State of knowledge, From Climate change to Ocean change

Morgan Wairiu & Elisabeth Holland
The University of the South Pacific

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Ocean

- Ocean is a sink for CO2 - 25% of CO2 in the atmosphere is absorbed by the ocean – Ocean PH is declining by 0.02 units/decade
- Ocean absorbs most heat from atmosphere – 93% of Ocean warming
Where we are now

• Since pre-industrial times, world has warmed by 1°C
• Science is clear that humans are responsible through burning fossil fuels and cutting down forests. These activities increase gases in the atmosphere that cause it to warm.
Key Messages

• **Every Half Degree Matters:** Climate change is already affecting people, ecosystems and livelihoods all around the world.

• **Every Year Matters:** Limiting warming to 1.5°C is not impossible but profoundly challenging. The next 10 years is critical.

• There are clear benefits to keeping warming to 1.5°C compared to 2°C, or higher. **Half a degree matters.**

• Limiting warming to 1.5°C can go hand-in-hand with achieving other world goals.
Key Message 1- Climate change impacts

Climate change is already affecting people, ecosystems and livelihoods all around the world

- coral reef decline, sea level rise, Arctic sea ice loss, biodiversity loss, declining crop yields, heatwaves, heavy rainfall & cyclones

Climate change is hitting world’s most vulnerable people, especially the PICs hardest but all countries are affected.
Impacts of Global Warming at 1.5°C

At 1.5°C compared to 2°C:
- Less extreme weather where people live, including extreme heat and rainfall
- By 2100, global mean sea level rise will be around 10 cm lower but may continue to rise for centuries
- 10 million fewer people exposed to risk of rising seas
- Lower risk to fisheries and the livelihoods that depend on them

- Lower impact on biodiversity and species
- Smaller reductions in crop yields (maize, rice, wheat)
- Global population exposed to increased water shortages is up to 50% less
- Up to several hundred million fewer people exposed to climate-related risk and susceptible to poverty by 2050

- Most PICs will be hardest hit from sea level rise, risk to fisheries & livelihoods
Key Message 2—*Every Year Matters* Limiting warming to 1.5C is not impossible but profoundly challenging (next 10 yrs is critical)

- Still need to adapt, even if we limit warming to 1.5C. Transformational, not just ad hoc.

- Particular challenge is coastal areas—sea level rise will continue, even if warming stops today.
Key Message 2- **Every Year Matters** Limiting warming to 1.5°C is not impossible but profoundly challenging (next 10 yrs is critical)

- Need to do more & faster. This would require greater collective ambition.
- Doing less now would shift the burden of responsibility to later generations.
- Good news is we have the tools & lots of action already underway.
Key Message 3-There are clear benefits to keeping warming to 1.5°C compared to 2°C, or higher - *1/2 a degree matters*

- Every extra bit of warming will worsen impacts (eg. more severe heatwaves, extreme weather events & crop losses)
- Chance of some tropical coral reefs surviving with 1.5°C of warming. Virtually disappear with 2°C
- Oceans are getting more acidic, affecting sea life and could take centuries to recover.
Key Message 4—Limiting warming to 1.5°C can go hand-in-hand with achieving other world goals

- Tackling climate change can be consistent with ensuring people around the world are healthy, prosperous, have food, clean air and water.
Greenhouse gas emissions pathways

• National pledges are not enough to limit warming to 1.5°C

• Avoiding warming of more than 1.5°C would require CO2 emissions to decline substantially before 2030
Climate change and people

• Close links to United Nations Sustainable Development Goals (SDGs) including SDG 14
• Mix of measures to adapt to climate change and reduce emissions can have benefits for SDGs
• National and sub-national authorities, civil society, the private sector, indigenous peoples and local communities can support ambitious action
1.5° Special Report & the Talanoa Dialogue

• 1.5 °Special Report informed the Talanoa Dialogue at COP24
  - PICs want to see deep emissions cuts in all sectors to be part of countries NDCs (Limiting warming to 1.5C is not impossible)
  - International cooperation is a critical part of limiting warming to 1.5°C & PICs are seeking a COP decision on the outcome of the Talanoa dialogue
Government Review in June and July

Plenary to decide Summary for Policy Makers September, 2019

Key Points:
--Every 0.5 degree Matters
-Every Year Matters
-Every Island Matters
-EverybodyMatters
- The ocean is already impacted:
  -ecosystem health
  -people of oceania
  -include oceans in your NDCS

Oceans are already part of the solution at a BIG cost
Thank You & Questions?