

# Sustainable Water Network (SWAN)

## *Response to Public Consultation: Unconventional Gas Exploration & Extraction*

*PROPOSED TERMS of REFERENCE for EPA/DCENR/NIEA Research Programme  
on Environmental Impacts of Unconventional Gas Exploration & Extraction  
(UGEE)*



**March 8th 2013**

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## Introduction to SWAN

The Sustainable Water Network (SWAN) is an umbrella network of 25 of Ireland's leading environmental NGOs, national and regional, working together to protect and enhance Ireland's aquatic resources through coordinated participation in the implementation of the Water Framework Directive (WFD) and other water-related legislation. SWAN member groups are listed in Appendix I. SWAN has been actively engaged in Water Framework Directive (WFD) and other water policy implementation at both national and River Basin District (RBD) level since 2004, responding to water-related public consultations and representing the environmental sector on WFD River Basin District (RBD) Advisory Councils, the South Eastern RBD Management Group and other water policy-related fora. **SWAN is also actively participating in the Catchment Flood Risk Management (CFRAMS) process and representing the environment sector at CFRAMS stakeholder meetings in all RBDs.**

## Research Programme on Environmental Impacts of UGEE

The Sustainable Water Network welcomes the Research Programme on Environmental Impacts of Unconventional Gas Exploration and Extraction (UGEE). SWAN wishes to submit the following comments and suggestions in relation to the proposed Terms of Reference for this Research Programme.

### Section 3. Previous Research on Unconventional Gas Exploration & Extraction

In addition to the EPA commissioned preliminary study<sup>1</sup> the Terms of Reference document states that *'Further research is required to fully understand the potential impacts on the environment from the use of this technology. The key questions this research needs to answer are:*

- 1) *Can this technology be used whilst also fully protecting the environment and human health? If the answer is yes, then:*
- 2) *What is best environmental practice in using the technology?'*

The first key question, before 1) & 2), must be

#### **What are the environmental impacts of fracking in Ireland?**

It is necessary to conduct a fully comprehensive study of the environmental impacts of fracking in Ireland in order to answer the two proposed key questions.

### Section 5. Further research

*'This programme of research is being administered by the EPA STRIVE Programme, and steered by a committee with representatives from DCENR, DECLG, the Commission for Energy Regulation (CER), An Bord Pleanála (ABP), GSI, the Northern Ireland Environment Agency (NIEA) and the Geological Survey of Northern Ireland (GSNI).'*

Commented [NF1]: Other stakeholders?

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<sup>1</sup> Healy D. (2012) Hydraulic fracturing or 'fracking' a short summary of current knowledge and potential environmental impacts. EPA, Wexford.

## Project-A: Baseline Characterisation:

### Project A-1 (groundwater, surface water and associated ecosystems):

The document states that '*...specific tasks relating to groundwater, surface water and associated ecosystems are required...*'. However the tasks outlined relating to the assessment of existing baseline monitoring practices and further baseline monitoring only refer to groundwater. SWAN welcomes baseline monitoring of groundwater however it is of vital importance that the assessment of existing monitoring and further baseline monitoring also includes surface water and associated ecosystems. This should place particular importance on water quality status in the context of the Water Framework Directive.

In addition to these requirements in order to complete a thorough assessment of baseline monitoring the exact chemical composition of chemicals added to the injection fluid which could be used in the fracking process must be declared to ensure that the means '*are in place to detect and monitor the presence and movement of this chemical*'<sup>1</sup> in all water bodies.

## Project-B: Fracking Operations, Impacts & Mitigation Measures:

This section states that '*This project should comprise a detailed examination of the potential environmental impacts and successful mitigation measures, associated with fracking that have come to the fore worldwide using published reports and other sources.*'

### 1. Water Impacts and Mitigation Measures

This subsection states that '*This work package should examine potential environmental impacts of UGEE on groundwater and other water bodies, including methane and chemical and other contaminant migration, both from surface as well as subsurface potential sources. Findings should be informed by an objective assessment of the risks and hazards posed by UGEE, supported by a literature review and experience from other jurisdictions. Mitigation measures to address water impacts (including effluent management/treatment) should be critically reviewed and presented.*

SWAN welcomes both these statements in that environmental impacts from fracking worldwide supported by literature will be used to inform this research however it needs to recognise that the research will need to identify additional potential impacts that had not occurred before worldwide could occur in Ireland given, *inter alia*, the complex geology, hydrogeology and surface water patterns and conditions which occur here. Findings from Project A: (Baseline characterisation) will somewhat inform the research and output from Project B so both project timelines will need to consider this.

## Project-C: Regulatory Framework for Environmental Protection

This section makes specific reference to *Directive 2006/21/EC on the management of waste from the extractive industries* and comprises a number of tasks

1. Regulatory approach of other countries
2. Best practice
3. Public engagement

#### 4. Other issues

An additional task should comprise a thorough evaluation of all relevant environmental legislation as has been identified at European level <sup>2,3</sup> and the transposing and national legislation in Ireland, recommendations for any gaps identified, identification of all relevant national agencies with responsibility for regulating all relevant activities and on integrated management of these activities.

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<sup>2</sup> European Parliament (2011) Impacts of shale gas and shale oil extraction on the environment and human health. European Parliament, Luxembourg.

<sup>3</sup> Broomfield (2012) Support to the identification of potential risks for the environment and human health arising from hydrocarbons operations involving hydraulic fracturing in Europe. AEA Technology, Didcot.

## Appendix I

### SWAN Member Organisations & Board Members

SWAN National Groups		SWAN Regional & Local Groups	
1.	An Taisce	16.	Carra Mask Corrib Water Protection Group
2.	Bat Conservation Ireland		
3.	Birdwatch Ireland	17.	Cavan Leitrim Environmental Awareness Network
4.	Coastwatch Europe Network		
5.	Coomhola Salmon Trust Ltd.	18.	Cork Environmental Forum
6.	Eco-UNESCO	19.	Longford Environmental Alliance
7.	Friends of the Earth	20.	Macroom District Environmental Group
8.	Friends of the Irish Environment		
9.	Irish Doctor's Environmental Association	21.	Save Our Lough Derg
10.	Irish Peatland Conservation Council	22.	Save Our Lough Ree
11.	Irish Seal Sanctuary	23.	Save The Swilly
12.	Irish Water and Fish Preservation Society	24.	Shannon Whale & Dolphin Foundation
13.	Irish Whale and Dolphin Group		
14.	Irish Wildlife Trust	25.	Slaney River Trust
15.	Voice Of Irish Concern for the Environment (VOICE)		

#### SWAN Board of Directors:

Mark Boyden, Chair	Coomhola Salmon Trust
Eamonn Moore, Vice Chair	An Taisce
David Healy, Director	Friends of the Irish Environment
David Lee, Director	Cork Environmental Forum
Elaine Nevin, Director	ecoUNESCO
Joachim Schaefer, Director	Cavan Leitrim Environmental Awareness Network
Karin Dubsy, Director	Coastwatch Europe