IPCC 1.5ºC Special Report Key Messages for AOSIS

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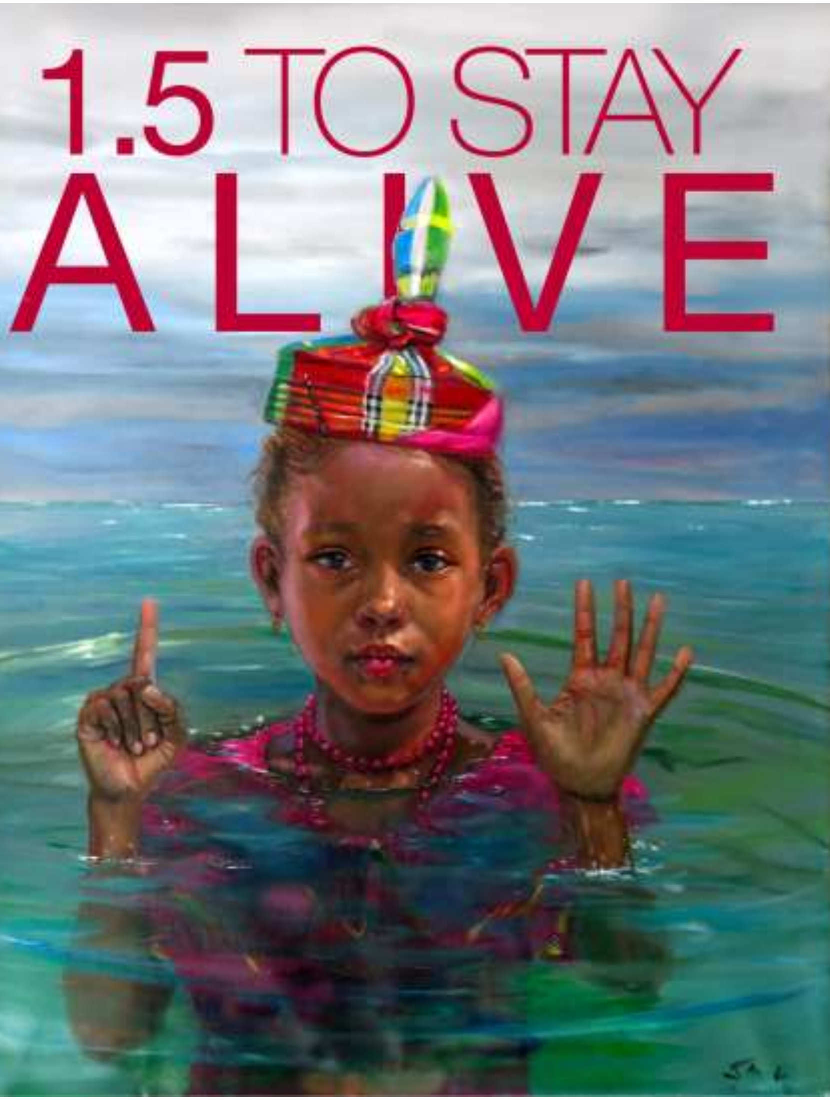
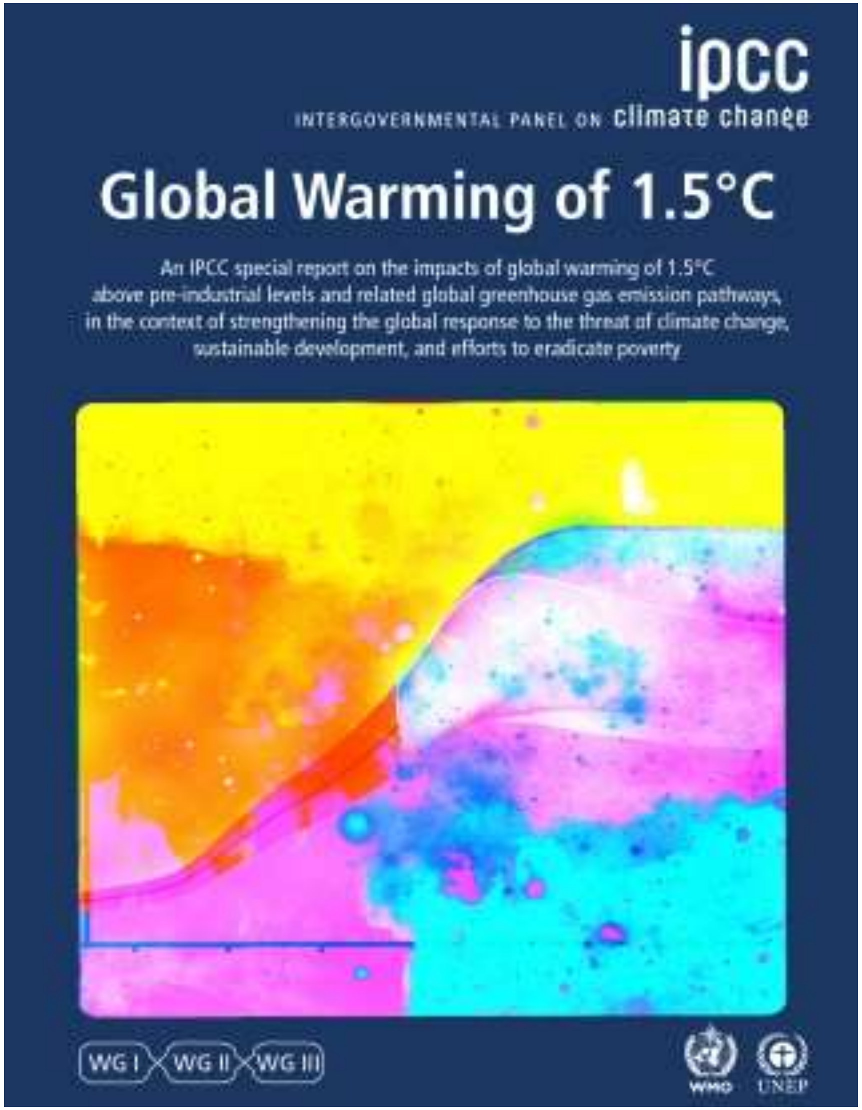
AOSIS and 1.5ºC



Key Messages?



- Climate change is already affecting people, ecosystems and livelihoods around the world
- Limiting global warming to 1.5ºC is not impossible-but it would require unprecedented transitions in all aspects of society
- There are clear benefits to keeping warming to 1.5ºC rather than 2ºC or higher
- Limiting warming to 1.5ºC can go hand in hand with achieving other world goals

Chapters 1 & 2

CLIMATE ANALYTICS

1 Framing and Context

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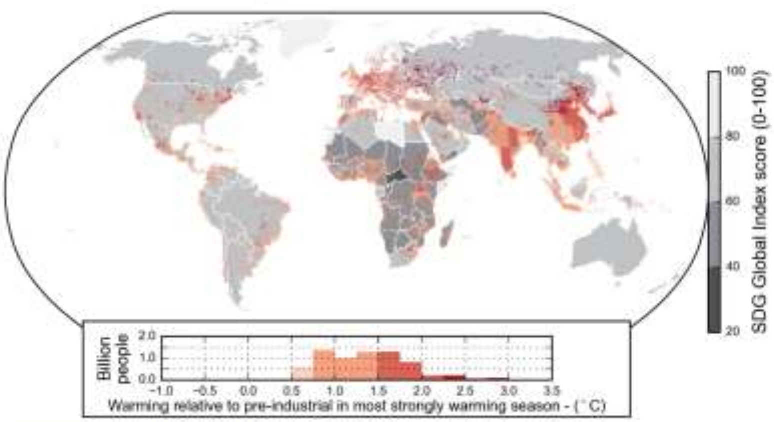

Figure 1.1 | Human experience of present-day warming. Different shades of pink to purple indicated by the inset histogram show estimated warming for th that has warmed the most at a given location between the periods 1850–1900 and 2006–2015, during which global average temperatures rose by 0.91°C in thi (Cowtan and Way, 2014) and 0.87°C in the multi-dataset average (Table 1.1 and Figure 1.3). The density of dots indicates the population (in 2010) in any 1° × 1° The underlay shows national Sustainable Development Goal (SDG) Global Index Scores indicating performance across the 17 SDGs. Hatching indicates missing SDG in (e.g., Greenland). The histogram shows the population (in 2010) living in regions experiencing different levels of warming (at 0.25°C increments). See Supplementary 1.SM for further details.

2 Mitigation Pathways Compatible with 1.5°C in the Context of Sustainable Development

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Ch 3: Impacts of 1.5ºC Global Warming on Natural and Human Systems

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Table 3.6 | Emergence and intensity of climate change hotspots under different degrees of global warming.

Region and/or Phenomenon	Warming of 1.5°C or less	Warming of 1.5°C–2°C	Warming of 2°C–3°C
Small islands	Land of 60,000 less people exposed by 2150 on SIDS compared to impacts under 2°C of global warming Risks for coastal flooding reduced by 20–80% for SIDS compared to 2°C of global warming Freshwater stress reduced by 25% Increase in the number of warm days for SIDS in the tropics Persistent heat stress in cattle avoided Loss of 70–90% of coral reefs	Tens of thousands of people displaced owing to inundation of SIDS High risks for coastal flooding Freshwater stress reduced by 25% compared to 2°C of global warming Freshwater stress from projected aridity Further increase of about 70 warm days per year Persistent heat stress in cattle in SIDS Loss of most coral reefs and weaker remaining structures owing to ocean acidification	Substantial and widespread impacts through inundation of SIDS, coastal flooding, freshwater stress, persistent heat stress and loss of most coral reefs (*very likely*)

Box 4.6 | Bottom-up Initiatives: Adaptation Responses Initiated by Individuals and Communities

To effectively adapt to climate change, bottom-up initiatives by individuals and communities are essential, in addition to efforts of governments, organizations, and institutions (Wamsler and Brink, 2014a). This box presents examples of bottom-up adaptation responses and behavioural change.

Fiji increasingly faces a lack of freshwater due to decreasing rainfall and rising temperatures (Deo, 2011; IPCC, 2014a). While some villages have access to boreholes, these are not sufficient to supply the population with freshwater. Villagers are adapting by rationing water, changing diets, and setting up inter-village sharing networks (Pearce et al., 2017). Some villagers take up wage employment to buy food instead of growing it themselves (Pearce et al., 2017). In Kiribati, residents adapt to drought by purchasing rainwater tanks and constructing additional wells (Kuruppu and Liverman, 2011). An important factor that motivated residents of Kiribati to adapt to drought was the perception that they could effectively adapt to the negative consequences of climate change (Kuruppu and Liverman, 2011).

Chapter 5: Sustainable Development, Poverty Eradication and Reducing Inequalities

Box 5.3 | Republic of Vanuatu – National Planning for Development and Climate Resilience

The Republic of Vanuatu is leading Pacific Small Island Developing States (SIDS) to develop a nationally coordinated plan for climate-resilient development in the context of high exposure to hazard risk (MoCC, 2016; UNU-EHS, 2016). The majority of the population depends on subsistence, rain-fed agriculture and coastal fisheries for food security (Sovacool et al., 2017). Sea level rise, increased prolonged drought, water shortages, intense storms, cyclone events and degraded coral reef environments threaten human security in a 1.5°C warmer world (see Chapter 3, Box 3.5) (SPC, 2015; Aipira et al., 2017). Given Vanuatu's long history of climate hazards and disasters, local adaptive capacity is relatively high, despite barriers to the use of local knowledge and technology, and low rates of literacy and women's participation (McNamara and Prasad, 2014; Aipira et al., 2017; Granderson, 2017). However, the adaptive capacity of Vanuatu and other SIDS is increasingly constrained due to more frequent severe weather events (see Chapter 3, Box 3.5, Chapter 4, Cross-Chapter Box 9 in Chapter 4) (Gero et al., 2013; Kuruppu and Willie, 2015; SPC, 2015; Sovacool et al., 2017).

Summary for Policy Makers

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B.6.2 Adaptation is expected to be more challenging for ecosystems, food and health systems at 2°C of global warming than for 1.5°C (*medium confidence*). Some vulnerable regions, including small islands and Least Developed Countries, are projected to experience high multiple interrelated climate risks even at global warming of 1.5°C (*high confidence*). {3.3.1, 3.4.5, Box 3.5, Table 3.5, Cross-Chapter Box 9 in Chapter 4, 5.6, Cross-Chapter Box 12 in Chapter 5, Box 5.3}

Key Messages for AOSIS

- Impacts of climate change are already being experienced in small islands
- Risks of climate change are more significant than previously assessed with substantial differences between 1.5ºC and 2ºC for small islands
- Limiting warming to 1.5ºC provides more opportunities for adaptation for small islands, but there is still potential of irreversible losses at 1.5ºC
- SIDS are already adapting to climate change but international cooperation, action and support is needed
- Limits to adaptation and loss and damage for SIDS will occur as temperatures rise

Further Research Needs

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- quantitative studies of projected impacts of SLR at 1.5ºC and 2ºC for small islands
- impacts for beaches, barriers, sandy dunes, rocky coasts, aquifers, lagoons that were identified in AR5 but for which there is no quantified information at 1.5ºC or 2ºC
- unique and threatened systems in small island states that pertains specifically to 1.5ºC and 2ºC

SIDS Authorship in Special Report

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