



the weekly anthropocene



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

By Sam Matey, June 24, 2020

Kazakhstan. The saiga antelope (*Saiga tatarica*) is a unique and critically endangered creature. (Pictured: a male saiga). They've had a rough decade. A massive bacterial plague devastated the species in 2015, killing an astonishing 200,000 saiga, more than 70% of the remaining population. (Scientists have since found that unusually warm and wet conditions due to climate change caused a chain of



events that led the usually harmless bacterium to enter the bloodstream and become deadly). Now, there's some really good news. Every spring since 2007, scientists have counted the newborn saiga calves on the Ustyurt Plateau in Kazakhstan, home to one of the most imperiled saiga population fragments. In 2018, they found 58 newborn calves, and in 2019, worryingly, only four. Now, the 2020 count is in and it appears the saiga have been busy: no less than 530 newborn calves were found! Furthermore, the aggregation of adults in the area was the largest seen in nearly ten years. Possible reasons for the increase include a decline in poaching thanks to better law enforcement and the Kazakhstan government's cutting saiga-size gaps in a barbed wire fence on the Uzbekistan border that was impeding the saiga migration. Dr. Eleanor Jane Milner-Gulland, expert saiga conservationist, told National Geographic that the saiga population was "still hovering on the brink, but it's going in the right direction...Any baby saiga is a good news story." This is another epic saga of animal resilience and conservationists' dedication, and another spark of hope that with human support, all wildlife can flourish in the Anthropocene! Great news! For more, see tinyurl.com/SaigaHope.

Indiana. In conservative southern Indiana, the heart of coal country, a utility company has taken a great step forward for renewable energy. Vectren Corporation has announced that it will shutter most of its coal plants by 2023, add 1,000 megawatts of solar and wind energy, reduce carbon emissions by 75%, and in total shift from 78% coal power now to just 12% by 2025. Spectacular, seismic news! For more, see tinyurl.com/IndianaPower.



the weekly anthropocene



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

By Sam Matey, June 24, 2020

Indonesia. A fascinating new study published in *Science* has found that the fight to protect tropical forests and the fight against poverty are not just both critical endeavors for humanity, they can sometimes be one and the same effort. Researchers from Baltimore and Singapore analyzed data from Indonesia's Program Keluarga Harapan (PKH), or Family Hopes Program, that provides cash transfers to poor households, then analyzed satellite data to track land cover change around rural villages that joined the PKH program between 2008 and 2012, studying 7,468 villages in total. Their headline finding is that exposure to PKH, a village receiving some anti-poverty cash, is associated with a 30% reduction in deforestation. And about half of the forest saved by the PKH money was biologically critical primary forest! The reasons for this likely include PKH money serving as an "insurance policy" in cases of bad rice yields, which might otherwise lead farmers to turn to deforestation for emergency income. The lessons from this are applicable worldwide! For more, see tinyurl.com/IndonesiaPKH.

Siberia. Siberia is experiencing a record-breaking heatwave, massive forest fires made worse by a plague of moths, and now a massive oil spill. There's a lot to unpack in that, so let's start with the direct impact of climate change: Siberia is undergoing an unprecedented heatwave. Truly extraordinary temperatures are being reached: the settlement of Khatanga, located above the Arctic Circle, reached 25 degrees Celsius, 77 degrees Fahrenheit, on May 22nd. Its previous record was 12 C, or 53.6 Fahrenheit. The nation of Russia as a whole hit record-high temperatures, with the January to May 2020 average a full 5.3 degrees C over the 1951-1980 January-May average. This is the largest January to May temperature anomaly in any country's records. To put into context just how insane this all is, Dr. Martin Stendel, of the Danish Meteorological Institute, calculated that temperatures like this in May in northwestern Siberia would likely only occur once every 100,000 years without human-caused global warming. Furthermore, these months of record-high temperatures have had profound ripple effects. Wildfires ravaged over 18,500 square miles of Siberia between January and May, inclusive. Swarms of Siberian silk moths (normally kept down by the cold winters) are ranging 150 kilometers further north than usual, and their larvae are eating away at conifer trees, stripping them of their needles and making them more vulnerable to wildfires, by the thousands. Over 120,000 trees have had to be treated in the Krasnoyarsk region. Finally, in an ongoing issue, melting permafrost collided with badly maintained infrastructure belonging to the Norilsk mining company to spill 20,000 tons of diesel fuel into the Ambarnaya and Daldykan rivers near the city of Norilsk, leading Russian President Putin to declare a state of emergency.

In sum, Siberia is currently experiencing the disruptive, chaotic effects of the climate crisis: the sharp end of the Age of Humanity. For more, see tinyurl.com/SiberianHeatwave and tinyurl.com/Siberia2020.