Alpaslan II Construction Environmental and Social Management Plan (C-ESMP)

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Purpose of this document	To provide the Contractor(s) with the minimum environmental and social requirements in order to construct the Alpaslan II project.					
Target population	Contractors and Subcontractors				**Effective from**	15 November 2019

Head of relevant function	Occupation	Signature	Date
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Verification

Role	Head of Function	Signature	Date

Versions

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Acronyms

A2	The Alpaslan 2 project
AoI	Area of Influence
BMF	Biodiversity Management Framework
BMP	Biodiversity Management Plan
CBD	Convention on Biological Diversity (Rio, 1992)
CHA	Critical Habitat Assessment
EAR	Ecosystem Assessment Report
EIA	Environmental Impact Assessment
EO	Ecological Offset
EP	EnergoPro
ESIA	Environmental and Social Impact Assessment
ESMP	Environmental and Social Management Plan
GIS	Geographic Information System
IUCN	International Union for the Conservation of Nature
LRP	Livelihood Restoration Plan
NGO	Non-Governmental Organization
OP/BP	Operational (World Bank) Policy/Bank Procedure
GIIP	Good International Industry Practice
IGP	International Good Practices
STP	Sectoral Technical Plan
HRWMP	Human Resource and Working conditions Management Plan
CHSMP	Community Health and Safety Management Plan
PPP	Private-Public Partnership
PS	Performance Standards
TEV	Total Economic Value

1. GENERAL

1.1. Introduction

The Alpaslan II Dam and Hydroelectric Power Plant (HEPP) Project is an energy generation development proposed by EnergoPro. The Project is located in the Muş province in the Eastern Anatolia Region of Turkey on the Murat River which forms a sub-basin of the Firat (Euphrates) River Basin. The City of Muş is located 30 km to the south and downstream of the Project.

EnergoPro is an international power engineering company which operates and develops hydropower plants in Central and Eastern Europe, the Black Sea and the Caucasus. The Project was initiated by Enerjisa Enerji Uretim A.S. ("Enerjisa Genco") in 2011. Development of the Project started in 2011 with the acquisition of the company holding Alpaslan II HPP by Enerjisa Genco and continued until 2015, when the main civil works were suspended. Enerjisa Genco suspended further work on the Project in 2015. In 2017, Enerjisa sold its Project SPV (Murat Nehri) to EnergoPro. Murat Nehri Enerji Uretim A.S is a company incorporated in Turkey. It is fully-owned by the privately-owned, Czech EnergoPro group through Energo-Pro Hydro Development s.r.o.

The dam body will have a height of 116 m and a crest length of 800 m. A 1700 m long spillway are constructed to provide a safe path for flood water to flow around the dam. There are two diversion tunnels (with a length of 875 m and 950 m each) built to divert the river so that the construction can be done in dry conditions. These are used as energy tunnels during operation. The powerhouse will contain four Francis-Vertical Axis type turbines, two of them will produce 110 MW each and the other two will produce 30 MW each leading to 280 MW in total. The energy generated by the HEP are connected to the national grid by two parallel lines, west and east, generating 380 kV and a 1272 MCM (Pheasant) conductor. The western transmission line is 20.36 km long and the eastern line are 20.41 km long starting. Both lines will start from the project substation and connect to the Yukari Kalekoy HEP Substation. The precise route and design of the transmission line are finalized by Turkish Electricity Transmission Company (TEIAS). The Environmental Permit for the Transmission Line was granted July 5, 2019.

The reservoir will have a surface area of approximately 55 km2 with a volume of approximately 2 billion m3. At its deepest points the water depth will range from a minimum of 68 meters to a maximum of 96 meters. Due to the formation of the reservoir, parts of Mus-Varto (36 km) and Mus-Bulanik (24 km) roads will have to be relocated. To replace these roads, the Mus-Varto road is being built by EnergoPro and the 24 km Mus-Bulanik road has been handed over to the General Directorate of State Highways (KGM).

1.2. Preamble

This document contains the environmental and social (ES) specifications that contractors and subcontractors need to comply with during the construction phase of the Alpaslan II project (A2).

It proposes measures to ensure the construction phase is in line with Turkish and international standards and practices, including IFC's Performance Standards (PSs). The publication of this document takes place in the course of a major reformulation exercise of the Environmental and Social Impact Assessment (ESIA) and an Environmental and Social Management Plan (ESMP) of said dam and associated infrastructure. Exceptionally, the construction works of the Alpaslan 2 dam have been launched before the final Environmental and Social Assessment of the Project was completed.

1.3. Purpose

The purpose of this document is to provide Contractor(s) and Subcontractor(s) with the minimum Environmental and Social requirements with which the Contractor must comply in order to

implement the ESMP commitments, embodied in a number of key documents, including the 2014 ESMP and newly development EnergoPro Environmental and Social Management System (ESMS). The overall goal of the plan is to avoid, minimize, mitigate and rehabilitate impacts to project employees, the environment, and the communities by operating in a responsible manner.

The general objectives of this plan are:

- Commit to meeting the requirements of the 2014 ESMP's and ESMS's applicable plans and procedures.
- Ensure the safety of all workers; visitors and any involved third party.
- Minimize the project footprint and avoid, where possible, sensitive environmental and social areas such as villages, cultural sites, water sources and ecosystems.
- Manage environmental and social risks during construction.
- Protect local villages from unacceptable security and health and safety impacts.
- Minimize negative impacts in the interaction between Alpaslan II and the communities.
- Comply with the regulatory environment in Turkey.
- Maximize socioeconomic and environmental benefits for the local communities.

1.4. Scope

This management plan applies to the Contractor and Subcontractors during the construction and end of construction phase. The project is currently completing the following infrastructure:

- Asphalt core rock fill dam with a height of 116 m and crest length of 844 m (in progress)
- 1,700 m spillway (in progress).
- Two diversion tunnels which will be converted to energy tunnels (completed).
- Powerhouse with 4 x turbines totalling 280 Mw (in progress).
- 5 km^2 reservoir (after impounding).
- 55 km electric transmission line.
- Relocation and construction of existing Muş – Varto roads (in progress).
- Rehabilitation and closure of all temporary sites.

1.5. C-ESMP Management

A key success factor in the effective implementation of the ES requirements described in this document is the definition of responsibilities between the Contractor(s), Alpaslan II and other third parties involved in the E&S management or monitoring of the project. The Contractor is required to comply with the ES requirements listed in this document, including allocating adequate ES resources towards management of ES and Alpaslan II is responsible for monitoring compliance and establishing the Environmental and Social Management System (ESMS). The ESMS establishes the organizational structure, responsibilities, plans and procedures necessary for managing environmental and social risks.

2. LEGAL, REGULATORY AND SECTORAL POLICY FRAMEWORK

2.1. National Framework for Environmental and Social Impacts

The A2 project is a complex, multi-faceted project, basically aiming at producing goods and services to the Turkish economy, but that must also comply with a series of laws, decrees, and other policies and regulations on technical, financial, environmental, social, and other matters. This C-ESMP focuses on compliance with the Turkish legal and regulatory arsenal in terms of minimizing negative impacts on the natural environment, local people, their health, and other

essential elements of quality of life. In addition, beyond these national requirements, the project must also comply with international policies and standards, most of which exceed in their norms the Turkish requirements. IFC's sustainability policy with its Performance Standards and World Bank Group's General Environmental, Health and Safety (EHS) Guidelines have been chosen as those international standards. Commercial banks' network (now 99 members) known as Equator Principles apply IFC standards and compliance with the Equator Principles is a by-product of the present efforts.

Without pretending to be exhaustive, the main framework documents and texts constituting the backbone of the legislative and regulatory framework for social and environmental management in Turkey are mentioned below.

National legislation on environmental and social management

This is a partial list of applicable legislation. The content is further elaborated in the 2012 EIA.

- Settlement Law (Official Gazette on September 26, 2006, No. 26301).
- "Regulation for Environmental Impact Assessment" published in Official Gazette dated 3rd of October 2013 with a number of 28784 and
- "Notification of Certificate of Competency published in Official Gazette dated 18 Dec. 2009 with a number of 27436.
- Environmental Law no. 2872, relevant provisions of the following regulations will be obeyed.
  - Regulation for Control of Solid Wastes dated 14.03.1991, under no.20814 in Official Gazette and its revision dated 26.03.2010 under no. 27533.
  - Regulation for Control of Excavated Soil, Construction and Demolition Wastes, dated 18.03.2004 under no. 25406 in Official Gazette (OG) and its revision dated 26.03.2010 under no. 27533 in OG.
  - Regulation for Control of Waste Batteries and Accumulators dated 31.08.2004 under no. 25569 in OG and its revision dated 05.11.2013 under no. 28812 in OG.
  - Regulation for Control of Water Pollution dated 31.12.2004 under no. 25687 in OG and its revision dated 07.04.2012 under no. 28257 in OG.
  - Regulation for Control of Hazardous Wastes dated 14.03.2005 under no. 25755 in OG and its revision dated 05.11.2013 under no. 28812 in OG.
  - Regulation for Protection of Underground Water Sources Against Pollution and Degradation dated 07.04.2012 under no 28257 in OG.
  - Regulation for Control of Waste of Vegetable Oil dated 19.04.2005 under no 25791 in OG and its revision dated 05.11.2013 under no. 28812 in OG.
  - Regulation for Control of Soil Pollution and Polluted Areas from Point Sources dated 17.06.2011 under no. 27967 in OG and its revision dated 07.11.2013 under no. 28704 in OG
  - Regulation for Control of Air Pollution due to Industrial Sources dated 03.07.2009 under no. 27277 in OG and its revision dated 10.11.2012 under no. 28463 in OG.
  - Regulation for Control of Tires Completed Their Service Life dated 25.11.2006 under no. 26357 in OG and its revision dated 10.11.2013 under no. 28817 in OG.
  - Regulation for Control of Wastes of Packing Material dated 24.08.2011 under no. 28035 in OG.
  - Regulation for Evaluation and Management of Environmental Noise dated 04.06.2010 under no. 27601 in OG and its revision dated 27.04.2011 under no. 27917 in OG.
  - Regulation for Environmental Impact Assessment dated 03.10.2013 under no. 28784 in OG.

- Regulation for Control of Waste Oils dated 30.07.2008 under no. 26952 in OG. And its revision dated 05.11.2013 under no. 28812 in OG.
- Regulation for Environmental Audit dated 21.11.2008 under no. 27061 in OG and its revision dated 16.08.2011 under no. 28027 in OG.
- Regulation Concerning Permits and Licenses: compliance is required.

2.2. International and Regional Conventions Ratified in Turkey

- United Nations Convention to Combat Desertification.
- Convention on the Protection of the Black Sea Against Pollution (Bucharest Convention).
- United Nations Framework Convention on Climate Change (UNFCCC) and the Kyoto Protocol.
- Convention on International Trade in Endangered Species (CITES).
- Convention on Biological Diversity (CBD).
- Ramsar convention on the protection of wetlands
- The Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean (Barcelona Convention).
- Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal

Labour conventions

- ILO Convention 87 on Freedom of Association and Protection of the Right to Organize.
- ILO Convention 98 on the Right to Organize and Collective Bargaining.
- ILO Convention 29 on Forced Labor.
- ILO Convention 105 on the Abolition of Forced Labor.
- ILO Convention 138 on Minimum Age (of Employment).
- ILO Convention 182 on the Worst Forms of Child Labor.
- ILO Convention 100 on Equal Remuneration.
- ILO Convention 111 on Discrimination (Employment and Occupation).
- UN Convention on the Rights of the Child, Article 32.1.
- UN Convention on the Protection of the Rights of all Migrant Workers and Members of their Families

Cultural Heritage Conventions

- Convention concerning the protection of the world cultural and natural heritage and its Helsinki Plan of Action for Europe.

3. APPLYING INTERNATIONAL GOOD PRACTICES (IGP)

As seen above, EP, in programming the A2 project, has made the decision to subject this project to the most stringent requirements for the integration of the "do no harm" principle into the design and the future implementation of the project. Based on 30+ years of conducting environmental and social assessments in World Bank Group lending, the adherence to IFC's Performance Standards ensures that IGPs are integrated and provides relevant guidance for the preparation of this C-ESMP. Good International Industry Practices (GIIP) also guide EP's attitude towards A2 Project's overall performance.

3.1. IFC's Performance standards applicable to this C-ESMP

These standards represent the operationalization of IFC's sustainability policy. There are 8 Performance Standards, of which all but PS7 (Indigenous Peoples) apply to the Alpaslan 2 project. The Performance Standards and Guidance Notes are available at www.ifc.org/sustainability.

1. Environmental and Social Assessment and Management
2. Labor and working conditions
3. Resource efficiency and pollution prevention
4. Community health, safety, and security
5. Land acquisition and involuntary resettlement
6. Biodiversity conservation and sustainable management of living natural resources
8. Cultural heritage

While these C-ESMP specifications, in terms of process, implement the prescriptions of PS1, all other PSs (with the exception of PS7) apply in terms of substance, e.g. on maximum emissions, World Bank Group's EHS Guidelines needing to be used in complement to the PSs and their Guidance notes (GN).

Commonalities and Complementary Aspects of National Requirements and PSs Initiated by the A2 Project

The principles underlying the development of national environmental and social laws and regulations are the same as those underpinning the development and updating of IFC's PSs. The very general "polluter pays" principle applies. It is also required that potentially project affected people (PAP) are as fully informed as possible and have a "voice" in major investment decisions. Priority is given to preventive measures ("precautionary principle") which are expected to be more cost-effective than "after the fact" mitigating measures.

The national requirements and the expectations of financiers can show commonalities but also points of divergence that are important to identify, knowing that it is obviously the most demanding of these two approaches that should apply to the Alpaslan II Project. Operationally, this means that it is the highest requirements, policy by policy and regulatory text by regulatory text, that are applied.

4. RESPONSIBILITIES OF PROJECT'S KEY PLAYERS

4.1. Project Owner (EnergoPro) `

Project management is provided by EP at the operational level. Beyond its administrative, financial and business components, EP includes several units handling environmental, social, health and safety issues.

At the project level, the project owner is responsible for:

- The overall supervision and coordination of the entire project at the administrative, financial and technical levels.
- Ensuring adequate financial resources and suitably qualified ES personnel are allocated towards ES management and in the field.
- Implementation of the project in compliance with national and financiers' requirements.
- Administrative and financial management of the project.

- As part of the implementation of the social and environmental measures, the project owner is responsible for the coordination and the good execution of all the activities related to the ESMP, the RAP and the Stakeholders' Engagement Plan (SEP).

More specifically, the project owner is in charge of:

- the validation, the follow-up of the execution of the C-ESMP and works contracts.
- the development of the Terms of Reference (TOR) and additional environmental/social studies required, their implementation and the successful implementation of the resulting environmental and social measures.
- the monitoring and the good execution of the measures envisaged in the RAP of the components: (i) dam and hydroelectric plant, (ii) transmission line and (iii) the access roads.
- quality assurance and control of the implementation of the ESMP, RAP, C-ESMP.
- monitoring of contractor(s) to ensure compliance with the C-ESMP and applicable ESMS plans and procedures.
- development and maintenance of the EnergoPro ESMS, including plans and procedures and the internal E&S management capacity.
- training contractor(s) on the ESMS and applicable plans and procedures.
- the monitoring of the application of the environmental and social covenants of the contractor and his subcontractors.
- conflict management.
- periodic and scheduled inspections of contractual agreements.
- random inspections, especially in areas related to potential impacts on neighboring communities and/or the environment.
- periodic meetings and ad hoc meetings convened by EP, the engineer or the contractor, as needed.
- the monitoring and control of the work and in particular the measurement of environmental and social indicators and the development and information of the dashboard.
- conducting environmental and social inductions for all new personnel and providing regular refresher updates.
- conducting interim evaluations and taking into account the recommendations of these evaluations in the project procedures and process,
- disclosing to third parties, as needed and as relevant, information about the project and its potential negative environmental and social impacts and risks..

4.2. Contractors and their Subcontractors

Companies and their subcontractors will be responsible for:

- the contractor(s) is responsible for monitoring their subcontractors regarding ES matters.
- the execution of the works planned in their contracts and periodic reporting on the achievements.
- ensuring adequate human and financial resources have been allocated towards managing social and environmental risks and management measures outlined in this C-ESMP.
- prioritizing, where possible, local employment and local purchases.
- implementing measures to prevent and mitigate environmental and social impacts as per this C-ESMP and the applicable procedures and plans from the ESMS.
- respect and report on the environmental and social covenants contained in their works contracts.
- report non-compliances and ES incidents.

4.3. Turkish Government

As part of the implementation of mitigation measures, GoG agencies and departments are responsible for verifying compliance with the national legal and regulatory framework in their respective areas, as well as for verifying the compliance of actions undertaken with policies, programs and programs. and sectoral plans concerned in project's Area of Influence. In addition, some administrations (so-called operational) are also likely to act as contractors for government actions.

At the national level, the administrations concerned must integrate their interventions in their respective work programs, but, given the relatively localized and time-and-space-based nature of the interventions required of them, it is especially local / regional level that the Turkish administrations must intervene in a coordinated way.

Government's remit includes, as part of a mission to define follow-up measures, facilitation and support to be implemented under the C-ESMP:

- Monitor and facilitate the implementation of the interventions described in the 2012 EIA.
- Identify complementary projects to be implemented as part of the interventions of the State or decentralized local authorities.
- Examine and ensure coherence of planned interventions in the project area.
- If possible, support EnergoPro in the development and implementation of the CIP program.
- Support EnergoPro in the identification of relocation homes, cultural heritage solutions, resettlement, and consultation process.
- Manage the relocation of archeological sites.
- Conduct audits and studies related to the integrated development of the project area as required by regulation.

At national scale, the administrations in charge of environmental protection, social protection, security, public health, archaeology and agriculture will be the most exposed and they will need to coordinate their actions with the local governments concerned as well as with the project owner.

It is proposed here to regulate cooperation between Alpaslan II Project owner and the various administrations concerned through:

- Strengthening the roles and capacities of the Monitoring, Facilitation and Support Committee under the authority of the Regional Governor.
- Bilateral administrative, technical and financial protocols between EP and the main government agencies/offices

5. CONTRACTOR ENVIRONMENTAL AND SOCIAL REQUIREMENT

The requirements set out in this section are the responsibility of contractor(s), who, among other things, are responsible for meeting the obligations of the C-ESMP, the overall accountability remains with the Project Owner.

5.1. Preamble

The Contractor will be responsible for the construction, management, maintenance and rehabilitation of activities on all the sites dedicated to the construction of the Project, according to the good environmental and social practices of the industry, as detailed in this document.

In order to ensure this responsibility, the Contractor is requested to respect the organizational and technical obligations defined in this C-ESMP.

These obligations refer, on the one hand, to ISO 14001 (Environmental Management System) or to an equivalent International Standard recognized for all organizational aspects imposed and, on the other hand, to good construction practices that respect the environment commonly observed around the world and implemented by responsible companies.

The E & S obligations imposed on the Project are a matter for EP and other interested parties to include in the Project the principles of sustainable development and the precautionary principle, during its construction and operation phases, given the E & S sensitivity of the site.

5.2. Resources Allocated to C-ESMP Implementation

For the implementation of this C-ESMP, the two main Contractors Eylul Beton and Irmakcilar will mobilize HSE specialists (or HSE consulting companies with the required accreditation) as per Turkish regulation. These specialists will be responsible for:

- the monitoring of the activity sites under the responsibility of the Contractor or its subcontractors, in order to ensure the proper implementation of the obligations of the C-ESMP by the teams in charge of the construction.
- the prevention, detection and resolution of any non-compliance with the C-ESMP as soon as possible.
- the monitoring of the quality of the water or atmospheric discharges resulting from the activities of building site, the verification of the respect of the standards and the control of the compliances.
- Providing safe waste management of all types, including hazardous waste.
- coordination with the Project Owner for any aspect related to environmental and social management.
- reporting to the Project owner all non-compliances and incidents.
- providing weekly and monthly progress report to the Project Owner.
- organizing weekly meetings to report on ES issues.
- preparing the technical documents and reports defined in ESMS applicable plans and procedures.
- Training subcontractors on HSE issues and the ESMS.

5.3. Material facilities

The E & S team set up by the Contractor will have access to the resources required to achieve the objectives set by the C-ESMP:

- Base camp life.
- Vehicles.
- Office space with computer equipment: computers, scanners, printers.
- Field equipment: GPS, digital cameras, compass.
- Measurement equipment for in situ water analysis and spot measurement of air and noise.

5.4. Environmental and social training

A training program will be implemented regarding the following:

- HSE Inductions for visitors and new employees, including refresher courses supported by EnergoPro.
- General training (awareness) programs for all staff and specialized training programs for employees involved in particularly environmentally sensitive activities (hydrocarbon management and distribution, waste management). hazardous waste, landfill management, etc.).

- An introduction to the Contractor's environmental and social policy and the objectives of the C-ESMP.
- Waste management rules within the boundaries of the sites.
- The rules for the management of hazardous products and waste, especially their exclusively authorized storage in specially equipped areas.
- The behaviors required in the event of a pollutant spill.
- The protection of biodiversity (i) the absolute prohibition to hunt and introduce on site weapons and traps, (ii) the prohibition to fish and to introduce any fishing gear within the limits of the camps, ((iii) the prohibition of illegal hunting around camps, (iv) the prohibition of collecting timber in the forest or non-timber products, (v) the prohibition of making forest fires that are not organized as part of construction activities.
- Protection of sites against erosion and sedimentation.
- Air, water and soil pollution control.
- Procedure to be followed in case of discovery of a physical cultural resource.
- Traffic and road safety rules on public roads and on sites.
- Penalties applied for breaches of the stated rules.
- As part of the E & S awareness program, hygiene, health and safety complements will be made for all aspects not covered by the Hygiene and Safety plan and related Hygiene and Safety training, an HIV / AIDS awareness and prevention plan to be written and implemented by the Contractor.
- The specialized trainings will be carried out by the contractors' supervisors or site managers with employees in positions sensitive to the environment; these trainings will identify specific risks and preventative or emergency measures and procedures.

Furthermore,

- The sessions will be conducted in Turkish and/or Kurdish, as required.
- Each training session will be preceded by a capacity needs assessment, preferably on an indivi and followed by an ex-post evaluation of trainees' satisfaction and a qualitative assessment of the skills learned.
- The participants in each training session will be entered in a register that will be available at any time by EP.
- Each employee in charge of sensitive activities will follow an upgrade session every 6 months or more frequently.
- The training will be complemented by the production of posters and other information materials that will be displayed in the camps and work sites on panels dedicated to E & S aspects.
- The Environmental and Social Management Awareness Program on sites for all of the Contractor's employees will be provided by its Environmental Operations staff; this program will address the following aspects:

5.5. Managing Non-Conformities

NCs detected during inspections carried out by EP will be treated according to the seriousness of the situation. Nonconformities will be divided into 4 categories:

- Note to the Contractor, (NC) for minor nonconformities. This level entails only a verbal notification, with the signature of NC; the NO multiplication on a site or the Contractor's non-inclusion of the NO may raise the NO to the level of NC at level 1.
- Level 1 NC: For NCs that do not pose a serious and immediate risk to the environment and health; The NC is the subject of a report sent to the Contractor who has 5 days to resolve

the problem and send to the EnergoPro HSE department (or social department) the problem resolution report. After a visit and a favorable opinion, the EnergoPro representative signs NC's closing report. Any level 1 NC that is not corrected quickly will be elevated to level 2.

- Level 2 NC: Applicable to any NC that has caused damage to the environment or security or health or poses a high risk to the environment or health. The same procedure as for NC1 is applied, the Contractor having 48h to solve the problem and address his resolution report. Any level 2 NC that is not promptly corrected will be raised to level 3.
- Level 3 NC: Applicable to any NC of major gravity presenting risks or causing environmental or human damage. The hierarchical level of the Contractor and EP are informed immediately, and the Contractor has 24 hours to secure the situation.

Conditions of Payment, Penalties and Suspension of Construction Activities

In the event of flagrant non-compliance with environmental obligations of the C-ESMP or deliberate non-resolution of non-compliances detected and notified during the monthly period elapsed. Contractors are responsible from all commitments in scope of Environmental and Social Management Plans, EP may impose a fine od 10.000-40.000TL per non-conformity. This amount shall not exceed 10% of the amount of the main contract signed with contractor. Contractors agree and undertake to comply with all requirements.

For intermediate situations, EP reserves the right to make only a deduction on the settlement of the monthly invoice, which can be released as soon as the NC is resolved. In the event of non-resolution of the NC within the time limits, EP may convert the deduction into a penalty.

In the event of a serious Contractor's failure (NC level 3), EP will also have the possibility of suspending construction activities at the site concerned, without financial implication for EP until the necessary corrective measures are taken. correctly implemented.

5.6. Relationship between the parties

All environmental and social aspects related to the construction sites will be handled between the Contractor's Environment and Social Manager and the EnergoPro HSE Department and/or the Social Department in strict compliance with the requirements of the C-ESMP.

The Environmental Manager of the Contractor will be responsible for the fulfillment of the C-ESMP obligations by its subcontractors.

In addition to routine site inspections carried out regularly by EnergoPro HSE and Social Department, the Contractor and EP will organize a joint monthly visit of the sites at the end of each month.

5.7. List of the EnergoPro ESMS Applicable Plans and Procedures

EP has prepared an ESMS, which includes a number of plans and procedures, policies, which the contractor(s) and their subcontractors are required to comply with and implement. The plans and procedures are located in the EnergoPro data room and the link to access each document is provided below. The following are the plans and procedures prepared by EnergoPro, applicable to contractors:

i. Energo-Pro policies including the HSE, Environmental and Social Responsibility Policy.

a. https://direct.dentons.com/dentons/documentHome.action?metaData.siteID=21133&metaData.paginationNo=0&metaData.loadMoreNo=0&filterShared=0&metaData.moduleView=columnView&sortOrder=0&metaData.parentFolderID=608917

ii. **ESMS Master Document. Commented, waiting for your approval?**

iii. **Labor Management and Monitoring Plan.**

a. https://direct.dentons.com/dentons/documentHome.action?metaData.siteID=21133&metaData.paginationNo=0&metaData.loadMoreNo=0&filterShared=0&metaData.moduleView=columnView&sortOrder=0&metaData.parentFolderID=609010

iv. **Erosion and Sedimentation Control Plan.**

a. https://direct.dentons.com/dentons/documentHome.action?metaData.siteID=21133&metaData.paginationNo=0&metaData.loadMoreNo=0&filterShared=0&metaData.moduleView=columnView&sortOrder=0&metaData.parentFolderID=612775

v. **Water Quality Management and Monitoring Plan (including protection of surface and ground water management).**

a. https://direct.dentons.com/dentons/documentHome.action?metaData.siteID=21133&metaData.paginationNo=0&metaData.loadMoreNo=0&filterShared=0&metaData.moduleView=columnView&sortOrder=0&metaData.parentFolderID=612169

vi. **Quarry and Excavated Materials Management Plan.**

a. https://direct.dentons.com/dentons/documentHome.action?metaData.siteID=21133&metaData.paginationNo=0&metaData.loadMoreNo=0&filterShared=0&metaData.moduleView=columnView&sortOrder=0&metaData.parentFolderID=621601

vii. **Hazardous Material Management Plan.**

a. https://direct.dentons.com/dentons/documentHome.action?metaData.siteID=21133&metaData.paginationNo=0&metaData.loadMoreNo=0&filterShared=0&metaData.moduleView=columnView&sortOrder=0&metaData.parentFolderID=612732

viii. **Air Quality, Dust and Noise Management Plan.**

a. https://direct.dentons.com/dentons/documentHome.action?metaData.siteID=21133&metaData.paginationNo=0&metaData.loadMoreNo=0&filterShared=0&metaData.moduleView=columnView&sortOrder=0&metaData.parentFolderID=609005

ix. **Cultural Heritage and Archaeological Management Plan**

a. https://direct.dentons.com/dentons/documentHome.action?metaData.siteID=21133&metaData.paginationNo=0&metaData.loadMoreNo=0&filterShared=0&metaData.moduleView=columnView&sortOrder=0&metaData.parentFolderID=609599

x. **Reinstatement and Landscaping Management Plan**

a. https://direct.dentons.com/dentons/documentHome.action?metaData.siteID=21133&metaData.paginationNo=0&metaData.loadMoreNo=0&filterShared=0&metaData.moduleView=columnView&sortOrder=0&metaData.parentFolderID=612162

xi. Reservoir Preparation and Clearing Plan

a. https://direct.dentons.com/dentons/documentHome.action?metaData.siteID=21133&metaData.paginationNo=0&metaData.loadMoreNo=0&filterShared=0&metaData.moduleView=columnView&sortOrder=0&metaData.parentFolderID=612738

xii. Waste Management Plan

a. https://direct.dentons.com/dentons/documentHome.action?metaData.siteID=21133&metaData.paginationNo=0&metaData.loadMoreNo=0&filterShared=0&metaData.moduleView=columnView&sortOrder=0&metaData.parentFolderID=609007

xiii. Traffic Management Plan

a. https://direct.dentons.com/dentons/documentHome.action?metaData.siteID=21133&metaData.paginationNo=0&metaData.loadMoreNo=0&filterShared=0&metaData.moduleView=columnView&sortOrder=0&metaData.parentFolderID=621600

xiv. Occupational Health and safety Management Plan

a. https://direct.dentons.com/dentons/documentHome.action?metaData.siteID=21133&metaData.paginationNo=0&metaData.loadMoreNo=0&filterShared=0&metaData.moduleView=columnView&sortOrder=0&metaData.parentFolderID=609042

xv. Reservoir Filling Plan
https://direct.dentons.com/dentons/documentHome.action?metaData.siteID=21133&metaData.parentFolderID=573636&metaData.moduleView=columnView&metaData.paginationNo=0&metaData.loadMoreNo=0&sortOrder=0&filterShared=0 **Reservoir Filling Plan = Impounding Plan.**

xvi. Dam Safety Plan- Before Impounding

xvii. Community Health and safety Management Plan

xviii. https://direct.dentons.com/dentons/documentHome.action?metaData.siteID=21133&metaData.paginationNo=0&metaData.loadMoreNo=0&filterShared=0&metaData.moduleView=columnView&sortOrder=0&metaData.parentFolderID=609041

xix.

5.8. Energo-Pro policies

Energo-Pro has developed a number of policies that establish firm and strategic commitment towards Environmental and Social performance. All contractor(s) and subcontractor(s) are required to abide by the commitments described in each of the company policies.

5.9. ESMS master Document

Energo-Pro has established an Environmental and Social Management System (ESMS) management in compliance with ISO 14,0001. The ESMS Master Document describes the system and provides details of structures and procedures that Energo-Pro has put in place to implement and maintain that system.

Responsible management of Environmental and Social issues is integral to an efficient and successful operation. The ESMS follows a continuous improvement cycle to plan, do, check and act/review, including leadership and support. The ESMS Master Document has been developed to establish a clear communication line and provide a context to manage ES related issues as well as the review and approval process for the Management System.

5.10. Labor conditions management plan

Objectives: to provide employees and, if such is the case, their unions and representatives, international standards of expression and guarantee of fundamental rights.

Principles: - Employees' full and free access to information concerning them

- Workers' right to organize and get represented in a free manner
- Nondiscrimination
- Assistance to severance

The employers for the A2 project, in their dealings with their employees, from owner to sub-contractors including contractor and engineer have established their commitment in human resource and working conditions that apply the Turkish laws and regulations as well as the guidance of IFC's PS2.

The plan will be published after validation by Turkish authorities and project financiers and will follow the format recommended in application of IFC PS1.

5.11. Community health and safety management plan (CHSMP)

The implementation of the plan will be a shared responsibility of the Project Owner and the Contractor. Recommendations of the plan will also apply to project's sub-contractors.

Objectives: make certain that no project activity results in a net harm to anyone in the local community. Intervene swiftly and effectively in case of accidents, incidents, including willful harm to a community member.

Principles: provide all concerned and, in particular, but not limited to, security staff or government employees working in the Project, the knowledge, rules and procedures to avoid harm and/or to report on any incident/accident affecting local dwellers in the AoI of the project; provide assistance on diseases that may be linked to the project and, in particular, with stagnant water. All other form and shape of improving, for one and all, public health services in the AoI in order to apply the "do no harm" principle. Work to be conducted in conjunction with the relevant Turkish Authorities.

5.12. Erosion and sediment control plan

Objectives: To limit the excessive release of sediments into surface waters

Principles: Limit sediment production by controlling erosion and collecting sediments transported before discharge of water into the environment.

The Erosion and Sediment Control Plan provides the requirements to manage erosion, including:

- Where possible, site delineation will be optimized to maximize the use of existing areas without forest cover and minimize clearing of forested and other valuable natural areas and exclude trees from clearing when their diameter exceeds one meter.
- Areas susceptible to erosion. Are considered sensitive:
  - areas with a slope greater than 20%,
  - areas within a limit of less than 30 m from a natural flow,
  - areas in soft terrain considered easily erodible due to geological features,
  - the areas to be cleared,
  - preserved woodlands,
  - the proposed storm drainage network including diversion structures to natural flows, diversion structures to sediment traps,
  - proposed sediment traps including in particular sedimentation ponds or sediment traps,
  - zones equipped with anti-erosion measures and the type of measures recommended (barriers to sediments, benches, etc.). A detailed note will justify the measures taken in terms of type of measurement, sizing, materials used,
  - discard points outside the site; in isolated sites, small discharges will be directed to the surrounding forest area as much as possible to limit the discharge of drainage water directly into watercourses,
  - measuring points for the control of sediment load and other water quality parameters (Ref Section on Water Quality).
- For any disturbed site with an area greater than or equal to 2 ha, drainage systems will discharge water into sedimentation ponds before reaching watercourses; in no case will these basins be located in temporary flow beds or lowland.
- The sedimentation basins proposed will be dimensioned on the basis of a calculation showing the effectiveness of the system as a function of the drained inputs, the sediment load, the type of sediment transported; in general, a retention time of 24h to 40h allows a reduction of the solid charge of 70 to 80%.
- Observations in climatically similar regions show that, for a depth of about 1.5 m, the required area of a sedimentation basin is of the order of 1% of the drained area.
- In order to allow good sedimentation, the length/depth ratio must be less than 200 and the length/width ratio must be greater than 6.
- The basins will be created in areas that will remain accessible to the machines in order to allow their regular maintenance (cleaning of the sediments); deposition pits will be kept close to the basin to allow the sediment to be drained before being evacuated to a permanent deposit zone.
- The basins should be cured as soon as their active volume (volume of water) is occupied by 50% by sediments (followed by the height of the water section).
- In cases where the sizing of a pond results in too important an area, either because of the size of the drained area or because of the granulometry of the sediments, the Contractor will use alternative solutions such as the use of flocculant to accelerate the process by reducing the size of the infrastructure; a calculation note will highlight the relevance of the proposed dosages and injection methods in the system.
- During the dry season, when the river waters have a very low turbidity, all the highly turbid discharges, such as underground or excavation drainage, will be treated with flocculant.
- Performance of sedimentation systems: the applicable performance criterion is an 80% reduction of the sediment load between input and output measured in dry weight.

- In none of the cases should the discharge of rainwater coming from a site into a river lead to an increase of the solid load in this river, with the load being measured 50 m downstream of the discharge point being more than 50% of the load of the river observed 50 m upstream of the discharge.
- Prior to site development, stripping of the organic surface soil (topsoil) will be an obligation, and its storage for re-use during the rehabilitation of the site.
- On disturbed slopes sensitive to erosion in the aquifer, anti-sediment barriers will be installed according to the rules of the art.
- Installation following the contour lines.
- At no point in the barrier should the concentration of water be more than 0.4 ha drained, 30 m barrier or a flow of more than 0.01 m3 / s.
- The ends of the barriers go upstream of the slope. Provide an area behind the 100 m² / 0.4 ha barrier drained to allow for water accumulation and sediment deposition.
- Posts shall not be more than 2 m apart and at least 75 cm deep into the ground.
- Along the barrier line, upstream of the poles, a trench 20 cm wide and 30 cm deep will be excavated to bury the lower part of the geotextile used for the barrier; this one will follow the sides of the trench, which represents a width of 80 cm of buried geotextile.
- In case of strong accumulation of sediments, the barrier will be reinforced in its lower part by a grid also partially buried in the trench.
- The barrier is to be inspected weekly and the sediment removed as soon as it reaches 1/3 the height of the barrier.
- For small areas (<2 ha), sediment traps (simplified sedimentation ponds and smaller ones) may be developed. However, the applicable performance criteria are identical to those of the sedimentation ponds.
- All water from concrete plants will be equipped with sedimentation ponds. The waters of these basins will also be buffered with acid in order to rebalance the pH to a value close to neutral (pH 6 to 8).
- Sedimentation ponds will be regularly monitored by the Contractor to ensure the efficiency of the systems. It will be based on water samples entering and leaving the basin for solid load control.
- Work in the river will be imperatively carried out protected by protective structures designed to limit sediment discharge into the stream: prior protection by sheet piling or rockfill covered with geotextile, temporary diversion cofferdam.
- All pumping water from river works will be pumped back into a sedimentation system before returning to the river.

5.13. Water quality management and monitoring

Objectives: To limit the pollution of water from the activity sites and compliance with the regulations in force.

Principles: Regularly monitor the effectiveness of the antipollution measures implemented on the sites

The specifications of the Plan are as follows:

- The monitoring program is applicable to natural surface waters, groundwater and all discharges from Project-related activity sites.
- The plan includes protection of surface and ground water Management.
- Regular monitoring of water quality of:

  - Treated effluents from sewage treatment plants (lagoons, septic tanks), sedimentation basins of concrete plants.
  - Stormwater sedimentation basins in sites considered particularly sensitive.
  - Drainage water from workshop sites, storage of hazardous products and canteen areas.
  - Rivers receiving site releases, with upstream and downstream control of the discharge point.
  - Work sites in rivers, with solid load control upstream-downstream works.
  - Storage and distribution points for drinking water.
- The monitoring will involve at least the following water quality indicators:
  - Organic pollution: BOD5, Nitrates, Phosphates, particularly related to living areas and sanitation systems.
  - Oils and grease, relating to the drainage of mechanical activities, the storage of dangerous products (hydrocarbons) and wastewater from canteens.
  - Suspended matters, relative to drainage water and performance criterion of anti-erosion and sedimentation ponds.
  - Bacterial pollution: Faecal and total coliforms, relating to the quality of the distributed drinking water.
  - Residual chlorine measured at the points of distribution of the drinking water system.
  - Pollution of the water table relative to the landfill site: BOD5, Nitrogen ammonia, Nitrates, Chlorides, Zinc, Chromium, Lead, Mercury,
- All samples will also be measured in situ using a probe including: Temperature, pH, Dissolved Oxygen.
- To carry out these follow-ups during the duration of the works, the Contractor will install an on-site chemical analysis laboratory capable of performing the analysis of these basic parameters.
- The frequency of measurements will vary from once a week to once a month depending on the type of installation.
- The Contractor will submit to the EP on a weekly or semi-monthly basis the results of the water quality monitoring.
- Management of surface and ground water as per the 2014 ESMP.

5.14. Quarry and Excavated Materials Management Plan

Objectives: To limit the impacts related to noise and dust and minimize public safety risks.

Principles: Definition of an operating plan reducing the footprint of the activities, the transport distance of the materials and optimizing the good environmental practices applicable to the operational conditions on site. Specifically, the plan requires:

- If geology guides the location of quarries, the operating procedures allow to modify their extent. The Contractor will limit as much as possible the extension of the site by optimizing its exploitation,
- The measures implemented for erosion and sedimentation control, the specifications of which have been presented previously, are applicable to quarry sites. In particular, all rainwater drainage and washwater materials will have to pass through a sedimentation basin. In the dry season, the use of flocculant or other equivalent techniques for the washings of the materials may be necessary to meet the criteria for sediment discharges into the river.
- As for other types of site, the topsoil will be stripped and preserved for the final rehabilitation of the site.

- The limits of a rockfill quarry where the use of explosives is planned cannot be located within 300 m of dwellings within the Site, in order to have a sufficient security perimeter. All dwellings located within a minimum radius of 800 m around the quarry will be the object, before the start of the operational activities, of a photographic identification of their general state to avoid any undue dispute after the beginning of the firing of mine. The blasting will be carried out in accordance with the safety rules defined in the Quarry and Excavated Materials Management Plan, and will in particular be (i) preceded by siren signals so as to warn the neighboring population, who will have received training and awareness building messages and sessions and (ii) preceded by the temporary closure of road accesses crossing the security perimeter. In case of identified problems related to the intensity of the firing, EP will be entitled to ask the Contractor to make seismographic measurements of the intensity of the vibrations generated by the blasts, at a variable distance from the firing points, under the control of the Engineer. The cost of any measures will be borne by the Contractor.
- The use of explosives will be limited to the 6 am-6 pm time slot at all sites within 1 km of dwellings or near labor camps; Unless otherwise specified by EP, no hourly restriction is imposed on isolated sites.
- The on-site explosives storage conditions will comply with the provisions of Turkish regulation regarding storage of explosives.
- Road traffic specifications will be strictly enforced for all trucks carrying materials.
- Due to the importance of the noise generated by the quarry activities, the Contractor will require personal safety equipment to be worn by the employees of the site.
- The Plan will present the measures applicable by the Contractor to fight against dust. In particular, systems for irrigating materials at the crusher and transport belts are desirable.
- Truck wheel washing systems at the exit of the main extraction sites will be set up by the contractor.

5.15. Emergency Management and Response Plan

Objectives: To manage emergencies and minimize risks for people and the environment.

The Emergency management and response plan considers the following:

- Common Hazards and Emergency Situations during construction, including:
  - Identification of potential emergencies based on hazard assessment.
  - Processes to respond to the identified emergency situations.
  - Processes to shut down equipment.
  - Processes to contain and limit pollution (e.g. hazardous spills).
  - Processes for decontamination.
- Rescue and evacuation, including a designated meeting place.
- Location of alarms and schedule of maintenance.
- List and location of equipment and facilities for employees responsible for responding to the emergency (fire-fighting equipment, spill response equipment, personal protection equipment for the emergency response teams, first aid kits and stations).
- Clear identification of evacuation routes and meeting points.
- Emergency drills.
- Emergency contacts and communication protocols, including with affected communities when necessary, and procedures for interaction with the government authorities.
- Community information regarding the plan and risks.
- Early warning systems and information to the communities regarding steps to be conducted if there would be an emergency.

5.16. Hazardous Materials Management Plan (HMMP)

Objectives: To reduce the risks of chronic or accidental pollution of water or soils by hazardous products or wastes stored on the sites of activity.

Principles: Implementation of rigorous procedures in the use of hazardous chemicals.

The specifications of the Hazardous Materials Management plan are:

- The HMMP will cover all the chemicals used on the construction and operations site (mainly hydrocarbons, concrete additives and paints) as well as the main liquid hazardous waste mainly represented by used hydraulic oils and fluids
- In the selection of products, the Contractor will exclude:
  - Products containing asbestos in friable form.
  - PCBs (Polychlorinated Biphenyls).
  - Lead paints.
  - Lead lubricants.
  - Antioxidants with chromium.
  - Products containing heavy metals including mercury (with the exception of nickel-cadmium batteries for computers and scientific materials).
- All hazardous products entering the site will be recorded on an updated tracking record at each receipt or use.
- The technical sheet of all hazardous products entering the Site must be produced to determine the conditions of use and treatment once rejected.
- Used oils and other hydraulic fluids will similarly be registered at the site where these products will be received in a dedicated storage area; the register will be available for consultation with the person responsible for the storage site.
- The storage of any product or hazardous waste will only be authorized in areas dedicated to the following characteristics:
  - Concrete platform on the ground surrounded on its 4 sides by a waterproof wall whose height will depend on the required retention volume: this volume is defined at least equivalent to 110% of the volume of the largest reservoir on the site (minus the volume corresponding to the right-of-way of all reservoirs stored on the site in the retention zone).
  - The entire platform is covered with roof overhang of at least 50 cm.
  - To allow the evacuation of rainwater, presence of a valve at the lowest point of the site leading to a de-oiler before transfer to the local drainage network,
- The treatment products that will be used on the sites, for example for the control of disease vectors, will have to be acceptable by EP, by the Ministries in charge of Agriculture and Rural Development and Health of Turkey. The selected products should have low or no toxicity to aquatic life, limited persistence in soil, rapid biodegradation and pose a low risk to the user; as far as possible, they will be replaced by preventive solutions such as the use of impregnated mosquito nets.
- The Contractor will be allowed to develop on the different sites to store dangerous products storages of variable size adapted to the needs, but all will have to respect the principles stated above.
- At the level of each hazardous material storage area, the procedures for product labeling, handling safety instructions, user risks and emergency procedures in the event of an accident will be respected (Safety Data Sheets).
- The filling of the tanks of the vehicles and the machines will be practiced by a dedicated mobile equipment or will be carried out on waterproof concrete slab in order to limit the risks of spill and pollution.

- Training programs for relevant staff will be conducted under supervision and assistance by EP.
- An emergency response process in the event of an accident related to hazardous products is included in the HMMP.

5.17. Air Quality and Noise Management Plan

Objectives: Limiting air and noise pollution from the sites of activities and compliance with the regulations and standards by providing a monitoring program for noise and air quality.

Principles: Regularly monitor the effectiveness of the antipollution measures implemented on the sites, particularly the dust and noise control measures along the access to the site.

The plan includes the following specifications:

- Description of the parameters to be monitored and allowed thresholds.
- Management and monitoring measures to maintain engines to minimize exhaust emissions to the atmosphere.
- Minimizing dust emissions by lightly watering immediate surroundings of relevant sites.
- Covering all transportation vehicles carrying materials.
- Wetting the excavated and filling material to prevent dust generation, keeping material at storage sites moistened and compacted.
- Limiting travel speed within construction sites.
- Maintaining and cleaning all vehicles.
- Analyzing the exhaust systems and emission values of all vehicles and ensure that all vehicles use clean and legal fuel.
- Using modern and efficient equipment to minimize air emissions.
- Establishing ventilation systems for underground works.
- Providing respirators to workers who are directly exposed to particulates.
- Clearing vegetation (trees) from the reservoir area before impoundment to avoid GHG emissions in liaison with communities and the authorities.
- Using equipment that comply with the provisions of the relevant Turkish noise regulations.
- Using silencers, protectors, ear plugs and other noise reducing tools and personal protection equipment for workers.
- Carrying out construction works only during the daytime hours between 7 am and 7 pm.
- Conducting blasting during the daytime after notifying nearby residential areas and safely as indicated in requirements for community health and safety.
- Training the workers on methods to reduce noise emissions.
- Routing vehicles to minimize noise from traffic

5.18. Cultural and Archaeological Management Plan

Objectives: To allow for the recovery, characterization, transportation, storage and protection of cultural heritage buildings, monuments, ruins, artefacts, discovered during the work.

Principles: Implementation of a procedure allowing rapid feedback of information in case of chance finds and securing C-CHMP while limiting the impact on the progress of work to the maximum.

The requirements of the plan are:

- Before undertaking work on a given site, EP will confirm to the Contractor (i) the presence of CH identified during the impact studies and their location for preservation purposes, or (ii) the absence of information on the possible presence of CH on the site.

- Description of actions taken by the Contractor for all sites notified by EP as containing potential or actual CH.
- Internal notification process of any discovery made by employees, allowing immediate feedback to the hierarchy.
- The obligation of immediate stop of activities to the right of the site of discovery waiting for the order of recovery which will be given by EP.
- The establishment of a protection perimeter and the corresponding materialization and monitoring measures.
- The communication process between the Contractor and EP.
- The Contractor will consult, through EP, the competent national authorities for the provisions to be implemented of a chance find.
- Training and awareness program of the plan.

5.19. Reinstatement and Landscaping Management Plan

Objectives: To document the Project's approach for rehabilitation and revegetation operations.

Principles: Commit from the beginning of the project a reflection on the methods of revegetation and the usable species which are the most appropriate according to the anticipated local constraints on the sites by distinguishing according to EP's indications on the sites concerned by the natural revegetation of those to be revegetated using plants and trees.

The specifications of the plan are:

- To start rehabilitation and revegetation as soon as possible and not limited to the rehabilitation of sites in the demobilization phase.
- Natural revegetation will seek to restore the original natural habitat taking into account the natural mechanisms of succession and regeneration.
- Identification of areas to be revegetated during construction and at the end of construction, with estimated distribution for each main site of the site.
- Distribution of areas according to the objective of revegetation: grass or forest.
- Establishment of a list of species usable on site taking into consideration (i) the prohibition to use species not already represented in Turkey or considered invasive, (ii) the priority to be given to species observed locally and considered as good adapted to certain types of land (iii) seed acquisition and establishment of nurseries, (iv) growth and resistance characteristics of species, (v) constraints related to their multiplication in nurseries, (vi) requirements regarding seeding (manual, hydraulic, etc.), (vii) stakeholder engagement.
- Identification of needs in shrubs and herbaceous plants according to the program of anticipated revegetation, definition of the needs in nurseries to be put in place.
- Typology of plantation practices to be selected according to the types of land.
- Maintenance measures after revegetation: watering, plant protection, other.
- The Contractor will consult, through EP, the competent national authorities for the provisions to be implemented.
- The Contractor will include information on this procedure in its E & S training and awareness program that will be put in place for all its personnel (see section on Staff Training).

5.20. Reservoir Preparation and Clearing Management Plan

Objectives: to address E&S risks associated with the Alpaslan 2 reservoir impoundment.

Principles: Implementation of a procedure imposing a thoughtful action plan before the first filling of the reservoir.

The procedure considers the following aspects (limited to the role and responsibility of the Contractor):

- The chain of communication of information.
- The closure of the upstream cofferdam, which could lead to the flooding of part of the reservoir as early as the rainy season.
- Demobilization measures for sites near the river that will be submerged during the first impoundment; the demolition of structures, the removal of waste and contaminated soil, the stabilization of potential septic tanks are all measures that must be planned according to the definitive closure of the temporary diversion/

Key specifications include:

- Forest inventory and permitting.
- Logging and wood harvesting.
- Clearing approach.
- Schedule.
- Disposal and utilization of cleared material.
- Infrastructure demolition and pollution prevention.
- Collection of household hazardous materials.
- Demolition of Infrastructure.
- Monitoring and reporting considerations

5.21. Waste Management Plan

Objectives: Prevent chemical, physical and aesthetic pollution of the natural environment through the production of solid waste, leachates and effluents.

Principles: Implementation of the principles of good waste management (limitation of production, reuse or recycling, storage under conditions that meet international practices) and effluents (appropriate treatment before disposal).

The general provisions include:

- A categorization of the waste must be put in place in the Site (Dangerous, non-dangerous, domestic, liquid solid).
- Non-hazardous domestic waste will be collected regularly and deposited in authorized locations.
- Non-hazardous construction waste will be recycled or transported to an authorized location.
- The waste classified as hazardous will be stored in a dedicated site before being disposed of and / or stored in a final storage facility.
- A storage center for recyclable products (iron, wood, plastics, glass) will be installed within the limits of the landfill site, allowing products to be segregated before they are evacuated.
- The waste will be removed regularly, at least twice a week; if necessary, temporary shelters will be set up in the camps to store garbage bags awaiting removal.
- The Contractor will identify the existing sectors in Turkey for the recycling of products that can be recycled.
- Hazardous waste (used oil, oil filters, paint cans, solvents, vehicle batteries, anti-pollution kits, clinical waste and first aid stations, etc.) will be separated from other wastes and stored on areas identical to those used for hazardous products (see section Management of Hazardous Products).
- The Contractor in collaboration with EP will identify the treatment solutions for used motor oils, hydraulic fluids and coolants and associated filters, which constitute the bulk of the

hazardous waste volume expected on a project of this type; transport to a refinery is the preferred solution, but if this is not possible, the Contractor will identify other alternatives: alternative fuel in cement plants, distillation treatment, etc.

- The Contractor will maintain a register where all the movements of hazardous waste will be indicated, in order to ensure the traceability of the waste.
- In the event of removal for treatment by an external subcontracting company, the Contractor shall provide EP with any information proving that the final treatment of the waste is carried out in accordance with good practices; the EP reserves the right to visit the facilities of the subcontracting company and to refuse the use to the Contractor if the conditions of treatment are not considered acceptable.
- All other dangerous products (batteries, fluorescent tubes, economic light bulbs, empty paint cans, etc.) will be collected and stored on a dedicated storage area meeting the criteria set out in section on the Management of Hazardous Products; in the absence of any external solution for the treatment of this waste, the Contractor shall propose to EP a long-term storage solution on site, providing all guarantees of containment and control of the risk of pollution to the environment.
- The clinic and health centers will use appropriate container of a particular color for their waste to ensure traceability and avoid mixing with other wastes; the medical waste will be collected separately and incinerated in a system guaranteeing a focus at more than 700 ° C.
- The Contractor will set up a training system for its employees to ensure that the basic rules of waste management are known and understood by all; personnel directly involved in the management of the landfill and hazardous waste storage sites will receive specific technical training (see section on Environmental and Social Training).
- Household waste will be collected in bins placed in sufficient numbers in camps and construction sites and which will allow the segregation of waste at the source; they will be cleaned regularly.
- Wastewater is managed by EnergoPro. Wastewater is treated to comply with the local legislation. The wastewater treatment (sewage plant) is located near the main EnergoPro camp. Sludge is treated on site through the wastewater treatment plant. Regular monitoring of the discharged water is undertaken by EnergoPro.

5.22. Traffic Management Plan

Objectives: To maintain optimum safety conditions on roads and sites.

Principles: Quality of traffic lanes, signage, behavior prevention, access control.

The specification includes:

- Establishment of a forecast of traffic according to the progress of the project: fleet vehicles anticipated on sites, on public roads.
- Presentation of proposed signs and dedicated parking areas.
- Presentation of the maximum authorized speeds according to the sections of track, the points of installation of retarders, and the fixed checkpoints on the accesses.
- Site access plan and applied control conditions (security checks, badge port, etc.).
- Presentation of the preventive measures implemented by the Contractor: vehicle maintenance program, monitoring of compliance with the speeds, and presentation of the measures taken by the Contractor in case of non-compliance by his staff with these measures (penalties and other).
- Proposed accompanying measures for the passage of large exceptional convoys or the transport of dangerous products (hydrocarbons, explosives),

5.23. Occupational Health and safety Management Plan

Objectives: to detail the measures taken by the Contractor and EP to manage the hygiene conditions and medical care in each of the project sites. The plan is aligned with Good International Industry Practices and IFC PS2. This plan includes: (i) Health and safety policy and commitment from management, (ii) Description of organization; human resources, definition of roles and responsibilities, (iii) workers accommodation, hygiene facilities and food supply, (iv) Description of material resources including Personal Protective Equipment (PPE) to be used by workers, (v) Health and safety procedures, (vi) Risk assessment , (vii) Pollution prevention and protection, (viii) Health and safety training, (ix) Monitoring of health and safety performance, and (x) Medical checks.

Specific requirements include:

- Health and safety training.
- Hazard identification and risk assessments.
- Specific measures to handling heaving equipment and machinery, including safety of machinery and equipment.
- Machinery maintenance and machinery safety.
- PPE requirements.
- Periodic health examinations.
- Special licenses for operators.
- Electrical safety and lighting.
- Traffic.
- Excavation works and scaffolding.
- Tunnel excavations.
- Lifting operations.
- Working in confined spaces.
- Working in and near water and flood prevention.
- Site welfare facilities.
- Firefighting measures and prevention.
- Occupational accidents.
- Site clinic and medical support

5.24. Reservoir Filling Plan

Objectives: To ensure the safety of people and animals and protection against water pollution.

Principles: Implementation of a procedure imposing a thoughtful action plan before the first filling of the reservoir.

The reservoir filling plan will be prepared prior to impoundment.

The following requirements are included in the Reservoir Filling Plan:

- The chain of communication of information.
- The closure of the upstream cofferdam, which could lead to the flooding of part of the reservoir as early as the rainy season.
- Demobilization measures for sites near the river that will be submerged during the first impoundment; the demolition of structures, the removal of waste and contaminated soil, the stabilization of potential septic tanks are all measures that must be planned according to the definitive closure of the temporary diversion,

5.25. Dam Safety Plan

The development and implementation of the dam safety plan is the sole responsibility of EnergoPro. The plan will be prepared prior to impoundment.

6. MONITORING INDICATORS

The table below presents the indicators that will be used to monitor social and environmental performance. They have been divided as follows:

- status indicators (descriptive parameter of the state of the environment).
- pressure indicators (assessment of project impacts on the environment).
- response indicators (measurement of the progress or effectiveness of the measures provided for in the C-ESMP).

For each indicator, the unit of measurement, the measuring frequency and the measurement time are specified. Additional information regarding indicators is provided in the ESMS Master Document.

Action	Indicator
Human Resource and Working Conditions	Workers' organizations authorized/registered GRM complaints GRM outcome (quantitative, qualitative) Number of lay-offs and assistance to severance recorded
Community Health and Safety (CHS)	GRM complaints related to health and safety Number of health centers Staffing of health centers Water-borne disease prevalence Water-borne diseases cured Number of CHS awareness building sessions held (i) with community members and (ii) with Project workers Number of participants Effectiveness of awareness building campaigns (qualitative, sample survey, focus group)
On site recruitment plans	Employment share of local workers in unskilled labour force (target of 80%) Number of recorded cases of illegal hunting or violation of the regulations in force
Control of access to construction sites	Gate activated with guards' present System's evaluation report
Management of building sites and transport	Rules of procedure Dismantling plan Agreement between the company and Turkish Government signed and implemented Operational and approved site construction plan

Road safety measures relating to the movement of personnel and the transport of goods generated by the site	Number of road accidents reported due to construction site activities Action Plan in the event of an accident operational and approved Awareness action carried out
Health plan on construction sites	Percentage of hired workers with a health check Epidemiology: prevalence of water-related digestive infections (intestinal parasites such as amoebiasis, giardiasis, infectious diarrhoea and hepatitis A), respiratory infections and ENT (bronchitis, nasopharyngitis), new evidence of contamination, risk behaviour towards STDs / AIDS Operational health control procedure and approved Nutritional status of populations Level of awareness of residents on the site Attendance of the health center Number of new cases of diagnosed illness
Safety plan on construction sites	Number of work accidents recorded during construction site work Operational security plan and approved SPS coordinator appointed and active Emergency and evacuation arrangements put in place Occupational risk prevention provisions put in place
Pollution risk management of rivers, soils and groundwater	Water quality measurements Mark-up realized A specifically protected area has been developed for toxic products storage
Identification and protection of water points that might be polluted during works (dam, roads, bridges, ...)	Number of water points near the works Number of water points subject to protective measures Bacteriological quality of the water points near the works
Waste management during the construction phase	Operational Waste Management Plan Approved Percentage of waste treated / waste produced by type of waste
Implementation on the projects of actions contributing to the protection of the wild fauna	Number of violations of hunting ban Water protection and pollution prevention measures put in place
Prohibition of opening new roads near protected areas	Linear runways and open roads within the protection perimeter Perimeter defined and approved
Awareness and training of workers	Number of organized training sessions Number of personnel members participating in the training sessions

Setting up an ad hoc cell for the recognition of archaeological sites and artefacts; companion training sessions	Number of organized training sessions Number of people trained in the recognition of archaeological sites and artefacts Number of dedicated operational people in the field
Definition and implementation of a site treatment procedure	Number of sites identified Number of sites treated
Dam safety	Note of satisfaction of the regular specialized inspections Early warning system in place and operational

6.1. Dissemination of monitoring results

The monitoring of the C-ESMP will be based on:

- Initial data listed in the environmental documentation of the different components of the project or in additional studies or ad hoc surveys.
- Indicators presented in the table above.
- Expected outcome by component.

The analysis, synthesis and dissemination monitoring outcome will be done by EP through:

- Internal intermediate notes.
- Internal quarterly reports.
- Annual dedicated reports, summaries of which will be made public.

The main results of the monitoring will be regularly presented by EP to all project partners as well as local populations. This presentation will be an opportunity to establish a regular link with all the stakeholders involved in the project to exchange, identify the successes and failures of the project, blocking points, sources of conflict, etc.

6.2. Expected contribution of companies for monitoring

In a general manner and under the conditions foreseen in the framework of the C-ESMP, the companies will put at EP disposal:

- An annual program of provisional activity specifying: the nature of the activities, the target populations, the schedule of implementation, the expected results, the indicators of follow-up, the anticipated risks.
- A quarterly report of internal and external environmental and social activities.
- Monthly reports regarding waste management and results of environmental monitoring (also to be provided to the Government, as required).
- An annual summary report of the environmental and social activities implemented, specifying: their nature, the target populations, their quantified results, the weaknesses and the successes noted, the proposals for improvements with a view to drawing up the next program of annual activities.
- Upon request, the internal quantitative results related to environmental and social monitoring activities (indicators dashboard), reports, etc.