Climate change threatens WaSH development and the attainment of the SDGs in the Pacific.

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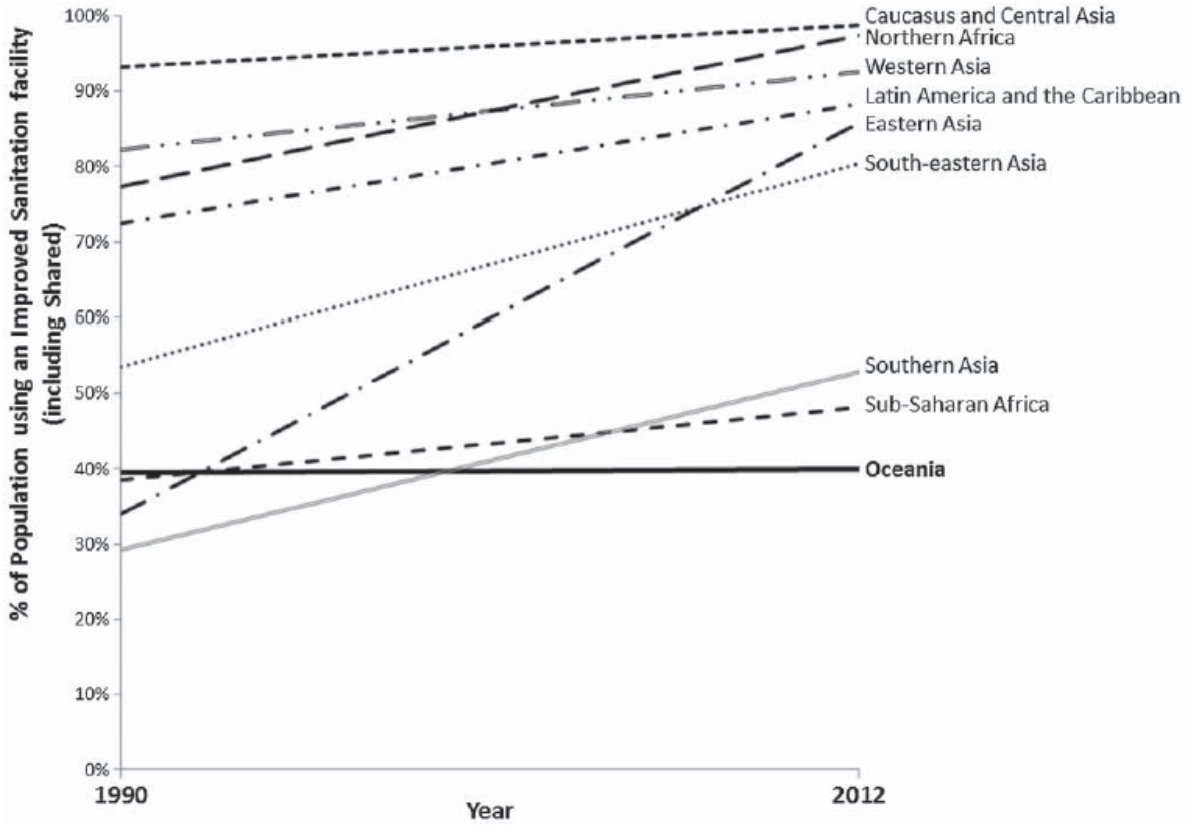
Trends in WaSH in the Pacific region

% of population using improved sanitation



IMPROVED SOURCES OF WATER

46% in 1990
52% in 2015

IMPROVED SANITATION

29% in 1990
31% in 2015

POPULATION GROWTH

70% between 1990 and 2015

Water-borne disease remains a huge problem – investment not keeping pace with population growth

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The SDGs – Goal 6

How can we achieve all of these objectives, particularly in light of climate change impacts?

Climate threats in PICs are diverse and context specific

Solomon Islands

- Floods, storm surge and sea level rise

Republic of the Marshall Islands

- Drought

- Sea level rise, saltwater intrusion and storm surge

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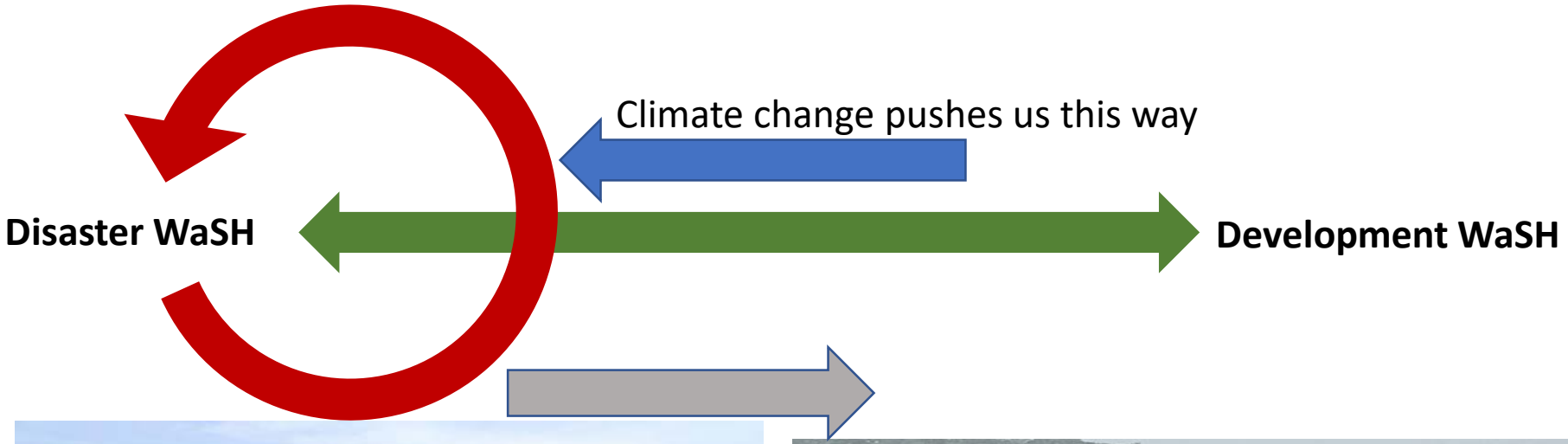
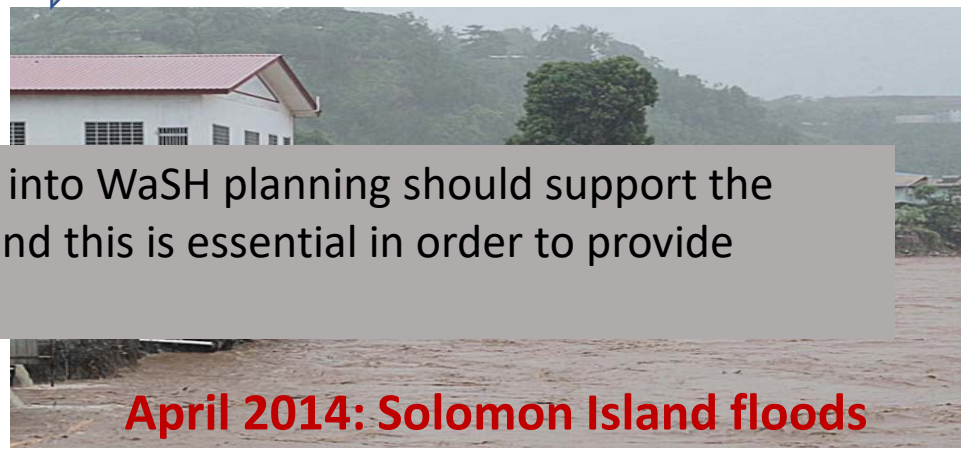
How will climate change affect WaSH?

Climate change is important in the WaSH sector, as it will influence where we sit along the spectrum of 'disaster to development' WaSH





Incorporating climate change adaptation into WaSH planning should support the development of climate-resilient WaSH and this is essential in order to provide security and development.

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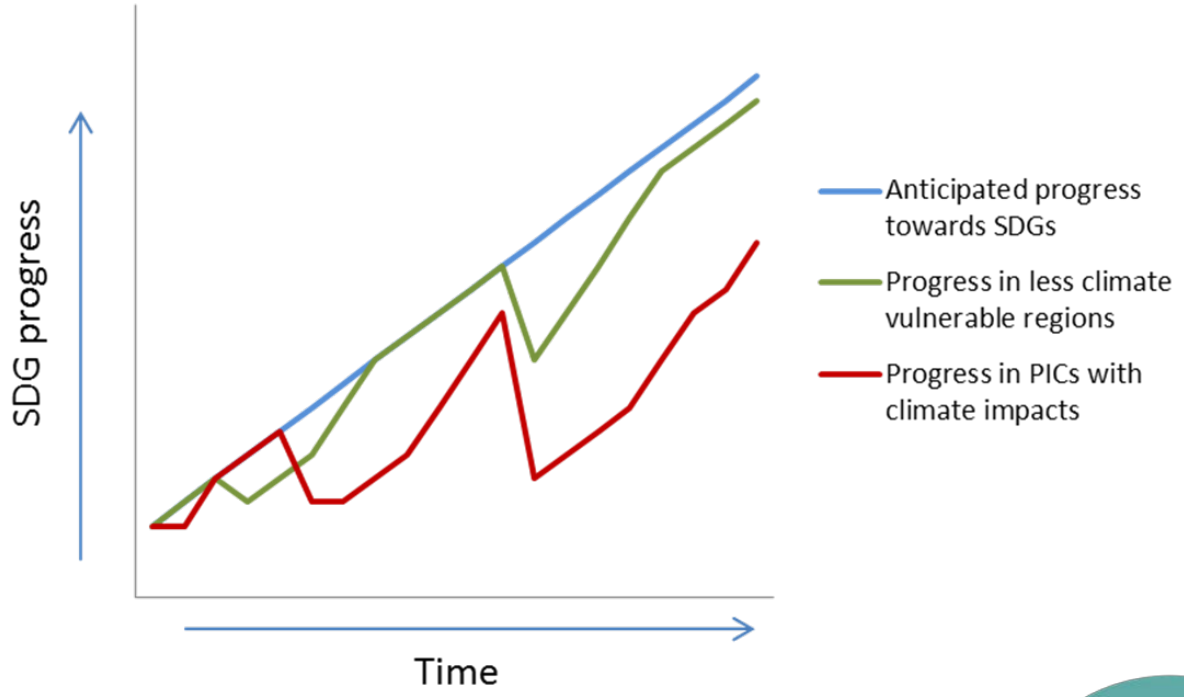
How will climate change affect our achievement of the SDGs?

Climate change and extreme events threaten our likelihood of meeting the SDGs.

Some small countries may lurch from almost complete coverage to almost none at all following extreme events!

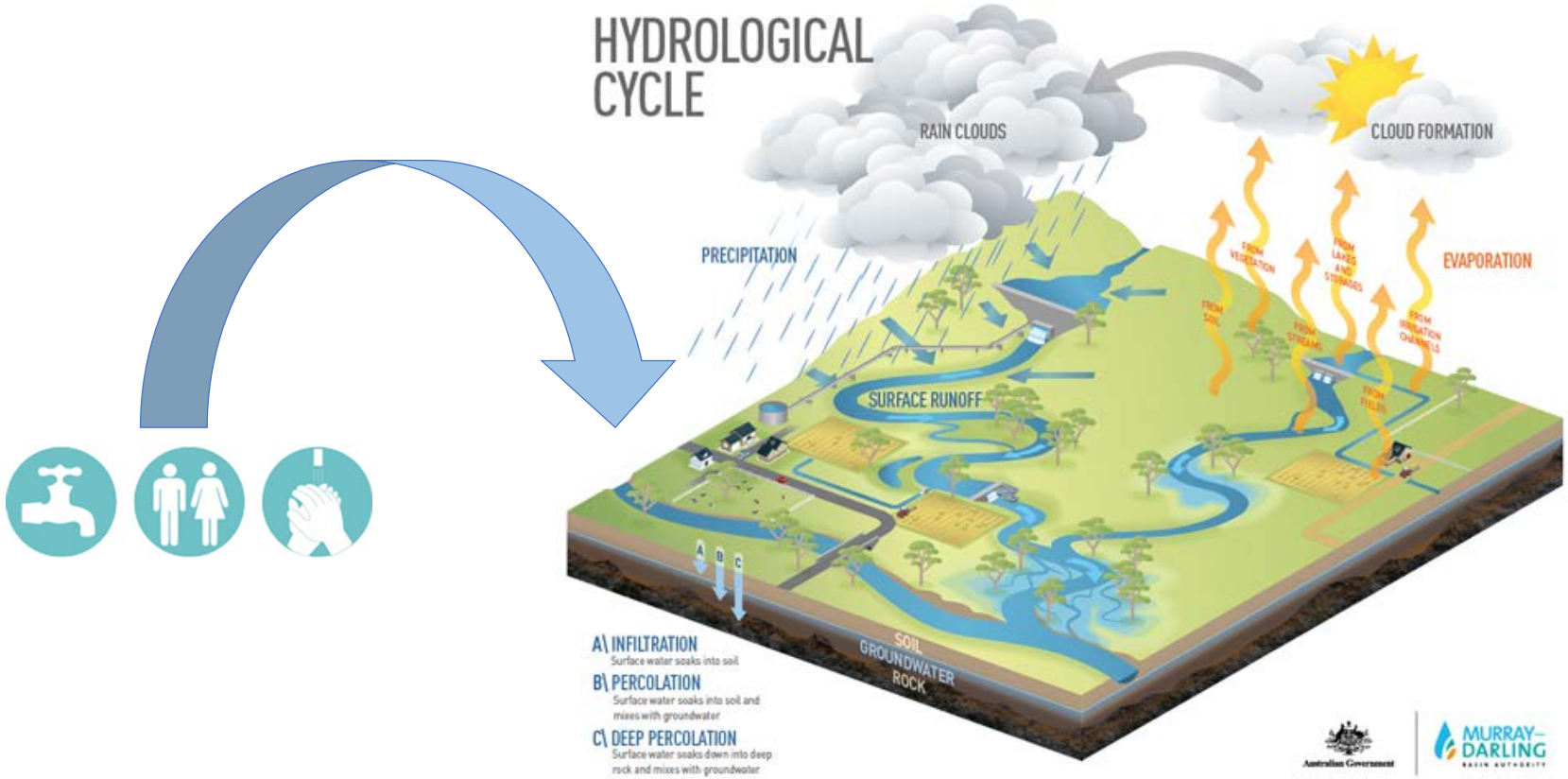
E.g. the village of Falelima, Samoa (Martin & Watkins Jr 2010).

- rainwater harvesting should be adopted both as a 'failsafe' approach following disasters
- pending re-construction of piped services (which may take several years).



Martin T. M. & Watkins Jr D. W. 2010 An analysis of household rainwater harvesting systems in Falelima, Samoa. In: World Environmental and Water Resources Congress 2010: Challenges of Change - Proceedings of the World Environmental and Water Resources Congress, 2010, pp. 2000-9.

Putting WaSH in the water cycle!



Some good news! SDGs are changing our collective view!

Hadwen et al. 2015 Putting WASH in the water cycle: climate change, water resources and the future of water, sanitation and hygiene challenges in Pacific Island Countries J.Wash Dev 5(2), 183-191

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Tackling climate change and WaSH challenges in remote PIC communities

Urgent need for us to:

1. Understand current issues relating to water supply, sanitation and hygiene

2. Understand climate change threats to the water cycle and WaSH systems

3. Learn from communities to understand their use of traditional and contemporary responses to extreme climatic events

4. Work with local communities and government bodies to develop adaptation options and tools (for data collection and analysis) in light of our shared understanding.

PACCWASH Project - Desktop analyses + Household surveys + Focus Group Discussions = systems level understanding

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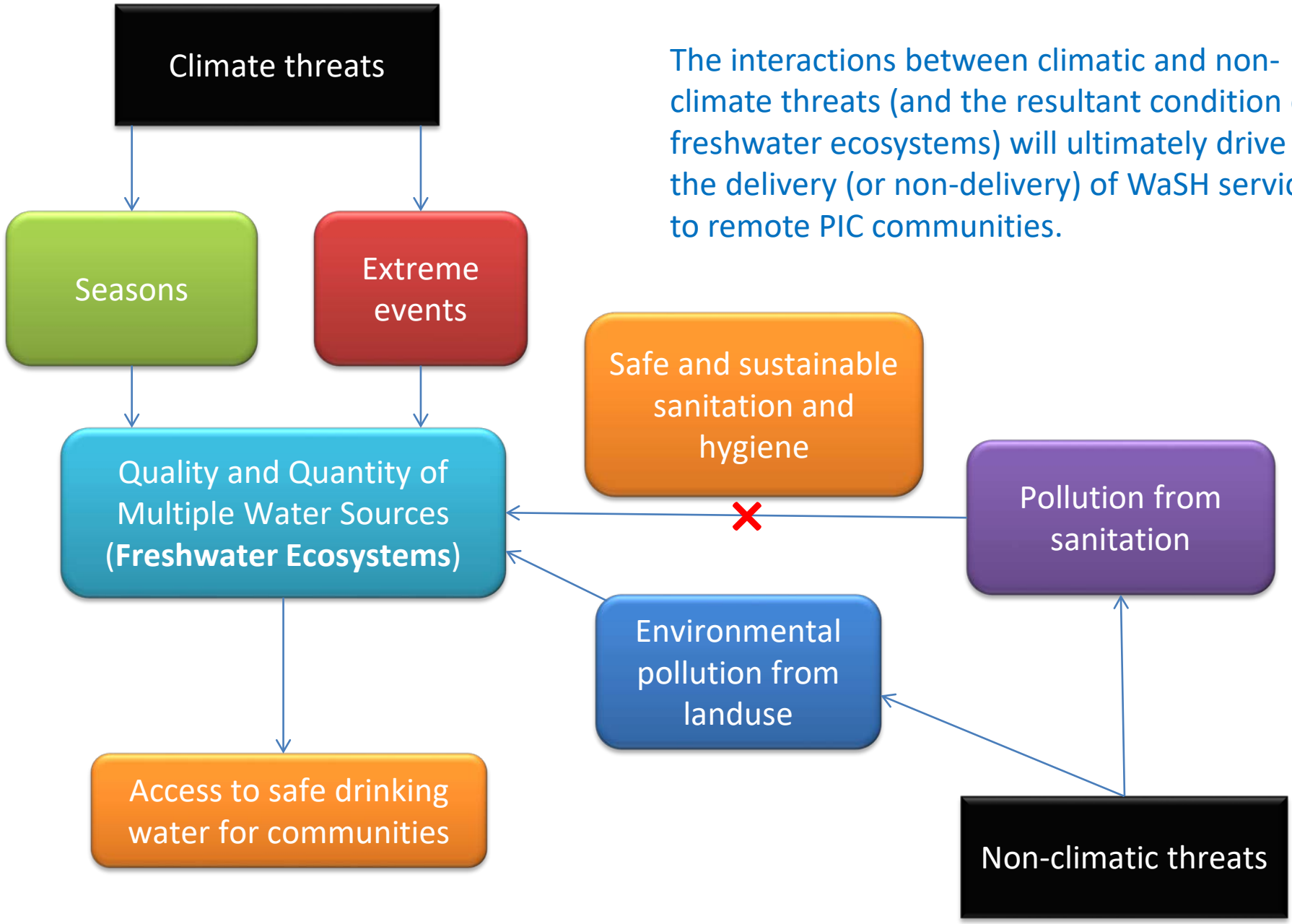
How systems thinking can sustain WaSH development



The interactions between climatic and non-climate threats (and the resultant condition of freshwater ecosystems) will ultimately drive the delivery (or non-delivery) of WaSH services to remote PIC communities.

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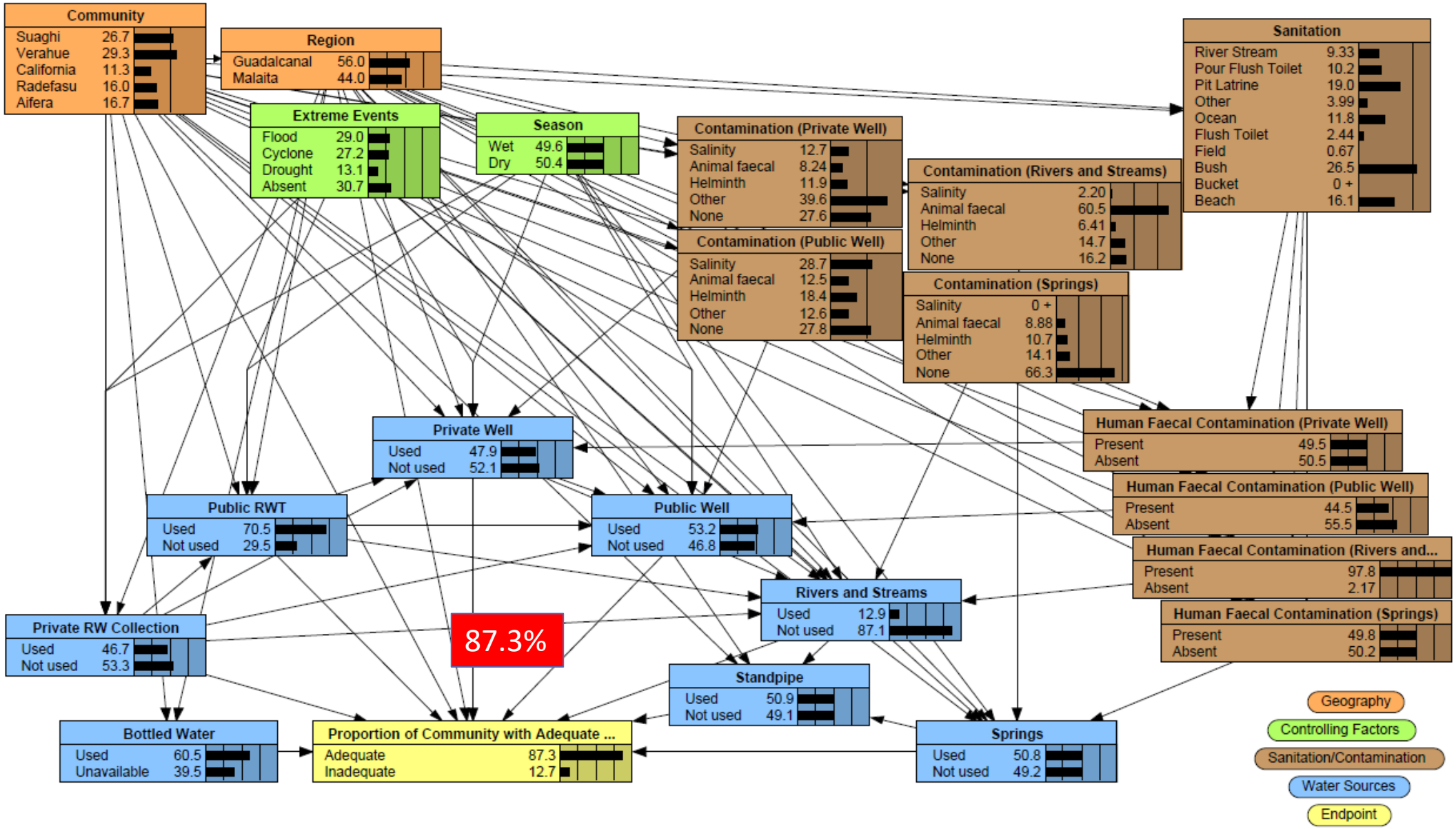
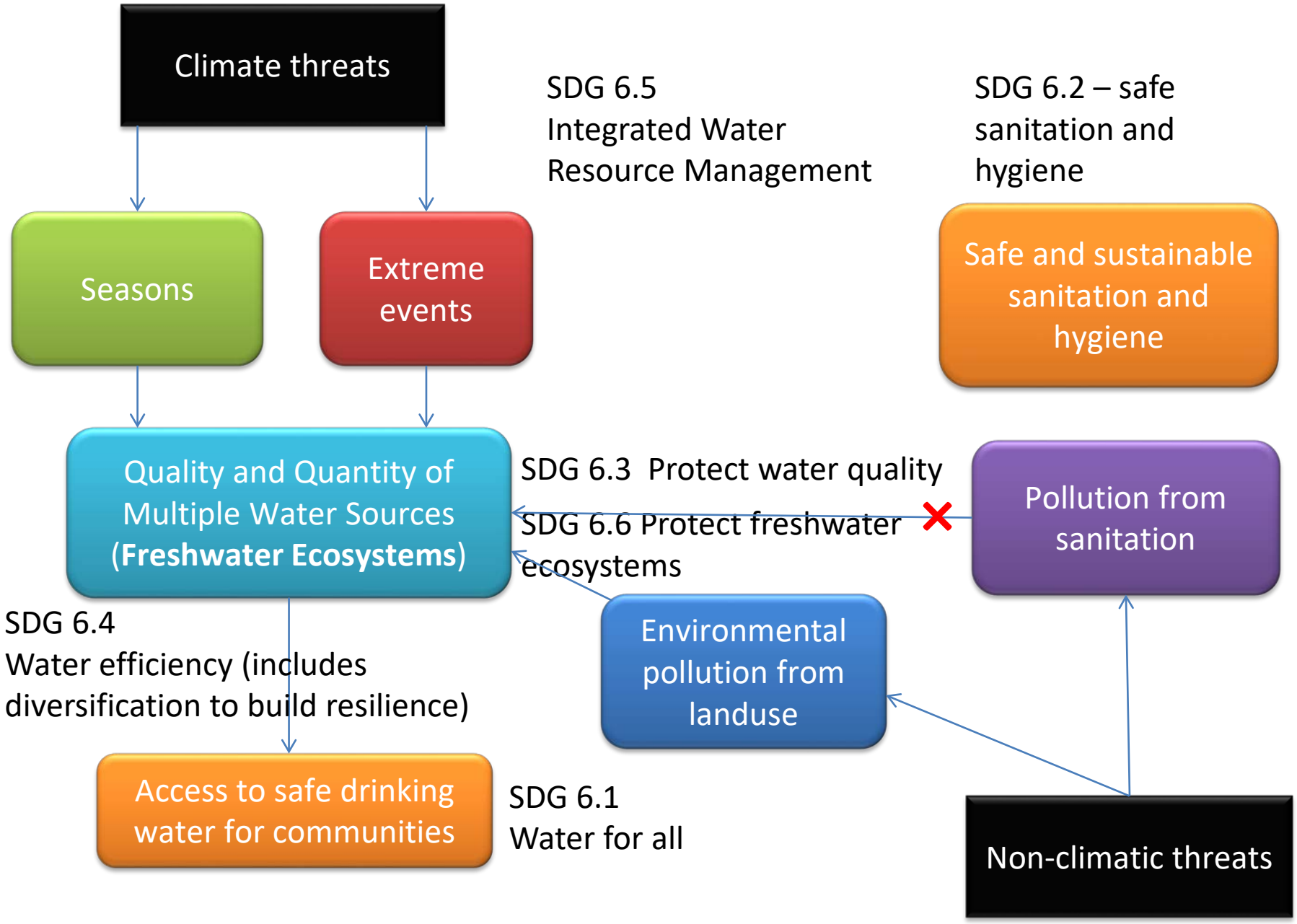
Modelling the connections – Solomon Islands BBN



Linking WaSH (6.1 and 6.2) and the other SDG 6 targets



Systems approaches to tackle climate change and WaSH

Yes, climate change threatens development and SDG success, but systems models can offer great capacity to evaluate climate threats and examine adaptation options.

We need to consider human and ecosystem conditions together, in an integrated way to achieve:

a) Sustainable development goals
b) Climate resilience for all sectors (including WaSH)

An integrated approach to tackling SDG 6 – not just an engineering approach - offers a great opportunity to support development throughout the Pacific, without risking the region's limited resources.

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