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MEDIA RELEASE

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SEA LEVEL RISE TO BECOME PART OF THE PLAN

The Antarctic Climate & Ecosystems Cooperative Research Centre (ACE CRC) today launched a national program of information seminars and training workshops on how to incorporate future sea-level rise projections into coastal planning codes.

Co-funded by the Department of Climate Change, the workshops are part of a package announced by the Australian Government earlier this year, aimed at helping vulnerable coastal communities plan for climate change.

ACE CRC will deliver a series of multiday training workshops for coastal infrastructure owners, planners, engineers and other interested stakeholders around Australia, commencing in Hobart in early 2009.

According to Dr John Hunter, ACE CRC sea-level rise scientist, "our data from long-term sea level records shows that events now occurring every few years could potentially happen annually in one or two decades.

"This means that the traditional guidelines for building coastal infrastructure, like the concept of a '1-in-100' year flooding event design guideline, are no longer relevant. They have always assumed the sea level is static, but we now know this is not true anymore.

"Incorporating future projections of sea-level rise throughout the life of the asset is vital for our coastal planning guidelines."

By statistically combining recorded variations in today's sea level (through tides, storms, and other meteorological events) with internationally-agreed projections of future sea-level rise, Hunter has established a method of determining the likely impacts of future sea-level rise on planned and existing infrastructure at the coast.

In the workshop series, trainers will be rolling out a new approach to estimating the risk posed by sea-level rise under a range of possible climate futures during this century. The results will be delivered via a web-based interactive tool, which will help engineers and planning authorities to set prudent risk guidelines for coastal developments and infrastructure maintenance. Workshop participants will be trained in using the web tool to determine appropriate design specifications based on the location, asset life and level of risk under a range of greenhouse emission scenarios.

ACE CRC will also be delivering a series of seminars aimed at providing an overview for policymakers and major coastal infrastructure owners, highlighting the need to address the potential impacts of a rising sea-level into their planning and decision making in the short-term.

The workshops and seminars will be delivered nationally between February 2009 and June 2010. A website for registrations of interest in seminar and course participation is available at:

www.sealevelrise.info

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The Antarctic Climate & Ecosystems Cooperative Research Centre (ACE CRC) is a collaborative partnership dedicated to the study of atmospheric and oceanic processes of the Southern Ocean, their role in global and regional climate change, and their impact on sustainable management of Antarctic marine ecosystems.

The ACE CRC's core partners are the Australian Antarctic Division, the Australian Bureau of Meteorology, CSIRO Marine and Atmospheric Research, and the University of Tasmania. Supporting partners are the Alfred Wegener Institute for Polar and Marine Research (Germany), the Australian Greenhouse Office, the Australian National University, the National Institute of Water and Atmospheric Research (New Zealand), Silicon Graphics International, and the Tasmanian Department of Economic Development.

Established and supported under the Australian Government's Cooperative Research Centre Program

BACKGROUNDER

Sea-level rise as a result of climate change may affect tens of millions of people worldwide years. The fourth report of the United Nations Intergovernmental Panel on Climate Change (IPCC AR4) indicated that sea level could rise between about 0.18 and 0.79 m this century. More recent research has shown that sea-level is currently tending towards the upper part of this range, sending a clear warning to coastal communities. This rise will lead to an increased frequency of extreme flooding events and coastal erosion, which will be exacerbated if storminess and wave heights also increase. A combination of higher sea level, possibly combined with stronger winds, could also cause more frequent flooding in coastal lowlands and put billions of dollars of coastal development at risk.

Infrastructure owners need to be able to assess their future risk and take appropriate adaptation measures. Helping Australia prepare for these possibilities depends on improving our ability to project and respond to future changes based on a better understanding of historical sea-level rise and the factors that contributed to it.

ACE CRC's expertise in sea-level rise has resulted in a new method which involves statistically combining observed variations in today's sea level (from tides, storms, and other meteorological events) with internationally agreed projections of future sea-level rise. The analysis has provided tabulations of the risk of flooding of assets for a range of reference heights under different climate projections, and over any prescribed period during this century. These can be used by engineering and planning authorities to set prudent risk guidelines for coastal developments and infrastructure maintenance.

Estimating Sea-level Rise in an Uncertain Future Project
The Hon Penny Wong, Minister for Climate Change & Water announced on 3 June 2008 three new projects to help Australia's vulnerable coastal communities plan for the effects of climate change. One of these was the Sea-level Rise in an Uncertain Future project.

Funding:
Department of Climate Change: $310,000 over 2.5 years
ACE CRC Contribution: $315,000 over 2.5 years

The ACE CRC Sea-level Rise Program

The ACE CRC is one of the few institutes in the world with the breadth of capability to address most aspects of sea-level change. We have made significant headway into systematically documenting the rate of sea-level rise for much of the past century, enhancing scientists' ability to plot regional sea-level rise into the future.

The overall goal of the ACE CRC Sea-level Rise Program is to narrow uncertainty in projections of global and regional sea-level change, including the changing frequency of coastal flooding events, for selected cities and populated regions of the Australian coastline and Australia's neighbours in the South Pacific. Key areas of research are:

- Improving estimates of the different factors that have contributed to sea-level rise in the past
- Significantly reducing the range of projections of sea-level rise in the future
- Forecasting changes in extreme events for strategic locations