



# Geographical Society of Ireland

*An Cumann Tíreolaíochta na hÉireann*

## **Projects/statements on climate (and biodiversity crisis) and SDG's**

*International Geographical Society Gathering - June 22nd 2021*

A short survey was sent to all relevant academics in the 7 geography departments across Ireland to get a high-level overview of ongoing research, education and engagement relevant to these themes. 12 responses were received representing colleagues from 6 departments. Colleagues in all 6 departments are working on these themes as part of their research agendas. Most departments do not have any formal statement on the SDG's but two research Institutes - Earth Institute at University College Dublin and ICARUS at Maynooth University – have adopted formal statements on the climate and biodiversity crisis and SDG's.

Geography departments include these issues in their curricula, with some colleagues teaching only in this field. Modules covering the climate, biodiversity crisis and SDG's are present in curricula at both undergraduate and graduate level, with some emphasis on upper year undergraduate modules that are more specialist in nature. Sustainability is a core value within NUI Galway which adopts a Learn-Live-Lead approach. There is a specific MSc in Climate Change at Maynooth University. Sustainability education is both stand-alone but also embedded within general first year geography introductory modules, and in modules on political geography, hazards, global citizenship, development studies, GIS and remote sensing.

There has been much success across our institutions in attracting research funding for projects related to these themes. This can be significant in scale and scope and there is a strong presence of large-scale EU funding in many institutions, along with significant EPA funding. Projects are both physical scientific and more social science in nature. Projects related to the climate and biodiversity crisis are listed in Appendix 1; those related to the SDG's are listed in Appendix 2. These are not exhaustive of all research ongoing in Ireland but rather indicative.

Geographers in Ireland are leaders across many of the climate and SDG research themes and needs. NUI Galway is a leader in relation to Goal 7: Ensure access to affordable, reliable, sustainable and modern energy and have received 4 recent Horizon 2020 grants to progress Goal 12: Ensure sustainable consumption and production patterns. Colleagues at Trinity are European leaders in this field, with the ERC SHARECITY project of particular note. UCD School of Geography is a leader in relation to Goal 11: Sustainable Cities and Communities uniquely combining physical science and social science understandings of the city to develop holistic understandings and responses. The Irish Climate Analysis and Research Unit (ICARUS) as part of the Department of Geography at Maynooth University is a national leader in the area of climate change providing integrated climate system research, solutions, data and advice to the scientific community, policy makers and for the benefit of society both nationally and internationally.

A large number of PhD students are currently working on topics related to the themes of this gathering and are due to complete relatively soon. There is a desire to undertake more work in relation to the spatial in/justice of the low carbon transition and how more just transitions can be developed through place-based approaches. We have not yet given thought to our aspirations for COP26 other than to hope that it generates momentum on addressing the crises and embedding the SDG's more fully in policy and funding landscapes.

Contact: [secretary@geographicalsocietyireland.ie](mailto:secretary@geographicalsocietyireland.ie)

June 2021

## Appendix 1: Current research projects related to SDG's

RESEARCH: Please describe any research projects you are currently working on related to the SDGs (name of project, duration, funding source, overall goal, status)	
2022 – 2027	Lead Irish partner: SHARED Green Deal Horizon 2020 Grant Total budget: 5 million Euro. The Social sciences & Humanities for Achieving a Responsible, Equitable and Desirable GREEN DEAL (SHARED GREEN DEAL) project brings together 22 leading organisations from across the EU including 9 universities, 2 research institutions, 8 network organisations and 2 SMEs. The network partners cover core elements on the European Green Deal and the SDGs cross cutting priorities such as civil society, democracy, gender, energy, environment, circular economy and innovation. NUIG are leading the work on 'clean energy' specifically working with local authorities across Europe to explore and develop community visions of successful and just energy transitions. The project aims to share actions, understandings, evidence, insights, responsibilities and benefits across stakeholders including policymakers and civil society. Issues of inclusivity and diversity are at the heart of the project to particularly account for disadvantaged and vulnerable social groups. Within this project Prof. Fahy is leading a work programme on 'clean energy' specifically, working with local authorities across Europe to explore and develop community visions of successful and just energy transitions.
2021 – 2024	Lead Applicant and Coordinator: EnergyPROSPECTS Horizon 2020 Grant Total budget: 3 million Euro. This large scale social science research project will explore SSH aspects of energy citizenship across Europe.
2021 – 2024	Lead Social Scientist: CAMPAIGNERS Horizon 2020 Grant Total budget: 5 million Euro. Frances Fahy is the lead SSH partner on this large (25 partner) project examining sustainable lifestyles across Europe.
2016 – 2020	Lead Applicant and Coordinator: European Network for Research, Good Practice and Innovation for Sustainable Energy (ENERGISE), Horizon 2020 Grant Total budget: 3.7 million euro. Recognising the persistence of diverse energy cultures, both within and between countries, ENERGISE offers an ambitious social science programme to enhance understanding of changes in energy consumption practices across 30 European countries. Moving beyond state-of-the-art research, ENERGISE theoretically frames and empirically investigates socio-economic, cultural, political and gender aspects of the energy transition. It also examines how routines and ruptures (re)shape household energy consumption practices. Adopting a cutting-edge Living Labs approach, designed specifically to facilitate cross-cultural comparisons, ENERGISE fuses tools for changing individual- and community-level energy consumption with a novel method for energy sustainability assessment. ENERGISE will open new research horizons and greatly enhance Europe's capacity for high-impact, gender-sensitive consumption research. It also offers timely support for public- and private-sector decision-makers who grapple with the design and implementation of measures to effectively reduce household energy consumption.
WaterWonders involves schools in outdoor geography and sustainability related learning funded by the Water Forum.	
The Community SDG Dashboard - Measuring Sustainability at the Local Level, funded by the Earth Institute, 16 months and we are half way through. Working with Dundrum2030 community group to co-design a GIS-based online platform that will capture changes on a set of SDG indicators which are selected on the basis of ongoing sustainability initiatives within the community.	
SHARECITY (ERC, 2016-2021): interrogating the practice and sustainability potential of urban food sharing <a href="https://sharecity.ie/">https://sharecity.ie/</a> which led to development of amongst other things the SHARE IT online platform for sustainability reporting aligned with the SDGs	
NovelEco, 5 years, ERC CoG: societal attitudes to urban novel ecosystems. Status: 2021 to 2026 (PI) GoGreen Routes, 4 years, H2020, nature-based solutions and health and well-being. Status 2020 to 2024 (Co-PI) Connecting Nature, 5 years, H2020: scaling out nature-based solutions to build climate resilience in cities. Status: 2017 to 2022 (PI) EPA studentship, 3 years, EPA: Incorporating urban nature-based solutions into governance, policy and planning in Ireland. Status: 2019 to 2021 (PI) ReNature, 3 years, H2020: promoting research excellence in nature-based solutions for innovation, sustainable economic growth and human well-being in Malta. Status: 2018 to 2021 (Co-PI) NATURA, 6 years, NSF: networking nature-based solutions. Status: ongoing. Key SDGs for all above projects: 3, 6, 8, 9, 11, 12, 13, 14, 15.	
Member of of ISBERG Blue Economy Research Group, with explicit emphasis on SDGs ( <a href="https://www.blueeconomyresearchgroup.org/">https://www.blueeconomyresearchgroup.org/</a> ) 'Coastal Transitions' - Collaboration with Liverpool John Moores University (UK) and Southern Connecticut State University (USA) considering Blue Economy and role of sustainability / SDGs in coastal communities	
Project name: China's Hydro Ambitions in the Brahmaputra Basin: Environmental Implications for a cross-border catchment area Duration: 4 year PhD scholarship Funding source: Dublin City University Overall goal: To examine the environmental implications of large-scale hydropower projects for the Brahmaputra Basin, specifically: to understand the impact of hydropower developments on the interconnected systems of water-food-energy-environment for the basin, and to suggest sustainable management strategies to mitigate the negative environmental impact for the basin region Status: Student scholarship to begin in October 2021	
iHabiMap, 4 years, EPA Ireland. Develop Automatic Algorithms to assess UAV data in line with Habitats Directive. SmartBog, 4 years, EPA Ireland. Develop mapping methods to assess, map and monitor land use and man-made drainage on peatlands to support restoration and rehabilitation programmes.	

Learning from Group Water Schemes: Community Infrastructures for Sustainable Development was an 18 month project funded by the EPA in Ireland. I am in the post-project dissemination phase of the project. The project explicitly addressed UNSDG 6 and UNSDG 15. More here: <https://www.catchments.ie/epa-research-364-learning-from-group-water-schemes-community-infrastructures-for-sustainable-development/>

Mapping Green Dublin project - aims to recognise and draw attention to the value of lived experiences in developing community greening plans more generally. (<https://mappinggreendublin.com>)

## Appendix 2: Current research projects related to climate and/or biodiversity crisis

**RESEARCH: Please describe any research projects you are currently working on related to the climate and/or biodiversity crisis (name of project, duration, funding source, overall goal, status)**

2020 – 2023 Lead Irish partner: CCC Catapult - European JCI SOLTICE Grant (with Tampere, Finland, Bristol UK and Genoa, Italy). Total budget: €1.38m Status ongoing  
The Challenging the Climate Crisis: Children's Agency to Tackle Policy Underpinned by Learning for Transformation (CCC-CATAPULT) project involves young people as researchers working with academics to examine young people's experiences of and learning around the climate crisis. This project is taking place in locations across Europe, including Bristol (United Kingdom), Galway (Ireland), Tampere (Finland), and Genova (Italy). We have recruited a diverse group of young people (15-18 year olds) in each location to take an active role in both shaping the research itself and collaborating across research locations to explore the research questions.

1. Climate Smart (SFI, 2018-2022): Just transitions for urban climate change adaptation, including educational platform and game: <https://climatesmart.ie/> and 2. SHARECITY (ERC, 2016-2021): interrogating the practice and sustainability potential of urban food sharing <https://sharecity.ie/> including the role of collaborative acts around food and their contribution to both climate action (e.g. reducing food waste) and biodiversity (e.g. seed sharing for agrobiodiversity and nature-based infrastructures)

Water Security in Australia. three year funded project with the Queensland Government aiming at outlining changes in hydroclimate over the past millennia and the application of Palaeoclimate proxy data to assess water security planning.

No funded projects, but paper in review currently about recent changes in climate on Svalbard as shown by increases in lake productivity based on palaeoclimate analysis of sediments.

NovelEco, 5 years, ERC CoG: societal attitudes to urban novel ecosystems. Status: 2021 to 2026 (PI)  
GoGreen Routes, 4 years, H2020, nature-based solutions and health and well-being. Status 2020 to 2024 (Co-PI)  
Connecting Nature, 5 years, H2020: scaling out nature-based solutions to build climate resilience in cities. Status: 2017 to 2022 (PI)  
EPA studentship, 3 years, EPA: Incorporating urban nature-based solutions into governance, policy and planning in Ireland. Status: 2019 to 2021 (PI)  
ReNature, 3 years, H2020: promoting research excellence in nature-based solutions for innovation, sustainable economic growth and human well-being in Malta. Status: 2018 to 2021 (Co-PI)  
NATURA, 6 years, NSF: networking nature-based solutions. Status: ongoing.

Climate / biodiversity: building resilience and innovation as well as tackling climate issues through biodiverse nature-based solutions (mainly in cities) and realising the associated co-benefits from this approach.

'Pillars for Just Transitions' - collaborative project with Southern Connecticut State University, USA

'From Just Transitions to Just Disruptions' - project to develop an integrated sustainability, justice and resilience framework to steer policy responses to the climate crisis

Project name: Local Authority Climate Action Key Performance Indicators  
Duration: 3-month project (February-April 2021)  
Funding source: Local Government Management Agency (public sector)  
Overall goal: To conduct a detailed international literature review in order to identify a list of suitable climate action metrics related to both mitigation and adaptation to support the Irish local government sector to begin to measure climate actions based on national/international climate change commitments.  
Status: Completed. Report published June 2021.

Project name: Climate change after COVID-19 - Challenges and opportunities to transform the Irish transport sector  
Duration: 4 year PhD scholarship  
Funding source: Dublin City University  
Overall goal: To examine how the COVID-19 pandemic can provide lessons and a window of opportunity to significantly reduce national transport emissions in the long term (reduction in transport emissions of 17% relative to 2019 emissions) in order to meet national climate change commitments.  
Status: Student scholarship to begin in October 2021

1. Sensitivity of flooding to climate change, Kidlare COCO, 2 years, to assess impacts of climate change on flood design allowances; 2. Health and wellbeing impacts of adaptation, 3 years, Wellcome Trust, to evaluate the health and wellbeing impacts of flood risk adaptation internationally; 3. CROSSDRO: cross sectoral assessment of drought impacts in Europe, 4 years, JPI Climate; 4. HydroPredict: Assessment of the impacts of climate change hydrology for Irish catchments, 3 years, EPA; 5. HydroCast: Development of seasonal forecasting approaches for flood and drought management, 4 years, SFI; 6 Reconstruction of river flows for Irish catchments, 4 years, IRC; 7. Impacts of place loss with climate change on communities, 4 years, IRC; 8. Of land and water, climate change on Inishboffin Island, 4 years, IRC; 9. Ireland's 5 Year Assessment Report on Climate Change, Vol 3 Impacts and Adaptation, 2 years, EPA; 10. WFD Futures, climate change and water quality in Ireland, 4 years, EPA; 11. Irish Droughts: Environmental and Cultural Memories of a Neglected Hazard, 2 years, IRC Coalesce.

I have been working on the 'energy/data' nexus in Ireland over the past two years. This relates to the complex entanglements of energy and the tech sector (particularly data centres and the extensive energy resources and infrastructures they require). The work has n't been funded yet but I will be applying for funding in the near future.

Significant work developing an urban climate model globally – WUDAPT project (<https://www.wudapt.org>)