

**To:**  
**Lebanese Petroleum Administration**

Wednesday, 01 May 2019

**RE: Draft Strategic Environmental Assessment for the Exploration and Production Activities Offshore Lebanon**

To whom it may concern,

The International Association of Geophysical Contractors (IAGC) appreciates the opportunity to provide comments as part of the public consultation on the Draft Strategic Environmental Assessment for the Exploration and Production Activities Offshore Lebanon.

IAGC is the international trade association representing the industry that provides geophysical services (geophysical data acquisition, processing and interpretation, geophysical information ownership and licensing, and associated services and product providers) to the oil and natural gas industry. IAGC member companies play an integral role in the successful exploration and development of offshore hydrocarbon resources through the acquisition and processing of geophysical data.

Seismic surveys are the only feasible technology available to accurately image the subsurface before a single well is drilled. For the energy industry, modern seismic imaging reduces the risk by increasing the likelihood that exploratory wells will successfully tap hydrocarbons and decreasing the number of wells that need to be drilled in a given area. This reduces the associated safety and environmental risks, as well as the overall footprint for exploration. Because survey activities are temporary and transitory, it is the least intrusive and most cost-effective means to understand where recoverable hydrocarbons likely exist offshore and onshore all over the world.

IAGC have provided detailed comments on specific parts of the consultation documents using the provided comments sheet. However, we would like to highlight a number of items here as the subjects are central to the work of geophysical contractors.

### **Mitigation**

Geophysical contractors are well-versed in implementing a wide range of mitigation protocols during the course of their operations, aimed at reducing any potential impact upon marine mammals and other marine species. The ACCOBAMS guidelines are acknowledged as being referenced specifically within the SEA documentation.

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IAGC would like to highlight that joint IAGC/IOPG (International Oil & Gas Producers Association) guidelines (*Recommended monitoring and mitigation measures for cetaceans during marine seismic survey geophysical operations, available from; <https://www.iagc.org/uploads/4/5/0/7/45074397/579.pdf>*) have been developed and are widely applied. These guidelines have also been provided as an appendix to the consultation comment document for reference. Further, a list of mitigation measures that is highlighted in a number of places includes techniques that are neither common, nor proven, and apply to a range of operations including geophysical surveys, construction and decommissioning.

IAGC would suggest that the mitigation sections be reviewed further, in order to take into account common practice from other areas, and make recommendations more specific to individual operations, such as geophysical surveying. Through the careful application of widely recognised mitigation measures, the potential impacts of underwater sound from survey operations upon marine life are reduced to negligible levels.

The timing of surveys can be highly variable, and is dependent on factors such as investment opportunities, vessel availability and favourable weather windows. IAGC note the broad suggestion of planning geophysical operations during the period of December-March, as it is the least productive season for target marine species. Geophysical contractors regularly work outside of critical periods for a variety of species in different locations, such as the North Sea. However, this must be balanced with the weather operability, which is noted as being less favourable between the months of December-February (Volume 2, Table 2-6).

## **Units**

It is noted that throughout the Volumes where reference is made to specific deciBel levels in relation to the introduction of underwater sound, that the units are not correctly qualified in terms of reference levels (to 1  $\mu$ Pa for underwater sounds), or metrics such as whether the level is intended as being an exposure level, pressure level and so on. IAGC encourages the authors to review the usage of sound levels and ensure that the correct reference level and appropriate metric is being used.

## **Baseline data collection**

IAGC notes that there is limited information relating to underwater sound levels offshore Lebanon, and that distributional data regarding marine mammals and other species is also limited. The collection of baseline data should not be within the remit of geophysical survey contractors, as this would add unnecessary burden to companies who are not expert in carrying out such data collection. However, IAGC would also like to highlight that data collected as part of mitigation efforts by professional Marine Mammal Observers (MMOs) on board survey vessels can be utilised to inform our wider understanding of species occurrence and distribution. IAGC would encourage the use of this data following survey operations. IAGC is an active participant in efforts to collect and analyse such data from other areas already via the Sound and Marine Life Joint Industry Programme (<http://www.soundandmarinelife.org/>).

IAGC welcomes the SEA review, and looks forward to a productive working relationship with the Lebanese Petroleum Administration in ensuring that geophysical surveys continue to be conducted in an environmentally responsible manner, as the prospectivity of Lebanese waters is evaluated. Should you wish to discuss any points or require any further information, please don't hesitate to contact me, or those colleagues in cc.

Yours faithfully,



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