

UGEE JOINT RESEARCH PROGRAMME

Submission on the Reports to Joint Committee on
Communications, Climate Action and Environment
SUMMARY

The Joint Research Reports were studied and reviewed. This paper debates the conclusions reached in the Executive Summary of the Integrated Synthesis Report and draws attention to 12 findings and issues included in the Research Study that have serious implications for the Research Questions.



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COMMENTS ON THE INTEGRATED SYNTHESIS REPORT

The research study on UGEE is an extensive document consisting of 11 separate reports, including an Integrated Synthesis Report which is a summary of the research, and an Executive Summary that attempts to further summarise the report.

The aim of this study according to the Terms of Reference¹ is to answer two questions:

1. *Can UGEE projects/operations be carried out in the island of Ireland, while also protecting the environment and human health?*
2. *What is best environmental practice in relation to UGEE projects/operations?*

THE RESEARCHERS FAIL TO ANSWER THOSE QUESTIONS.

The Executive Summary on the first page of the Integrated Synthesis Report surprisingly does not quote the research questions but makes some important statements:

1. *“UGEE activities have the potential to impact both human health and the environment”.*

Comment: In this case, the essential follow-on question is **“Can those activities with the potential to impact both human health and the environment be adequately mitigated so that there is protection from such impacts?”** The research study continues:

2. *“Many of the activities associated with UGEE projects/operations could proceed on the island of Ireland, while protecting the environment and human health, using the best practices...”*

Comment: The activities cited (access road construction, site preparation and materials transport) are **not part of the hydraulic fracturing process** and current regulations may adequately mitigate the environmental impact of single operations. However, the **cumulative and substantial environmental impacts** of establishing a commercial UGEE project with dozens of well pads, access roads to each, up to 1,000 wells, extensive industrial infrastructure and a million vehicle journeys, are not mentioned, although described in Report 4.

3. Three important impacts that possibly could not be effectively mitigated (“effectiveness remains unproven”) are identified:
 - *Groundwater contamination from migration of pollutants through fractures created by hydraulic fracturing*
 - *Groundwater contamination by leakages from wellbore casings*
 - *Methane leakages from wells.*

This means that the processes of hydraulic fracturing, well completion and gas extraction, essential elements of UGEE operations, are **NOT shown possible to carry out while protecting the environment and human health.**

¹Unconventional Gas Exploration and Extraction (UGEE) Terms of Reference

Comment: This is an important finding. If activities associated with hydraulic fracturing, well completion and gas extraction cannot prove to be capable of adequate mitigation, and pose risks to the environment and human health, **then THE ANSWER TO RESEARCH QUESTION 1 IS “NO” and the Precautionary Principle applies.**

4. **The statement on the impacts on air quality was extraordinarily misleading.** *“There is a lack of a clear agreement on the magnitude of air quality impacts caused by UGEE activities, although there is consensus about the compounds or families of compounds emitted.”*

The research study describes chemicals used in hydraulic fracturing and/or emitted and their toxicity, **not protection of human health.** It does not mention the hundreds of peer-reviewed scientific reports that detail serious impacts of human health experienced by industry workers and communities living close to well pads. The compendium² of such reports is not even referenced despite its authenticity. Mitigation of such human health impacts is not addressed.

In summary, the Integrated Synthesis Report cannot conclude that Unconventional Gas Exploration and Extraction projects and operations can be carried out in the island of Ireland, while also protecting the environment and human health.

CONCLUSIONS ON INTEGRATED SYNTHESIS REPORT

This report shows no evidence that UGEE projects/operations could be carried out in the island of Ireland, while also protecting the environment and human health.

Given the known risks to the environment and human health, coupled with the contribution of UGEE to Greenhouse Gas emissions and climate change, legislation must be passed that would enact a prohibition on UGEE projects/operations in the island of Ireland .

² *Compendium of Scientific, Medical, and Media Findings Demonstrating Risks and Harms of Fracking (Unconventional Gas and Oil Extraction)* Concerned Health Professionals of New York, Physicians for Social Responsibility (2016)

OTHER FINDINGS AND ISSUES INCLUDED IN THE RESEARCH STUDY

THEME 5 - GENERAL

1. Confirms that the Northwest Carboniferous Basin (**NCB**) is a structurally complex, fault-bounded sedimentary basin with fault and fracture networks, **extensive aquifers**, some of which extend deep underground, and complex, poorly understood underground water courses and networks.
2. Discovers **serious gaps in knowledge** of the deep underground conditions in the Northwest Carboniferous Basin (NCB) and the Clare Basin.

THEME 6 - WATER

3. Acknowledges the shallow depth of the target shale formations and cannot accurately estimate the **risk of migration of pollutants along fractures** generated by UGEE to subsurface aquifers in the study areas.
4. Describes pathways of groundwater contamination from UGEE but gives flawed analysis of risks of contamination by failed borehole casings.
5. Can find no failsafe way of preventing **leakage of methane** and other gases from wells.
6. Cannot forecast the impact of UGEE on **seismicity (earthquakes)** in the target areas.

THEME 7 – IMPACTS AND MITIGATION MEASURES

7. Acknowledges the absence of a pathway for **wastewater disposal** in Ireland without major environmental impacts.
8. Lists **numerous potential impacts on the environment and communities** caused by UGEE projects/operations.
9. Cannot evaluate **the impacts of particle and gas pollution from UGEE project/operations on human health**.
10. **Does not address the issue of protecting human health**
11. A **two-year extensive environmental monitoring programme** is proposed at huge expense and with doubtful benefits

THEME 8 – REGULATORY FRAMEWORK

12. Found **gaps in EU legislation and no statutory requirement for HIA** at SEA or EIA level.

Each of those issues are addressed separately in the full Submission.

OVERALL CONCLUSION

We cannot do better than quote the conclusion to the Compendium of Scientific, Medical, and Media Findings Demonstrating Risks and Harms of Fracking (Unconventional Gas and Oil Extraction) Fourth Edition³

“Findings to date from scientific, medical, and journalistic investigations combine to demonstrate that fracking poses significant threats to air, water, health, public safety, climate stability, seismic stability, community cohesion, and long-term economic vitality. Emerging data from a rapidly expanding body of evidence continue to reveal a plethora of recurring problems and harms that cannot be averted or cannot be sufficiently averted through regulatory frameworks.”

And

“There is no evidence that fracking can operate without threatening public health directly or without imperiling climate stability upon which public health depends.”

THIS IS ALSO OUR CONCLUSION

The research question was

Can UGEE projects/operations be carried out in the island of Ireland while also protecting the environment and human health?

Answer: This study shows NO evidence that UGEE projects/operations could be carried out in the island of Ireland, while also protecting the environment and human health.

The second question was:

What is “best environmental practice” in relation to UGEE projects/operations?

Answer: Since no evidence has been produced that UGEE projects/operations can be carried out while also protecting the environment and human health, there cannot be “best environmental practice”, i.e. practice that would do mitigate the risks to such an extent that the environment and human health would be protected.

Recommendation: That legislation be passed that would enact a ban on UGEE (fracking) in the island of Ireland.

³ *Compendium of Scientific, Medical, and Media Findings Demonstrating Risks and Harms of Fracking (Unconventional Gas and Oil Extraction)* Concerned Health Professionals of New York, Physicians for Social Responsibility (2016)
<http://concernedhealthny.org/compendium/>