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MORE ADAPTATION WILL BE NECESSARY TO DEAL WITH CLIMATE CHANGE IMPACTS

"More extensive adaptation than is currently occurring is required to reduce vulnerability to future climate change, but there are barriers, limits and costs". That's one of the key findings of the Fourth Assessment by the Intergovernmental Panel on Climate Change released today in Brussels.

The Assessment found that the array of potential adaptive responses available to human societies is very large, ranging from purely technological (e.g., sea defences), through behavioural (e.g., altered food and recreational choices) to managerial (e.g., altered farm practices), to policy (e.g., planning regulations). Yet there remain formidable environmental, economic, informational, social, attitudinal and behavioural barriers to implementation of adaptation. For developing countries, availability of resources is particularly important.

Sustainable development can reduce vulnerability to climate change by enhancing adaptive capacity and increasing resilience. However the Assessment indicated that, at present, few plans for promoting sustainability have explicitly included either adapting to climate change impacts, or promoting adaptive capacity. Non-climate stresses can increase vulnerability to climate change by reducing resilience and can also reduce adaptive capacity because of resource deployment to competing needs.

Updating the last Assessment completed in 2001, the Report brings identifies impacts that have been observed by scientists, together with a survey of potential impacts, the vulnerability of ecosystems and communities to climate change, and options for adaptation.

Some of the other key findings include:

- Many natural systems, on all continents and in most oceans, are being affected by regional climate changes, particularly temperature increases
- since 1970 the human-induced component of warming has had a discernible influence on many natural systems
- Effects of temperature increases on some managed and human systems are emerging, although these are more difficult to discern than those on natural systems due to adaptation and non-climatic drivers
- Projected changes in the frequencies and intensities of extreme weather events are very likely to increase impacts
- Although future impacts will vary greatly from place to place, all regions face potentially significant impacts in most of their systems and sectors.

A Lead Author of the report, CSIRO's Kevin Hennessy, describes the findings as a comprehensive assessment of recent and projected impacts, along with the solutions offered through adaptation and sustainable development.

“This should help Governments, industries and the community to begin planning responses to climate change,” he said.

For Australia, the key findings were:

- As a result of climate change, water security problems are projected to increase by 2030 in southern and eastern Australia
- Loss of biodiversity is projected to occur by 2030 in ecologically-rich sites including the Great Barrier Reef, Kakadu wetlands, the Queensland Wet Tropics, south-west Australia, sub-Antarctic islands and Alpine national parks
- Coastal communities are projected to have increased risk from sea-level rise, increases in the severity and frequency of storms and coastal flooding by 2050, especially those with ongoing development and population growth, such as the Cairns region and Southeast Queensland
- Agricultural and forestry production by 2050 is likely to be reduced over much of southern and eastern Australia due to increased drought and fire.
- Heat waves are projected to increase in intensity and frequency causing more deaths

More than 200 Australian and New Zealand climate scientists contributed to the scientific assessments.

Australian Lead Authors assessing the research were Kevin Hennessy, Roger Jones, Mark Howden, Lesley Hughes, Nick Harvey, Bryson Bates, Colin Woodroffe, Roger Maclean, Harvey Marchant and Barrie Pittock.

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