



# the weekly anthropocene

*dispatches from the wild, weird world of humanity and its biosphere*



By Sam Matey, September 9, 2020

**Montreal.** Montreal just saw the opening of the world's largest rooftop greenhouse (pictured). It's atop a warehouse, grows eggplants and tomatoes, and is 15,000 m<sup>2</sup> in area (about 3 football fields). The company that built it, Lufa Farms, now feeds 2% of the entire city of Montreal through its rooftop greenhouses and partner farms. For more, see [tinyurl.com/MontrealRooftopGreenhouse](https://tinyurl.com/MontrealRooftopGreenhouse).



**Global Safety Net.** An international team of researchers have created a new web platform showing what portions of Earth's land need to be protected from degradation in order to protect Earth's biodiversity and help stabilize our climate. The Global Safety Net (pictured) consists of six main data layers: "existing protected areas, habitats where rare species live, areas of high biodiversity, landscapes inhabited by large mammals, large areas of intact wilderness and natural landscapes that can absorb and store the most carbon." Interestingly, that last category, "Climate Stabilization Areas," includes much of the fast-growing forest land of Maine! The researchers' analysis found that in total, protecting a particular 50.4% of Earth's land should "stave off the worst effects of global warming and extinction." (Current global protected areas account for 15.4% of Earth's surface). This is very close to E.O. Wilson's earlier "Half-Earth" protection estimate, but was independently arrived at. They also highlighted indigenous peoples' land management as a highly effective means of environmental protection, noting that addressing indigenous land claims could account for one-third of the estimated required global protected area. For more, see [tinyurl.com/GlobalSafetyNetInfo](https://tinyurl.com/GlobalSafetyNetInfo) and the highly interactive and fascinating map itself at [globalsafetynet.app](https://globalsafetynet.app).

**PetroChina.** PetroChina, Asia's largest oil and gas producer and the listed arm of the state-owned China National Petroleum Corporation, lost \$4.4 billion (nearly 30 billion yuan) in the first half of 2020 due to record-low oil prices and shrinking demand. Now, they're sharply changing course, and the planet will benefit. The company pledged to cut greenhouse gas emissions to "near-zero" by 2050 (their first-ever emissions target), and plans to invest more in solar, wind, geothermal, and pilot hydrogen energy projects in the next five years. Another step in the takedown of fossil fuels and transformation of the global energy market! For more, see [tinyurl.com/PetroChinaEmissions](https://tinyurl.com/PetroChinaEmissions).



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**Climate Impacts.** While overshadowed in most media by election-related news, the climate crisis is raging on-and being abetted by human vandalism. **The Amazon rainforest** is experiencing fires roughly as bad or worse than last year, with over 500 major fires since late May 2020 and 29,308 fire hotspots in August. (Pictured: a recently deforested area is near the border of the Kaxarari Indigenous territory, in Lábrea, Amazonas state, August 17 2020). Almost all of these fires are not primarily due to the climate crisis, but to a more immediate human impact: they are being illegally set by land-grabbing farmers and ranchers, and are releasing more carbon from trees as they burn.



**California** just had one of its hottest weekends ever, with some truly extraordinary and horrific dangers. To quote *The Washington Post*, “Woodland Hills, just 20 miles from downtown Los Angeles, soared to 121 degrees, the highest temperature ever observed in Los Angeles County. Chino, 32 miles east of Los Angeles, also hit 121 degrees...Farther north, the mercury in San Luis Obispo, just 10 miles from the Pacific Ocean, reached a sweltering 120 degrees. This may be the highest temperature ever measured so close to the ocean in the Americas.” A new, massive wildfire also erupted over the weekend: the Creek Fire grew to at least 45,500 acres as of Sunday afternoon, necessitated the evacuation by military helicopter of over 200 people trapped at the Mammoth Pool Campground, and has so far produced a pyrocumulonimbus system and multiple fire tornadoes. California as a whole has seen over 1.6 million acres burned since August 16, compared to about 310,000 acres in an average fire season. In sum, the Golden State is feeling the fury of the climate crisis. (see <https://tinyurl.com/CaliforniaFlamelands>).

Finally, 25% of **Nigeria's** projected rice harvest, over 2 million tons, were washed away by extreme floods. Fortunately, this is very unlikely to cause a famine, as Nigeria already imports a lot of rice. See [tinyurl.com/NigeriaRice](https://tinyurl.com/NigeriaRice).

We're summarizing these events instead of going into detail or omitting them for several reasons. For the rest of all readers' natural lifespans, there will likely be more than enough climate change-related extreme events every week to completely fill a newsletter this size. We try to showcase positive news and steps forward, to point out the progress humanity is making on issues like species conservation and renewable energy, and we don't want to become a catalog of destruction. However, it's important to realize and remember...this is not normal. We are in a climactic state unprecedented in the history of our species. And our choices, our diets, our purchases, and by far the most important of all our votes, will determine whether things get better or worse in the coming decades.