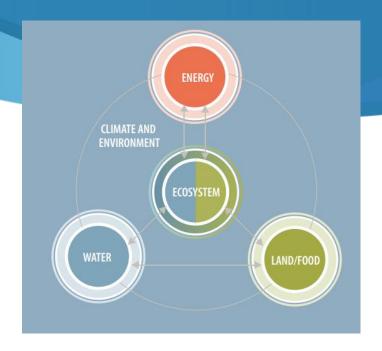
## Nexus approach to natural resources management

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# What is the "nexus" and why do we need a nexus approach now?

- Water, energy, and food security are interlinked. Without coordination sectors and countries compete for common resources.
- Sustainable Development Goals (Agenda 2030): Evidence of tradeoffs between sectoral objectives
- Climate action & post-covid recovery: Need to invest effectively and efficiently, sharing costs and multiplying benefits
- "Nexus" approach aims at reconciling the interests of the different sectors and co-optimizing, while respecting environmental needs and human rights, and improving governance.



Backbone of UNECE nexus work: assessment methodology, policy support, basin assessments and solutions under the Water Convention

Task Force on the Water-Food-Energy-Ecosystems Nexus (2013-)

Methodology development – iterative improvement – Synthesis (2018)

**Policy support** 

**Platform** for exchange of experience

**Taking stock** 

Global workshops backto-back: assessment approaches & tools, water allocation 7 Basin assessments since 2013

Revised

Methodology with technical and governan "tracks"

Evolution of participatory methods (partner inputs)

progressive expansion optimization of infrastructure the toolkit

Facilitating inter-sectoral dialogue

Initiating, broadening, revisiting transboundary basin cooperation

Policy insights from modeling on key questions e.g. optimization of resource and infrastructure

Joint identification of nexus solutions

Solutions, partnerships

Synthesis of solutions and investments: how to realize them through cooperation, consultation, and exploration of co-financing opportunities (across sectors, countries)

Cooperation with the **energy sector** on multisector dialogues,
strategic planning/policy support
with a toolkit

#### Example: Nexus issues in the Drin River Basin

Sector	Water	Agriculture and use of land	Ecosystems and the environment
		resources	
	- Impact of current and future hydropower	- Role of biomass production	- Impact of logging on forest
	generation (taking into account new	in forest/land management	degradation, erosion, and
	investments) on the basin hydrology, including	- Integration of energy	sedimentation
Energy	on floods	infrastructure in broader	- Incoherencies between clean
	- Impact of energy policy on water resources -	spatial planning	energy/climate action, sustainable
	including efficiency, non-hydro renewables, and		development, and environment
	trade and related transmission projects.		preservation
Water		- Water demand for irrigation,	- Poor/inexistent wastewater treatment,
		likely to increase due to	exacerbated by urbanization and
		climate change & reg. trade	tourism (at given locations and seasons)
			- Agricultural pollution and
Agriculture			eutrophication of water bodies
and use of			- Conversion of natural habitats into
land			agricultural land, loss of habitats
resources			- Illegal fisheries, hunting and logging
			- Poor/inexistent solid waste managem.
			- Sand and gravel extraction



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#### Pressure on natural resources continues to increase

Increasing demand, changing climates and technologies, urbanisation, growing populations, societal demand and inequalities, globalisation and other megatrends are putting pressure on natural resources, most of which are not renewable.

Climate change may reduce agricultural productivity by up to a third. Significant knock-on effect on energy and water demand from increased demand on food. Impacts on natural ecosystems and biodiversity, economic growth, and global food security as well as threaten human health.

#### Calling for integrated and sustainable natural resource use

Taking a nexus approach - integrated planning, management, and governance of natural resources – needed & provides opportunities

**Natural Resource Nexuses in the ECE region** 

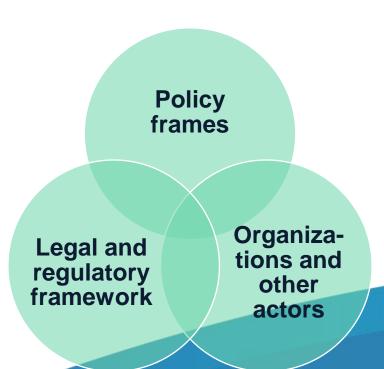




**Natural Resource Nexus Hotspots identified** 

## To-do list for improving inter-sectoral cooperation: avenues for action

- Overcoming "silos thinking" in policy making and resource management -> reduced friction between sectors and countries, reduced economic losses from inefficiency, enhanced sustainability
- Optimizing use of **infrastructures** (benefits to different sectors, lower resource use intensity possible...)
- "Nexus-proofing" the legal and regulatory framework, institutions and actors at multiple levels, policies
- Facilitating information sharing and consultation considering different interests & alternatives
- Highlighting the broad benefits of cooperation



## Leveraging sustainable management of natural resources: UNECE's nexus-relevant tools can help

- Taking a holistic and long-term approach, considering not only intersectoral impacts but also environmental, social, institutional and economic dimensions; not now but also in the future (accounting for climate change).
- Contributing to implementing the SDGs and targets of Agenda 2030, in conformity with the principles of the United Nations.
- UNECE Tools include conventions, protocols and soft-law instruments; a charter and a
  policy platform, standards and good practice guidance, strategies, an accounting
  system, data connected tools and dedicated projects and capacity-building.
- Engaging authorities and key stakeholders as part of finding solutions through relevant frameworks.
- Climate change, green economy and sustainable development provide frameworks for coordinated action as well as financing and partnerships

#### Providing relevant tools based on dialogues and practice:

**Nexus & Renewable Energy** 

Cooperation between Environment and Sustainable Energy Divisions

- Policy Brief on RE, nexus and SDGs (UNECE, 2017)
- RE "Hard Talks" linking to actual energy policy questions and orienting future investment (Drina Nexus Assessment follow-up: Bosnia and Herzegovina 2018, Serbia 2019)
- **Sustainable RE Deployment a tool for Policy Makers** (UNECE, 2020): guidance for policy development or revision, strategic planning and projects

**Deployment of Renewable Energy:** educing Barriers to Accelerate the

Sustainably in Serbia

HARDTALK

The Water-Energy-Food-Ecosystem Nexus Approach to Support the Sustainable Development Goals

UNECE

Good practices and policies for intersectoral synergies to deploy renewable energy

UNECE

Towards sustainable renewable energy investment and deployment

Trade-offs and opportunities with water resources and the environment





## Identifying nexus issues and solutions (and related benefits) through dialogue and analysis

Assessment of the water-food-energy-ecosystems nexus in Albania applies the methodology developed under the UNECE Water Convention for analyzing issues between sectors, considering both technical resource management issues, and the governance

Step 3 Step 4 Step 6 Step 1 Step 2 Step 5 Characterise **Identify** key **Analysis of key Defining the** Solutions and **Nexus dialogues** benefits: socio-economic & sectors and actors **Nexus:** (with key sectors sectors (stakeholder and stakeholders) **Proposing actions** environmental Intersectoral mapping) issues context Review of relevant studies & reports for the concept (MAPS, UNECE EPR etc.)

Participatory process (consultations etc.)

Fact-finding and analysis of the key intersectoral issues identified