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ESB Networks and MaREI Collaborative Research on the Dingle Peninsula

Overview of Research Outputs

MaREI 2022

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Introduction

This report collates the MaREI research outputs arising from the collaborative research project undertaken with ESB Networks entitled *MaREI Engaged Research to Support the Energy Transition on the Dingle Peninsula*. The project took place over a three year period between October 2019 and September 2021. The outputs comprise

- 13 innovative, co-produced learning briefs that document and evaluate the lessons learned from the Dingle Peninsula 2030 initiative. These learning briefs are made publically available with a view to informing future engagement between public bodies and communities and to inform wider climate action and climate action policy.
- 7 journal papers, focussing on the energy engineering, sociological and transdisciplinary aspects of the research. The papers are internationally scientifically peer reviewed to ensure that the research is original and uses valid scientific methods.
- 1 report summarizing the key findings on two aspects of the research, namely the ESB Networks Dingle Project Ambassador Programme and Electric Vehicles Trials.
- 14 videos highlighting different aspects of the research and partnership activities associated with the Dingle Peninsula 2030 partnership.
- 10 academic conference presentations, allowing the MaREI researchers to share and discuss the findings of this research with other cutting-edge scholars involved in energy engineering, sociology, climate mitigation and energy transition research.
- 27 research engagement events where the researchers presented and discussed the research findings to policy makers, citizens, communities, industry and academics.

The 13 learning briefs, 7 journal papers and 1 research report are included in this report. Web links are provided for the videos. The MaREI research team is hugely grateful for the collaborative support provided by ESB Networks, Dingle Hub, North East West Kerry Development and the citizens and communities on the Dingle Peninsula who provided key contributions to the success of the research. MaREI also acknowledges the research funding provided by ESB Networks and by Science Foundation Ireland.

Research Outputs

Co-created Learning Briefs (LB)

The Dingle Peninsula 2030 'Learning Briefs' are short documents focusing on learnings from particular activities, projects or outcomes relating to the work of the partnership. The process has been coordinated by MaREI but the learning briefs themselves are co-created with other members of the partnership.

1. Climate Hack Learning Brief- highlights the interactive approach to scientific communication used to have a discussion about the energy system with students in the Dingle Peninsula's three secondary schools. [Published April 2020](#)
2. Dingle Peninsula 2030 Brochure- provides an outline of the aims and objectives of Dingle Peninsula 2030, highlighting a number of the different initiatives being developed on the peninsula. [Published May 2020](#)
3. LED Bulb Swap- this learning brief highlights the approach taken to the 'LED bulb swap', whereby 300 LED bulbs were distributed to residents of the peninsula, with an estimated saving of 13.8 tonnes of CO₂. [Published July 2020](#)
4. Energy Master Plan Learning Brief- documents reflections on the creation of a sustainable energy community and work to develop an energy masterplan for the Dingle Peninsula, outlining a number of recommendations to improve the process. [Published August 2020](#)
5. Dingle Peninsula 2030: The Value of Collaboration- this learning brief draws out reflections from members of the collaborative committee across the four organisations involved in Dingle Peninsula 2030 drawing out benefits and challenges associated with collaboration. [Published February 2021](#)
6. Anaerobic Digestion on the Dingle Peninsula- the development of an anaerobic digestion feasibility study is charted through this learning brief, from the initial conversations to stakeholder workshops and study reports. [Published May 2021](#)
7. The Community Energy Mentor Course- documents the series of community meetings held in the seven parishes across the peninsula, as well as a summary of the key issues that were discussed. [Published May 2021](#)
8. Evidence-based Community Planning on Corca Dhuibhne- this learning brief outlines the process throughout which members of the Dingle Peninsula 2030 engaged with seven parishes across the peninsula to develop a socio-economic profile of the area. [Published June 2021](#)
9. Dingle Peninsula 2030- Lessons Learnt and Implications for Policy and Practice- here reflections and learnings are provided with relation to the first three years of operations on Dingle Peninsula 2030, with policy and practice recommendations provided. [Published November 2021](#)
10. ESB Networks Dingle Project: The Ambassador Programme- over the past three years MaREI has followed the Ambassador Programme whereby five people integrated low-carbon technologies into their homes and businesses on the peninsula. [Published January 2022](#)

11. ESB Networks Dingle Project: The EV Trial- this learning brief highlights findings related to the EV trial whereby 15 electric vehicles were given to residents on the peninsula to investigate experiences of using EVs in a rural context for daily driving. [Published January 2022](#)
12. Dingle Peninsula 2030 and The Diffusion of Sustainability – here a range of different emergent initiatives emanating from Dingle Peninsula 2030 and ESB Networks Dingle Project are outlined with relation to the emergence of the area as an active energy community. [Published January 2022](#)
13. The Role of Engaged Research in Dingle Peninsula 2030_documents the various engagement activities undertaken by MaREI, as well as reflections on the value of, challenges associated with and recommendations for supporting this research approach. Published February 2022.

Journal Papers (JP)

1. McGookin, C., Gallachóir, B.Ó. and Byrne, E., 2021. An innovative approach for estimating energy demand and supply to inform local energy transitions. *Energy*, 229, p.120731. Developed an approach for estimating energy demand/supply and associated CO2 emissions in small regions such as the Dingle Peninsula. This was the analysis that informed the Energy Masterplan.
2. McGookin, C., Gallachóir, B.Ó. and Byrne, E., 2021. A compiled dataset of the energy usage indicators and unit energy consumption values available in Ireland. *Data in Brief*, p.107204. Supporting data for the previous paper.
3. Boyle, E., Watson, C., McGookin, C., Deane, A., de Bhailís, D., McElligott, C., O'Hara, S., Tuohy, B., Gallachóir, B.Ó. and Mullally, G., 2021. Reflecting on a collaborative approach to a regional sustainability transition: Dingle Peninsula 2030. *Reflective Practice*, 22(3), pp.416-430. Draws out reflections from members of the collaborative committee across the four organisations involved in Dingle Peninsula 2030 drawing out benefits and challenges associated with collaboration.
4. Boyle, E., Ó Gallachóir, B. and Mullally, G., 2021. Participatory network mapping of an emergent social network for a regional transition to a low-carbon and just society on the Dingle Peninsula. *Local Environment*, pp.1-15. Provides an outline of a workshop where participants from Dingle mapped out their goals related to Dingle Peninsula 2030 alongside the supports required to achieve them.
5. McGookin, C., Gallachóir, B.Ó. and Byrne, E., 2021. Participatory methods in energy system modelling and planning—A review. *Renewable and Sustainable Energy Reviews*, 151, p.111504. Provides an overview of the various qualitative and quantitative methods used to develop energy system models through a participatory approach.
6. Boyle, E., 2021. Workshopping online: the use and usability of online platforms for facilitating research workshops in the era of covid-19. *Journal of Qualitative Social Sciences*, 3(1), pp.22-32. Outlines reflections on undertaking qualitative research using online platforms in light of the Covid-19 pandemic.
7. Boyle, E., Watson, C., Mullally, G. and Ó'Gallachóir, B., 2021. Regime-based transition intermediaries at the grassroots for community energy initiatives. *Energy Research & Social Science*, 74, p.101950. Outlines the role of different supporting groups to help communities develop energy projects.

Report (R)

The ESB Networks Dingle Project: Activating Energy Citizenship- Across the three years of the research (December 2018-September 2021), MaREI developed a range of different methods to provide insights into the *Dingle Project*. This research report provides findings with relation to energy citizenship both at the individual and societal level and brings forward knowledge with relation to the social dimensions of low-carbon technologies. Published January 2022.

Video Content

1. [The ESB Networks Dingle Project \(2019\)](#)
2. [LED Bulb Swap Event \(2019\)](#)
3. [Climate Hack in Schools \(2019\)](#)
4. [Dingle Peninsula Farmers' Forum: Farming-the key to a sustainable future \(2019\)](#)
5. [ESB Networks Dingle Project Community Networking Event \(2019\)](#)
6. [ESB Networks Dingle Project Community Networking Event \(2020\)](#)
7. [Anaerobic Digestion on the Dingle Peninsula \(2020\)](#)
8. [Dingle Adapts Energy Live Series featuring ESB networks Ambassadors \(5 interviews & a panel discussion\) \(2021\)](#)
9. [Energy Action on the Dingle Peninsula \(short version\) \(2021\)](#)
10. [Energy Action on the Dingle Peninsula \(full version\) \(2021\)](#)
11. [Sustainable Agriculture on Dingle Peninsula \(short version\) \(2021\)](#)
12. [Sustainable Agriculture on Dingle Peninsula \(full version\) \(2021\)](#)
13. [Corca Dhuibhne public vox pops \(2021\)](#)
14. [Engaged Research on the Dingle Peninsula \(2021\)](#)

Academic Conference Presentations

1. Bolger, P., McGookin, C., & Boyle, E. (2021) 'Collaborating for a more sustainable society – Enabling team science and inter/transdisciplinary research for sustainability', Environ. University College Cork, 16th – 18th June. – Workshop session hosted with Paul Bolger (Manager of UCC Environmental Research Institute) for early career researchers looking to work with other disciplines and stakeholders from outside the university.
2. McGookin, C., Ó Gallachóir, B., & Byrne, E. (2021). 'Planning healthy communities for a healthy planet', Environ. University College Cork, 16th – 18th June. – Presentation on the findings from modelling the Dingle Peninsula energy system out to 2030 and community meetings held with NEWKD.
3. McGookin, C., Ó Gallachóir, B., Byrne, E. (2021) 'Walking the walk; meaningfully engaging people with engineering challenges', EESD2021: Proceedings of the 10th Engineering Education for Sustainable Development Conference, 'Building Flourishing Communities', University College Cork, Ireland, 14-16 June. pp. 356-363. ISSN: 2737-7741 at: <https://cora.ucc.ie/handle/10468/11459> - Presentation on how conventional engineering education fails to prepare engineers to work collaboratively with communities.
4. Boyle, E., McGookin, C. (2021) 'Dingle and transdisciplinary research'. Royal Irish Academy Annual Conference. 3rd June 2021. An overview of the transdisciplinary approach to work on the Dingle Peninsula, combining energy engineering, social science, and wider stakeholders to engage in developing a low-carbon transition initiative.
5. McGookin E., Boyle, E. (2020) 'Facilitating Sustainable Transitions through the meeting of top-down, bottom-up and middle-out approaches' International Sustainability Transitions Conference, 2020 Vienna. 18th August 2020. – Panel session hosted with Deirdre (Dingle Hub) and representatives from UN and Austrian government discussing how to improve communication channels at the various policy levels in order to support local projects like Dingle Peninsula 2030.
6. McGookin C., Ó Gallachóir B., Byrne E., (2019) 'A transdisciplinary approach to energy system modelling; Case Study Dingle 2030', 1st Energy and Environment Clustering Event. Durham University, 23-24 September 2019. – Presentation on the approach to be taken to develop scenarios for the energy system out to 2030 informed by the community meetings held with NEWKD.
7. Boyle E., Ó Gallachóir B., Mullally G., (2019) 'Participatory Mapping on an Emergent Social Network for a regional transition to a low-carbon society', Royal Geographical Society Annual Conference. RGS London, 27-30 August 2019. Presentation on the novel approach to stakeholder mapping developed on the Dingle Peninsula.
8. Boyle E., Ó Gallachóir B., Mullally G., (2019) 'A multi-stakeholder approach to a regional sustainability transitions', International Political Anthropology Summer School. Acquapendente, Italy, 24-28 June 2019. A broad overview of the different aspects of research throughout the PhD thesis process.
9. McGookin C., Ó Gallachóir B., Byrne E., (2019) 'Developing a regional energy balance; Case study from the Dingle peninsula', Environ. IT Carlow, 18-20 April 2019. – Presentation on the approach developed to estimate the current CO2 emissions on the Dingle Peninsula as part of preparing the Energy Master Plan.

10. McGookin C., Ó Gallachóir B., Byrne E., (2018) 'New Societal and Energy System Frameworks; Case Study Transition Dingle 2030', International Sustainable Production and Consumption Conference. University of Manchester, 3-5 October 2018 – Presentation on the approach to be taken to develop scenarios for the Dingle Peninsula energy system out to 2030 informed by a series of community engagements.

MaREI Outreach

1. Farmers' Forum (2018) 'Farming and Energy - A Time of Transition?' (2018) (as part of Dingle Food Festival). Presentation on Bioenergy and panel discussion. Shane McDonagh, MaREI.
2. Presentation: 'MaREI Centre and Bioenergy' (2019), followed by questions and open discussion with an invited group of local stakeholders. Jerry Murphy, MaREI.
3. Joint Committee on Climate Action meeting with Third-level Students in Seanad Chamber as Part of Europe Day (2019). Statement made on the need for adequate resources to support the development of local / community energy, with reference to Dingle Peninsula 2030. Connor McGookin, MaREI.
4. Day-long engagement with Aoife McEvilly, Commissioner and Directors, Commission for the Regulation of Utilities (CRU) (2019). Presentations on the work of MaREI and the role of community engagement and engaged research. Brian O'Gallachóir and Clare Watson, MaREI (and partners).
5. Presentation to the Education and Public Engagement Managers of the 17 SFI-funded Centres on Dingle Peninsula 2030, MaREI and engaged research (2019). Brian O'Gallachóir, Aoife Deane, Evan Boyle and Clare Watson, MaREI (and partners).
6. Farmers' Forum (2019) 'Farming – the Key to a Sustainable Future' (as part of Dingle Food Festival). Participation in panel discussion. Richie O'Shea, MaREI.
7. MaREI Symposium (2019). Presentation: 'A transdisciplinary approach to energy system modelling; Case Study "Dingle Peninsula 2030"'. Connor McGookin, MaREI.
8. Roundtable on Climate Change with Taoiseach Leo Varadkar, organized by SFI as part of Science Week (2019). Short presentation: 'Dingle Peninsula 2030, and Supports Required for Community Engagement'. Clare Watson, MaREI.
9. Meeting with Climate Action Regional Offices (CARO) Management Team (2019). Presentation: 'Framing the Role of Technology, Research and Community Engagement in Addressing Climate Change' and panel discussion. Clare Watson, Evan Boyle and Connor McGookin, MaREI (and partners).
10. Community Meetings held in 7 parishes to develop a sustainable development plan for the Dingle Peninsula (2020), organized by NEWKD with the support of Breandán Ó Caoimh. Connor McGookin, MaREI.
11. MaREI's 9th Annual Energy and Climate Policy Research Webinar (2020). Presentation: 'Dingle Peninsula 2030 – Diffusion of Sustainability'. Brian Ó Gallachóir, MaREI.
12. Cobh Zero Carbon Group. Presentation on the development of the Dingle Peninsula 2030 Energy Master Plan (2020). Connor McGookin, MaREI.

13. ESB Networks/ MaREI Knowledge Sharing Workshop (2020). Presentation: 'The Diffusion of Sustainability on the Dingle Peninsula'. Brian Ó Gallachóir, MaREI.
14. 'An Armchair Chat with Dingle Peninsula 2030 ' webinar, jointly organized by MaREI & SEAI, as part of SFI Science Week (2020). Brian O'Gallachóir, Connor McGookin, Clare Watson and Evan Boyle, MaREI along with partners
15. Local Climate Dialogues Workshop (2020) - An Exchange with Imagining 2050, Dingle Peninsula 2030, GEAI Leitrim and Energy Politics. Connor McGookin, & Evan Boyle, MaREI.
16. UCC Environmental Society Climate Conference (2021). Presentation: 'Dingle Peninsula 2030 - Community Engagement in Climate Action'. Clare Watson, MaREI.
17. Still Connecting Webinar, organized by Campus Engage (2021), Irish Universities Association & Science Foundation Ireland. Presentation on doing engaged research in an online world. Evan Boyle, MaREI.
18. Educating Engineers for Sustainable Development Conference. Presentation: '*Walking the Walk: Meaningfully Engaging People with Engineering Challenges*'. Connor McGookin, MaREI.
19. EPA Climate Conference (2021). Presentation: 'Lessons from Dingle Peninsula 2030 on How to Engage Communities in Climate Action'. Clare Watson, MaREI.
20. Credence Project Showcase Event: Case Study: 'Dingle Peninsula Rural Energy Transition' (2021). Brian Ó Gallachóir, MaREI.
21. Educating Engineers for Sustainable Development Conference (2021). Presentation: 'Walking the walk: Meaningfully Engaging People with Engineering Challenges'. Connor McGookin, MaREI.
22. ESB Networks' 'Lunch and Learn' (2021). Presentation: 'Update on Sustainable Diffusion on the Dingle Peninsula'. Brian Ó Gallachóir, MaREI.
23. Pre Cop Event highlighting collaborative partnerships for sustainability in Columbia, Ireland and Portugal (2021). Evan Boyle and Connor McGookin, MaREI (and Deirdre de Bhailís, Dingle Hub).
24. COP 26 Side Event on transforming climate solutions for business, cities and civil society in Europe & Latin America (2021). Evan Boyle, MaREI (and Deirdre de Bhailís, Dingle Hub).
25. Codema Energy Planning Conference 'Planning our Energy Future' (2021). Joint Presentation: 'Corca Dhuibhne/Dingle Peninsula/ 2030 Initiative and Energy Master Plan'. Connor McGookin, MaREI (and Tom Fitzgerald, Dingle Hub).
26. 'Creating Our Future' Students Union National Conference (2021). Presentation on engaged research working in community contexts. Evan Boyle, MaREI.
27. ESB Networks Webinar: The Active Energy Citizen: Engaging and Empowering Individuals and Communities to Lead Low Carbon Energy Lives', (2021) Presentation on MaREI research. Evan Boyle, MaREI.

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