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Cluster: Environment, Development and Sustainability

Theme:

Sustainable and Inclusive Societies

Further Reading:

Heaslip, E., Costello, G.J. and Lohan, J., 2016. Assessing good-practice frameworks for the development of sustainable energy communities in Europe: Lessons from Denmark and Ireland. Journal of Sustainable Development of Energy, Water and Environment Systems, 4(3), pp.307-319.

Heaslip, E. and Fahy, F., 2018. Developing transdisciplinary approaches to community energy transitions: An island case study. Energy research & social science. https://doi.org/10.1016/j.erss.2018.07.013

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Developing Transdisciplinary Approaches to Community Energy Transitions

Communities' perceptions of energy are complex, place-based and situated in cultural and political contexts. Explicitly addressing the social study of energy and climate change, the research highlights how developing collaborative, fair approaches to community low carbon energy transitions poses critical questions for both technical and social scientific methods. This research argues that there is a unique space at these disciplinary junctures of energy research for a transdisciplinary methodological framework that is embedded in both social scientific and technical contexts. Introducing an innovative methodological approach, this research critically reflects on the design and development of a transdisciplinary methodological framework and its successful implementation in energy planning with 29 households participants on Inis Oírr, an island off the west coast of Ireland, from 2015-2017. The novel methodological approach developed and tested in this study utilised thorough qualitative data generated through in-depth focus groups and interviews. The data was then used to inform the design of technical energy plan scenarios employing hybrid micro-grid system design software.

Results

The findings from this research reveal how the inclusion of social science expertise into energy planning can give broader context to the needs of communities and the suitability of certain technologies. Outputs from this research included the co-creation of three technical energy scenarios which revealed that, although technologies might be technically and economically viable, they must also meet the energy needs and practices of the community in question. Without the inclusion of social scientific methods into the transdisciplinary energy planning process, and the extensive data collection of the participants' narratives, the reason for unusual energy demand profiles on Inis Oírr may not have revealed themselves. Chronicling the difficulties faced by those in island communities constituted a large portion of discussions around local knowledge. Participants' narratives revealed that geographic remoteness had an impact on perceptions of energy and energy practices. Participants' discussions revealed several perceived requirements for a successful energy plan in an island community. These included (but were not limited to): the use of affordable energy, achieving energy independence, the inclusion of the community in its management, the use of renewable energy and the use of secure energy sources.

Policy Implications

While the outputs and development of three energy scenarios are important in their own right, one of the significant contributions of the research is that the results highlighted how reflexivity is key to merging across disciplinary approaches. Due to the co-creative nature of the methodology, the response from participants to the process was very positive. The participants stated that they felt they had ownership over the project and the methodology was fully inclusive of their knowledge. This case study provides a grounded empirical worked example that has articulated, illustrated and provided co-created solutions to problems of method in transdisciplinary energy research.

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