Improving the Effectiveness and Sustainability of Climate-Change Adaptation Outcomes in the Pacific Islands: A Role for Faith-Engaged Approaches?

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Organisation of this Talk

1. Islands are uniquely exposed to climate change
2. Failures of (most) past interventions for climate-change adaptation in the Pacific Islands
3. The future need for transformational adaptation: how to design and drive it
4. A role for faith-engaged approaches?
Part 1
Islands are uniquely exposed to climate change
Ofu, Olosega and Ta’u Islands, American Samoa

High exposure to climate change

Few in-situ relocation options

Few livelihood possibilities / high dependence on natural environment

Comparative smallness and remoteness

High coastline to land-area ratio
Recent impacts of climate change on islands

• Sea-level rise
  • Shoreline erosion
  • Coastal-lowland flooding
  • Groundwater salinization
Recent impacts of climate change on islands

- Sea-level rise
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  - Coastal-lowland flooding
  - Groundwater salinization

- Warming and precipitation changes
  - Food insecurity
  - Coral-reef bleaching

Coral bleaching, American Samoa (XL Catlin)

Falling subsistence production, Isabel, Solomon Islands

December 2014

February 2015
Recent impacts of climate change on islands

• Sea-level rise
  • Shoreline erosion
  • Coastal-lowland flooding
  • Groundwater salinization

• Warming and precipitation changes
  • Food insecurity
  • Coral-reef bleaching

• Extreme events
  • Tropical cyclones
  • Droughts

Tropical Cyclone Pam, March 2015, Vanuatu

Severe TC Winston, February 2016, Koro Island, Fiji
Future impacts of climate change on islands

• Temperature rise
  • By 2100, temperatures may be 3-4°C higher than today

• Impacts on
  • Human comfort / organization
  • Food production
Future impacts of climate change on islands

• Sea-level rise
  • By 2100, sea-level may be 1-1.2 m higher than today
  • “Sea levels may rise substantially above 1 or even 2 meters during the 21st century” (Hinkel et al., 27.6.2018, Nature Climate Change)

• Impacts on
  • Human settlement / economy
  • Food production
Part 2

Failures of (most) past interventions for climate-change adaptation in the Pacific Islands
Failures of climate-change adaptation on islands

• In the Pacific Islands, it is difficult to find many specific climate-change adaptations that have been successful (i.e. effective and sustainable).

• A problem common to islands is the use of a short-term solution to a long-term problem.
  • e.g. ‘Protect’ and ‘Accommodate’ rather than ‘Retreat’

[Image: Damaged seawall, Bikenibeu, Tarawa, Kiribati]
Navunievu, Bua, Fiji
(January 2018)

- Refuse dumped along eroding shore
- Eroding edge of Navunievu Village
- Remains of 1990s seawall
- Remains of 1970s seawall
- Remains of once-continuous fringe of mangrove forest
Failures of climate-change adaptation in the Pacific Islands

- Small Island Developing States (SIDS) are different to other island contexts because they usually
  - are **poorer** and therefore more **dependent** on external funding.
• SIDS are different to other island contexts because they usually
  • are **poorer** and therefore more **dependent** on external funding.
  • have fewer national in-country **experts** able to **localize** global information about climate change.
Failures of climate-change adaptation in the Pacific Islands

- SIDS are different to other island contexts because they usually
  - are *poorer* and therefore more *dependent* on external funding.
  - have fewer national in-country *experts* able to *localize* global information about climate change.
  - are less ‘western’, more *culturally grounded*, less impressed by ‘science’, and favour *short-term planning* horizons.
Part 3  The future need for transformational adaptation: how to design and drive it
Aligning adaptation needs with interventions

• Should acknowledge islands as different to continents.
• Yet should also acknowledge islands as diverse; no one-size-fits-all solution works well.
• As along many continental coasts, we should acknowledge the growing need for transformational change … largely relocation.
Relocation as transformational adaptation

- Relocation: the most important undiscussed issue on islands today.
- Yet with the rate of sea-level rise likely to accelerate in the next few decades ... to reach levels $>1$ m by the year 2100 (relative to today), we need to discuss it.
- Relocation has been a feature of island life for millennia ... only today is the need for relocation often rejected by coastal dwellers.
Involuntary (within-island) relocation

Korovou (new village), Yadua Island, Fiji

Source: Martin et al., 2018, Climate Risk Management
Involuntary (within-island) relocation

Kenani (new village), Vanua Levu Island, Fiji

Vunidogoloa (old village), Vanua Levu Island, Fiji
Cyclical (upslope coastal) relocation

Baie Martelli, Pentecost Island, Vanuatu

Autonomous (upslope coastal) relocation

Fagasa, Upolu Island, Samoa
Relocation in island contexts: key challenges

• Acceptance of the need by affected people to move from vulnerable to less-vulnerable locations.

• Identification of less-vulnerable locations (identification of place).

• Negotiation to make these locations available for relocatees (acquisition of place) – land tenure, costs.

• Development of new locations to make them suitable for relocation (establishment of place) – infrastructure, housing, livelihood reconfiguration.
Driving transformational change on islands

• Equally urgent on most islands, whether in richer or poorer contexts.

• Requires behaviour change on the part of all major actors (governments, donors, international organizations, communities).

• Localization (and local ownership) of adaptation is important, especially in poorer contexts (where external funding will drop in future).
Part 4 A role for faith-engaged approaches?
Faith engagement in Pacific Island Countries

• Most people living on Pacific Islands are routinely engaged in religious practice
  • 2011 Tonga census - <1% declared no religion
  • 2014 survey of students at the University of the South Pacific found 80.3% attended religious services weekly (27% twice weekly)

• This influences Pacific Islanders’ attitudes towards climate change and their responses to it.

Data/inferences from Nunn et al (2016), Climatic Change
Faith engagement in Pacific Island Countries

• Yet most interventions (for climate-change adaptation) in Pacific Island Countries are secular because
  • Intervenors regard climate change as a science-informed (not a faith-informed) issue
  • Secular solutions are normal in countries where faith engagement rates are comparatively low (perhaps <10% weekly churchgoing in Australia).
Faith engagement in Pacific Island Countries

• Is the secular nature of external interventions (for climate-change adaptation) one reason for the conspicuous failure of the vast majority of these?

• It seems likely.

Data/inferences from Nunn & Kumar (2017), *International Journal of Climate Change Strategies and Management*
Faith engagement in Pacific Island Countries

• The way forward?

• Engage faith-based organisations (FBOs) in developing **messaging** and **strategies** for responding appropriately to the impacts of climate change.

• Persuade external donors of the efficacy of faith-engaged approaches.

Church members building seawall on Tarawa (Kiribati) to protect Mormon Church lands
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