

ACTOM

Act on Offshore Monitoring

Accelerating
CCS
Technologies



NORCE

PML

Plymouth Marine Laboratory



Los Alamos
NATIONAL LABORATORY

TNO innovation
for life

Centre for Energy, Petroleum
and Mineral Law and Policy
University of Dundee



Objectives

...the primary objective of ACTOM is to develop internationally applicable capabilities for the design and execution of appropriate, rigorous and cost-effective monitoring of offshore carbon storage, aligning industrial, societal and regulative expectations with technological capabilities and limitations.

Key Targets

We envisage, as a result of ACTOM, three new capabilities for the industrial, regulatory and social sectors, they are to:

- Enable regulators to quantifiably assess that a proposed monitoring strategy delivers an acceptable standard of assurance.
- Enable operators to properly plan, cost and adapt monitoring strategies to site specific circumstances, hence accelerate the planning phase and implementation.
- Enable regulators and operators to communicate to the effectiveness of proposed monitoring strategies to enable informed societal consensus in view of marine spatial planning.

Expected outcome

- A pre-operational web-based toolkit of algorithms that enable the derivation of optimal monitoring strategies specifically tailored to individual offshore storage sites or regions.
- The toolkit will enable an operator to determine how to combine different monitoring technologies and to design and update adequate and efficient monitoring programs based on assessed risks.
- The toolkit will evaluate the success rate of metrics and automatic decision and recommendation tools for detecting anomalies in data streams.

Project Integration

WP1 BASELINE: *Monitoring the marine environment.*

Will survey the regulatory requirements and opportunities and technical limitations laying the foundation for the marine monitoring program. This activity will underpin the other WPs, providing the necessary information on what level of assurance is expected from a monitoring program, alongside the present capabilities of marine measurements and monitoring.

WP2 DIGITAL: *Design and build of the pre-operational web toolkit.*

Will be responsible for building the toolkit based on verified algorithms for detecting weak signals in a highly variable environment and designing monitoring programs.

WP3 RESPONSIBILITY: *Responsible CCUS monitoring process.*

Will study how the monitoring program can be used to communicate risks and benefits of subsea storage, and as a tool for public engagement through the Responsible Research and Innovation (RRI) framework.

WP4 IMPACT: *Scenarios and site studies.*

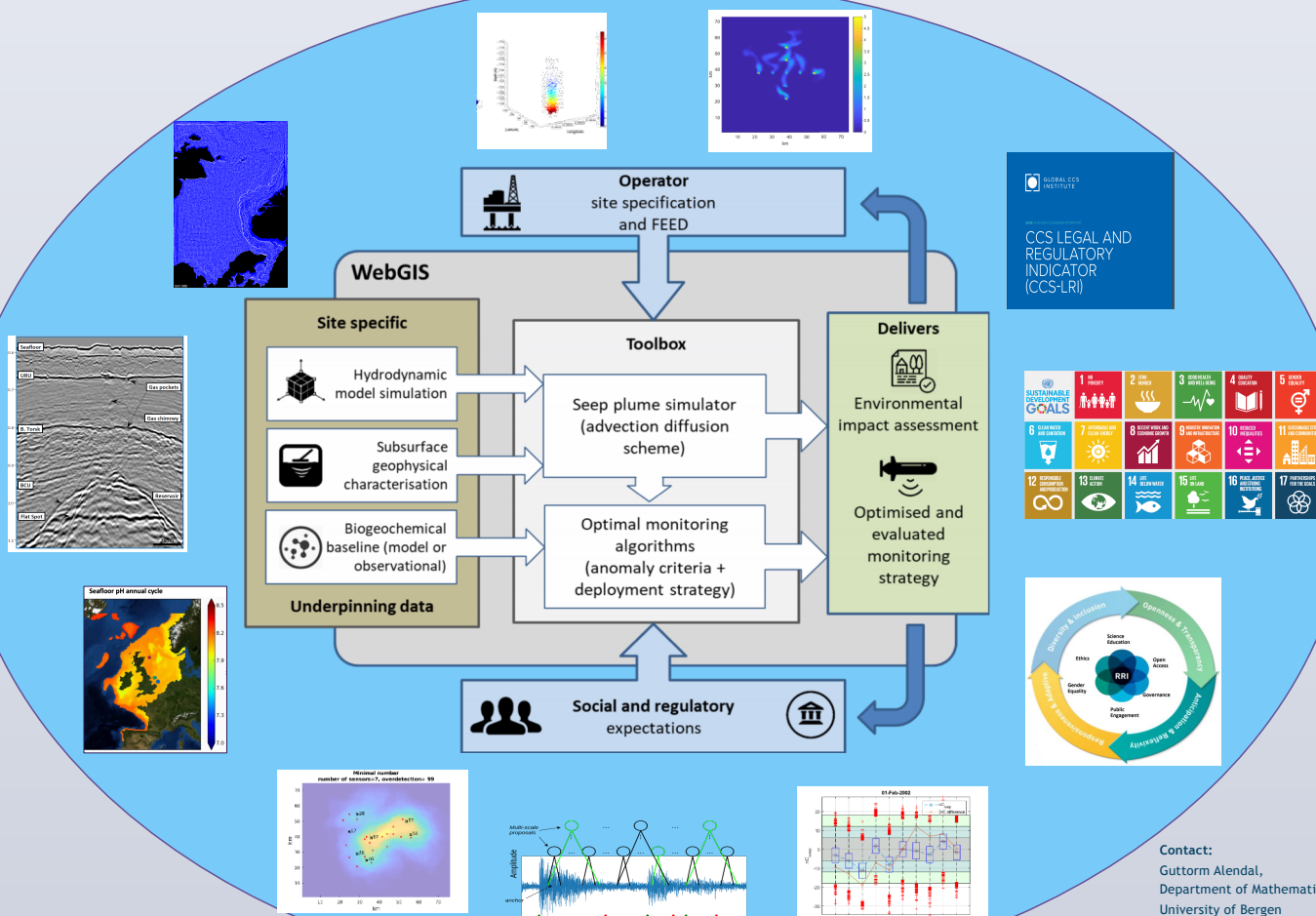
Will utilize the web toolkit built in WP2 and the knowledge learned in WP3 to study policy scenarios and demonstrate the toolkit on the P18 and Smeaheia storage sites as well as study sites in the Gulf of Mexico.

WP5 INTEGRATION: *Dissemination, reporting and coordination.*

Assure easy communication in this highly cross-disciplinary project, both in the core project group, in the extended collaboration group, and beyond the project.

ACTOM will apply

- A Responsible Research and Innovation (RRI) and a marine spatial planning (MSP) and licensing framework to evaluate CCUS in a social, regulatory and political context
- Put offshore monitoring strategies in a practicable framework in line with current regulations, standards and expectations.



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