

## **What Climate Change mitigations measures have been put in the Torres Strait?**

The Australian Government (FaHCSIA and TSRA) has provided \$1 million in funding towards tidal gauges in the Torres Strait region to assist island communities in monitoring sea levels. These gauges will monitor mean sea levels on at least four islands and will provide key information to assess tidal variation, potential sea level rise and to support planning decisions. The Australian Government, through the Department of Climate Change and Energy Efficiency (DCCEE), has also provided \$400,000 for new research into the impacts of climate change on Torres Strait communities. This research is being used to assess the risks of coastal inundation and erosion, and to identify and assess specific adaptation options. Discussions are being held with relevant Government agencies on the issue of tidal inundation in the Torres Strait region.

Some minor protective works (sand relocation) have commenced with existing funds on the island of Warraber with a range of other less difficult and less resource intensive works expected to follow on several other of the most vulnerable islands. These works are short term responses, and while useful, do not represent a long term solution to erosion and inundation on these islands.

The identification of these minor works was assisted by a previous project by the Australian Government to assess erosion and inundation risks and develop adaptation options for the four most vulnerable island communities. Dr Kevin Parnell, who undertook this project, is now continuing this same assessment and community consultation on the remaining 13 Torres Strait communities with the \$400,000 of research funding announced on 5 May 2010.

## **How is the position in the Torres Strait different to places like Tuvalu in terms of Australian climate change related assistance?**

There have been unfavourable comparisons made locally with the significant Australian Government aid to Pacific countries for climate change mitigation compared to the investment in the Torres Strait. In December 2009, following media on this issue, the then Environment Minister Peter Garrett commented that the Government would consider a request to provide about \$22 million in climate change mitigation aid to the Torres Strait Islands.

### International Climate Change Adaptation Initiative

Australia has invested \$150 million over three years from 2008-2009 to meet high priority climate adaptation needs in vulnerable countries. This assistance will be scaled up by \$178.2 million over two years to 2012-13 (a total of \$328.2 million) to help the most vulnerable countries adapt to the impacts of climate change. The primary geographic emphasis of the AusAID-DCCEE jointly managed International Climate Change Adaptation Initiative (ICCAI) is on Australia's neighbouring island countries. However, targeted policy and technical assistance is also being made available for other countries in the region; and the Caribbean and Africa.

The ICCAI is working closely with Pacific Island countries. It will build capacity to plan and implement adaptation strategies and undertake priority adaptation projects. Australia provides practical support both through community based programs and through larger programs of assistance developed in partnership with Pacific Governments.

Key activities implemented under the ICCAI include:

- The **Pacific Climate Change Science Program** (\$20 million, 2009-2011) is helping Pacific Island countries and East Timor better understand how climate change will impact on them.
- The **Asia-Pacific Community-based Adaptation Small Grants Program** (\$6 million, 2009-2013, including approximately \$4 million for Pacific Island countries and East Timor) is providing fund to implement priority adaptation measures at the local level in 14 Pacific Island countries, the Mekong sub region, East Timor and Sri Lanka.
- The **Pacific Future Climate Leaders Program** (\$3 million, 2010 and 2011) will work to build a group of Pacific leaders with a greater understanding of climate change and tools to enhance resilience.
- The **Community-based Adaptation Activity Grants** (\$2.7 million, 2010 and 2011) will support Australian and international NGOs to work with local organisations to scale up current successful community-based adaptation activities or to build an adaptation component onto existing community-based activities in the Pacific region and East Timor.

Examples of support provided to the region to address climate change include:

- Australia has helped the Government of Tuvalu's Public Works Department to supervise the construction of large rainwater tanks for homes in Funafuti.
- Australian aid is integrating climate change adaptation measures into Vanuatu's transport infrastructure sector (including improving erosion protection).
- With Australian support, the University of the South Pacific in Suva is working with rural communities to help them reduce their vulnerability to climate change.

Australia is also working with its Pacific partners to monitor and plan for changes in sea level, and enhance the capacity of national meteorological services to interpret and use weather and climate data.

### **What are the main issues regarding inundation and are they attributable to climate change, flooding or usual inundation, or a combination?**

King tides, wind and extreme events, and increasingly sea level rise are causing tidal inundation and erosion on islands across the Torres Strait. In particular, the outer islands of Boigu (population according to 2006 Census: 283), Saibai (337), Warraber (247), Iama (311), Poruma (166) and Masig (300) have been affected by tidal inundation. The attachment to land is such that there is a reluctance to relocate, but significant expenditure will be required to protect infrastructure on affected islands (approximately \$22 million has been cited). The inner islands are not as threatened as some, but do suffer inundation from time to time.

In May 2010, the *Torres Strait Climate Change Strategy 2010-2013* was released, which noted 'each year many Torres Strait Island communities are impacted by inundation during high tides. These events inundate houses, infrastructure including roads and sewage systems, community facilities, cultural sites including cemeteries, traditional gardens and ecosystems. Often these events are accompanied by severe coastal erosion and reconfiguration of island shorelines, further threatening community infrastructure. The implications of sea level rise associated with climate change are immense with potentially devastating significance.'

In May 2010, the Department of Climate Change (DCC) released the report *Risks from Climate Change to Indigenous Communities in the Tropical North of Australia*, which finds climate change will have a significant impact on Indigenous communities in the far north of Australia. Saibai Island in the Torres Strait region is one of eight case studies listed in this report.

In December 2010, CSIRO prepared a report for TSRA's Land and Sea Management Unit titled 'Observed and Future Climates of the Torres Strait Region.' The key findings included:

- Simulated changes in climate indicate that a significant degree of climate change in the Torres Strait region is inevitable, and likely to become increasingly apparent over the next 30-100 years. Changes are expected in both the mean values and in the magnitudes and frequencies of these extremes. Therefore, long term planning should not assume that future climate and resources will be as they were over the past 100 years. Significant adaptation to a changing climate will be required.
- The practical implications of these projections of climate change suggest possible widespread impact across the Torres Strait region. Such impact can affect ecosystem health, agricultural productivity, water resources, fisheries, human health, tourism, pest abundance and low lying islands.
- Increases in sea level due to climate change are expected to pose the greatest threat to the wellbeing and viability of low lying island communities.
- Coastal ecosystems will be affected by rises in sea level, storm surges, and storm tides also by extreme weather events. Sea level rises are expected due to the thermal expansion of oceans and the melting of glaciers.
- Climate impacts and adaptation assessments should be improved by further development of versatile climate impacts and adaptation models and methodologies for a number of key sectors and activities.

**What is the current status of the work with Regional to look at infrastructure funding for the sea wall?**

(Following up progress with Regional – email sent 12 July)

**When has Minister Macklin visited the Torres Strait region during her tenure as Minister?**

Minister Macklin visited the Torres Strait region on **9-13 April 2009**, her first and only visit to this region since becoming the Minister for Indigenous Affairs. On 9 April 2009, Minister Macklin met with the Torres Strait Regional Authority Board and amongst other issues, climate change and its potential impact on Torres Strait communities was raised.

Note: On 5 May 2010, Senator Wong (the previous Minister for Climate Change) and the previous Member for Leichhardt, Jim Turnour, visited several islands in the Torres Strait to examine the problems caused by sea inundation events and coastal erosion. At the end of the visit, a joint media release (Wong, Macklin and Turnour) was provided, which outlined the Government's assistance to the Torres Strait region to address this issue.