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| ***Embargoed till 5am Friday 20 April 2018*****Coping in the face of climate change: Research announced to better support our communities**In the coming decades, more and more New Zealand communities will be exposed to flooding and coastal erosion made worse by climate change. Some communities will be resilient but others may find the physical, social, financial or emotional consequences difficult to recover from. These climate change impacts are unlike other natural hazards because they will incrementally worsen over time – the Parliamentary Commissioner for the Environment called sea level rise a “slowly unfolding red zone.” This is new territory for New Zealand, and we don’t yet know how communities will respond, nor is it clear what steps will reduce vulnerability and build community resilience to climate change impacts in the long term.A new report released by the Deep South National Science Challenge, [Communities and climate change: Vulnerability to rising seas and more frequent flooding](https://www.scimex.org/newsfeed/coping-in-the-face-of-climate-change)(hosted on SciMex), highlights key gaps in our collective understanding about how climate change will impact Aotearoa New Zealand’s diverse communities.“Climate adaptation processes need to be carefully designed and delivered, especially for the more vulnerable,” says Janet Stephenson, lead author on the report and Director of the Centre for Sustainability at the University of Otago. “Decision-making institutions such as councils will need to be proactive in working with exposed communities,” Janet continues. “They will need to anticipate the support that communities will require, and will need to offer equitable solutions. Iwi and community members will need to be involved in climate change adaptation processes, and be in a position to make informed decisions about their future.”The report outlines our current knowledge and identifies priority areas of research needed to prepare alongside communities for a changing climate. “For example,” says Janet, “law and policy need to be fit-for-purpose for the new challenges of climate change. This includes the role of government agencies, limiting exposure to hazards, and how we will finance adaptation.”The report emerged out of a Deep South Challenge Dialogue, in which participants ranged from academics and scientists working in health, sustainability, hazard management and climate and environmental science, to representatives of iwi, migrant and local communities, and particular groups such as older New Zealanders. “The dialogue process creates conditions in which participants learn from one another, come to a common understanding, and innovate together,” says Dr Suzi Kerr, Senior Fellow at Motu Economic and Public Policy Research and the leader of the Deep South Challenge’s [Impacts and Implications programme](http://www.deepsouthchallenge.co.nz/programmes/impacts-and-implications). “The small number of participants means the issues are discussed honestly and in depth. Group discussion and thinking can progress and converge, rather than be subject to a polarised debate that solidifies existing views and positions.”The report identified that we need to know much more about the extent to which flood mitigation schemes will or won’t help to protect communities under climate change and how information about climate change impacts can be more effectively communicated.Janet says, “I hope that this report will continue to underpin further research on exposure, vulnerability and resilience for coastal and flood-prone settlements facing a climate-impacted future.” **New research announced**From the knowledge gaps identified in the report, the Deep South Challenge has recently funded two projects that go some way to addressing these questions.The first project, [Climate adaptation, vulnerability and community well-being](http://www.deepsouthchallenge.co.nz/projects/climate-adaptation-vulnerability-and-community-well-being),led by Janet Stephenson herself, is using case studies in the Hutt Valley and South Dunedin to investigate how councils already engage with exposed communities, whether any engagement is influencing adaptation, and options for improvement. “We will explore how community groups, iwi, businesses and NGOs are involved in self-motivated adaptation actions, and the intersection with councils’ mandated roles and responsibilities.” Janet says. “Our project also focusses on more vulnerable community members to consider whether additional actions – not just engagement – are needed to ensure they are not further marginalised by adaptation processes.”We are also surveying councils around New Zealand to see how they are engaging with their communities on adaptation processes. We will be drawing from all of this work to develop a suite of recommendations for policy, process and adaptation practice.” A second project will look closely at [flood mitigation schemes](http://www.deepsouthchallenge.co.nz/projects/flood-mitigation-schemes-are-they-working-flood-prone-areas). “Floods are the most frequent economically damaging natural hazard in New Zealand,” says lead researcher Patrick Walsh of Manaaki Whenua, “and climate change and sea level rise are projected to increase their intensity and frequency. People are increasingly moving into populated places with elevated flood risk, where floods damage both dwellings and primary income sources.”Economic losses from flooding are substantial in New Zealand and are projected to increase. Floods have caused almost $300 million in damages since only 2014 (not including the New Year floods of 2017/18 or more recent flooding), with particularly disruptive impacts on homes and farming.The most common method of managing flood risk in New Zealand is through flood mitigation schemes, in which flood-related infrastructure is funded via targeted property rates and government budget. “However,” says Patrick, “many of these schemes were implemented last century, with mounting evidence that land use and population changes mean they’re insufficient for future risk.” There is also a surprising lack of research on these schemes. This research will explore whether or not all flood-prone settlements have schemes in place – and will catalogue and map flood mitigation scheme locations using regional council data. “We’ll investigate whether flood mitigation scheme funding is adequate, and we’ll try to understand whether flood mitigation schemes are sufficient to protect exposed communities from increased flooding due to climate change.”Both the newly released report and this new funding are an attempt by the Deep South Challenge to ensure that people, and communities, are at the heart of the conversation we need to have nationally about climate adaptation.For more details about the Deep South Challenge, please visit [www.deepsouthchallenge.co.nz](http://www.deepsouthchallenge.co.nz).**Media enquiries:**Associate Professor Janet StephensonCentre for Sustainability, University of Otagojanet.stephenson@otago.ac.nz | 021 279 8779, (03) 479 8779 Dr Patrick Walsh, Senior EconomistManaaki Whenua | Landcare ResearchWalshP@landcareresearch.co.nz | (09) 574 4164Alexandra Keeble, Senior Communications AdvisorDeep South National Science Challenge alex.keeble@niwa.co.nz | (027) 212 7709 |
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