

# Understanding adaptive capacity to emergencies in the Pacific in the context of climate change

Stephanie Fletcher, Anna Gero, Michele Rumsey, Juliet Willetts, John Daly, James Buchan, Jodi Thiessen, Natasha Kuruppu  
University of Technology, Sydney

## Introduction

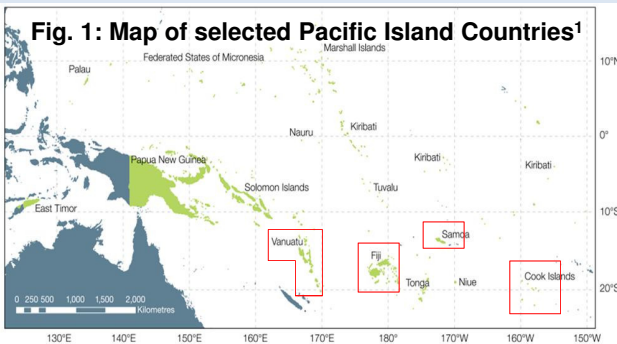
Climate change impacts are likely to affect global stability, health, resources and infrastructure; including the nature and needs of disaster and emergency response. In the Pacific, the impacts of climate change are expected to be severe, with the possibility of increased frequency and intensity of extreme events. This research investigates the adaptive capacity of both Pacific Island Countries (PICs) and Australia's emergency response to a potential increase in disasters driven by climate change in PICs.

## Research Focus

With a focus on the immediate humanitarian needs post-disaster, including health care; food and nutrition; water and sanitation and psychosocial needs, the primary objectives of the research are:

- To provide recommendations to policy makers and practitioners in the Pacific and Australian disaster and emergency response sectors on current adaptive capacity of PICs to climate related disasters and identify the resources, policies and systems needed in the coming years to enhance this capacity;
- To inform improved planning and more effective response through analysis of the Australian emergency services and related organisations' capacity, role and obligations to assist PICs in times of disaster

Four PICs were selected as case studies: Vanuatu, Fiji, Samoa and the Cook Islands (Fig. 1).



## Methodology

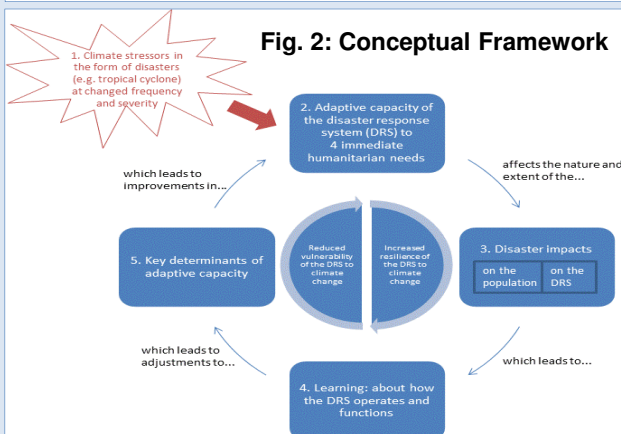
The research approach is collaborative, seeking to engage those stakeholders the research seeks to influence. Methods include interviews and workshops in Australia and the four case study countries, alongside a thorough institutional analysis of disaster response systems in Australia and the Pacific. A Project Reference Group has been established to inform and guide the research and is comprised of key individuals from organisations including:

- Secretariat of the Pacific Community, Applied Geoscience and Technology Division (SOPAC)
- Asia Pacific Emergency Disaster Nursing Network (APEDNN)
- World Health Organisation Western Pacific Division (WHO WPRO)
- Humanitarian Partnerships Agreement (HPA)
- CSIRO
- South Pacific Chief Nursing and Midwifery Officer's Alliance (SPCNMOA)
- Global Health and Development Faculty of Arts and Social Sciences, University of New South Wales
- Caritas Australia / Papua New Guinea

## Conceptual Framework

The conceptual framework (figure 2) draws from literature from climate change adaptation<sup>3</sup>, health resources<sup>4,5</sup>, disaster management<sup>5,6</sup> and sustainability theory and practice<sup>8</sup>. This framework describes a cycle of adaptive learning within which the **adaptive capacity** of the Disaster Response System (DRS) is affected by a range of **key determinants**. The Disaster Response System is defined, in the scope of this research, to be the organisations and inter-agency coordination and governance mechanisms that respond to the immediate humanitarian needs after a disaster has occurred.

The **key determinants of adaptive capacity** are an important element of the conceptual framework and lie at the centre of the research focus. We differentiate between inter-organisational, organisational and individual determinants of adaptive capacity.

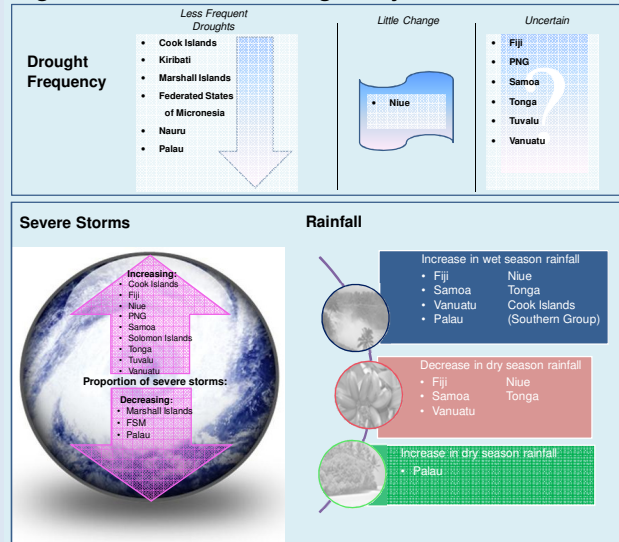


## Preliminary Findings

Preliminary findings of the following outputs to date are provided below.

- Projected Climate Change Impacts in the Pacific*
- Review of Australia's Overseas Disaster and Emergency Response Sector*
- Background Review: Disaster Response Systems of Four Pacific Island Countries*

## Fig 3: Pacific Climate Change Projections: Extremes<sup>1,2</sup>



## Preliminary Interview Findings on Australian response

Australian based interviews have been conducted with the following organisations: *ACFID, Adventist Disaster Relief Agency (ADRA), AusAID, Australian Civil-Military Centre, Australian Defence Force, Australian Red Cross, CARE Australia, Caritas Australia, Oxfam, Plan, Save the Children, World Vision*. Initial findings include:

- There are several levels or layers of disaster response, which are not always coordinated with one another.** Australian Government overseas disaster response in PICs is led by the Civil/Military arm of Australian Government, including AusMAT, Civil/Military Team, Australian Defence Force. Australian NGOs primarily respond to disasters in the Pacific at the invitation of in-country partners and through activation of the UN Cluster system which focuses special teams on individual humanitarian needs.
- Attention to climate change adaptation (CCA) in disaster planning is variable.** In some agencies, CCA is of major focus and is integrated in plans and disaster risk reduction (DRR), while in others it has only been discussed informally. In yet others, CCA is considered in the overall country programming and incorporated into country-specific DRR planning and interventions.
- Adaptive capacity is varied.** On the positive side, Australian NGOs undertake simulations to support staff capacity building (real time, in the field) and facilitate coordinated action by NGOs and UN Cluster systems. However at the time of disaster it is difficult for ANGOs to acquire information about the real 'gaps' and needs in a given country and best role to play. And although a shortage of human resources for health in-country was mentioned, it was not given much emphasis and may point to a gap between external response and internal PIC government processes and needs. This area will be further explored in-country in coming field trips.

## Fig. 4: Australian organisations' contribution to four humanitarian needs

Organisations <sup>9</sup>	Health and Medical Care	Food and Nutrition	Water and sanitation	Psychosocial needs
Australian Civilian Corps	Yes		Yes	
Australian Department of Defence	Yes		Yes	
Australian Red Cross	Yes	Yes	Yes	Yes
Civilian medical teams	Yes		Yes	
CARE	Yes	Yes	Yes	
Caritas Australia		Yes	Yes	Yes
Oxfam	Yes	Yes	Yes	
Plan Australia		Yes	Yes	Yes
RedR	Yes	Yes	Yes	
World Vision Australia	Yes	Yes	Yes	Yes
Other faith based organisations	Yes	Yes	Yes	Yes

## References

- Australian Bureau of Meteorology & CSIRO (2011) Pacific Climate Change Science Program (PCCSP): Current and future climate of Pacific Island Countries. International Climate Change Adaptation Initiative (ICCA), Collaboration between Pacific Island Countries, Australian Bureau of Meteorology and Commonwealth Scientific and Industrial Research Organisation (CSIRO).
- Gero, A., Willetts, J., Daly, J., Buchan, J., Rumsey, M., Fletcher, S. and Kuruppu, N. 2012. Projected climate change impacts in the Pacific: A summary Report prepared for NCCARF by the Institute for Sustainable Futures, and WHO Collaborating Centre, University of Technology, Sydney.
- Ekstrom, M., Kuruppu, N., Fowler, H., Chew, F., Young, B., Wilby, R., Dessai, S. 2012. Examination of climate risk in a modified uncertainty matrix framework', Global Environmental Change, (under review).
- World Health Organization (2006) The World Health Report 2006 - working together for health. Geneva, Switzerland: WHO
- World Health Organization (2011) Human resources for health action framework: For the Western Pacific Region (2011 - 2015) Draft. Manila, Philippines: WHO WPRO
- IPCC (2012) Summary for Policymakers: Managing the risks of extreme events and disasters to advance climate change adaptation. New York, USA.
- FAO (2008) Disaster risk management system analysis: a guide book. FAO, Rome.
- Stengers, Y. (2010) Conceptualising everyday practices: Composition, reproduction and change. Working Paper 6, Carbon Neutral Communities, Centre for Design, RMIT University and University of South Australia.
- Fletcher, S., Gero, A., Rumsey, M., Willetts, J., Daly, J., Buchan, J., Kuruppu, N., and Thiessen, J., 2012. Review of Australia's Overseas Disaster and Emergency Response Sector. Report prepared for NCCARF by the WHO Collaborating Centre and the Institute for Sustainable Futures, University of Technology, Sydney