

1.5°C-aligned resilient development for small island developing states (SIDS)

1.5°C is a physical limit, in particular for SIDS

- 2024 is the hottest year on record, with global observed annual average temperature increase more than 1.5°C above pre-industrial levels, of which about 1.4°C can be attributed to human activity^{1,2}.
- Current levels of global warming already lead to devastating impacts and loss and damage, with the most vulnerable disproportionately affected³.
- Every increment of global warming will escalate adverse impacts and loss and damage and progressively constrain pathways for climate-resilient development, in particular beyond 1.5°C^{3,4}.

Unique vulnerabilities require systemic change

- Securing a liveable and sustainable future requires systemic change across all sectors and systems to achieve global emissions reductions that keep 1.5°C within reach as well as transformative adaptation.
- Mitigation and adaptation have more synergies than trade-offs with sustainable development, across systems such as: energy; land, ocean, water, food; settlements and infrastructure; health; livelihood.⁴
- Priorities for a secure future for SIDS include sustainable energy transitions, integrated water resources management, food security, resilient infrastructure, and transportation and connectivity⁵.
- Despite only contributing around 0.6% to global greenhouse gas emissions¹⁰, many SIDS have ambitious mitigation targets, with many striving towards 100% renewable energy by 2030¹¹.

Finance is a critical enabler

- Small islands face a range of constraints that make it harder to plan and implement human adaptation and achieve their NDCs^{6,13}.
- The IPCC is clear that improved access to adequate financial resources – in particular for vulnerable regions –, inclusive governance, and coordinated policies are critical enablers for climate-resilient development⁴.
- Enabling conditions for adaptation and mitigation in small islands are related to: governance; finance and risk transfer; subsidies and taxes; human resource capacity; partnerships with non-governmental stakeholders; justice, equity and gender; education and awareness; climate information; adequately downscaled climate data; Indigenous knowledge and local knowledge^{6,13,14}.
- In the face of challenges in accessing adaptation finance, e.g., SIDS started financial enablers such as insurance and microfinance, and innovative financial instruments to reduce, retain, and transfer climate risks^{6,15}.
- The Caribbean Climate Risk Insurance Facility (CCRIF) has made payouts of c. 400 million USD across the Caribbean (2007-2024) incl. c. 5 million USD to St. Kitts and Nevis for three events (tropical cyclones, trough system)¹⁶.

SIDS are uniquely vulnerable to climate change

- SIDS are increasingly affected by rising temperatures, changes in rainfall, droughts, more intense tropical cyclones, above-average sea level rise, and coastal flooding and erosion^{5,6}.
- Freshwater systems on small islands are among the most threatened globally⁶, and above 1.5°C, limited water resources may pose hard limits to adaptation³.
- SIDS make up two-thirds of countries that suffer the highest relative losses from natural disasters each year: between 1-9% of their GDP⁷.
- 2024's Hurricane Beryl caused devastation across the Caribbean and was the strongest hurricane on record to make landfall on Grenada⁸. It was fuelled by unusually high sea surface temperatures, made 100-400x more likely due to human-induced climate change⁹.

Climate-resilient development is already taking place

- SIDS are already employing mitigation and adaptation options and responses, including energy system transitions, nature-based and ecosystem-based measures, hard protection, infrastructure-related measures, climate services including early warning systems, disaster risk management, human migration, livelihood responses and diversification.
- Some responses are able to address impacts on multiple systems in an integrated way creating co-benefits, but sometimes leading to disbenefits or trade-offs.^{6,12,13}



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