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Bonn Climate Conference Confronts New Urgency

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The United Nations climate conference meeting in Bonn, Germany from November 6-17, 2017 (known as COP-23),[1] is tasked with carrying forward the implementation of the 2015 Paris Climate Agreement.[2] The conference takes place in an atmosphere of increased urgency, with recent climate-related disasters including major hurricanes and floods in the Caribbean, the United States, and South and Southeast Asia, plus new evidence on more rapid increases in sea-level rise and climate-related threats to world health.[3]

The Island Nation of Fiji is holding the COP23 presidency this year, which means that the small Pacific Nation is responsible for leading this round of climate negotiations. The actual location of the conference is in Bonn to reduce the carbon footprint of arriving delegates. The inspiration for the "facilitative dialogue" framework comes from a traditional form of consensus building in Fiji and all Pacific indigenous people, called "Talanoa". Talanoa is a traditional word used in Fiji and the Pacific to reflect a process of inclusive, participatory and transparent dialogue. The purpose of Talanoa is to share stories, build empathy and to make wise decisions, which are for the collective good.[4]

Climate
Policy Brief
No. 5
Nov 2017

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Implementing the Paris Agreement

To achieve this goal, countries will need to finalize the "rule book" – the rules and procedures to implement the Paris Agreement. Some of the key rules will provide for:

1. Robust procedures for measuring and reporting each country's efforts, in order to build transparency among countries and a review mechanism where each country's progress is reviewed by other countries.
2. Plans for a preliminary assessment in 2018 of how states are progressing toward the 2-degree target.

Shortly before the opening of COP23, the United Nations Environment Program (UNEP) released a sobering document, the *Emissions Gap Report 2017*, which served as a compelling reminder that if countries are going to come anywhere close to achieving the Paris Agreement's topline goals, they will have to scale up their efforts dramatically and immediately. According to the report:

> The Nationally Determined Commitments that form the foundation of the Paris Agreement cover only approximately one third of the emissions reductions needed to be on a least-cost pathway for the goal of staying well below 2°C. The gap between the reductions needed and the national pledges made in Paris is alarmingly high.[5]

A Global CO_2 Budget

To understand the challenges of remaining below the Paris temperature range (1.5 to 2°C), experts have computed budgets for cumulative global CO_2 emissions, which establish "the maximum amount of the gas that can be released before the temperature limit is breached."[6] According to a recent report, "2020: The Climate Turning Point", the carbon budget that would be consistent with the Paris goals is approximately 600 gigatons of CO_2.[7] This is equivalent to about 15 years of emissions at current levels of 39 gigatons of CO_2 per year.

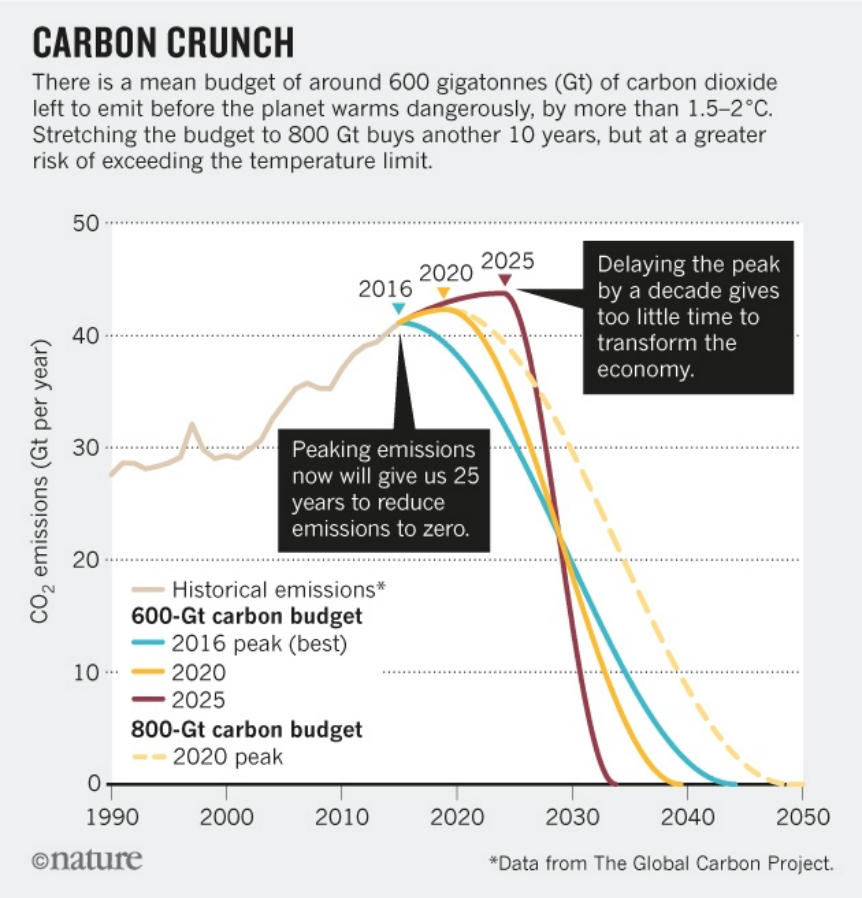
In order to meet this target, global CO_2 emissions would need to peak in 2020 at the latest to have a chance to meet this target. *Figure 1* shows three scenarios: One scenario (the blue curve) assumes that the peak has already occurred in 2016 and that CO_2

emissions start decreasing in 2017 and continue decreasing from then on. In that scenario, we have about 25 years to plan a transition to zero-carbon, which will be reached at mid-century. A scenario with a peak in 2020 (yellow curve), leaves 20 years to reach zero CO_2 emissions. The third scenario (red curve) shows peaking in 2025, requiring a transition to zero carbon in only 10 years – essentially impossible.

The authors of the report urge world leaders, businesses, cities, states, regions, and civil society leaders to act "further, faster, together" by relying on science to guide decisions and set targets; by scaling up existing solutions, planning to move to 100% renewable electricity as early as possible; and by encouraging an optimistic attitude that allows more ambitious goals to be conceived and implemented.

In this context of great urgency on climate action, COP-23 in Bonn attempts to set the course towards global peaking and eventual zero-carbon emissions.

Figure 1: Carbon Emissions Peak and Decline Required for 1.5-2°C



Sources: Stefan Rahmstorf/Global Carbon Project

Can the Goals be Met?

One of the major obstacles to global unity in pursuing climate goals is the United States' Trump Administration, which announced in June its decision to withdraw from the Paris Agreement. With Syria and Nicaragua joining the agreement, the U.S. is now the only country to reject it. Still, it has sent a delegation to the COP23, though a small and less visible one, in order to be part into the process, which it cannot formally leave until 2020. The U.S. focus at the talks is on the "role of cleaner and more efficient fossil fuels and nuclear power in climate mitigation."[8] A coalition of African civil society organizations called for the U.S. delegation to vacate its seat in the negotiations. "The time has come when we should ask ourselves whether the U.S. official delegation is necessary in the negotiations when its top leadership is playing an obstructionist role," said the Pan African Climate Justice Alliance in a statement.[9]

At the same time, representatives of U.S. states, cities, and civil society attended the Bonn conference to make clear their commitment to the Paris goals. Governor Brown of California and former Mayor Michael Bloomberg of New York City "announced that the states, cities, and businesses that had pledged to abide by the Paris accord were on track to meet the Obama administration pledge to cut emissions at least 26 percent below 2005 levels by 2025." According to Brown and Bloomberg, "if the institutions working to meet the Obama target were a country, they would be the third-largest economy in the world after the United States and China." [10]

Europe, China, and Canada have made clear that they intend to take aggressive leadership in achieving climate goals. According to Chinese President Xi Jinping, China has "taken a driving seat in international cooperation to respond to climate change." Xi also criticized countries that "retreat into self-isolation".

> Many political analysts say China has indeed moved dramatically on climate change, both to meet its own pledge under the Paris accord and to start the world's largest carbon market and swiftly expand the use of electric cars. In recent months, China has hosted ministerial-level meetings on clean energy and joined Canada and the European Union to lead discussions on climate…
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> In September 2017 Canada hosted a meeting of the world's largest economies to discuss climate change. American officials in the George

> W. Bush administration had created that gathering, originally known as the Major Economies Forum, and it continued under Mr. Obama. The Trump administration essentially abandoned it this year.
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> "If the U.S. is going to step back, we're going to step up," Canada's environment minister, Catherine McKenna, said. [11]

Along with China, other emerging economies such as India are strongly committed to the development of renewable energy. According to "New Energy Outlook 2017" by *Bloomberg New Energy Finance*:

> Renewable energy sources are set to represent almost three quarters of the $10.2 trillion the world will invest in new power generating technology until 2040, thanks to rapidly falling costs for solar and wind power, and a growing role for batteries, including electric vehicle batteries, in balancing supply and demand.[12]

Given the extremely demanding requirements shown in *Figure 1* for carbon stabilization and reduction, even rapid progress on replacing carbon-based fuels with renewables will not be enough to meet the Paris goals. It will also be necessary to have a large withdrawal and storage of atmospheric CO_2 through improved agricultural and forestry practices, another topic that is on the agenda at Bonn. (For more on the potential for soil and forest carbon storage, see GDAE Climate Policy Brief #4, *Hope Below Our Feet: Soil as a Climate Solution*).[13]

Perhaps the most hopeful indication for major action on climate change, in addition to the determination expressed by major nations other than the U.S., is the increasing evidence that aggressive climate action will be economically beneficial. As noted, renewable energy has become highly competitive, and nations such as China that forge a lead in solar and wind power stand to benefit both from domestic production and exports. There are also huge "co-benefits" such as reduction in ground-level pollution from limiting fossil fuel use (now a critical issue in India as well as China), increased food productivity associated with carbon-storing agricultural techniques, and benefits from forest preservation such as flood prevention.

Thus, the path ahead from Bonn must include both specific policy responses to climate change and efforts to transform our economies. It appears that most of the world,

including the coalition of U.S. states, cities, businesses, and civil society organizations, is on track to take up this challenge.

Endnotes

[1] COP stands for "Conference of the Parties" to the U.N. Framework Convention on Climate Change.

[2] "UN climate conference to maintain ambition one year after Paris accord's entry into force," *UN News Centre*, November 6th, 2017 http://www.un.org/sustainabledevelopment/blog/2017/11/bonn-un-climate-conference-to-maintain-ambition-one-year-after-paris-accords-entry-into-force/

[3] Jeff Nesbit, "Climate Change Is Bad for Your Health," *New York Times*, October 30, 2017, https://nyti.ms/2iNURhJ; Chris Mooney, "New science suggests the ocean could rise more — and faster — than we thought," *Washington Post*, October 2, 2017, http://wapo.st/2gFURfr

[4] United Nations Framework Convention on Climate Change, "2018 Facilitative dialogue," http://unfccc.int/items/10265.php

[5] United Nations Environment Program, *Emissions Gap Report 2017*, November 2017, http://www.unep.org/emissionsgap/

[6] Christiana Figueres, et. al, "Three years to safeguard our climate," *Nature*, June 28 2017 http://www.nature.com/news/three-years-to-safeguard-our-climate-1.22201

[7] Mission 2020. *2020: The Climate Turning Point*, April 10, 2017, http://go.nature.com/2takuw3

[8] Jessica F. Green, "What's next for the Paris Agreement? Nearly 200 countries meet this week to talk climate change," *Washington Post*, November 6, 2017, http://wapo.st/2zy83yl; Lisa Friedman, "Trump Team to Promote Fossil Fuels and Nuclear Power at Bonn Climate Talks", *New York Times*, November 2, 2017, https://nyti.ms/2z7IIYQ

[9] Michael Igoe, "5 things to watch at COP23," devex, November 10, 2017 https://www.devex.com/news/91506

[10] Lisa Friedman, "Dueling U.S. Messages at Global Climate Talks," *New York Times*, November 11, 2017, https://nyti.ms/2jjh8E8

[11] Lisa Friedman, "As U.S. Sheds Role as Global Climate Change Leader, Who will Fill the Void?" *New York Times*, November 12, 2017, https://nyti.ms/2jkv14W

[12] "New Energy Outlook 2017" *Bloomberg New Energy Finance*, 2017, https://about.bnef.com/new-energy-outlook/

[13] "Hope Below Our Feet: Soil as a Climate Solution," *GDAE Climate Policy Brief #4*, http://www.ase.tufts.edu/gdae/Pubs/climate/ClimatePolicyBrief4.pdf

Tufts University's Global Development and Environment Institute (GDAE) offers a series of climate policy briefs covering the Paris agreement, the role of forests and soils, and current policies on biomass and forests.