegare and SHPP Rekovici (1st phase). All of these HPPs have LCOE less than 0.0650 EUR/kWh.
  - HPP Dubravica, HPP Kozluk and HPP Brodarevo 1 belongs to 2nd investment phase. All of these HPPs have LCOE higher than 0.0750 EUR/kWh making it an investment with higher risk.
  - The best option would be parallel construction of all HPPs from the scenario (1st + 2nd phases) as one system, which would enable positive economies of scale effect. In that case, the LCOE is equal to 0.0692 EUR/kWh and the investment in HPPs from second group is financially more profitable (these HPPs would be more competitive on the energy market than in case of one-by-one investment).

## Recommendations-1

- In terms of flood attenuation:
  - consider weather forecasting techniques in their future planning,
  - HPPs operations should be coordinated between the riparian countries to mitigate sediment negative impacts and flood peaks.
- In terms of climate change adaptation measures:
  - Undertake revision and improvement of the monitoring system across the basin to enable better detection of the impact of climate change and determination of vulnerable areas.
  - Raise public awareness within the Basin's stakeholders regarding potential impacts associated with climate change and undertake education and training programs in adaptation measures especially regarding water use and water saving measures.

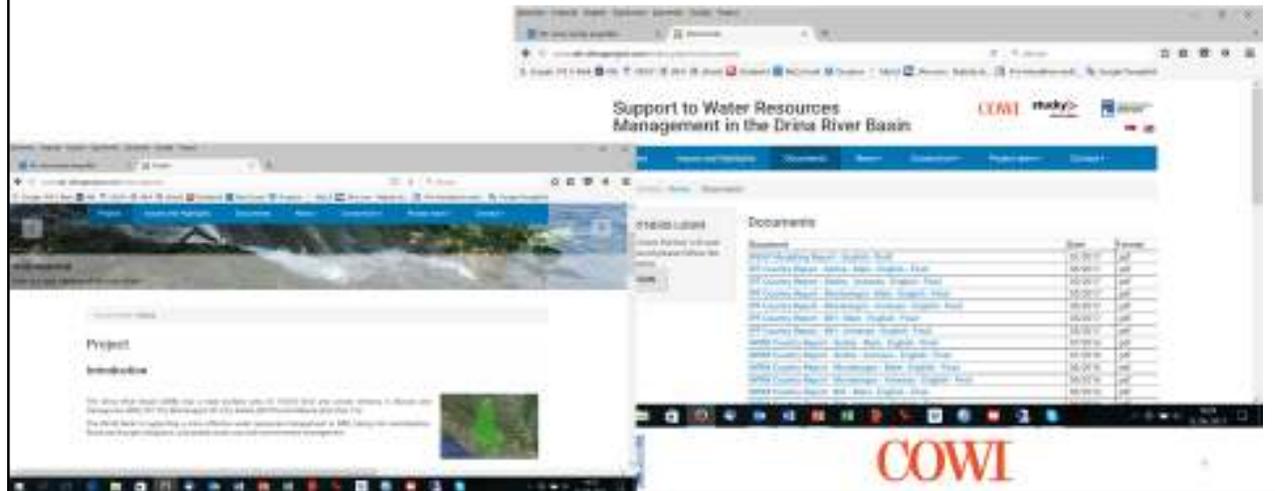
## Recommendations-2

- Based upon the outcome of the MCA for selected scenario:
  - Improvement of the legislation enforcement,
  - Undertaking a full public consultation process advocating the preferred schemes,
  - Undertaking a detailed feasibility, EIA and SIA of individual schemes,
  - Investigate the optimal financial instrument for implementation.
- In terms of water management concerns:
  - Accelerate the implementation of existing sub-laws and standards and harmonize the existing secondary legislation,
  - Improve the solid wastes management with adequate sanitary landfills construction and increasing the part of recycling wastes,
  - Carry on the construction of WWTPs in the DRB.
- In terms of transboundary cooperation, the Consultant recommends:
  - Transboundary cooperation among the riparian countries should be improved and coordinated.

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## More on Project webpage

- <http://www.wb-drinaproject.com/>



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**Thank You for Your Attention!**

**We will be happy to respond to any question!**

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