



# the weekly anthropocene



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

By Sam Matey, September 2, 2020

**Myanmar.** The Wildlife Conservation Society has reported out on their efforts to protect the critically endangered Burmese roofed turtle (*Batagur trivittata*) turtle-and they've likely saved the species. The wild population is likely less than ten individuals, an estimated five to six females and as low as two males. Fortunately, a captive breeding effort began in 2007, and there is now a growing population approaching 1,000 at a secure facility. Hatchling eggs are incubated and eventually "head-started," trained for release into the wild in the Chindwin River. With such sustained conservation effort, this species has likely been saved from extinction. Great news! (Pictured: a hatching newborn). For more, and more pictures, check out [tinyurl.com/BurmeseRoofedTurtle](https://tinyurl.com/BurmeseRoofedTurtle) and [tinyurl.com/RoofedTurtleSaga](https://tinyurl.com/RoofedTurtleSaga).



**Belize.** The small Central American nation of Belize has consistently been a world leader on marine conservation, repeatedly expanding their marine reserves over the years and banning all oil and gas drilling in its waters in 2018. Now, it's taken two more awesome actions. In early August, the Belizean government expanded the Sapodilla Cayes Marine Reserve to seven times its original size, reaching a final size of about 1,300 square kilometers (500 square miles), an area larger than New York City. The new expansion protects the Corona Reef complex one of the healthiest remaining coral reef ecosystems in the world, home to rare species like elkhorn coral (pictured above, in Biscayne National Park), Nassau grouper, whale sharks, and blue marlin. It has been consistently threatened by illegal fishers from Guatemala and Honduras, and the new designation will likely help preserve the reef. As many studies have shown that protection from pollution, overfishing and other immediate threats can help coral reefs weather the existential threats of climate change and ocean acidification, this could be a great move to save a remnant of this globally imperiled ecosystem type. Then, the Belizean government entered an agreement with two conservation NGOs to help gillnet fishers transition to new livelihoods, with the plan to ban harmful gill nets in Belize by 2022. Great news! For more, see [tinyurl.com/BelizeOceans](https://tinyurl.com/BelizeOceans).





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**Niger.** Niger is one of the poorest countries in the world, perched on the edge of the Sahara and the Sahel, and plagued with jihadism terrorism. However, in the last few decades, its subsistence farmers have accomplished something remarkable: individually chosen to re-embrace the practice of agroforestry, growing crops under the shade and shelter of trees. Since



the 1970s, an estimated 10 million hectares have been reforested, and the areas around the cities of Zinder and Maradi have been transformed. One key tree species used was *Faidherbia albida* (pictured, with maize growing underneath). Its life cycle is the opposite of the other local plants, as it goes dormant during the rainy season (not competing with young crops) and goes into leaf in the dry season, casting critical shade when it's most needed. This is an amazing example of communities making themselves more sustainable, adapting to a warming world by the sweat of their brow. For the full epic story, see [tinyurl.com/NigerAgroforestry](https://tinyurl.com/NigerAgroforestry).

**NDB.** A Californian company called NDB is claiming to have created something extraordinary: a battery powered by radioisotopes drawn from nuclear waste, sheathed in protective (presumably lab-grown) diamond, with the potential to power everything from electric cars to smartphones for decades at a time with no need to recharge. On August 25<sup>th</sup>, they made claims to be a few years out from mass production, to have conducted two proof-of-concept tests at Lawrence Livermore National Laboratory and the Cavendish Laboratory at Cambridge University, and to have secured two companies as beta-testers for prototypes later this year, including one aerospace company. If this is true, it would be incredible. Conversion of the abundant resource of nuclear waste into batteries with decade-long lives would be a powerful aid to the electrification of human civilization. However, this seems too good to be true. As the great Carl Sagan said, extraordinary claims require extraordinary evidence. These are immense claims, and it's entirely possible, even probable, that NDB is some kind of complex Theranos-esque corporate scam. However, the possibility that this is a legitimate invention would be so transformative that it seems worth sharing. For more, see [tinyurl.com/NDBattery](https://tinyurl.com/NDBattery).