

The Guardian

Why the next three months are crucial for the future of the planet

Two forthcoming major climate talks offer governments an opportunity to respond to this year's extreme weather with decisive action



Kerala suffered its worst monsoon in nearly a century in August. It was just one of many extreme weather events around the world this year. Photograph: Aijaz Rahi/AP

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The warning signals of climate change that have hit people around the world in the last few months must be heeded by national governments at key meetings later this year, political leaders and policy experts are urging, as the disruption from record-breaking weather continues in many regions.

Extreme weather events have struck around the world - from the drought and record

temperatures in northern Europe, to forest fires in the US, to heatwaves and drought in China, to an unusually strong monsoon that has devastated large areas of southern India.

As the northern hemisphere summer closes, polar observations have just established that the Arctic sea ice narrowly missed a record low this year. The sea ice extent was tied for the sixth lowest on record with 2008 and 2010. Sea currents and wind conditions can have large effects on sea ice extent from year to year, but the trend is starkly evident.

“Put simply, in the last 10 years the Arctic is melting faster than it ever has previously since records began,” said Julienne Stroeve, professor at University College London. “We have lost over half of the summer sea ice coverage since the late 1970’s and it is realistic to expect an ice-free Arctic sea in summer in the next few decades.”

Of particular concern is the decline in thick ice which forms over several years. “The older ice has been replaced by more and more first-year ice, which is easier to melt out each summer,” she explained.

Not all of the effects of this year’s extraordinary weather, which has also seen the UK’s joint hottest summer on record, can be traced directly to climate change. However, scientists are clear that the background of a warming planet has made extremes of temperature, and accompanying droughts and floods, more likely.

This week, scientists are gathering in South Korea to draw together the last five years of advances in climate science to answer key questions for policymakers. The UN’s Intergovernmental Panel on Climate Change (IPCC) celebrates its 30th birthday this year with what is likely to be a landmark report to be released on Monday 8 October. What is expected to emerge will be the strongest warning yet that these unusual occurrences will add up to a pattern that can only be overcome with drastic action.

Thousands of the world’s leading climate experts collaborate on the periodic reports, released roughly every half-decade. They have grown clearer over the years in the certainty of their evidence that climate change is occurring as a result of human actions, and firmer in their warnings of the disruptive consequences.

This time, the scientists will attempt to answer whether and how the world can meet the “aspiration” set in the Paris agreement of 2015 to hold warming to no more than 1.5C, beyond which many low-lying states and islands are likely to face dangerous sea level rises.

When the scientists deliver their verdict, the onus will pass to politicians to translate their advice into concrete action. Already in recent weeks, global initiatives have begun aimed at doing so: the Global Climate Action Summit in San Francisco last month spurred protests, and dozens of local governments and multinational companies to make pledges; the second One Planet Summit saw advances in climate finance; while at the UN General Assembly, secretary general António Guterres urged world leaders to step up, calling climate change “the defining issue of our time”.

Evidence showing that tackling climate change can be an economic boost rather than a

brake has been growing. The recently published New Climate Economy report says more than 65m new low-carbon jobs could be created in just over a decade, and that 700,000 premature deaths from air pollution could be avoided every year by government action on climate change. A further \$2.8tn could be added to government revenues by 2030 by reforming perverse incentives to burn fossil fuels.

Nicholas Stern, co-chair of the Global Commission on the Economy and Climate, which produced the study, said: "Current economic models fail to capture both the powerful dynamics and very attractive qualities of new technologies and structures [that reduce carbon]. Thus we know that we are grossly underestimating the benefits of this new growth story. Further, it becomes ever clearer that the risks of the damage from climate change are immense, and tipping points and irreversibilities getting ever closer."

The existence of tipping points - thresholds of temperature beyond which certain natural processes become irreversible, such as the melting of permafrost, which may release the greenhouse gas methane and create runaway warming effects - is a key concern of many climate scientists. The faster emissions rise, the sooner we may unwittingly pass some of these key points.

For all these reasons, the IPCC's special report comes at a crucial point. Scientists and economists have warned that if the world cannot shift course within the next few years, the consequences will be dire, as new infrastructure built now - in energy generation, transport and the built environment - will be made either to low-emissions standards or in the high-emissions habits of the past. As the IPCC's next comprehensive assessment of climate science will not be available until 2021, this year's report will be vital in shaping policy.

Ted Chaiban, director of programmes at Unicef, urged governments to seize the opportunities for action offered by this year's series of political meetings offers for action. "Over the past few months, we have seen a stark vision of the world we are creating for future generations," he said. "As more extreme weather events increase the number of emergencies and humanitarian crises, it is children who will pay the highest price," he said.

"It is vital that governments and the international community take concrete steps. The worst impacts of climate change are not inevitable, but the time for action is now."

After the IPCC publication, the world will face a key test of faith in the 2015 Paris agreement, the only global pact stipulating action on temperature rises. This December in Poland, the UN's climate change arm will hold a two-week meeting aimed at turning the political resolve reached in Paris three years ago into a set of rules for countries to follow on reducing emissions.

The political situation is more fraught than it was in the runup to Paris. The US is pulling out of the landmark climate agreement and is likely to play little part in the talks. Australia's government is also in turmoil over climate actions. Now the challenger for Brazil's presidency, Jair Bolsonaro, is threatening to withdraw its participation - a potential

blow to the Paris consensus, as Brazil was a linchpin among rapidly developing nations.

All eyes will be on China, which has shown remarkable progress on renewable energy and emissions reduction, and India, where climate champions have found common cause with opponents of increasingly damaging air pollution. Patricia Espinosa, the UN's top climate official, warned that only "uneven progress" had been made so far on the 300-page rulebook for implementing the Paris targets, leaving the rest of the work for December.

While the dangerous weather of the first half of 2018 has raised concerns worldwide that we are seeing climate change in action, many leading experts told the Guardian they were optimistic that political and business leaders this year would help set the world on a different course to avoid the worse predictions of untrammelled warming.

Achim Steiner, administrator of the UN Development Programme, said the past few years had seen "extraordinary progress" in areas such as renewable energy and the take-up of low-carbon technology: "This is real, not in the future but happening now. We are showing that we can do this, we can bring down emissions, it doesn't need to be a disaster."

Adopting low-carbon aims now would set developing countries on a course to a brighter future, added Ngozi Okonjo-Iweala, former economic minister of Nigeria and a member of the Global Commission on the Economy and Climate. "Now is the time to do this, before we lock in high-carbon infrastructure," she said. "Now is the opportunity for real sustainable growth."

Political leaders will find that global investors back them up in opting for low-carbon policies, predicted Frank Rijsberman of the Global Green Growth Institute. "I see this from investors, from businesses," he said. "They are ready, and they see low-carbon as the future."

Felipe Calderón, former president of Mexico, called on political leaders to take note: "We can turn better [economic] growth and a better climate into reality. It is time we decisively legislate, innovate, govern and invest our way to a fairer, safer, more sustainable world."

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