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By Sanam Yar

Good morning. The effects of climate change are growing more apparent, but there are reasons to be hopeful.



Extremely low water levels in Lake Mead at the Hoover Dam this week. Justin Lane/EPA, via Shutterstock

Climate change in action

Climate change has plunged the Western U.S. into its worst drought in two <u>decades</u>. And a record-breaking heat wave only made things worse.

In Arizona and Nevada, it's been so hot that doctors warned people they could get third-degree burns from the asphalt. Wildfires raged in Montana and Utah. Power grids in Texas strained as officials asked residents to limit appliance use to avoid blackouts.

The levels in Lake Mead, which supplies water for millions of people, are at their lowest since the 1930s. In one California lake, the water was so shallow that officials spotted plane wreckage from a 1986 crash.

And that's just in the U.S. Experts say global temperatures will keep rising as countries — and companies — fail to limit their planet-warming emissions. Smaller countries often <u>pay the price for wealthier nations' pollution</u> through extreme weather. "Most of these gases have come from the United States, China, the European Union, Russia and other developed countries," Bernard Ferguson writes. Yet islands like the Bahamas, where Ferguson is from, "are on the front lines of the climate crisis."

The problems in the West and around the globe are more evidence that climate change is already affecting us. But there are also reasons for hope.

What are the solutions?

For The Times Magazine's climate issue, Ezra Klein <u>spoke with experts</u> to compare political progress in the U.S. with the scale of the crisis. "Our politics co-evolved with a century of fossil fuels, and so a huge portion of our regulations still favor the incumbent, which is fossil fuels," Saul Griffith, a scientist and founder of a nonprofit, said.

In Australia, Griffith said, a kilowatt-hour of energy generated by rooftop solar panels costs about a third of what it would from a U.S. power grid. "We can make everyone's energy future cheaper, but politics has to work with technology, which has to work with finance," he said.

Cities have been adapting in other ways: Tucson, Ariz., is a national leader in recycling wastewater for irrigation and firefighting. Districts in California are investing billions into infrastructure to store water for future droughts.

More globally, another story in the magazine, by Aurora Almendral, focuses on <u>decreasing the shipping trade's carbon footprint</u>. Cargo vessels are among the largest machines on the planet, and shipping generates 2.9 percent of global carbon-dioxide emissions — nearly as much as the entirety of South America. Some experts believe using wind through modern sails could considerably reduce that number.

Other companies are developing more environmentally friendly manufacturing techniques that would <u>repurpose carbon dioxide</u> into building materials, fuels, plastics and even fish food.

"You might wake in the morning on a mattress made from recycled CO₂," Jon Gertner writes. "You might drive your car — with parts made from smokestack CO₂ — over roads made from CO₂-cured concrete. And at day's end, you might sip carbontech vodka while making dinner with food grown in a greenhouse enriched by recycled CO₂."



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