

EXTREME WEATHER AS THE GREATEST LONG TERM GLOBAL THREAT

- Ankur Goel

Director, Copper Cross Solutions

Extreme weather is no longer a distant warning discussed only in scientific reports or international conferences. It has become a lived reality for millions of people across the world. From devastating floods sweeping away homes in one region to relentless heatwaves scorching another, extreme weather has emerged as the most serious long term global threat facing humanity. It affects economies, public health, food production, ecosystems, and social stability in ways that are becoming impossible to ignore. For generations, weather was considered unpredictable but manageable. Communities adapted to seasonal rains, occasional storms, and periodic droughts. Today, the scale, frequency, and intensity of weather events are changing dramatically. What once happened once in a century is now happening every few years, and sometimes every few months. Scientists have repeatedly linked this intensification to climate change driven by human activities, especially the burning of fossil fuels, deforestation, and unsustainable industrial growth.

Heatwaves have become one of the deadliest examples of extreme weather. Rising

temperatures are not just uncomfortable. They are lethal. In many parts of the world, summer temperatures are reaching levels that threaten human survival, particularly for outdoor workers, the elderly, children, and those without access to cooling systems. Hospitals see spikes in heat related illnesses, agricultural workers face dangerous conditions, and power systems struggle under the increased demand for electricity. In cities, where concrete traps heat, the situation becomes even more severe.

Floods are another growing menace. Intense rainfall events are becoming more common as warmer air holds more moisture. When this moisture is released, it often comes in sudden and destructive downpours. Cities with poor drainage systems are overwhelmed within hours. Rivers burst their banks. Roads disappear under water. Families lose homes, possessions, and in many tragic cases, loved ones. The emotional scars of such disasters often remain long after the waters recede.

Droughts present a quieter but equally dangerous threat. A prolonged absence of rainfall can cripple agriculture, dry up reservoirs, and trigger water shortages that affect millions.

Farmers lose crops, livestock suffer, and food prices rise. In vulnerable regions, drought can spark migration, conflict over resources, and deepening poverty. Unlike storms that make headlines immediately, droughts often unfold slowly, but their impact can be devastating and widespread.

Storms and cyclones are also becoming more destructive. Warmer ocean temperatures provide more energy for tropical storms, increasing their potential intensity. Coastal communities face stronger winds, heavier rainfall, and dangerous storm surges. Infrastructure that was built for past climate conditions often cannot withstand the new reality. Schools, hospitals, transport systems, and communication networks are frequently damaged, setting back development gains by years.

The economic cost of extreme weather is staggering. Governments spend billions on disaster relief, rebuilding infrastructure, and emergency response. Businesses face supply chain disruptions, production losses, and insurance challenges. Small communities often suffer the most because they lack financial resilience. A single disaster can erase decades of progress. For developing countries, which often contribute least to global emissions, the burden is especially unfair.

Extreme weather also poses a major threat to food security. Agriculture depends heavily on stable weather patterns. Too much rain can destroy crops just as surely as too little. Heat stress reduces crop yields and affects livestock productivity. Fisheries are disrupted by warming waters and changing ocean conditions. As global food systems become more strained, vulnerable populations are at greater risk of hunger and malnutrition.

Nature itself is under immense pressure. Forest fires fueled by heat and drought destroy biodiversity and release massive amounts of carbon into the atmosphere, worsening climate change further. Coral reefs bleach under warming seas. Wetlands that once buffered floods are disappearing. Species that cannot adapt quickly enough face extinction. The

natural systems that protect and sustain humanity are being weakened at the very moment they are needed most.

India offers a powerful example of this growing challenge. In recent years, the country has experienced severe heatwaves, erratic monsoons, flash floods, cyclones, and glacial lake related disasters. Farmers struggle with unpredictable rainfall, urban residents endure unbearable heat, and mountain ecosystems face increasing instability. A country with immense climate diversity is witnessing disruptions across nearly every region. Similar stories are unfolding across Africa, Europe, North America, and island nations vulnerable to sea level rise and storms.

What makes extreme weather such a profound long term threat is its interconnected nature. It is not just about weather. It is about health, migration, inequality, national security, energy systems, and economic development. A heatwave can trigger power failures. A drought can increase food insecurity. Floods can displace entire communities. These cascading effects create complex crises that are difficult to manage.

Yet this is not a story of inevitable defeat. Solutions exist. Cleaner energy systems, better urban planning, resilient infrastructure, ecosystem restoration, early warning systems, and climate aware policies can reduce risks significantly. Communities can be made safer through preparedness and adaptation. International cooperation is essential, as climate impacts do not respect national borders.

The greatest danger lies not in the storms themselves, but in treating them as isolated events rather than symptoms of a deeper global crisis. Extreme weather is not the future knocking at our door. It has already entered our homes, fields, cities, and coastlines. The question is no longer whether the threat is real. The real question is whether humanity will act with the urgency that this defining challenge demands.