

“Imminent” Collapse of the Antarctic Ice Shelf and a “New Era” in the Arctic

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As human-caused climate disruption progresses, sea level rise is happening far faster than previously expected. (Photo: [Iceberg](#) via Shutterstock)

Recently, two friends and I attempted to climb Washington State’s beautiful, glacier-clad Mount Baker. Roped up while climbing up a glacier, roughly 1,500 feet below the summit, our route reached an impasse.

Given that it was technically early in the climbing season, and that we were on the standard route, we were dismayed to find a snow bridge spanning a 10-foot wide crevasse about to collapse. Finding no other way around the gaping void, we agreed to turn back and return another day.

After breaking down our camp and hiking out, we stopped off for a bite to eat in the nearby small town of Glacier, Washington. Our waitress told us of a friend of hers who worked in the Forest Service there, who told her that the area had, in the past year, “received the least amount of precipitation [that] it had for over 100 years.”

While planning our next trip to Mount Baker, one of my climbing partners spoke with a local guide who informed him that, despite the fact that it was only mid-May, “climbing conditions are already equivalent to what they usually are in mid- to late July ... crevasses are opening up, and snow bridges are already melting out like it’s late season.”

Mountaineering in the throes of anthropogenic climate disruption (ACD), like the rest of life, is becoming increasingly challenging – as well as more dangerous.

The signs are all around us, every day now. All we need to do is open our eyes to the changes occurring in our regions. We need to look closely, and think about what is happening to the planet.

Now, zoom out with me for the bigger picture in this month’s Climate Disruption Dispatch, and brace yourself for some difficult news.

Changes in the Arctic Ocean have now become so profound that the region is entering what Norwegian [scientists are calling](#) “a new era.” They warn of “far-reaching implications” due to the switch from a permanent cover of thick ice to a new state in which thinner ice vanishes in the summer.

Meanwhile, sea level rise is now happening much faster than anyone had expected, according to a recently published [study](#) from climate scientists in Australia. The study

showed that sea level rise has been accelerating over the last two decades.

NASA recently released a [study](#) that reveals that the planet's polar regions are in the midst of a stunning transformation, and showed that the massive 10,000-year-old Larsen B ice shelf in Antarctica will soon completely collapse – perhaps as soon as 2020.

And these trends are on track to speed up, as March saw the global monthly average for atmospheric carbon dioxide hit 400.83 parts per million. According to the National Oceanic and Atmospheric Administration, it was the [first time](#) the average surpassed 400 parts per million for an entire month since such measurements began in the late 1950s.

Earth

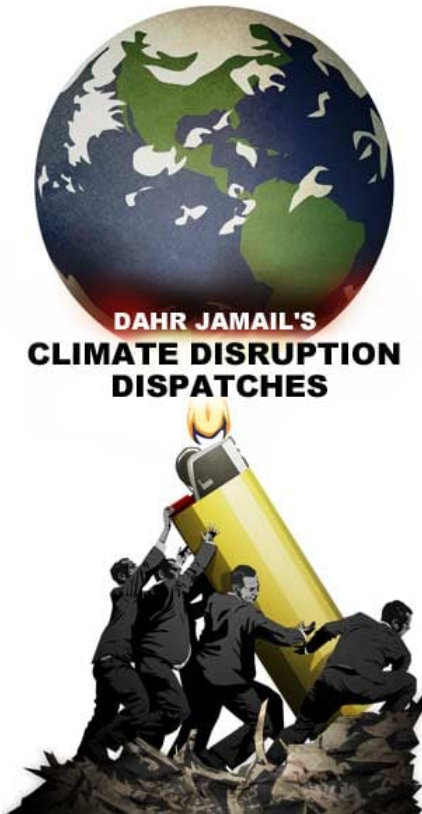
Starting on the earth and land front, the changes are coming fast and furiously.

A [study](#) released by researchers in Sweden and China revealed how ACD can seriously alter the prospects of survival for pretty much every living thing on the planet, and in particular birds. The researchers showed how in the last ice age there was a severe decline in the vast majority of the species studied, which is precisely what we are seeing currently. Massive numbers of species of birds are currently in dramatic decline.

A recent stark example of this is happening in Ohio, where birds are being devastated from the impacts of ACD, according to the Audubon Society's top scientist, who expects things to get far worse.

In California, the ongoing megadrought is already responsible for having killed 12.5 million trees in that state's national forests, [according to scientists](#) with the US Forest Service. The scientists expect the die-off to continue. "It is almost certain that millions more trees will die over the course of the upcoming summer as the drought situation continues and becomes ever more long term," said biologist Jeffrey Moore, acting regional aerial survey program manager for the US Forest Service.

[Recent research](#) out of California also shows that forests there have actually become climate polluters, rather than carbon dioxide reducers, again due to ACD impacts. The study shows that greenhouse gases are billowing out of the state's forests faster than they are being sucked back in, with [ACD-amplified wildfires](#) mostly to blame.



Across most of the drought-stricken western United States, wild animals are literally [dying for water to drink](#), as they are now being forced to seek water and food in areas far outside their normal range, leading to large increases in deaths.

Another recent [study](#) shows that as ACD progresses, expanses of majestic forests across the planet will become short and scrubby, due to changes of fluid flow to the inner workings of vegetation.

Meanwhile, rising carbon dioxide levels and other ACD impacts are having a [massive impact](#) on Native peoples' ability to provide for their own health care, as medicinal plants are on the wane. This issue extends beyond the United States: Of the 7.3 billion people alive on earth right now, approximately 5 billion of them don't go to a pharmacy to get their prescriptions filled.

On that note, a troubling recent study in the [Proceedings of the National Academy of Sciences](#) showed that a warming climate is already driving down wheat yields in the United States, and likely elsewhere around the globe. Hence, feeding the 7.3 billion humans (and counting) is only going to become increasingly challenging.

More broadly, a recent [report](#) from doctors and scientists in Australia warned that ACD will lead to more disease, death and violent conflicts as countries fight more for food and water resources.

Water

As usual, some of the most glaringly obvious impacts of ACD are making themselves known on the waterfront, both in the form of too little or too much water.

With the former, Nevada's Lake Mead, the largest reservoir in the United States, has now dropped to its lowest water level in [recorded history](#).

Up in the Pacific Northwest – not the region one tends to think about when considering droughts – a recent study found that more mountains there were [snow-free earlier in the year](#) than ever, since the region had a largely snow-free winter with many of the snowpacks at record lows. Water managers there had hoped late season snows or heavy spring rains would fill reservoirs, but they didn't come. Instead, of the 98 sites monitored in Washington, 66 were snow-free by early May, and “76 percent of Oregon's long-term snow monitoring sites were at the [lowest snowpack levels on record](#)” in April. In a typical year at that time, most sites would be near their peak snowpack.

Things are bad enough in the region that by mid-May Washington Gov. Jay Inslee declared a [statewide drought emergency](#), as mountain snowpack in that state reached only 16 percent of average and water levels in rivers and streams dried to a trickle not seen since the 1950s. Inslee warned that “residents should also be prepared for an early and active fire season that could reach higher elevations in the Cascade and Olympic mountain ranges, where many spots are already completely clear of snow.”

Looking further north, this past winter was also the [least snowy on record](#) for Anchorage, Alaska, according to the National Weather Service.

Moving across the Pacific to Taiwan, not a country one usually thinks about being impacted by drought, that nation is currently experiencing one of its [most severe droughts](#) in decades. Residents living on the country's heavily populated western coast must ration their water use.

Up in the Arctic, our canary in the coal mine for ACD impacts, circumstances are growing increasingly dire. There was less ice in the Arctic this winter than during any other winter in the satellite era, [according to National Oceanic and Atmospheric Administration](#).

An international team of scientists [recently confirmed](#) a longstanding fear: The vast amounts of carbon currently preserved in the frozen soils and tundra of the Arctic will, thanks to melting of the permafrost, eventually all get back into the atmosphere. This is evidence of a positive feedback loop: Warming temperatures melt the permafrost, releasing stored carbon dioxide into the atmosphere, which further warms temperatures, which melts more permafrost, and on and on.

As though performing an Arctic version of the post-apocalyptic action movie *Mad Max*, the thawing of the northern polar ice cap has several Western powers and Russia [rushing](#) to stake and safeguard their claims of newly opening shipping routes and offshore drilling sites. In other words, the latest iteration of the Cold War is heating up, rapidly.

Down in the Antarctic, this dispatch finds some equally disturbing developments.

The Larsen C ice shelf, which is dramatically larger than Larsen A and B and about two and a half times the size of Wales, is now looking as though it could collapse. A recently published [study](#) reported that mechanisms exist that “could pose an imminent risk” to the ice shelf.

In an example of yet another runaway feedback loop, a recent report shows that accelerating [sea level rise is occurring](#), as the planet's ice sheets melt at ever-increasing speeds.

On that note, Caribbean political leaders, whose 14 island countries are being hammered by increasing ocean acidification, rising sea levels and increasingly intense hurricane seasons, are [pinning their hopes](#) on the upcoming Paris Climate Summit later this year for their very survival.

Fire

California's ongoing drought is turning the entire state into a tinderbox, where several years of hyper-dry conditions have led [experts to warn](#) that the drought and current conditions are "a recipe for disaster." California is already spending more money on fighting wildfires than the other 10 western states combined, and the state's tally of fires so far this year is 967, which is 38 percent higher than the average for this date since 2005. The number of acres burned is already nearly double what it was this time last year, and 81 percent above the average since 2005.

Throughout the rest of the western United States, the upcoming wildfire season is looking grim as well. As drought continues to worsen across the West and upper Midwestern United States, the Forest Service [expects](#) to spend up to \$1.6 billion on fighting wildfires in 2015, during a fire season that is expected to be far worse than "normal."

A recently released [study](#) by researchers from the National Park Service, the University of California, Berkeley, and other institutions has confirmed what we already know: When drought-parched forested land goes up in flames, the fire contributes to ACD, causing yet another runaway feedback loop.

Air

A recent [paper](#) published in Nature Climate Change has revealed that 75 percent of the world's abnormally hot days and 18 percent of its extreme snow and rain events are directly attributable to ACD.

[Two reports](#) recently published by scientists at UCLA showed that by 2050, portions of Los Angeles County are forecast to experience triple or even quadruple the number of days of extreme heat (days over 95 degrees) that they currently do.

On that note, another recently published [study](#) showed that Americans' exposure to heat extremes will likely rise sixfold by 2050, due to a combination of rising temperatures and rapid population growth across the South and West.

The ongoing drought in California has also made that state's air quality far worse, according to a recent [American Lung Association report](#).

Across the Atlantic, [scientists have warned](#) that record-breaking hot years in England have officially become at least 13 times more likely due to ACD.

Another recent [report](#) shows that, due to ACD, hurricanes, globally, are now expected to come in bunches and be far stronger than in the past.

Denial and Reality

There seems to never be a dull moment in the ACD-denial camp in the United States. The US House committee that is tasked with authorizing NASA spending has taken aim recently

at a key Obama administration priority with a party line vote [slashing spending](#) on “earth science”: the missions that study ACD. The opponents aim to shift funding away from environmental and earth science research that can help policy makers assess how to regulate pollution and plan for the effects of ACD.

In Alaska, hawkish anti-environmental Sen. Lisa Murkowski is [urging the Environmental Protection Agency](#) to drop her state from that agency’s ACD rule that regulates power plant emissions – and it appears as though she might get her way.

Down in Florida, although rising sea levels bring a greater threat to that state’s coastline with each passing day, there remains [no statewide plan](#) on how to mitigate this particular ACD impact.

The United States isn’t the only country with a strong fossil-fuel-funded ACD denial movement. In Australia, the former head of Australia’s respected Climate Commission, which was disbanded by conservative Prime Minister Tony Abbott in 2013, recently challenged the government to explain why it is [funding a “research institute” that supports ACD denial](#).

I’m unsure whether this next item fits into the category of “denial” or “reality”: Back in the US, President Obama, who has green-lit offshore drilling in both the Arctic and off the Atlantic coast, [has argued](#) that ACD poses an “immediate risk” to the US, and has pushed for urgent action as a national security imperative.

Fully on the reality front, the chief of the World Bank [recently stated](#) that ACD is a “fundamental threat” to development, acknowledging how far the dangers have progressed.

The US Department of Defense, not known for being concerned about the environment, is now [taking large steps](#) toward adapting to and preparing for ACD.

Also not known for being overly worried about ACD, Saudi Arabia’s oil minister, Ali al-Naimi, [recently announced](#) his country’s intentions to switch entirely over to solar power by 2040-2050: “We have embarked on a program to develop solar energy. Hopefully, one of these days, instead of exporting fossil fuels, we will be exporting gigawatts, electric ones. Does that sound good?”

Yes minister, it does, albeit a little late in the game.

Also on the reality front, the UN and Vatican have [teamed up](#) against ACD deniers, warning the world about the impacts of ACD while coming down firmly against the “skeptics.” Former UN Secretary General Kofi Annan came out and [said](#), “We must challenge climate-change skeptics who deny the facts.” And Pope Francis has instructed Catholic Church leaders to join with politicians, scientists and economists to [draft a statement](#) that declares not only that ACD is a “scientific reality,” but also that there is a moral and religious responsibility to do something about it.

All of this is good, but we cannot rest easy. We do not have a moment to waste: A recently published analysis in the prestigious journal [Science](#) shows that one in six of the world’s species now faces extinction due to ACD.

Dahr Jamail, a Truthout staff reporter, is the author of [The Will to Resist: Soldiers Who Refuse to Fight in Iraq and Afghanistan](#), (Haymarket Books, 2009), and [Beyond the Green Zone: Dispatches From an Unembedded Journalist in Occupied Iraq](#), (Haymarket Books, 2007). Jamail reported from Iraq for more than a year, as well as from Lebanon, Syria, Jordan and Turkey over the last ten years, and has won the Martha Gellhorn Award for Investigative Journalism, among other awards.

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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