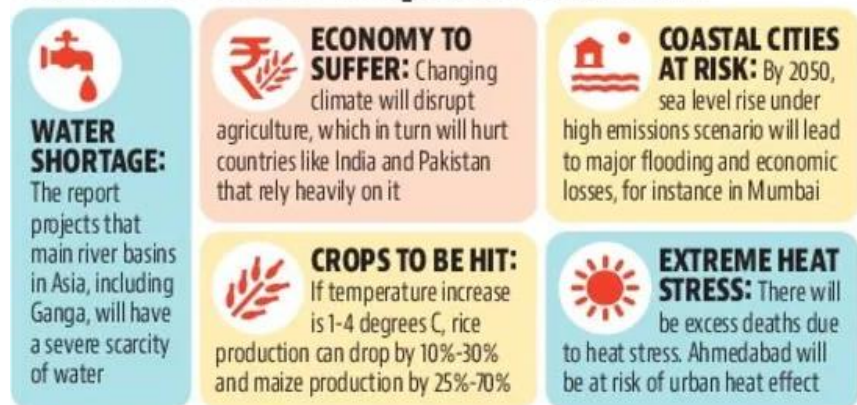


Half the world threatened by climate crisis: Latest IPCC report paints a worrying picture

1. At least half the world's population lives in regions vulnerable to the climate crisis, which has become complex, with several interacting factors likely to increase food prices, reduce household incomes, and lead to malnutrition and climate-related deaths, especially in tropical regions, according to the latest report of the Intergovernmental Panel on Climate Change (IPCC).

Climate crisis impact on India



2. South Asia, including India, is among the most vulnerable, with the Ganga basin likely to face severe water shortage by 2050, Mumbai at high risk from flooding and sea-level rise, and Ahmedabad at danger from the so-called urban heat island effect, the report warned.
3. Mass mortality events on land and ocean, the first climate-driven extinctions, death and disease due to extreme heat -- the climate crisis has already resulted in some irreversible changes, the report added.

“Climate Change 2022: Impacts, Adaptation and Vulnerability”

1. Several of these impacts are of such a kind (or magnitude) that they are beyond the ability to adapt of nature and human life and even a temporary breach of 1.5-degree global warming threshold could be disastrous, IPCC said in its working group II report titled “Climate Change 2022: Impacts, Adaptation and Vulnerability” released in Geneva.
2. “The cumulative scientific evidence is unequivocal: Climate change is a threat to human well-being and planetary health. Any further delay in concerted anticipatory global action on adaptation and mitigation will miss a brief and



rapidly closing window of opportunity to secure a liveable and sustainable future for all,” it warned.

3. Global warming of 1.5 degrees Celsius (°C) in the next 18 years (till 2040) will lead to unavoidable increases in multiple climate hazards and risks, IPCC said.
4. There is likely to be a very high risk of widespread biodiversity loss— with massive impacts on kelp and seagrass ecosystems; and high to very high impact in Arctic sea-ice and terrestrial ecosystems and warm-water coral reefs. Accelerating sea-level rise will encroach on coastal infrastructure causing low-lying coastal ecosystems to submerge, the report warned.
5. Even if the global mean temperature rises transiently, overshooting the 1.5°C threshold, there will be widespread and irreversible impacts on the polar, mountain, and coastal ecosystems due to glacier melt and sea-level rise, the report projected.

Climate change has Increased Human Mortality and morbidity:

1. The climate crisis has impacted the physical and mental health of people. In all regions, globally extreme heat events have resulted in human mortality and morbidity, IPCC said.
2. The occurrence of climate-related food, water-borne and vector-borne diseases have also spiked from range expansion and increased reproduction of disease vectors. Animal and human diseases, including zoonoses, are emerging in new areas.
3. Higher temperatures, increased rain and flooding have increased the occurrence of diarrhoeal diseases, which the world had once conquered.
4. Several mental health challenges are associated with increasing temperatures, trauma from weather and climate extreme events and loss of livelihoods and culture.
5. Approximately half of the species assessed globally have shifted poleward or to higher elevations, and the local loss of hundreds of species has been driven by increases in the magnitude of heat extremes. There have been mass mortality events on land and in the ocean and loss of kelp forests.



6. Some losses are already irreversible, such as the first species extinctions driven by climate change. Other impacts are approaching irreversibilities such as the impacts of hydrological changes due to retreat of glaciers, or the changes in some mountain and Arctic ecosystems driven by permafrost thaw, the report drafted by 270 authors from 67 countries warned.
7. Weather extremes such as heatwaves, floods and droughts have exposed millions of people to acute food and water insecurity in Asia, Africa, Central and South America, on Small Islands and in the Arctic making them the most vulnerable regions globally, the report said.

Climate-caused local population extinctions

1. Climate-caused local population extinctions have been widespread among plants and animals, detected in 47% of 976 species examined -- and they have been mainly linked to heat extremes.
2. For example, the white subspecies of the lemuroid ringtail possum in Queensland, Australia, disappeared after heat waves in 2005; the Bramble Cay Melomys was not seen after 2009 and was declared extinct in 2016, with sea-level rise and increased storm surge, associated with climate change, the most probable drivers, the biodiversity factsheet of the report said.
3. Since IPCC's assessment report 5 (2013), some impacts have now been attributed to the climate crisis, particularly increased heat-related human deaths; warm-water coral bleaching; increased drought-related tree mortality; increases in areas burned by wildfires; ocean acidification, sea-level rise or regional decreases in rainfall have also been attributed to climate change now.

Multiple hazards occurring simultaneously

1. IPCC has warned that climate crisis impacts and risks are becoming increasingly complex and more difficult to manage because of multiple hazards occurring simultaneously.
2. For example, the concurrence of heat and drought events are causing crop production losses and tree mortality. Global warming of 1.5°C will increase the risk of simultaneous crop losses of maize in major food-producing regions;
3. future sea-level rise combined with storm surge and heavy rainfall will increase compound flood risks;



4. risks to health and food production will be made more severe from the interaction of sudden food production losses from heat and drought, exacerbated by heat-induced labor productivity losses.
5. These interacting impacts will increase food prices, reduce household incomes, and lead to malnutrition and climate-related deaths, especially in tropical regions.

Differential vulnerability and inequality:

1. The report underlined that the vulnerability of ecosystems and people to climate change differs substantially among regions mainly due to “socio-economic development, unsustainable ocean and land use, inequity, marginalization, historical and ongoing patterns of inequity such as colonialism, and governance.”
2. Around 3.3 to 3.6 billion people live in conditions that are highly vulnerable to climate change, it added.

The report highlighted that “soft limits” to some human adaptation have been reached which can be overcome by financial, governance, institutional and policy constraints. Hard limits to adaptation have also been reached in some ecosystems including some warm-water coral reefs, coastal wetlands, some rainforests, and some polar and mountain ecosystems -- and those are likely unmanageable.