

Warming shrinks Arctic Ocean ice to 2nd lowest on record

September 22, 2020

Many outlets cover the news that ice in the Arctic melted to its second lowest level on record last week according to US scientists, with Associated Press saying the decline was “triggered by global warming along with natural forces”. It continues: “In the 1980s, the ice cover was about 1m square miles (2.7m km²) bigger than current summer levels.” [Reuters](#) reports from the Arctic Ocean that this year’s sea ice melt was “especially fast between 31 August and 5 September, thanks to pulses of warm air coming off a heatwave in Siberia”. It quotes one scientist saying the levels of melt in recent years is “devastating...[but] not surprising”. [BBC News](#) explains that the sea ice has a natural yearly cycle through summer and winter, but that the low points in September “are getting deeper and deeper as the polar north warms”. It adds: “The downward trend since satellites started routinely monitoring the floes [in 1979] is about 13% per decade, averaged across the month.” [CNN](#) reports that the 14 lowest sea ice extents have occurred in the past 14 years. The [New York Times](#) reports what one scientist calls it a “crazy year” in the Arctic and adds: “Many scientists expect that the Arctic could be devoid of ice in summers well before midcentury.” [Sky News](#), the [Hill](#) and [Bloomberg](#) all have the story. [Carbon Brief](#) has also covered the story in depth.

In widely reported news, aircraft firm Airbus has announced concept plans for what the Guardian calls “the world’s first zero-emission commercial aircraft models that run on hydrogen and could take to the skies by 2035”. The [Financial Times](#) says that the hydrogen-fuelled concept designs could cut CO₂ emissions from aviation by up to 50%, according to Airbus. The paper says the images of the concept planes, released by Airbus yesterday and used across media reports today, are “computer-generated”. The FT reports that Airbus says it would need government support to design and manufacture the aircraft and that it “declined to give a figure for costs”. It adds: “The company is hoping demonstration models will be in operation before 2025, with a full-scale concept ready some time later this decade.” According to [BBC News](#), “analysts point out that it is not the first time that hydrogen has been touted as the saviour of modern air travel”. [Reuters](#) reports that the Airbus timeline for commercial operation of hydrogen-fuelled planes by 2035 is “ambitious”, according to engine maker Safran. It adds: “Other industry executives said such a clean break in propulsion could take until 2040.” The [Times](#) says the concept designs could carry passengers “up to 2,300 miles, paving the way for ‘clean’ transcontinental flights”. The [Daily Telegraph](#), [i newspaper](#), the [Independent](#) and [BusinessGreen](#) all have the story.

All of the senior politicians, civil servants and negotiators that will represent the UK at next year’s COP26 UN climate talks are men, the Guardian reports, in a move that it says is “flouting international norms and angering activists and observers”. Meanwhile, writing for the [Times Red Box](#), Lord Teverson, chair of the House of Lords EU environment sub-committee, says the UK

“can use COP26 to lead the way on climate change”. He says that yesterday he was joined by members of six House of Commons committees to “quiz [secretary of state for business, energy and industrial strategy] Alok Sharma on the government’s climate change policies and his preparations as president of COP26”. Teverson adds: “Our overall impression was of a government getting its house in order before this crucial event, now scheduled for November 2021. Britain’s reputation and the future of the planet hang on its success.” [BusinessGreen](#) reproduces Sharma’s speech to New York “climate week”, in which he says: “I am calling on the world to up its ambition.” Additionally, [Reuters](#) reports that China has promised to “do more by 2050” on climate, according to comments from Xie Zhenhua, “the country’s top climate change advisor”. Reuters adds: “He also said China would adopt strong measures to further reduce coal use and control coal-fired power generation in the 2021-2025 five-year plan.”

Separately, in other UK climate developments, [BBC News](#) reports that government “[c]ash will be diverted away from ambitious conservation projects and towards protecting farm businesses,” contrary to previous promises that the farm subsidies “would be wholly used to support the environment”. A separate [BBC News](#) piece looks at “the long-running debate over greening the land” and asks “how should farmers be rewarded for tending the land?”

In what BBC News calls “a dramatic reversal”, General Electric is to stop making equipment for coal-fired power stations, the broadcaster reports. It says: “US industrial giant General Electric said it would shut or sell sites as it prioritised its renewable energy and power generation businesses.” BBC News adds that just five years ago, GE paid almost \$10bn for a business that made turbines for coal plants. [CNN](#) reports that GE is “one of the world’s largest makers of coal-fired power plants” adding: “But now it plans to say goodbye to coal.” The [Hill](#) also has the story. In a comment for [Bloomberg](#), columnist David Fickling comments on the news, reported last week, that China “is lifting its energy-transition ambitions in its 14th five-year plan”. Fickling says the numbers being floated for “non-fossil” energy take some “decod[ing]”, but that they are “a big deal” that would require “a blistering build-out of wind, solar, nuclear and hydro-electric generation”, with consequences for the country’s coal plans. He concludes: “China has been the world’s most important redoubt of lingering coal demand. As those defences crumble, the prospect of keeping the world’s emissions within more manageable limits looks a little brighter.”

The Australian government is to unveil plans to invest A\$18bn (\$13bn) over the next 10 years in technologies to cut carbon emissions, Reuters reports, citing a statement yesterday from Angus Taylor, the country’s energy minister. The newswire says the plan “is the latest attempt by Australia, the world’s top coal and gas exporter, to come up with a climate and energy policy after 13 years of wrangling over carbon prices and emissions targets”. The piece adds: “It stops short of proposing a net-zero emissions target by 2050 or a carbon price... Instead, the government will focus on investing in hydrogen, energy storage, low carbon steel and aluminium, carbon capture and storage, and carbon sequestration in soil.” [ABC News](#) also has the story. The [Guardian](#) says the plan “flags more investment in carbon capture and storage” and adds that the government is “continuing to resist pressure to sign up to a target of net-zero emissions by 2050”. A second [Guardian](#) article reports that the “rejection of [a] 2050 net-zero emissions target is at odds with Paris agreement, experts say”. A third [Guardian](#) piece reports that former Australian prime minister Malcolm Turnbull has called the government’s approach “bonkers”, while a fourth [Guardian](#) article reports that “two-thirds of voters would prefer [the

governing] coalition support renewables rather than new gas plants”. A comment for the Guardian by Guy Dundas says the government’s “plan to use gas to stimulate manufacturing will fail”.

In other news relating to carbon capture, Reuters reports that Norway is to finance two-thirds of a large-scale trial, called project “Longship”. EurActiv also has the story.

There is continuing coverage of the speech recorded by Prince Charles for the start of “climate week” and trailed in yesterday’s papers, in which, according to Reuters, he called for “a military-style response reminiscent of the US Marshall Plan to rebuild post-war Europe”.

The Guardian also reports the speech, saying the prince called for efforts to tackle the “comprehensive catastrophe” caused by climate change and the loss of nature. BusinessGreen says the prince “slam[med] climate inaction” in his speech.

Meanwhile, Reuters reports the comments of Sir David Attenborough as he launched a film “about lessons learned during his seven decades as a television naturalist”. He said the coronavirus pandemic showed the need for a global response to climate change, the newswire reports. The Times and the Daily Mail carry reports about Attenborough saying that his conscience “troubles” him when he eats meat, with both basing their headlines around his comment that he is guilty of “hypocrisy” for, as the Times puts it, “occasionally eating free-range chicken while urging others to give up meat”. [See last week’s special series by Carbon Brief on food and climate change.] Separately, the Financial Times reports that climate campaigners, who have “spent years pushing for defunding and divestment from fossil fuel companies...are taking aim at the emissions-heavy meat and dairy industries”.

Wildfires are growing “more frequent and ferocious” as climate change increases aridity, Reuters reports, in a piece that explores the “record fires” this year in Australia, Argentina, Siberia and the US. It adds that “scientists worry the hottest blazes could end up obliterating swathes of some forests forever”.

In a piece for the Met Office blog, chief scientist Prof Stephen Belcher looks at “what has led to the potentially record-breaking scale of fires and what science is needed to contain the risks”. He explains: “Wildfires are more severe during extended periods of hot dry weather, because higher temperatures cause more evaporation and that dries the vegetation, creating fuel for the fires.” Belcher adds: “In January this year, an international group of scientists, including from the Met Office, got together to survey the published scientific evidence and concluded there is consistent evidence that hot dry weather conditions promoting wildfires are becoming more severe and widespread due to climate change.” A piece in the Independent says land management in California is “only one reason [the] state is so vulnerable to climate disasters, experts say”.

Toxins from an algal bloom in their water caused what BBC News calls “the previously unexplained deaths of hundreds of elephants in Botswana”. It adds: “Scientists warn that climate change may be making these incidents – known as toxic blooms – more likely, because they favour warm water.”

Antarctic glaciers are falling apart. Meanwhile, Trump hires a climate denier.

An editorial in the Washington Post comments on the news that the Trump administration “has added another climate denier to lead an agency that is supposed to follow the science”. It says “a University of Delaware professor associated with the Heartland Institute, a climate denial think

tank”, David Legates, “has been chosen to be deputy assistant secretary of commerce for observation and prediction at the National Oceanic and Atmospheric Administration (NOAA), which is responsible for weather and climate observation and prediction”. The editorial says: “Mr Legates’s appointment, which does not require Senate confirmation, threatens to upend an agency that produces some of the best Earth science research in the world.” It adds: “As if the raging fires in the Western United States were not enough to focus minds, both the Antarctica and the Legates news should remind voters that the coming election has almost indescribable importance for the future of the planet...The world cannot afford another four years of denialism and delay.”

Separately, the Washington Post reports that the Trump administration is moving ahead with efforts to appoint Ryan Maue, “a meteorologist who has challenged connections between extreme weather and climate change”, as NOAA chief scientist. It continues: “Two NOAA officials, who spoke on the condition of anonymity because they were not authorised to speak about the personnel move, confirmed the appointment is in progress.” According to the paper: “[Maue] was previously an adjunct scholar with the Cato Institute, a libertarian think tank that was involved in efforts to question the scientific consensus on human-induced climate change.” It adds that Maue co-authored a 2018 Wall Street Journal opinion article “challenging the climate change projections made in 1988 by noted former NASA scientist James Hansen, which other researchers, backed up by peer-reviewed studies, have found were prescient”.

In a special series as part of its “climate countdown” supported content, the Guardian US has a special edition guest edited by “seven Generation Z climate activists from across the United States”. In a piece introducing the seven activists, they write: “Generation Z didn’t cause the climate crisis, but we’re paying for it...We are seven first-time voters from diverse backgrounds across the United States who have come together to curate a special climate edition of the Guardian.” Articles in the special edition include a comment by Cora Dow, who writes under the headline: “I’m 18 and can already see my Alaska community changed forever by climate change.” Another article in the Guardian special runs under the headline: “Meet the doomers: why some young US voters have given up hope on climate.” InsideClimate News reports that young Republican climate activists are “split over how to get their voices heard in November’s election”.

A Financial Times “big read”, trailed on the paper’s frontpage looks at Tesla’s “widely acknowledged lead in the technology” of electric cars, in the week that the firm’s head Elon Musk “is expected to reveal the latest advances in Tesla’s battery technology”. The piece notes the “boasting” and “hyperbole” that characterise Musk’s public persona but says: “Beneath the hype...the event could provide important clues about whether Tesla can maintain the technology edge that has made it the auto industry’s most envied – and emulated – innovator.” Meanwhile a frontpage Financial Times story reports that Trevor Milton, the founder of electric truck maker Nikola, is to step down “after fraud allegations”.

Forests and harvested wood products take up more than 14% of US CO2 emissions annually, a new study says, and has the potential to increase “by 20% per year by fully stocking all understocked productive forestland”. The research uses data from more than 130,000 national forest inventory plots to assess the mitigation potential of nearly 1.4tn trees in the conterminous US. The authors also look into the challenges and opportunities of tree planting in the US.

Temperatures in Brazilian coffee growing regions have been increasing by around 0.25C per decade since the mid-1970s, a new study says, and “annual rainfall has been decreasing during the blooming and ripening periods”. To map coffee climate hazards, the researchers assess the sensitivity of Brazilian coffee yields to temperature and rainfall variations from 1974 to 2017. The results suggest Minas Gerais, the largest coffee producing state in Brazil, “has among the highest climate hazard and overall climate risk”, the researchers say, while climate change “has already resulted in reductions in coffee yield by more than 20% in the southeast of Brazil”.

The “thermal habitat” in inland standing waters around the world will change more quickly than the ability of some species to disperse to cooler areas, a new study warns. Using high resolution modelling, the researchers find that the “velocity of climate change” in the surface of inland standing waters globally was 3.5km per decade between 1861 and 2005. This is projected to increase to between nine and 57km per decade under different scenarios of future emissions, the study suggests. It also notes that “the negative consequences of rapid warming for freshwater species are likely to be much greater than in terrestrial and marine realms”.