

# **PARADISE UNDER THREAT?**

## **THE HEALTH IMPACTS OF CLIMATE CHANGE**

**IUHPE**

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# Outline

- Climate Change Impacts
- Health Impacts of Climate Change
- Health Care Facilities
- Role of the Pacific Community
- Conclusions

# ACKNOWLEDGEMENTS

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# Climate Change

- **Climate change is no longer a scientific debate;** moral imperative to act, build on Paris momentum
- Climate change potential as **ecological disaster**
- **Climate change is an issue of justice;** Pacific people at the sharp end of climate change, miniscule contribution to harmful GHG emissions but maximum negative impact
- **Health Impacts largely invisible thus far;** but everyone is affected, SIDS most impacted, least able to respond

# Climate Change

- **Climate Change affects entire determinants of health;** social, economic, environmental – food we eat, water we drink, weather we experience, affects lives and livelihoods
- **Climate Change is an “Effect Multiplier”** – aggravates existing health risks e.g post disaster disease outbreaks usually from pre-existing threats, aggravates access to pre-existing gaps in access to water and sanitation
- **Preparedness is critical** – integrate health issues into CC adaptation policy



# A VULNERABLE REGION

- Pacific region is highly vulnerable to disasters; floods, droughts, Tropical Cyclones etc
- WEF Global Risk Report 2018 showed Vanuatu and Tonga top two at highest disaster risk with high levels of societal vulnerability
- Solomons Islands, PNG and Fiji in top 10 countries
- High levels of societal vulnerabilities

# RECENT DISASTERS & ESTIMATED COSTS

Disaster	Disaster Effects USD Million	%GDP
2009 TSU Samoa	124	22
2012 TC Evan Fiji	108	2.6
2013 TC Evan Samoa	203	29
2014 Floods SB	107	9.2
2015 TC Pam Vanuatu	449	64
2016 TC Winston Fiji	900	20
2018 TC Gita Tonga	150	38



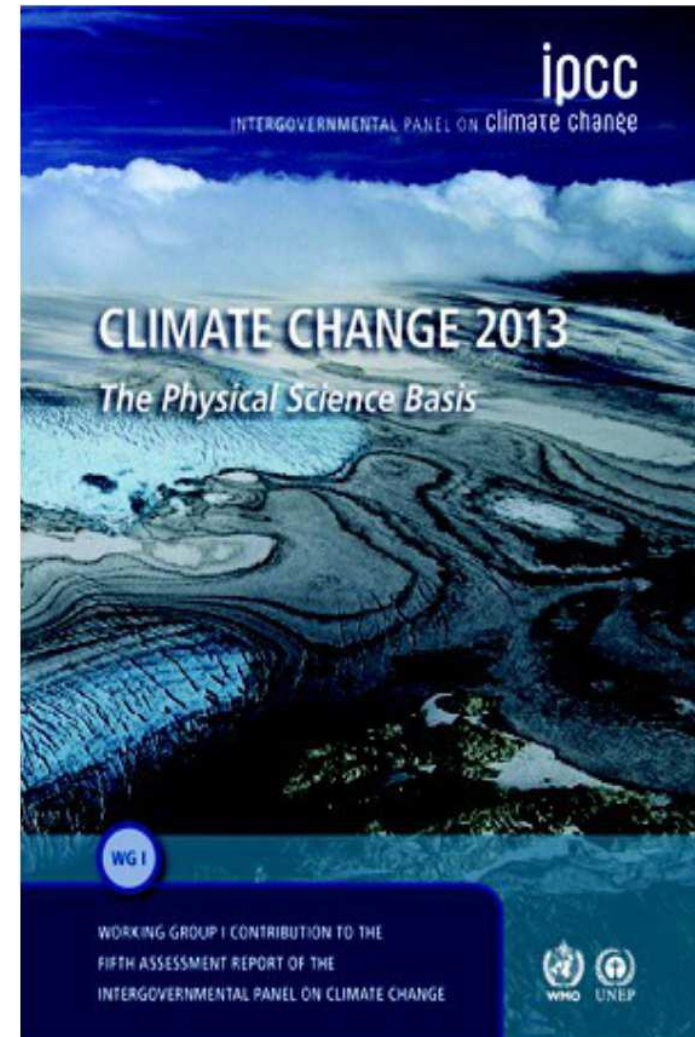
# Climate Change Impacts

- Increased risk of weather-related disasters
- Progressive long-term degradation of natural environment, biodiversity, critical ecosystems, (eg coral reefs), social and economic systems
- Increased vulnerability of islands
- Displacement of people - LSE estimates 2-10 million people displaced by 2050
- Fiji plans to relocate 63 villages; Vunidogoloa in 2012, Tukuraki 2017 with assistance from SPC



# Impact of Climate Change

- **Food security** (as a result of ocean acidification, increase in ocean temperature, changing rainfall patterns causing drought and flooding events ...)
- **Water security** (as a result of salt intrusion, drought, etc.)
- **Loss of land** (as a result of erosion, sea level rise ..)
- **Loss of natural and economic base** .. and casualties (as a result of cyclones, flooding and other weather related disasters)
- **Biodiversity loss** (krill, seagrass, bivalves at sea, etc.)
- **Economies** (altered tuna stock migration affecting industrial fisheries, tourism, ) with high costs upon small island countries
- **Health issues** (as a result of rising temperature, sea level rise or weather changes)



# Impact of Climate Change on Human Health



# Health Impacts of Climate Change

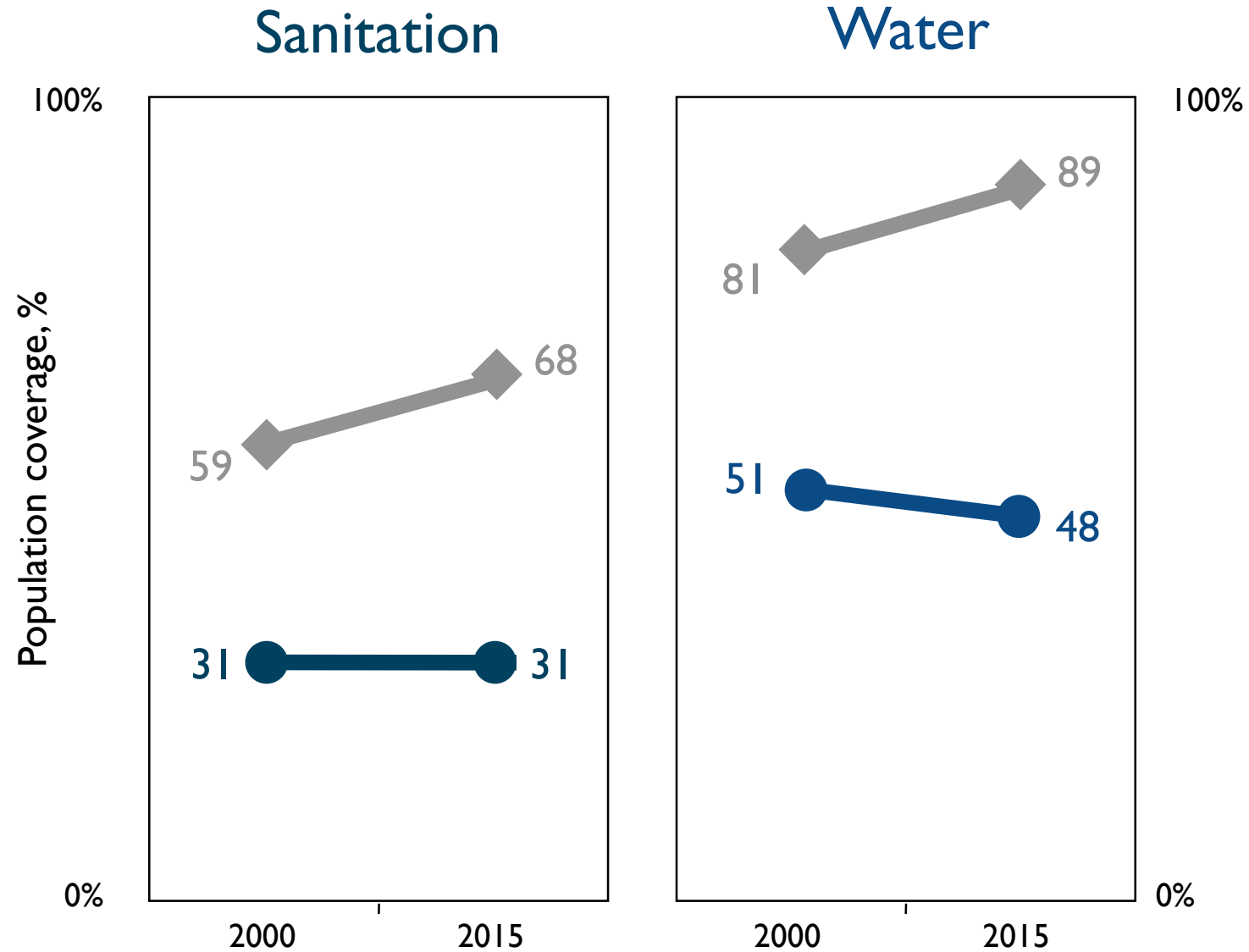
- Considerable anxiety for affected communities – their future, their lives and livelihoods, burial grounds, food security, water supply, uncertainty about the future,
- Immediate effects of trauma and shock, loss, grief and long term PTSD
- Poorly understood mental health; impact on children, elderly in Pacific

# Access to safe water

- A major risk to human health
- Currently, only half of the Pacific population have access to clean water
- Water sources vulnerable to contamination, salt water intrusion in low lying atolls
- Climate change likely to increase incidence of water-borne diseases, data hard to come by



# Water and Sanitation



# Water security

- SPC, WHO, UNICEF, UN HABITAT 2016 Pacific Regional Synthesis Report on Water and Sanitation 48% access to clean water, 31% basic sanitation
- Varies widely across Pacific region – national sanitation coverage in PNG 19% to over 90% in some PICTs
- Coverage levels stagnant or dropping
- Children and families highly vulnerable to WASH-related impacts of CC

# Food security

- Global warming increases mean annual air and water temp
- Southern Pacific becoming drier; Central Pacific more rainfall but still subject to droughts
- CC affects entire food chain, primary production to end point
- Important cash crops (sugar, coffee, copra, cocoa) production expected to decline
- Alter agrodiversity, changing pest and disease patterns



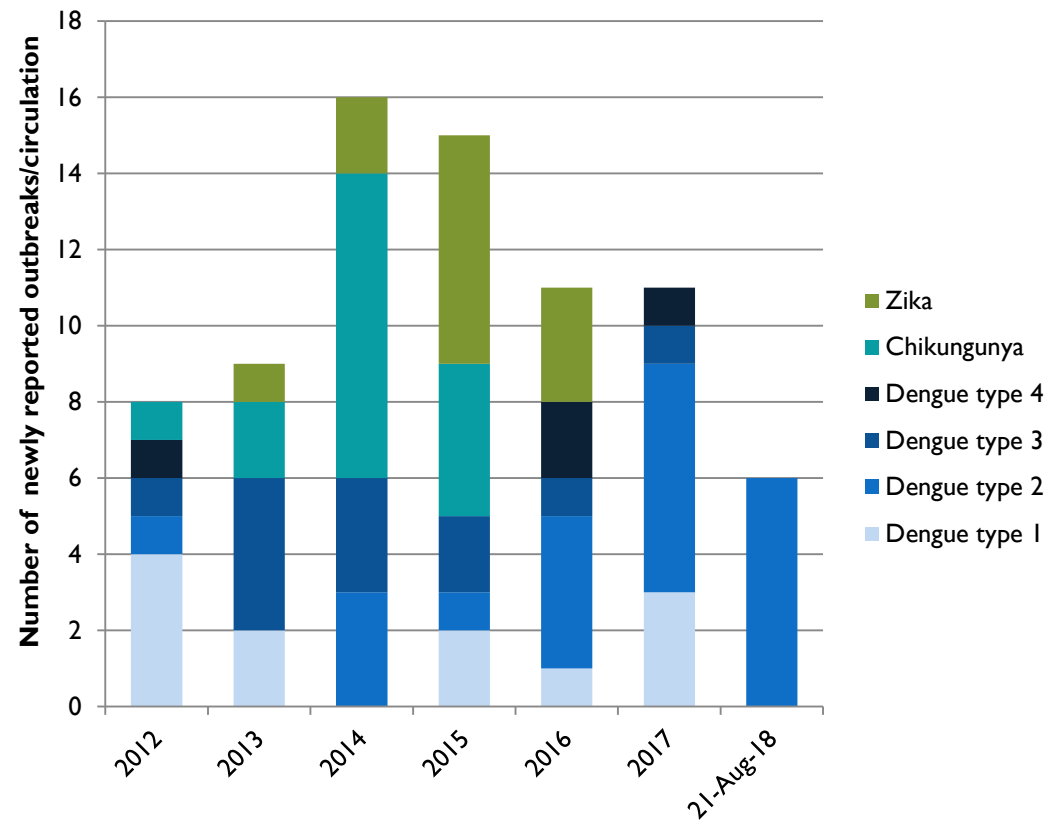
# Food security

- Coastal fisheries harvest could decline by 50% by 2100 due to overfishing, pollution, ocean acidification, indirect effects on habitats; coral reefs, mangroves etc
- Offshore stocks expected to increase, move further east – higher catches in Polynesia, lower in Melanesia
- Sea level rise have direct effects on low lying atolls through loss of land, erosion, salt water intrusion
- Ocean acidification impact on coral reefs, bleaching

# Aboviral Outbreaks and Circulation

- A total of **76** newly reported arboviral infection (Dengue fever, Chikungunya and Zika) outbreaks and circulation recorded in the Pacific between January 2012 and August 2018
- **49** newly reported dengue outbreaks
- For the first time since 1970, all 4 dengue serotypes were circulating in the region in 2012
- **12** newly reported Zika virus outbreaks
- **15** newly reported chikungunya outbreaks

Number of newly reported arboviral infection outbreaks and circulation in the Pacific, 2012 - 21 August 2018



Source: Pacific Community (SPC) Epidemic Intelligence System Database

# BETIO MATERNITY WARD



A joint initiative under the Kiribati-Australia partnership for development



MINISTRY OF  
HEALTH & MEDICAL  
SERVICES



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UTILITIES

Australian  
Aid



# Health Systems

- Fragile health systems, many facilities located in vulnerable locations in coastal areas; at high risk of damage during disasters, especially tropical cyclones
- Most need to be strengthened, better building codes, more climate resilient
- SIDS health systems most affected; least able to cope
- Constrained human resources for health, limited finances

# Pacific leading the actions



- **Leadership and strong advocacy:**  
Pacific small islands loud voices
- **Effective and integrated policies:**  
FRDP, JNAP and NDC, overall  
mainstreaming in national policies
- **Risk assessment and continuous  
monitoring** (incl. economic revenue  
at risk, vulnerable communities and  
systems)
- **Risk preparedness**
- **Taking actions:** GCF submissions and  
projects, insurance initiative, coastal  
protection and ecosystem-based  
initiatives



# SPC contribution to climate change agenda

- **Provision of science and knowledge** to partners and PICTs to inform decisions and policies
- **Technical assistance delivered on the ground** to address CC mitigation or adaptation priorities, and mainstream climate resilience in sectors
- **Promoting multi-sectoral responses** through integrated approach
- Associating **Disaster Risk Management** efforts for preparedness and disaster plans
- **Gender and Human Rights** focus, ensuring people's realization of their fundamental human rights
- **Engaging partners, mobilizing leaders and empowering all actors of the Pacific**, through convening, training and capacity building, and fundraising support



# Conclusions

- Climate change is the most important threat to Pacific lives and livelihoods; potential ecological disaster
- Climate change impacts adversely all communities, especially Small Island Developing States
- Climate change compounds/aggravates existing health threats – ‘effect multiplier’
- Food and water security are most critical, vulnerable
- Both communicable and non-communicable diseases will get worse, especially vector-borne diseases such as dengue

# Conclusions

- Pacific people and nations need to pay attention to basic needs such as water supply and good sanitation, food security
- Health needs need to be integrated into climate change policy and development plans
- Global Community needs to step up actions to limit impacts on Small Island communities
- IUHPE use their influence; hold responsible nations to account