

ENVIRONMENTAL LAW

Expert Analysis

Three Major Developments In International Climate Change Law

The past month has seen a remarkable set of developments at the international level in controlling greenhouse gas (GHG) emissions—the entry into force of the Paris Climate Agreement, and major new agreements on controlling hydrofluorocarbon emissions and pollution from airplanes. The stunning election of Donald Trump on Tuesday casts the future of some but not all of these efforts into doubt, however.

Paris Climate Agreement

Last Friday—Nov. 4—the Paris Climate Agreement went into force. It had been negotiated by 197 countries last December at the 21st Conference of the Parties to the United Nations Framework on Climate Change. To take effect, it required 55 countries accounting for 55 percent of global GHG emissions to join. Those thresholds were passed on

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Oct. 5—a speed unparalleled in multilateral environmental pacts—and the agreement automatically took effect 30 days later.

The heart of the agreement is pledges made by 186 countries

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(called nationally determined contributions) to reduce their GHG emissions. These pledges are not legally binding commitments. If fully carried out they would lower global temperatures considerably below what would happen under

a business-as-usual scenario, but still nowhere near the objective set in Paris of keeping global average temperatures well below 2°C (3.6°F) above pre-industrial levels, and trying to keep them within 1.5°C (2.7°F). Thus the parties promised to come back every five years with higher levels of ambition.

The parts of the agreement that are legally binding relate mostly to the monitoring and reporting of emissions and control measures. Had other provisions such as the emissions reduction pledges been legally binding, the agreement would have required ratification by the Senate, which could not be achieved under the political situation even before the election.

Both the binding and the voluntary provisions involve working out a great many details. This week and next the 22nd Conference of the Parties is taking place in Marrakesh, Morocco, with a focus on many of these details. The election results have cast a pall over that conference, as President-Elect Trump repeatedly vowed during his campaign to cancel the Paris Agreement. He cannot

do that, but he could impede U.S. cooperation with its implementation.

Addressing the Ozone Layer

The Montreal Protocol on Substances that Deplete the Ozone Layer was negotiated in 1987 and became the first treaty in the history of the United Nations with the participation of every country on the planet. It has led to the phaseout of the chemicals that deplete the ozone layer, principally chlorofluorocarbons and halons, and it is rightly hailed as the world's most successful environmental treaty. Unfortunately some of the substitute chemicals, especially hydrofluorocarbons (HFCs), while safe for the ozone, are powerful greenhouse gases (as were their predecessors).

At a conference in Kigali, Rwanda, from Oct. 10-14, agreement was reached on an amendment to the Montreal Protocol to cut the production and consumption of HFCs by more than 80 percent over the next 30 years. This agreement has been projected to avoid up to 0.5°C of global warming.

The HFC agreement divides countries into several groups. The first group, largely the developed countries, must reduce their HFCs by 10 percent by 2019 and by 85 percent by 2036 relative to production and consumption levels in 2011-2013. Almost all other countries—including China and all of Africa and Latin America—are to freeze their levels by 2024 and then ultimately reduce by 80 percent by 2045 relative to 2020-2022 levels.

A few countries (India, Pakistan, Iraq, Iran, and several Gulf states including Saudi Arabia) negotiated a more relaxed schedule, freezing use in 2028 and reaching 85 percent cuts in 2047. There is also an exemption for "high ambient temperature countries" (those with an average of at least two months per year over 10 consecutive years with a peak monthly average temperature above 35 degrees Celsius). This is designed to protect those countries facing particularly higher costs for air conditioning, the most prominent use of HFCs.

A group of donor countries and philanthropists have announced they will provide \$80 million in support to help the poorest countries reduce their HFCs.

The United States has already been taking action on this issue. The Environmental Protection Agency has finalized two rules under the Clean Air Act's Significant New Alternatives Policy program to prohibit the use of certain HFCs when safer and more climate-friendly alternatives are available. 40 CFR Pt. 82. There is also progress in other countries. For example, China (the world's largest HFC producer) has shut down five of its HFC production facilities, and has put into place incentives to destroy existing HFC stocks. Indeed, the global negotiations on HFCs were boosted by a June 2013 meeting between President Barack Obama and President Xi Jinping of China at the Sunnylands estate in Rancho Mirage, Calif., where they agreed to joint action on HFCs.

The HFC agreement will go into force on Jan. 1, 2019, provided that at least 20 countries have ratified by that point. Trade restrictions on HFCs with non-parties would be imposed by 2030 provided that at least 70 countries have ratified. (The possibility of trade restrictions was one of the key features of the Montreal Protocol.)

It is still an unresolved and somewhat contentious question whether the HFC agreement requires Senate ratification. Most of its implementation would occur after the 2020 election, and meanwhile it appears likely that industry will move forward with the development of substitutes for HFCs.

Aviation Agreement

International aviation accounts for about 2 percent of global carbon dioxide emissions from fuel combustion, and international shipping is another 2 percent. Together, if they were a country they would be the sixth largest emitter (after China, the United States, India, Russia and Japan). The emissions from both are rapidly rising, and they are not included in the Paris Agreement commitments. Last month saw an important agreement on aviation emissions, and also the failure to achieve one on shipping.

The International Civil Aviation Organization (ICAO), a specialized agency of the United Nations, held its 39th Assembly in Montreal in early October. The member states agreed on two policies applicable to international (but not domestic)

aviation to meet the goal of carbon neutral growth from 2020.

The first is a carbon dioxide standard for new aircraft, which applies a complex formula that is based on fuel use and fuselage size. It will apply in three stages. Starting in 2020, all new aircraft designs will have to comply with the standard. Since U.S. aircraft manufacturers will wish to sell into foreign markets, and the buyers of the planes will want the option to resell them abroad, the manufacturers will presumably build planes that meet the 2020 standards even if not compelled to do so. From 2023 to 2028, all aircraft models currently being produced will need to meet a less stringent “in-production” standard, but only if they undergo modifications requiring recertification. Starting in 2028, all new aircraft will have to meet the full standards.

The second policy is called the Carbon Offset and Reduction System for International Aircraft (CORSIA). Since cleaner airplanes will still be GHG emitters, CORSIA seeks to offset emissions by purchasing offsets from other sectors. It will operate from 2021 until at least 2035. Those 15 years will be divided into five three-year chunks. The first three-year chunk will be the “pilot phase,” the second will be the “first phase,” and the last nine years will be the “second phase.”

Only states that volunteer will participate in the pilot phase and the first phase. More than 60 have already agreed to join the pilot phase, including the United States, China, European states, Mexico, and

others. All states will be expected to participate in the second phase except for certain that have been exempted—basically the smallest and the poorest countries.

In a compromise between the developing countries (which tended to have faster-growing airline sectors) and the developed countries (which did not want to shoulder all the required emissions reductions), ICAO adopted an approach under which from 2021 to 2029, the offsetting requirements would be distributed completely on the basis of the growth of the overall air transport sector, rather than each individual airline’s growth rate. After 2029 an increasing percentage of the cost would be borne based on each airline’s growth rate.

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Payments for offsets may generate significant revenues for forest conservation projects in developing countries, but precautions will be needed to ensure the environmental integrity of these projects (e.g., that they are really saving forests that

would otherwise be destroyed, and that there is no double counting with reductions that are also achieving a state’s Paris commitments). In addition to offsets, airlines may reduce their carbon footprint through other methods, such as the use of biofuels and design and operational measures that increase energy efficiency.

Since CORSIA will not begin operation until after the next presidential election, it may not be much affected by the Trump victory.

Less climate progress was made by the shipping sector. Another United Nations agency, the International Maritime Organization (IMO), met in London in the last week of October. After 10 years of negotiations, agreement was reached on reducing emissions of sulphur (a major source of premature deaths from air pollution).

The IMO also established a mandatory data system for fuel consumption, and strengthened implementation of energy-efficiency regulations. However, the road map the IMO set for developing a comprehensive strategy on GHG emissions will not culminate in an actual plan until 2023. This delay outraged the environmental groups, especially in view of the rapid growth of emissions from the shipping sector.