

A Transformative End to the Year

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2015 has been an unexpectedly positive year for climate change efforts, as the long-floundering U.N. process has finally begun to deliver some of what is needed. Make no mistake: We are still on track to overshoot the limits of our planet's ability to absorb the fossil pollutants we are pumping into it. But substantial progress is being made, and denying that would be counterproductive to the important cooperation that has occurred.

For all the complaining about the cumbersome United Nations Framework Convention on Climate Change (UNFCCC) process, real progress is being made in two important areas this year: national pledges and a new agreement text. Four somewhat unexpected tailwinds have also helped this year: increased perceptibility of climate change, the pope's campaign to raise the issue, the plunge in renewable costs, and collaboration between China and the United States. Still, some key issues loom that will have to be dealt with carefully in Paris and earnestly followed up on in 2016.

A year of positive, but still inadequate, pledges

This year's meeting in Paris will reverse the earlier model of climate action. Rather than produce a collective decision that divides up the "atmospheric space" available for emissions, the COP21 will build on the 2009 and 2010 negotiations in Copenhagen and Cancun. Nations will bring emissions pledges based on their individual circumstances, and the world will review those pledges for fairness and ambition, and see if they are adequate to the task.

The pledges are called Intended Nationally Determined Contributions (INDCs), a phrase emphasizing that countries are protecting their sovereignty against binding commitments. That is problematic when considering enforceability and overall adequacy of ambition, but the approach has allowed a far wider range of countries come in with national pledges. The approach began in Copenhagen with five people: Obama and the leaders of the BASIC group (Brazil, South Africa, India, and China). Since these five nations produced this system, they now need to show that it can actually work.

Here is what's new: This year's INDCs are supposed to be universal. In the previous system (under the 1997 Kyoto Protocol), only the rich countries were responsible for emissions reductions. Now all countries are expected to act, and the "<u>firewall</u>" between richer and poorer countries is being taken down. The world has changed dramatically since 1992, when that first annex of "rich" countries was defined; the highly vulnerable countries in the Alliance of Small Island States (AOSIS) and the 48 least-developed countries (LDCs) broke from the big emerging economies to say that they had to act on emissions as well. They were especially concerned with China, whose massive growth since 2000 has led to it now being responsible for over 30 percent of total global emissions.

Despite uncertainty, the pledges have rolled in. By the October deadline, 128 INDCs were on the U.N. website, representing about 150 countries and about 88 percent of all global emissions. Lagging are the major oil producers and some of the poorest nations in the world. The INDCs are revealing. They show what each country believes its abilities are regarding climate change, how they see the issue, and where we might see movement in the future.

Preparing INDCs has also forced ministries across national governments to begin planning national emissions targets and pathways to meet them. Ideally, these plans involved public input, but this is less clear and will need widespread improvement.

Mexico pledged to reduce emissions 25 percent at a joint announcement with the U.S. in March, but also offered a 40 percent reduction if certain conditions were met: a global agreement addressing "international carbon price, carbon border adjustments, technical cooperation, access to low-cost financial resources and technology transfer." Mexico is a growing manufacturing country without the huge hydroelectric potential some of its neighbors have. Its pledge is significant and shows how countries can act alongside others in a mix of unconditional and conditional pledges that factor in historical carbon debt.

Indonesia, often considered a country resistant to emissions reduction obligations, released an INDC promising to shift away from fossil fuels, especially coal. "Despite the challenges common to other developing countries, Indonesia is committed to transition its current development pathway toward climate resilience in a phased approach. The pathway towards de-carbonization of the economy will be fully integrated into Indonesia's National Medium-Term Development Plan for the period 2019-2024."

The INDC from the Gambia was particularly impressive. Despite being one of the least-developed countries, the Gambia pledged impressive absolute and unconditional emissions reductions. Planned methods for this included reforesting, and the installation of renewables for lighting, communication, health facilities, and pumps. Gambian Environment Minister Pa Ousman Jarju declared that "By presenting this INDC, the Gambia would like to provide a moral voice for all responsible and capable countries to undertake actions that are proportionate for their responsibilities and capabilities not only for themselves, but for the whole global community."

The success of the INDC process was in part is due to leadership by the United States and China in making joint announcements in November 2014 and September 2015 that their INDCs would be ambitious, though in different ways. They were "differentiated" pledges: The U.S. pledged 26-28 percent emissions reductions overall by 2025, the maximum the Obama administration could squeeze out of existing policies without requiring congressional action. China pledged to peak its emissions by 2030 and increase its share of renewable energy by then. Premier Xi's September announcement in Washington that China was creating a national cap-and-trade program by 2017 provided more momentum to the process.

The Obama administration was impressive and successful in coordinating with other major emitters to create meaningful action this year. The U.S.-China announcements come from the countries responsible for nearly half of global emissions, and apparently the two nations understand that they can have more impact together. The U.S.-Mexico joint announcement showed the U.S. was willing to work with other nations also, and administration officials reached out to numerous countries to encourage more ambition. While its own pledge is far weaker than needed, for once in the climate talks the U.S. was a leader and a cheerleader.

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What do the INDCs add up to? Not enough reductions, unfortunately. We are <u>still headed to 3.5 degrees Celsius</u>, 3.1 C, or <u>2.7 C</u> of warming above pre-industrial levels, depending upon the assumptions one uses in projections. But the INDCs do represent big reductions in likely warming. One estimate set puts the reduction with INDCs from 3.9 degrees to 3.1 degrees. To remove nearly 1 degree of likely warming in one year is remarkable progress.

It is striking that most INDCs affirm the "principles of the Convention" that countries should all act according to their "common but differentiated responsibilities and respective capabilities"—meaning, the rich countries should go first in reducing their emissions. However, each INDC did this in a rather pragmatic way, realizing that all countries needed to act. Most lacked explicit text on the "climate debt" of the so-called global North.

The painful emergence of the Paris Agreement

As the last day of climate change negotiations before the COP21 in Paris wound down in Bonn in October, Mexico's negotiator expressed alarm at the strongest hurricane ever recorded—Patricia—moving toward his coast. It is time to "get this deal done" and put aside differences, he said. Low-lying areas and small island states face inundation if oceans rise as quickly as predicted. Their negotiators want a strong deal, but mostly they fear no deal at all.

Two weeks before the October Bonn session, the co-chairs of the main UNFCCC negotiating section introduced a boldly streamlined draft text. Working to sharply pare down a confusing 85 pages, the co-chairs' initial text was a slim eight pages in main document—and only 20 in all. The options were clearly laid out, but too much text had been cleared out; the G-77 objected, suddenly reunited over the perceived slight from the co-chairs' text and from the lack of a clear roadmap on how the wealthy countries were planning to reach the targeted \$100 billion in climate finance by 2020.

The co-chairs relented, allowing "surgical insertions" of parties' greatest priority items. The negotiating text ballooned from 20 pages to 55, including 1,255 bracketed parts that indicated disputed phrases. "No one actually compromised. Come December, all the hard decisions will still be on the table."

Is this time different, or is the U.N. up to its old shenanigans? This time has to be different, since Paris is a crucial deadline to seal a deal. In 2011, it was agreed in Durban that an agreement would be struck in 2015 to guide humanity away from excessive carbon emissions, which endanger the stability of our climate system. Many other actors are beginning to move on climate change, but those actions may not prove sufficient or be sustained. Only states can collectively agree on enforceable commitments. There is no other available forum for a global agreement: We need the U.N. to succeed on climate change.

Promises made in Paris will come into effect in 2020, and the targets that have been set by countries this year are for emissions reductions by 2025 or 2030. This has led some people to say that the agreement will have no effect until then. This is incorrect. Countries are already having to begin preparing to meet the pledges they have made. That is where the difficult work begins, in redirecting national economies away from high-carbon pathways of development.

Four new tailwinds for success in Paris

Four tailwinds make 2015 different from the disappointing 2009 Copenhagen meeting.

First, people are perceiving climate change happening around them; they don't have to just believe the scientists. Fall is coming later and is warmer, springs come earlier. Summers are hotter and last longer. The extreme weather of hurricanes, drought, heat waves, floods, and wildfires are affecting millions of people around the world, including Americans. Sea levels are steadily rising. In the United States, new polls say that skepticism about climate change is plunging, including among Republicans.

In the United States, at least, a second tailwind is the economy, which was a massive headwind in the face of negotiations in 2009. Relatedly, President Obama used the economic crisis to direct some of the billions in stimulus funds to efficiency and lower-carbon approaches, when some nations were unwilling or unable to put major funding into climate change.

Third, and also relatedly, is the wind itself. Solar and wind has become nearly as cheap as coal—at "grid parity" in some places. A few countries have begun to remove fossil fuel subsidies, and the U.S. is leading in shifting away from coal. Americans and people in other countries are seeing that the necessary shift from fossil fuels and toward efficiency and new renewables creates millions of jobs and economic growth. This also has the effect of creating a class of people in whose interest it is to drive down global emissions, since it creates new business and job opportunities.

A fourth tailwind boosting action in 2015 is the pope's message and campaign to make climate change and climate justice a moral and deeply religious issue. He sought in numerous speeches and his impressive encyclical <u>Laudato Si</u> to connect issues of human development, poverty, and justice to the need to listen to the science of climate change and to act ambitiously.

The Paris Moment

We cannot expect the COP21 negotiations in Paris to resolve everything, and it won't. Key parts of the Paris agreement are still not coming together, such as how the pledge of \$100 billion in climate finance will be met and fairly apportioned. There is also major work to be done on the transparency of climate finance flows. There is demand, too, by the poorest and most vulnerable nations to secure a mechanism to address the "loss and damage" they are suffering, which cannot be adapted to.

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Finally, work will be needed immediately after Paris to continue to ratchet up efforts to keep the world under 2 C or even 1.5 C of warming. Far bolder plans will be needed to decarbonize the wealthiest economies by 2030, which would be fair, given those countries' wealth and responsibility for creating the problem of climate change. The rest of the world will need to get to net zero carbon soon thereafter, probably by 2040 for emerging economies and 2050 for the least-developed ones. Together, decarbonization will require a major wartime-like mobilization. Switching economic pathways away from coal and other fossil fuels can create a huge stimulus program to bring nations out of their "great slowdown." Capitalism can be very low carbon, but a major pulse of climate finance will be required to get this going. Governments have done this kind of thing before, and they can do it again.

First, though, they need to craft a workable and ambitious agreement in Paris—one that can secure the gains of 2015 and foster the greater ones we need ahead.