

Opportunities to support specific intersectoral activities or projects

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The “nexus tool” for Sustainable RE Deployment – a tool for Policy Makers

Strategic Planning

- Sectoral targets, common objectives on RE
- RES Potential mapping for optimal siting (all technologies, TB level)

Sustainable RE Policies

- Identification and assessment of cross-sectoral synergies and trade-offs
- A checklist for guiding new policy / improving existing policy (e.g. MEAs)

Sustainable RE Projects

- Maximization of benefits (incl. social and environmental)
- Possibilities for co-financing (across sectors, PPP..)



Multi-stakeholder dialogue and Public Participation

The “RE nexus tool” for Sustainable RE Deployment – a tool for Policy Makers

- ✓ RE “Hard Talks” linking to actual energy policy questions and orienting future investment
 - Bosnia and Herzegovina 2018
 - Serbia 2019
- ✓ The “RE nexus tool” is part of the upcoming publication *“Towards sustainable renewable energy investment and deployment: Trade-offs and opportunities with water resources and the environment”* (UNECE, 2019 - upcoming)

Opportunities:

- More RE Hard Talks in the region? A more specific focus (e.g. sustainable biomass)?
- Interest in applying/testing of the nexus tool in countries?

“Promoting the Sustainable Management of Natural Resources in SEE, through the use of the Nexus approach”

Funded by Austrian Development Agency (ADA); implemented by UNECE and GWP-Med. Builds on previous work on the Drina (funded by Italian Ministry of Environment Land and Sea) and Drin (funded by GEF)

Main outputs:

3 Nexus Dialogue Processes (Drin, Drina rivers, Albania)

- Transboundary / National Consultation Meetings
- Analytical Nexus Assessments (UNECE methodology)

2 Nexus-related capacity development workshop (Drin, Drina)

Opportunity: 4 Concept Notes and Project Documents for nexus projects addressing priority issues (also exploring financial options)



Drina RB: where we are & what's next

- ✓ Nexus assessment (flow regulation, rural development, water quality, tb cooperation) (Italy funded);
- ✓ Follow up project (sustainable energy, sediment management, e-flows, monitoring & information exchange) (Italy funded):
 - ✓ High-level workshop 29 October 2019, Belgrade
- New phase: Quantification/modelling of proprieties (ADA funded)
 - RE-focused analysis of Sustainable RE developments in the basin
 - hydropower dynamics in the basin (costs&benefits, hydro/non-hydro competitiveness)
 - others (interest to be discussed)

Relevance of the results from the earlier and planned “nexus” modelling for water-energy dialogue

Drina Nexus I: co-optimization of hydropower in the Drina River Basin, interconnections and trade, energy efficiency policy

Drina Nexus II: linking hydropower development in the basin to the RE energy and climate commitments of riparians - **Important to understand how this outlook plays out to anticipate the possible impacts on water resources (including other uses) and to explore alternatives**

Expected impact of Drina Nexus II: elements to answer the question *“How to increase the share of RE in the Drina riparians in a way that optimizes the resources available (including financial), minimizes the negative impact on the environment (including transboundary), and maximises the multi-sectoral benefits of projects?”*

in particular through a better understanding of hydropower dynamics in the basin (costs&benefits, hydro/non-hydro competitiveness)



APPROACH



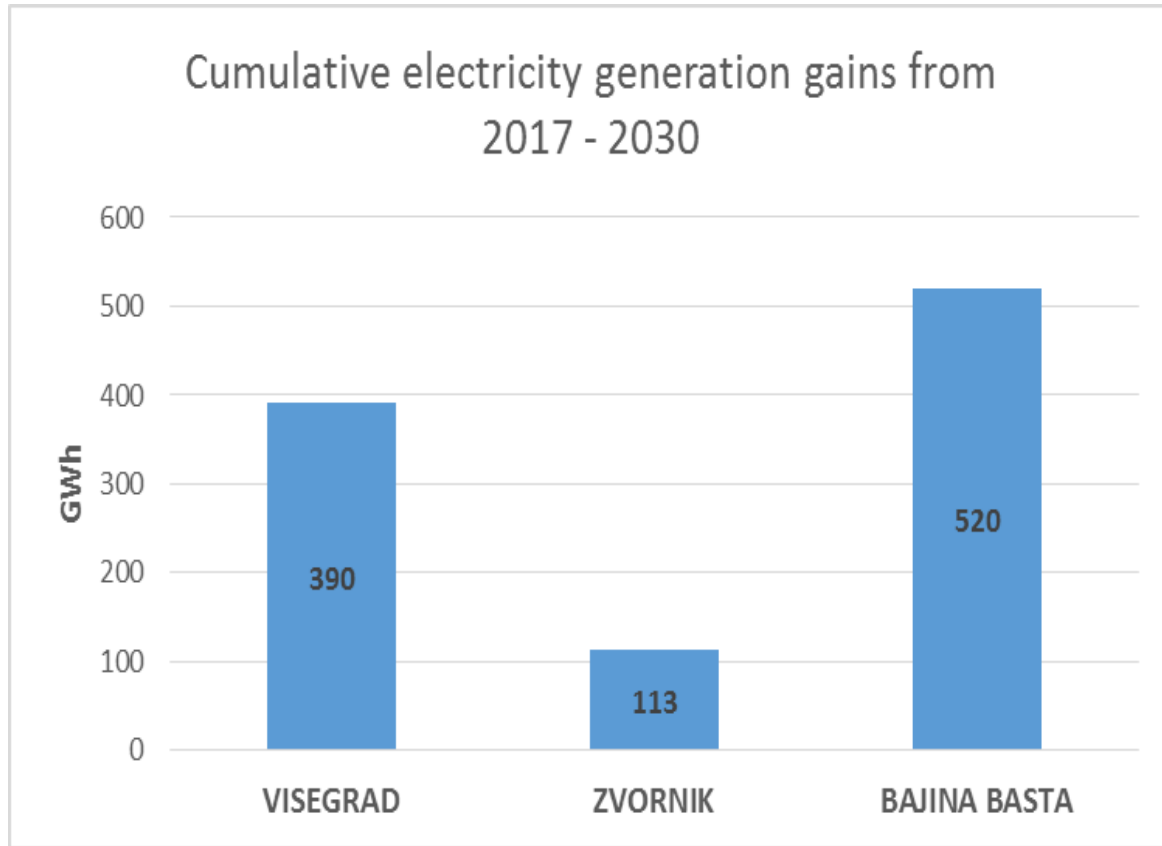
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- Electricity sector expansion model developed for Drina River Basin nexus assessment phase I to be used for this study
- It is developed in an open source framework (OSeMOSYS) to facilitate replicability and transparency (data and assumptions)
- The model is a techno/economic least cost optimization model of the power sector
- Power sector in all three Drina River Basin riparian countries (BA, ME and RS) represented with good technological detail
- Emphasis on the operation of hydropower in cascade



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Modelling results from nexus Phase I

The results demonstrated substantive benefits from coordinated operation of hydropower plants in the main Drina cascade compared to optimizing the generation from the plants on a single unit basis

A modelling exercise carried out as part of this assessment shows that cooperative operation of hydropower dams could deliver more than 600 GWh of electricity over the 2017-2030 period. Setting aside 30% of the dam capacity for flood control would have a cost, through a change in the energy mix, of about 4% of the operational cost of the whole electricity system in the three countries. Pressure on hydropower generation could be reduced by increasing energy efficiency – by as much as 4.1 TWh in the combined Drina Basin in the 2017-2030 period – and would also deliver significant reductions in greenhouse gas emissions (from 38 Mt in 2017 to about 28 Mt in 2030) representing about 21% of the combined emissions of the three countries in 2015.