



REPUBLIC OF TAJIKISTAN ROGUN HYDROPOWER PROJECT

Riparian Consultations Event

Istanbul, August 28-29, 2025

**Environmental and Social Panel of Experts (ESPoE)
Dam Safety Panel of Experts (DSPoE)**

**COMMENTS ON THE ESIA WATER CHAPTER WITH
FOCUS ON RIPARIAN COUNTRIES**

Ioannis Karavokyris - Hydrology Expert

Summary Comments on the Water Chapter with Focus on Transboundary Issues

- The water chapter in its latest version is greatly improved. The text is clear in meaning and interesting.
- Inclusion (in Annex 13-3) of model simulations of the operation of the Rogun-Nurek pair of HPPs is very important. This is an independent verification of the TEAS simulations which had been done with river flow data up to 2007 and on which the design of the project had been based.
- The new simulations of the ESIA Report include river flow data up to year 2024. They confirm the conclusions of the TEAS Design, that the Rogun-Nurek system can and should be operated so that the flow regime downstream of Nurek and into Amu Darya River remains the same as before construction of Rogun Dam.

Summary Comments on the Water Chapter with Focus on Transboundary Issues

- The ESIA Report specifies that water regulation in Vakhsh River, after completion of Rogun Dam, will follow the agreements, limits, and procedures of ICWC in application of the Nukus declaration and Protocol 566.
- The above specification is supported by the operation simulations already mentioned, which demonstrate that the cascade after completion of Rogun HPP as designed, will be operated so as not to change the river flow regime downstream of Nurek from what existed before Rogun.
- The Impoundment Period is important for river regulation for all large dams. The ESIA Report specifies that, again as in normal operation, impoundment will respect the procedures of ICWC in application of the Nukus declaration and Protocol 566. Water retention for impoundment will be from the volume allocation to Tajikistan according to the above procedures. The impoundment schedule will be, therefore, flexible so that the above are respected.

Beneficial Functions of Rogun Project Relevant to Downstream Riparian Countries - Energy

- Rogun will have a generation capacity of 3780 MW.
- Together with Nurek HPP, the Project will ensure reliable electricity supply to meet the growing domestic demand at affordable cost.
- At the regional level, the Project is expected to play a crucial role in decarbonizing the electricity grids of the Central Asian electricity networks. Together with Nurek HPP they may provide grid-stabilization services and act as balancing plants for the broader Central Asia to facilitate integration of solar and wind production into the networks.

Beneficial Functions of Rogun Project Relevant to Downstream Riparian Countries – Flood Risk

- The existing legacy dams of the Vakhshs Cascade were designed for lower flood flows than modern safety requirements would specify.
- This constitutes a risk for all downstream riparian zones, particularly due to Nurek Dam not having been designed to pass the Probable Maximum Flood.
- The design criteria for Rogun Dam include the requirement for the project to be capable of routing the Probable Maximum Flood so that the downstream flows are safe for the Nurek Dam and the rest of the cascade.
- To bring up to date Climate Change predictions a new study is being conducted that will update the TEAS estimates. The spillway design and operational procedures for Rogun will cover the results of this latest study.

Conclusions on Transboundary Impact of the Project With Respect to Water

- The ESIA Report in conjunction with the CIA Report demonstrate convincingly that water-related impacts from operation of the project to downstream riparian countries will be negligible.
- The undertaking of a long and flexible impoundment plan that will stay within the existing international agreements and procedures for water regulation and abstraction means that there is no additional impact specific to the impoundment period.
- While water-related impacts to downstream riparian countries are shown to be insignificant, there will be important benefits related to energy generation – grid stabilization (ancillary services) – and flood risk reduction.



Thank you!