

Climate Change and Urban Impacts Project

In October 2008, the Foundation for Research Science and Technology (FRST) awarded a three-year contract to a consortium headed by NIWA (the National Institute of Water and Atmospheric Research) to investigate the impacts of climate change on the urban built environment. The other members of the consortium are MWH NZ Ltd, the Institute of Geological and Nuclear Sciences (GNS) and the Building Research Association of New Zealand (BRANZ).

The research involves the development of a toolkit of methods and worked examples with which local government agencies, in particular, can identify and manage regional and local impacts on the built environment (community assets and infrastructure, buildings and associated activities), associated with climate change.

Four case studies will focus on the impacts of climate change on flooding, sea level rise, heavy rainfall events and drainage, land slipping, and potable water supply and demand. In most cases the analyses will involve assessments of the change in the hazard, the resultant risk to buildings and infrastructure, adaptation options to reduce the risk, and the costs and benefits of these options. The case studies will be performed for Auckland, Wellington, Christchurch and Westport.

Further to the above case studies, the project team are assembling examples from all around New Zealand of the application of climate change guidance by local government for adaptation purposes in urban environments. What discernable actions have been performed as a result of considering potential climate change impacts, and what process was used to account for the range of climate change projections (i.e. was a risk assessment based methodology used)?

If you have specific examples of performing and applying climate change related impact assessments, the research team would like to include them in the toolkit. Please contact Dr Andrew Tait, NIWA (a.tait@niwa.co.nz, 04-386 0562). More information on the project can be found at www.niwa.co.nz (click on Our Science > Climate > Research Projects).