



NW PELOPONNESE LEASE AREA ENVIRONMENTAL REPORT 2019

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HSE Policies & System, Environmental Studies and Implementation

1. Introduction

The following are representing the implementation of HELPE's policies and systems related to the **NW Peloponnese** Lease Area.

Hellenic Petroleum has operated during the past in this area as an operator and has gained a deep understanding and knowledge of the context, regulations, local communities' relations and management that could guarantee a smoother development process in the lease area with no impact to the environment and local communities. On March 16th 2018, the Greek State awarded a Lease Agreement for Hydrocarbon Exploration and Production in the onshore area of NW Peloponnese in Western Greece.

Hellenic Petroleum, acting as the sole Operator, is fulfilling its commitments and has planned the exploration work program by implementing the most up-to-date, safe and environmentally friendly technological methods and practices. According to the Provisions of Article 12 for «**Environmental Protection**», the Lessee (Hellenic Petroleum) «shall not be liable for any environmental condition or damage existing in the Contract Area prior to the commencement of the Lessee's operation therein. For this purpose, an Environmental Baseline report of Stage 1 prepared by the Lessee, in order to detail the condition of the environmental parameters and resources at the time prior to commencement of the Land Geophysical Survey operations. The baseline report will be submitted for review to the Lessor (Ministry of Environment & Energy) early December 2019. If no objections will rise by the latter within twenty (20) Business Days of its submission, the report is deemed accepted».

Furthermore and according to the Provisions of Article 12 for «Environmental Protection», in case of activities for which an Environmental Impact Assessment (EIA) is not mandatory, but it is reasonably expected that any minor environmental impacts might occur, as in particular for the case of geophysical surveys, the Lessee shall prepare an Environmental Action Plan (EAP). The EAP will aim to determine, assess and mitigate these impacts, focusing on prevention and minimization thereof in accordance with Good Oilfield Practices.

Hellenic Petroleum is planning to execute a 2D Land Geophysical Survey (LGS) with the outmost respect to the local social and physical environment of NW Peloponnese Lease Area. Throughout the course of the 2D Land Geophysical Survey (LGS), Hellenic Petroleum (HELPE NW Peloponnisis Exploration & Production of Hydrocarbons S.A.) will develop policies, procedures and manuals related to the activity. A minimum list of related tasks and documents includes:

1. *Environmental Baseline Report (EBR) prior to the commencement of the operations.*
2. *Environmental Action Plan (EAP) for the 2D LGS for NW Peloponnese Lease area.*

3. *A dedicated Environmental Monitoring Plan (EMP) aiming to minimize any possible impacts in proximity of the identified environmental sensitivities*
4. *The establishment, organization and operation of a discrete Environmental Unit. This Unit will be organized and operated under the sole responsibility of Hellenic Petroleum that has been granted the right to explore and exploit hydrocarbons in the NW Peloponnese Lease Area.*

2. HSE Studies and Reports

2.1. Environmental Baseline Report & Environmental Action Plan

Environmental Baseline Report

An Environmental Baseline Report (EBR) as described in article 12, §14 of L. 4527/2018, should be prepared in separate stage reports that will cover the phases of the Exploration period (3 district phases) for the lease agreement of NW Peloponnese area. The 1st Exploration phase concerns the Geophysical survey operations and shall be covered by the 1st and 2nd stage Environmental Baseline Reports.

The purpose of the Environmental Baseline Environmental Report (EBR) is to collect data, define and evaluate the current state of the environment in the exploration area in order to:

- Survey the condition of the environment within the exploration area before starting any work, to ensure non-liability of the contractor for environmental damage that may occur in the exploration area from other activities.
- Be part of an integrated system for monitoring the condition of the environment in the research area, to allow the monitoring of any impact of the individual stages of the research program.

The elaboration of the Environmental Baseline Conditions within the Exploration Area will be based on the requirements of JMD 10776/ 02.03.2017 (*“Approval of Strategic Environmental Assessment (SEA) for hydrocarbon exploration and exploitation in the area of NW Peloponnese”*), according to which environmental indicators, shall be used as fundamentals of monitoring and they shall represent in a comprehensive way, important aspects of developments in the environment.

All the environmental data has been collected and evaluated by taking into account that this information will feed into the Environmental Action Plan (EAP) prior to be prepared and submitted for approval by the competent Authorities in order to execute the 2D Land Geophysical Survey operations with the outmost respect to the environment. Moreover, the contents of the Environmental Baseline Reports will be appropriately adapted to the conditions of the lease agreement block area and in compliance with Ministry’s requirements for preparing and submitting the following:

- ✓ 1st Stage Environmental Baseline Report NW Peloponnese Block for the wider area of the Lease Agreement Block.
- ✓ 2nd Stage Environmental Baseline Report NW Peloponnese Block for the immediate area of the conventional block area prior to the commencement of the LGS works.

In more detail, the aforementioned Reports shall address the existing physical, biological and socioeconomic environment and sensitivities of NW Peloponnese Lease Area and provide any updated information or newly published data not covered in the Strategic Environmental Assessment (SEA). Under physical and biological environment, topics to be included are Topography and Landscape, Soil and Water, Geology, Tectonics Characteristics and

Hydrographic Network (underground and ground water baseline study), Vegetation and Ecosystems / Flora & Fauna, Wildlife, Protected Sites and Conservation Areas. Under existing Socioeconomic Environment, topics to be included are Land Use and Socioeconomic Environment, Cultural Heritage and Infrastructure, Atmospheric and Acoustic Environment.

In addition, an essential element of the organization and monitoring of the state of the environment, natural and human, as well as significant environmental impacts on individual environmental parameters is the development of an environmental indicators catalogue. Environmental indicators are a numeric or descriptive classification of a large number of environmental parameters, which have the objective to provide information extraction, which may become useful in related to the assessment of environmental quality and taking appropriate decisions. The use of indicators facilitates the comparison of environmental quality in different geographical areas and different periods.

About the current status, the Environmental Baseline Report Stage 1 (EBR), prepared and was planned to be submitted by HELPE NW Peloponnisos Exploration and Production of Hydrocarbons S.A. to the relevant Authorities (HHRM and DIPA) early December 2019.

Environmental Action Plan

Throughout the course of the year 2020 HELPE NW Peloponnisos Exploration & Production of Hydrocarbons S.A.), will elaborate the preparation and submission of an Environmental Action Plan (EAP) prior of the commencement of LGS operations. In particular, the following requirements of the Environmental Action Plan shall be set to:

- Identify the best option for the environment between technically suitable methods of vibration, especially with regard to the choice between controlled mild explosions or mechanical soil vibrator.
- Avoid any possible damage to monuments and buildings.
- Minimize any disturbance of ecological functions in areas with protected natural environment as well as man-made activities in urban and rural areas.
- Ensure compliance with all safety rules to prevent accidents with an impact on the environment
- Adjust the parameters (charges, depths, etc.) for the quality design of the land seismic project
- Implement an Environmental Monitoring Program and environmental management procedures throughout the period of the operations by a specialized Environmental Unit .
- Set environmental commitments in order to reduce any potential environmental impacts from the implementation of the 2D Geophysical Survey.
- Identify any mitigation measures for the protection of sensitive elements of the biotic, abiotic, cultural and anthropogenic environment.

The aforementioned objectives will be taken into account in the preparation of the Environmental Action Plan (EAP) for the "NW Peloponnisos" Lease Area in a way that ensures

the quality of the result under the existing environmental legislation and the best practices for the implementation of two - dimensional land geophysical acquisition internationally.

The final EAP expected to be submitted for review and approval by the Competent Authorities. More specifically, the purpose of the Environmental Action Plan will be:

- The assessment and evaluation of impacts of the proposed activities on the environmental components;
- The assessment and evaluation of environmental risks for the geophysical acquisition operations;
- The proposition of mitigation measures in order to minimize any potential risks and impacts and the relevant monitoring during the project activities.

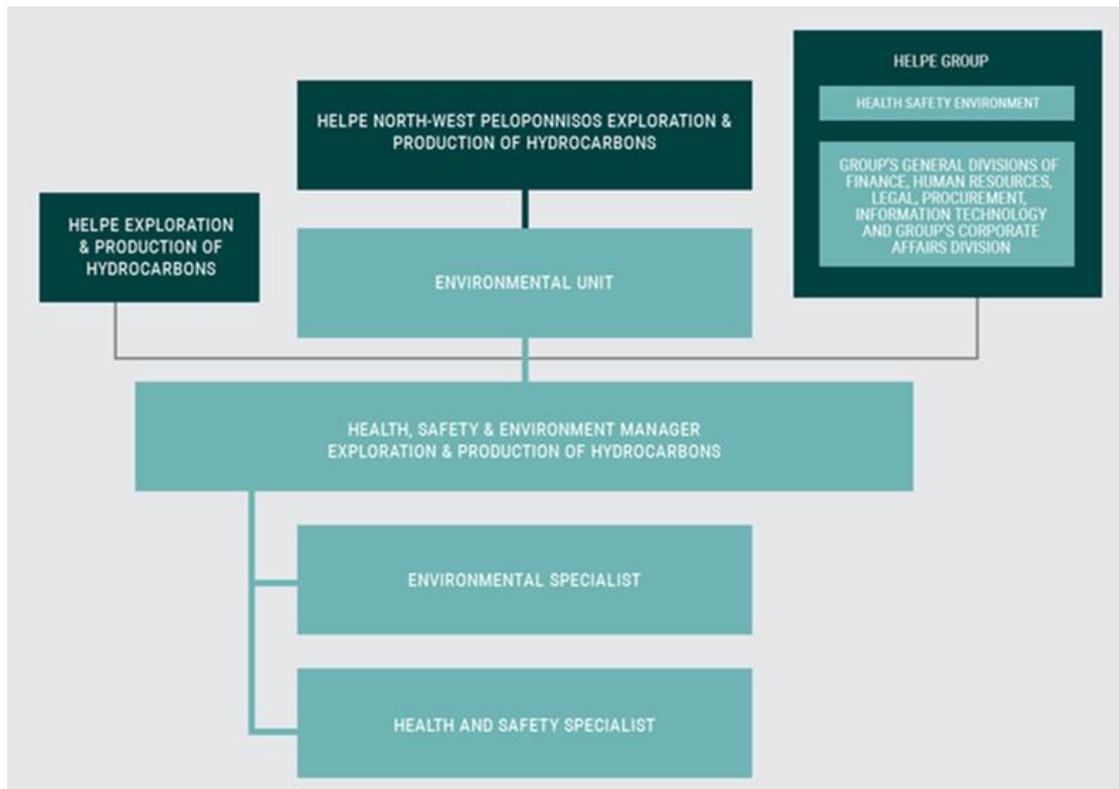
Any potential impacts of the project activities will be identified, with regard to abiotic, biotic and human environment. Through the objectives set out in the decision to approve the Strategic Environmental Assessment (SEA) of “NW Peloponnese” Lease Area, it should be noted that the EAP should foresee any potential impacts that may be observed as a result of key aspects or activities of the geophysical acquisition program and will define a baseline to understand the existing conditions in the proposed position of the seismic record program.

Early recognition of the impacts that may occur in the area of impact of the proposed program reduces the likelihood of long-term adverse environmental impacts and allows the proposal and subsequent implementation of mitigation measures to avoid, reduce or address any possible complications.

Establishment of the Environmental Unit

In the context of the Joint Ministerial Decision (JMC) of 2 March 2017 for the approval of a Strategic Environmental Assessment (SEA) for the Hydrocarbon Research and Exploitation Program in the NW Peloponnese Lease Area and under Section BII (Conditions, Limitations and Guidelines for the protection and management of the environment that must accompany the approval of the Program) for the establishment of an Environmental Unit for the full protection and management of the Environment, Hellenic Petroleum S.A., which has been granted the right to explore and exploit hydrocarbons, has to set up, organize and operate at its sole discretion, supervised by the Competent Authority (YPEN / EDEY), a separate Environmental Unit which will be responsible for the environmental protection and management of the environment.

According to the above, HELPE NW Peloponnisos Exploration and Production of Hydrocarbons S.A., organized and operates their Environmental Unit with the following organizational structure:



2.2. Land HSE Project Plan for the 2D Land Geophysical Survey

HELPE NW Peloponnisos Exploration & Production of Hydrocarbons S.A. has an active Health, Safety, Societal and Environment protection Policy for its Hydrocarbon Exploration and Production activities, which is based on its commitment to:

- ✓ *Compliance*: Full compliance with all HSE relevant international legislations (laws, resolutions, regulations) and other requirements.
- ✓ Collaboration with competent authorities and organizations in the above areas.

Health:

- ✓ Protection and promotion of health of all employees.
- ✓ Control of health related hazards and factors, which contribute to health risks, based on suitable standards.

Occupational Safety:

- ✓ Following preventive occupational safety instructions.
- ✓ Managing safety issues equally with other important issues.
- ✓ Ensuring contractors apply adopted HSE standards in the main office and the field.

Pollution Prevention:

- ✓ High consideration for environmental protection and pursuit of lower emissions, waste disposal and effluents that potentially have negative impact on the environment.
- ✓ Belief of the management that every employee is responsible for the environmental compliance of the company and its commitment to sustainable development.

Communication:

- ✓ Responsibility of the management to communicate the HSSE policy to all employees, contractors, vendors, partners, and the public.

Training and Preventive Awareness:

- ✓ Establishment of the culture necessary to encourage all employees to share this commitment.
- ✓ Emphasis on HSSE awareness, investigation and recording of relevant incidents and building upon the experience gained.

Continuous Improvement:

- ✓ Continuous improvement of all HSSE subjects by adopting international codes, modern practices and best available techniques.
- ✓ Provision of the appropriate resources to implement this policy
- ✓ Periodic audits and reviews of the HSSE Policy and Management System as well as performance evaluation to ensure that they are up-to-date and effectively implemented.

The aforementioned Policy binds all the company's personnel in Hydrocarbon Exploration and Production activities, it is an integral part of every activity and it is re-examined and amended when necessary by the company.

The selected Land Geophysical Contractor that will execute the works shall prepare a HSE plan in order to undertake the Project in a safe manner as well as to assess any major HSE hazard that may impact the project. This will include all aspects of HSE management, corporate HSE policies and procedures. The main purpose for the project HSE plan shall be to:

- Provide assurance of the effective working of the interface between the HSE-MS of client (HELPE NW Peloponnisos), 2D Land Geophysical Contractor and subcontractors at the project level; to document this interfacing; and to include the necessary interfacing between other parties that may be impacted by the project.
- To demonstrate that all involved parties have the necessary procedures – Permit to Work (PTW), hazard and risk controls, operating instructions, Lock Out Tag Out (LOTO), Manual of Permitted Operations (MOPO), Management of Change (MoC), emergency plans and controls in place to achieve the project programme without compromising HSE performance.

Moreover, in order to identify and address any relevant issue concerning Hazards and potential Risks on Health, Safety and Environment (HSE) during the **2D Land Geophysical Survey** campaign, HELPE NW Peloponnisos Exploration & Production of Hydrocarbons S.A. shall undertake a bidding process with the aim to identify the most suitable contractor in order to provide Consultancy Services for the HSE Services related to the Land Geophysical Survey in NW Peloponnese. In particular, HELPE NW Peloponnisos shall prepare and release a Request for Quotation (RFQ) to various specialized companies in the relevant market.

The HSE elements that shall be considered in the RFQ stage are the following:

- Assist to the preparation of the Invitation to Tender document for selecting the MSS contractor (drafting of the HSE aspects of the project, checklists and questionnaires for evaluating HSE aspects)
- Participate in the evaluation of the bids submitted for the LSS in relation to the HSE aspects of each bid. Recommend preferred contractor(s) on HSE aspects and review of final proposal
- Provide support to develop HSE bridging documentation between HELPE and the selected Contractor and participate in the contract finalization (acceptance of an HSE Management Process). Provide support to develop Project Health, Safety and Environmental Plan in cooperation with the selected Land Geophysical contractor.
- Perform regular HSE audits on LGS Contractor and its sub-contractors - vehicles and equipment before the commencement of any works (including but not limited to a compilation of an environmental audit report and a full environmental statement of the vehicles' & equipment's environmental performance, impacts and management). Land HSE audits - compliance and regulatory based on IOGP and IAGC.
- Review of the HSE plan upon progress of the operations and perform periodically site visits and audits.

3. Stakeholder Engagement

Prior to the commencement of operations, continuous informative meetings with local communities and authorities are ongoing and will be conducted in the area throughout the course of the exploration operations in order to inform and educate upon the upcoming geophysical program in NW Peloponnisos Lease Area as well as to create a positive impact to local societies highlighting benefits of hydrocarbons exploration and future exploitation in their local economies.