

# IPCC Special Report on 1.5°C regional perspectives - Asia

Strengthening the global  
response in the context of  
sustainable development

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# The report in numbers

**91 Authors from 40 Countries**

**133 Contributing authors**

**6000 Studies**

**1 113 Reviewers**

**42 001 Comments**

# Key findings

Climate change is already affecting people, ecosystems and livelihoods all around the world. Every bit of warming matters

Limiting warming to 1.5°C is not impossible but would require unprecedented transitions in all aspects of society

There are clear benefits to keeping warming to 1.5°C compared to 2°C , or higher.

Limiting warming to 1.5°C can go hand-in-hand with achieving other world goals, such as achieving sustainable developments and eradicating poverty





# Impacts of global warming 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


Jason Florio / Aurora Photos



# Impacts of global warming 1.5°C

At 1.5°C compared to 2°C:

- Lower impact on biodiversity and species
- Smaller reductions in yields of maize, rice, wheat
- Global population exposed to increased water shortages is up to 50% less



# Impacts of global warming 1.5°C

At 1.5°C compared to 2°C:

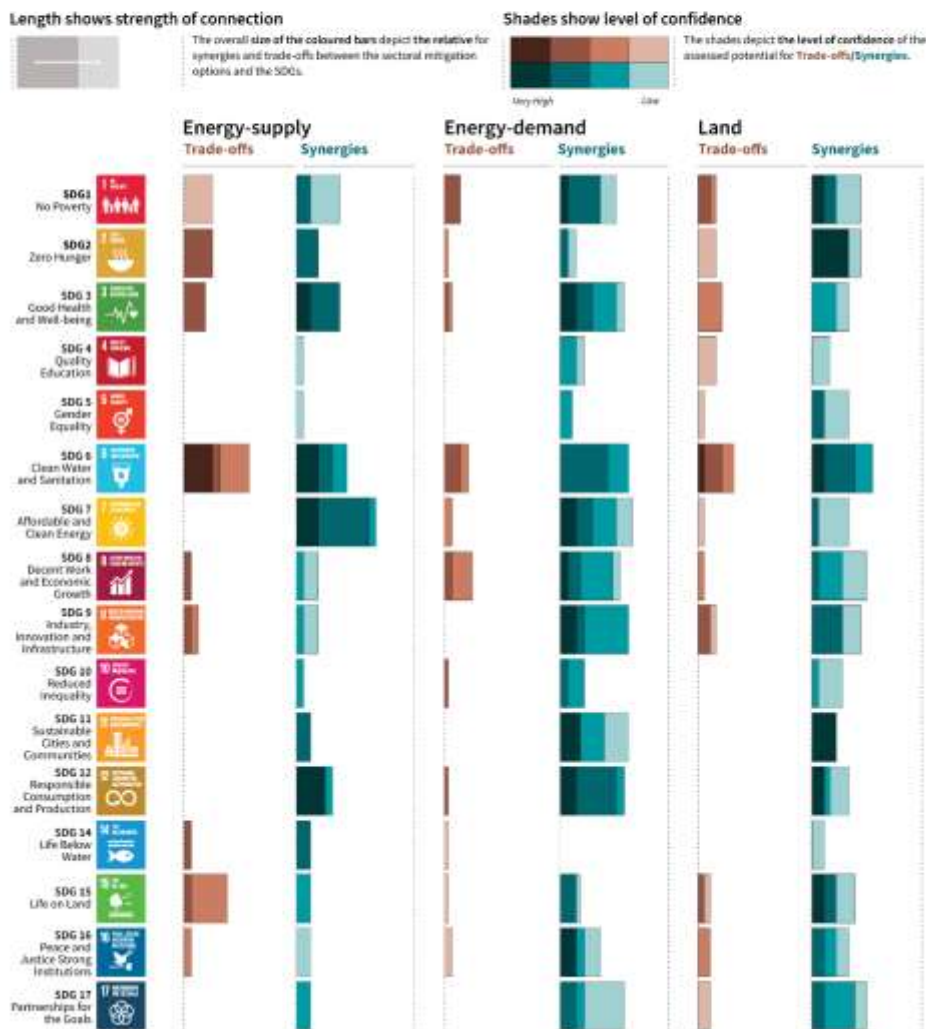
- Lower risk to fisheries and the livelihoods that depend on them
- Up to several hundred million fewer people exposed to climate-related risk and susceptible to poverty by 2050



Natalie Behring / Aurora Photos

## Indicative linkages between mitigation options and sustainable development using SDGs (The linkages do not show costs and benefits)

Mitigation options deployed in each sector can be associated with potential positive effects (synergies) or negative effects (trade-offs) with the Sustainable Development Goals (SDGs). The degree to which this potential is realized will depend on the selected portfolio of mitigation options, mitigation policy design, and local circumstances and context. Particularly in the energy-demand sector, the potential for synergies is larger than for trade-offs. The bars group individually assessed options by level of confidence and take into account the relative strength of the assessed mitigation-SDG connections.



# **Strengthening the Global Response in the Context of Sustainable Development and Efforts to Eradicate Poverty: Special Reference to Asia**





## Impacts of global warming 1.5°C


Local yields are projected to decrease in major food producing areas **South-East Asia, South-Asia.**

Adaptation options that include conservation agriculture, improved livestock management, increasing irrigation efficiency, agroforestry and management of food loss and waste, complementary adaptation and mitigation options, for example, the use of climate services, bioenergy, biotechnology can also serve to reduce emissions intensity and the carbon footprint of food production.

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# Poverty Impact



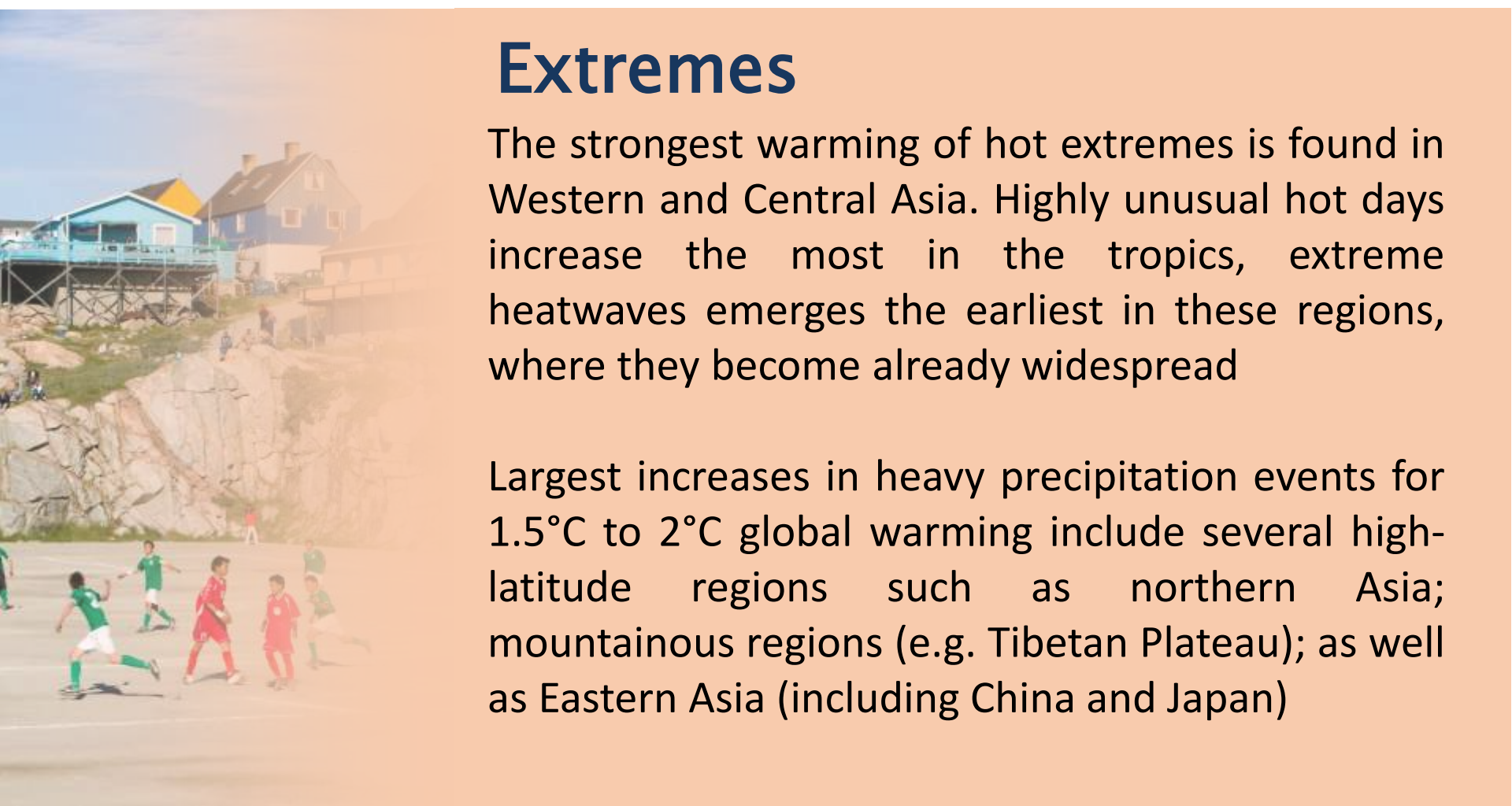
At approximately 1.5°C (2030), climate change will be a poverty-multiplier: makes poor people poorer, increases poverty head count. Most severe impacts projected for urban areas, some rural regions in sub-Saharan Africa and Southeast Asia.

Climate change will negatively affect childhood undernutrition and stunting through reduced food availability, will negatively affect undernutrition-related childhood mortality and increase disability-adjusted life years lost, with the largest risks in Asia and Africa.

Ashley Cooper/ Aurora Photos



## Extremes




The strongest warming of hot extremes is found in Western and Central Asia. Highly unusual hot days increase the most in the tropics, extreme heatwaves emerges the earliest in these regions, where they become already widespread

Largest increases in heavy precipitation events for 1.5°C to 2°C global warming include several high-latitude regions such as northern Asia; mountainous regions (e.g. Tibetan Plateau); as well as Eastern Asia (including China and Japan)



## Governance Issues



Risks of coastal flooding are projected to be the highest in south and south-east Asia, assuming there is no upgrade to present protection levels, for all temperatures of climate warming

Significantly increased run off and high flows are expected to occur in South and Southeast Asia at 1.5°C , the region currently facing water shortage



# Governance Issues

Run off increase and hydro power potential

Water resources availability for livestock are expected to decrease due to increased runoff and reduced groundwater resource

Moderate and high multi-sector impacts are prevalent where vulnerable people live, predominantly in South Asia (mostly Pakistan, India, and China) and South East Asia at 1.5°C



## Scalable experiments, governance

In 43 Asian cities Transit Oriented Development (TOD), has emerged as an organising principle for urban growth and spatial planning reducing demand for private cars. In India TOD has been combined with localized solar PV installations and new ways of financing rail expansion.

Mitigation pathways show that synergies for air pollution increase with the stringency of the mitigation policies. The synergies for air pollution are highest in the developing world, particularly in Asia.

Low-carbon supply-side investment needs are projected to be the largest in OECD countries and those of developing Asia.



## Opportunities

Built environment, spatial planning, infrastructure, energy services, mobility, urban-rural linkages necessary in **rapidly growing cities in South Asia** in the next three decades present mitigation, adaptation and development opportunities that are crucial for a 1.5°C world

Realising these opportunities would require the structural challenges of poverty, weak and contested local governance, and low levels of local government investment to be addressed on an unprecedented scale.



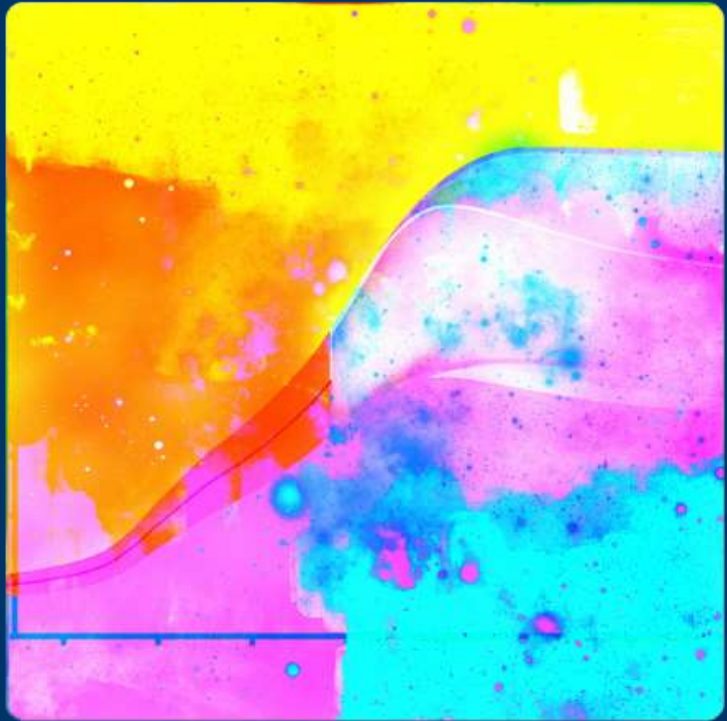
# Climate change and people

- Close links to United Nations Sustainable Development Goals (SDGs)
- 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
- International cooperation is a critical part of limiting warming to 1.5°C



Ashley Cooper/ Aurora Photos





Questions?