



**BLOCK 10 (KYPARISSIAKOS) LEASE AREA
ENVIRONMENTAL REPORT 2021**

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BLOCK 10 LEASE AGREEMENT AREA – ENVIRONMENTAL REPORT 2021

HSE Policies & System, Environmental Studies and Implementation

1. Introduction

Hellenic Petroleum Exploration & Production of Hydrocarbons Kyparissiakos Gulf Single Member S.A. (HELPE Kyparissiakos), 100% subsidiary of HELLENIC PETROLEUM EXPLORATION AND PRODUCTION OF HYDROCARBONS (UPSTREAM) S.A., owns all the rights to explore and produce hydrocarbons deriving from the Lease Agreement with the Greek State in the offshore area of Kyparissiakos Gulf (Block 10), total area 3.420,6 sq. km. HELPE Kyparissiakos Gulf SA (100%, Operator) officially signed the Lease Agreement with the Minister of Environment & Energy on April 9, 2019 and on October 3, 2019, the Greek Parliament ratified (Law 4630/10.10.2019).

HELPE Kyparissiakos, acting as Operator, is fulfilling its commitments and planning of the first phase of the exploration work program by implementing the most up-to-date, safe and environmentally friendly technological methods and practices with the outmost respect to local societies and socioeconomic activities.

According to the Provisions of Article 12 for «Environmental Protection» «The Lessee shall include in each Annual Work Program and Budget to be submitted to the Lessor, an environmental report on the work to be undertaken as provided in that document, as well as on the work undertaken in accordance with the preceding Annual Work Program and Budget».

During 2021, HELPE Kyparissiakos has prepared and submitted to Competent Authorities the following Environmental Studies:

1. Amended Environmental Action Plan following up Comments received from Competent Authorities for the 2D Marine Seismic Acquisition Survey.

The amended submitted to Competent Authorities (HHRM & DIPA) June 3rd 2021 and successfully approved by HHRM & DIPA October 5th 2021.

Moreover, HELPE Kyparissiakos during 2021 is continuing working on 2D Marine Seismic Survey's HSE Consultancy Services assigned to external Contract following up a Request for Quotation (RFQ), assisting in the Tendering process for the selection of a competent international seismic contractor.

2. HSE Studies and Reports

2.1. Amended Environmental Action Plan

The objectives of the Environmental Action Plan (EAP) are the following:

- Detailed and documented compliance of the proposed activities with all the requirements of the applicable environmental legislation, including the provisions concerning the protection of marine species and sensitive habitats and the avoidance of any kind of pollution due to exploration activities.
- Avoiding any impact of the proposed activities on critical elements of marine ecology, such as marine mammals (cetaceans and monk seals), sea turtles (*Caretta Caretta*) and seabirds.
- Implement all necessary measures and methods related to the prevention of any incident of marine pollution, including solid and liquid waste management methods.
- Limiting disturbances to existing marine activities such as fishing and fish farms.
- Assess and evaluate the effects of the proposed activities on all individual environmental elements.
- Assess and evaluate the environmental risks for the proposed activities.
- Propose prevention and mitigation measures to minimize risks and impacts and execute an environmental monitoring program during project activities.

In order to select the time of the survey implementation, it should be stated that the winter season is preferable, considering the fact that marine species (marine mammals, sea turtles, seabirds) populations are less affected during that period. Especially, the EAP study considered whether the measures proposed for the protection of cetaceans, in accordance with the above condition, are adequate to avoid any potential impacts on the population, habitats and reproduction rate of the protected species of the Ionian Sea, by providing relevant documentation and/or specialization of these measures.

The potential impacts of the project activities was identified, with regard to abiotic, biotic and human environment. Particular attention was given to marine noise levels, the marine ecology and the socioeconomic environment. The impact of marine noise was evaluated based on the results of noise propagation modelling. Identified effects of the seismic acquisition program, were focused on the impact on marine mammals due to noise produced during the survey that, considering the scheduled period and the limited duration of the activity, can be considered moderate for the areas of special importance for cetaceans and due to the possible behavioral response of marine mammals to noise produced due the seismic acquisition program.

In aim to protect the marine fauna, with particular regard to the marine mammals, mitigation measures will be implemented during the survey in accordance to ACCOBAMS and JNCC Guidelines, and more specifically about the following:

- presence on board of qualified Marine Mammals Observers (MMO) and technicians for Passive Acoustic Monitoring (PAM);

- adoption of the soft-start technique and establishment of an Exclusion Zone around the seismic vessel where visual and acoustic monitoring of the presence of marine mammals will be continuously carried out and confirmed in the field;
- establishment of Exclusion zones of normal operation of airguns within environmentally sensitive areas as well as within a distinct buffer zone around the sensitive areas.

The initial EAP has been submitted by HELPE Kyparissiakos for review and approval to Competent Authorities (Hellenic Hydrocarbons Resources Management – HHRM) on 12th of October 2020.

DIPA has reverted back with Comments on May 6th 2021 and HELPE Kyparissiakos working with the appointed Contractor incorporated, reviewed and presented to HHRM/DIPA the amended version of the EAP which had totally adopted and incorporated DIPA's comments. More particularly, key comments addressed, were distinguished between key remarks to be incorporated as additional information and further improvements on existing EAP as well as points for discussion and recommendations. These points are summarized as follows:

Key remarks addressed and complied

- ✓ A compliance table with ACCOBAMS Guidelines and mitigation measures.
- ✓ West Patraikos Marine Seismic Survey Case Study mitigation measures applied and environmental results.
- ✓ Citation and comparison of cases and environmental results from previous Marine Seismic Surveys in Greece as well as from other countries (Croatia and Italy) acquiring similar Marine Seismic Surveys during hydrocarbons exploration.
- ✓ Commitment for increasing Exclusion Zone from 750m up to 1500m in case sperm whales are entering the Exclusion Zone during Seismic Acquisition activities in Block 10.
- ✓ Apply Sea Turtles (*Caretta caretta*) Telemetry for the very first time in Greek territorial waters.

Recommendations addressed and complied

- ✓ As part of Underwater Noise Simulation, categorization of frequency sensitivity to be applied on each marine species instead of categorizing them under low, medium and high frequency regardless Cetaceans species.
- ✓ Ballast water treatment on the vessel and mitigation measures to be applied in order to avoid entering into Greek territorial waters of invasive alien marine species.

- ✓ Clear statement of HELPE Kyparissiakos that they will carry out the Marine Seismic Acquisition Survey during the Winter period and avoiding breeding periods for the Cetaceans (May to October most dominant periods)

Amended EAP has been submitted on June 3rd 2021. The Amended EAP has been successfully approved by HHRM / DIPA on October 5th 2021.

2.2. Environmental Parameters and Monitoring (MMO'S & PAM's / Acoustic Monitoring)

MMO'S & PAM's (2022 ONWARDS)

Following the above mentioned mitigation measures and guidelines, properly trained, qualified and experienced Marine Mammal Observers (MMOs) and Passive Acoustic Monitoring (PAM) Operators will be on board the seismic vessel whose primary role will be to detect marine mammals through the course of the Marine Seismic Acquisition Survey (MSS) and advise on stopping seismic surveys (air guns) upon detection of marine mammals within the defined exclusion zone (EZ) and initiate “soft start” to give marine mammals enough time to move away from the acoustic source and outside the exclusion zone (EZ).

A sufficient number of Marine Mammal Observers equipped with passive acoustic monitoring systems for marine mammal observations will be on board the vessel during acquisition of the MSS. HELPE Kyparissiakos anticipates that two (2) Marine Mammal Observers and two (2) Passive Acoustic Monitoring Operators will be required for the duration of the 2D Marine Seismic Survey.

✓ MMO's

Vessel-based visual monitoring for marine mammals will be done by trained Marine Mammal Observers (MMO's) throughout the period of Marine Seismic Survey activities. MMOs will monitor the occurrence and behavior of marine mammals in the project area during all daylight periods of the 2D MSS.

MMO's duties will include watching for and identifying marine mammals, recording their numbers, distances, and reactions to the MSS operations.

The MMO's shall be able to advise the vessel crew on the procedures set out in the mitigation guidelines described in the EAP and to provide advice and ensure that the survey program is undertaken in accordance with these guidelines (pre-mobilization meeting, etc.).

MMO's onboard the survey vessels shall meet the following criteria:

1. 100% monitoring coverage during all periods of survey operations in daylight;
2. Maximum of 4 consecutive hours on watch per MMO; and
3. Maximum of 12 hours of watch time per day per MMO.

The MMO team (2 MMO observers and 2 PAM experts) will consist of well trained, dedicated and experienced marine biologists who will be preferably JNCC or BOEM approved and will have previous marine mammal observation experience in the wider project area. The qualifications and training standards of the team members shall follow the MMO qualification standard as issued by the Marine Mammal Observer Association (MMOA).

http://www.mmoassociation.org/images/MMOA_Position_Statements.pdf

The observer(s) will watch for marine mammals from the best available vantage point on the survey vessel. The observer(s) will scan systematically with the unaided eye with equipment such as 7×50 reticle binoculars, supplemented during good visibility conditions with equipment such as “Fujinon 25x150 “Big-eye” binoculars mounted on a bride wing or flying bridge. BIDDER shall provide a full list of equipment and specifications readily available on board the vessel during the project duration. MMOs should be equipped with a standard “Cetacean Sighting Form” made available by ACCOBAMS.

PASSIVE ACOUSTIC MONITORING (PAM) (2022 ONWARDS)

Towed passive acoustic monitoring (PAM) is part of the monitoring program to be implemented for the duration of the 2D MSS. PAM operators should be experienced bio-acousticians, certified and familiar with the vocalizations of cetaceans in the wider project area. Their qualifications and training standards shall follow the PAM qualification standard as issued by the Marine Mammal Observer Association (MMOA)

http://www.mmo-association.org/images/MMOA_Position_Statements.pdf

PAM will be used as practically and continuously as possible. PAM effort will focus on providing a marine mammal monitoring capability of the area within 750m of the source array, during the monitoring period prior to soft-start at night or during periods of poor visibility.

Passive acoustic monitoring components must be suitable for the current project in Block 10 Area. The proposed components i.e. hydrophone(s), cables, pre-amplifiers, array control, analog-to digital converters, data processing hardware, sound analysis software, display hardware and software and data assemblage methods, should be presented and their selection, sufficiently justified. PAM operators will be familiar with the installation, functionality, calibration and service of the components.

MMO HANDBOOK (2022 ONWARDS)

In order to maximize the successful operation of the MMO’s, a Marine Mammal Observer’s Handbook will be prepared by the (MMO - PAM) Team or Team Leader in the framework of the monitoring program. The Handbook will contain maps, illustrations, and photographs, as well as text, intended to provide guidance and reference information to trained individuals who will participate as MMO’s. The following topics are proposed to be covered in the MMO Handbook:

- summary overview descriptions of the project, marine mammals and underwater noise, the marine mammal monitoring program;
- monitoring and mitigation objectives and procedures, initial safety radius;
- responsibilities of staff and crew regarding the marine mammal monitoring plan;
- instructions for ship crew regarding the marine mammal monitoring plan;
- data recording procedures: codes and coding instructions, common coding mistakes,
- electronic database; navigational, marine physical, field data sheet;
- list of species that might be encountered: identification cues, natural history information;

- use of specialized field equipment (reticle binoculars, etc.)
- reticle binocular distance scale;
- table of wind speed, Beaufort wind force, and sea state codes;
- data storage and backup procedures;
- safety precautions while onboard;
- crew and/or personnel discord; conflict resolution among MMOs and crew;
- drug and alcohol policy and testing;
- scheduling of cruises and watches;
- communication availability and procedures;
- list of field gear that will be provided;
- suggested list of personal items to pack;
- Suggested literature, or literature cited.

The MMO handbook will be distributed to the MMO's at least 15 days before the commencement of the activities in order to have sufficient time to go through it. MMO's and PAM operators are required to have Basic Offshore Safety Induction and Emergency Training (BOSIET) certificate from a recognized training center and medical certificates.

IAGC guidelines and policies for Marine Life observers and towed passive acoustic monitoring will be taken into consideration.

ACOUSTIC MONITORING (BACKGROUND NOISE MEASUREMENTS AND VERIFICATION OF EXCLUSION ZONE) (2022 ONWARDS)

The proposed monitoring will be carried out by means of survey, allowing for:

- verify the actual presence of mammals;
- define the background noise level and verify the anticipated Exclusion Zone (EZ)

A research vessel will be used to carry out the acoustic survey and separate portable systems will be provided to monitor the ambient noise on predefined locations and close to critical environmental components such as the Protected Areas of the Natura 2000 Network either/or the shores of Kyparissiakos Gulf.

The objectives of this acoustic study are to measure ambient sound levels as a function of sound frequency components, time and position as well as correlate acoustic anomalies to major acoustic sources within the survey areas:

1. Prestart: In general, exhibit high ambient sound levels concentrated on the top (or above) limit of the bibliographic prevailing ambient noise.
2. Post Completion: To identify significant differences in the ambient noise between the pre-start and the post completion stages of the 2D seismic survey.
3. Seismic noise monitoring & Verification of Exclusion Zone: The aim of the acoustic survey at that stage is to assess the sound pressure level of the noise induced by the air-gun seismic source to the predefined sampling locations. Additionally, field measurement of noise levels around the seismic source (air-guns) will take place and

will be carried out during the acquisition activities in order to record and study the seismic noise attenuation levels and validate the specified mitigation zone.

4. Coastal Zone Inspection and Control for marine mammals stranding.

A visual inspection for marine mammals' presence will be carried out at all stages of MSS (pre-seismic, while and post-seismic). The research vessel will visually inspect the coastal line as well as predefined areas to verify and report any strandings.

2.3. Establishment of the Environmental Unit

In the context of the Joint Ministerial Decision (JMD), of 3 October 2017 for the approval of the Strategic Environmental Assessment (SEA) for the Hydrocarbon Research and Exploitation Program in Block 10 (Kyparissiakos) 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) the establishment and operation of an Environmental Unit for the fuller protection and management of the Environment, is required. The Environmental Unit will operate under the control and responsibility of the Operator. More specifically the Environmental Unit will have to ensure that:

- has the responsibilities and jurisdictions (including its position in the Operator's organization chart) necessary for effective intervention in the design, implementation and operation of each project that will occur under the program, as well as the subsequent phases of completion or abandonment related activities.
- should be focused on environmental tasks, which can only be combined with issues related to Health, Safety and Environment (HSE), while maintaining the independency of the other units of the organization chart which are related to technical or economical aspects.
- is organized with sufficient and adequately qualified personnel
- has the infrastructure and adequate resources that are necessary for its efficient operation
- is constantly being updated on state-of-the-art technologies developed or applied internationally in environmental aspects in the field of exploration and productions of hydrocarbons.

In addition, the Environmental Unit will be the link on all environmental issues with the local communities and the relevant departments of the Authorities.

According to the above, HELPE Kyparissiakos, which has been granted the right to explore and exploit hydrocarbons in Block 10 Lease Area, already established, and operates at its sole discretion, a separate Environmental Unit which will be responsible for the environmental protection and management of the environment. This Environmental Unit will cooperate with the Competent Authority (HHRM) on environmental issues in the context of exploration and exploitation activities in the area of Block 10. In addition, HELPE Kyparissiakos has to present the environmental monitoring results of the program in an annual report published and

uploaded on the website of the Environmental Unit. The overall aim of the website is to allow the public concerned to express its opinion on the content of the reports.

Environmental Unit Website (<https://www.helpe-kyparissiakos.gr/en/?view=default>) has been successfully uploaded July 2021.

2.4. Environmental Monitoring and Recording of Critical Biodiversity Indicators

In the context of Environmental Monitoring and Recording of Critical Environmental Indicators of Biodiversity, such as marine mammals (cetaceans and monk seals), sea turtles and seabirds, HELPE Kyparissiakos has assigned to NCC (Nature Conservation Consultants Ltd) a biodiversity monitoring program for conducting a survey of the status of Important Fauna Species in the Block 10 Lease area (Kyparissiakos).

The Project works consist of the following four (4) work packages:

1. Pelagic survey for marine turtles-seals and seabirds at sea with research vessels and ultralight aircraft in order to establish the presence status and abundance of marine species at sea.
2. Coastal survey for Monk Seals pupping sites and Seabirds sites in the coastal zones of the adjacent Nature 2000 sites including mapping the existence of marine caves, appropriate terrestrial habitats and refuges of the Mediterranean Monk Seal, as well as record their features and environmental characteristics, assessment of the possible use of the refuges by Monk Seal, assessment of sites and populations of Seabirds, such as Mediterranean Shag and Scopoli's Shearwater and, assessment of the conservation status of breeding seabirds in the vicinity of the Kyparissiakos Lease area and identify existing and potential threats
3. Telemetry of marine turtles (*Caretta caretta*) including tagging sea turtles with satellite transmitters and attachment of flipper tags in order to carry out post-nesting tracking of breeding turtles and tracking of turtles found inside block 10, and to carry out aerial surveys using drones or ultralight aircraft to determine distribution and density.
4. Telemetry of Scopoli's shearwaters (*Artemis in Greek*) breeding on Strofades islets.

2.4.1. 2021 Final Reports (and 2022 onwards)

WPI: Pelagic Survey for marine turtles - seals – cetaceans and seabirds with vessel records at sea

The following consists of the Final Report of the Work Package (WP)I: Pelagic Survey for marine turtles - seals – cetaceans and seabirds with vessel records at sea of the project "Survey of the Status of Important Fauna Species in the Kyparissiakos Lease area" and incorporates the results of boat and aerials surveys for the that were carried out in autumn 2020 and early summer 2021.

The initial stage of the WPI implementation involved two pelagic aerial surveys that were carried out in the Wider Project Area in the beginning of September 2020, followed by boat based pelagic surveys at the end of September 2020. In 2021 boat-based surveys were carried out at the end of June. In September 2021 aerial surveys have been carried out in the entire Project Area.

The present project involves the first combined systematic pelagic recording of cetacean, marine turtles and seabirds in the Project Area, although the Wider Project Area has been the subject of systematic pelagic and acoustic surveys of cetaceans in the past. The main results and conclusions of the study are:

- Confirmation of a significant presence Striped Dolphins, Cuvier's Beaked Whales and Sperm whales in the Project Area and the Wider Project Area. Unlike other nearby areas e.g. Patraikos Gulf and Inner Ionian Archipelagos, there are no associations of cetaceans with the fisheries. The reasons for this lack is the absence of the main dolphin species associated with the fisheries i.e. Bottlenose dolphins (*Tursiops truncatus*) due to deep pelagic habitats and a low number of active fishing vessels in the Project Area.
- The presence of deep diving odontoceti (Cuvier's Beaked Whales and Sperm whales) in the study area, which are highly sensitive to sound pollution, highlights the necessity for very strict protocols regarding noise minimization and Marine Mammal Observer activity for the detection of cetaceans during all future noise producing procedures such as seismic surveys, pile-driving and construction as well as drilling operations in the region. Confirmation of the presence of the Loggerhead Turtle, Scopoli's Shearwater and Yelkouan Shearwater in the Project Area.
- Despite low number of recorded Loggerhead Turtles in the pelagic Lease Area 10, the site is important for adult turtles migrating to the species largest nesting aggregation in the Mediterranean at Kyparissia Bay. Additionally, the Wider Project Area is also being used by the turtles associated with other breeding sites e.g. on Zakynthos island. Furthermore, hatchling Loggerhead Turtles are expected to pass through the area after they leave their hatching beaching at Kyparissia and Zakynthos.
- The recorded Scopoli's Shearwater low abundance in autumn and species low to medium abundance in spring indicates that the Project Area does not consist an important foraging area for the species, however the waters surrounding Strofades islets are important for the formation of congregations related to entering the species biggest colony in the Eastern Mediterranean located on the islets. Low abundance of the Yelkouan Shearwater indicates that the Project Area does not consist an important foraging area for these two species.

WP11: Coastal surveys for monk seals and Mediterranean shag breeding sites in the coastal zones of the adjacent Natura 2000 sites

As has been shown by on-sight research conducted in November 2020, both the Strofades islands as well as the Peloponnese coastline situated directly opposite the project area have no significant importance for the monk seal since no suitable pupping habitat has been recorded and the presence of monk seal individuals is very rare. It should be underlined

though that the area is situated between the highly important for the monk seal areas of Mani/Kythira and the Zakynthos/Inner Ionian Archipelago. On the contrary, available information and data from MOm (The Hellenic Society for the Study & Protection of the Mediterranean Seal) show that the island of Zakynthos is of great importance for this species. The island of Zakynthos may not be included in the project area, but is situated within the wider project area and the sphere of influence of future drilling operations. Thus, monk seal experts consider it important to include the south and west part of Zakynthos in this baseline study. Data from field research in combination with information collected through the operation of MOm's Rescue and Information Network (RINT) (for more details on methodological approaches please see November 2020 report) has revealed the existence of monk seal habitats suitable for breeding along the western coast of Zakynthos island.

Furthermore, the birth of at least 2 monk seal pups during late summer 2021 has been confirmed. All the above findings confirm that Zakynthos (and especially its western coastline) is of great importance for the Mediterranean monk seal. Additionally, Zakynthos is the southernmost breeding location for the monk seal in the Ionian archipelagos and is the closest such location to the western Mani breeding hub in the southern Peloponnese and therefore may act as the "stepping stone" for the genetic exchange between the Ionian and Aegean monk seal populations. This is considered to be of particular importance for the overall conservation of the species which is already faced with a low diversity in its genetic pool and a low exchange rate between the two populations (Karamanlidis et al. 2015).

These facts should be considered when designing emergency response plans during future activities in the area. Additionally, a monitoring program for the species should be designed and implemented during and after the drilling operations.

WP III: Investigation into the Presence of Sea Turtles in The Kyparissiakos Lease Area. (With Reference to Wp I) 2021 Report (September 2020 to August 2021)

Sea turtles *Caretta caretta*, are known to be at least temporarily present in the Kyparissiakos Lease area, but the numbers, distribution and seasonality of their presence is not well defined. Addressing these knowledge gaps is the main aim of the investigation, with the goal being the elaboration of guidance on the feasibility and recommended timing of hydrocarbon exploration in the Kyparissiakos Lease area that will eliminate or minimize potential impacts on sea turtles utilizing the area.

To accurately quantify the number of turtles, present in the subject area and to assess their behavior as likely residents or migrants a combination undertaken of boat (WPI) and a satellite tracking study (WP III) on a subset of individuals encountered in the greater study region.

Due to logistical limitations imposed on the field team by COVID-19 restrictions, during the initial project period during spring 2021, the foreseen tracking of the poorly studied adult males needed to be postponed until spring 2022, but we were able to deploy three Argos satellite transmitters on nesting turtles to determine their presence in the Block 10 Lease Area during their breeding and post breeding periods. Tracking devices were deployed as per manufacturer recommendations, as has been successfully employed in western Greece in

recent years. It is anticipated that each device will provide a year or more of tracking data that will suffice to indicate the seasonal spatial movement patterns of turtles in the subject area.

Further boat-based efforts during the pre-breeding season (April-May 2022) will be made to acquire adult male turtles in the area to breed in order to deploy the remaining five Argos satellite transmitters and track the turtles over their breeding and post breeding period. Turtles to be tracked will be captured using the established rodeo technique as employed elsewhere in Greece. Tracking data collected to date were processed to ensure higher accuracy in the location data as per Haywood et al. (2020) by removing locations resulting from unlikely travel speeds or turning angles and were then interpolated to produce locations at a regular 6-hourly time stamp.

A total of 3 Argos satellite transmitters were so far deployed on nesting loggerhead turtles in June/July 2021 on the beach in southern Kyparissia Bay. A summary of their operation is provided in the Table 1. The remaining 5 transmitters are scheduled to be deployed in April/May 2022 on adult male loggerhead turtles, assumed to be in the Kyparissia Bay area to breed.



Deploying the satellite tag on a nesting turtle.

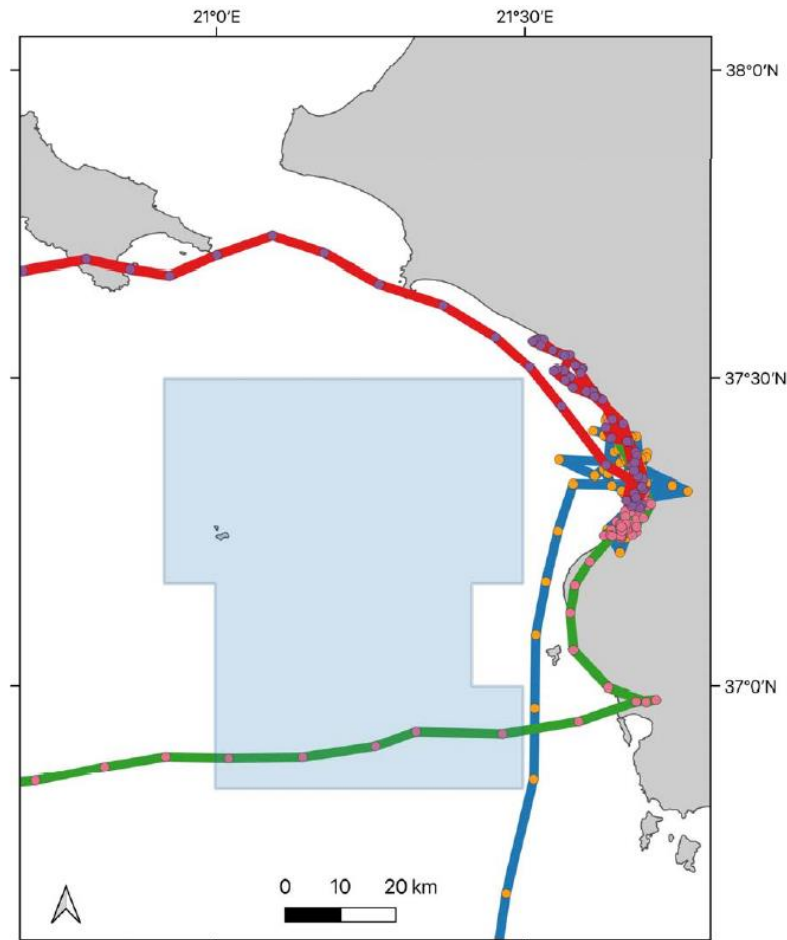


Detail of the transmitter in place on the turtle's carapace.

Device ID	Life stage / Sex	Transmitter deployment	Departure from Kyparissiakos area	Tracking in Kyparissiakos area	Transmitter status (31/08/2021)
210317	Adult / Female	28 June 2021	21 July 2021	22 days	Still active >64 days
210318	Adult / Female	2 July 2021	22 July 2021	19 days	Still active >60 days
210319	Adult / Female	3 July 2021	17 July 2021	13 days	Still active >59 days

The turtles remained in the area to complete their breeding seasons for one or more nests following transmitter deployment, departing from the nesting beach 13 to 22 days after receiving their transmitters. All transmitters remained active after the breeding season and all turtles migrated away from the Kyparissiakos Lease area. During the breeding season, turtles remained close to the mainland coast. After completion of their breeding season, they

migrated to vastly different areas of the Mediterranean, with one turtle moving into the Aegean Sea, one to the Adriatic and one to western Greece. Concerning marine habitat use, the turtles were only infrequently moved through the Wider Project area which was most notably used during the post-breeding migration. After breeding the turtle migrated in different directions (Map 1) with one heading north into the Adriatic, one west then north to the southern coast of Puglia, Italy and the final one south and then east and then north to the northwest part of the Aegean Sea.



Tracks and locations of the tracked loggerhead turtles in the Wider Project area

WP IV: Telemetry of Scopoli's Shearwaters breeding on Strofades islets 2021 Final Report

The Final Report of the WP IV incorporates the results of telemetry surveys that were carried out in 2020 and 2021. The implementation of WP IV involved deployment of GPS/GMS transmitters on 20 Scopoli's Shearwater (*Calonectris diomedea*) breeding on Strofades Islets in May 2020 and June 2021 and subsequent collection and analysis of the telemetry data. The present project is the first attempt that GPS/GSM technology has been used for the telemetry of Scopoli's Shearwater in Greece. The main results of the study are:

The key importance of the Project Area for the Scopoli's Shearwater is the existence of the largest species breeding colony in the Ionian Sea and in Greece, located on the Strofades Islets,

while the surrounding marine areas are used primarily for creation of rafts before entering colony. The marine areas in the Project Area away from the colony have a minor importance for foraging and resting in comparison to other foraging areas the Adriatic Sea, western Ionian Sea, Inner Ionian Sea, Patraikos Gulf and Korinthiakos Gulf. Therefore, the most important marine area for the Scopoli's Shearwaters in the Project Area is considered to be the marine area within a 3-n.m. radius around Strofades Islets, where all breeding and non-breeding (i.e. prospecting) birds from the colony gather in rafts from late afternoon on and enter the colony usually during the darkest period of the night. The number of birds visiting the colony per night is considered to be significantly increased during early chick rearing period, i.e. from early July until the end of July, when the adult breeders visit the colony very frequently (every night or every few nights). During the rest of breeding period the congregations of birds per night are expected to be smaller, because the single foraging trips last from few days to few weeks.

Other areas of increased abundance of Scopoli's Shearwaters in the Wider Project Area are the western tip of Zakynthos Island and the western tip of Kyllini Peninsula where bottlenecks are created for shearwaters that are flying between the colony on Strofades and their foraging areas either in the western Ionian Sea/Adriatic Sea and Inner Ionian Sea/Patraikos Gulf/Korinthiakos Gulf, respectively.



2.5. Marine Seismic HSE & HSE Seismic Project Plan

HELPE Kyparissiakos being the Operator, desire to acquire 1200 km 2D Seismic Data in the Block-10 Lease Area by executing a towed streamer 2D Marine Seismic Survey (MSS) which shall fulfil the minimum exploration work program agreed under the Lease Agreement for the first exploration phase (3 years duration). The new 2D MSS data will cover an area of approximately 3421 square kilometers (sq.km) which corresponds to the entire Block 10 concession. The exact coordinates of the 2D MSS as well as the proposed seismic line location will be defined at a later stage, following the seismic vessel contractor award.

During 2020, HELPE Kyparissiakos has issued a Tender for the provision of HSE marine consulting services by experienced professional(s) for the 2D Marine Seismic Survey Acquisition Program in Block 10. Main aspects covered from this tender are to provide Project management, Contract and Bids evaluation (i.e. preparing and reviewing tenders, bid reviews, participate in Contract finalization etc.) and Technical auditing services as well as assist in the

development/improvement of an effective safety & environmental management systems and processes including support to develop HSE Bridging Documentation and HSE Plans. More analytically HSE Consultancy Services, upon contract award and within Year 2021, will be focused on the following items:

Item 1: Assist to the preparation of the Invitation to Tender document (including form of contract) for selecting the MSS contractor. The specific services include the drafting of the HSE aspects of the project to enable the contractors to submit a tender that will provide a crew that can fulfill the requirements efficiently and operate with an expectation of zero HSE incidents. In addition, selection criteria and check lists and questionnaires for evaluating HSE aspects of each bidder shall be prepared. **COMPLETED**

Item 2: Participate in the evaluation of the bids submitted for the 2D MSS in relation to the HSE aspects of each bid. Recommend preferred contractor(s) on HSE aspects. Review final proposal. **COMPLETED**

Item 3: 3.1 - Provide support to develop HSE Bridging Documentation between HELPE and the selected contractor and participate in the contract finalization, which is the acceptance of an HSE management process that all parties have agreed to apply. **3.2** - Provide support to develop Project HSE Plan (including emergency response plans, Shipboard Oil Prevention Emergency Plan-SOPEP) in cooperation with the selected seismic contractor prior to the arrival of the survey vessel and other equipment. The Project HSE Plan will be initially drafted by the selected seismic contractor. **ONGOING Q4 2021**

Item 4: 4.1 - Perform HSE Vessel Audits while the vessel is at the initial port of call in Greece and before the commencement of work (including but not limited to a compilation of an environmental audit report and a full environmental statement of the vessel's environmental performance, impacts and management). **ONGOING 4Q 2021**

Item 5 (contingent) 1Q 2022 ONWARDS

- Perform HSE audits while the MSS is progressing,
- Investigate accidents, incidents, near misses or other unforeseeable events,
- Review of the HSE plan.