



Integrated Working in Climate Change & Disaster & Risk





Background:

- Developing integrated working in an organisation used to Divisional working will be challenging but achievable.
- Development partners are interested in this organisational change and other stakeholders.
- High priority development needs have been identified by Pacific island Leaders.
- The SRDP (Strategy for Resilient Development in the Pacific) has been developed by PICTs & regional agencies and will be tabled for endorsement at the Forum Leaders meeting in September 2015.
- SPC Working groups are developing some detailed thinking of ways forward in technical, scientific, policy and behavioural change areas to implement the SRDP (for example) and address many key Pacific development challenges.



What do we mean by integrated working ?

- Developing new ways of working at SPC that allow cross-organisational working **for Pacific development** so that staff and other resources can be effectively deployed for holistic solutions: *less single theme, more a whole story multidisciplinary approach.*
- *Working with partners to achieve the above: (CROP, UN, development partners, universities, research institutes, communities, NGOs, CSOs, private sector)*



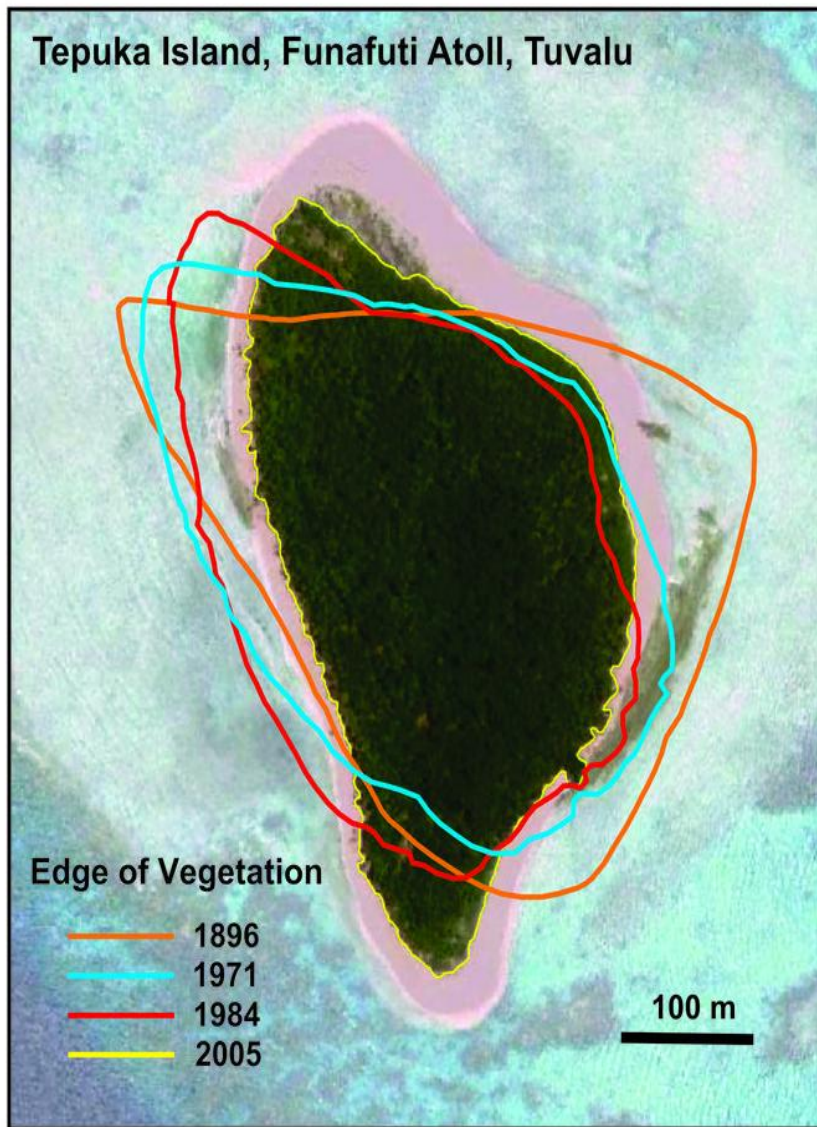
SPC Moving Forward:

- Testing the waters and developing management systems for integrated working
- Based on SPC's areas of excellence, seven subthemes have been tentatively identified: *rising sea levels; the science of risk; changing ecosystems; human dimension of CC-DRM; climate & disaster resilience; Communication of CC-DRM; low-C development, renewable energy*
- *Synthesis and summation of the findings of the seven subthemes will guide SPC's integrated CC&DRM approach to building a resilient and low carbon Pacific*



Case study on rising sea levels

- 20,000 years ago Pacific sea levels were 120m lower than today
- From c. 7,000 years ago Pac sea levels were a few metres higher than today
- Since 1950 in particular sea levels rising at 2mm/year
- IPCC-by 2100 sea levels will be 70-100cm higher than today



Changes in vegetated shoreline on Tepuka Island, Funafuti Atoll, Tuvalu 1896-2005.

Main perceived threat is to atolls,
Only 1-4m above sea level

What is actually happening to atolls?,
their physical size area, volume and
shape over time and what processes
control these dynamics?

Studies to date suggest that atolls set
on a large carbonate platform with
abundant sediment supply are resilient
and long living.

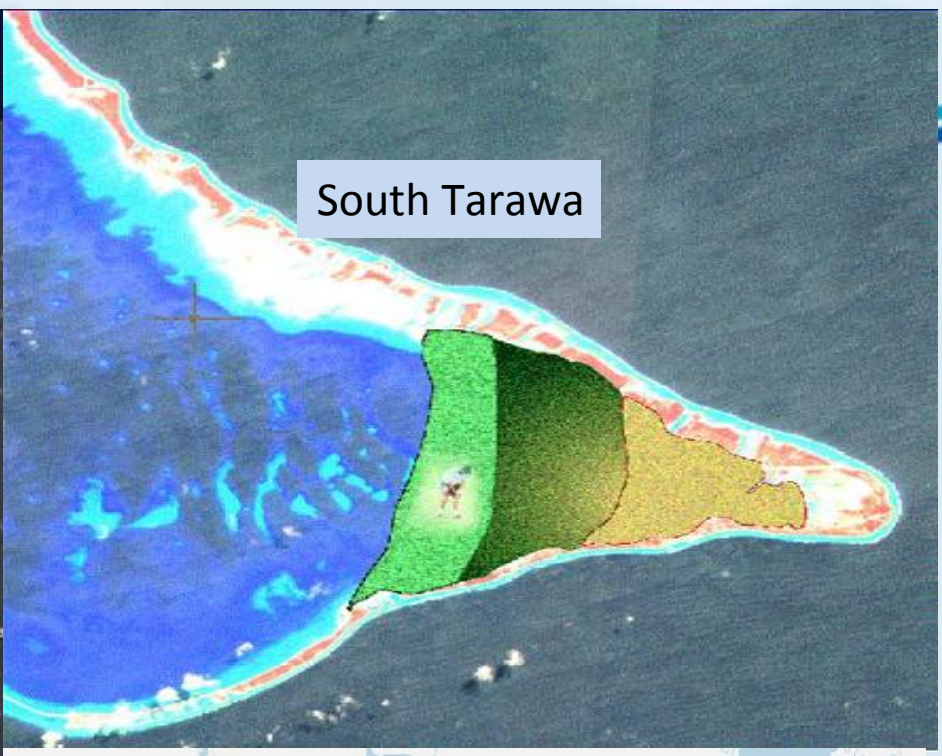
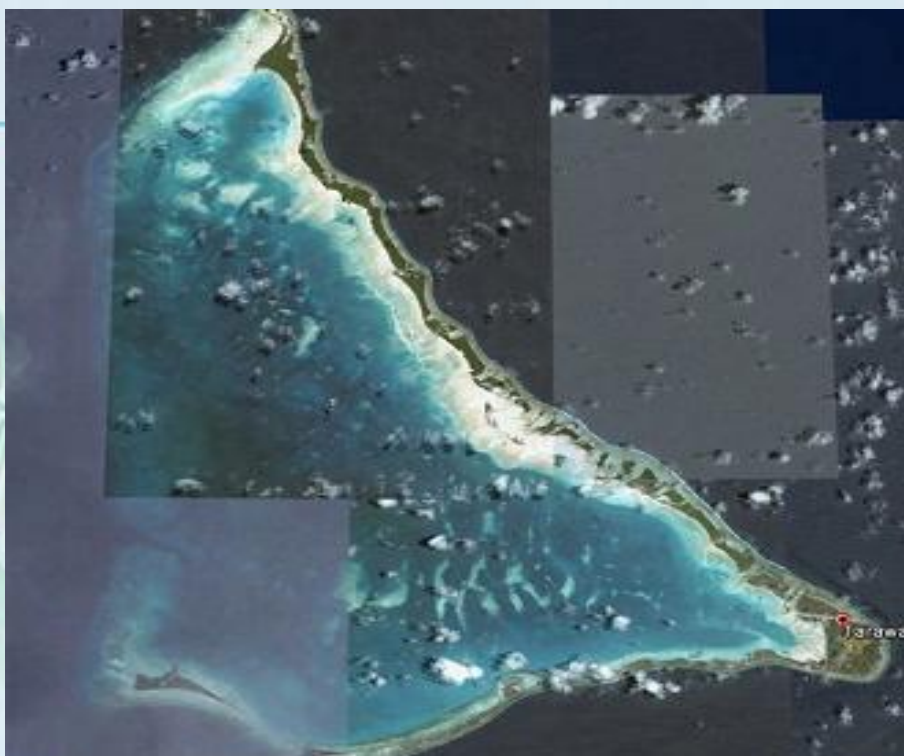
Shape and size change (some
shorelines retreat, some shorelines
extend, some grow, then recede...even
in one year)

Studies of atolls Pacific and worldwide
suggest most atolls are actually
growing



But we have fixed infrastructure and townships that don't want to move.....

Protection: sea defences, urban planning, new housing designs
....or.....





Hulhulé, North Malé Atoll, Maldives (example of new reclaimed land): with Tarawa for example new reclaimed land can be designed for a brand new aquifer, agriculture, recreation, government buildings, new housing, social and medical centres...etc.



Identifying and risk-proofing infrastructure
against sea level rise:
Information systems for decision making:
investments & urban planning



Sea Level and atolls: An Integrated Programme

(i) Science of atolls & (ii) sea level rise:

- Physical shape & size, sea inundation, extreme weather, tsunamis and increased risks;
- Mapping of relative vulnerability;
- Scenario models for sea level rise: urban development;
- Identifying and filling data gaps

(iii) Human Dimensions:

- Migration
- Empowering women & vulnerable groups
- Governance
- Health (stressors -water & vector borne diseases, sanitation, waste management)
- Education
- Livelihoods

(iv) Ecosystems:

- Land resources (agriculture, forestry)
- Marine resources (coastal and ocean fisheries)

(v) Climate & Disaster Resilience:

- Engineering & infrastructure
- Mapping vulnerability & risk proofing (ports, roads, key buildings). Investment- decision-making –tools;
- Supporting coastal resilient development
- Innovative regulatory frameworks supporting options for migration

(vi) Low carbon development:

- Supporting energy efficiency and renewable energy: ocean thermal technology (Korea)

(vii) Communication & Information Technology

- Raising the issues at all levels
- Drafting evidence-based policy options





Thank you!

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