

INSITE

Influence of
man-made
structures in
the ecosystem

The INSITE Programme: The Role of data in a Successful Industry- Science Partnership

MASTS Annual Science Meeting 4 October 2017

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INSITE Programme Director



INSITE Phase 1: Summary

INSITE	IN fluence of man-made Structures In The Ecosystem
Key Driver	Lack of science specifically addressing the question of how man-made structures influence the marine environment
Funding	8 Sponsoring organisations, made up of oil and gas operators Foundation Phase £2.4M (£1.8M net) over 3 years (BP, Centrica, CNRI, ExxonMobil, Marathon Oil, Shell, Repsol-Sinopec, Total)
Scientific Direction	Independent Scientific Advisory Board (ISAB) Set objectives and built the programme to deliver the objectives
Outcomes	Papers and articles published in the scientific media (requirement) Stakeholder symposia at end of years 1 and 2 of Programme
Timeline	<ul style="list-style-type: none">• Conceived: 2012• Industry agreement signed: April 2014; RFP: July 2014• Research Commenced: Q4 2015• Research Concludes: Q4 2017

Overall:

“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”

OBJECTIVE 1: ‘EFFECTS’

Investigate 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.

OBJECTIVE 2: ‘CONNECTIVITY’

To what extent, if any, do the man-made structures in the North Sea represent a large inter-connected hard substrate system?

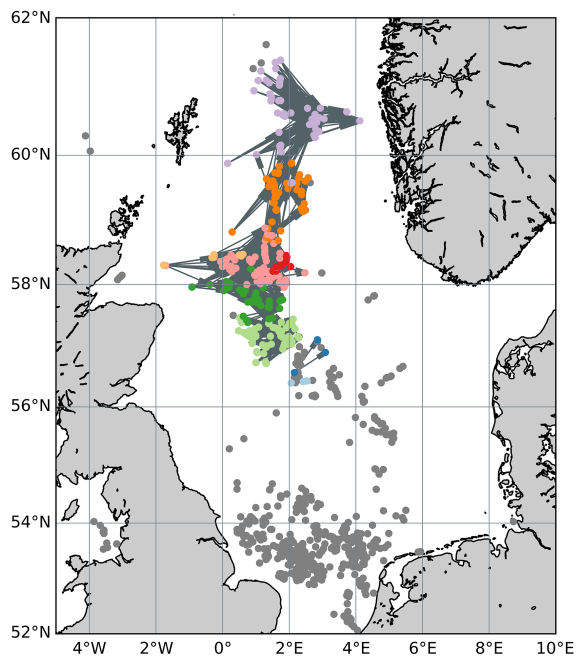
Objective 1: EFFECTS

Objective 2: CONNECTIVITY

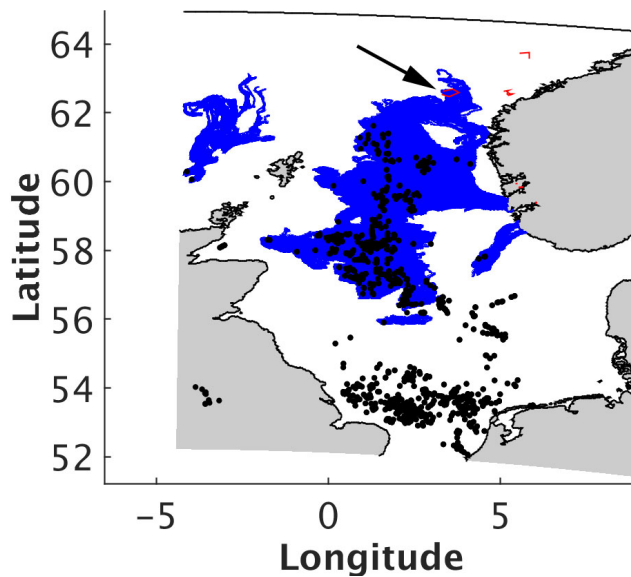


Murchison Platform: Sampling during Decommissioning





Trajectories of *Lophelia Pertusa* illustrating connectivity between platforms



Lophelia Pertusa pathways into Norwegian MPA



Images courtesy of the ANChor Project and INSITE

- Research projects are 'data hungry': *“Please forward all data on structures A, B and C that industry has ...”* Industry data:
 - Much of the available data is 'raw' ROV footage (many kilometres and is voluminous)
 - Data has been collected for a different purpose, i.e. Regulatory compliance
 - Obtaining useful sample data is difficult
 - Confidentiality is a major issue
- Conclusion: INSITE research is greatly enhanced by the availability and provision of quality ecosystem data, e.g. ANCHor, EcoConnect, RECON, UNDINE

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Data Enhancement

- **Industry**
 - Regulatory Compliance
 - Environmental Impact Assessment
 - Regional contextual data
 - Pre- Post-decommissioning
 - Long-term Monitoring

Data Acquisition

- **New Data-sets**
 - Consistent
 - Standardised
 - Accessible
 - Regulatory Compliant
 - Existing Data processing¹
- **Acquisition Technology**
 - Low-cost data acquisition systems
 - Deployment and recovery methodologies

Data Enhancement

- **Science**
 - Builds on INSITE Phase 1 objectives
 - Model validation and ground-truthing
 - Further research calls addressing specific issues, e.g. fouling

Note 1: Securing release of existing data from industry partners

INSITE Phase 2 – Structure and Funding

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Data Initiative

(including Project Management)

- Gather and process existing data
- Develop protocols
- Collect new data
- Development of data access products (e.g. portal access)

Science Programme

- Science Board led
- Built on enhancing INSITE Phase 1 objectives
- 5-year Programme, including synthesis to inform Policy-makers

Technology Programme

- Identify low-cost data acquisition systems
- Development of new technologies to enhance Data Initiative

Scope

Partners

Industry: Cash and In-kind Support
(E.g. data, access to assets, vessels, facilities)



Department for
Business, Energy
& Industrial Strategy

BEIS (in-kind)

NERC and Partners
'Joint Strategic Response'



Industry Contribution¹

CEFAS



Industry

OGTC or similar¹



The
Oil & Gas
Technology
Centre

Your Innovation Partner

¹ Subject to discussions with OGTC, OGIC or others

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- The INSITE Programme – Phase 2:
 - Funding model currently under development: Industry-Science Collaboration building on the INSITE governance model
 - Dialogue underway with NERC and Industry, plus BEIS, DEFRA, Oil & Gas UK and others
 - Timeframe
 - Foundation Phase concludes end of 2017
 - Data Acquisition and Enhancement Phase from Q1 2018 to end 2022

More information, abstracts and presentations available on: www.insitenorthsea.org

The INSITE SCIENCE DAY

Reporting on scientific studies exploring the influence of man-made structures on the ecosystem of the North Sea

31st October 2017

The Royal Society, 6-9 Carlton House Terrace, London SW1 5AG

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

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Register to attend at: www.insitenorthsea.org