The World Bank
Central Asia Energy Water Development Program

ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT FOR
THE PROPOSED ROGUN HYDROPOWER AND REGIONAL
WATER RESERVOIR PROJECT

TERMS OF REFERENCE
INDEPENDENT PANEL OF EXPERTS
ENVIRONMENTAL AND SOCIAL PANEL

The World Bank
Europe and Central Asia
Sustainable Development Unit – Energy Sector
Washington D.C.
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1. INTRODUCTION

The proposed Rogun hydropower project (Rogun HPP) in Tajikistan is a large and ambitious project on an international waterway. It is intended to provide energy for domestic (Tajik) customers and export revenues; under its original Soviet design, it was also to provide water regulation for downstream countries. The proposed Rogun HPP is being considered within an environment of very difficult regional political and economic relations. Conceived under a system of central management of Central Asia resources, it must now be re-examined in a political dynamic of increased nationalism, resource conflicts and declining regional cooperation. Nonetheless, the proposed Rogun HPP has a potential to address many of the development needs of Tajikistan and the broader region and thus is worthy of study.

Given its complexity, multiple stakeholders (Uzbekistan, Turkmenistan, Afghanistan, Kyrgyz Republic and Kazakhstan in addition to Tajikistan), such a study requires particular care and attention. The Government of Tajikistan will be undertaking Techno-Economic Assessment and Environmental/Social Impact Assessments funded by the World Bank IDA credit. The two assessment studies are intended to provide a sound basis for discussion of future decisions regarding the proposed Rogun HPP. The World Bank will be taking an expanded role in the study process as part of its Central Asia Energy-Water Development Program (CAEWDP).

Background on World Bank engagement in Central Asia. Energy-water issues in Central Asia were highlighted as a critical element in the March 2010 World Bank Regional Strategy for Europe and Central Asia. Building on a history of engagement in the energy and water sectors in Central Asia, the Bank has initiated Central Asia Energy –Water Program (CAEWDP) to assist in the long-term amelioration of the regional difficulties, the uneven endowment and distribution of energy and water, and the evolution of regional cooperation. The costs of not engaging are likely to include increased power outages, limit growth opportunities, and weaken regional security. The objective of CAEWDP is to enhance energy and water security through improved cooperation with the intent of expanding economic opportunities and benefit to each county. In building a platform for cooperation, the program will support national needs and regional benefits. The program addresses investment analytics, dialogue and institutional strengthening. The CAEWDP is a long-term program encompassing a broad range of energy and water issues including fostering cooperation in future infrastructure decisions.

Project description. The proposed Rogun hydroelectric power project (HPP) is located about 110 km (by road on M41) East-North East of Dushanbe, the capital of Tajikistan. It is proposed to be a large storage reservoir-type HPP on the Vaksh River, which is an important tributary of the Amu Darya River. It represents a case of completing a partially constructed HPP. Its construction commenced in the early 1980s and continued until about 1992. After the dissolution of the Soviet Union construction languished for want of funds. Since then work has continued using Tajik resources, focused on rehabilitation of works damaged by flooding in 1993.

The original design for the proposed Rogun HPP was started in 1978 under the Soviet era system as a combined energy and water management project. In 1992/1993 supplementary studies were supplied by Tashkent HydroProject, an Uzbekistan based design institute, to the recently independent Government of Tajikistan, but the civil war disrupted further development. In 2000, the HydroProject Institute produced a Feasibility Study for the construction of Stage 1 of Rogun. In 2005/2006 a modified feasibility study was prepared by Lahmeyer International
(commissioned by RussAl, which at one time had been a potential investor) and further design was undertaken in 2008-2009 by Hydroproject Moscow, Moshydrostal.

According to the Soviet conceptual design, the proposed Rogun HPP would have a reservoir with a rockfill/earthfill dam height of 335 m. The reservoir would have a total storage volume of about 13 km$^3$ with a live storage about 8.6 km$^3$, which is nearly twice that of the downstream Nurek HPP (4.5 km$^3$). The reservoir would extend upstream over a distance of about 70 km. The installed capacity would be 6x600 MW (totaling 3.6 GW). The estimated average annual energy would be about 13 TWh.

Most of the site preparation works as well as 60-70 percent of the underground works (access tunnels, penstocks, and diversion and outlet tunnels, chambers for turbines / generators and transformers) have been completed. Thus, the location is defined by already existing built assets and auxiliary infrastructure, such as office buildings, construction camps and access roads, some of which have deteriorated since construction was halted in the early 1992 and are currently being rehabilitated. Rehabilitation works continue at site, along with stockpiling of construction materials and river bank reinforcement at the designated site for the coffer dam. The construction of the coffer dam, which existed before 1993, will proceed only if it is sufficiently supported by the findings from the assessment studies.

**Riparian**$^1$ **concerns.** The proposed Rogun project is located on a major tributary to the Amu Darya River, which flows along the border with Afghanistan through Turkmenistan and Uzbekistan. The proposed project is contentious within Central Asia given the complexity and critical dependence that downstream countries have on water allocation, particularly for irrigation. Both Turkmenistan and Uzbekistan have expressed objections to the proposed project and outlined numerous technical aspects that are of specific concern including dam safety. The Government of Uzbekistan has also expressed concern about the study process, citing a lack of independence of the studies, transparency, use and enforcement of international norms and standards, and quality data. As a project with perceived potential impacts in neighbouring countries, the assessment studies must meet a high standard of objectivity, transparency and quality, founded on modern international standards and norms.

**The World Bank’s expanded role.** In 2007, the Government of Tajikistan requested the Bank to assist with the Techno-Economic Assessment Study, Environmental, and Social Impact Assessment Study for the proposed Rogun HPP. The World Bank, recognizing the complexity and magnitude of such a project, its potential benefits and possible tensions, agreed to bring international standards to the challenge. The World Bank has made no financial commitment to support construction of the proposed project. Since 2007, the World Bank facilitated extensive consultations with the Governments of Kazakhstan, Kyrgyz Republic, Tajikistan, Uzbekistan, Turkmenistan, and Afghanistan to ensure that the riparians’ views and concerns were taken into account in the Terms of Reference (TOR) for the assessment studies. Consultations were also undertaken with civil society and representatives of potentially affected communities within Tajikistan. The World Bank has also overseen the International Competitive Bidding (ICB) process for the assessment studies, consistent with World Bank requirements.

More recently, the World Bank committed to an expanded role to ensure credible, transparent assessments that are open to international scrutiny and riparian dialogue, as part of CAEWDP. The expanded role follows a five-point program (a) oversee the Consultant assessment studies financed under an IDA grant for which payments will be made directly by the Bank, (b)

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$^1$ Central Asia riparians are broadly defined to include the following: Afghanistan, Kazakhstan, Kyrgyz Republic, Tajikistan, Turkmenistan, and Uzbekistan
undertake additional analytical studies to supplement the assessment studies, (c) fund and manage independent and international Panels of Experts, (d) facilitate a structured consultation process with all the riparians, and (e) continue to participate in the process on the condition that Tajikistan uphold its commitment to international practices.

**Assessment studies:** The assessment studies for the proposed Rogun HPP are clustered in three groups of studies:

I. *Techno-Economic Assessment Study (TEAS)* to carry out engineering study comprised of the following components:

- Phase 0: Assessment of the salt dome risks
- Phase I: Assessment of existing Rogun HPP site and works
- Stage 1: Assessment of an interim 70m dam project
- Phase II: Comparison of alternatives and project definition
- Phase III: Assessment of selected (full project) scheme.

II. *Environmental and Social Impact Assessment (ESIA)* to undertake a program of safeguard studies and other relevant social and environmental issues which will encompass:

- Environmental impact assessment of the interim (Stage 1) project design
- Environmental impact assessment of the final (Stage 2) project design
- Environmental Management Plans for both the interim and final projects
- Resettlements Action plans for populations affected by the interim project
- Resettlement Policy Frameworks for populations affected by the full project design
- Resettlement audit or completed/ongoing resettlement
- Socio-economic baseline study
- Social impact analysis of the impact of the project and related activities on local population
- Social impact mitigation plan

The TEAs and ESIA assessment studies are being undertaken by international firms selected though World Bank ICB procurement procedures. The TEAS will be undertaken by a group headed by Coyne and Belier; while the consultants for the ESIA are Poyry, based in Switzerland.

2 Both assessment studies may be extended to a subsequent work to prepare bidding documents and detailed plans (for the TEAS), and to complete the Resettlement Action plans (for the ESIA) for the full project design, if it is determined that the project should advance to that stage.

3 The ESIA for the complete project will occur in two parts: the first part consists of the deliverables noted above. The second part is contingent on a decision to proceed with the full project design and is subject to the assessments carried out to that point. The second part will complete the Resettlement Action Plans for the remaining households to be resettled due to reservoir filling.
The Government of Tajikistan, through Barki Tajik, will retain these assessment Consultants, funded by a World Bank IDA credit.

The TEAS and ESIA are expected to be prepared in an interactive manner to manage the interface between the engineering design and the environmental and social aspects of the proposed project.

**III. Additional studies funded and managed by the World Bank** as part of its expanded role in the assessment process. These studies will explore:

- power supply options for Tajikistan to meet domestic energy needs, export opportunities, and water regulation, encompassing a Strategic Environmental Assessment of the project;
- possible institutional mechanisms to manage reservoir operations with transboundary impacts; and
- Verifying hydrologic data and analysis used by the Assessment Consultants.

The additional studies will be undertaken in parallel with the TEAS and ESIA.

**Independent Panels of Experts.** Under World Bank operational policies, large hydropower projects are classified as category “A”. Specifically OP4.01 on environmental assessment, OP4.12 Involuntary Resettlement; and OP4.37 on dam safety, and OP7.50 on international waterways, require the involvement of two independent Panels of Experts: (a) one Panel for engineering/dam safety aspects (Engineering Panel); and (b) the second for environmental/social safeguards aspects (ESIA Panel) for the proposed project. Such panels constitute a standard arrangement for projects of this type and magnitude according to the Bank’s safeguard policy OP 4.37, if large dams are involved (>15m height), as well as OP 4.01, if the project poses a significant, potentially adverse and irreversible environmental and social impact (environmental category A), and OP7.50, if the project is located on or influencing international waterways. Annex B identifies all Bank safeguard operational policies.

The general task of the two Panels is to review all relevant design, engineering and dam safety aspects, as well as environmental and social impacts and safeguards issues for the proposed Rogun HPP. The two Panels will work in coordination with each other recognizing the importance and close relationship between technical, economic, environmental and social considerations in the feasibility, design, construction and operation of the Project. It is anticipated that they will jointly participate in selected meetings and some elements of the site visits, to support a more comprehensive and integrated understanding of issues related to the Project.

The members of the two Panels should among them share cutting edge expertise and profound experience in (a) dam engineering; (b) engineering geology and rock mechanics; (c) tunneling and dam construction, (d) dam monitoring instrumentation, and (e) dam safety inspections during operation (f) hydrology, (g) environmental safeguards, (h) involuntary resettlement, (i) social impact analysis and mitigation plans (other than resettlement), (j) socio-economic baseline evaluations, (j) public consultation. Additional expertise on climate change adaptation would be desirable.

The World Bank has agreed to take on the responsibility to hire, manage and engage the Panels of Experts as part of its expanded role, consistent with its CAEWDP commitment to provide independent expertise on a range of transboundary energy and water issues, analyses and
institutions strengthening. The members are selected by the Bank based on the required skill-mix, individuality and independence. Members are selected from outside the countries of the former Soviet Union and constitute a group of high-level, internationally-recognized professionals. These Terms of Reference address the specific scope of work for the Environmental and Social Panel of Experts (hereinafter referred to as the ESIA Panel).

2. OBJECTIVES OF THE ESIA PANEL OF EXPERTS

The Terms of Reference (TOR) for the ESIA Panel reflect the following objectives: (a) to ensure due diligence and international quality standards in the studies, including integration of international standards for data, methodologies, benchmarks for impacts, and design criteria; (b) to provide high level and professional independent advice and guidance to support objectivity and credibility in the assessment process, and (c) to share technical expertise and knowledge and so contribute to dialogue amongst Consultants, the Government of Tajikistan and riparians. The primary outcome from their effort is to ensure international standards of design, risk evaluation and impact assessment are met, and to build a level of confidence amongst the international community in the quality and integrity of the assessment process and findings.

3. ESIA PANEL ORGANIZATION AND MEMBERSHIP

General Qualifications

The ESIA Panel will have at minimum four key permanent members. Additional members will be invited and approved on an as-needed basis; however, it is highly desirable that strong continuity of Project knowledge and issues is maintained. The members of the ESIA Panel should among them share innovative expertise and profound experience as (a) an Environmental Specialist, (b) a Social Specialist, (c) a Water Resources and Climate Change Specialist, and (d) international waters/transboundary water resources specialist. A Hydrology Specialist will participate jointly on both the ESIA and the TEAS Panels. The ESIA Panel may request that the Bank temporarily provide the assistance of other experts if in the Panel’s opinion it is advisable to do so. One of the permanent specialists will be designated as the Chairperson of the Panel. The Chairperson will coordinate the activities and communications of the Panel, call and chair its meetings, and liaise as appropriate with the Chairperson of the Engineering Panel. S/He will be the main point of contact with the World Bank task manager. He/She will ensure the objectivity of the Panel and its members, and provide balance in Panel’s reviews and recommendations.

All ESIA Panel members should be familiar with the Bank Safeguard Policies and have practical and technical expertise in reviewing project reports produced by consulting firms; and have strong analytical and reporting skills as well as an ability to work in teams. The specialists will have a demonstrated capacity to prepare reports in English. In a broader context the relevant members will have an understanding of transboundary riparian issues and experience in addressing hydropower and cross-border impacts.

Technical Qualifications

The ESIA panel will consist of four senior specialists with complementary expertise:

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Experts have been funded for work with the International Fund for Saving the Aral Sea (IFAS). The Rogun Panels of Experts are a second implementation of the commitment. It is expected that ongoing work under the Central Asia Energy-Water Development Program will call for similar expertise for other issues/initiatives. This Terms of Reference is focused on the Rogun Assessment Studies.

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**Environmental Specialist.** A senior environmental specialist with a minimum of 25 years of experience in: (a) preparing environmental assessments for large scale energy and infrastructure projects including large dams; (b) designing and implementing environmental mitigation and monitoring plans; (c) developing detailed cost estimates and schedules for environmental mitigation and monitoring plans; and (d) implementing public consultation and disclosure processes.

**Social Specialist.** A senior social specialist with a minimum of 25 years of experience in: (a) preparing and implementing compensatory measures and resettlement action plans and land acquisition plans for large scale infrastructure projects including dams; (b) reviewing social baseline data; (c) designing and carrying out social impact analysis, socio-economic baseline studies; (d) developing of detailed cost estimates and schedules for resettlement action plans, land acquisition plans, (e) social impact mitigation and monitoring plans; and (e) implementing public consultation and disclosure processes.

**Water Resources Specialist.** Senior water resources specialist with a minimum of 25 years of experience in: (a) preparing and implementing integrated water resources management scenarios; (b) defining parameters for making decisions and taking actions while considering multiple viewpoints of how water should be managed; (c) understanding the key decision points, situations and actions needed for river basin planning, institutional arrangements, planning of new capital facilities, controlling reservoir releases, regulating floodplains, and plicies laws and regulations, that govern water resources management, and (d) understanding on the management of water resources across boundaries, whether sub-national or international, with awareness of the various issues needed to be taken into account when making water management decisions that will affect all riparians.

**Hydrology Specialist.** A senior specialist with a natural sciences background in hydrology and meteorology and a good understanding of current state of the art in the climate change discussion. The specialist should have a minimum of 25 years experience covering: (a) excellent understanding of meteorological, hydrological and climatologic baseline data and the access to databases; (b) assessing hydrological impacts of large scale infrastructure projects including dams; (c) experience with qualitative and quantitative hydrological models in regions including glaciated high alpine areas, (d) developing mitigation measures of hydrological impacts, (e) experience in mid- to long-term climate projections and mainstreaming climate change information into design parameters (climate change adaptation).

**4. SCOPE OF WORK**

The ESIA Panel will be responsible for detailed review and guidance on the ESIA study by the Assessment Consultants (see Annex C for the ESIA TORs), which will be undertaken concurrently with the development of the engineering/dam safety assessment study. The ESIA Panel shall also consider additional assessments and reports as will become available into their review during the course of the work, including those prepared by the Consultants contracted directly by the World Bank.

The Panel’s input will be focused on defined key milestones in the project’s progress. The purpose of this approach is to ensure the credibility of every increment of the work undertaken as soon as interim outputs are available, and before further steps are initiated. Such milestones will consist of the completion of (final draft) assessment studies, or the conduct of consultations, linking project progress with relevant findings, information produced or decisions prepared. Riparian consultations will also constitute such key milestones.
The ESIA Panel will undertake the following tasks:

**A. Ensure due diligence and international quality standards**

The ESIA Panel will support due diligence and international quality standards by using appropriate practice and standards, modern criteria for data quality and by ensuring international benchmarks for the evaluation of impacts. Specifically the ESIA Panel will:

a) *Review methods in preparing ESIA and outcomes.* The Panel will evaluate key deliverables, to include the Environmental Impact Assessment (EIA) and Social Impact Assessment (SIA) or a combination of both reports (ESIA). This will include review of the baseline data, design options; analysis of alternatives, projected impacts, and mitigation and monitoring plans to be developed for the EMP. Review of the EIA should take into account potential physical, biological, social and cultural heritage impacts, mitigation measures and monitoring activities. One important focus will be the critical review of and guidance on Climate Change issues (the project’s potential incremental contributions, as well as adaptation strategies to climate change), which might become relevant for project design. The SIA will cover both the impacts linked to involuntary resettlement as well other social impacts such as the influx of workers, development opportunities linked to new towns/sites, possible conflicts with current resident population, inflation in the markets, supply chains, opportunities for local people, etc. The Panel will use best international practice as benchmark for evaluating the proposed project.

b) *Ensure quality assurance of the assessment studies.* The Panel will review and comment on draft and draft final reports prepared by the ESIA Consultants, especially the completeness of their scope, their adequacy and quality, and compliance in accordance with applicable provisions of Tajik legislation and World Bank OP/BP 4.01, OP/BP 4.12 and other operational safeguards policies as well as coverage of the range social impact issues beyond those covered under World Bank safeguards.

**B. Provide independent advice and guidance**

a) *Provide guidance on key issues and methods for preparation of the ESIA.*

b) *Collaborate and effectively integrate the findings and recommendation of the assessment studies.* Recognizing the importance and close relationship between technical and economic, environmental and social considerations in the feasibility, design, construction and operation of the proposed project both Panels will coordinate efforts to effectively integrate the findings and recommendation of both assessment studies. Specifically, the ESIA Panel will review and comment on the integration of environmental and social dimensions into the techno-economic studies and designs, and estimated budgets, schedules of the proposed project. It is anticipated that the two Panels will jointly participate in meetings and some elements of the site visits, to support a comprehensive and integrated understanding of issues related to the proposed project.

c) *Advise to optimize alternatives.* Advise the Government on optimizing alternatives and synergies between engineering/dam safety and environment/social aspects of the proposed projects; while also taking into consideration the outcomes from the Bank-funded additional studies.

d) *Ensure recommendations of the ESIA are pragmatic and feasible to implement.* Review and comment on recommendations for further studies and / or concrete measures, and any cost estimates for preparation of environment management plan (EMP), resettlement policy framework (RPF), resettlement audit, resettlement action plan (RAP), socio-economic...
baseline study and social impact mitigation plan for the development of environmental and resettlement management capacity in relevant authorities and institutions, for implementing environmental mitigation, resettlement and monitoring activities recommendations.

e) **Recommend measures to maximize enhancement of the overall environmental and social outcome of the proposed project.** Provide advice regarding measures to enhance the overall environmental and social outcome of the proposed project.

### C. Share knowledge through consultations, meetings and field visits

The Panel members will share technical expertise and knowledge through meetings, consultations\(^5\) and field visits. Specifically, the Panel will share knowledge and international experience with the Government of Tajikistan and its agencies at Panel meetings and site visits. The Panel will also engage in riparian consultations to share information and international perspectives with downstream and regional neighbours. These consultations will be managed by the World Bank to ensure transparency and to provide access to independent international experts by stakeholders.

In addition, the ESIA Panel will review and comment on planned public consultation and disclosure to support preparation of the environmental and social studies. Required for compliance with Bank OP 17.50 Disclosure Policy, this will include both in-country for the project affected population and other civil interest groups as well as for riparian countries within the Vakhsh and Amu Darya river basins. The Panel’s feedback and advice will also be sought on the use of stakeholder feedback into design alternatives and options for the project.

### D. Prepare Reports

The Panel will document each of its meetings. The meeting reports will present, inter alia, the experts present at the meetings, the reference material provided, topics reviewed, the analyses carried out, the key areas of concern, the requests for additional information/analysis, the conclusions and recommendations for risk management, potential mitigation measures and solutions and approaches for corrective measures, and the actions to be taken by the concerned parties. It should address comments received in that period from the Government of Tajikistan, riparians, the World Bank and the Consultants, and include a statement of actions taken on the recommendations of the previous meeting of the Panel. The Panel will present its draft meeting report to the World Bank, Government of Tajikistan, and the Consultants prior to the departure of the members from Central Asia.

The Panel will also provide a consolidated report at the conclusion of its meeting schedule. The draft shall be shared with the World Bank who will seek comment. After a period of one month, the consolidated report shall be finalized, signed by participating members of the Panel and presented to the World Bank. The World Bank shall arrange for its translation into Russian and for disclosure, as appropriate.

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\(^{5}\) The consultation program with riparians is under development. The World Bank has requested the governments of Kazakhstan, Uzbekistan, Turkmenistan, Tajikistan and Kyrgyz Republic to appoint a senior staff member (preferably at the Deputy Prime Minister level) to lead and participate in riparian consultation. Although the specifics of the consultation program are not finalized, Panel consultation with riparians will be incorporate into the Panel’s meeting schedule.
5. **MEETINGS OF THE PANEL**

During the assessment study phase, the Panels will meet to assess quality, due diligence, timeliness and status of the work. These meetings will be combined with site visits as needed. Meetings will be held also when important decisions regarding key aspects are required, and at the proposed project preparation milestones. The ESIA Panel will have co-chairpersons in order to benefit from the comparative skills (hydropower development and international/transboundary water resources management).

**Participation:** Each meeting will make best efforts to include relevant core members of the Panel. Additional experts will be invited as deemed necessary by the Bank (on the advice of the Panel chair). These additional members may participate directly in meetings or through comments based on review of documents. The World Bank will participate as an observer in the meetings.

**Structure of meetings.** Relevant members of the Panel will participate in meetings that will generally consist of (a) Panel deliberations, (b) dialogue with the project proponents and the authorized representatives of the Government of Tajikistan, (c) dialogue with riparian stakeholders, and (d) additional ad-hoc activities as suggested by Panel members. All meetings will be attended by the relevant members of the Panels and the Consultants. The meetings will normally take place at times, at locations and by defined medium\(^6\) as agreed upon by the Panels. The duration of each meeting inclusive of site visits is expected to be about 6-8 days plus travel time.

**Preparation for meetings:** Panel members will review available documentation from consultants (and World Bank where appropriate). Such documentation will be made available to Panel members in advance of the meeting. In addition, the Panel will take under advisement key issues for review as suggested by: (i) the Government of Tajikistan or its agencies; (ii) the World Bank; iii) stakeholders, as coordinated by the Bank; and (iv) the Consultants. The issues should be those on which the Panel will provide advice, such as: findings and issues from the deliverables, important decisions on Consultant recommendations, geological or other aspects encountered during site investigations, etc. The Panel will be free to extend the scope of their review to other subjects.

**Frequency and duration of meetings.** The Panel will meet during the preparation of the work/reports to assess the status of the work and to present recommendations. The World Bank, both Consultants and both Panels will coordinate the meeting schedule jointly. The schedule of the meetings will be arranged well in advance taking into account the program of work on the proposed project and the availability of the members of the Panel. Meeting may involve more than one location (e.g., site visit followed by riparian consultations in a neighbouring country). Currently a minimum of three meetings will take place during the 18-month assessment study period (either in-country or video-conference). Additional meetings (physical or by videoconference) and field visits will be scheduled for different tasks and activities, as deemed necessary; and at defined decision points. A preliminary schedule of meetings is resented in Table 1 below.

**Field trips** will be coordinated with the meeting schedule. The purpose of the field trips will be to field verify the upstream, at site, and downstream issues, findings and recommendations, and assess the on-site activities and implications.

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\(^6\) Participation in meetings either through physical attendance, site visits, or attendance via videoconferencing.
### Table 1: Notional Meeting Schedule and Milestones

*The following schedule is indicative ONLY; the final schedule will be based on the inception reports of the consultants and input from riparians.*

<table>
<thead>
<tr>
<th>Milestones &amp; Meeting Schedule</th>
<th>Expertise and Logistics</th>
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<tbody>
<tr>
<td><strong>Meeting Purpose</strong></td>
<td><strong>Meeting Format</strong></td>
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<tr>
<td>ESIA</td>
<td>TEAS</td>
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<tr>
<td>Launch meeting</td>
<td>Inception report</td>
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<tr>
<td>Inception report; &amp; Environmental and Social Screening Report</td>
<td>Meeting or videoconference</td>
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<tr>
<td>Stage 1 ESIA draft report</td>
<td>Stage I: Viability Draft Report &amp; Phase II Draft report</td>
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<tr>
<td>Stage 2 ESIA (full project) draft report</td>
<td>Phase III interim studies</td>
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<td>Stage 2 ESIA (full project) draft final report consultations</td>
<td>Phase III: Feasibility of selected scheme draft report</td>
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### 6. SUPPORTING SERVICES

The Government of Tajikistan has agreed to a number of responsibilities:

- The Government of Tajikistan will make available authorized and knowledgeable personnel for discussions at the request of the ESIA Panel.
- The Government of Tajikistan and Consultants shall provide the necessary documentation such as background information, topographical and thematic (geological, 

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7 ESIA POE and TEAS POE schedules will be coordinated to the extent possible

8 Dependent on requirements for site investigations.
soils, vegetation, population/villages etc.) maps, aerial and satellite photographs and drawings, relevant data, techno-economic assessments, engineering design reports (criteria and calculations), environmental and social data, census and reports, legal/policy documents, laboratory tests, minutes of consultation meetings, and construction records related to the proposed

- The Panel will have free and unrestricted access to and both Consultant teams (TEAS and ESIA) at all times.
- The Consultants will be informed ahead of, and shall be present during meetings of the Panel in Tajikistan.
Annex A: Information Note on Bank Involvement in Assessment Studies

Invitation to Assist

In 2007, the Government of Tajikistan requested the Bank to assist with the Techno-Economic Assessment Study, Environmental, and Social Impact Assessment Study for the proposed Rogun Hydropower Project (HPP). The World Bank, recognizing the complexity and magnitude of such a project, its potential benefits and possible controversies, agreed to bring international standards and appropriate financing to the challenge. The World Bank has made no financial commitment to support construction of the proposed project.

Since 2007, the World Bank has facilitated extensive consultations with governments of Kazakhstan, Kyrgyz Republic, Tajikistan, Uzbekistan, Turkmenistan, and Afghanistan to ensure riparians’ views and concerns were taken into account in the Terms of Reference (TOR) for the assessment studies. Consultations were also undertaken with civil society and representatives of potentially affected communities within Tajikistan. The World Bank has also overseen International Competitive Bidding procedures for the studies, consistent with World Bank requirements.

Five Point Program for World Bank Involvement

More recently, the World Bank committed to an expanded role to ensure credible, transparent assessments that are open to international scrutiny and riparian dialogue. It will follow a five-point program:

<table>
<thead>
<tr>
<th>World Bank’s Five Point Program for Rogun HPP Assessment Studies</th>
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<tr>
<td><strong>1. Consultant studies</strong></td>
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<tr>
<td>The World Bank will oversee consultant studies financed under an IDA grant to the Government of Tajikistan, including selection of consultants, contract negotiations, and review of all interim and draft reports. The Bank will also affect direct payment to the consultants. All short-listed consultants have been selected through International Competitive Bidding and are experienced in similar projects.</td>
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<tr>
<td><strong>2. Regional studies</strong></td>
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<td>The World Bank will undertake certain studies independently of the Government of Tajikistan, funded through Bank-managed trust funds. These studies will focus on: (a) alternatives to the proposed Rogun HPP to meet both domestic energy needs and export opportunities and water regulation, encompassing a Strategic Environmental Assessment of the project; (b) possible mechanisms to manage reservoir operations with potential transboundary impacts; and (c) verifying hydrologic data and analysis.</td>
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<td><strong>3. Panels of Experts</strong></td>
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<td>The World Bank will select, manage and fund international Panels of Experts that will participate in the studies and provide independent advice, guidance and quality assurance. Panel members will be well-known in their fields of expertise and will be drawn from outside the former Soviet republics to ensure independence.</td>
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<td><strong>4. Riparian</strong></td>
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<td>The World Bank will facilitate a structured process for riparian</td>
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**World Bank’s Five Point Program for Rogun HPP Assessment Studies**

<table>
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<tr>
<th>involvement</th>
<th>involvement in the assessment studies, to include information exchange and access to independent experts. The specific program will be determined with input from riparians.</th>
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<tbody>
<tr>
<td>5. Commitments</td>
<td>The Government of Tajikistan has committed to fully comply with all World Bank Operational and Safeguards Policies (including the policy related to international waterways) and to align construction with study results (specifically as it concerns construction of the coffer dam and diversion of the Vakhsh River). The World Bank’s involvement is contingent on continued compliance with both conditions; if either of these conditions were to be violated in the future, the World Bank would be forced to stop all involvement in any activities related to the proposed Rogun project.</td>
</tr>
</tbody>
</table>

**Current Status**

Current work at site focuses on rehabilitating infrastructure that was damaged after the project was abandoned in 1993, such as clearing and strengthening tunnels. Resettlement is also underway, with about 1000 people already settled. Funding for all current work is provided by the Government of Tajikistan.

Contract negotiations for the Techno-Economic Assessment Study are nearing conclusion, with work expected to begin in November 2010. The Environmental/Social Impact Assessment will be open to a new round of proposals; work is expected to begin in January 2011. The World Bank is currently establishing the independent panels of international experts.

**Good Faith Participation**

The Bank is well aware that the management of water resources for both irrigation and power generation is critical for the sustainable and balanced development of all the countries in Central Asia. Given different national perspectives on hydro development, the limited up-to-date technical information available for the proposed Rogun project, and the immense technical and financial challenges involved in such a project, the Bank believes that high-quality, internationally recognized technical, economic, social and environmental studies would provide essential inputs for informed debate and decision-making by concerned stakeholders. Such an approach supports regional peace and security.

The World Bank recognizes that there is no single approach to the Rogun studies that will meet the expectations of every stakeholder. However, with the good faith of the parties, the proposed study program can stimulate cooperation based on an understanding of mutual benefits. The World Bank is committed to implementing the enhanced 5-point process in partnership with all concerned Central Asian countries. The World Bank has invited Central Asia countries to become actively involved in the assessment process by asking each President to nominate a senior representative to lead its participation.
## Annex B: List of World Bank Safeguards Operational Policies

### World Bank Safeguard Operational Policies

<table>
<thead>
<tr>
<th>Policy No.</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>OP 4.01</td>
<td>Environmental Assessment (EA)</td>
</tr>
<tr>
<td>OP 4.04</td>
<td>Natural Habitats</td>
</tr>
<tr>
<td>OP 4.09</td>
<td>Pest Management</td>
</tr>
<tr>
<td>OP 4.10</td>
<td>Indigenous Peoples</td>
</tr>
<tr>
<td>OP 4.11</td>
<td>Physical Cultural Resources</td>
</tr>
<tr>
<td>OP 4.12</td>
<td>Involuntary Resettlement</td>
</tr>
<tr>
<td>OP 4.36</td>
<td>Forest</td>
</tr>
<tr>
<td>OP 4.37</td>
<td>Safety of Dams</td>
</tr>
<tr>
<td>OP 17.50</td>
<td>Disclosure</td>
</tr>
<tr>
<td>OP/BP 7.50</td>
<td>International Waterways</td>
</tr>
<tr>
<td>OP/BP 7.60</td>
<td>Disputed Areas</td>
</tr>
</tbody>
</table>

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Annex C: Weblink to Terms of Reference for Rogun ESIA

From the World Bank website (search: Rogun)

TORs for Rogun Environmental and Social Impact Assessment Study:

English | Russian