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From nexus assessments to nexus solutions and investments

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Main achievements in this area of work

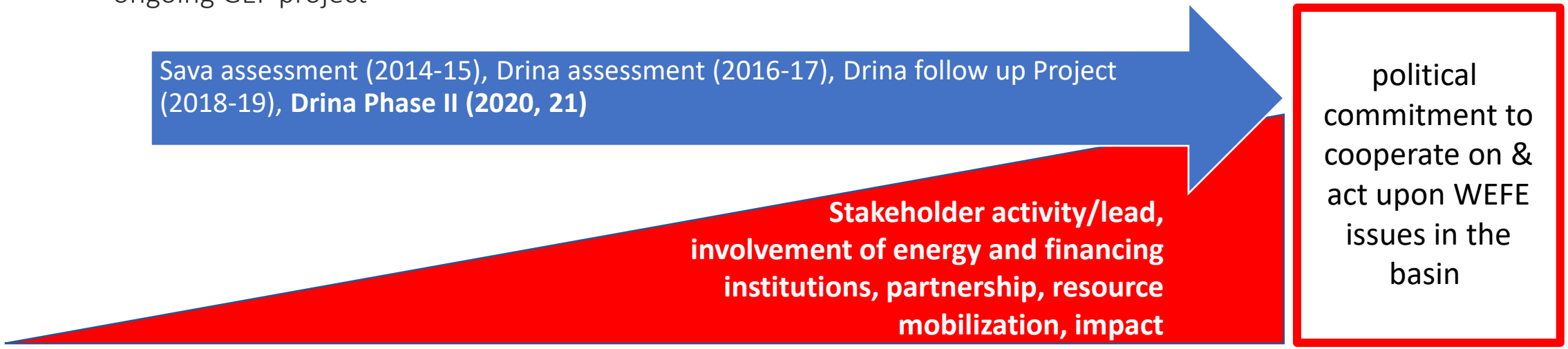
- Cross-sectoral dialogues and assessments in three basins during the triennial 2019-2021:
  - Drin and Drina in the Balkans
  - Northwestern Sahara Aquifer System
- Published synthesis report on Nexus Solutions and Investments in transboundary basins
  - Talks on financing aspects of nexus cooperation (expert consultations in Latin America and the Caribbean (ECLAC and IADB); Western Balkans (GWP-Med and EIB)
- Increased cooperation between water and energy sectors:
  - "Toolkit" for energy policy makers to deploy renewable energy more sustainably in transboundary basins in cooperation with UNECE SED (UNECE, 2020 *Towards sustainable renewable energy investment and deployment: Trade-offs and opportunities with water resources and the environment*)
- Continued capacity building and experience sharing, increased understanding of financing aspects (WFEE Task Force meeting in 2020)

Report on Nexus Solutions and Investments in transboundary basins – main findings

- Report is based on a **stocktaking exercise** (survey and a literature review), a review of regional nexus dialogues, expert consultations – **transboundary focus**
- Nexus solutions (action across sectors) tackle a variety of **issues related to water quantity, water quality and environment** -> "anthropogenic changes in hydrology" main root cause of problems reported, "stronger transboundary cooperation" main enabling factor of nexus solutions
- Nexus investments with transboundary benefits may arise: evidence of **nexus investments** coming from private sources (energy and agriculture) still limited, while innovative financing solutions could play a major role in upscaling nexus solutions by leveraging multiple sources (incl. climate): **high-level political commitment needed** to coordinate and partner across sectors and borders
- Little understanding so far about **benefits of nexus solutions** for basins and riparians: more dialogue, cost/benefit needed
- Report: Solutions and investments in the water-food-energy-ecosystems nexus: A synthesis of experiences in transboundary basins | UNECE

Drina and Drin

- 2 nexus assessments tailored to enhance previous and ongoing processes (both at stage of finalization):
  - Drina River Basin (Bosnia and Herzegovina, Montenegro, Serbia): previous nexus activities in Sava and Drina, ongoing GEF project



  - Drin River Basin (Albania, Kosovo*, North Macedonia, Montenegro): **Strategic Action Programme (GEF project): nexus to support cross-sectoral implementation**
- **Project concepts** for nexus interventions in the two basins, e.g. sediment management and erosion control across sectors, solar PV in reservoirs, etc. – linking to **regional strategies** e.g. Green Agenda for Western Balkans

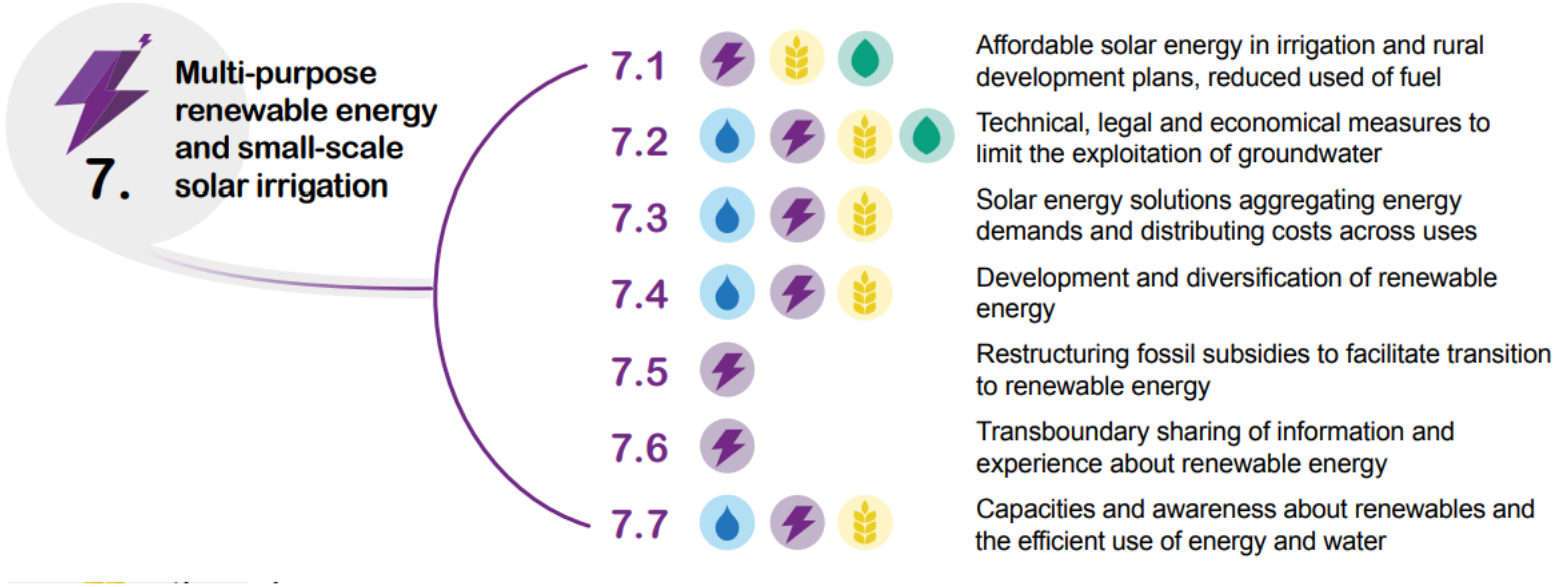
* UN Security Council resolution 1244 (1999)

North-Western Sahara Aquifer System (NWSAS)

- First nexus assessment of a shared aquifer (Algeria, Libya, Tunisia)
- Assessment report (2021)
- A package of solutions developed in an extensive cross-sectoral multi-stakeholder consultative process, best implemented in synergy, through coordinated action – to advance e.g. Sustainable Development, Climate mitigation + adaptation

Figure 4: A package of nexus solutions for the NWSAS[162]

	Water	Energy	Food	Environment
Governance and international cooperation	1. Enhance local water management, including revitalising participatory models in oases and enhancing the enforcement of existing laws on water conservation. 2. Reinforce transboundary cooperation for sustainable groundwater resource management.	6. Enhance mechanisms for the coordination of energy development with other sectoral plans, to anticipate trade-offs and build on intersectoral synergies.	9. Set up agricultural policies oriented towards rational, sustainable, and productive agriculture. 10. Valorise local products and strengthen programmes for a more balanced diet while involving young people and women in the economic and social development of the oases.	13. Increase awareness of the trade-offs and synergies between different sectors in public institutions.
Economic and policy instruments	3. Set up dedicated policies and related incentives for wastewater reuse in agriculture and urban areas. 4. Strengthen water demand management, including through water-saving programmes.	7. Develop a sustainable programme for diversified, multipurpose renewable energy and sustainably upscale small-scale solar irrigation.	11. Promote the circular economy including agroecological practices, through ad hoc economic measures and social instruments.	14. Consider environmental needs in the water balance of the aquifer.
Infrastructure and innovation	5. Upscale the use of non-conventional water resources through desalination and wastewater and drainage treatment.	8. Improve the reliability of the electricity grid in rural areas, thereby enhancing the integration of renewable energies for remote and multiple uses.	12. Enhance innovative practices and techniques for sustainable soil and crop management and invest in their upscaling and dissemination.	15. Systematise environmental and social impact assessment for all new infrastructure (large and small scale).



Lessons learnt for future work

- Lots of experience from assessments (even though we still see issues with data, tools, access to information across sectors); increasing focus on **implementation/operationalization, "nexus proofing"**
- **Institutional arrangements and processes** conducive to developing cross-sector designs and solutions commonly lacking (e.g. different planning cycles)
- More effective cross-sectoral "nexus" cooperation would improve the sustainable management of natural resources in transboundary basins
  -> **need political commitment or a common motivation to work together** (e.g. climate action)
- The nexus approach could catalyse **co-financing for water and environment** services from other sectors and private actors (notable energy and agriculture/forestry)
- To provide transboundary benefits Nexus solutions need to build on **common understanding and mutual trust**.
- Nexus solutions and investments can promote transboundary water cooperation and **conflict prevention**.

Suggested future work in this area

- The methodology for assessing the water-food-energy-ecosystems nexus (i.e. intersectoral trade-offs, synergies and benefits) in transboundary basins will be promoted
- Support will be provided for the operationalization of nexus (intersectoral) solutions (in particular, facilitating identification of projects and of financing options) in up to four regions/basins
- Assistance will be provided in the development and operationalization of cross-sectoral regional strategies with a transboundary character as frameworks for action on nexus solutions and investments
- Nexus work in Central Asia will be supported by the project: Regional mechanisms for the low-carbon, climate-resilient transformation of the energy-water-land nexus (subject to confirmation of funding)
- Task Force on the Water-Food-Energy-Ecosystems Nexus will meet twice
- Nexus approach to ensure coherence in climate action; increase opportunities for financing
- Proposed lead Party: Finland. *Resource requirements for activity 3.2: $1,221,000.*

Partners and donors

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Global Water Partnership Mediterranean

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giz Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

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UNITED NATIONS ESCWA

KTH VETENSKAP OCH KONST

IDB Inter-American Development Bank

European Investment Bank

Thank you

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