



SDG 13: Climate Action

Take urgent action to combat climate change and its impacts

An Overview

Climate change is now affecting every country on every continent. Its impacts include changing weather patterns, rising sea levels, and more extreme weather events. It is disrupting national economies and affecting health, agriculture and migration with impacts set to increase.

The greenhouse gas emissions from human activities are contributing to climate change and continue to rise. From 1880 to 2012, average global temperature increased by 0.85°C. For each 1 degree of temperature increase, grain yields decline by about 5%. Maize, wheat and other major crops have experienced significant yield reductions at the global level of 40 megatons per year between 1981 and 2002 due to a warmer climate. In addition, from 1901 to 2010, the global average sea level rose by 19 cm as oceans expanded due to warming and ice melted. The Arctic's sea ice extent has shrunk in every successive decade since 1979, with 1.07 million km² of ice loss every decade. Such changes not only impact the wildlife that lives within these waters (SDG 14), but also impacts fishing (SDG 2), flood risk and land loss (SDG 1 & SDG 11).

Global emissions of carbon dioxide have increased by almost 50% since 1990. Emissions grew more quickly between 2000 and 2010 than in each of the three previous decades. Without action, the world's average surface temperature is projected to rise over the 21st century and is likely to surpass 3 degrees Celsius this century—with some areas of the world expected to warm even more. The poorest and most vulnerable people are being affected the most.

To address climate change, countries adopted the [Paris Agreement](#) at the [COP21 in Paris](#) in December 2015. In the agreement, all countries agreed to work to limit global temperature rise to well below 2 degrees Celsius, and strive for 1.5 degrees Celsius through technological measures and behaviour changes. Addressing climate change requires international collaboration and coordination to support countries in moving towards a low-carbon economy.

The pace of positive change is quickening as more people are turning to renewable energy and a range of other measures that will reduce emissions and increase adaptation efforts but the work to be done is great. Many aspects of climate change will persist for many centuries even if emissions are cut - efforts must therefore not only be on how to mitigate climate change but must also look at how to adapt our behaviours and cities - from food production (SDG 2), to addressing increased migration (SDG 11).

SDG 13 Keywords

This list is comprised of the Scopus queries generated by Elsevier in order to identify research that supports SDG 13, as part of the assessment undertaken by the global THE Impact League.

climate action	climate adaptation	climate change	climate capitalism
IPCC	climate effect	climate equity	climate feedback
climate finance	climate change financing	climate forcing	climate governance
climate impact	climate investment	climate justice	climate mitigation
climate model	climate policy	climate risk	climate services
climate prediction	climate signal	climate tipping point	climate variation
eco-climatology	Green Climate Fund	regional climate	urban climate
climate and adaptive management	climate awareness	climate and bioeconomy	Climate and carbon
climate and disaster risk reduction	climate and environmental education	climate and sustainable development education	climate and energy conservation
extreme climate	climate and food chains	small island developing states	climate and atmosphere
anthropocene	clean development mechanism	glacier retreat	ice-ocean interaction

nitrogen cycle	ocean acidification	radiative forcing	sea ice
sea level	thermal expansion	UNFCC	ozone

SDG 13 Targets & Indicators

Consider if your research could support a specific target in order to maximise impact.

TARGETS		INDICATORS	
13.1	Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries	13.1.1	Number of deaths, missing persons and persons affected by disaster per 100,000 people
		13.1.2	Number of countries with national and local disaster risk reduction strategies
		13.1.3	Proportion of local governments that adopt and implement local disaster risk reduction strategies in line with national disaster risk reduction strategies
13.2	Integrate climate change measures into national policies, strategies and planning	13.2.1	Number of countries that have communicated the establishment or operationalization of an integrated policy/strategy/plan which increases their ability to adapt to the adverse impacts of climate change, and foster climate resilience and low greenhouse gas emissions development in a manner that does not threaten food production (including a national adaptation plan, nationally determined contribution, national communication, biennial update report or other)
13.3	Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning	13.3.1	Number of countries that have integrated mitigation, adaptation, impact reduction and early warning into primary, secondary and tertiary curricula
		13.3.2	Number of countries that have communicated the strengthening of institutional, systemic and individual capacity-building to implement adaptation, mitigation and technology transfer, and development actions
13.A	Implement the commitment undertaken by developed-country parties to the United Nations Framework Convention on Climate Change to a goal of mobilizing jointly \$100 billion annually by 2020 from all sources to address the needs of developing countries in the context of meaningful mitigation actions and transparency on implementation and fully operationalize the Green Climate Fund through its capitalization as soon as possible	13.A.1	Mobilized amount of United States dollars per year starting in 2020 accountable towards the \$100 billion commitment
13.B	Promote mechanisms for raising capacity for effective climate change-related planning and management in least developed countries and small island developing States, including focusing on women, youth and local and marginalized communities	13.B.1	Number of least developed countries and small island developing States that are receiving specialized support, and amount of support, including finance, technology and capacity-building, for mechanisms for raising capacities for effective climate change-related planning and management, including focusing on women, youth and local and marginalized communities

Useful Links

- [IPCC Climate Report 2018](#)
- [UN and climate change site](#)
- [UN Framework on the Convention on Climate Change](#)
- [World Meteorological Organization](#)
- [UN Population Fund](#)
- [UN Environment – Climate Change](#)
- [Intergovernmental panel on Climate Change](#)
- [FAO – Climate](#)