



# Adapting WASH to climate change threats in the Pacific

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# Climate change in the Pacific

*Climate change threatens biodiversity, ecosystem services, food and water supply and the livelihoods and wellbeing of coastal communities across the Pacific.*

Threats from climate change include:

- temperature rise
- storm surges
- sea level rise
- changes in rainfall patterns
- salt water intrusion into groundwater
- more frequent and intense droughts
- more frequent and intense storms



# Climate threats in the Pacific

## Local context is critical

### Solomon Islands

Floods, storm surge and sea level rise



### Marshall Islands

Drought



Sea level rise, saltwater intrusion and storm surge



# Tackling climate change and WASH

Four project aims:

1. To understand current issues relating to water supply, sanitation and hygiene (405 household surveys across 13 communities)

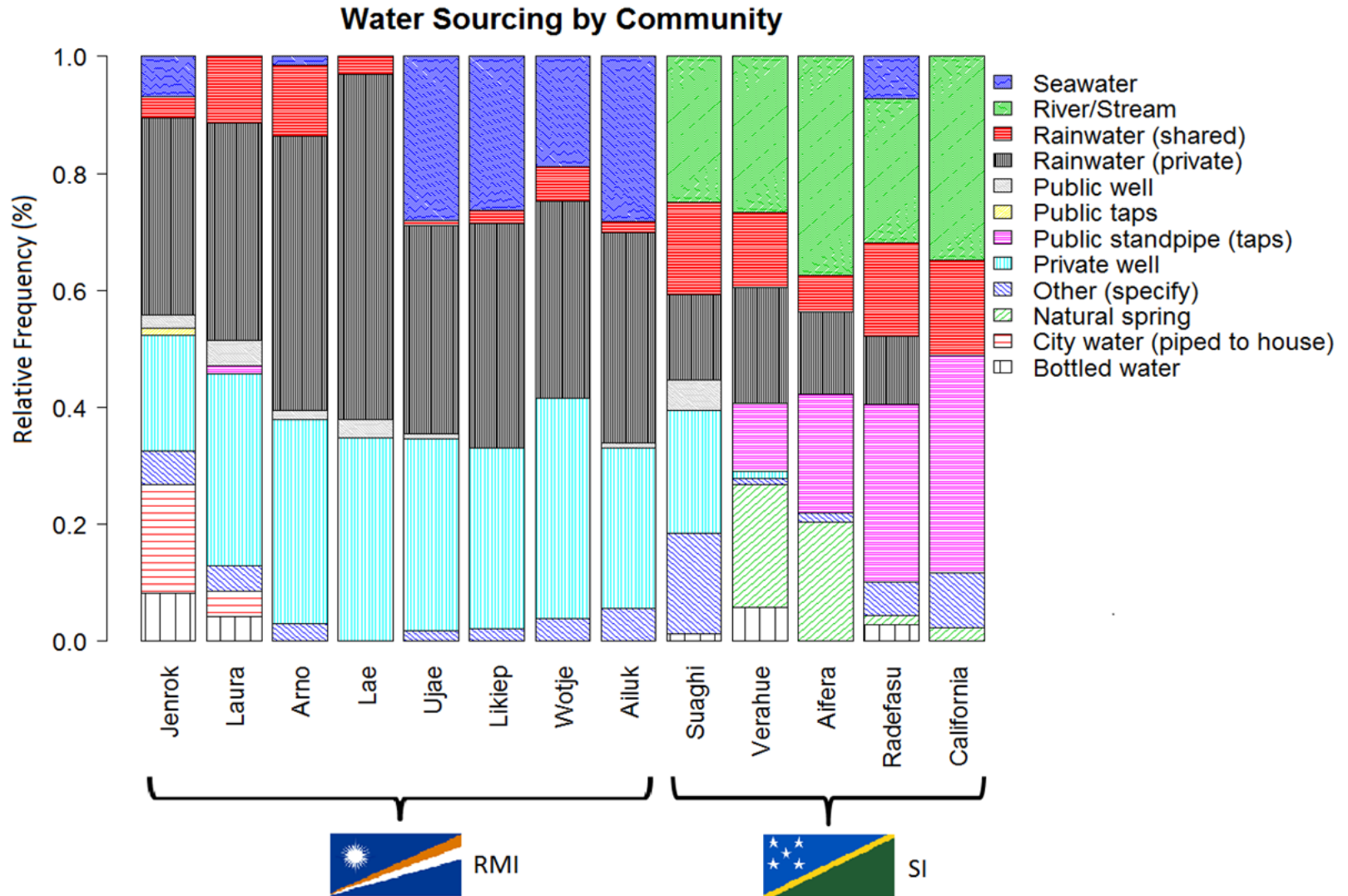
2. To understand climate change threats throughout the Pacific (desktop analyses)

3. To learn from communities to understand their use of traditional and contemporary responses to extreme climatic events (focus group sessions across 13 communities)

4. To use the information from aims 1-3 and continue work with local communities and government bodies to develop adaptation options in light of our shared understanding.

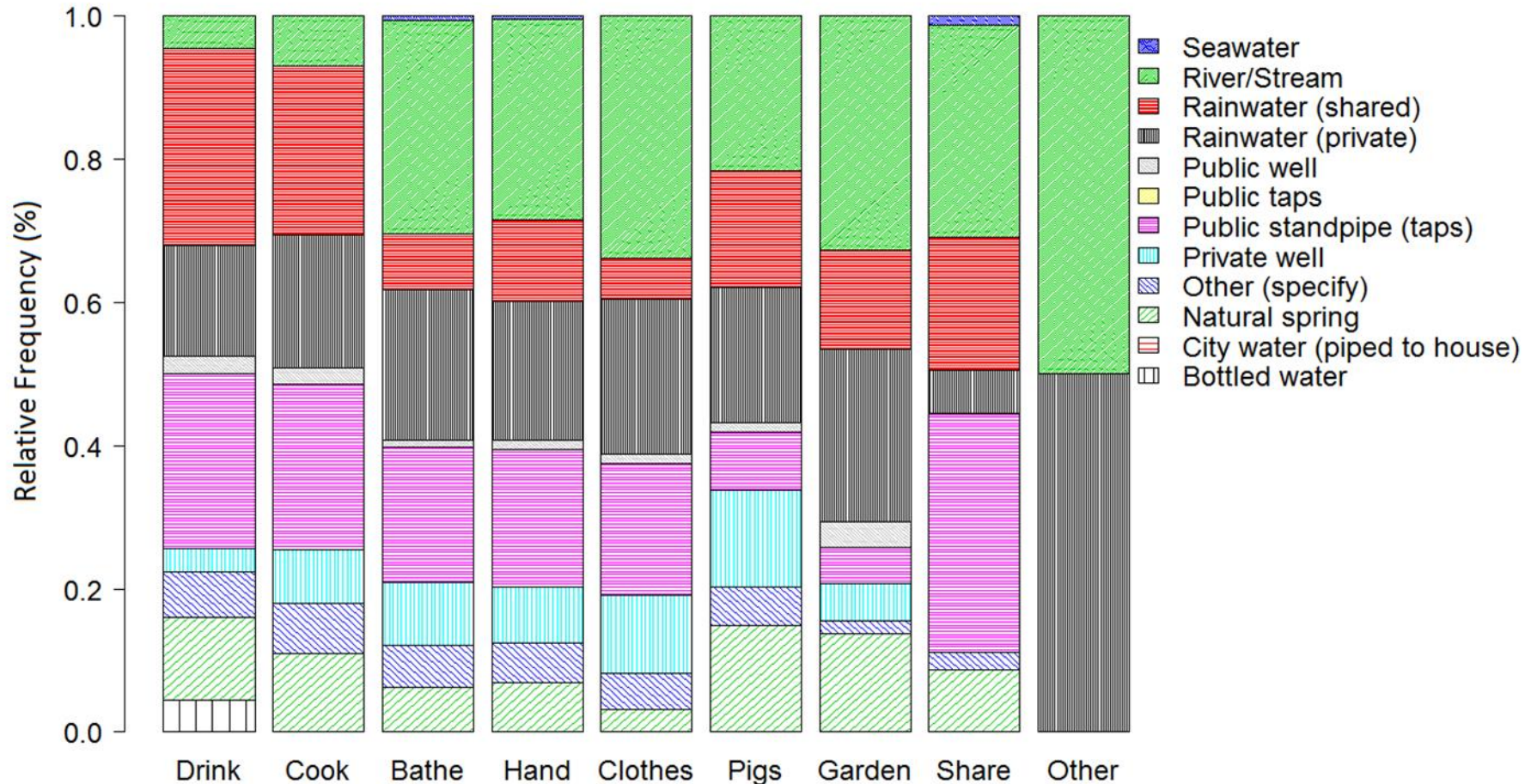


# Multiple water sources are commonplace



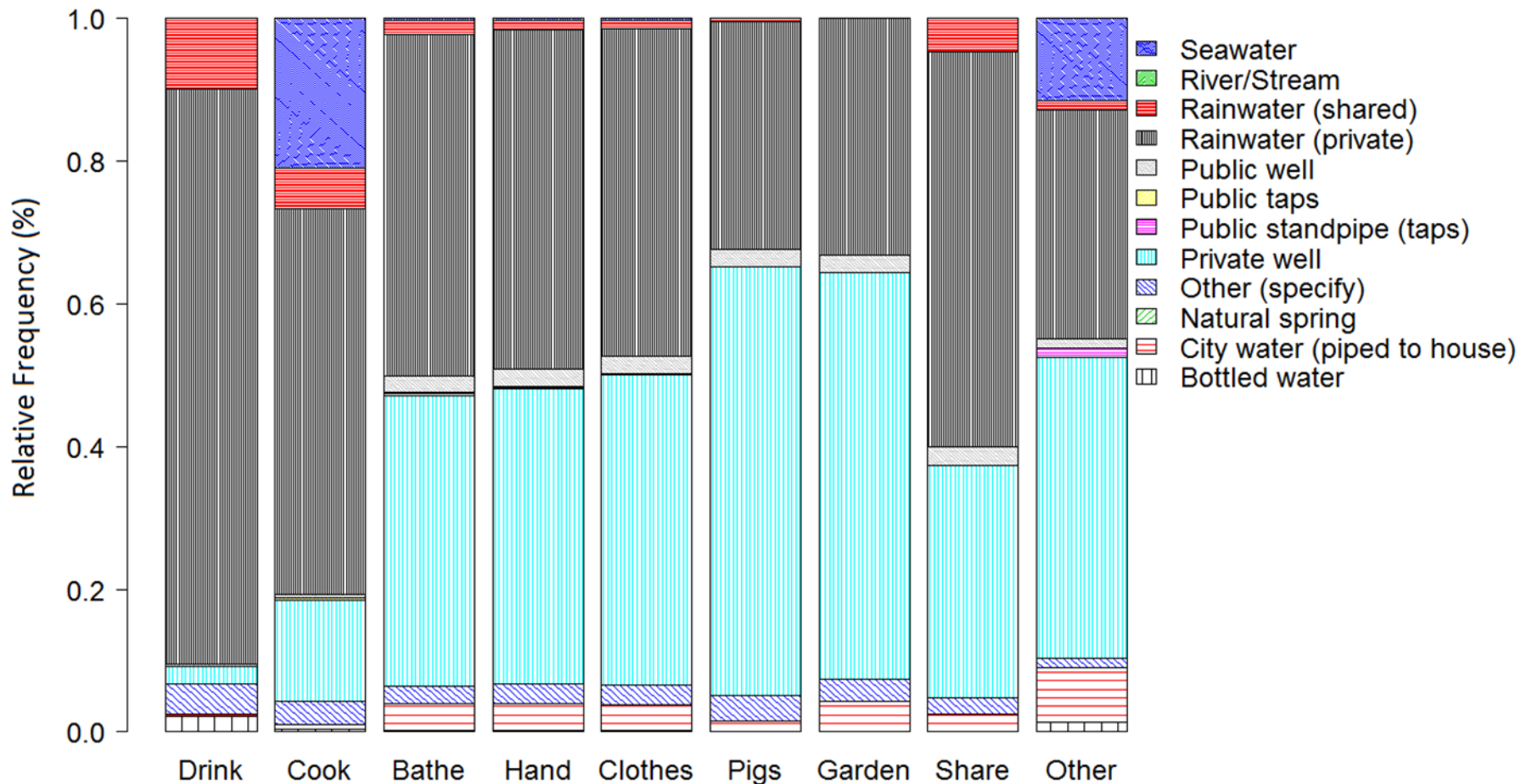
# Mapping uses to sources – Solomon Is

SI: Water Source by Usage during Wet Season



# Mapping uses to sources – Marshall Is

RMI: Water Source by Usage during the Wet Season



# What have we learnt so far?

Every community is different

- Water and sanitation settings are different
- Climate change threats are different
- Social structure and traditional knowledge are different



*There is no one single solution that will work everywhere...  
...but working closely with communities will improve the outcomes and  
reduce the risks.*

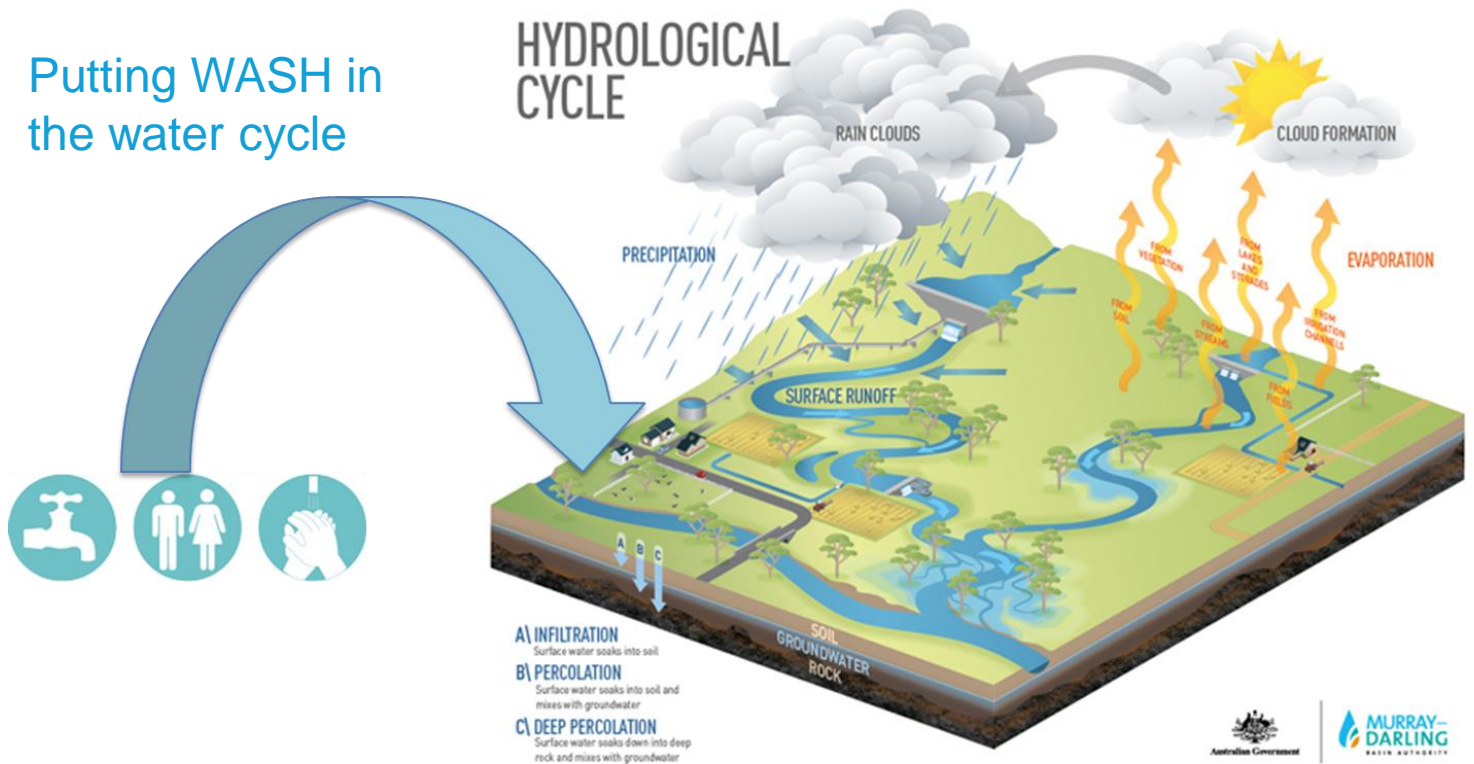


# How can we accommodate climate change threats in WASH planning?

*Understanding multiple sources and uses demands a broader and more holistic approach to understanding and adapting WASH to climate change threats.*

Putting WASH in the water cycle

Hadwen et al.  
2015 *Journal of Water, Sanitation and Hygiene for Development*  
5(2):183-191.





# Anticipated outcomes from our project

- Putting WASH in the water cycle
- Analysis of water, sanitation and hygiene in communities
- Evaluation of climate threats and historical responses to extreme climatic events



## Bayesian statistical models to evaluate:

- a) Climate change scenarios – extreme events, sea level rise, change in rainfall patterns, and
- b) Adaptation options – evaluating the pros and cons of different adaptation approaches – water tanks vs standpipes etc.

***Improved understanding of impacts and consequences can help reduce the risk of maladaptation (ie poor decision making).***

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- All study participants in rural communities in RMI and SI

