the weekly anthropocene

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

Indonesia. At the UN climate summit in Bonn, Germany, Indonesia announced a bold new initiative to establish 1,000 "eco-mosques" by 2020. The new program will help mosques become sources of renewable energy and sustainable water supplies and encourage them to instill a sense of environmental stewardship in their community. "The environmentally friendly mosque or 'eco-mosque' program is expected to instill mosques with a concern about the mutual relationship between living things and the environment for the sustainable livelihoods of us all," said Indonesian Vice President Jusuf Kalla. As Indonesia is a 90% Muslim nation and the world's 6th largest carbon emitter (mostly due to deforestation) this is a logical, much-needed admirable way to spread environmental awareness in the country.

Brazil. Scientists have now officially described a new species of snouted tree frog, found by a stretch of abandoned highway at the juncture of the Purus and Madeira rivers in Brazil's Amazon basin. The jaguar-spotted tree frog (*Scinax onca*) is less than two inches long, with orange eyes and a brown body with black spots. Check out goo.gl/3N7MPS for pictures.

Nebraska. On November 20th, the Nebraska Public Service Commission (NPSC) announced that it would allow TransCanada to build the highly controversial Keystone XL pipeline. Keystone XL would carry oil from Alberta's tar sands, and has been endorsed by President Trump. Keystone XL is a monumentally unwise project, and not only because it would contribute to global warming by increasing the market for the carbon-intensive and environmentally devastating tar sands oil. TransCanada's pipelines have a record of putting communities along the pipeline's path at risk from oil spills. In fact, TransCanada's Keystone pipeline spilled 210,000 gallons of oil in South Dakota-on November 16th, *four days* before KXL was approved.

Keystone XL would be a really bad thing and so the NPSC's decision seems like bad news. However, these Nebraska public servants may be smarter than we think. They approved the Keystone XL pipeline, which was the headline-making news for many, but did not approve TransCanada's preferred route. The NPSC approved an alternate route, which means TransCanada has to go back to the drawing board, planning it out, making deals for the land, and facing new legal challenges from landowners. Even in a best-case scenario for TransCanada, KXL won't be up and running for years-and by then, a new president could be in office, one not so friendly to fossil fuel interests. TransCanada may not even choose to go ahead with the pipeline. They will announce their plans soon. More news as it develops.

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San Francisco. In a groundbreaking experiment, a team of scientists from the University of Washington have created enhanced trees that clean up a cancer-causing pollutant. Trichloroeythlene, or TCE, is a carcinogenic industrial solvent that has leached into the ground in many American waste sites. The UW team harvested an unusually effective strain of TCE-degrading bacteria from an individual poplar tree in Wisconsin, then bred two poplar species to create hybrid saplings that were then soaked in the bacteria. Having gained their superpowers, the poplars were planted in three highly TCE-contaminated Superfund sites around San Francisco, California. Three years later, the team found that their super-poplars had 30% wider trunks that untreated trees and had reduced the local TCE concentration to below the EPA's safe drinking water limit. Dr. Sharon Doty, plant microbiologist and leader of the team, has high hopes for her new creation. “Turn Superfund sites into parks?” (Pictured are regular poplars. For pictures of the super-poplars, check out goo.gl/FxnBU2.)

World. At the UN climate summit in Bonn, Canada and the UK have spearheaded the creation of a new international group to tackle climate change: the Powering Past Coal Alliance. Members of the Alliance pledge to move beyond coal in their jurisdictions by 2030 (for developed OECD nations) or 2050 (for the rest of the world). So far, 20 nation-level governments, 4 Canadian provinces, 2 US states, and 1 city have joined. Some notable members include France, Italy, Mexico, Fiji, El Salvador, New Zealand, Switzerland, Ontario, British Columbia, the city of Vancouver, Washington state, and Oregon. Although none of the world's top five coal users (China, India, the US, Germany, and Russia) have joined the Alliance, it is still incredibly encouraging to see such a broad group of governments pledge to wean themselves off the dirtiest fossil fuel. The Alliance hopes to expand to at least 50 members by next year's UN climate summit, which will be held in Katowice, Poland. Let us hope they reach and exceed their goal.

Forests. A study recently published in *Science Advances* has found that the best way to heal deforested areas is to let them be. The researchers analyzed the findings of 133 other studies covering 114 landscapes, and found that naturally restored landscapes had 34 to 56 percent higher biodiversity 19 to 56 percent higher vegetation structure than areas that had been actively restored by humans. This has wide implications for land conservation around the world.

Guyana. A bright blue tarantula, probably a new species, has been discovered in Guyana, and has yet to be formally described and named. Herpetologist Andrew Snyder found the tarantula in 2014, when noticed a blue gleam in his flashlight one night in the forest. Snyder was surveying the Potaro Plateau region as part of a biodiversity assessment team. The team as a whole discovered over 30 probable new species, and has only now published their report. To read the report (which is very interesting and has lots of awesome pictures), check out goo.gl/9S1KM7.