

Innovation Programme in Oil and Gas

Mark Calverley
MASTS IPOG Meeting
4th October 2019



Welcome

Time		
1330	Mark Calverley	Introduction to IPOG
1340	Per Berggren	Novel low-cost methods for marine mammal and environmental monitoring
1405	Sally Rouse	Improving marine growth estimates using 3D photogrammetry
1430	Jacky Wood	Overview of UKRI / NERC Funding Mechanisms
1450	Gus Jeans	Panel Discussion
1550	Mark Calverley	Summary
1600		Close



Challenges and Themes



Decommissioning



Extending the life of mature basins



Exploration in challenging environments



Unconventional hydrocarbons

Innovative monitoring approaches

Data management, sharing and collaboration

Environmental management

IPOG Members



BMT Cordah Limited



Chevron North Sea Limited



Fugro



Joint Nature Conservation
Committee



Marine Scotland



Natural England



Oil Spill Response Limited



Innovation

The process of translating an idea or invention into a good or services that creates value for which customers will pay



Funding rounds - Decommissioning

Year	Title	PI	Institute
2015	Automation of Marine Growth Analysis for Decommissioning Offshore Installations	Dr Beth Scott	University of Aberdeen
	Optimising decommissioning of oil and gas pipelines with respect to the commercial fishing sector on the UK continental shelf	Dr Thomas Wilding	SAMS
2016	Strategic Review of Autonomous System Capability for Long Term Decommissioning Monitoring	Prof Ben Wilson	SAMS
	Development of a strategic framework for the comparative assessment of pipeline decommissioning options: optimising environment and fishing interests	Dr Thomas Wilding	SAMS
	An evidence-based approach for the effects of decommissioning options on Marine Protected Area conservation and ecosystem services (DECOM-MPA)	Prof Michael Elliott	University of Hull
	Autonomous marine environmental monitoring for decommissioning	Dr Brian Bett	NOC



Funding rounds – Innovative Monitoring

Year	Title	PI	Institute
2018	Demonstration Of A Comprehensive Approach To Monitoring Emissions From Oil and Gas Installations (AEOG)	Prof. Stephen Mobbs	University of Leeds
	Improving marine growth estimates using 3D photogrammetry	Dr Thomas Wilding	SAMS
	Innovative monitoring of offshore methane and hydrocarbons with miniature sensors and autonomy	Alexander Beaton	NOC
	Discrimination of Sediment Type using Unmanned Aerial Vehicles (DST-UAV)	Prof. Dominic Reeve	Swansea University
	Fibre-optic distributed Acoustic Sensor Technology for seismic Monitoring During shale gas Extraction (FAST-MoDE)	Prof. Michael Kendall	University of Bristol



Funding rounds – Innovative Monitoring

Year	Title	PI	Institute
2018	Novel low-cost methods for marine mammal and environmental monitoring	Dr Per Berggren	Newcastle University
	Development of a standardised marine mammal monitoring system for the tidal energy industry	Gordon Hastie	University of St Andrews
	Monitoring and forecasting avian collision risk at an operational offshore wind farm	Aonghais Cook	BTO
	Measuring ADD Noise in Tidal Streams (MANTIS): Could Acoustic Deterrent Devices (ADDs) reduce risk of marine mammal collisions with tidal turbines?	Ben Wilson	SAMS
	Radar-model-fusion approach for high-resolution marine resource mapping (RAWMapping)	David McCann	NOC



Panel Discussion

- Peter Oliver - Chevron
- Steve Hall – SUT
- Sally Rouse – SAMS / MASTS Oil & Gas
- Jacky Wood – NERC

- Chaired by Gus Jeans - Oceananalysis



Objectives

- To inform the future strategy of IPOG
- To ensure available funding mechanisms are identified to support IPOG member
- To inform dissemination activities and strategy to better link industry and research
- To inform NERC's programme strategy



NERC Research areas

- Atmospheric physics and chemistry
- Climate and climate change
- Ecology, biodiversity and systematics
- Geosciences
- Marine environments
- Terrestrial and freshwater environments
- Tools, technology and methods



Do you believe that the original IPOG challenges and themes remain the priorities of the industry, if not what would you like to see addressed?



Decommissioning



Extending the life of mature basins



In challenging environments, those who learn and apply new ideas, win.

Exploration in challenging environments



Unconventional hydrocarbons

Innovative monitoring approaches

Data management, sharing and collaboration

Environmental management

Panel Discussion Questions

- Many operators are investing in decarbonisation strategies, do you feel that this is an area that NERC funded science and technology should be supporting, and if so how?
- What science/ technologies do you believe to be key to solving the challenges in the oil and gas sector?
- What are the key enablers to innovation in the oil and gas sector utilising the science / technologies you have highlighted?
- What are the key inhibitors to innovation in the oil and gas sector utilising the science / technologies you have highlighted?

