

Proposal Outline

Topic	Increasing the resilience of coastal communities in the context of climate change
Research Theme(s)	1) Climate Change and 2) Integrated Policy & Governance: Socio-Economics
Background and Rationale	Due to climate change coastal communities are facing a raft of challenges; increased frequency of storms and flooding causing damage to homes and businesses, coastal erosion and hazards, disruption to seasonal income stream, lack of year round employment opportunities, etc. Despite these drawbacks, 1.9 million people or 40% of the Irish population reside within 5km of the coast (CSO Data 2017). The National Emergency Co-ordination Group (NECG) promotes coordination amongst departments in their emergency planning and encourages best use of resources, and has been activated on a number of occasions due to severe weather in the past number of years. Long-term planning for climate change mitigation and adaption is critical for coastal communities that involves an integrated approach from stakeholders.
Scope of Research (Scientific/ Technical Challenge)	This fellowship will work to advance research in one or more of the following areas: • Examine international climate resilience tools that have been implemented and identify those that are suitable for adaptation for Ireland. • Carry out coastal community case studies showing the economic cost and socio-economic effects of specific storms (e.g. storm Desmond, Hurricane Ophelia) during the period from 2015 to 2020. • Examine initiatives dealing with coastal erosion and hazards, assess their success and recommend future policy with respect to monitoring requirements. • Investigate the economic aspects of future climate adaptation and cost–benefit analysis of adaptation actions, including better infrastructure and creating employment opportunities. • Study best ways of communicating how communities can adapt, including behavioural changes required, interactions between the local community and relevant stakeholders (local councils, Climate Action Regional Offices, OPW, etc.) and identify specific training needs. The fellow would ideally have a primary degree and PhD in engineering, planning, economics, social sciences or closely related discipline.

Expected Impact	This fellowship will help to build national expertise in this research area and publish their research findings as widely as possible through peer-reviewed papers, conference presentations, policy briefs, articles, etc. The fellow is also expected to engage with relevant national and international networks, and explore opportunities for collaboration and securing further European and international research funding, for example under Horizon Europe.
Specific Collaboration	Coastal Community Groups Local Authorities & Climate Action Regional Offices OPW (Office of Public Works) Marine Institute (Marine Spatial Planning) Department of Housing, Local Government and Heritage Department of the Environment, Climate and Communications
Location of Fellow	Higher Education Institute or Public Research Body (Republic of Ireland or Northern Ireland)
Duration and Funding Available	4 years €100,000 per annum (i.e. total €400,000 maximum for duration of four years)
References	National Marine Planning Framework (2021) National Adaptation Framework (2018) Climate Action Plan (2019) Climate Action Regional Offices Castlegregory Community Talk (2016), Challenges for coastal management in Ireland. Case study: The Maharees, Castlegregory, County Kerry. EPA CCRP Report Series No. 28 (2013), Coastal Climate Adaptation in Ireland: Assessing current conditions and enhancing the capacity for climate resilience in local coastal management. I.H. Townend, J.R. French, R.J. Nicholls, S. Brown, S. Carpenter, I.D. Haigh, C.T. Hill, E. Lazarus, E.C. Penning-Rowsell, C.E.L. Thompson, E.L. Tompkins, Operationalising coastal resilience to flood and erosion hazard: A demonstration for England, Science of The Total Environment, Volume 783, 2021, 146880, ISSN 0048-9697, https://doi.org/10.1016/j.scitotenv.2021.146880.



Masselink, Gerd & Lazarus, Eli D, Defining Coastal Resilience, Water 2019, 11(12), 2587, doi:10.3390/w11122587 <https://Azq/www.mdpi.com/2073-4441/11/12/2587>

[OECD Environment Policy Paper No. 13: Innovative Approaches to Building Resilient Coastal Infrastructure \(2018\)](#)

[Planning for Coastal Resilience - KESS Northern Ireland Assembly \(2017\)](#)

[U.S. Climate Resilience Toolkit](#)