The rate of global warming is accelerating, approaching a dangerous tipping point

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Multiple recently released studies highlight dire changes in the earth's climate and environment due to global warming which may soon unleash a self-reinforcing feedback loop which is difficult or impossible to reverse.

The 2015 Paris agreement set a somewhat arbitrary but nevertheless significant goal of limiting global average temperature rise to 1.5 degrees Celsius (2.7 Fahrenheit) above the preindustrial level, beyond which significant negative changes in earth's climate were projected to begin. At the current rate of increase, that turning point will be reached by 2030, if not sooner.

A newly published report in *Nature*, titled, "Climate change is speeding up—the pace nearly doubled in ten years" (Witz, March 6, 2026) finds that the past three years have been the hottest on record, continuing a decades-long trend of increasing temperatures. The overall rate of increase has risen from 0.2 degrees C. per decade in the 1970s to around 0.35 degrees C. per decade currently, based on data from NASA.

Ironically, the recent surge may be the result of a lowering of particulate matter in the atmosphere due to the introduction of fuel regulations for international shipping. These particles reflect sunlight into space, reducing the amount of solar radiation reaching the ground. Nevertheless, this has only enhanced an overall marked warming trend clearly evident since at least the 1980s, due to the burning of fossil fuels that release heat-trapping gasses into the atmosphere.

Other studies corroborate the acceleration in global warming. One, for example, found that the rate of warming increased from 0.2 degrees C. per decade in the 1970s to 0.27 degrees C. now. That is slightly slower than the study previously cited, but still demonstrates a marked upward trend.

This acceleration is being driven by continuing greenhouse gas emissions. Another study was published in the journal *PHYS.ORG*, prepared by the Korea Advanced Institute of Science and Technology (KAIST) (March 6, 2026), and titled "Carbon emissions now more than double the planetary boundary, analysis finds." It found that,

> Based on the condition of limiting the rise in global average temperature to within 1.5°C, the analysis showed that Earth's safe limit for annual CO? emissions is approximately 4–17 gigatons (Gt CO? per year). However, humanity's current annual emissions amount to about 37 gigatons (Gt CO? per year). This level exceeds Earth's safe operating space by more than twofold.

The consequences of this trend are alarming. Another recent study published in *Nature Climate Change* (Palmer, March 3, 2026) is titled, "The hard road back from overshoot." It presents the stark reality that there is no possibility of achieving the Paris agreement's goal of keeping the increase in global temperatures to below 1.5 C degrees C. above preindustrial levels by drastically reducing greenhouse gas emissions. It is now clear that "emissions have kept climbing, and even the most optimistic models now project that the global temperature will rise past 1.5 °C in just a few years, reach 2 °C in the next decade, and will remain above that for decades before coming back down, perhaps." This is now referred to as "overshoot."

The period of overshoot, even if dramatic measures, much more extensive than the feeble attempts made so far, are undertaken, will have devastating consequences not easily reversed. According to one scientist quoted in the article, "Coral reefs bleach, ice sheets melt, 50% of species vanish and droughts lengthen. These things happen long before temperatures start to fall. 'We can't just go above and then slide back,' he said. 'We carry the damage forward.'" One result is that frequency and strength of extreme storms will increase, with devastating consequences. A number of other scientists corroborate these dire predictions. The longer the drastic reduction in greenhouse gas emissions is delayed, the greater the impacts to the earth's environment will be.

The article goes on to frame the fight against global warming as a moral imperative, which is to be implemented by educating those in power. A wide range of measures are proposed that can be implemented to significantly reduce greenhouse gas emissions. However, as with the struggle against the Gaza genocide, the war in Iran and the establishment of a Trump dictatorship, bitter experience demonstrates that such appeals will fail. As the old saying goes, "There are none so blind as

those who will not see."

Appeals to the ruling capitalist oligarchy fall on deaf ears. Their interest is in defending the economic system on which their power is based. Any more than token efforts to reduce greenhouse gas emissions would impinge on their profits and will be resisted. The history of the past half century proves that to be the case. And the growing capitalist crisis is already prompting the Trump administration to conduct a direct assault on the meager environmental regulations put in place in the preceding decades.

Indeed, the Trump administration is actively seeking to suppress research on the effects of climate change on the environment. For example, one study, newly released in draft form, reviews a large range of existing research on the already evident negative effects of global warming and other human activities on the natural environment and the consequences for humanity. This study was originally sponsored by the US federal government, then canceled by the Trump administration, but the team of scientists working on the project continued with it anyway.

The report paints a grim picture of the environmental degradation that has already occurred. For example, freshwater ecosystems are "overdrawn, polluted, fragmented and invaded." Biodiversity is reduced. An estimated 34 percent of plant species and 40 percent of animal species are at risk of extinction. The impacts on the human population are already evident, including degradation of clean water, food, health, livelihoods and protection from storms and fire.

Another potentially devastating effect of global warming is the rise in sea level. New research, published in *Nature*(Seeger and Minderhoud, March 4, 2026), titled "Sea level much higher than assumed in most coastal hazard assessments," has found that overall sea levels are already 8 inches to a foot (20.32 to 30.48 cm) higher than has been understood. In some areas it is considerably higher, up to several meters, due to ocean dynamics. The implications for millions of people living in coastal areas are significant. The study found the greatest deviations between pre-existing measurements and the new, higher findings were in Latin America, East Africa and the Indo-Pacific, with Southeast Asia and Oceania as global hotspots. Deviations of up to several meters were observed.

As global temperatures continue to increase, sea levels will rise even more. This is the result of two factors. First, warm water expands. A recent study released by NOAA, "Climate Change: Ocean Heat Content" (Lindsey and Dahlman, June 26, 2025) documents that the oceans of the world have already absorbed a huge amount of heat from global warming. It found: "Upper layers are accumulating heat faster than deeper layers, but averaged over the full depth of the global ocean, the 1993–2024 heat-gain rates are approximately 0.66 to 0.74 watts per square meter averaged over the surface of the Earth." The authors observe:

> Less than a watt per square meter might seem like a small change, but multiplied by the surface area of the ocean (more than 360 million square kilometers), that translates into an enormous global energy imbalance. It means that while the atmosphere has been spared from the full extent of global warming for now, heat already stored in the ocean will eventually be released. That release of ocean heat would commit Earth to at least some additional warming in the future once greenhouse gas emissions stop.

Secondly, the melting of glaciers and continental ice sheets in Greenland and Antarctica will contribute significant additional water to the world's oceans. It is estimated that if all this ice melts, global average sea level would rise about 60–70 meters (?200–230 feet), a distinct possibility if global warming continues. This has potentially severe consequences, not only for the permanent inundation of major coastal urban areas around the world, but even more when combined with enhanced storm surges during increasingly powerful hurricanes or typhoons, also the result of global warming.

The bottom line is that unless drastic measures are undertaken to rapidly reduce greenhouse gas emissions and thus slow and eventually stop global warming, the fate of human civilization is bleak. The resources that are now squandered on filling the pockets of the super-rich and financing war and dictatorship could instead fund the technological measures to accomplish the changes necessary to significantly reduce the emission of greenhouse gasses. However, as bitter experience has already shown, the corporate and financial oligarchy will do whatever is necessary to protect its interests regardless of the consequences.

Only the united struggle of the world working class to put an end to capitalism and institute a socialist society across the globe can avert otherwise inevitable disaster.