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Tajikistan's Rogun Hydro: Social and Environmental Aspects¹

Background

Central Asia's water resources are distributed highly unequally between the republics. Most waters arise in Kyrgyzstan and Tajikistan, while they are used mainly in Kazakhstan, Turkmenistan and Uzbekistan for irrigation (See Map 1). After the break-up of the Soviet Union disagreements arose about water usage due to different national usage priorities. As the Soviet Union waned, the upper riparian states began to use more water from the reservoirs (See Map 2) for hydro energy production in winter instead storing it for irrigation purposes at the lower reaches during the summer.

There is tension between Kyrgyzstan and Uzbekistan, as well as Kazakhstan at the Syr Darya concerning the use of the Toktogul reservoir; between Turkmenistan and Uzbekistan about the amount of water withdrawn from the Karakum and Tujamujun canals and the newly constructed Golden Century lake; and between Tajikistan, Uzbekistan and Turkmenistan at the Amu Darya because of Tajikistan's plans for building the Rogun dam. Although regional institutions have been set up to regulate the water courses, they do not work effectively due to mutual distrust of the republics, and the threat of conflict persists. (After Giese et al., 2004 & Juraev 2009).

The Central Asian electricity grid is on the verge of collapse. Uzbekistan cut supplies to Tajikistan (due to 'technical reasons') and threatened to halt the transit of power from Turkmenistan across its territory. Tajikistan is braced for dire energy shortages each winter, with electricity already only available in rural areas for about 3 hours per day. The 2010-2011 winter was somewhat less harsh than usual so electricity supply was increased to 10 hours per day. Energy shortages in Kyrgyzstan and Tajikistan have intensified in recent years, with serious repercussions on the local population. Both countries are heavily dependent on hydro resources, but the outdated and barely functional energy infrastructure in Kyrgyzstan and Tajikistan has had to face a number of environmental challenges, such as a cycle of dry years and harsh winters.

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Map 1: Major River Systems in Central Asia (Amu Darya and Syr Darya)



Wegerich (2008) summarizes the legacy well. The water allocations in the Amu Darya Basin reflects the legacy of the Soviet Union: the downstream riparian states, Turkmenistan and Uzbekistan, were utilized to produce cotton while upstream Tajikistan used water for energy production and it was anticipated to increase its reservoir capacity further to provide water storage and facilitate agricultural production downstream. Tajikistan and Kyrgyzstan were considered simple

producers of water without having a real claim to it. Independence manifested inequitable water allocations, giving rise to the perception that especially Uzbekistan is the hydro-hegemony in the Amu Darya Basin. But the post-Soviet basin may be, in fact, without a hydro-hegemony. The riparian states are currently engaged in strategies of resource capture, by increasing their water demand without renegotiating agreements. In addition, while during the Soviet hegemony the increase of reservoir capacity upstream was perceived as 'integration' into the larger framework, today the re-emergence of these plans is perceived as a threat. The analysis of different aspects of hydro-hegemony, such as control over data, current discourses, and control over provision infrastructure, demonstrates that Uzbekistan's control over the flows is hardly consolidated.

Box 1: Background: The Aral Sea

The environmental impact of water use is a major issue in Central Asia, due in part to the Soviet era diversion of tributary rivers from the Aral Sea. For the better part of the twentieth century, the Amu Darya and Syr Darya were heavily diverted for cotton production in riparian communities. This resulted in the Aral Sea losing more than 75% of its volume between 1960 and the present. Former islands on the sea have become peninsulas, and the salinity of the water has become highly concentrated, killing many native fish and animals.²

The five Central Asian nations formed the Interstate Water Coordinating Commission (ICWC) in 2002 to negotiate solutions for water use. However, conflicts persist and the current debate focuses on the use of dams for irrigation versus energy production.³ This is a contentious issue that needs to be resolved if cooperation of riparians is to be achieved.

Introduction to Rogun Hydro

The Rogun hydroelectric power project is hoped eventually to transform impoverished Tajikistan into a regional energy supplier. Designed in the Soviet era, the Rogun hydroelectric plant would be the largest in Central Asia, tapping the Amu

²CA Water Info, "Degradation of the Aral Sea and South Prearale," www.cawaterinfo.net/arak/arak3_e.htm.

³ Interstate Commission for Water Coordination of Central Asia, <http://www.icwc-arak.uz/>

Darya River in the Pamir Mountains to produce energy for consumers in Central Asia, Afghanistan, and Pakistan.

Rogun hydro, on the Vakhsh River, is 100 Km downstream from Dushanbe. The Vakhsh River is a major tributary of the transboundary Amu Darya, which drains much of Tajikistan, thence flowing into Afghanistan, Turkmenistan, and Uzbekistan, finally debouching into the Aral Sea (See Box 1).

However, the \$2 billion, 3.6 Gw project is now facing opposition from other countries in the region that depend on water from the Amu Darya for irrigation. As of 2006, two designs are under consideration: the original, 335-metre (1,099 ft), and an alternative one, 280 to 300 metres (920 to 980 ft), both having their advantages and drawbacks, according to Savchencov (2006). The 335 m-high option would make Rogun the tallest dam in the world.

Rogun Hydro Financing: Both Iran and Russia were interested in investing in Tajikistan's 2.4 Gw or 3.6 Gw Rogun Hydro project, which was shelved following the collapse of the Soviet Union in 1991. ADB is interested, and as of 2010, the Government of Tajikistan and the World Bank signed a [Memorandum of Understanding on Energy Development for Sustainable Growth](#). The World Bank accepted the request of the Government of Republic of Tajikistan to finance the [environmental and social impact assessment study for the Rogun Hydroelectric Power Plant Construction Project](#).

The estimated \$10 million financing for necessary studies to complete Rogun Hydro, including the social and environmental (but excluding the two independent panels of social and environmental experts) is expected to come out of the World Bank's \$30 million Energy Loss Reduction Project (P089244) to Tajikistan, co-financed by Switzerland's Secretariat for Economic Cooperation.

Lack of Information: One of the major problems experienced by civil society with regard to the Rogun hydroproject is the lack of reliable information. This issue was raised with Mr. Motoo Konishi, Regional Director of the Central Asia department of the World Bank at a December 15, 2010 meeting with the Bank Information Center (BIC). The Bank team acknowledged the problem and promised to work on improving regular communication with stakeholders. In response, BIC has drafted this Social and Environmental Briefing Note in order to share reliable information with civil society partners. This Briefing Note focuses mainly on social and environmental aspects, and is compiled from secondary sources.

The World Bank restructured the Energy Loss Reduction Project to include a component for financing studies and technical assistance concerning the feasibility of the Rogun Hydropower Plant (HPP) in Tajikistan. The Bank notes in [the Integrated Safeguard Datasheet](#) that "from the safeguard perspective this project is

both unconventional and bears a significant reputational risk component for the Bank, and additionally has a highly challenging regional political dimension.”

Rogun has increased in importance recently as Tajikistan is experiencing severe winter shortages of electricity. About 98% of its electricity is generated by hydro power. Strict electricity rationing has been in effect in Tajikistan for at least a decade. Since January 2009 rationing became even more severe due to a dispute with neighboring Uzbekistan that blocked the import of Turkmen power. Both Tajikistan and Uzbekistan left [the region's uniform electricity grid](#) in 2009. Tajikistan is said to buy about 8m kWh and 1m kWh of electricity daily from Turkmenistan and Uzbekistan. Gas is also mainly imported. Rogun hydropower is thought to be the best long-term solution to Tajikistan's perennial power shortages. But Rogun also is expected to generate ample electricity for export, and thus provide the hard currency that can help dig Tajikistan out of its economic malaise. Tajikistan and the Kyrgyz Republic in Central Asia (intended exporters) and Afghanistan and Pakistan in South Asia (intended importers) have been pursuing the development of a Central Asia South Asia Regional Electricity Market (CASAREM). CASA-1000 project is the development of the first phase of CASAREM, which will establish necessary transmission and trading infrastructure and systems to enable a trade of about 13,000 MW of electricity between the two regions.

Uzbekistan

The President of Uzbekistan, Islam Karimov, has expressed opposition to Rogun until all potentially impacted countries fully agree.

The Ecological Movement of Uzbekistan registered a Request for Inspection on Tajikistan Rogun HPP with [the World Bank Inspection Panel \(IP\) on October 8, 2010](#). The Request was submitted by Mr. Boriy Botirovich Alikhanov, Mr. Saydirasul Sanginov and Ms. Dilorom Fayeziyeva on behalf of the Ecological Movement of Uzbekistan (Requesters).

Panel Chairperson Roberto Lenton together with Panel Senior Operations Officer Serge Selwan visited Tashkent, Uzbekistan, and Dushanbe and Rogun, Tajikistan, between December 13 and 18, 2010. During its visit, the Panel team met with the Requesters and with high level Government officials.

Management submitted its [Response](#) on November 22, 2010:

In its Response, Management considered that this Request for Inspection should be ineligible for the following reasons: i) the issues raised by the Requesters focus on potential harm that could derive from the construction, operation and/or failure of the proposed Rogun HPP, but not from the Assessment Studies that the Bank intends to finance; ii) Management has no record of the

Requesters' attempt to raise their issues with it prior to the submission of the Request for Inspection.

The Panel concluded in [the Report and Recommendation on Report for Inspection](#):

The Panel does not recommend an investigation of whether the Bank has complied with its operational policies and procedures. The Panel notes that this recommendation would not prevent the Requesters or others from coming to the Panel at a later stage in the event that the Assessment Studies deviate from Bank policy requirements in a way that could lead to harm to affected communities. The Panel recommendation also does not preclude the possibility of a future claim, relating to compliance and harm, in the event that the Bank decides to finance activities for the construction of the Rogun HPP or a related alternative.

The IP request was concerned with the one-sidedness of the proposed studies, which may take into account the needs of Tajikistan, but may not adequately address the concerns and risks to downstream riparians. As Rogun Hydro was designed 40 years ago, this was before social and environmental impacts were adequately assessed in major infrastructure projects. The request expresses concern that Rogun hydro could aggravate currently unsatisfactory conditions, especially downstream.

Impacts of Dam-Filling Regime: The speed with which the reservoir is filled creates major and different risks. The potential construction of the Rogun Hydro project presents political issues concerning water availability during the lengthy reservoir-filling years and the future risk of dam safety. The requesters are concerned that reservoir filling could take as much as 8 or 9 years. During this time, water availability downstream is likely to be reduced. This would impact potable water supplies, damage irrigation and crop yields, decrease cultivable areas, and impair land fertility and productivity. Such impacts would lower living standards in Uzbekistan and Turkmenistan. The Uzbek contention is that Tajikistan would fill the Rogun reservoir in 7- 8 years, and not 17 years as Tajiks claim, leaving Uzbekistan dry. Uzbeks claim that this means there will be an irreversible drain on the Vakhsh River during the crop growing season, particularly in June through August. Tajiks say that they will use water usage quotas set out in earlier agreements on use of Aral Sea waters. "The Aral zone is fed water from two major rivers: the 1,500-mile-long Amu Darya and 1,380-mile-long Syr Darya. Any reduction of these river's tributaries is a cardinal violation of the region's ecological balance," Uzbek President Islam Karimov said on September 20, 2010 at a UN summit on the Millennium Development Goals. Reservoir filling time is critical to ensure cotton irrigation water to Uzbekistan. A slow filling time of 12-18 years is thought to prevent irrigation problems because river flow is 20 BCM/year, or 26% of Amu Darya flows.

Dam Safety and Seismicity: Rogun is located in a seismically active area. A fault line runs under the area. Earthquakes could reach a Richter magnitude of 9-10 in the Rogun region. Dam failure could create waves threatening to destroy six hydros and 700 settlements downstream. Uzbek Parliament's Vice-Speaker Borii Alihanov emphasized these risks previously. If the Rogun dam were to break it would create a wave 245-280m high in the (subsequent) Nurek Hydropower Plant zone and 6-7m high in (its final destination of) Karakalpakstan. A dam rupture could destroy the entire hydroelectric system, flooding an area of 1.3-1.5m ha with more than 700 populated areas in Tajikistan, Afghanistan, Uzbekistan and Turkmenistan, where roughly 5m people live. Uzbekistan needs assurances that water volume and quality would not be decreased for agriculture and cotton irrigation.

Dam Safety and the Rock Salt Risk: The request states that there is a thick layer of rock salt in the sub-surface geology. As the reservoir fills through the years, filtration under enormous water pressure must be expected. Subsurface erosion, the risks of salt dissolving and undermining the integrity of the dam need to be assessed and prevented.

Dam Safety over the last twenty years: The requesters are concerned that the construction of two decades ago, which was suspended in 1992, deviated from initial design. Construction was halted suddenly with little if any precautions to conserve progress before the 1992 abandonment. Powerful mud streams have damaged tunnels and other structures.

Biodiversity Loss: The requesters predict sharp reductions of biodiversity and deterioration of the gene pool, especially the valuable "Tugay" riparian and flood-plain forests bordering the impacted rivers.

Non-Compliance with World Bank Policies: Rogun, as planned, risks non-compliance with five policies: Environmental Assessment (OP 4.01), Natural habitats (Biodiversity (OP 4.04), Involuntary resettlement (OP 4.12) Dam Safety (OP 4.37) and Projects on International waterways (Downstream Riparians, OP 7.50).

Public Consultations

The Tajik Government contracted the Regional Environmental Center for Central Asia (RECCA) to conduct consultations. The Tajik branch of the RECCA (<http://carecnet.org/en>) held public consultations on the Rogun Hydro proposed project's Terms of Reference (ToR) for its Environmental and Social Assessment (ESA) in the city of Rogun on November 30, 2010 (Nurekskaya St, Conference Hall in café Rogun) and in Dushanbe on December 3, 2010, in the "Vahdat" conference hall.

Concerns from Civil Society

The newly established governmental NGO Ecological Movement of Uzbekistan (EMU) is heavily involved in advocating against the Rogun project and similar undertakings in Kyrgyzstan. Independent NGOs are excluded from the energy and water debate in Uzbekistan. Tajikistan is reported to have a culture of fear around questioning government decisions. There are few individuals who continue asking for a more transparent process at great risk.

Civil society has asked for the government and World Bank to review other options for energy generation, such as smaller hydro and renewable energy projects. The World Bank studies must clarify if Rogun is the least cost (or least bad), and most cost effective solution, after internalizing all environmental and social impact costs and externalities. Tajikistan's government is adamant about building Rogun; while multilateral development banks like the World Bank, the European Bank for Reconstruction and Development, and the Asian Development Bank have regularly suggested less grandiose plans such as building smaller hydropower plants for 100 times less the cost. Potential locations for smaller plants were identified in the Soviet era. Such plants could be financed more easily, be built and come online much faster, and could allow for multi-stages in the construction process with the installation of one or two turbines at the initial stage with the possibility to install more in facilities conceived to host several turbines.

There are other pressing needs, partly alternatives to Rogun. Renovating existing hydroelectric cascades (Kyrgyzstan, Tajikistan) is likely to be highly cost effective. Water purification in all basin countries is a priority. Saltwater distillation (Turkmenistan) and erosion control (Uzbekistan, Kazakhstan and Turkmenistan) also are priorities.

Alternatives to Rogun hydro: Some members of civil society have asked the World Bank and other funders for feasibility studies of alternative energy generation and efficiency projects to Rogun. Potential alternatives suggested for detailed assessment are wind, solar, and micro-hydro energy production projects. However during public consultations on the ToR of ESA in the meeting the World Bank representatives announced that coal thermal power plants would be the main alternatives considered to Rogun. While the World Bank financed [billions of dollars of new coal plants in their latest financial year \(FY2010\)](#), this is extremely risky from the climate change point of view. Countries such as Tajikistan also have a strong need for energy efficiency improvement, since grid infrastructure is aging and inefficient.

Involuntary Resettlement

Resettlement may become the most severe impact of Rogun; at the moment it is one of the least transparent proposed projects; information seems lacking or

confidential. At least 30,000-40,000 residents from the reservoir area may have to be involuntarily resettled. This is proving very difficult to document. Resettlement began during the Soviet era and some of the oustees have already been moved to new areas. Four villages may be relocated by the Government of Tajikistan (GoT). No clear policies and procedures have been stated so far; Free Prior and Informed Consent (FPIC) and Impact Compensation Contracts (ICC) or Impact-Benefit Agreement (IBA) are not mentioned in the ToR, but need to be central. Consultations and disclosure are mentioned, but not participation. The ToR contains page after page of relocation of lengths of roads, but very little on resettlement and FPIC.

Involuntary Resettlement: Involuntary resettlement is important for many compelling reasons. First, all World Bank studies have found that involuntary resettlement almost always increases poverty, while at the same time the goal of development and of the World Bank is to decrease poverty. The World Bank should not finance any action that tends to increase poverty. Second, involuntary resettlement is coercive, otherwise it would be voluntary. The use of force to achieve economic development is becoming increasingly unacceptable. People displaced in the name of development should not be forced to sacrifice their livelihoods for the benefit of distant electricity consumers. Resettlement must be made so attractive that it becomes voluntary; that is what 'meaningful' participation means. That is why potentially impacted people must be permitted to participate in the 24 month environmental and social assessment process such that they fully understand the mitigation plan arising from the ESIA process. If participation does not include the right to say 'no' to a project, it is not meaningful. That is partly why most nations of the world (now including all major shareholders of the World Bank) now accept the right to free, prior, informed consent (FPIC) of project affected peoples. Third, the World Bank is mandated by its Articles of Charter to follow economic principles. The basic principle of market economics, namely willing seller/willing buyer, is absent in involuntary resettlement, therefore the Bank should not resort to such practices.

No studies have been done to assess the resettlement legacy, not from comparable dams, nor about the ousted residents already moved years ago. Many seem to have been resettled in the cities of Rogun, Obigarm and other parts of Tajikistan, but information is very limited. Resettlement started at the end of the 1980s. Planning for involuntary resettlement was prepared and resettlement partially implemented at the end of the 1980s of the past century. The risk is that after collapse of the USSR, some or even many displaced people returned to their origins.

The crucial datum of the area of inundation is still not clearly provided; but total storage volume of 13.3 km³ and an active storage volume of about 8.6 km³ of the proposed dam is indicated. The reservoir will extend about 70 km upstream. Sicherogh hamlet will be flooded; where 5 families live in each house. The population of Sicherogh remains unknown, although it seems to be the main settlement to be flooded.

Rogun HPP Project: Time Line

1965 -1978	The Soviet Hydroproject Institute, Tashkent, Uzbekistan, prepared the first feasibility study for Rogun.
Early 1980s:	Construction works were started on the Rogun Project.
1976 -1990	Civil works implemented constitute a significant volume of construction, both underground works and surface facilities.
1992-1997	Civil war between ethnic groups from the Garm and Gorno-Badakhshan regions, which were underrepresented in the ruling elite, disrupted further development.
1993	During a flood, the diversion tunnels were blocked, which caused overtopping of the 45m high upstream embankment cofferdam, which was subsequently washed away.
October 2004	The presidents of Russia and Tajikistan, Vladimir Putin and Emomali Rachmon signed an accord concerning the economic co-operation between both countries. Within the framework of this accord, an agreement was established between the Tajikistan Energy Ministry, in Dushanbe, and the Russian Aluminum Company (RUSAL, owned by Russian oligarch Oleg Deripaska), from Moscow, to complete works of the Rogun dam and hydropower plant.
February 2005	RUSAL commissioned Lahmeyer International to carry out a bankable feasibility study for Stage 1 completion of the scheme. The final report of this study was issued in December 2006. Rusal accepted Lahmeyer's report, while Dushanbe and Tajikistan did not accept the results. It would be illuminating to ascertain the objections to ensure they are not repeated.
2006	Project re-started with Russian investment.
August 29, 2007	Project stopped amid disagreements between Moscow and Dushanbe . President Rahmon starts seeking new investors to restart the project, the completion of which would allow Tajikistan to become a net exporter of power.
October 2008-April 2009	World Bank conducts consultations with riparian countries.
Beginning c. 2006	Resources were allocated from the State Budget to continue restoration works.
2009	Uzbekistan has more than quadrupled the price of its gas as world prices for the "blue fuel" rose. This has led Tajikistan to drastically reduce the amount of Uzbek gas it buys. In 2009 Tajikistan received some 216 million cubic meters, a 57 percent reduction compared to 2008.

January 2009	Russian President Dmitry Medvedev surprised Dushanbe by telling Central Asia's upstream and downstream countries to agree together on such large projects.
November 2009	Uzbekistan withdrew from the regional power grid, cutting Tajikistan off from its external source of electricity.
January 2010	The Tajik government launched a campaign to sell Rogun shares to the public, but officials quickly came under criticism for reportedly employing strong-arm tactics to ensure the offering's success.
January 2010	Medvedev supports Rogun while he was visiting Tashkent, Uzbekistan.
February 2010	Tajik President Imomali Rahmon visited Moscow, but no support was forthcoming. The project has raised tensions with Uzbekistan over the impact of the dam on its cotton fields' irrigation systems. In February 2010, Uzbek Prime Minister Shavkat Mirziyoyev sent a letter to his Tajik counterpart demanding an independent examination of the possible consequences of the dam.
March 2010	IMF says forced deductions from salaries for Rogun is harming macroeconomics.
2010	Dushanbe accused Uzbekistan of trying to undermine Rogun by imposing a rail blockade, holding up hundreds of Tajikistan-bound freight cars at the Uzbek border this year. Tajik officials have also complained about closed Uzbek border checkpoints along the heavily mined, 1,160-kilometer frontier. Tashkent denies the delays are intentional. At the same time, Uzbek leader Islam Karimov regularly asserts that Rogun's construction would be economically and environmentally catastrophic for downstream countries.
March 10, 2010	At the request of the Government of Republic of Tajikistan, World Bank regional director for Central Asia, Motoo Konishi, announced in Dushanbe that the bank offers to finance an 18 month feasibility study and environmental assessment under WB Project ID: P089244. The World Bank estimates it will take three months to select a contractor to conduct the impact study, which could then take 18 months to complete.
March 12, 2010	The Government of Tajikistan and the World Bank signed a Memorandum of Understanding on Energy Development for Sustainable Growth .
March 15, 2010	The Asian Development Bank (ADB) strongly supports Rogun. President Imomali Rahmon met with Juan Miranda, ADB director general for Central and Western Asia. ADB expressed its readiness to help with assessments.
October 2010	The Ecological Movement of Uzbekistan registered Request for Inspection on Tajikistan Rogun HPP with the Inspection Panel. IP will

	<p>be visiting Uzbekistan on December 13-14 and Tajikistan on December 16-17. IP will be issuing eligibility report including a recommendation on whether to investigate the case.</p> <p>During October 2010, Uzbek President Islam Karimov called the Rogun hydropower plants a "stupid project." Because it could cause water shortages in Uzbekistan for up to eight years of reservoir filling time.</p>
November 1, 2010	<p>Uzbekistan unilaterally closed the border checkpoint between its Samarkand Province and the remote Zarafshan Valley in Tajikistan, effectively severing the region from the outside world for the winter months. (Mountain passes from the valley into the rest of Tajikistan are closed for months at a time due to snow).</p> <p>Several days before, according to Uzbek sources, Tajik officials unilaterally shut a major border crossing to truck traffic and filmed the event with the intent of "damaging Uzbekistan's international reputation and inflating the myth about the Uzbek-Tajik border's transport blockade before the international community," an Uzbek law enforcement official told Regnum News Agency.</p>
November 16-17, 2010	<p>International conference: "Transboundary ecological problems of Central Asia: Application of international legislative mechanisms for their solution" held in Tashkent, Uzbekistan. This was organized by the government of Uzbekistan. The main theme of the conference was the negative consequences of Tajik hydro plans on environment.</p>
November 19, 2010	<p>The chairman of the Uzbek State Committee on Environmental Protection, Narimon Umarov, claimed that Tajikistan's major energy consumer, the TALCO aluminum plant, had caused \$282 million in "environmental damages" to neighboring districts in Uzbekistan, (Regnum date). The Talco Aluminum Plant (formerly "TadAZ") consumes 40% of Tajikistan's electricity production and is said to pay its electricity at heavily discounted prices. Umarov also predicted that Rogun would inflict \$17.8 billion in damage on Uzbekistan during its first five years of operation. (Note: Talco's smelters, Tajikistan's biggest industry, produces alumina and about 450,000 tonnes of aluminum a year, worth about \$1.2 billion internationally. It is 43.8% owned by Norway; and has experienced several years of allegations of corruption, especially in 2007 when the IMF requested funds to be returned).</p>
November 28, 2010	<p>President Imomali Rahmon and Iranian Energy Minister Majid Namjou inaugurated the start construction of the Sangtuda-2 hydropower plant, funded in part by Iran.</p>
November-	<p>The Tajik branch of the Regional Environmental Center for Central</p>

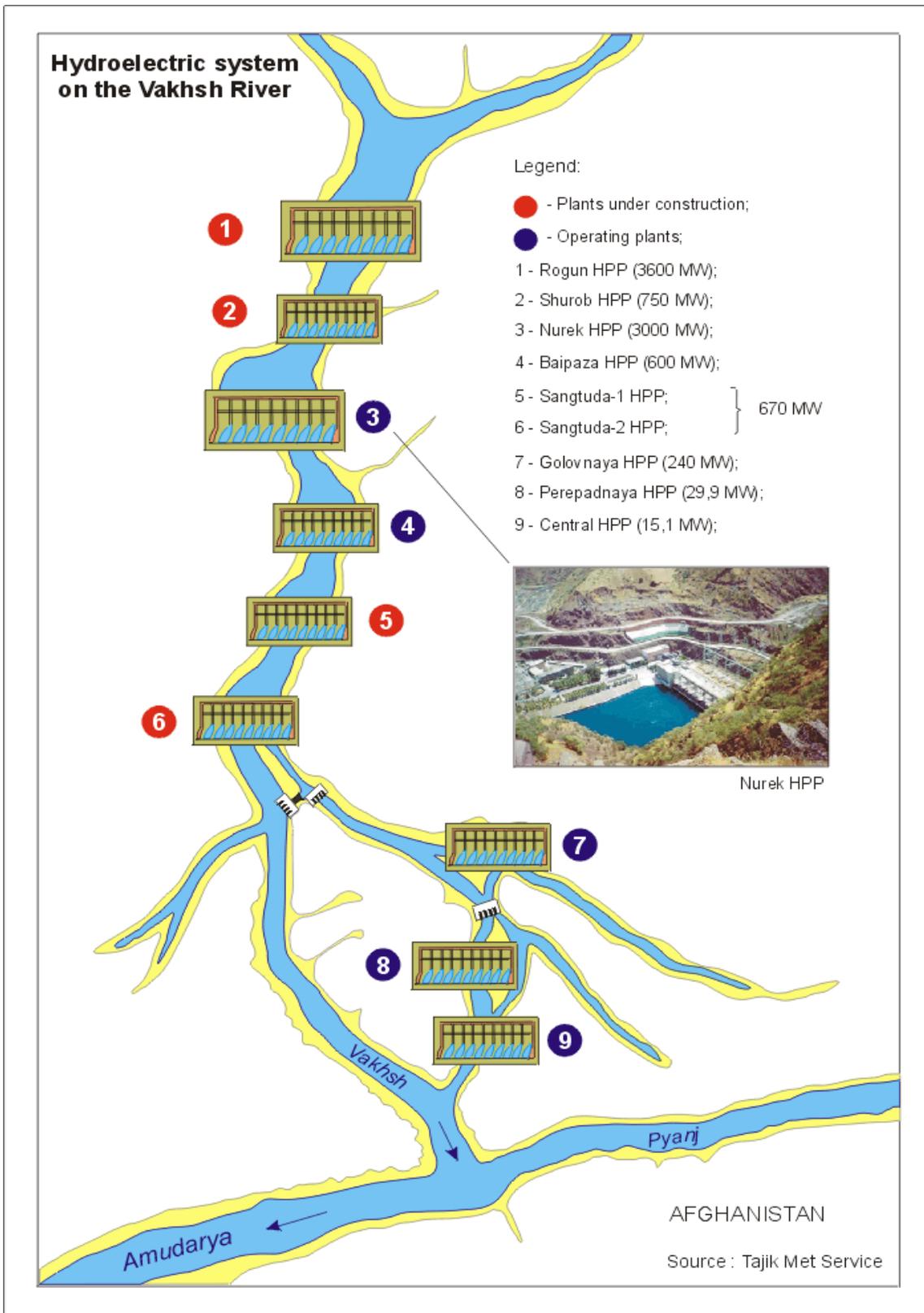
December 2010	Asia www.carecnet.org/en held public consultations on the ToR of ESA in the city of Rogun on November 30, 2010 and in Dushanbe on December 3, 2010.
December, 2010	Uzbekistan's state gas distributor's letter to its Tajik counterpart stated that unless Tajikistan immediately repaid its \$1.6 million debt, Uzbekistan would have no choice but to cut off Tajikistan's gas supplies. (Note: Tajikistan relies on Uzbekistan for up to 95 percent of its gas supplies).
December 2, 2010	State-run Uzbek TV accused Tajik government officials of spreading lies to damage "the friendship between the Uzbek and Tajik peoples." The Tajik people are suffering from the "arbitrariness" of their leaders, the report asserted, though "their gradually escalating tricks cannot damage stability in the Republic of Uzbekistan, or our good relations with the friendly [Tajik] people." Regarding the delays at the border, the report added somewhat ominously, "our state borders have always been open to people with good intentions."
December 7, 2010	Zarubezhneftegaz, a subsidiary of the Russian gas giant Gazprom, started drilling at the Sarikamysh gas field on December 7. Gazprom head Aleksei Miller was in Tajikistan on the big day, and offered an estimate of project's worth to the Central Asian country's future.

Major Hydros Useful to Compare Track Records with Rogun

ESIA is essentially a prediction of what impacts may arise from the Rogun Hydro project. The best basis for prediction of likely impacts in a new hydroproject is to scrutinize the track record of what has happened in older hydro projects in similar regions, both on the ground and from technical literature. The SEA should be based on a review of the track records of previous comparable hydroprojects. This brief listing therefore notes some hydros that could prove to be a useful learning experience about what to expect at Rogun. For the detailed list of operating and planned hydro plants please see [Renewable Development Initiative](#) of the EBRD.

Nurek Hydro: Nurek's 300m-high dam on the Vakhsh River, 70 km downstream from Rogun, is the second tallest in the world. Nurek still supplies 70 percent of Tajikistan's power. The 3000 MW project was supported by the Soviet Union between 1961 and 1980. The reservoir is 70 km long, and is connected to a 14 km irrigation water tunnel. Generation began between 1971 and 1979.

Toktogul: Toktogul process on the Naryn River with a rated capacity of 12,600 MW. There are earthquake-prone sites nearby, about 70 km from Jalal-Abad, Kyrgyzstan. Kyrgyz farmers lost 21 thousand hectares due to the construction of Toktogul.



***Informational update:** capacity of Sangtuda-1 HPP is 670 MW and Sangtuda-2 is 220 MW, total installed capacity is 890 MW. Sangtuda-1 HPP began operation in 2008.

Diagram of the Amu Darya and Tributaries

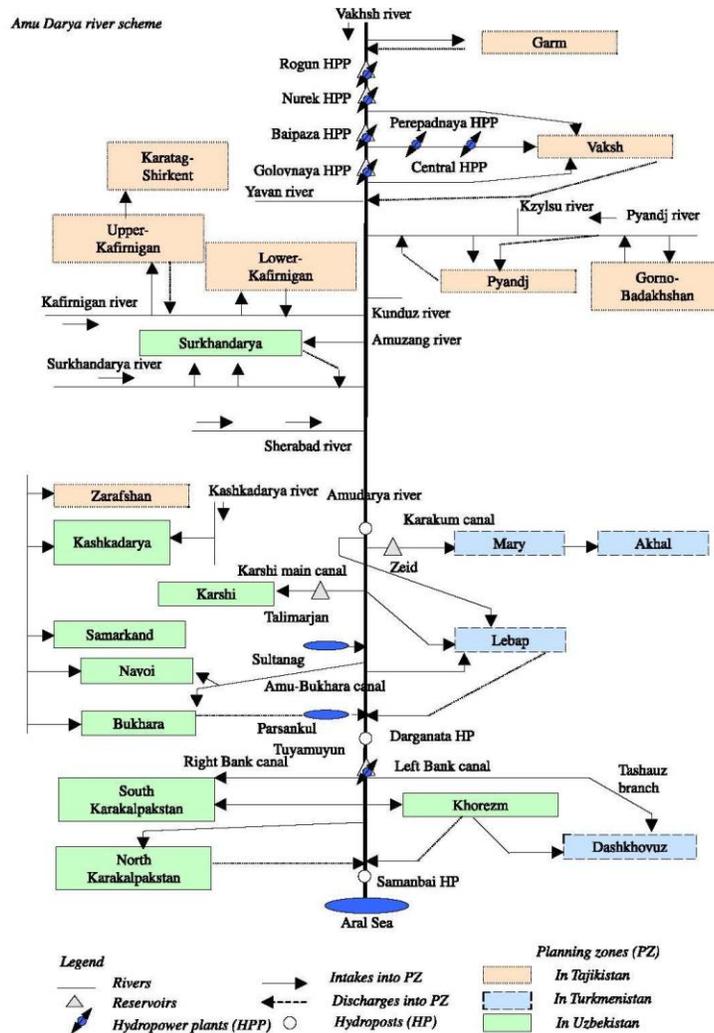


Fig. 2. Control structures and tributaries in the Amu Darya Basin (Source: PA Consortium Group and PA Consulting, 2002).

Recommendations

1. **Best Practice ESIA:** The World Bank must ensure that the proposed ESIA is as reliable as possible, and fully meets Best Practice. The World Bank seems to be relaxing its ESIA standards, for example by refusing to categorize China's Western Region (Tibet) project as EA Category A, despite it being their fiercest-ever controversy. Similarly, financing [\\$4.4 billion in new coal-fired plants in FY2010](#) shows that the Bank is not yet fully internalizing external costs such as carbon emissions. The Rogun ESIA must be perceived to be fully participatory and consensual, and must meet -- or preferably exceed -- international best practice.
2. **Energy Poverty.** The World Bank needs to ensure that the project will directly address poverty and meet domestic needs before assessing energy for export.
3. **Effective public communication plan.** The Bank must develop a comprehensive communication plan and engage with all stakeholders on a regular basis. Only informed public can participate in the process in a meaningful way. The Bank needs to engage with the public long before and after the consultations. Consultations should be seen as one of the multiple ways to engage with the affected communities and public at large.
4. **Meaningful Participation and FPIC:** The World Bank must be much more inclusive in meaningful participation by all stakeholders, especially potentially impacted people. Meaningful participation means FPIC although the Bank still is hesitating to follow FPIC. FPIC has been included in drafts of the Bank's new energy strategy, but seems flagging lately.
5. **Regional Agreements:** Part of fostering agreements between stakeholders means respecting and strengthening Regional Agreements. The ESIA should codify what agreements exist; especially what is currently agreed in terms of water sharing and how Rogun would impact on those agreements, particularly in relation to the uncertainty on the different reservoir fill rates.
6. **Civil Society:** Civil society needs to be actively fostered and nurtured in this case. The Bank needs to take their concerns more seriously than at present.
7. **Afghanistan:** Also is a stakeholder in the same river basin; its role, interests and views needs to be sought and integrated into the ESIA. Afghanistan already is an existing customer of power generated in the Vakhsh cascade (and perhaps a much larger future one), and has potential for hydro schemes of its own. Afghan agriculture already uses Amu Darya.
8. **Alternatives to Rogun:** The World Bank must ensure that all alternatives are taken seriously, as indeed already is mandated by World Bank policies. As the 24-month ESIA should be a consensus-building process, the Bank cannot be paternalistic and assume that all stakeholders know that Rogun is best for them.

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