

Climate report warns of “severe, pervasive and irreversible impacts”

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The International Panel on Climate Change concluded its latest round of assessment studies this week with a new report warning that the opportunity for action to limit some of the worst consequences of global warming is rapidly closing. The multi-year effort, which involved thousands of climate scientists from around the world, highlighted the growing risks to human society and the environment as fossil fuel use continues to add unprecedented amounts of greenhouse gases into the atmosphere.

No part of the globe will be left unaffected. High-level risks include food and water insecurity in Africa, crop shortages in South America, and flood damage in North America and Asia. Poor and otherwise vulnerable communities are likely to be hit hardest by climate change, which acts as a “risk multiplier” that worsens already existing inequality.

In order to keep these risks under relative control, a target to limit global warming to 2 °C (3.7 °F) through 2100 relative to pre-industrial levels was eyed as early as the 1990s. Two decades on, and after governments formalized this goal in 2009, the current runaway trajectory prompted the sharpest warnings to ever come from the IPCC assessments. The report makes clear that substantial cuts in greenhouse gas emissions are needed without delay and must be continued over the next few decades to avert potential catastrophe.

With business as usual, the IPCC projects an end-of-century temperature rise of around 4 °C, which could result in “severe and widespread impacts on unique and threatened systems, substantial species extinction, large risks to global and regional food security, consequential constraints on common human activities, increased likelihood of triggering tipping points, and limited potential for adaptation in some places.”

Even at 2 °C increase, the report noted, serious risks

such as extreme weather events may still be high. Without drastic changes to the energy production system, the primary driver of greenhouse gas emissions, the world is on track to surpass the 2 degree target by 2030.

Nonetheless, only a pathetic \$1 billion per day is being allocated globally on mitigating and adapting to climate change, the report found. By contrast, this is about half of the daily expenses of the US military, which has nonetheless declared climate change a significant threat to national security requiring immediate action. Annual global investment in fossil fuels comes in well over \$1 trillion according to the International Energy Agency.

Climate change is not simply a future risk. The IPCC report documents many already observed changes “unprecedented over decades to millennia,” including the warming of the atmosphere and ocean, declines in snow and ice, and a rise in sea level.

These findings echo previous assessments, particularly the 2007 report. However in the intervening years scientists have strengthened many of the observations and developed a more sophisticated understanding of the mechanisms of climate change, leading in many cases to improved confidence and reduced uncertainty.

Thus, with high confidence, the IPCC concludes that many plants and animals “have shifted their geographic ranges, seasonal activities, migration patterns, abundances, and species interactions in response to ongoing climate change.” Ultimately this portends a significant number of species extinctions, which in the past have been caused by slower, natural climactic changes.

Likewise, a review of the research on food production shows climate change is already hampering yields for

some of the world's staple food crops, including wheat and maize. While some areas have seen an improvement in crop production, on balance climate change is having a decidedly negative impact on the food system. Over the last several years, the IPCC explains, several rapid price increases have followed climate extremes in key farming regions.

The report, which assesses not only climate science but also climate policy, comes a month and a half ahead of the next UN negotiating conference in Lima, Peru. The December meeting is intended to set the stage for a global agreement in Paris in 2015, where the successor to the Kyoto Protocol is to be negotiated.

Despite repeated warnings from scientists about the urgency of the climate crisis, the political response has been characterized by paralysis. Governments have already conceded that no legally binding emissions targets will be on the table in Paris. Instead, they are relying on a series of voluntary pledges, which, even if carried out, are nowhere near enough to prevent a 2 degree temperature rise, according to the IPCC analysis.

While the coverage of climate mitigation policies has expanded throughout the world, in practice they are having little impact on reversing course. "In 2012, 67 percent of global greenhouse gas emissions were subject to national legislation or strategies versus 45 percent in 2007," the report states. "However, there has not yet been a substantial deviation in global emissions from the past trend."

These policies often depend on market-based mechanisms that set a price on carbon, including cap and trade systems and carbon taxes. While the report argues that in principle these mechanisms can be effective, they admit that results thus far have been inconsistent and have not translated into significant environmental benefits.

The IPCC details some key policy principles to effectively mitigate and adapt to changes in the climate system. These include improving governance institutions, enhancing cooperation and coordination across borders, and promoting innovation and investments in environmentally sustainable infrastructure and technology, and so on.

Here the limits of the report, which is in part intended to inform the UN climate negotiations, are striking. In tacitly accepting the permanence of the profit system,

and offering up only modest reforms, the IPCC is unable to confront why its proposed remedies either have not been implemented or have not resulted in meaningful change, even when faced with a catastrophic future.

The world's political and economic situation is dominated by a tiny corporate and financial elite, which makes all decisions about the allocation of resources for its own enrichment, not for the benefit of society. Meanwhile national antagonisms are growing, as governments seek to use all means available, including climate negotiations, for relative gain versus potential rivals.

It is the capitalist system itself, which precludes rational, democratic planning of the international economy, that must be confronted if the growing dangers of climate change are to be addressed.



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