JAMES COOK UNIVERSITY

Management of Coastal Erosion and Inundation

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The problem at three levels

- Specific project: Long term management of erosion on the cay islands of Torres Strait
- Climate change: How will climate change affect the physical resources of indigenous communities who live near the coast and on islands?
- Sharing knowledge: How do we integrate local knowledge and scientific expertise to achieve quality solutions?

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The specific problem: Long term management of erosion on the cay islands of Torres Strait

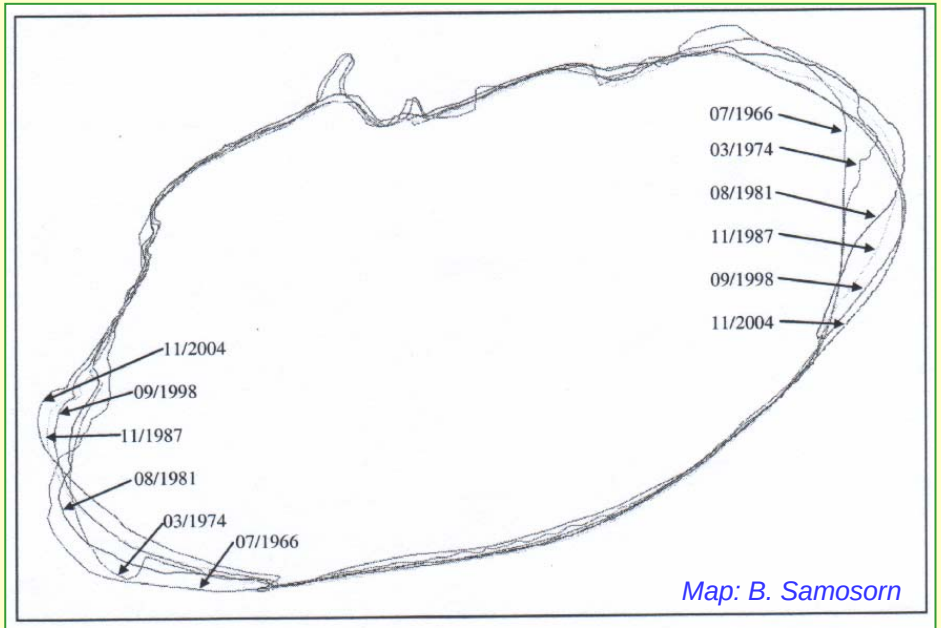
The final outcome:

Credible, strategic, costed options that are achievable and backed up by science, so that communities have a good basis for obtaining funding for the implementation of works and procedures to address the coastal erosion problem in a long-term and sustainable fashion.

A natural, well nourished reef island shore

An over constructed shore

Some starting points



Map: B. Samosorn

- Coastal erosion is a ***global trend***, and may get worse.
- Fixed shorelines are not natural - dynamic shorelines are.
- It is probably not possible to keep things exactly as they are now. There will need to be trade offs.

First Task

- Engage with community to understand the cultural and social aspects of the problem.
- Determine what is most important to the community.

Example

A lot of effort has gone into trying to save this tree. Is this because it is culturally important? What culturally important sites must be protected?

Output

Understanding of community requirements, and the cultural issues that must be considered in appropriate solutions.

Last Task

Selection of preferred scientifically informed options in collaboration with communities.

Example

“We all understand that OPTION will stop shoreline erosion HERE but may cause more shoreline change THERE, but that is the best achievable outcome for our community”

Output

Selection of the best possible options for communities, with a scientific understanding of how the options will work and any other consequences, that can be put forward for costing.

However, we will have to learn to live with some hazard events

Sharing knowledge: How do we integrate local knowledge and scientific expertise to achieve quality solutions?

- There is often mistrust (on both sides)
- What is the role of the community and the scientific expert ?
- A medical example ???????

1. We know our own bodies better than anybody else
2. But sometimes we go to the doctor
3. The doctor is trained to know how people’s bodies work
4. We need to tell the doctor what the problem is and what sort of treatment is acceptable to us
5. The doctor can advise what treatment is best, but it’s finally up to us
6. Sometimes, all this needs to happen quite quickly

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How do we get effective knowledge sharing between communities and scientific experts to achieve quality outcomes that are sound, and are culturally acceptable, within the time constraints that we have?

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