



# the weekly anthropocene



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

**The World Economy.** A report from the International Energy Agency has found that renewable energy accounted for two-thirds of net new energy capacity for the world 2016. The report also found that renewable sources accounted for 24% of power generation in 2016, and estimates that they will reach 30% in 2022. China alone accounted for 40% of the growth in renewable energy. This is excellent news for the fight against climate change-but there's still a long way to go.



**USA (1).** The US government's Global Change Research Program recently released a long-gestating scientific report on climate change. It contradicts everything the Trump Administration is saying about climate change: the report affirms that climate change is happening, is caused by humans, and poses a threat to the world. *National Geographic* describes the conclusions as having an “unprecedented level of scientific certainty.” You can access the report at <https://science2017.globalchange.gov/>.

**USA (2).** The 2015 Paris Agreement sets a goal of restricting global warming to 2 degrees Celsius, and encourages nations to set emissions reduction targets to meet that goal. It is not legally binding, and so nearly every nation in the world has signed on to it, with varying degrees of commitment to their emissions targets. Nearly every nation. Now that Syria has announced its intention to join the Paris Agreement, the United States of America, which signed under Obama and is attempting to withdraw from the agreement under Trump, is the only nation in the world not in line with the international consensus on climate change. Even Russia and North Korea have signed the Paris Agreement, as well as every US ally from Albania to Zambia. Although it will take years for Trump to fully withdraw from the agreement, this sends a signal to the rest of the world that the United States is anti-science and anti-international cooperation. Unfortunately, this appears to be true of the current government. Fortunately, not all of the nation has succumbed to the Trump Administration's staggering ignorance. Members of the We're Still In Alliance, composed of 9 states, 125 cities, 902 businesses, and 183 colleges and universities, have committed to abiding by the Paris Agreement. These are heavy hitters-the states includes California, New York, and Virginia and the businesses include Apple, Facebook, Nike, Tesla, Target, and Google. Together, these entities represent over 130 million Americans and \$6.2 trillion dollars of the US economy. The We're Still In Alliance is representing the United States at the climate talks currently underway in Bonn, which are working on implementing the Paris Agreement.

**Philippines.** A team of scientists exploring the coral reefs of the Philippines have discovered a new species of butterflyfish. As butterflyfish are a well studied group of fish, the discovery of this species was quite surprising. This prompted the team to name the fish *Roa rumsfeldi*, as it was an “unknown unknown.” The team took live samples, *Roa rumsfeldi* can now be seen at the Steinhart Aquarium in San Francisco. (Pictured is the closely related *Roa modesta*: there are currently no public domain images of *R. rumsfeldi*, which looks very similar, but has a black pelvic fin instead of a white one).





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**Indonesia.** A new species of orangutan has been discovered in Indonesia. The Tapanuli orangutan, *Pongo tapanuliensis* (pictured) lives only in the Tapanuli highlands of Sumatra, and there are only an estimated 800 individuals left. The most visible difference between Tapanuli orangutans and Sumatran and Bornean orangutans is the wispy beards and mustaches of the Tapanuli males, which are not present in other orangutan species. This is only the eighth species of great ape known to humanity, the other seven being Bornean and Sumatran orangutans, eastern and western gorillas, chimpanzees, bonobos, and humans. Fortunately, the Indonesian government is already working to protect the new species, including reviewing land designation in the area to determine whether some of it should become protected areas and reevaluating the impact of a planned dam that could flood some of the Tapanuli orangutans' habitat. This is a truly amazing new discovery.



**The Ozone Hole, Antarctica.** On Nov 2<sup>nd</sup>, NASA announced that the Antarctic ozone hole had reached its maximum yearly extent on September 11<sup>th</sup>. The ozone hole maximum was the smallest it had been since 1988, the year before the Montreal Protocols (that limited the production of chemicals that damage the ozone layer) were enacted. NASA estimates that the unusually small hole was due to natural variability, but predicts that the ozone layer will have recovered back to 1980 levels by 2070. This example shows that major environmental problems can be halted.

**Gulf of California.** In a deeply tragic turn of events, a vaquita has died in captivity. The Mexican government had authorized a team of scientists, VaquitaCPR, to attempt to capture individuals of this critically endangered porpoise in an attempt to protect them from illegal fishing and start a captive breeding program, but the team is finding that vaquitas are extremely delicate. The dead vaquita, a female, began to display signs of deterioration after she had been transported to a sea pen. The team recognized the danger she was in attempted to release her, but it was too late. This is extremely saddening news, but this initiative remains the best hope to save the vaquita from extinction. VaquitaCPR are currently reviewing what went wrong and determining how they can prevent such a loss from occurring again. More news as it develops.

**Norway.** In an innovative approach to encouraging governments to take action on climate change, Greenpeace has sued the Kingdom of Norway over its greenhouse gas emissions. Greenpeace, and their co-plaintiff Nature for Youth, argue that Norway's leasing new oil fields in the Arctic will contribute to global warming, thus violating the Norwegian constitutional obligation to preserve an environment "conducive to health". A district court in Oslo will begin hearing the case on November 14<sup>th</sup>. There is precedent for such cases being successful: in 2015, a Dutch court mandated that the government cut carbon emissions by 25% compared to 1990 levels by 2020, in order to fulfill their constitutional duty of care to the Dutch people. Legal action to cut carbon emissions will likely become more common, and is a welcome new tool in the fight against climate change.