Energy – Water Nexus in Central Asia: Evolution of Regional Legal & Institutional Frameworks

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Energy security in Central Asia

- **External dimension** – source of energy resources for Europe & North-Western Asia
- **Internal dimension** – regional energy imbalance
- Regional security discourse – focus on transboundary water resources
  - Water security – equitable & efficient use of transboundary waters
  - Energy security – reliable and adequate energy supply
  - Food security
  - Environmental security
- The Syrdarya and Amudarya rivers account for almost 90% of total available water resources
- Growing tension over water utilization: Downstream countries’ use (irrigated agriculture) vs. Upstream countries’ use (hydro-power generation)
  - Operational regime of the Toktogul reservoir (Kyrgyzstan)
  - Construction of the Rogun dam (Tajikistan), Kambarata (Kyrgyzstan)
Regional energy imbalance

Allocation of the confirmed reserves of mineral energy resources and hydro-energy potential in the CA region

- Уголь: 10.5%
- Нефть: 29%
- Газ: 42.6%
- Гидроэнергетический потенциал: 76.8%

Источники: [1, 2]
Schematic Layout of the Syrdarya Basin

KEY:
- Dam or barrage
- Hydropost
- Canal
- Pump station
- Hydro-electro station
Regional developments since 1992

- **1992 Agreement on cooperation in the utilization of interstate water resources:**
  - “Conservation” of the pre-independence regime of water use
  - Creation of the Interstate Commission on Water Coordination (ICWC)

- **1993 Agreement on joint actions in addressing the Aral Sea problems:**
  - New regional institutional mechanism (ICAS ➔ Int’l Fund AS)

- **1996 Agreement on the use of water & energy resources, construction & exploitation of gas pipelines in the CA region (Kaz., Kyrg., Uzb.)

- **1998 Agreement on the use of the fuel-energy and water resources of the Syrdarya river basin: Kaz., Uzb. & Kyrg. (+Tajikistan)

- **International & supra-regional dimensions:**
  - WB: ASBP, EU: WARMAP, UN ECE: SPECA
  - Eurasian Economic Community (EurAsEC)
UN ECE

- SPECA: Special Programme for the Economies of CA
  - Theme “Water & Energy” – among the initial work areas
  - Objective: to promote efficient use of water & energy resources on mutually agreed & beneficial terms
  - Project Working Group (PWG) on Water & Energy Resources
    » Strategy for the Efficient Use of Water & Energy Resources
    » Baku Initiative on Energy Efficiency & Conservation
    » Development of cooperation on Chu & Talas rivers (with OSCE)
    » Dam safety in CA (international agreement and guidelines)

- Regional dialogue & cooperation in transboundary water resources management:
  - Improvement of the regional legal & institutional framework
Regional Institutional Structure

State Founders of the IFAS

KA  KY  TA  TU  UZ

Executive Committee of the IFAS
International Fund for saving the Aral Sea (IFAS)
Regional Branches of the IFAS

Ministries of Agriculture and Water Resources
Interstate Commission for Water Coordination
ICWC Secretariat

Scientific Information Center of the ICWC
Basin Water Organization "Amudarya"
Basin Water Organization "Syrdarya"

Regional Branches of the SIC ICWC
EuRasEC: Common Energy Policy

- Regional economic integration organization (Treaty of 2000): RF, Belarus, Kazakhstan, Kyrgyzstan, Tajikistan + Uzbekistan (suspended)

  - Policy objective – energy security & energy independence of the member states through the formation of a common energy market
  - Main energy policy aims, principles and directions
  - Policy implementation - Programme of the development of fuel & energy industry of the member states

- The Concept of the formation of a common energy market
  - Common market for electricity, oil, gas & coal
  - Harmonization of applicable national regulatory frameworks
  - Gradual liberalization of the energy sector, facilitation of competition

- Draft Concept of the efficient use of water and energy resources of Central Asia – currently being developed
Concept of the Regional Water & Energy Consortium

- First proposed under the Central Asian Cooperation Organization
- Envisaged in the 1998 Syrdarya Agreement
- Inadequacy of the existing institutional framework: ICWC – a purely water-focused mechanism
- ICWC & BVOs – no powers to enforce decisions on water allocations & reservoir operations
- No effective dispute prevention & resolution mechanisms
- Proposed way forward:
  - At the policy level – Interstate Council for Water & Energy (to replace ICWC)
  - At the regulatory level – BVOs as regulators of water infrastructure & reservoir operations
  - Regional electricity market
  - Financial & compensatory mechanisms
  - New power-generating projects (such as Kambarata) – as regional projects
- New legal framework for transboundary river systems & institutional setup
Main challenges

- How to reconcile conflicting interests: **Upstream vs. Downstream**?
- How to integrate energy production and transmission and water resource utilization?
- How to manage extremely complex water utilization infrastructure and increase the efficiency of water use?
- How to improve inadequate institutional structure & weak legal and enforcement mechanisms?
- To summarize: Water is the principal factor in achieving regional energy security & sustainability