Alpaslan II
Lenders' Environmental and Social Consultant

Environmental and Social Action Plan

Draft for Disclosure, April 2014

Prepared by: Pierre Légaré, Marc Cloutier, Gordon Appleby, Iain Bell Approved by: Iain Bell

Alpaslan II Project: Lenders Consultant ESAP

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AECOM
1 Tanfield
Edinburgh
Eh35DA
United Kingdom
Website: http://www.aecom.com

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Draft Report

Section One

Introduction and Purpose of Report

1.1 Introduction

The European Bank for Reconstruction and Development (EBRD) and Garanti Bank are considering providing a loan to EnerjiSA (Enerji Uretum A.S.) for the development of the Alpaslan II hydroelectric and dam (the 'Project').

The Project includes the construction of: a large dam on the Murat River including formation of a reservoir; an hydroelectric power plant (HEPP) with an installed capacity of 280MW; access roads; electric transmission line (ETL) of approximately 54km in length; and the relocation of an existing surfaced road with approximately 50km of new road.

The project is being developed by Enerjisa as an electricity generation project, but, like other reservoirs in Turkey, it can be used for additional functions such as flood control and water regulation depending on requirements imposed by the Turkish Government through its water sector regulation agency, the General Directorate of State Hydraulic Works (DSI).

The Project has been categorised as 'A' in terms of the EBRD's Environmental and Social Policy (ESP, 2008) as it could result in potentially significant adverse and diverse environmental and social impacts. Category A projects require a full Environmental and Social Impact Assessment in line with the EBRD Performance Requirements (PRs).

Enerjisa has undertaken an Environmental Impact Assessment (EIA) process for the dam and HEPP and has completed an EIA report and associated appendices for local permitting requirements. In addition, an EIA was prepared for the road to be relocated and an interim EIA has been prepared for the ETL. Enerjisa has also compiled a Supplementary Lenders Information Package (SLIP) to bring the environmental and social documentation for the Project in line with the PRs. The EIA reports, and associated documentation, together with the SLIP form the 'Project ESIA' for disclosure purposes.

AECOM has been appointed by the EBRD and Garanti Bank to review the Project ESIA (including additional documents and reports developed by Enerjisa) to confirm that the Project ESIA meets the EBRD Performance Requirements and is fit for purpose and disclosure.

1.2 Purpose of this Report

AECOM has prepared this Environmental and Social Action Plan (ESAP) in order to set out the actions that need to be implemented by Enerjisa to ensure that the Project meets PRs during on-going construction (including commissioning and filling) and operation. The actions summarised in this report are based on:

- The key mitigation measures identified in the Project ESIA to avoid, reduce, offset or otherwise manage impacts during all phases of the Project.
- The need to complete some outstanding gaps in the Project ESIA in order to meet the EBRD's PRs.
- The need, where appropriate, to realise opportunities for environmental and social benefits.

The ESAP has been developed in close liaison with EBRD. The ESAP will be part of the financing agreements between the lenders and Enerjisa. The performance of the required actions will initially be reported quarterly during construction and annually thereafter by Enerjisa and will be audited or otherwise evaluated by the lenders throughout construction and operation of the Project.

Section Two

Actions

The table below constitutes the ESAP. It identifies the required actions, the basis of the requirement, the timetable for the action, and the criteria to be used to determine whether the action has been successfully achieved. Enerjisa is responsible for the implementation of all of the actions. When other companies perform work under contract to Enerjisa, it will still be the responsibility of Enerjisa to ensure that these contractors' are in compliance with the requirements of the ESAP. This is expected to be accomplished by inclusion of relevant requirements in contracts and subcontracts, and by direct oversight and supervision by Enerjisa.

As agreed by the parties, this ESAP may be revised from time to time during Project development, so that it remains up to date and responsive to needs. All changes must remain compliant with Turkish laws and regulations, and the EBRD's Performance Requirements.

Where the ESAP denotes specific responsibilities for the Lenders or the EBRD, such as monitoring or review of documentation, these responsibilities may be delegated to a designated Lenders Environmental and Social consultant or Lenders monitoring consultant.

2.1 Recommended Actions

No	Action	Turkish Regulations EBRD PR Best practice	Timetable Action to be completed	Target and Evaluation Criteria for Successful Implementation
Performance Requirement 1: Environmental and Social Appraisal and Management				
1.1	Enerjisa will put in place the necessary resources, both internal and external, to implement this ESAP. This will include a mix of appropriately qualified and experienced international and national consultants, experts, contractors, etc. with experience in Turkey. EBRD will provide input to Term of References (or equivalent) developed for the implementation of actions in this ESAP.	EBRD PR1, PR2, PR3, PR4, PR5, PR6, PR8, PR10	As required by the relevant action. Prior to consultant, specialist, etc. appointment.	Appropriate resources in place. EBRD will provide input where necessary Terms of References satisfactory to the EBRD.
1.2	Appoint or designate an Enerjisa Environmental, Social and Health and Safety (ESHS) manager (managers), or other suitably qualified personnel with appropriate management capacity, for the Project to take responsibility for ESHS management, implementation of this ESAP and liaison with the Lenders during all phases of the 'Project'. During construction it is necessary to have separate 'environmental and social' and 'health and safety' managers. The 'Project' includes the dam and associated reservoir area, hydroelectric power plant (HEPP) and supporting structures, the electric transmission line, roads to be relocated as well as supporting infrastructure such as quarries, borrow pits, access roads and constructions camps.	EBRD PR1	By end of Q2 2014	Appointment of suitably qualified and experienced ESHS manager(s). Identify the responsible person(s) in reports to Bank.

No	Action	Turkish Regulations EBRD PR Best practice	Timetable Action to be completed	Target and Evaluation Criteria for Successful Implementation
1.3	Continue to implement, and update and revise if required, the current integrated Environmental, Social and Health and Safety Management System (ESHS MS) for the Project. The ESHS MS will be aligned with Enerjisa's existing corporate MS and include the necessary policies, procedures, capabilities and capacities. Certify the management system to ISO 14001 and OHSAS 18001 international standards Review and update ESHS procedures when necessary or at minimum once a year. Including a specific procedure on incident and accident investigation and the need for corrective actions. This will extend to contractors as well.	EBRD PR1, PR2, PR3, PR6, PR10 ISO 14001 and OHSAS 18001 standards.	Implemented by end 2014 and maintained throughout Project. Certification by end Q2 2018 (one year after operation starts)	ESHS Management system developed and operational. Report to EBRD on status of system development and operation.
1.4	Report to the Lenders on the status of each ESAP requirement and compliance with EBRD Performance Requirements.	EBRD PR 1	Weekly during the disclosure period Quarterly throughout construction and commissioning. Annually during operation.	Submission of reports in format to be agreed with EBRD. Environmental and social reports and progress against the ESAP satisfactory to the EBRD. Note: Quarterly reports will be in addition to the consolidated annual environmental and social report prescribed in the loan agreement.

No	Action	Turkish Regulations EBRD PR Best practice	Timetable Action to be completed	Target and Evaluation Criteria for Successful Implementation
1.5	Enerjisa will: • Complete the EIA climate description to understand reservoir ice and waves patterns during future conditions; • Assess potential erosion and hillside stability risk areas around the reservoir edge. Where risks are identified ensure that appropriate safety information is disclosed to the public. Communicate the results of the assessment to the General Directorate of State Hydraulic Works (DSI). • Based on the outcomes of the assessment, monitor reservoir bank and hillside stability during impoundment and operation. • Define and implement any mitigation measures or further monitoring requirements.	EBRD PRs	Climate description before end 2014. Assessment before end Q3 2014 Monitoring during impoundment and operation.	Complete climate description. Assessment results Monitoring results Mitigation measures developed if required and ESMP updated. Monitoring in place
1.6	Based on the detailed hydraulic model results (See PR 4), Enerjisa will develop and implement a downstream erosion prevention plan including prevention, mitigation and/or monitoring measures, to address any erosion risks identified in the river territory reach under its responsibility. Enerjisa will forward to DSI the results of the erosion assessment related to areas under DSI's responsibility, with a copy of the erosion prevention plan prepared by Enerjisa.	EBRD PR1-10 Best Practice	Prior to commissioning of the Project Implementation throughout operation of the Project	Erosion assessment conducted satisfactory to the EBRD. Downstream erosion prevention plan in place and implemented for river territory under Enerjisa's responsibility. Results of erosion assessment provided to the DSI .

No	Action	Turkish Regulations EBRD PR Best practice	Timetable Action to be completed	Target and Evaluation Criteria for Successful Implementation
1.7	For all components of the Project, Enerjisa to complete the Social Impact Assessment (SIA), including additional baseline data collection, and Social Management Plan (SMP), in accordance with PRs. The completed SIA will ensure an appropriate understanding of the potential social and socio-economic impacts associated with the Project and any measures required to avoid, minimise, mitigate or compensate these impacts. The SIA will include an assessment of the impacts associated with the implementation of the RAP(s).	EBRD PR1, 4, 5, 8 and 10 Best Practice	SIA and SMP completed by end May 2014 and disclosed. SMP to be implemented during construction and operation.	SIA and SMP satisfactory to the EBRD and in line with the PRs. Construction and operation of the Project in accordance with the agreed mitigation measures and SMP.
1.8	Further develop the Cumulative Impact Assessment (CIA) developed as part of the Project ESIA.	EBRD PR 1 Best Practice	Completed by end May 2014	CIA in place satisfactory to the EBRD.
1.9	Receive and comply with all required permits/ authorisations for construction and operation from the relevant authorities. Maintain the current permit/authorisations and permissions register or tracking system for the Project. Register to be updated and maintained as required.	National regulations EBRD PR1	Receive prior to activities that require permits/ authorisation. Comply throughout Project activities. Update permit-tracking system.	Timely receipt of all permits and authorisations. Report to EBRD on status of permit issuance and permit compliance. Report to EBRD immediately in case of significant non-compliance.

No	Action	Turkish Regulations EBRD PR Best practice	Timetable Action to be completed	Target and Evaluation Criteria for Successful Implementation
1.10	In liaison with TEIAS, complete the EIA for Electric Transmission Line (ETL) for local permitting purposes and disclose this EIA to stakeholders in line with Turkish EIA Regulation requirements and as per the Stakeholder Engagement and Action Plan. Update the ESMP based on the outcomes of the EIA.	National EIA regulations EBRD PR1	Prior to ETL construction	ETL EIA approved by authorities and disclosed. ESMP updated
1.11	Enerjisa to ensure that the ESMP and required mitigation and compensation measures for the Project are fully implemented. Update the ESMP as and when required taking into consideration current ESHS performance and the results of ongoing studies.	EBRD PR1-6, 8 and 10 Best Practice	Implementation of ESMP during construction/operation for all components of the Project. ESMP updated as required	Implementation of the necessary mitigation and compensation measures as per ESMP. Reporting on performance to the Lenders. ESMP updated as required.

No	Action	Turkish Regulations EBRD PR Best practice	Timetable Action to be completed	Target and Evaluation Criteria for Successful Implementation
1.12	Develop outstanding management plans required and implement existing and new plans accordingly, as per the conclusions of the Project ESIA, including: • HEPP operation plan//manual. • Reservoir banks and hillside stability monitoring plan (see PR 1). • Erosion Prevention Plan (see PR 1). • Biodiversity Action Plan (see PR6). • Hydrological Monitoring Program (see PR6). • Water Quality Monitoring Programme (see PR 6). • Stakeholder Engagement and Action Plan (to update, see PR10). • Social Management Plan (to update) (PR 1). • Chance Finds Procedure (see PR8). • Cultural Heritage Management Plan (see PR8). • Emergency Action Plan (see PR4).	EBRD PR1-6, 8 and 10	As per timetables noted elsewhere in the ESAP. Implemented as required during construction and operation. HEPP Operation plan/manual in place before impoundment. Plans to be updated where necessary during life of Project.	All Plans prepared and implemented satisfactory to the EBRD. Environmental, Social and Health and Safety impacts avoided, minimised, mitigated or compensated

No	Action	Turkish Regulations EBRD PR Best practice	Timetable Action to be completed	Target and Evaluation Criteria for Successful Implementation
1.13	Require all contractors to develop and submit to Enerjisa a CESMP (construction environment and social management plan) aligned with the Project ESHS Management System requirements, ESMP and topic specific plans where relevant for construction, and management system requirements. The CESMP will describe all the measures planned by the contractor to avoid or minimise its E&ESHS impacts, including, but not limited to: • Liquid and solid waste management. • Noise, air quality and dust management. • Erosion prevention and control. • OHS risks and associated safety rules. • Emergency response. • OHS and E&S training The extent and content of the CESMPs, or equivalent procedures should be commiserate with the nature and extent of the contractors activities.	EBRD PRs 1-6, 8 and10	Already in place for existing contractors For new contractors: As part of contractor procurement (in tender documents) and contracts.	CESMP in place for all contractors. CESMP reviewed and approved by Enerjisa. CESMP implementation monitored by Enerjisa.

No	Action	Turkish Regulations EBRD PR Best practice	Timetable Action to be completed	Target and Evaluation Criteria for Successful Implementation
Performance Requirement 2: Labour and Working Conditions				
.2.1	For the Project, and specifically for Enerjisa staff, develop and implement an HR policy and associated procedures/manual(s) to fully comply with national regulations and EBRD PR 2. This may draw upon existing Enerjisa policies and procedures. Develop an equal opportunities recruitment policy. Provide communication and access to HR policies and procedures to all staff. Ensure that appropriate facilities are available for female workers such as dedicated toilet and changing room facilities. Review and update HR when necessary or at minimum once a year.	Turkish regulations EBRD PR 2	By end Q2 2014	HR policy and associations procedures/manual (s) in place HR information in annual report to the EBRD
2.2	Enerjisa will review current and future contractor HR provisions including conditions of employment to ensure compliance with national labour legislation and paragraphs 6-16 and 8 of EBRD PR 2.	Turkish regulations EBRD PR 2	By end Q2 2014 for current contractors. On appointment for future contractors	Evidence of review by Enerjisa.
2.3	Continue to ensure that Contractor CESMP's and ESHS performance are aligned with the requirements of Enerjisa's ESHS Management System, the Project ESMP, topic specific management plans with particular reference to construction, and the EBRD PRs. This may include review of contractor documentation and plans, monitoring of contractor activities, contractor reporting, etc.	Turkish regulation EBRD PR 2 Best Practice OHSAS18001	On-going during construction	Regular reporting on lost time & injuries. Contractor E&S an OHS performance in annual report to the EBRD.

No	Action	Turkish Regulations EBRD PR Best practice	Timetable Action to be completed	Target and Evaluation Criteria for Successful Implementation
2.4	Develop and implement a worker Grievance Mechanism, made available to all Enerjisa and contractor workers. For contractors the grievance mechanism may be restricted to a particular contracting company.	EBRD PR 2	In place by end Q2 2014 and implemented throughout construction and operation	Mechanism implemented include recording of grievances Timely resolution of all grievances Reporting on grievances to the EBRD.
2.5	Continue to periodically review worker accommodation against PR2 and the IFC/EBRD "Workers' accommodation: processes and standards" guidance notes and develop a plan for improvement when and/or where necessary.	EBRD PR 2 Best practice guidelines	Twice a year during construction	Twice a year report internally and submission to the EBRD during construction. Improvements plan, when and/or where necessary.
2.6	Enerjisa will endeavour to source supplies, raw materials and other equipment locally. Where local companies are not able to meet standards required by the Project, assistance will be given so that they can develop their organisations and compete successfully for contracts. Enerjisa will consider potential supply chain risks when selecting suppliers. These include worker issues such as child and forced labour.	EBRD PR 1 and 2	Prior to supplier selection	Evidence of local procurement and support to local suppliers where necessary.

No	Action	Turkish Regulations EBRD PR Best practice	Timetable Action to be completed	Target and Evaluation Criteria for Successful Implementation
Performance Requirement 3: Pollution Prevention and Abatement				
3.1	Implement waste storage areas as appropriate according to national regulations.	EBRD PR3 National regulation Best practice	Development and implementation by end of Q2 2014 and throughout construction and operation.	Waste managed according to regulation.
3.2	Monitor solid and liquid waste management from the construction camps, construction areas and operational facilities and confirm final destination/treatment comply with national regulation and EU standards.	EBRD PR3 National regulation Best practice EU standards	Throughout construction and operation.	Monitoring audits to confirm that plans are being implemented.
3.3	Undertake a follow up audit of surface water quality control mechanisms related to the worksite and develop a plan to ensure untreated grey / black, sediment, fuels and/or construction waters are not being intentionally discharged to the Murat River. Develop and implement a plan to prevent and manage serious accidental spills.	EBRD PR3 National regulation Best practice	Undertake an audit by end Q2 2014 and develop a plan for implementation thereafter.	Audit by end Q2 2014. Action plan by end Q3 2014.

No	Action	Turkish Regulations EBRD PR Best practice	Timetable Action to be completed	Target and Evaluation Criteria for Successful Implementation
Performance Requirement 4: Community Health, Safety and Security				
4.1	Prior to the commissioning of the Project, Enerjisa will develop a hydraulic model based on (i) precise riverbed cross-sections developed through field topographic and bathymetric works and (ii) calibration works using the Arincik weir as a control section. All necessary transient flow calculations will be run to produce the information required for the preparation of the various plans described in this ESAP. The downstream stone weir (ancient bridge north of Mus) will be used as downstream boundary condition. Enerjisa will use the model to further identify and evaluate downstream environmental, social, health and safety risks from the construction and operation of the Project including dam, and cofferdam, failure.	PR1, 2, 4 and 6	Prior to project impoundment	Hydraulic model in place Project operation and downstream impact assessment updated satisfactory to the EBRD.

No	Action	Turkish Regulations EBRD PR Best practice	Timetable Action to be completed	Target and Evaluation Criteria for Successful Implementation
4.2	Drawing on the hydraulic model Enerjisa will prepare an emergency response plan covering all discharges ranging from the maximum Murat River minor bed bearing capacity to a catastrophic dam failure (including a coffer dam break). The emergency response plan will include: • A set of inundation maps calculated for various outflows from Alpaslan II scheme (these maps will be shared with DSI); • Operational procedures to anticipate and manage inflows generating a risk of outflows higher than maximum Murat minor bed bearing capacity (the procedure shall include the contacts of the authorities to be informed by the staff operating the dam); • Operational procedure in case of abnormal outflow from Alpaslan I (including Alpaslan I dam break), based on Alpaslan I emergency response plan.	PR4	Prior to impoundment	Emergency response plan in place
4.3	Identify & assess population H&S risks associated to dam failure, reservoir level fluctuation, operation and uses in order to minimise risks to the population. Prepare and implement an awareness raising and public information campaign (see PR10).	EBRD PR4	Prior to dam impoundment.	H&S risks identified and managed. Safety measures in place.
Performance Requirement 5: Land Acquisition, Involuntary Resettlement and Economic Displacement				

No	Action	Turkish Regulations EBRD PR Best practice	Timetable Action to be completed	Target and Evaluation Criteria for Successful Implementation
5.1	Develop the preliminary resettlement action plan into a final Resettlement Action Plan (RAP), including supporting documents as required, in line with PR 5. The RAP (or RAPs) will include the impoundment and dam construction area, the ETL right of way and the corridor of the road to be relocated. The RAPs will provide a detailed entitlement matrix. In the entitlement matrix and elsewhere, the RAPs must set out compensation measures which ensure replacement value in line with PR5 requirements according to the type of impact suffered. Options are to be made available ranging from cash compensation to replacement land and housing. Where cash is given, the RAPs will document that the Project Affected Peoples (PAPs) are able to demonstrate a robust strategy for how the cash will be utilised to restore livelihoods. It is essential that the RAPs identifies vulnerable PAPs and has in place strategies that meet their needs and allows them to fully benefit from mitigation measures. For example, PAPs who are tenants who pay no rent or resident co-owners of the property will not have sufficient funds to replace their housing. The Project promises to restore their residences itself. To do so requires identification of a (or the) resettlement site(s), agreement with the PAPs on the lay-out of the new village(s) and house types, assessment of any environmental impact of new house construction in the resettlement site, assessment of the needs for social infrastructure of any neighbouring host communities affected by the relocation, and an budget adequate for site preparation and construction, as well as the physical transfer. Particular attention needs to be given to female PAPs, many of whom will be landowners in their own right. The RAPs must include a robust grievance mechanism.	National legislation; EBRD PR5	At least six months prior to dam impoundment or related infrastructure construction	Full RAP(s) in place satisfactory to the EBRD. RAP(s) disclosed Record of public consultation.
	Review all budgetary amounts to ensure their adequacy for the purpose.			

No	Action	Turkish Regulations EBRD PR Best practice	Timetable Action to be completed	Target and Evaluation Criteria for Successful Implementation
5.3	Prepare and implement a Livelihood (economic) Restoration Framework (LRF). Livelihood restoration will be a combination of agricultural support, training with direct access to employment where possible, small business development, micro-finance, etc. This framework shall take into account the dispersed nature of independent resettlement, and shall be prepared in conjunction with Governmental concerned agencies. The LRF will be developed with a thorough understanding of market demand conditions. Built into the LRF will be a flexible approach with an understanding that in some cases livelihood restoration requires a long term approach. Although the area has experienced significant out-migration, the demographics show a young population and therefore it is essential that the LRF addresses the needs and opportunities presented by a youthful population.	EBRD PR5	At least six months prior to dam impoundment or related infrastructure construction	LRF in place satisfactory to the EBRD LRF implemented. Monitoring of LRF implementation and PAPs in place. Monitoring results in reports to the EBRD.
5.4	Create and/or strengthen the Project's resettlement unit (Enerjisa personnel), with particular attention to implementation and monitoring of economic development activities. Other key personnel will be land officers and community liaison officers. This unit shall be headed by an overall manager that has its own budget and latitude for action. This unit shall be distinct from the ESHS management units.	EBRD PR 5	At least three months prior to initiation of resettlement operation.	Staffing needs identified and filled (e.g., land acquisition, grievance resolution, economic rehabilitation, monitoring) Monitoring systems for administrative and program monitoring operating successfully and reports delivered to management in a timely manner; Grievances are registered, tracked and resolved in a systematic and timely manner.

No	Action	Turkish Regulations EBRD PR Best practice	Timetable Action to be completed	Target and Evaluation Criteria for Successful Implementation
5.5	Implement the Resettlement Action Plan (s) for the impoundment area, the ETL and the road in accordance with Turkish regulations and PR5. If in the future, it becomes apparent that there is need for further resettlement and or economic displacement in the area of influence of the Project, an addendum RAP (s) will be prepared.	EBRD PR 5	Prior to impoundment or related infrastructure construction	Acquisition of the required land, adequate compensation paid in a timely manner or payment in kind. Physically relocated PAPs have replaced their homes and businesses, as relevant. Economically displaced PAPs are restoring their livelihoods and incomes compared to the pre-Project baseline period. PAPs satisfied with the compensation (cash or in kind). Report to EBRD on the status of land compensation and economic restoration at least quarterly, with a completion report submitted within one month of land acquisition and, within 2 months for economic rehabilitation.

No	Action	Turkish Regulations EBRD PR Best practice	Timetable Action to be completed	Target and Evaluation Criteria for Successful Implementation
5.6	Due to the nature of the compensation process, the strategy for resettlement of the villages that will be inundated can be difficult to develop and implement. As such comprehensive and effective monitoring of PAP relocation and economic rehabilitation shall be put in place for all phases of resettlement and described in detail in the RAP(s). Regular monitoring both internally and by external auditors will be an essential component of the RAP.	EBRD PR5	Throughout construction and operation until complete livelihood restoration is achieved and documented.	Computerised monitoring system in place. Baseline database in place; Staff trained and skilled in its use. PAP housing & financial situation tracked for improvement vis a vis baseline situation. Grievances tracked for type and time required for amicable resolution. Management receives timely and usable reports.

No	Action	Turkish Regulations EBRD PR Best practice	Timetable Action to be completed	Target and Evaluation Criteria for Successful Implementation
Performance Requirement 6 Biodiversity Conservation and Natural Resources Management				
6.1	**Hydrological Monitoring Program** For hydrological continuous monitoring, implement: • A Meteorological station. • Construction phase: A flow station (downstream of the Project), parameters to measures: Flows (m^3/s), Water Level (m). • Operation phase: Automated outflow, downstream and upstream water level monitoring through the HPP automates. Make the monitoring data available on the Project/Enerjisa website. Outflow shall be disclosed on a real-time basis in order to demonstrate the application of the environmental flow requirements.	National regulation EBRD PR6 Best practice	Implement prior to Project impoundment. Maintain during life of the Project.	Functioning in real time. Data made available to the public on the Project/Enerjisa website. Maintain environmental flow rates. Include data in annual reports.

No	Action	Turkish Regulations EBRD PR Best practice	Timetable Action to be completed	Target and Evaluation Criteria for Successful Implementation
6.2	**Water Quality Monitoring Program** For the reservoir, out-flows from Alpaslan I and Bingol Creak and downstream of the Project, prepare (through a wide spectrum water quality assessment) and implement a water quality monitoring programme. Parameters to be measured shall include as a minimum: Temperature (˚C), pH, Oxygen saturation (%), Conductivity (µS/cm), Turbidity (U.T.N.), Phosphate, Nitrates, BOD5, COD and micro pollutants (such as pesticides, arsenic, heavy metals including mercury. Sediments shall also be tested the first year) identified as presenting a risk during the wide spectrum assessment. Sampling: 4 times a year.	EBRD PR6 National regulation Best practice	Develop by end Q2 2014 Implement one year before impoundment and during life of the project.	Water quality monitoring programme satisfactory to the EBRD. The water quality monitoring results will be included in the annual environmental and social report to the EBRD, and disclosed on the Project/Enerjisa website.
6.3	**Aquatic Monitoring Programme** For the reservoir and downstream of the Project, continue to implement a multi-taxa aquatic monitoring programme (habitat, composition and population) for fish and other aquatic life. Implement a habitat restoration program if fish habitats are affected. Implement a system of catch and truck for fish in line with the conclusions of the ecosystem assessment.	National regulation EBRD PR6 Best practice	Develop by end Q2 2014 Implement during life of the project.	Submission of monitoring plan to Lenders. Summary report on habitat modification.

No	Action	Turkish Regulations EBRD PR Best practice	Timetable Action to be completed	Target and Evaluation Criteria for Successful Implementation
6.4	**Biodiversity Action Plan** Development and implement a Biodiversity Action Plan for the construction and operation of the Project. This will include as a minimum: • The collection of seeds and cuttings/seedlings of vulnerable and endangered flora prior to construction works and impoundment to be planted later in appropriate areas. • The need to close, reinstate and rehabilitate Project affected areas such as quarries, borrow pits, road verges and eroded areas. Where appropriate, reinstatement and rehabilitation activities shall seek to create habitats for species of flora and fauna of conservation value as well as consider other measures to mitigate impacts on fauna and flora in the Project area (see 6.5). • Reforesting of areas to offset forested areas lost in the reservoir area (see 6.6). • Monitoring of all closed, reinstated, rehabilitated and newly planted areas.	National regulation EBRD PR6 Best practice	Develop by end May 2014 Implement during life of the project (construction and operation).	Biodiversity Action Plan in place and implemented. Monitoring results.
6.5	Enerjisa will ensure that all quarries and borrow pits, construction areas, areas affected by ETL and road reserves located outside the reservoir area are appropriately reinstated and/or rehabilitated and closed where relevant. Where appropriate, rehabilitation shall seek to create habitat for species of flora and fauna of conservation value (see 6.4). Ongoing monitoring is required to ensure successful reinstatement.	EBRD PR6 Best practice	Within in 8 months following completion of construction activities and quarry/borrow pit usage.	All affected areas outside the reservoir area reinstated and/or rehabilitated and closed. Monitoring results (photographs, etc.)

No	Action	Turkish Regulations EBRD PR Best practice	Timetable Action to be completed	Target and Evaluation Criteria for Successful Implementation
6.6	Enerjisa will reforest an area of equivalent size (at least 55 ha) and ecological value to the forested area in the impoundment area as described in the EIA report. Ongoing monitoring, and potentially maintenance, is required to ensure successful reforestation. Where possible Enerjisa will target areas affected by erosion and instability.	EBRD PR6 Best practice	Within 2 years of project operation.	Equivalent area reforested (at least 55ha) with trees appropriate to the area. Monitoring results (photographs, etc.)
6.7	Based on the hydraulic model outputs, Enejisa will assess whether the flow velocity and level fluctuations are compatible with the vital requirements of fish identified in the EIA, in particular during the breeding season. On this basis, Enerjisa will revise the biodiversity action plan to ensure that impacts that could not be anticipated before the detailed hydraulic model was run are addressed through preventive, corrective or mitigation measures that ensure the preservation of the fish population.	PR6	By end 2014.	Revised biodiversity action plan in place satisfactory to the EBRD.
6.8	Should DSI intend to use the reservoir for fishing activities, Enerjisa will liaise with DSI in the development of an appropriate fisheries management programme commiserate with the scale of fisheries proposed for the reservoir.	EBRD PR6 Best practice.	Prior to the development of fishery activities in the reservoir	Programme in place. Report results annually to lenders and national agencies.
6.9	Develop mitigation measures to prevent fish from being caught at the intake to the penstock/turbines (grids installation).	EBRD PR6 Best practice	Implement during construction.	Mitigation in place.
Performance Requirement 8 Cultural Heritage				

No	Action	Turkish Regulations EBRD PR Best practice	Timetable Action to be completed	Target and Evaluation Criteria for Successful Implementation
8.1	Complete the cultural heritage assessment to meet the requirements of PR8 for the reservoir area, dam site, ETL and road corridors. This will be done in close liaison with the relevant authorities. Investigation and excavation requirements of already identified sites and mitigation measures to be agreed with the relevant authorities and implemented. Develop a strategy that will be adopted for cemetery and graves displacement or other local cultural assets in a participatory manner with local communities.	EBRD PR6 National legislation Best practice	Studies within reservoir are completed prior to impoundment. Other studies completed prior to construction of Road, ETL. Update to assessment of impacts cultural heritage (as part of Social Impact Assessment) by end May 2014 Mitigation measures implemented.	Submission of results of cultural heritage studies to Lenders.
8.2	Develop a chance finds procedure.	EBRD PR6 National regulation Best practice	Prior to construction of ETL and roads. Prior to impoundment.	Chance finds procedure in place

No	Action	Turkish Regulations EBRD PR Best practice	Timetable Action to be completed	Target and Evaluation Criteria for Successful Implementation
Performance Requirement 10: Information disclosure and stakeholder engagement				
10.1	Disclose all new studies and Project updates available during construction and operation.	EBRD PR10	As required and when available	Studies disclosed & population consulted.
10.2	Implement the Stakeholder Engagement Action Plan.	EBRD PR10	Throughout construction and operation.	SEAP implemented.

No	Action	Turkish Regulations EBRD PR Best practice	Timetable Action to be completed	Target and Evaluation Criteria for Successful Implementation
10.3	Drawing on the SEAP, Enerjisa will prepare a specific public awareness and information plan aimed at informing the public about the potential downstream risks associated with the Project. The plan shall at a minimum include: • A website for general public information, including an informative description of the risks associated with the dam operation and the disclosure of environmental parameters measured at the dam (reservoir level, water flows and meteorological parameters, if any) and real-time information on the outflow value and variation. The website shall be developed such that it is accessible by mobile phones; • Rapid information tools (such as SMS alerts) agreed with those regularly working along/in the river bed (quarries, large and small irrigation users) and exposed to rapid flow variations; • Awareness raising campaigns in villages in the Project area to inform people, children, livestock farmers, fishermen, water sport clubs, etc.) about the risks and the tools put in place to inform people; • Regular communication campaigns (annual open-day, information's in schools, etc.); • Specific communication campaigns through appropriate local media (radio, newspaper and information boards) to (i) inform people about any incidents/accidents and (ii) inform people early about seasonal operation changes (typically when the overflow spillway is planned to start operating); • Signs and posters informing the public about the risks at all places exposed to rapid flow variations and where people can access the riverbed.	EBRD PR10	Prior to impoundment and ongoing through operation.	Public awareness and information plan, satisfactory to the EBRD, in place and implemented.

No	Action	Turkish Regulations EBRD PR Best practice	Timetable Action to be completed	Target and Evaluation Criteria for Successful Implementation
10.4	If risks associated with erosion and potential hillside instability around the reservoir edge are identified, complement the public awareness and information plan to inform the public about potential risks in the reservoir area.	EBRD PR 10	Prior to impoundment and ongoing through operation.	Public awareness and information plan, satisfactory to the EBRD, in place and implemented.
10.5	Undertake regular reviews, noting ongoing social surveys in the Project area, to evaluate and update the SEAP to improve/ refine stakeholder list, communication methods, media, etc.	EBRD PR10	Evaluation and update: - Bi-annually during construction, - Annually thereafter.	SEAP evaluated and updated if needed.

AECOM
Tanfield, 1 Tanfield, Edinburgh, EH3 5DA
Telephone: +44 131 301 8600
Website: http://www.aecom.com