

Empowering People to Address the Problems of Climate Change

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ECONOMIC



ENVIRONMENTAL



SOCIAL



ACADEMIC



EDUCATIONAL



POLITICAL

SUMMARY

With climate change causing radical changes to coastlines through erosion and flooding and leading to major disruption to the coastal communities living near them, concern about the impact of climate change is no longer confined to the world of environmental scientists and “eco warriors”. But how do communities that will be affected develop a comprehensive understanding of the many, often complex, problems this is causing? How can they make sense of the competing agendas of the various affected stakeholders? And, perhaps most crucially of all in the face of such immense challenges, how can they be helped to overcome their fears and feelings of powerlessness when it comes to addressing them? A collaborative team including researchers and local authorities in Ireland and Wales set out to find the answers to these questions.

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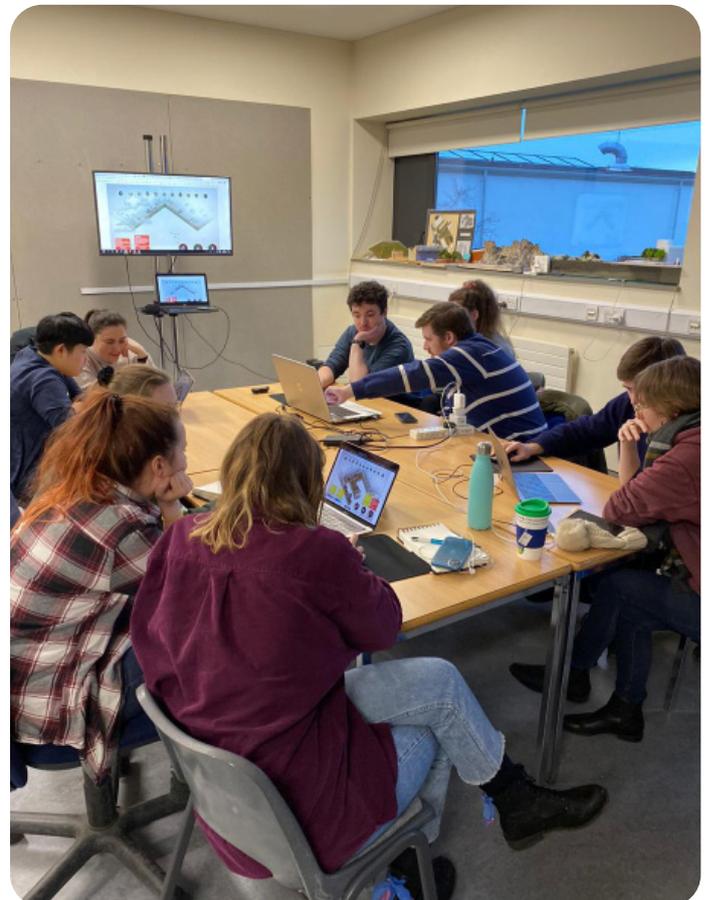
Coastal Communities Adapting Together

In Ireland 40% of the population lives within 5km of its 7,500km long coastline and 40,000 people live within 100 metres of it. As an identifiable island, the coastline has a powerful resonance with many people. Connected with national identity, it is also the location of much of the country’s industry and a major driver of tourism.

The Coastal Communities Acting Together (CCAT) research project was established to identify ways of building capacity in Irish Sea coastal communities to adapt to change. Led by Dr Karen Foley, Head of Landscape Architecture within the UCD School of Architecture, Planning and Environmental Policy, it has been undertaken in partnership with Fingal County Council, University College Cork, Cardiff University, Pembrokeshire Coastal Forum and the Port of Milford Haven in Wales. It has been part-funded by the European Regional Development Fund through the Ireland Wales Programme.

The project builds on earlier work undertaken by Dr Foley and Dr Philip Crowe, an Assistant Professor in Climate Responsive Design (a post shared between the UCD School of Civil Engineering and the UCD School of Architecture, Planning and Environmental Policy), as part of a previous EU-funded project that explored citizen engagement as part of building urban resilience and sustainability.

“Rather than trying to impose solutions, you need to work with communities to co-create them. That way they will be more readily accepted and they’ll probably be better, anyway, because of the inclusion of local knowledge - and then change may actually happen.”



Geogames Club, UCD Landscape Architecture, Planning and Environmental Policy students, February 2020



Coastal Communities Growing Together, tree planting, Pembrokeshire, March 2021

The Challenge of Community Engagement

But community engagement is a critical element that researchers, local authorities and governments struggle to get right. “A project like this was long overdue because there’s no consensus on how to engage people with change,” says Dr Crowe. “That’s not just because it’s difficult, it’s also because the very nature of change has altered. It’s happening at an increasingly rapid rate and the questions have become enormous – such as whether it’s viable anymore to have an urban settlement in a particular location, for example.”

Focused on two coastal communities, Fingal in Ireland and Pembrokeshire in Wales, CCAT has explored in detail how digital and other collaborative tools can be used to achieve this engagement. These tools have included, for example, interactive games and online learning resources to help children and young people gain a practical understanding of the various ways in which climate change is affecting their local area and its implications for the future.

The two coastlines selected for the study present quite different challenges. Pembrokeshire involves questions about regeneration of Pembroke Dock and involves the redeployment or reskilling of workers there. In Fingal, on the other hand, the challenge relates primarily to the problems for property owners of coastal erosion and the pressure this puts the local authority under to “do something” about it.

“The project has also explored ways in which workshops and initiatives such as mapping the changes in an area can support communities, help them understand how they can adapt to climate change and make their communities more resilient to its effects,” says Dr Foley.

“Obviously a research project cannot solve the problem, but what we can do is look for ways to engage citizens at a deeper level so that, in a way, you can start allowing citizens and property owners to be in the same head space as the local authority and to understand all the different points of view,” adds Dr Crowe.

At the outset the project adopted a “blended” approach, using digital and non-digital tools to provide a mix of online and in-person interactions. In Fingal these included using a well-proven set of concepts and methods such as

Geodesign workshops. These assist stakeholders and relevant professionals to work collaboratively to make sense of complex problems and to then design and negotiate optimum solutions that accommodate often competing interests.

The arrival of COVID forced the researchers to bring all the elements of the project online. This has not been all bad. “As a result, the project outputs have become accessible to a much greater number of people and, in line with the project’s eco-code, have further reduced the researchers’ travel and carbon footprint,” says Dr Crowe.

Significant Potential Impacts

Although still in the final outcome appraisal phase, the research has already been widely embraced. It has contributed to a successful European Green Deal proposal involving the School of Architecture, Planning and Environmental Policy and the UCD School of Civil Engineering. An EU COST Action programme application has also come out of the Geodesign aspect of the project. At a local level, sharing the findings with the communities involved has commenced through a number of events, although these have been restricted to online during COVID.

One of the expected legacies of the project is the development of a “citizens’ observatory” for UCD’s Earth Institute. This is basically a facility that will enable researchers from the UCD Earth Institute to engage with communities through digital participatory mapping tools that are available to UCD under license.

At a broader level, when published in full the research will be of direct benefit to communities around the world where people live and work in urban environments that are either directly on or close to sea coasts.

Its contribution to the challenge of community engagement will inform the efforts of agencies and actors in the climate change space as they seek to foster both the abilities and the willingness of communities to play active roles in addressing these problems and to find optimum solutions to the existential challenges now facing humanity.

By paving the way for an improved connection between coastal communities and the social-ecological systems within which they live there will be greater capacity and support

for climate adaptation. It can also be anticipated that, equipped with better knowledge of potential solutions and opportunities relating to climate change adaptation, these communities will become agents of change.

Local Government, communities and other stakeholders will also have a better understanding of how to realise international, national and local policy and regulations on the ground in coastal areas through effective actions.

Research References

CCAT research paper: Going digital - Lessons for future coastal community engagement and climate change adaptation

I.E. McKinley, P.R. Crowe, C.F. Storie, R. Ballinger, A.T.C. Brewster, L. Blacklaw-Jones, A. Cameron-Smit, H.S. Crowley, G.C. Cocco, B.C. O'Mahony, D.B. McNally, P.P. Power, K. Foley

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Media and Social Media

The CCAT Exchanging Knowledge and Best Practice Across Borders, online event, Nov. 2020 featured in the Fingal Independent, Cardiff University, UCC/MaREI, Southern Regional Assembly and Fingal County Council website as well as on the Dublin Biosphere and Engineers Ireland social media and in the Future Earth Coasts and CMS newsletters:

<https://www.independent.ie/regionals/fingal-independent/news/climate-change-and-our-coast-39753209.html>

The CCAT Coastal Communities Growing Together, which was a tree-planting project in Wales featured in the Western Telegraph newspaper :

<https://www.westerntelegraph.co.uk/news/19265457.soroptimist-international-haverfordwest-plant-huge-amount-trees-helppccat/>

CCAT was featured in three podcasts this year:

BBC Green Thinking podcast - *Seascapes and Blue Gold* - June 2021

Pembrokeshire Coastal Forum podcast - *Coastal Cyrum* - March 2021

Thames Estuary podcast - *Talk of the Thames* - February 2021

The CCAT project was mentioned in an article in the Western Telegraph newspaper about the development in Pembroke Dock in Wales:

<https://www.westerntelegraph.co.uk/news/19019039.pembroke-dock-royal-naval-dockyard-say-milford-haven-port-authoritys-plans/>

CCAT was featured in Port of Milford Haven's OnBoard magazine summer 2020 edition:

<https://www.mhpa.co.uk/uploads/2020-09-15-46-1-onboard-summer-issue11-16pp.pdf>

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