



**Australian Government**

**Department of the Environment, Water, Heritage and the Arts**

## **Marine and Tropical Sciences Research Facility Milestone Report, May 2008**

**Program 3: Torres Strait: Status, Use and Trends**

**Project 1.3.1: Climate change impacts in the Torres Strait: Building resilience and planning adaptation strategies**

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### **Summary**

Overall, progress on project is going well. The frequent complications due to last minute changes and reorganisation of field work and meetings have necessitated some change around of the project's internal structure, however it is not anticipated that these should affect overall deliverables significantly.

Other changes have been made due to requests from Islanders and feedback. For example greater inclusion of schools through creation of a weather knowledge poster was identified on a few islands as a good educative tool so this additional deliverable is being included in the project design. Also, a larger number of islands were interested in climate impact workshops on the delayed field trip, these requests were accommodated as much as possible (Yam Island workshop has still to be fulfilled).

The scientific report generated much interest and support amongst leading climate researchers. Co-authors now include Kathy McInnes, John Church and Neville Nichols. Recent discussion has included the possibility of storm surge return periods being calculated of existing tide records by N. White. This suggestion is being followed up, and if successful, will be integrated into the main report before publication.

The finalised review of the scientific section is finalised, and a decision regarding whether to include the additional return period work will be made once greater details are known about the timeframe of the work needed and the data necessary.

Protocol discussions were held on each island with the island manager and councillor in respect to this project. Given each island had a slightly different response, they will be discussed on an 'island by island' basis. In general terms, the recognition of ownership, full and proper acknowledgement and sharing of information were re-occurring elements. Also that individuals were able to agree their own terms about providing information that was representing 'their' knowledge (as distinct from general Island TEK was clearly important).

Given that the order of this work was swapped around, the maps used in the workshops were largely taken from the JCU inundation work. The community liaison officer at TSRA

land and sea unit has a copy of the workshop presentation that he gave as part of the workshop series.

The outcomes from community based workshops were that more specific information about how to adapt (at an island level) would be appreciated. Clearly the need to distinguish between storm surge, sea level rise (and in some cases Tsunami) is critical, as are the connections between the direct impacts of climate change and the multiple and synergistic indirect impacts.

## Project Outputs / Milestones

Targeted Activity
<p>This science report has been sent to RRRC for review and comment. The scientists directly involved in related RRRC projects in the region have been involved in revising this paper as requested by RRRC (e.g. Penny Whetton CSIRO, Kevin Parnell JCU). The inclusion of additional information about storm surge return periods is being investigated, and a decision will be made in the near future about whether this additional data analysis can be included in the final peer reviewed document.</p> <p>The two-pager summary of the above document in plain English for each island where a workshop was held was definitely identified as a useful product for Islanders. A consultant has been engaged with science communication training to work on this project as well as on the school poster project.</p> <p>The protocol discussions on all islands were progressed. It is not yet resolved whether it will be possible to do the planned engagement of locals to perform knowledge recording (the planned candidate unfortunately decided to take on other full time work just prior to final engagement on this project). An alternative strategy might be to identify specific key people on several of the islands and engage directly between project staff and these informants. Two initial trials with this approach were carried out on this research trip on two different islands, and the results were good. The discussion about knowledge management was facilitated by the fact that these informants are very keen to have the information about weather and climate documented, and so are very willing to participate in ongoing iterative updates of the TEK information (current plan is to work by fax).</p> <p>Discussions with the CSIRO climate adaptation flagship about developing a vulnerability assessment for indigenous communities is currently underway. Pending final details, it is envisaged that this collaboration would result in the production of regionally specific inundation mapping, as well as storm surge vulnerabilities as well as (as appropriate) indirect impact vulnerabilities – e.g. severity of portable water shortages.</p> <p>As noted earlier, six workshops were held on this trip. A total of 103 people (not including minors) attended in total, and accordingly these workshops were considered a success.</p>

## Project Results

### ***Description of the results achieved for this milestone***

Report on scientific workshop: Delivered.

Additional peer review scientific co-authored paper pending final reviews and possible integration of additional storm surge return period modelling.

Report on protocol discussions and methodological agreements between stakeholders for TEK documentation: first agreement document example already sent to RRRC.

(Training of Islanders: as noted, due to problems between initial discussions with a potential employee and changing employment situation, this approach is being reviewed. On most recent trip, two TEK recording interviews were carried out using the agreement document sent to RRRC.)

Report describing climate impact assessments for use in community.

Workshops: due to change of order of project work, the bulk of these workshops was discussing the differences between direct and indirect impacts on each island and used the existing inundation maps. Workshop slides held by TSRA community liaison for one of the workshops please contact the PI directly if you want others.

Report on outcomes from community based workshops: as noted above (and detailed in more length in informal trip report) these workshops were very successful.

This project is on track despite the need to over come a number of temporal, human resource and logistical difficulties.

### ***Explanation of Activity changes***

As noted, L. Alexander is the collator of the science paper after the resignation of a CSIRO staff member. L Minchin has been serving as consultant on the development of plain English summaries for the islands and for TEK recording. Pending final discussions with the CSIRO flagship, the integrated assessments are planned to be commenced in the middle of 2008, and discussions with the Connex groups and JCU academics will finalise what GIS layers are accessible to more accurately indicate storm surge and sea level rise inundations.

The main staffing change may relate to the need for the PI to conduct the initial TEK recording directly, with follow up work conducted by Island consultants and /or feedback integration through ongoing fax/post/email contact with the key informants. We anticipate that this strategy will be resolved by June 2008 so that appropriate trip and resource planning can be organised for the middle of the year.

### ***Problems and Opportunities***

At this point, no major technical problems other than the CDMA service being cut off during the field trip and general difficulties of not knowing who to report to in the immediate wake of the council changes, etc.

### ***Other Issues***

A concern that the planned project budget for the second year was cut by one third without warning. This was a complete surprise and not helpful in terms of allowing the planning process (in already difficult circumstances) to run smoothly. Post-trip discussion with the research director, it is now understood that exactly the same level of funding in the first year will remain for the second and final year of this project.

### ***Communications, Major Activities and Events – During milestone reporting period***

The science report will be available during this time.

### ***Communications, Major Activities and Events – During next milestone reporting period***

The peer reviewed science report will be available pending the journals review process. The 2 page scientific summary statements will be available during this period which will be available for download by the general public from the *sharingknowledge.net.au* web site.

The final workshop (Yam) is most likely to go ahead on the next trip which is also likely to serve as the initial TEK recording trip for several islands.

### ***Forecast variations to planned milestones***

As noted above other than for making up time due firstly to initial signing delays, and then to having to wait for council elections, we believe that this project is largely on track.