



Using data visualisation to engage the public with climate change and earth observation science

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Research into Climate Change is generating a wealth of data resources that are publically accessible. However, despite the amount of resources, their collector's openness to data transparency, and the growing interest across all sections of the community, there remains a lack of scientifically robust information and knowledge within the general public. The results of a recent study by the Pew Research Centre (PRC) show a considerable gap between the position held by scientists and the general public, with only 50% of adults surveyed acknowledging the anthropogenic influence on recent climate warming.

Despite high levels of investment in Education and Public Engagement (EPE) for STEM, research suggests that the desired results of a more engaged community have not yet come to pass, and that target audiences are not engaging with the material generated by experts for non-scientific audiences. Key societal issues such as climate change in particular have seen high investment in EPE, but as is indicated from the research by PRC, the highly sought-after ambition of a scientifically engaged and aware society is not materialising.

An example of a recently developed communications technology used by MaREI for EPE activities which combines the science and complexity of Earth Observation (EO) technology, and climate change research is the European Space Agency (ESA) Climate Change Initiative (CCI) visualisation tool. The application displays interpreted EO data, demonstrating the capacity of satellite technology for measuring both the causes, effects, and projected impacts of climate change and making this information accessible to a wide audience.

The use of the CCI tool has been deemed a success in practice by MaREI researchers for EPE activities. In these activities, which have taken place both in-house and in collaboration with third-party agencies, the visualisation tool was found to be key to the success of the presentation of scientific information, by allowing researchers to communicate fundamental research in a contextual and applied way, supported by visual aids. Researchers noted active engagement and follow up from educators interested in pursuing the application in the classroom and students seeking further information on how to engage with the tool. In response, science communicators at MaREI are actively pursuing a line of research into the development of educational resources that will accompany this tool, to be applied in a classroom/workshop setting, to help encourage active engagement with climate and EO science.