



Dispatches From The Wild, Weird World Of Humanity And Its Biosphere

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Climate Action: Illinois, LA County, & Methane



After years of legislative wrangling, the Democratic-led state of **Illinois** just passed one of the [best climate action bills in the nation!](#) The new Climate and Equitable Jobs Act mandates that Illinois achieve a **100% zero-emissions electricity sector by 2045**, shutting down all fossil fuel plants by that year. It also [invests \\$580 million a year](#) to boost the state's clean energy industry, [quintuples](#) funding for community solar projects from \$10 to \$50 million per year, [bails out the state's struggling nuclear plants](#) to keep their carbon-free power online longer, expands energy-efficiency and weatherization programs, and allocates over \$115 million towards supporting job hubs and small businesses in environmental justice communities (those disproportionately suffering from past pollution) and \$78 million

towards new electric transportation (with 45% of that set to go to low-income communities). This notably adds up to a new gold standard for state-level energy equity programs, in addition to a boost for the renewables revolution! (Pictured: [Radford's Run Wind Farm](#), Macon County, Illinois).

Illinois has now joined California, New York, Hawaii, Virginia, Massachusetts,

Washington, Nevada, New Mexico, Oregon, and Maine (plus Washington DC and Puerto Rico) on the [noble list of climate leader jurisdictions](#) that have passed legislation committing to a fossil fuel-free power sector by 2050 or earlier. (Other states, like Massachusetts, Colorado, and Arizona, are also making progress with less stringent targets!) And Illinois has set a new standard for ensuring a just and equitable transition. Great news!

And hot on the heels of the city of Los Angeles' commitment to accelerate their decarbonization, a unanimous vote among the supervisors of the broader **Los Angeles County** is set to apply pressure to the fossil fuel industry from the supply side. The measure passed begins the process of [phasing out all oil drilling on unincorporated LA County lands](#)-and is likely to directly **shut down 1,600 active oil wells**, [including](#) the large Inglewood Oil Field. This makes America's most populous county the first to ban oil drilling. Great news!

Finally, President Biden announced on September 20th a new international agreement: the [Global Methane Pledge](#), led by the U.S. and E.U., to make sharp reductions in [emissions of methane](#), the [second major greenhouse gas](#) contributor to the climate crisis after carbon dioxide. The new pledge, launched in advanced of the vitally important [COP26 UN climate talks in Glasgow this November](#), requires the **reduction of methane emissions by 30% by 2030**, and has already been joined by Argentina, Ghana, the UK, Mexico, Indonesia, and Iraq. Major sources of methane include livestock, off-gassing from coal mines, and leaks from natural gas extraction. (Quick explainer: [natural gas](#), better named fossil gas, simply *is* methane: its carbon molecules react with the air's oxygen to form carbon dioxide when it's burned for fuel, but it's also a greenhouse gas all by itself, no burning required, when it leaks into the air from pipelines or abandoned wells-which happens [disturbingly often](#)).

Achieving reductions will be [challenging](#), but the formal international commitment being made is excellent for a number of reasons-first, there's the obvious importance of any and all reductions in the climate change threat, but there's also an interesting timeliness aspect. Methane [stays in the atmosphere for only about 12 years](#) (compared to between 20-200 years for carbon dioxide) so reductions in methane emissions will lead to a relatively fast "payoff" in terms of slowing the rate of rising temperatures. Great news!



Ecological Engineering: Beavers & First Responders

A small research team from Utah State University is [translocating beavers](#) (pictured) to the streams trickling through the state's deserts. **Eastern Utah** has been stricken by drought and

wildfires in recent years, while pollution and overuse for irrigation have degraded local rivers like the [Price](#) and [San Rafael](#). The researchers moved a first wave of 47 beavers into the area in 2019 and 2020, all "second chance" animals who had been trapped elsewhere due to conflict with humans and would likely have been put down otherwise. Some died or moved away, but many settled down and started building dams in the local rivers. The [program is set to continue](#)-now with tiny artificial "starter" dams added to help the beavers by providing a foundation on which to build.



This is set to bring substantial benefits for the region's ecology, as study after study has found that [beaver dams are multipurpose marvels](#), improving water quality by acting as filters, improving biodiversity and water availability by creating ponds, saving plants from drought via acting as a reservoir, and even [guarding the surrounding landscape from wildfires](#) by acting as a wet, cool firebreak. This sort of ecosystem engineering is an excellent way to help landscapes thrive in the Anthropocene!

As hurricanes grow stronger on the American coasts of the Anthropocene, a team of volunteer engineers are often first on the scene to evaluate the damage, learn lessons and helping where they can. The U.S. National Science Foundation funded the development of the [Structural Extreme Events Reconnaissance Network](#), or [StEER](#), a community of altruistic American structural engineers lending their free time to travel to sites recently impacted by natural disasters and survey the damage inflicted. Formed in the aftermath of Hurricane Harvey in 2017, StEER teams drive into disaster sites and use image data gathering apps, survey drones, and image analysis software to rapidly discover which buildings were damaged, how much, and-critically-why, learning about unforeseen structural weak points that left them vulnerable to combinations of gale-force winds, rain, storm surge, and ocean waves. This data is then used for new simulations of how to build hurricane-resistant structures-and is consulted by the Federal Emergency Management Agency, which lately has seen StEER ramp up evaluate the situation even before the official help arrives.

This work on the frontlines is emotionally resonant, as StEER director Tracy Kijewski-Correa [told The Atlantic](#). "I've held hands. I've cried. I've hugged. I've made sure that sick people were able to get help. But I've also received beers and high fives. We show them that we're here for you. And we're going to do our best so this never happens again." This is a spectacularly noble-spirited, and potentially highly societally valuable coastal adaptation endeavor!



Conservation: Marsupials, Tuna, & Corals



Two rare Australian marsupials have come back from the edge of extinction due to assiduous conservation efforts. In the early 1980s, there were only 35 [northern hairy-nosed wombats](#) (*Lasiorhinus krefftii*, pictured). left in the world, but there are now [more than 300 individuals](#) roaming the forests of Queensland. In the further-south state of Victoria, the **eastern**

barred bandicoot population plunged to an estimated 150 by 2008 (though there were more, of a different subspecies, across the water in Tasmania) but a robust captive breeding program [brought the number in Victoria up to 1,500 today](#). As we've seen before, conservation works! Great news!

Thanks to well-enforced fishing quotas, several species of **Atlantic tuna** are [finally seeing growing populations](#) after years of overharvesting.

Coral reefs are one of the most precious habitats on Earth, home to a quarter of all marine life. However, they've been absolutely devastated in the Anthropocene, with reports of [coral bleaching](#) due to warming waters and [coral skeleton erosion](#) due to ocean acidification (plus an array of other problems, from overfishing to [coral diseases carried on plastic trash](#)) flooding in from around the globe. Now, a new meta-analysis quantifies the damage, pulling together data from decades worth of studies. They found that [Earth has lost half of its coral reef cover since 1950](#), with massive concomitant biodiversity losses. These unique ecosystems desperately need us to solve climate change in the next century-and will likely also need proactive human assistance, like expansion of [pioneering coral gardening programs](#), to survive till then.



The Weekly Anthropocene

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