

The New Climate “Normal”: Abrupt Sea Level Rise and Predictions of Civilization Collapse

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Helicopters drop water on the Blue Creek wildfire as it burns near Walla Walla, Washington, July 22, 2015. Officials warn about the potential for even more catastrophe in the months ahead, as drought, heat and climate change leave the landscape ever thirstier. (Ruth Fremson/The New York Times)

We know things are a bit “off” when a rainforest is on fire.

Over 400 acres of the Queets Rainforest, located in Olympic National Park in Washington State, nearby where I live, [have burned recently](#), and it is continuing to burn as I type this. Fires in these rainforests have historically been rare, as the area typically receives in excess of 200 inches of rain annually.

But this is all changing now.

The new normal is that there is no longer any “normal.”

The new normal regarding climate disruption is that, for the planet, today is better than tomorrow.

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Another perfect example of this is a crucial recent study led by James Hansen, the former director of NASA’s Goddard Institute for Space Studies. The study, authored by Hansen and more than a dozen other scientists and published [online](#), warns that even staying within the internationally agreed goal of keeping the planet within the 2-degree Celsius temperature warming limit has already caused unstoppable melting in the Antarctic and Greenland ice sheets. The study shows that this will raise global sea levels by *as much as 10 feet by the year 2050*, inundating numerous major coastal cities with seawater.

The oceans and all marine life will be “irreversibly changed” unless there are immediate and dramatic cuts in carbon dioxide emissions.

As if that’s not enough, Hansen’s study comes on the heels of another study published in [Science](#), which shows that global sea levels could rise by at least 20 feet, even if governments manage to keep global temperature increases to within the agreed upon “safe” limit of 2 degrees Celsius. The study warns that it is quite possible that *75 feet* of sea level rise could well already be unstoppable given current carbon dioxide levels in the atmosphere and recent studies that show how rapidly Greenland and several Antarctic ice

sheets are melting.

Disconcertingly, another new “normal” this month comes in the form of huge plumes of [wildfire smoke over the Arctic](#). At the time of this writing, well over 12 million acres of forest and tundra in Canada and Alaska have burned in wildfires, and the smoke covering the Arctic sea ice is yet another anthropogenic climate disruption (ACD) amplifying feedback loop that will accelerate melting there. The additional smoke further warms the atmosphere that quickens the melting of the Arctic ice pack.

As if that’s not enough to keep you up at night, a [recently published study](#) by a team from Anglia Ruskin University’s Global Sustainability Institute has shown that society will likely collapse within 30 years, due to catastrophic food shortages resulting from the ever-worsening impacts of ACD.

“The results show that based on plausible climate trends, and a total failure to change course, the global food supply system would face catastrophic losses, and an unprecedented epidemic of food riots,” the Institute’s director, Dr. Aled Jones, told [Insurge Intelligence](#). “In this scenario, global society essentially collapses as food production falls permanently short of consumption.”

Another shocking study, this one published in [The Anthropocene Review](#), shows how humans are causing catastrophic shifts in planetary ecosystems that have been unprecedented for 500 million years. The study outlines how human actions have led to extinctions of plants and animals, and added that while “species extinctions and other changes are far more advanced” already, “[g]lobal warming as a phenomenon is just beginning.”

Bad news from scientific studies flowed abundantly this last month when it comes to the oceans, as well.

Another [major report](#), this one published in Science, warns that the oceans and all marine life will be “irreversibly changed” unless there are immediate and dramatic cuts in carbon dioxide emissions – a scenario from the realm of fantasy, given the current political climate. The report states clearly that even the 2-degree Celsius “maximum allowable temperature” rise from ACD agreed upon by world governments “will not prevent dramatic impacts on global ocean systems.”

As if all this isn’t enough to impress upon you how rapidly ACD is progressing, 2014 was also [confirmed](#) as the hottest year ever recorded, both on land and in the oceans. That report was followed by another from the [National Oceanic and Atmospheric Administration](#) that showed that the first half of 2015 was, by far, the hottest ever recorded on the planet.

As this dispatch dives into greater detail about how the world is being changed dramatically, buckle up. The news does not get any easier to take in.

Earth

The impacts from ACD continue to take dramatic tolls on the earth’s species.

Researchers [recently reported](#) that warmer temperatures across both North America and Europe are leading to loss of habitat for bumblebees, which in turn is threatening their very

survival.

In the UK, several species of [birds are now under threat](#) because temperature shifts are pushing several of the species further north, even all the way to Scandinavia. Once there, the birds encounter habitat they are not adapted to, and likely won't survive.

Scientists in the United States with the US Geological Survey released a report that shows that polar bears will have a [steep decline in their populations](#) in most places in the Arctic as the sea ice melts away. This isn't news, but the report shows how closely scientists are monitoring the situation, due to the speed at which the melting of the polar ice cap is occurring.

Humans are not immune to the growing impacts of ACD.

Another study published in [Science](#) shows that polar bears' metabolism will not be able to adapt quickly enough to their dramatically changing habitat as the Arctic warms and melts. This, coupled with a dramatic decline in their sources of food, again confirmed that the iconic bears are most likely en route to extinction.

Of course, humans are not immune to the growing impacts of ACD.

A [report](#) produced by the University College of London's commission on health and climate change along with the Lancet revealed that ACD threatens to erode five decades of overall progress in global human health.

Professor Anthony Costello, director of the UCL Institute of Global Health and co-chair of the commission, [told](#) the Guardian that on our current trajectory of warming, we are going to see "very serious and potentially catastrophic effects for human health and human survival.

"We see that as a medical emergency because the action we need to do to stop that in its tracks and get us back onto a 2C trajectory or less requires action now – and action in the next 10 years – otherwise the game could be over," he added.

For the earth itself, ACD is even leading to geo-structural changes.

In Greenland, massive earthquakes are resulting from melting glaciers, and icebergs calving from tidal glaciers collapsing into the ocean are causing consistent quakes of magnitude 4-5.2, with most of them closer to 5, according to a [recent study](#) published in Science. The calving glaciers are also causing tsunamis.

Water

As usual, the impacts of ACD are most dramatic on the waterfront.

A [recent report](#) revealed that all of the world's sea turtles are at risk, due to rising sea levels. Higher sea levels mean their rookery sites, where their babies hatch, are becoming submerged.

Equally distressing, the [entire pink salmon population](#) in the Pacific Ocean is at risk, as they are being subjected to a double impact: the acidification of their ocean habitats, coupled with the acidification of rivers, slowing their growth and killing them off there as well.

Speaking of salmon, in Oregon, salmon must be [trucked north hundreds of miles](#) to a hatchery in Washington State, in a desperate effort to save fish that have been dying off in the tens of thousands due to increasingly warming river waters.

We know there is trouble when we are having to truck fish north in an effort to keep them alive; needless to say, this is not a sustainable activity.

A group of scientists from the Marine Conservation Institute [recently announced](#) that deep-sea coral reefs off the coast of Australia could be dead within 50 years due to warming temperatures and ocean acidification.

A series of [recent studies](#) has recently confirmed that ACD's impacts on the oceans, including warming temperatures and acidification of the waters, is causing global seafood supplies to diminish drastically.

Plankton, the basis of the entire food chain, are threatened by ocean acidification.

More bad news for the planets' oceans comes from a [recent study](#) that shows that plankton, the basis of the entire food chain, are threatened by ocean acidification. Some species of plankton will die out, while others will flourish, creating an imbalance that the report's authors say will be "a big problem," given that plankton produce half the total oxygen supply for the planet.

Pause for a moment before reading further and ponder the implications of that: The source of half the world's oxygen is in major peril.

Droughts around the planet continue to abound.

Chile is facing its [driest year to date](#), since record keeping began. There has been little to no snow on any of its famous ski slopes, and the lack of rainfall has worsened the already bad pollution problem in the country's capital city.

In Canada, several counties in the province of Alberta announced in July that they were seriously considering [declaring themselves in a state of agricultural disaster](#) due to severe drought. It's one of the worst drought's in Alberta's history, and one farmer said, "It's almost get-ting at the point rain wouldn't help much."

In addition to the important report on sea level rise mentioned at the beginning of this article, the Guardian recently posted a [video](#) that investigates the question of whether Filipinos will have to abandon Manila due to rising sea levels. Manila has a population of roughly 2 million people.

Needless to say, glaciers and ice sheets around the world continue to melt at breakneck speeds.

The impacts of warmer ocean temperatures "will be felt for centuries to come."

NASA recently released a [report](#) showing that in Turkey, more than half of the ice cover in the mountainous regions has vanished since the 1970s. A [map](#) in the NASA report shows five areas in Turkey's mountains where 100 percent of the glaciers have disappeared, and three areas where 75 percent of them are gone.

Another [study](#) released in July revealed another factor that is causing the Arctic to melt at a pace far faster than believed possible: Warm, tropical air masses are speeding up Greenland's melting by warming Arctic air, as well as causing warmer rains to fall over the ice sheets.

Another [NASA study](#) found that the melting of Alaskan glaciers is now estimated to be one of the current largest contributors to global sea level increases. [Maps](#) in the study show dramatic changes to Alaska's glaciers between 1994 and 2013, revealing a precipitous decline in their total mass. NASA estimates that the region lost approximately 75 billion tons of ice per year over that 19-year period, which is equivalent to around 30 percent of the amount of ice lost each year from the Greenland ice sheet.

Lastly, climate scientists affiliated with the US government [announced recently](#) that the warming of the oceans due to ACD is now unstoppable, and will continue to bring additional sea level rise, acidification and increasing global temperatures. Their report added that the impacts of the warmer ocean temperatures "will be felt for centuries to come" – even if immediate efforts are made to cut global carbon dioxide emissions.

Fire

In Canada, wildfires that have been described as "unprecedented" have forced more than [13,000 residents](#) of Saskatchewan from their homes (a record evacuation), with wildfire-driven evacuations happening across other provinces as well.

The town of Whistler, Canada, famous for its world-class ski resort, is dealing with [horrible air quality](#) as smoke from wildfires is polluting the air across British Columbia.

NASA recently released disturbing [images](#) of smoke from the Alaskan and Canadian wildfires that is blowing out over the Greenland Sea.

[Wildfires are ravaging](#) parts of Southern California where the megadrought is cutting deep. The fire season started earlier than "normal" this year, and was helped along by [massive numbers of dead trees](#) brought to their demise by the increasing bark beetle infestation. That infestation was fueled by warmer temperatures as well as the drought itself. Hence several runaway feedback loops are feeding off one another.

A [recently released study](#) shows, again, how ACD has caused wildfire seasons around the globe to begin earlier and last later, shifting what "normal" means in the realm of fire.

Air

[Heat records on three continents](#) fell this last month, as brutally hot conditions in early July baked parts of Europe, Asia and South America. Dozens of heat records were broken: Maastricht, the Netherlands, saw 100.8 degrees Fahrenheit, an all-time July heat record for that nation, along with several other heat records throughout the country. London's Heathrow Airport saw 98.1 degrees Fahrenheit, an all-time heat record for the UK.

In Thailand, Kamalasai saw 105.8 degrees, the hottest temperature ever recorded for that country, while other heat records across the nation were set as well. In Pakistan, [morgues literally ran out of space](#) as a heat wave there killed more than 1,000 people.

In South America, Urumita, Colombia, reached 108 degrees Fahrenheit, setting an all-time

high for that country.

[Heat records](#) across the United States continue to be broken as well, including in [Seattle](#), which has seen several record temperatures this summer, with possibly more to come.

A [recent study](#) has linked Hurricane Sandy and other extreme weather events around the globe to ACD. The study, published in Nature Climate Change, shows how ACD is ramping up extreme weather events, both in frequency and intensity, to never-before-seen levels.

Denial and Reality

Regarding ACD, news on the denial front never runs dry.

It [emerged recently](#) that Exxon was aware of ACD as far back as 1981, but continued to deliberately fund climate change deniers nonetheless ... and has gone on to spend millions of dollars since then to continue to do so, to this day.

The US House of Representatives, in another stroke of genius, [passed a bill](#) that allows state governors to refuse to comply with the Environmental Protection Agency's Clean Power Plan, developed to lower carbon dioxide emissions from currently active power plants.

Elected politicians acting on behalf of Big Oil and Gas are functioning as little more than lobbyists for said industries, despite what's at stake (the planet and human existence).

On the reality front, to counter these amazing acts of denial, Pope Francis continues to fight the good fight as far as ACD goes. Thousands of religious leaders recently [marched](#) in Rome in support of his call to world leaders to take a stand and work to mitigate the impacts of ACD.

On that note, more than a dozen Catholic organizations have [launched a campaign](#) that is asking Catholics around the world to change their lives in order to reduce their carbon dioxide emissions and lower their consumption.

A recent [study](#) has shown, again, that ACD has made deadly floods and record heat waves over the last month even worse, and will continue to make other extreme weather events more intense, as well as more frequent.

"We need the deniers to get out of the way. They are risking everyone's future."

Lastly, an excellent [article in Esquire](#) about Dr. Jason Box provides a glimpse into the dilemma climate scientists face in regards to the intensely troubling information their research is producing and the emotions elicited by it, coupled with the pressures they face politically. Box, a world-renowned glaciologist whose focus is the Greenland ice sheet, has not been shy about expressing his opinions, and sometimes emotions, about what he is seeing.

Box has said things like: "If even a small fraction of Arctic sea floor carbon is released to the atmosphere, we're fucked," and concluded that a 70-foot rise in sea levels over the next few centuries was probably already "baked into the system." After these and other similar statements, he has come under intense fire from both the scientific community and - of course - the deniers.

Box, a US citizen, had already taken his family and moved to Denmark, where he works while continuing his cutting-edge studies on the Greenland ice sheet, largely due to the ongoing attacks he withstood from the oil-and-gas-funded deniers in the United States.

"We need the deniers to get out of the way. They are risking everyone's future," Box told Esquire. "The Koch brothers are criminals.... They should be charged with criminal activity because they're putting the profits of their business ahead of the livelihoods of millions of people, and even life on earth."

Box thinks there is at least a 50 percent probability that the world is already on track to go well over the 2-degree Celsius politically accepted maximum limit of global warming, and agrees with most climate scientists that we are on a trajectory toward more like 4-5-degree Celsius warming in the near to mid-term future.

When asked what amount of warming would throw Greenland into irreversible ice loss, Box answered "between two and three degrees."

When Greenland goes, that is enough sea level rise to destroy every coastal city on the planet. Speaking of Antarctica, Box said: "Abrupt sea level rise is upon us."

"The forests are dying, and they will not return," he told Esquire about his home state of Colorado. "The trees won't return to a warming climate. We're going to see megafires even more, that'll be the new one - megafires until those forests are cleared."

Meanwhile, he has adjusted his life to minimize his carbon footprint, and continues his work in Greenland, but is worried about his daughter's future. Box's view of the disrupted climactic future is scary enough; he is thinking about survival.

"In Denmark, we have the resilience, so I'm not that worried about my daughter's livelihood going forward," he said. "But that doesn't stop me from strategizing about how to safeguard her future - I've been looking at property in Greenland. As a possible bug-out scenario."

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His third book, [The Mass Destruction of Iraq: Why It Is Happening, and Who Is Responsible](#), co-written with [William Rivers Pitt](#), is available now on Amazon. He lives and works in Washington State.

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