

# Thematic assessment on the Water-Food-Energy-Ecosystems Nexus

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Convention of the Protection and Use of Transboundary Watercourses and International Lakes

# Assessment of the water-food-energy-ecosystems nexus under the Water Convention in selected basins

- Part of the Work Programme 2013-2015
- Work overseen and guided by the Task Force on the Water-Food-Energy-Ecosystems Nexus; Working Group on IWRM the other responsible body
- Some 6-8 basins to be assessed (based on interest expressed) – Africa, Asia & Europe; different nexus settings, climate, resource scarcity etc.
- Key partners: Finland (lead)/Finnish Environment Institute SYKE, FAO, Royal Institute of Technology (Stockholm)



# Why a NEXUS assessment?

Sustainable ways to address the resource Nexus needed:

- Water, Food, Energy and Ecosystems intrinsically interlinked — to be looked at in an integrated way
- Important to avoid negative feedback reactions common in a segregated, sectoral approach

In a transboundary setting

- the trade-offs and externalities may cause friction
- forming a holistic picture of the situation more complicated
- more opportunity for benefits looking at the basin as a whole, only achievable through joint action



# Why a NEXUS assessment? (...)

Some specific questions that can be answered using an integrated nexus approach are:

- How can we **meet common development needs** (food, water, energy) **in a sustainable manner** without compromising the availability of natural resources (ecosystems)?
- Which **technologies** and what combination and configurations of them are best going to help?
- What **policies** are going to make this feasible and economically viable – and thereby help reduce future conflicts?
- How to **coordinate the actions of countries** that share the same resources/transboundary systems?
- And what happens if we do nothing?
- What are possible **implications of climate change** on the Nexus system and what **future** challenges will we face?



# Some key features of the approach

- **Participatory processes** that support ownership by the concerned countries, organizations and various stakeholders;
- Underpinned by **sound scientific analysis** to inform the process;
- **Knowledge mobilization** and awareness-raising;
- **Capacity building** - supporting mutual learning across basins, sectors and State borders;
- **Collective effort** that brings together a broad range of expertise & views (sectors, countries, IGOs, civil society...)



# The process: proceeding step-wise

## Methodology

- Consultative process based on a discussion paper

## Data Requirements

- Selection and expert review of Nexus indicators
- Development of a **questionnaire**

## Nexus profile

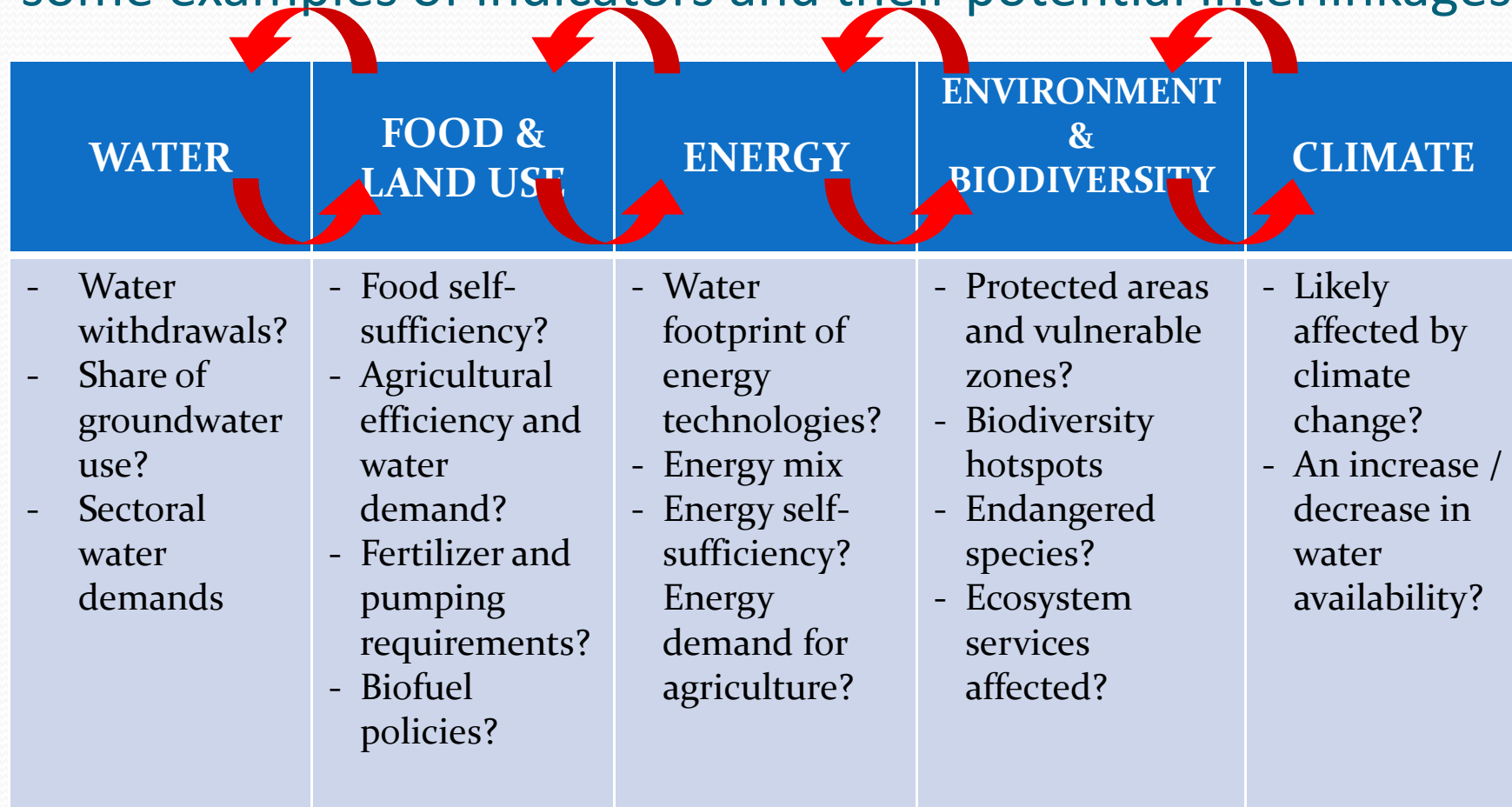
- Nexus profiles for river basins developed using **indicators** (review of country documentation & databases)
- **Identification of the key inter-linkages/trade-offs**, pressing issues and hotspots

## Pilot Assessment

- **Participatory, inter-sectoral assessment** of the pilot basin (workshop+ consultations)
- **Quantification of selected aspects** of the nexus
- Illustration of **future projections** for water-food-energy developments and impacts on ecosystems

# Defining Nexus Indicators:

some examples of indicators and their potential interlinkages



# Substantive elements of the assessment

1. A mapping of the land, energy and water balances; helps to initiate /enrich discussions on important nexus trade-offs, institutional economy & resource allocation
  2. A conceptual picture of the nexus in the basin with relative importance of interlinkages determined, illustrated with indicators, and limited quantification of selected aspects
  3. Scenarios of potential trade-offs that may arise as demands, management patterns (or e.g. the climate) change
  4. An institutional analysis
- => basis for a later quantitative trade-off analysis (depending on the countries interest & availability of donor funding)





# Expected outcomes

- Greater capacity of sectoral ministries and authorities, joint bodies and other stakeholders for assessing and addressing the nexus, to reduce conflict and enhance sustainability
- Useful information produced for regional, national and basin level to support policy development, decision-making, transboundary cooperation, public participation and policy coherence
- Identification of additional benefits from co-management and inter-sectoral coordination & cooperation – opportunities for cooperation
- Beneficial exchange of experience between countries, sectors and basins
- A methodology for transboundary settings for further application/development
- valuable lessons and practical solutions drawn and disseminated



# Time line

- Consultation of the nexus Task Force on the methodology and the indicators (October 2013)
- Testing the methodology on a pilot basin (the Alazani/Ganyh), including data collection, analyses and assessment, conclusions of the testing and finalization of the methodology (October 2013-January 2014);
- Jan 2014- Apr 2015: basin level process (inter-sectoral basin level meetings with concerned sectors & main water users) & assessments
- 2<sup>nd</sup> meeting of the Nexus Task Force in 8-9 September 2014
- May 2015 content of the Assessment to be endorsed by the Nexus Task Force
- Publication in August 2015

