



Overview of Water, Sanitation and Climate Interactions



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South Pacific islands running out of water

By [Hillary Whiteman](#), CNN

October 4, 2011 -- Updated 0936 GMT (1736 HKT)

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Locals helping with the transfer of emergency water supplies by the Government of Tuvalu and the Tuvalu Red Cross.

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“Water is the primary medium through which climate change influences peoples’ livelihoods and wellbeing, and adaptation to climate change impacts must include better water management”

– UN Water



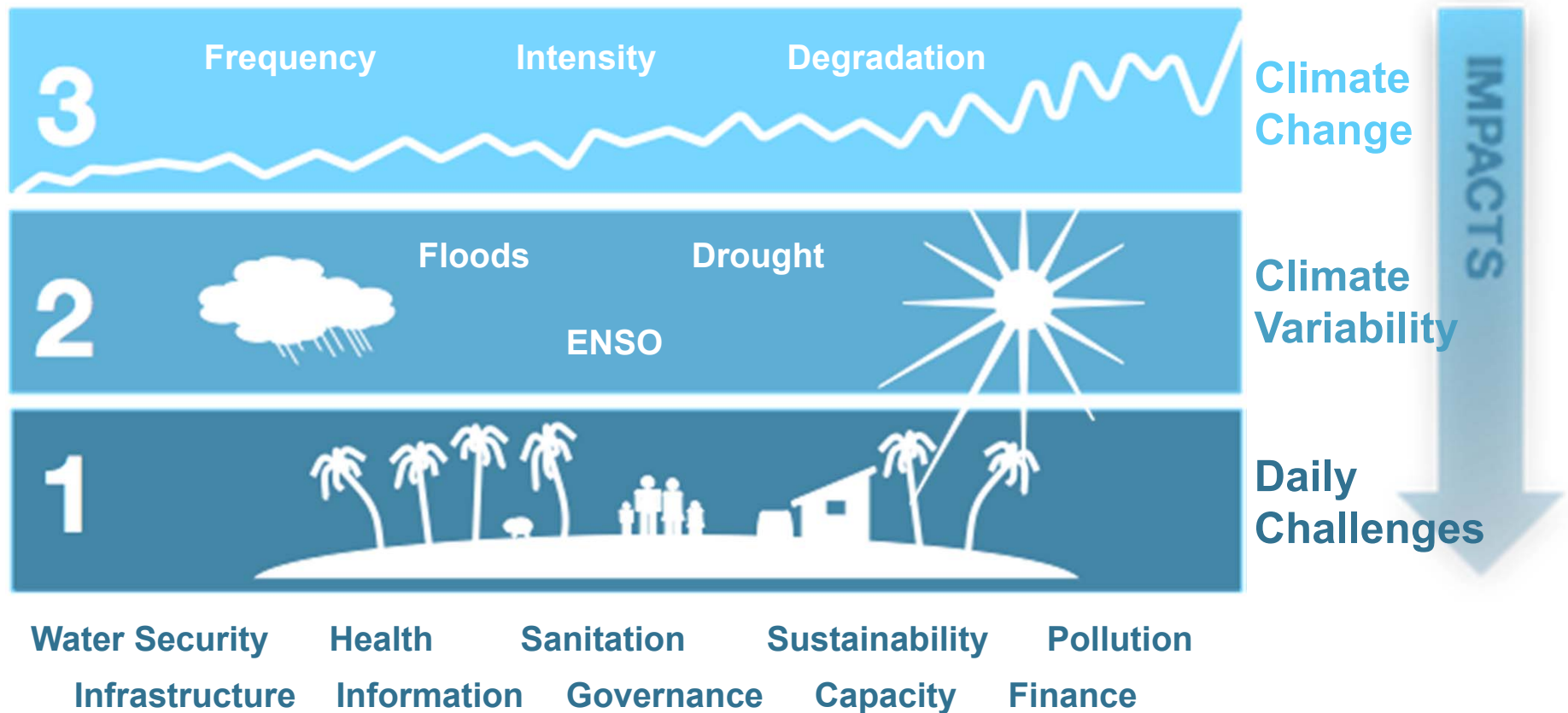
“Water needs to be placed at the heart of global policy responses to climate change”

– Water and Climate Coalition

Resilience to Variability is Changing

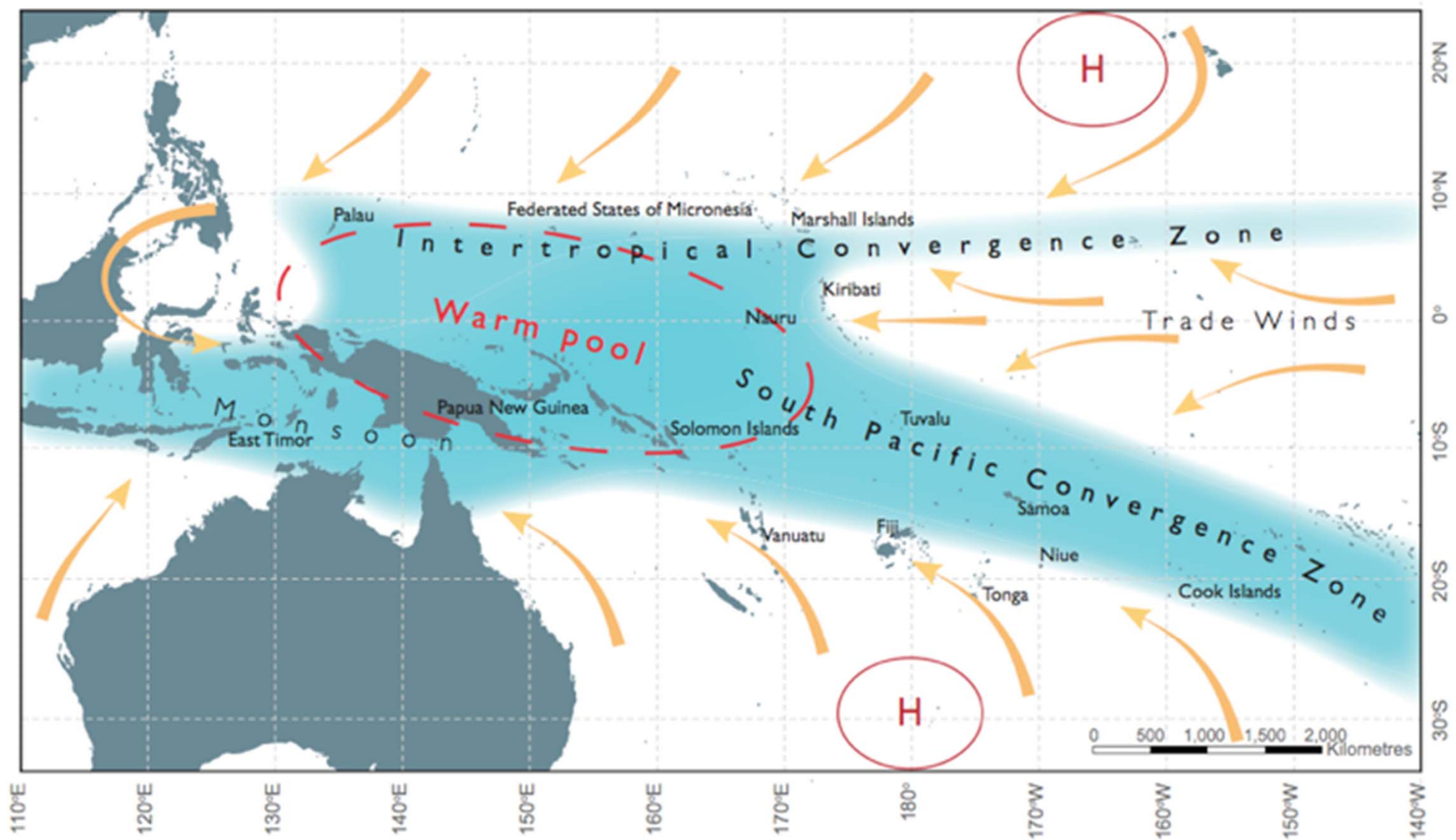
- ✱ **Pacific communities amongst the most resilient on earth**
- ✱ **But this has changed & is continuing to change with social, economic & environmental challenges**
- ✱ **Preparation for & management of floods & prolonged drought generally poor**
- ✱ **Vastly improved understanding, but not translated to improvements in resilience**
- ✱ **Significant risk is now a way of life for many**

Mounting pressures...



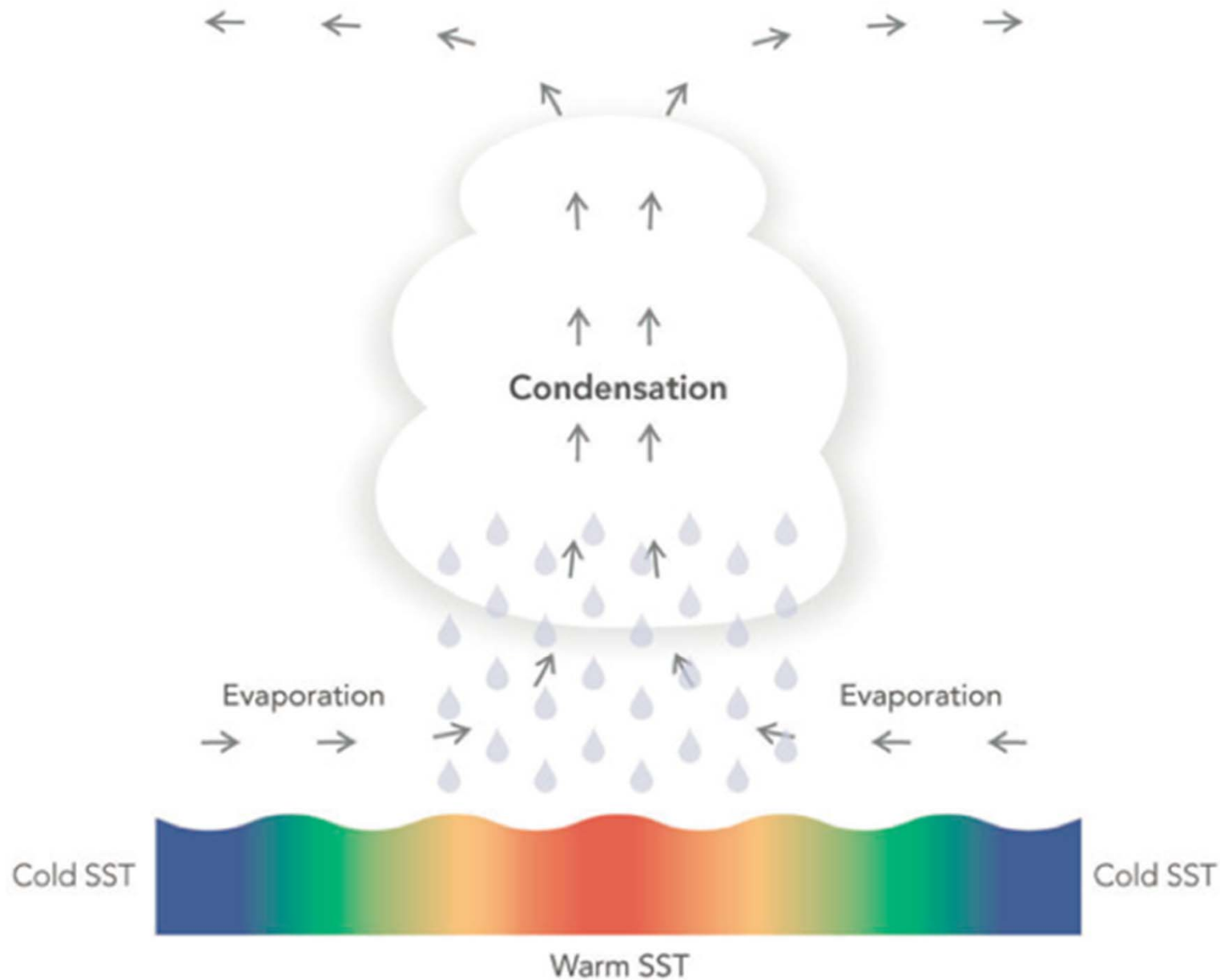
Key Drivers of Climate Variability

- ✱ **Seasonal:** *Convergence Zones*



A key driver of tropical climate

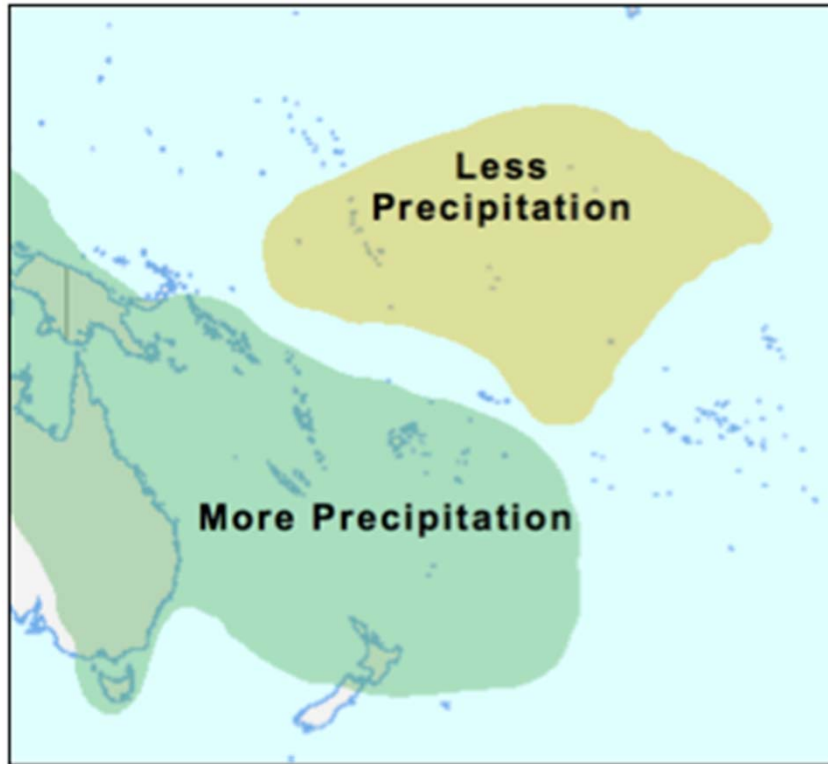
Precipitation and low pressure tend to occur over tropical ocean areas with the highest sea surface temperatures



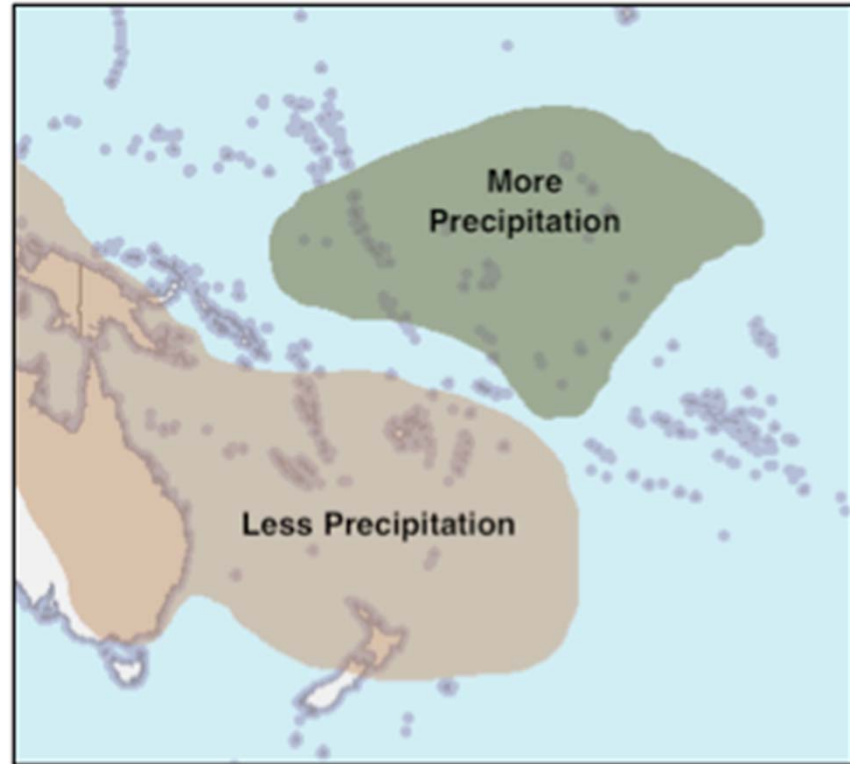
Key Drivers of Climate Variability

- ✱ **Seasonal:** *Convergence Zones*
- ✱ **Medium Term:** *ENSO*

July to August



La Niña event



El Niño event

The impacts of Climate Change on the Pacific...

Short term impacts (10-20 years) marginal

Best response is to build resilience to existing climate variability, and improve understanding

Medium term (20-60 years) become more apparent (water, weather events, biodiversity, food)

Longer term (60+ years) potentially more severe (sea level rise a more serious issue)

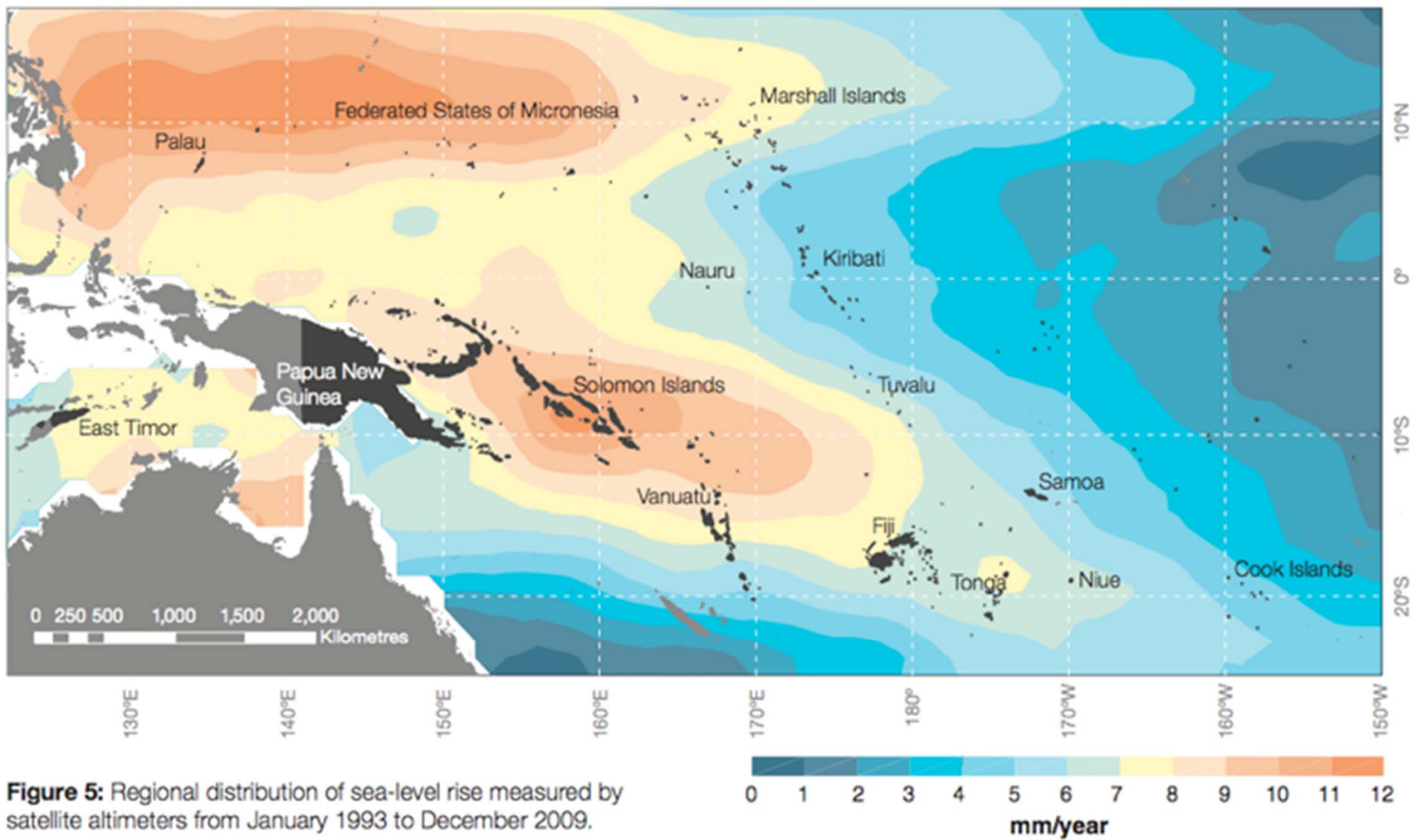
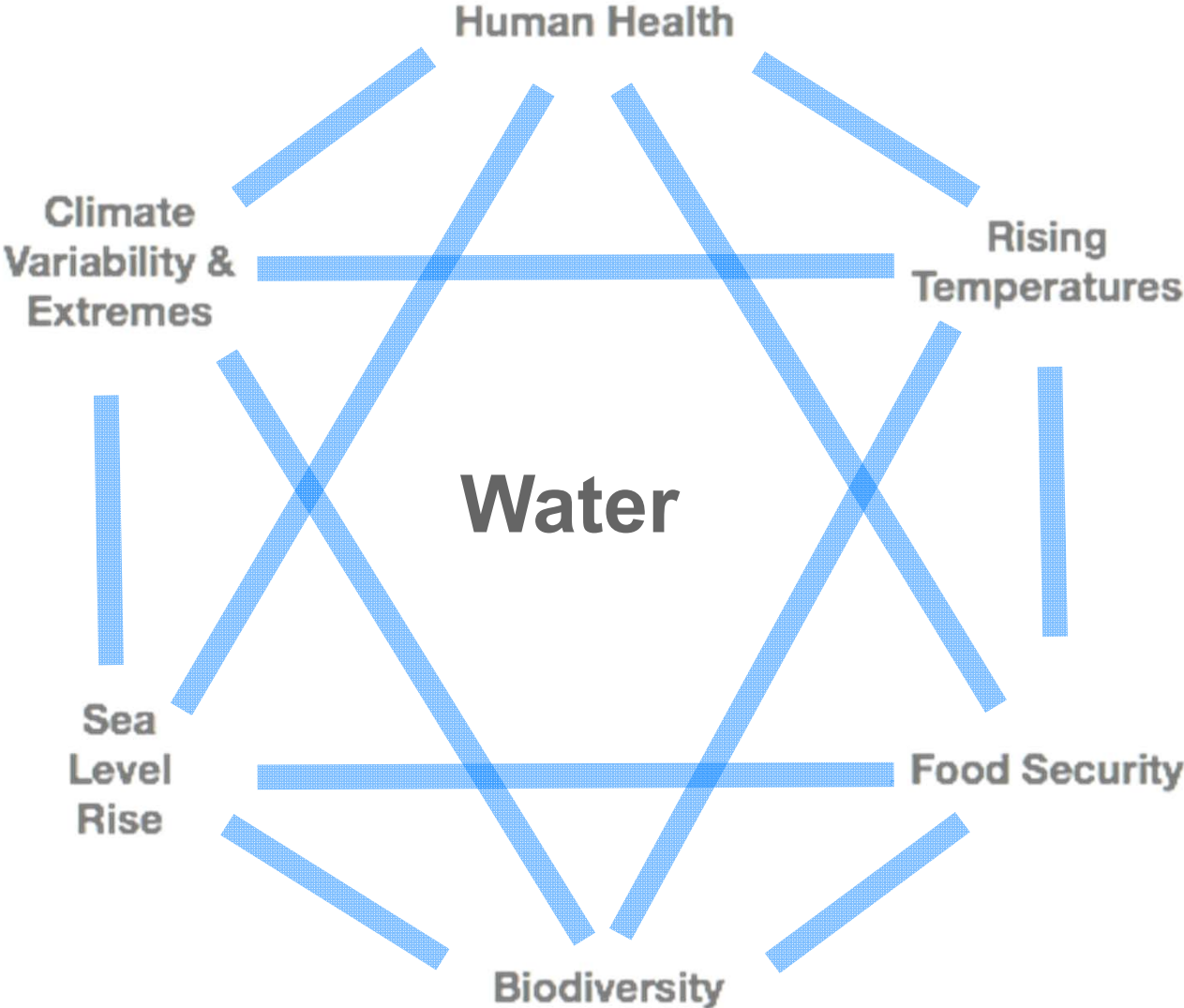
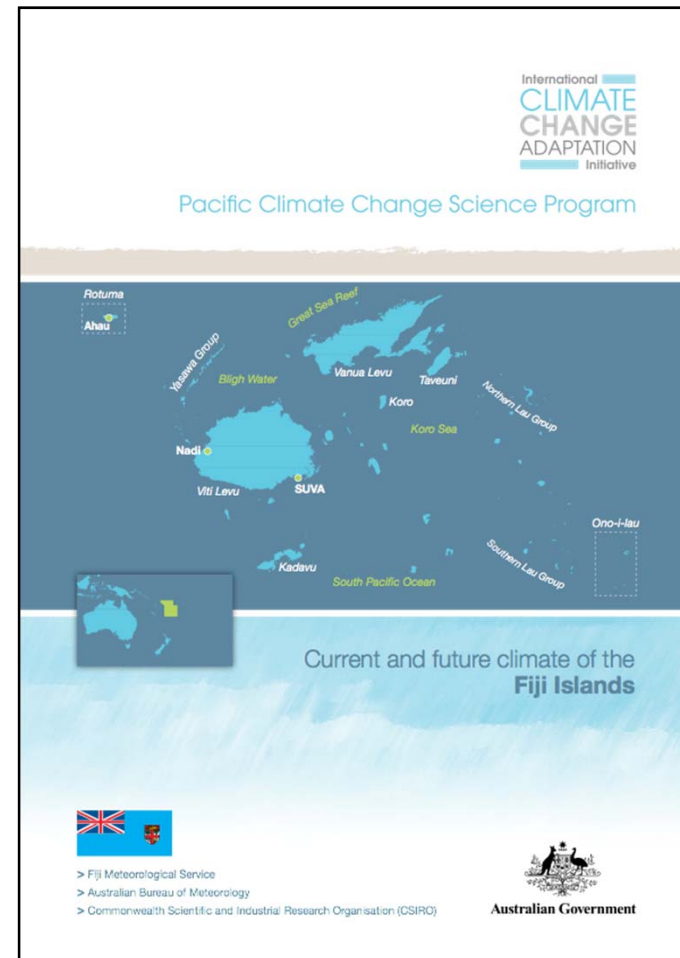


Figure 5: Regional distribution of sea-level rise measured by satellite altimeters from January 1993 to December 2009.

Where do the impacts lie?

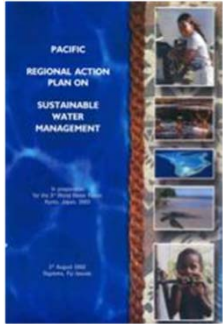


Knowledge of impacts improving, but significant uncertainties remain





So what to do to protect water outcomes?



The Pacific RAP says:

- ✱ **Strengthen capacity to monitor and assess water resources**
- ✱ **Enhance application of climate information specific to PICs**
- ✱ **Adopt a risk-based approach**

The Role of IWRM



The Role of IWRM

- ✱ Growing recognition of usefulness
- ✱ *“The best approach to managing the impact of climate change on water is that guided by the philosophy and methodology of IWRM” - GWP*
- ✱ *“Best way for countries to build the capacity to adapt to climate change will be to use IWRM tools to strengthen their ability to cope with today’s climate variability”*

The Role of IWRM

- ✱ Not limited to technical assessments & interventions
- ✱ Strengthening water governance at a community, national and regional level should be a cornerstone of CCA efforts
- ✱ There is a need to build capacity of those at the forefront of the adaptation battle
- ✱ Use IWRM tools to fix today's serious problems before they are compounded beyond repair
- ✱ **Efforts will only work if IWRM, DRR and CCA efforts do not become 'sectoralised'**