

INSITE Programme - Scope Framework



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1 Introduction

1.1 The INSITE Programme

During 2011 and 2012, Oil & Gas UK led the 'Decommissioning Baseline Study' joint industry project (JIP) to gather knowledge and experience in the decommissioning of offshore structures and pipelines. The environmental workstream within the JIP identified that gaps exist in the data set used to describe the influence of fixed structures on the North Sea ecosystem.

In May 2013 in response to this situation, Oil & Gas UK facilitated the creation of a scientifically-led, long-term environmental JIP aimed at improving scientific knowledge across all aspects of the ecosystem. In April 2014, eight energy company sponsors signed the JIP Agreement, marking the start of the programme. To demonstrate independence and transparency, the programme sponsors are committed to engage proactively with the broader stakeholder community of the North Sea and to make the findings available in the public domain.

Known as the 'INSITE Programme' ('Influence of Structures In The Ecosystem'), this JIP is a major initiative, which seeks to provide all stakeholders with the science needed to better understand the effect of man-made structures on the North Sea and hence better inform any decision making process.

1.2 Purpose of this Document

The scope of the INSITE research programme will be determined by an Independent Scientific Advisory Board (ISAB) under the chairmanship of Dr Graham Shimmiel. The public '*Request for Proposals*' (RFP) issued by ISAB in July 2014 covering the INSITE 'Foundation Phase', includes Pre-proposal and, if requested Full Proposal submissions.

Evaluations of the Pre-proposals received, and the subsequently invited Full Proposals will use the scope descriptions contained in this document i.e.:

- The overall Programme Objective;
- The description of the Integrated Programme; and
- The Scope Definition Statement

2 The INSITE Programme Objective

The overall objective of the INSITE Programme is:

“To provide stakeholders with the independent scientific evidence-base needed to better understand the influence of **man-made structures** on the **ecosystem** of the **North Sea**.”

Key terms and definitions of the words and phrases shown in bold are described in Sections 3 and 4 below.

3 The Integrated Programme

The INSITE Programme will facilitate connected physical, chemical and biological studies on how the presence of the various man-made structures in the North Sea influences or has influenced the ecosystem of the North Sea. The programme will focus primarily on ecosystem structure & function.

It is anticipated that the Programme will include studies relating to the variability in marine communities inhabiting or surrounding man-made structures, i.e., communities that depend on the presence, location, age and design of the structures and on their surrounding substrate.

The **primary objectives** of the study are to help establish:

- a) the magnitude of the effects of man-made structures compared to the spatial and temporal variability of the North Sea ecosystem, considered on different time and space scales; and
- b) to what extent, if any, the man-made structures in the North Sea represent a large inter-connected hard substrate system.

Studies in the initial 'Foundation Phase' of the Programme are expected to focus on modelling, but proposals for the collection, synthesis and analysis of data (or the means of collecting new data) are welcome.

The ISAB reserves the right to invite proposals from particular bodies or organisations from which data or information are required to construct a coherent and connected Programme.

4 Scope Definition Statement

To provide greater clarity and to ensure the objective of the Programme is fully understood, the following paragraphs describe key terms (in bold) used in Section 2, the INSITE Programme Objective statement.

There are many **man-made structures** in the North Sea region, some of which (e.g., shipwrecks) have been there for many decades. In this Programme it is proposed that man-made structures should include steel and concrete oil and gas installations, pipelines and renewable energy structures. Shipwrecks could provide an analogue of a structure of known age.

The **ecosystem** is defined as the complex of species inhabiting the North Sea and their interactions with each other and their environment, from bacteria to marine mammals, organisms that range in position from the subsurface sediments, through the water column and into the atmosphere (to include birds). Fishing activity is included but only in so far as it has a direct impact on the influence of man-made structures on the North Sea ecosystem. The external influences on the North Sea ecosystem have varied over centuries, and an appreciation of the changes in the ecosystem from more recent pressures will be required to ascertain whether the physical presence of man-made structures has had any effect over the past 40-50 years. The influence of man-made structures may be understood by taking an ecosystem-based approach to determine their cumulative effect and to compare this with effects of other stressors of the North Sea region, e.g., river and atmospheric pollution, and climate change. Coupled ecosystem modelling is regarded as an important approach, capable of including time and spatial dimensions as well as a predictive aspect to the Programme. Modelling is therefore considered an important component of the Foundation Stage of the Programme.

The **North Sea** is semi-enclosed with open boundaries to the northwest, southwest and the Skagerrak; the area of primary interest broadly coincides with OSPAR Region II 'the Greater North Sea'. Determining fluxes through the boundaries of the region is important for modelling purposes. The deep water off the shelf-break west of Shetland is outwith the study area, but studies of other areas such as the east Irish Sea may be included where they can be shown to provide relevant information. As an operational definition, this study extends from the 12 nautical mile limit from the coast although connectivity of pipelines to the shore is recognised, along with any similar effects from groupings of renewable energy structures which span this inshore limit. For clarity, near shore structures such as jetties, wharves and coastal defences are excluded. The countries bordering the North Sea, Denmark, the Netherlands, Germany, Norway and the UK are part of the JIP. It is hoped that learning from other regions, including recent and on-going work in the Gulf of Mexico, will be incorporated into the study.