CIViC
Critical Infrastructure Vulnerability to Climate change

The latest report by the Intergovernmental Panel on Climate Change (IPCC) states that the warming of the climate system is unequivocal, and predicts that future changes in climate may lead to increased risk to critical infrastructure and human life. It is thus vital to quantify potential increases in risk to critical infrastructure, with a view to reducing future vulnerability through climate adaptation. The CIViC project aims to improve our understanding of potential climate change risks for Irish critical infrastructure. The first component involves a national "regionally-specific" high-level risk analysis, considering four of Ireland's critical infrastructure sectors, namely transport, energy, water and telecoms. An essential element of this high-level approach is the engagement with national critical infrastructure stakeholders, through knowledge and expertise sharing. While, this high-level analysis will provide insight into possible risk hotspots, it will not contain the level of detail required for industry stakeholders to implement, what would be, expensive climate adaptation measures. Such decision support requires a far more detailed analysis and quantitative vulnerability modelling of existing networks, incorporating uncertainty and variability.

The second main component of the project seeks to examine one element of Ireland's critical infrastructure in this manner, thus providing an illustrative pilot study and framework for Irish infrastructure. The pilot study will examine the power distribution network. The planned outputs of this detailed study, which will include probabilistic cost-benefit analysis of climate adaptation measures, will help inform important climate change action policy going forward.

Quick Facts

Start: 2017

End: 2021

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