

World Set to Cross 1.5°C Warming Threshold, but Return Below It Still Possible: UNEP

The world is likely to cross the 1.5°C global warming threshold within the next few years, exposing communities and ecosystems to increasingly severe climate risks, but global temperatures could still be brought down below the threshold, according to a new report by the United Nations Environment Programme (UNEP).

The report, titled *Limiting Overshoot*, identifies an “overshoot, peak and decline” pathway as the best remaining option to limit the magnitude and duration of warming above 1.5°C and eventually return global temperatures below the Paris Agreement’s target.

The most optimistic scenario projects that global temperatures could peak at around 1.8°C above pre-industrial levels, while most other scenarios foresee higher levels of warming.

UN Secretary-General António Guterres warned that the world must make the period of warming above 1.5°C as small and short as possible.

“This summer’s scorching heat, raging wildfires and deadly floods are a warning of what lies ahead,” Guterres said, urging countries to significantly increase climate ambition.

According to the UNEP report, the proposed pathway requires immediate and sustained reductions in greenhouse gas emissions, including methane, followed by net-zero emissions and eventually long-term net-negative emissions.

Carefully governed carbon dioxide removal (CDR), including afforestation and other methods of removing carbon dioxide

from the atmosphere, would also be essential to bring temperatures back down.

At the same time, countries will need to strengthen climate adaptation measures to reduce vulnerability to both expected and unexpected impacts on people, communities and economies.

UNEP Executive Director Inger Andersen said there would be no good outcomes if global temperatures remain above 1.5°C for an extended period.

“Extreme heatwaves are already proving that climate impacts will strike faster, hit harder, and last longer,” she said, warning that they are costing lives and causing deeper disruption worldwide.

The report warns that every additional fraction of a degree of warming above 1.5°C will intensify climate risks and impacts. These include more severe extreme weather events, ecosystem degradation, threats to food and water security, damage to infrastructure and economies, and increased risks to human health.

Low-lying coastal cities and Small Island Developing States are also expected to face growing risks from sea-level rise and potential submersion.

The likelihood of triggering irreversible climate tipping points will also increase as temperatures remain higher for longer. Potential tipping points include destabilization of major ice sheets, degradation of the Amazon rainforest and disruption of the Atlantic Meridional Overturning Circulation, a major system of ocean currents that plays an important role in regulating the global climate.

UNEP said the speed and scale of climate action will determine how high temperatures peak and how quickly they can subsequently decline.

The report calls for stronger political commitment, effective climate policies, inclusive governance, international cooperation and increased climate finance. It also stresses that climate action must be guided by equity and justice, with countries that have contributed most to climate change expected to act fastest and with greater ambition.

The report further emphasizes that climate mitigation and adaptation must progress together. Nature-based solutions, including measures that can simultaneously reduce emissions and help communities adapt to rising temperatures, should be prioritized.

UNEP cautioned that net-zero emissions should be viewed as a milestone toward net-negative emissions rather than the final destination. Carbon dioxide removal must complement, rather than replace, deep and sustained reductions in greenhouse gas emissions.

The report also acknowledges that even if global temperatures are eventually brought back below 1.5°C, some irreversible losses and permanently changed conditions will remain.

Many communities could be forced to relocate or change their livelihoods, while governments and societies may face difficult questions over climate justice, power and political legitimacy.

UNEP therefore stressed that immediate action is essential to keep the possibility of returning below 1.5°C open, warning that the task cannot simply be left for future generations.