

TATIANA PROSKURYAKOVA
Country Director
Central Asia

October 28, 2024

Mr. Eugene Simonov
Coordinator
Rivers without Boundaries International Coalition
Abish Kekilbayuly Street, 34, office 28
Almaty, KAZAKHSTAN

Dear colleagues,

I am responding to your letter to President Banga dated 15 October 2024, detailing your concerns regarding the Rogun Hydropower Project (Rogun HPP). As you know, we believe that the Rogun Hydropower Project (HPP) has the potential to be transformational for the country and all Central Asia. It could replace dependency on fossil fuel with clean energy, alleviate power shortages, and drive economic growth.

We appreciate the time and effort you have taken to raise important matters. We find several of your recommendations helpful as we work with government counterparts to expand and improve key documents like the Environmental and Social Impact Assessment (ESIA) and mitigation measures, such as outlined in the Environmental and Social Management Plan (ESMP). Some of the points you raise have already been addressed in our earlier letters.

We would like to note that many of the technical matters raised in the letter are being actively reviewed by the Rogun Project Management Group and the Directorate of the Flood Zone of Rogun HPP, with support from the World Bank's Environmental and Social team. Given the complexity and technical nature of some of the issues, we are planning a meeting with CSOs tentatively on November 14th, where we can discuss these in greater detail. We have addressed the issues you've raised in an [online factsheet](#) and attached to this letter. This way, other stakeholders, including beneficiaries of the project, can access as well. We are planning to update this fact sheet over time.

Additionally, we have organized another consultation on riparian issues and to follow-up on discussions in other riparian countries in Tashkent, Uzbekistan on October 28, 2024, with the participation of the Government of Uzbekistan, Non-Governmental Organizations (NGOs), and CSO representatives and to follow-up discussions in other riparian countries. You should have received an invitation to this session with the option to connect remotely.

We look forward to continuing this important dialogue.

Sincerely,



Tatiana Proskuryakova
Country Director for Central Asia

CC:Ms. Antonella Bassani, Vice President, Europe and Central Asia, World Bank
Ms. Anna Bjerde, Managing Director, World Bank
Mr. Axel van Trotsenburg, Senior Managing Director, World Bank
Mr. Wencai Zhang, Managing Director and Chief Administrative Office, World Bank
Ms. Mamta Murthi, Vice President, People, World Bank
Mr. Juergen Voegelé, Vice President, Planet, World Bank
Mr. Pablo Saavedra, Vice President, Prosperity, World Bank
Ms. Antonella Bassani, Regional Vice President, Europe and Central Asia, World Bank
Mr. Guangzhe Chen, Vice President, Infrastructure, World Bank
Mr. Indermit Gill, Senior Vice President and Chief Economist, World Bank
Mr. Mouhamadou Diagne, Vice President, Integrity, World Bank
Ms. Mercy Tembon, Vice President and Corporate Secretary, World Bank
Ms. Tatiana A. Proskuryakova, Country Director for Tajikistan, World Bank
Mr. Charles Cormier, Regional Director, Infrastructure, Europe and Central Asia, World Bank
Mr. Bakhrom Sirojev, Rogun HPP PMG

Annex A: Responses to Concerns Raised in Letter

1. Compliance of Environmental and Social Documentation with World Bank Standards

A draft version of the ESIA/ESMP was initially disclosed on December 23, 2023, for stakeholder consultation purposes, and while these drafts provide a useful account of the potential environmental and social impacts and their mitigation, several environmental and social management plans and frameworks remain under preparation. The completion and disclosure of the final versions of the ESIA, ESMP, Cumulative Impact Assessment (CIA) and other critical instruments are conditions of project effectiveness. Nevertheless, many of the key surveys, such as those on biodiversity, have now been completed, and their findings align with the 2014 ESIA prepared by the Government of Tajikistan, and financed by the World Bank. The recent surveys did not reveal any significant changes that would affect the conclusions previously drawn.

The Environmental and Social Commitment Plan (ESCP), which is a legally binding document and which forms part of the Financing Agreement, includes reference to material measures and actions that the Government commits to implementing before the project can become effective, while others should be implemented before the Government can receive disbursement of funds for the relevant Project components. Consequently, some of the relevant comments raised will still be incorporated in the final versions. This process ensures compliance with the World Bank's Environmental and Social Framework (ESF) throughout the project lifecycle.

2. Geographic Scope of the ESIA

You have noted limitations in the initial scope of the ESIA, which focused on the section between the Rogun and Nurek dams, assuming that downstream impacts beyond Nurek would be minimal. The ESIA that is currently being finalized acknowledges that this scope was too limited and has expanded the Area of Influence (AOI) to include the downstream sections of the Vakhsh and Amu Darya rivers. It is critical to note that the mitigation measures have been designed to effectively minimize impacts when the reservoir is being progressively filled, and our assessment remains that no appreciable adverse impacts on downstream users are expected, including during those years.

As confirmed in the 2014 ESIA and reaffirmed in the updated ESIA, which will be finalized, disclosed, and adopted prior to project effectiveness, Tajikistan's continued adherence to international agreements is expected to ensure that there will be no appreciable downstream impacts. The primary concern of the 2014 ESIA was related to irrigation and other water uses, especially in the context of the Aral Sea. By operating Rogun and Nurek dams in tandem, seasonal flow patterns will be maintained and downstream users will continue to have water during the critical summer months. Moreover, the storage capacity of Rogun will enhance Tajikistan's ability to release stored water during droughts, helping to alleviate water shortages when needed. Tajikistan remains a committed member of the Interstate Commission for Water Coordination of Central Asia (ICWC) and consistently operates within its agreed annual water allocations. This commitment will be further detailed in the final ESIA and will be closely monitored during the implementation of the project, with transparency and disclosure measures.

3. Analysis of Alternatives and Dam Safety

In terms of assessment of alternative technologies as required by EES1, the Rogun HPP stands out as a least-cost solution for providing clean and affordable electricity to Central Asia, as demonstrated by extensive regional modeling work carried out by the World Bank during project appraisal. The project is

designed to significantly increase the supply of renewable energy, thereby reducing reliance on fossil fuels and supporting the region's low-carbon development goals. According to a regional planning analysis, the Rogun HPP, along with other large-scale hydropower projects, is expected to displace gas and coal-fired generation, and provide stability services to further enhance the development of variable renewable energy, leading to substantial environmental and economic benefits. Moreover, the cost of electricity generated by Rogun HPP remains highly competitive compared to alternative baseload sources, making it a part of the least-cost supply options for both Tajikistan and the broader Central Asian region. This is crucial for meeting the increasing power demand and supporting economic growth and development aspirations of the region. The project's ability to export surplus electricity to neighboring countries like Kazakhstan and Uzbekistan further underscores its role in enhancing regional energy security and cooperation.

For a project of this magnitude, dam safety is of utmost importance. Based on detailed geological investigations and seismic hazard assessments, appropriate protective measures have been incorporated into the design of the dam and associated facilities. These assessments and designs have been carried out by reputable international consulting firms and independently reviewed by the Dam Safety Panel of Experts (DSPOE), which includes leading experts in relevant fields. As additional surveys, investigations, and monitoring activities are conducted, their findings and recommendations will be integrated into the design during project implementation.

The design and construction plans for the dam and associated facilities have been prepared for both construction and operational phases, following international standards and best practices. The robustness of these designs has been confirmed by the DSPOE.

Currently, eleven seismic stations are operational, for the purpose of monitoring the dam and reservoir areas throughout the construction, filling, and operational phases. If further studies indicate the need for additional monitoring systems, these will be installed under the guidance of the DSPOE.

The project has also addressed concerns regarding the geologically sensitive zone on the right bank downstream of the dam. Detailed geotechnical investigations, surveys, and monitoring have been conducted to assess potential risks, with corresponding mitigation measures reviewed and approved by the DSPOE. Monitoring of this area will continue throughout the project, as reflected in the Instrumentation Plan, which covers potential landslide risks.

A construction-stage Emergency Preparedness Plan (EPP) has already been developed and will be updated as the reservoir water level increases. The full EPP for the Vakhsh cascade is scheduled for completion by June 2025, following consultations with stakeholders, including downstream riparian countries. Additionally, a flood forecasting system has been installed and is operational, providing monitoring and early warnings during the construction stage. This system will be further enhanced under the project.

4. Resettlement and Livelihood Restoration Framework

The project prioritizes minimizing displacement wherever possible, taking into account the final design of the dam. The Resettlement and Livelihood Restoration Framework, along with subsequent Resettlement Action Plans (RAPs) and Livelihood Restoration Plans (LRPs), address the physical and economic displacement of project-affected people (PAPs) near the dam site and downstream, as well as those in the reservoir area. The well-being of affected communities is central to the project's design, and consultations—including those held without government representatives—have provided valuable

insights into the resettlement and compensation process, which continue to guide implementation efforts. Please refer to our previous correspondence on this topic where we have also addressed the concerns you raise.

5. Biodiversity Conservation and Environmental Flow

The Biodiversity Management Plan (BMP) is under preparation and will be disclosed for consultation when ready. Its completion, disclosure and adoption are conditions of disbursement for the relevant project components. Additionally, environmental flow regimes are being designed to protect downstream ecosystems, with measures embedded in the project to prevent degradation.

Biodiversity conservation is integrated into the project, in line with ESS6. The eDNA sampling program confirmed that no sturgeon species were found at the project site, and research indicates that the ecosystem is not viable for the species known from the region—*Pseudoscaphirhynchus kaufmanni* and *P. hermanni*. Furthermore, the final BMP will include a no-net loss plan for the juniper woodland.

6. Environmental and Social Management Plan (ESMP) and Commitment Plan (ESCP)

The Environmental and Social Management Plan (ESMP) integrates mitigation measures specific to construction and installation directly into the contract documents. This includes pollution management, occupational health and safety, traffic management for vehicles used in the project and biodiversity management, among others – with these activities accounted for within the overall construction program costs.

All requisite site-wide guidelines and/or management plans are being developed as set out in the Environmental and Social Commitment Plan (ESCP), which, as indicated above, is legally binding and referenced in the Financing Agreement. The ESMP defines actions, responsible parties, timeframes and monitoring processes. The timeframes included in the ESMP for each of these instruments ensure that they will be in place as needed throughout Project implementation.

7. Compliance with ESS10 and Meaningful Stakeholder Engagement

Extensive and constructive project consultations have been conducted. For the December 2023 ESIA, the Rogun Project Management Group (PMG), with support from an international consultant and in line with the World Bank's guidance, held nine consultations with national and international CSOs on issues like biodiversity, resettlement, human rights, and labor conditions. Moreover, these consultations have been essential in understanding the needs of the PAPs in terms of replacing their houses, structures, and lands, accessing supportive social infrastructure, and working on longer-term efforts to restore livelihoods. The World Bank has been able to talk to PAPs without the government being present, and these discussions have been informative and constructive, especially in identifying challenges in the resettlement, compensation and livelihood restoration process.

In November 2023, the Rogun PMG hosted consultation meetings for riparian countries and CSOs in Almaty, Kazakhstan, prior to the disclosure of the ESIA findings to gather feedback. More consultations are taking place in the riparian countries. As indicated above, the next one will be held on October 28, 2024, in Tashkent, Uzbekistan, with others to follow.

Each Environmental and Social document has been disclosed prior to consultations, consulted upon, revised and then re-disclosed. PMG and Directorate of the Flood Zone of Rogun HPP, hold periodic

meetings in the communities to discuss key issues, particularly regarding the dam's environmental and social impacts. Once the project is approved and becomes effective, resources will be made available to strengthen the grievance mechanism, monitor the Resettlement Action Plan and Livelihood Restoration Plan, address gender issues, and engage the public in designing and implementing the benefit-sharing program. The SEP is continually being updated to reflect stakeholder engagement activities.



[Rogun Alert Coalition](#)

ROGUN HPP PROJECT: NON-COMPLIANCE REPORT

Analysis of non-compliance with the World Bank's Environmental
and Social Standards

October 2024

Rogun HPP Project consists of two projects managed by the World Bank : the “Technical Assistance for Financing Framework for Rogun Hydropower Project” (P178819 – approved finance 10 million from the WB and 5 million from the AIIB), and the [“Sustainable Financing for Rogun Hydropower Project” \(P181029\)](#) – 350 million of the World Bank finance now under appraisal with further contribution of 1.2 billion expected to come from other financiers: AIIB, ADB, EIB, IsDB,OPEC, bilateral aid, etc. The World Bank claims that it took responsibility for developing environmental and social safeguards for the project on behalf of all financing institutions. By relegating their responsibility for establishing the environment and social safeguards to the World Bank, other financial institutions have recognized the World Bank standards as equivalent to similar standards of their own. So if those are violated it is also leading to non-compliance with similar policies of other participating financiers.

Non-compliance overview

The project is subject to the World Bank’s 2018 Environmental and Social Framework (ESF), including its Environmental and Social Standards (ESSs) and furthermore, project documentation suggests that all other potential financiers will accordingly rely on the proper implementation of the World Bank’s standards as prerequisite to approval and financing of the Rogun HPP project. Yet, as evidenced below, neither the World Bank nor the borrower have met the requirements of the ESS1, ESS3, ESS4, ESS5, ESS6, and ESS 10. Indeed, it appears that the World Bank is also in violation of requirements of the [Environmental and Social Policy for Investment Project Financing](#) and has undermined the very ‘Vision’ of its ESF.

The borrower’s environmental and social management plan (ESMP) fails to incorporate appropriate mitigation measures, even for the items marked in ESIA as requiring mitigation. For example, there is no sufficient set of mitigation measures outlined which would realistically prevent water shortage downstream in years of low flow in Vakhsh River. It also does not appear to be applied using a logical approach nor does it comply with the required frameworks as prescribed by the ESS1.

Major deviations from the requirements of the ESS1 can also be found in the draft Environmental and Social Commitment Plan (ESCP), which does not contain key obligations necessary to mitigate potential impacts and is largely devoid of clear substantive requirements beyond quoting general language of existing policies/standards. From our perspective, we cannot understand how the World Bank could ever use it to keep the Borrower accountable – which we understand to be the primary purpose of the ESCP.

In addition, the Stakeholder Engagement Plan (SEP) has no specific timetable or clear procedures outlined for consultations on the key E&S documents, which are listed as disclosable in the ESIA. Different documents have been disclosed on various dates from December 2023 to July 2024, while some key documents such as Volume 2 of the ESIA (the actual full assessment report) and Biodiversity Action Plan have not been disclosed at all as of mid-September 2024. Consultations organized so far have not met basic World Bank standards. Stakeholder Engagement Plan SEP and associated procedures do not comply with ESS10.

Since the previous ESIA was completed in 2014, the Borrower has not effectively implemented mitigation and monitoring measures to meet the requirements of the World Bank's ESSs and no solid plans are presented for the finalization of the current ESIA.

Given the factors above, there can be little doubt that the current draft project documentation does not comply with the World Bank's own policy requirements or that the World Bank management has to date failed to undertake sufficient efforts to ensure such compliance. Lack of compliance with mitigation hierarchy results in project design with many inefficient and risk-prone elements, which should have been eliminated at planning and appraisal stages. This creates multiple risks and inefficiencies which may lead to major environmental and social damage not mitigated during the project implementation.

In particular, we highlight the following most worrying instances of non-compliance with the World Bank's environmental and social standards:

ESS1. Assessment and Management of Environmental and Social Risks and Impacts

ESS1 covers the Assessment and Management of Environmental and Social Risks and Impacts, requiring borrowers to *“conduct environmental and social assessment of projects proposed for Bank financing to help ensure that projects are environmentally and socially sound and sustainable. The environmental and social assessment will be proportionate to the risks and impacts of the project. It will inform the design of the project and be used to identify mitigation measures and actions and to improve decision making.”*

The Rogun HPP ESIA does not meet requirements of the ESS1 prescribing that *“The environmental and social assessment will be based on current information, including an accurate description and delineation of the project and any associated aspects, and environmental and social baseline data at an appropriate level of detail sufficient to inform characterization and identification of risks and impacts and mitigation measures.”*

The ESIA presented for public comment does not provide consistent measurements for an evidence-based impact assessment, but rather appears to be made up of a haphazard compilation of contradictory data with different basic parameters used as foundation for assessments (annual electricity production in different parts of the text varies from 14 to 17 billion kWt*h, reservoir area from 110 to 170 km², construction completion date from 2029 to 2036 and so on). There is no unified methodological guidance or mitigation hierarchy for the ESIA, nor any clarity on if and how information quality control was performed formally. The disclosed part of the ESIA documentation is extremely fragmented, full of unverifiable qualitative assessment judgements and not supported by sufficient and up to date environmental and social data. Much of the data on environmental conditions and expected changes was derived from the 2014 ESIA, which is by now outdated, as it does NOT take into account either changes in the environment or sector-relevant information that has advanced over the course of more than a decade. Many key assessments and surveys on climate, hydrology, sedimentation, and biodiversity, which are essential for project design and impact assessment, have not been completed yet at the time of the ESIA disclosure.

The scope of ESIA 2023 was less than that in the 2014 ESIA. Many of the impacts identified in the 2014 ESIA were ignored in the 2023 ESIA. In particular, unlike the ESIA version of 2014, the economically displaced residents of the communities in the valley of the proposed reservoir whose villages will not be flooded were left out of the scope of the ESIA 2023. Overall, the scope of hydrological studies appear completely insufficient to forecast the range of consequences that could arise over the years due to the development and operation of the Rogun HPP and Vakhsh cascade, in particular in relation to the water availability for agriculture in the four countries of Amu Darya basin.

All in all, the disclosed documentation does not constitute an evidence-based ESIA satisfying the ESF standards, and should accordingly be fully revised before actual consultations and appraisal.

The scope of the ESIA assessment is overly limited by merely considering the area of impacts (AOI) of the project as the territory of the Rogun reservoir and the downstream area from the Rogun HPP to the Nurek HPP dam. In effect, the entire downstream section of the Vakhsh River and the Amu Darya River are excluded from detailed consideration in the ESIA. However, those impacts on the water regime of the transboundary Amu Darya that have been causing significant international friction and expert concern over the Rogun HPP project. The justification for such limited consideration is that “*The flow regime of the Vakhsh River will be significantly altered only between the Rogun and Nurek HPPs*”. Yet, numerous paragraphs of the ESIA and previous reports from the World Bank clearly suggest that the Lower Vakhsh’s and Amu Darya’s River flows may be significantly altered, potentially leading to a heavy ecological and social toll.

ESS1 requires that “*The assessment will evaluate the project’s potential environmental and social risks and impacts; examine project alternatives; identify ways of improving project selection, siting, planning, design and implementation in order to apply the mitigation hierarchy for adverse environmental and social impacts and seek opportunities to enhance the positive impacts of the project.*” Simply put, this has not been done.

The lack of an up-to-date Assessment of Alternatives makes it impossible to effectively fulfill the key SEA/EIA objective of “prevention and avoidance of risks and impacts” and the World Bank’s “Vision Sustainable Development” in terms of the need to give preference to project implementation options that provide for a lower level of carbon emissions. As the ESIA is based on pre-2014 data, most prominent alternative technologies, competitive types of renewable energy generation like solar or wind are not considered (with a false statement that those are more expensive than hydroelectric power plants, which contradicts the current international statistics, e.g. reports of the International Renewable Energy Agency-IRENA), and accordingly, their potential socio-environmental impacts are not considered in comparison. The latest World Bank documents propose that Rogun HPP is needed to balance increasing generation by “variable renewable energy” sources, however this statement is not supported by comparative analysis of alternative means to support accommodation of more wind and sun generation into regional energy system (e.g. already existing 15GW of hydro, better grid interconnection, BESS, pumped storage, demand management, etc.). Meanwhile, ESS-1 stipulates that, for each of the alternatives, a quantitative assessment of socio-

environmental impacts should be provided where possible and, when feasible, an economic assessment is made. All these basic requirements have not been met. As a result, the project “selected” is the costliest, the slowest, the most carbon-intensive and risky option as compared to other alternative options, which by now, 10 years later, are indeed practical and feasible from an economic, geographical and technological perspective.

ESS-1 also requires a systematic comparison of possible alternatives for the methods and conditions of operation of the facilities to be created and their socio-environmental impacts, which is not done either. By applying artificial and baseless justifications, the ESIA fails to present and compare accurate and trustworthy quantitative assessment of the possible impacts of the Rogun HPP under at least three main possible flow regulation regimes (operation patterns) briefly mentioned in the ESIA: 1) contemporary, 2) maximizing energy and 3) “maximum water allocation for all users”. It also does not differentiate possible impacts for years with low, average and high flow and for different climate change scenarios possible in Central Asia in the next 100 years – the lifetime of the Rogun dam. Without such analyses, it is not possible to assess all impacts of the Rogun reservoir on ecosystems and local communities located downstream from the Vakhsh hydropower cascade in Uzbekistan, Turkmenistan, Afghanistan and Tajikistan.

Despite the improvement of transboundary water resource management being one of the World Bank's central requirements in 2014 set forth in the paper “Key Issues for Consideration on the Proposed Rogun Hydropower Project” concluding the 2014 ESIA, the 2023 assessment studies fail to analyse the feasibility of implementation and necessity to improve the existing water-management agreements between the basin states in the light of those scenarios. The need for additional specific agreements to complement the transboundary water management treaties signed has increased since 2014, while the Tajikistan Government shows increasing unwillingness to enter into new water-management agreements with four other riparian countries.

ESS 1 annexes suggest that *“for all aspects (mitigation, monitoring, and capacity development), the ESMP provides (a) an implementation schedule for measures that must be carried out as part of the project, showing phasing and coordination with overall project implementation plans; and (b) the capital and recurrent cost estimates and sources of funds for implementing the ESMP.”* As outlined below, this has been largely unfulfilled.

The Project's mitigation hierarchy has not been detailed in the ESMP, while listed mitigation measures and indicators are abstract prescribing to upgrade “unacceptable” conditions into “acceptable” without any meaningful indicators of acceptability and mechanisms to monitor them. The approach to the ESMP compilation is unproductive and the information on activities is insufficient and non-transparent. The document argues that *“‘ESHS’ (environmental-social-health-safety) performance during construction should be considered an integral part of the works, not as a separate component of the construction process. This makes it inappropriate to estimate the costs of mitigating impacts”* (SIC!) (ESMP para.11.1.11). Indeed, the estimate for specific environmental measures is very modest at only \$13.5 million (or 8% of the ESMP budget and 0.21% of the estimated Rogun HPP Project completion cost), in particular it includes

\$2 million for the preparation of a 170 km² reservoir bed, which is probably insufficient (ESMP Table 11). At the same time, maintaining “ESHS staff” (35 international and 280 local supervisors) will take more than 90% of ESMP budget or 141 million over the 5.5 years of the project (calculated only until 2029) and this amount could double if construction lasts till 2036. This approach makes the allocation of funds for environmental measures highly opaque and unguaranteed, while the hiring of many inspectors without clear mitigation budget and performance indicators may not significantly mitigate the environmental impacts of the project.

ESS 1. Annex 1 C. 12. reads as follows: “Where relevant, the environmental and social assessment will take into account the requirements of OP 7.50 for projects on international waterways and OP 7.60 for projects in disputed areas”. This provision appears to have been violated as the ESIA documentation still does not have information that allows to make accurate judgements about possible project’s transboundary impacts downstream of Vakhsh hydropower cascade where other riparian countries are located. Meanwhile, the defunct draft ESIA “placeholder document” was used to inform riparian countries and seek their consent to the project. There is potential violation of OP7.50 (international waterways) due to limited analysis of hydrological changes below Nurek Dam, including on transboundary watercourses shared with Afghanistan, Uzbekistan and Turkmenistan. At best, the project will ensure persistence of current quite substantial negative impacts of the Vakhsh Hydropower Cascade, but more likely it will exacerbate those for downstream watercourses (this also violates WB ESF Vision for Sustainable Development).

By January 2024 the World Bank recognized full inadequacy of the “cumulative impact assessment” section of the ESIA despite the last-minute attempt to improve it by including description of the Kosh-Tepa (Qosh-Tepa) Canal Project in Afghanistan, which was clearly a step forward. However, as the list of projects to be included into CIA analysis remains incomplete, the analysis of cumulative impacts is purely formalistic. In fact, despite the inclusion of the Kosh-Tepa Canal, documentation continues to misleadingly assume that “*the Rogun HPP Project does not affect the Vakhsh downstream of the Nurek HPP*”, which, as we have shown above, is a false judgment in the ESIA context.

The ESIA should have included a comprehensive assessment of the cumulative impacts of all existing and planned water and energy projects in the Amu Darya basin on its ecosystem processes, biodiversity, habitat quality and socio-economic well-being. For instance a strategic environmental assessment incorporating a broader geographic zone, rather than a “rapid cumulative assessment” would be most suitable for this purpose.

Concerningly, the “cumulative impact assessment” section of the ESIA relies on the perspective of a single individual consultant – the same individual was responsible for managing the 2014 ESIA and correspondingly may fail to incorporate more up to date, broader perspectives. According to his ToR, the consultant should have contacted “concerned stakeholders,” and the new CIA report should have been subject to public consultations. According to our knowledge neither has been implemented.

ESS3 covers Resource Efficiency and Pollution Prevention, requiring borrowers and the World Bank to “*avoid or minimize adverse impacts on human health and the environment by avoiding or minimizing pollution from project activities.*” The borrower’s Rogun dam construction activities, resulting in air, water, and land pollution and erosion have already dramatically reduced biodiversity and human health in the region, which is clearly explained in the ESIA. This necessitates bringing it to acceptable levels, however the ESIA rather uses this as an excuse to lower requirements and applicable standards, as the area is already significantly degraded.

In particular the project fails on the ESS3 requirements for water use efficiency. ESS 3 states: “*7. When the project is a potentially significant user of water or will have potentially significant impacts on water quality, in addition to applying the resource efficiency requirements of this ESS, the Borrower will adopt measures, to the extent technically and financially feasible, that avoid or minimize water usage so that the project’s water use does not have significant adverse impacts on communities, other users and the environment. These measures include, but are not limited to, the use of additional technically feasible water conservation measures within the Borrower’s operations, the use of alternative water supplies, water consumption offsets to maintain total demand for water resources within the available supply, and evaluation of alternative project locations. 8. For projects with a high water demand that have potentially significant adverse impacts on communities, other users or the environment, ... A detailed water balance will be developed...*”

The ESIA should have considered the environmental and social impacts of all possible scenarios for filling the Rogun reservoir, including severe climate change scenarios, as there is reasonable doubt that sufficient water resources are available in the basin to fill the Rogun reservoir without undue harm to other countries, ecosystems and sectors of the economy, especially in years with water-scarcity.

Instead of the actual quantitative assessment of multiple possible scenarios, the ESIA is relying solely on legally defined “water allocation quotas”. It only states that, on average, Tajikistan in 2010–2014 did not use more than 1 km³ of quota annually, so the Rogun reservoir can be filled until 2038 without exceeding the quota and without conflict with irrigation water use. However, irrigation farming in Tajikistan is growing and, for example, in the last year (2023) the country had just under 0.3 cubic kilometres of unused quotas. In a succession of dry years, the amount of water within the quotas may not be sufficient to fill the Rogun reservoir according to the project schedule, which would not only affect the cost and timing of the project completion but also the water supply for ecosystem processes and agricultural enterprises downstream in 3 other riparian countries causing economic displacement and deterioration of environmental conditions.

Without considering water efficiency alternatives, significant environmental impacts are inevitable during the filling phase of the Rogun reservoir. For example, in the World Bank document “Key Issues for Further Consideration of the Proposed Rogun HPP Project” on the results of the ESIA and TEAS of the Rogun HPP released in 2014, in paragraph 47, referring to the impact on the Aral Sea, it is recognized that during the filling phase “*in case of creation of the largest reservoir (option 1290 m), it will lead to an average annual*

reduction in downstream flow by 0.83 billion cubic meters annually for 16 years". At the same time, in 2013-2022, the annual inflow to the Amu Darya delta and the Aral Sea averaged 4.1 billion cubic meters. Therefore, filling of the Rogun hydropower reservoir could lead to a 20% reduction in the current flow into the Southern Aral for 10-16 years.

ESS4. Community Health, Safety, and Security

ESS4 covers Community Health, Safety, and Security, requiring borrowers to "anticipate and avoid adverse impacts on the health and safety of project-affected communities during the project life cycle from both routine and nonroutine circumstances." Dam safety is emphasized by the ESS4.

The local communities may suffer from the World Bank and the borrower's failure to assess geological and seismic hazards and develop correspondingly sufficient mitigation hierarchy procedures around these harms.

The recommendations critical to the project safety made by ESIA 2014 developer Pöyry Energy Ltd. on need to practice specific methods of monitoring (e.g. to install the micro-seismic monitoring system five years before the reservoir impounding commencement) have not been implemented by the Tajikistan side, which the developers of the ESIA 2023 WSP UK Ltd turned a blind eye to. Between 2014 and 2023, a landslide hazard was identified for a large section of slope on the right bank downstream of the dam. A landslide in this area can block the Vakhsh River. The 2023 ESIA developer just recommended to arrange monitoring, being fully aware that previously such recommendations had been ignored. Given this, there are reasonable doubts that sufficient data to assess the safety of the project will be available within the next ten years.

The ESIA still fails to answer the following questions, important to downstream communities: What is the likelihood and consequences of failure of the Rogun dam during construction due to extreme flooding? What is the risk to the Nurek and downstream HPPs of the cascade, the Vakhsh and Amu Darya floodplains? How are these risks monitored and mitigated? What is the emergency response plan agreed with downstream countries?

ESS5. Resettlement / Displacement

The Resettlement Framework does not address potential impacts on downstream populations who depend on Amu-Darya River flow. The 2023 ESIA, without any credible assessment, denies the possibility of any environmental, socio-economic and health impacts on downstream populations in Turkmenistan and Uzbekistan. The ESMP does not include mitigation tools or budgets to address the deterioration of environmental health and socio-economic displacement in downstream communities in riparian countries. Meanwhile, economic displacement, health and environmental effects caused by decreased water flows in the Aral Sea which happened in the past are indisputable and the Rogun HPP Project with 10 cubic kilometers of active volume of its reservoir has clear potential to exacerbate those effects.

Besides that, in relation to the ESS5 the project, probably, demonstrates the most outrageous documented failure of the borrower and the World Bank to prioritize the

prevention of harm. The objectives of ESS-5 are: “- *Prevent involuntary resettlement or, if unavoidable, minimize it by considering project alternatives.*”

In the 2023 ESIA, the selection of the largest reservoir with the largest (50,000 people) resettlement is justified by the economic effects of the project resulting from selling electricity for export, which directly contradicts the objectives of ESS-5. However, many other alternatives, where the main objective of the project to supply electricity to Tajikistan is fully realized, and which require less resettlement have been rejected or not considered by ESIA. For example, the next highest alternative with a reservoir level of 1255 meters above sea level would spare 32,000 people from resettlement (or more than 60% of all planned resettlement), while producing 18% less electricity.

ESS6 Biodiversity

The ESS 6 prescribes “Precautionary approach in the design and implementation of projects that could have an impact on biodiversity.”

First of all, these are two sturgeon species endemic to the Amu Darya basin: small and large Amu Darya false shovelnose sturgeon (*Pseudoscaphirhynchus hermanni* and *Pseudoscaphirhynchus kaufmanni*). Both are recognised as critically endangered species by the IUCN, and included in the national Red Data books of Turkmenistan, Uzbekistan and Tajikistan. Changes in flow and migration routes during dam construction are often the main cause of extinction of sturgeons, in particular for the extinction of closely related Syr Darya shovelnose sturgeon. The possible impacts of the Rogun reservoir project on these sturgeons and ways to improve their chances of survival under flow regulation have not been assessed in the ESIA.

Nor does the ESIA consider impacts on the Aral salmon (*Salmon trutta aralensis*) – important regional species once migrating through Turkmenistan, Uzbekistan, Afghanistan and Tajikistan, the last population of which was known from the Nurek Reservoir and therefore could only spawn in the rivers flowing into it, i.e. the section of the Vakhsh upstream of the Nurek Reservoir, which will be directly affected by the Rogun HPP Project, which may cause full extinction of this species.

The 2023 ESIA fully disregards potential impacts on the most important biodiversity features of the Amu Darya River basin, such as “tugays” – unique floodplain ecosystems characteristic of riparian areas which are preserved in several protected areas in Turkmenistan, Uzbekistan and Tajikistan. The “[Tugay Forests of the Tigrovaya Balka Nature Reserve](#)” World Heritage Site in the Vakhsh River floodplain is the closest to the Rogun HPP project. The flood control by the Nurek HPP has previously led to the deterioration of the Tigrovaya Balka and similar ecosystems downstream, and now it may be further exacerbated by the creation of the Rogun reservoir.

The Terms of Reference for the current World Bank project “*Update Environmental and Social Instruments for the Rogun HPP Project*” point (i) prescribes that the preparation of the Biodiversity Management Plan “*will include working with Rogun and Tigrovaya Balka experts to assess the feasibility of having Rogun release water in a pattern and amount that at least partially mimics previously naturally occurring floods, which ended with the construction of Nurek HPP*”. However, the Draft ESIA materials do not contain the results of such an assessment on the feasibility of environmental flow releases. It

is clear that the ESIA's proposed "*current operation pattern of flow regulation by hydropower cascade*" will continue to have a serious negative impact on the World Heritage Site. Meanwhile this flow regulation will be performed by the newly built Rogun Reservoir, while downstream reservoirs will, allegedly, work in run-of-river mode.

The ESIA text on page 106 recognises the potential (and even desirability) of the Rogun HPP's impact on flood regulation downstream of the Vakhsh HPP Cascade: "4.11.8. *The construction of the Project will improve flood routing capacity for the area downstream of the Vakhsh cascade. This positive effect could be increased by appropriate flood management. The inclusion of Rogun HPP in the cascade would also reduce risks of floods of lower magnitude, but with a higher probability of occurrence.*" It was the flood management by the Nurek HPP that previously led to the deterioration of the tugay forest ecosystems, and now it will be exacerbated and perpetuated by the creation of the Rogun reservoir.

In order to justify maintaining the selected flow regime, the ESIA must have included a study of these impacts on the outstanding universal value of the UNESCO World Natural Heritage property, as well as a study of impacts under other alternative operation pattern regimes. An environmental flow regime sufficient for safeguarding and recovery of the tugay ecosystems downstream should have been designed as a part of those assessment studies with climate change projections taken into account.

As for the ESS 10, the CSOs comprising the Rogun Alert Coalition several times [addressed](#) financing institutions due to deficiencies and violations in the course of the stakeholder engagement process pursued by the Rogun HPP Project. However, the situation has not improved: many essential documents, including detailed ESIA itself have not been disclosed and consultations have been neither meaningful nor reached vulnerable groups in downstream riparian countries. No specific effort was made by the World Bank to ensure that people who want to comment on the project are protected from retaliation, and given the current human rights situation in the region, this makes the whole consultation process meaningless.

CONCLUSIONS:

The Rogun HPP Project cannot move into appraisal and financing phase without eliminating its glaring non-compliance with the World Bank's ESF and corresponding E&S policies of all participating finance institutions:

1. Currently developed Environmental and Social documentation of the Rogun HPP Project cannot be the basis for the project financing as it does not meet the requirements of the World Bank's ESF and many specific environmental and social standards. It should be completely redeveloped to eliminate non-compliance with the ESF itself as well as the ESS1, ESS3, ESS4, ESS5, ESS6, and ESS10.
2. To be credible, the ESIA geographic scope must be extended to consider downstream impacts all the way to the Amu Darya Delta – Aral Sea to assess flow regime at each downstream river stretch as well as its dependent components: freshwater biodiversity, ecosystem processes (services) of the river, river-related socio-economic activities (e.g. irrigation) and others.

3. Robust analysis of alternatives should be performed from scratch based on contemporary data and in strict accordance with ESS1 requirements. First of all, it should consider options for Rogun Project completion which downsize dam height and allow to use saved resources to diversify Tajik energy system over-reliant on hydropower. To be able to assess the full range of negative impacts and benefits it can bring to downstream communities and the ecosystems of the Aral Sea basin, the analysis of alternatives should also include different operation regimes possible at Rogun HPP. Analysis of legal issues should assess feasibility of future fulfillment of the old water-management agreements between riparian countries, both in the case of the Rogun HPP and under alternative development scenarios. It should identify how the legal water resource management framework should be improved prior to decisions on Rogun HPP project completion.
4. ESIA and Resettlement Framework should address impacts on and needs of upstream and downstream communities and prioritize minimizing numbers of people resettled and economically displaced by the project. The repressive authoritarian rule in Tajikistan and surrounding countries, does not leave people safe room for defending their rights and will make them silent victims in case of further resettlement. First of all it is necessary to assess alternative scenarios for Rogun HPP Project completion with smaller reservoir, which eliminate a need for further resettlement.
5. Biodiversity conservation in downstream areas should be prioritized, impacts assessed and mitigation action planned in full accordance with the ESS6. Special environmental flow regime with binding agreement to ensure its implementation is needed to guarantee that the Project does not perpetuate degradation of the World Heritage property and contribute to extinction of critically endangered species. An environmental flow regime sufficient for safeguarding and recovery of the ecosystems and species downstream of the Vakhsh Cascade should be implemented as a part of any completion scenario selected for the Rogun HPP Project.
6. The ESMP and ESCP must be fully redesigned to incorporate clear, enforceable obligations and actionable steps to ensure thorough mitigation hierarchy processes are followed for upstream and downstream areas and credible mechanisms for compensation of damages that may occur under different project completion scenarios.
7. Requirements of ESS 10 should be fully met. During the process of additional assessment of alternatives and impacts and bringing the project in compliance with the ESF, all E&S documentation should be fully disclosed in appropriate manner. The project proponents must conduct broad consultations with populations of all areas potentially affected by the project and interested international stakeholders taking all possible steps to be inclusive of systematically marginalized segments of communities, and making deliberate proactive measures to minimize the risk of reprisals and intimidation.