Track 1:
Health, Water and Sanitation

Meeting basic needs and building resilience to climate variability and change
Outline of track 1 session:

Welcome and outline of session
Introductory presentation

What is the relationship between water, sanitation and health in PICs?
Key issues, and why does climate variability and climate change make it even more serious?
What are we doing and where do we want to go?

Plenary discussion on two questions…

…on the theme of meeting basic needs and building resilience to climate variability and change

Summary and wrap up
Mounting pressures on health, water and sanitation...
Multiple Cross Sectoral Impacts of Climate Change on Health...

Adapted from Patz et al. 2000
Fiji floods: State of emergency declared as rains continue
South Pacific islands running out of water

By Hilary Whiteman, CNN

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

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

Drought hits South Pacific islands
Newly reported arboviral infection outbreaks and circulation in the Pacific, Jan 2012 - June 2015

source: SPC, Public Health Division
Incidence of diarrhoeal disease (per 1000 population)

- The World
- Australia & NZ
- Pacific

Water borne disease
Diarrhoea and rainfall, Suva 1995-2010

Note: Figure based on a time-series Poisson regression model. The solid orange line is a Lowess smooth illustrating a typical "U-shaped" relationship.

Source: McLeroy et al. 2012
National Climate Change and Health Action Plans

The Top 3 priority climate-sensitive health risks of 12 PICTs

1. **Food** and/or **water** borne (10/12 PICTs)
2. **Vector** borne (9/12 PICTs)
3. **Air**-borne (6/12 PICTs)
Building adaptive capacity in core public health functions

- Knowledge Transfer Country Residence
- Two Studies Projects
- Teaching DDM
- Protocol Writing
- Data Management & Analysis
- Paper writing
- Effective Module
- Health Alert Response
- Public Health Surveillance
- Basic Epidemiology & data analysis
- Intermediate Epidemiology & data analysis
- Surveillance Project
Principles of Development Effectiveness: Key approaches to adaptation activities

✓ Country ownership

✓ Alignment with national priorities and policies

✓ Building capacity upon existing systems

✓ Harmonisation of development assistance

✓ Results oriented approach

✓ Mutual accountability
Percentage of populations using improved drinking water sources in 2013

Source: WHO & UNICEF Joint Monitoring Programme
Percentage of populations using improved sanitation facilities in 2013

Source: WHO & UNICEF Joint Monitoring Programme
Massive effort required to meet proposed SDGs of universal access by 2030

Population Using Improved Water Supply and Sanitation (total Pacific SIDS)

- **1990**: SANITATION 1.7M, WATER 2.7M
- **2015**: SANITATION 3.1M, WATER 5.2M
- **2030**: REQUIRED* 12.8M

*to meet proposed SDG targets of universal access

Source: Sanitation, Drinking-Water and Health in Pacific Island Countries: Breaking the Barriers to Progress, SPC, UNICEF & WHO, 2015
Universal Pacific Access to Safe Water and Sanitation

- Sustainable Resources
- Affordable Technology
- Effective Governance
- Health & Hygiene
- Community Resilience
Case Study 1:

Honiara, Solomon Islands
Deadly flash floods hit Solomon Islands' capital Honiara

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The flooding in Honiara followed days of heavy rain in the area
Solomon Islands floods: Thousands remain in Honiara evacuation centres

Updated 8 Apr 2014, 7:22am

People walk through debris resulting from days of heavy rain in the Solomon Islands, which caused flash flooding and the Matambo River in Honiara to burst its banks, April 4, 2014.
(Audience submitted: Tony Bransby)
Post flash-flood diarrhoea outbreak
Solomon Islands 2014

Diarrhea cases per 1000 population

Honiara and Guadalcanal

Malaita, Makira, Isabelle

Epidemiological week and month

Solomon Islands MHMS and WHO
Case Study 2:

South Tarawa, Kiribati
~20% climate impact on sustainable yield over 20 year period

2 x more people

67% system losses

5 litres per person per day?

Potential population increase at current growth rates

Current estimates of leakages and losses in transmission

assuming 3.47% growth, 20% reduction in sustainable yield, and no changes to current system losses

approximate per capita share of the sustainable yield of Bonriki and Buota potable groundwater reserves
Where to go?

- PICs have “triple burden of diseases” due to impacts of climate variability and climate change.
- Impacts on health and on health systems in PICs should be considered a central issue in climate agreements.
- Existing health systems, surveillance, monitoring and capacity building programmes must be strengthened.
- Improving water and sanitation systems for improved health outcomes is essential for sustainable development, and critical to the climate resilience of PICs.
Plenary Discussion
Aim: Meeting basic needs and building resilience to climate variability and change

Question 1
How can we build the necessary adaptive capacity within government, civil society and the private sector?

Question 2
How can government, private sector and civil society harmonise their efforts towards achieving this in the Pacific?
Track 1:
Health, Water and Sanitation
Key Messages
The Pacific is extremely vulnerable to the immediate and most severe health impacts of climate change, and faces a set of unique challenges in protecting health and securing safe drinking water and sanitation for all.
The scale of these challenges is illustrated by the region’s burden of climate-sensitive communicable and non-communicable diseases, and made increasingly difficult by the impacts of population growth, urbanisation and climate change.
Significantly increased and sustained investment is required to implement the multi-sectoral health, water and sanitation solutions essential to the climate resilience of Pacific communities. This must be underpinned by the principles of development effectiveness.
In the Pacific, local communities, including women, are the front line defence against the health, water and sanitation impacts of climate variability and climate change, and need support to implement sustainable solutions on the ground.