

Northern Ireland Data Gaps and Accessibility

At Climate Northern Ireland, we are aware that there are numerous data gaps across the sectors that are restricting the progress in addressing climate change both in terms of mitigation and adaptation. Brendan Freeman, a Senior Analyst from the UK Climate Change Committee (CCC) said:

“Measurement is fundamental to understanding if adaptation is working. However, current indicators for measuring progress and the effectiveness of adaptation actions are inadequate. There is an urgent need, therefore, for Government to fund work to develop new indicators to support the comprehensive assessment of adaptation progress.”

There is already a considerable amount of research being conducted across Northern Ireland and the rest of the United Kingdom and it is vital we exchange ideas and keep track of progress being made to ensure new data is used effectively and made accessible for the wider community. As such, we have been using a variety of resources, including the 2021 Climate Change Risk Assessment Evidence Report (CCRA3), to compile a list of known data gaps and related access issues for Northern Ireland.

The aim

The aim is that by having this list and circulating it across the sectors we work with, we can help promote collaboration and partnerships to address these gaps and advance our mission in reducing the risks of future climate change impacts to Northern Ireland.

The ask

We are asking you to review this list and feedback to us under the following points:

- Are you aware of any other data gaps that should be included?
- Does any data already exist but needs to be made more accessible?
- Are there any data gaps or access issues that are being or have been addressed from the below tables?

The gaps

The following table highlights the 19 climate risks and opportunities for NI where more evidence is required, as outlined in the [CCRA3](#). The evidence required aims to fill significant gaps or reduce the uncertainty in the current level of understanding in order to assess the need for additional adaptation action.

Chapter	Risk Descriptor	Adaptation Score	Urgency Score
3	N3 Opportunities from new species colonisations in terrestrial habitats	No	Further investigation
3	N9 Opportunities for agricultural and forestry productivity from new/alternative species becoming suitable.	No	Further investigation
3	N15 Opportunities to marine species, habitats and fisheries from changing climatic conditions	No	Further investigation
3	N18 Risks and opportunities from climate change to landscape character	No	Further investigation
4	I3 Risks to infrastructure services from coastal flooding and erosion	Partially	Further investigation
4	I4 Risks to bridges and pipelines from flooding and erosion	Partially	Further investigation
4	I7 Risks to subterranean and surface infrastructure from subsidence	Partially	Further investigation
4	I10 Risks to energy from high and low temperatures, high winds, lightning	Partially	Further investigation
4	I13 Risks to digital from high and low temperatures, high winds, lightning	No	Further investigation
5	H2 Opportunities for health and wellbeing from higher temperatures	Partially	Further investigation
5	H4 Risks to viability of coastal communities from sea level rise	Partially	Further investigation
5	H5 Risks to building fabric from moisture, wind and driving rain	Partially	Further investigation
5	H7 Risks to health and wellbeing from changes in air quality	Partially	Further investigation
5	H8 Risks to health from vector-borne diseases	Partially	Further investigation
5	H9 Risks to food safety and food security from higher temperatures and extreme weather	Partially	Further investigation
5	H10 Risks to health from water quality and household water supply	Partially	Further investigation
6	B3 Risks to businesses from water scarcity	Partially	Further investigation
6	B5 Risks to business from reduced employee productivity due to infrastructure disruption and higher temperatures in working environments	Partially	Further investigation
6	B7 Opportunities for business from changes in demand for goods and services	Partially	Further investigation

The following table is a collection of data gaps and/or accessibility issues that have been highlighted by members in our sector networks and from relevant literature.

Sector	Nature of gap or access issue	Update/work	Links/Resources
Environment	‘There is a gap in the scientific literature around threshold effects . A threshold is the point when a ‘non-linear’ change in a system occurs because of change in a climate variable. Understanding such effects can inform when action is or is not needed and so more efficient investment.’	‘Met Office Hadley Centre Programme is exploring “high impact, low-likelihood” climate outcomes, to include extremes, tipping points and thresholds, including to what extent these outcomes feature in climate risk assessments.’	https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1047003/climate-change-risk-assessment-2022.pdf
	No common strategy in NI for coastal flooding and erosion risk management in NI		https://www.ukclimaterisk.org/wp-content/uploads/2021/06/CCRA-Evidence-Report-Northern-Ireland-Summary-Final.pdf
	No flood warning system in NI		Resource – “Towards the “Perfect” Weather Warning” Brian Golding 2022 https://link.springer.com/content/pdf/10.1007/978-3-030-98989-7.pdf?pdf=button
Infrastructure	No detailed landslide susceptibility maps along transportation infrastructure in NI		http://www.niassembly.gov.uk/globalassets/documents/raise/publications/2017-2022/2021/infrastructure/7421.pdf
	No current assessment in NI for inspecting bridges or rail track for buckling due to heat		https://www.ukclimaterisk.org/wp-content/uploads/2021/06/CCRA-Evidence-Report-Northern-Ireland-Summary-Final.pdf

			http://www.niassembly.gov.uk/globalassets/documents/raise/publications/2017-2022/2021/infrastructure/7421.pdf
	In terms of flooding, there are no consistent indicators of resilience to flood risk across transport infrastructure.	No policy	http://www.niassembly.gov.uk/globalassets/documents/raise/publications/2017-2022/2021/infrastructure/7421.pdf
	Air pollution data in combination of extreme heat		
Health and Wellbeing	Scarcity of robust mental health data in NI – current statistics can't tell us how many people are accessing mental health services in NI and whether their needs are being met (2021)		https://osr.statisticsauthority.gov.uk/publication/review-of-mental-health-statistics-in-northern-ireland/
	Excess winter deaths/ mortality data (especially for the older demographic)		
	Hospital admission data (plus the process required to access this data)		
	Cardiovascular information to add to the respiratory and chronic information which is available (older generation and children)		
Energy	Energy Performance Certificate (EPC) / Energy Efficiency Rating (EER) data		
	Fuel poverty		