VIEWPOINTS

The United States and the Paris Agreement: A Pivotal Moment

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In the five decades since the first Earth Day¹ was celebrated in 1970, remarkable economic growth around the world has inevitably been accompanied by significant environmental challenges. While tremendous progress has been made to address concerns about air and water quality, hazardous waste, species extinction, and maintenance of stratospheric ozone,² leaders around the world continue to struggle to address the threat of global climate change in the face of the steady accumulation of greenhouse gases in the atmosphere.³

The Necessity of International Cooperation

There is broad scientific consensus that human-based emissions of greenhouse gases—including carbon dioxide (CO_2) from fossil-fuel combustion and land-use changes—will change the earth's climate in ways that will have serious environmental, economic, and social consequences.⁴ Sixteen of the warmest years on record have occurred since 2000, including 2016 as the warmest of all.⁵ At the same time, winter arctic sea ice is at its lowest extent in recorded history.⁶

Increased temperatures—which might be welcome in some places—are only part of the story. More important are changes in precipitation, decreased snowpack, glacier melting, droughts in mid to low latitudes, decreased cereal crop productivity at lower latitudes, increased sea level, loss of islands and coastal wetlands, increased flooding, greater storm intensity, species loss, and spread of infectious disease.⁷

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These biophysical impacts will have significant economic, social, and political consequences. Estimates of economic damages of unrestrained climate change vary, with most falling in the range of 1% to 3% of world GDP per year by the middle of the current century.⁸

In order to have a 50-50 chance of keeping temperature increases below 2° C (a long-term political goal acknowledged by most national governments), it would be necessary to stabilize atmospheric concentrations at 450 parts per million, which in principle could be achieved by cutting global emissions by 60% to 80% below 2005 levels by 2050.⁹

Reducing emissions will not be cheap or easy, but the greatest obstacles are political. The severe political challenges are due to the fact that greenhouse gases mix in the atmosphere, and so the location of damages is independent of the location of emissions. Any political jurisdiction that takes action incurs the direct costs of that action, but the climate benefits are spread globally. Hence, for any country, the direct climate benefits of taking action will likely be much less than the costs, despite the fact that the global benefits may exceed, possibly greatly, the costs. Therefore, due to the global commons nature of the problem, meaningful international cooperation is necessary.¹⁰

The Paris Climate Agreement: A Breakthrough after 20 Years

The countries of the world have been struggling to come up with a solution since they agreed in 1992 to establish the United Nations Framework Convention on Climate Change (UNFCCC).¹¹ After more than 20 years of negotiations, an important, historic breakthrough came with the signing of the Paris Climate Agreement in 2015, a path-breaking approach that increased the scope of participation from countries accounting for just 14% of global emissions (in the current, second commitment period of the Kyoto Protocol) to countries accounting for 97% under the Paris Agreement.¹²

Contrary to some claims, China, India, Brazil, Korea, South Africa, Mexico, and the other large emerging economies do have obligations under this new approach. Far from being a "bad deal" for the United States, as U.S. Environmental Protection Agency (EPA) Administrator Scott Pruitt has asserted, the Paris Agreement is actually the answer to U.S. prayers going back to the U.S. Senate's bipartisan (95-0) Byrd-Hagel Resolution in 1997, which rejected the Kyoto approach and called for an agreement that would include not only industrialized countries, but the large emerging economies as well.¹³ That is precisely what the Paris Agreement has finally delivered!

Will the U.S. Remain Part of the Process?

This is a pivotal moment. President Trump's recent executive order, in which he laid out his plans to roll back much of the Obama administration's climate policy, was silent on the Paris Agreement, reportedly reflecting disagreements among the President's closest advisers.¹⁴

During the campaign last year, the President said he would "cancel" the Paris Agreement.¹⁵ But because the Agreement has already come into force, under its rules, any party must wait three years before requesting to withdraw, followed by a one-year notice period. The U.S. is part of the Paris Agreement for the next four years. Any White House announcement of pulling out of the pact will have no direct effects for this presidential term.

In theory, the President could try to bypass that four-year delay by taking the one-year route of dropping out of the overall UNFCCC—signed by President George H.W. Bush and ratified by the Senate in 1992. But that could require another two-thirds vote of the Senate, would be challenged in the courts, and would be unwise in the extreme, given that the U.S. would then be the only one among 197 countries in the world not to be a party to the Climate Convention. At a time when the U.S. wants cooperation from a diverse set of countries around the world on matters of national security, trade, and a host of other issues, it would be counter-productive in the extreme to willingly become an international pariah on global climate change.

Key Support Inside and Outside the Administration

Fortunately, key voices in the Administration have argued for remaining in the Paris Agreement. Secretary of State Rex Tillerson has stated that it is better for the U.S. to be at this table of ongoing negotiations.¹⁶ More broadly, Secretary of Defense James Mattis said in congressional testimony that he views climate change as a national security threat.¹⁷

Remarkably, support for the Paris Agreement is broad-based within U.S. private industry from electricity generators such as PG&E and National Grid, to oil companies such as Chevron, ConocoPhillips, Exxon-Mobil, BP, and Shell (the last two having large operations within the U.S.), and a very long list of manufacturers, including giant firms such as General Motors. Even some of the largest coal producers, such as Arch Coal, Cloud Peak Energy, and Peabody Energy, have told the President about their support for the U.S. remaining in the Agreement.¹⁸ This broad support is due to a simple reality—leaders of successful businesses make decisions not on the basis of ideology, but based on available evidence. True enough, there is also opposition from some especially vocal coal industry executives,¹⁹ and the President seems to have shaped his domestic climate policies around their interests, with his repeated pledge to "bring back coal." But the job losses in coal mining over the past decades have been due to technological change (increased productivity) in the coal sector, and more recently by low natural gas prices, not by environmental regulations (particularly not by regulations—such as the Clean Power Plan—that have not even been implemented).

The Paris Agreement Provides Flexibility

The U.S. could stay in the Paris Agreement, and seek to revise the Obama-era numerical target of a 26% reduction in emissions below 2005 levels by 2025, an approach recommended by North Dakota Republican Representative Kevin Cramer.²⁰ This is possible because the specific national targets and actions pledged under the Paris Agreement are not actually part of the Agreement itself, and they are not binding under international law. However, by 2016, U.S. energy-related emissions were already down by 14% below 2005,²¹ so it is not clear that the existing pledge even needs to be re-assessed. Also, state climate policies in California, Oregon, Washington, and the Northeast will remain in place, and likely be strengthened.²² And more than half of all states have renewable energy policies; just since Election Day, the Republican governors of Illinois and Michigan have signed legislation aimed at increasing solar and wind generation.²³ At the federal level, important tax credits for wind and solar power continue to receive bipartisan support in the U.S. Congress.²⁴

Putting It All Together

In summary, climate change is a serious threat, which requires international cooperation because of its global commons nature. After 20 years of negotiations, the path-breaking Paris Climate Agreement, with its exceptionally broad participation, is the answer to long-standing, bipartisan appeals, and provides an excellent foundation for progress.

The President cannot "cancel" the Agreement, and it would take four years for the U.S. to withdraw. Pulling out of the foundational United Nations Framework Convention on Climate Change might be quicker, but would be unwise in the extreme, jeopardizing U.S. relationships with countries around the world on a host of pressing issues, ranging from national security to international trade.

Fortunately, key voices in the administration have argued for keeping the U.S. in the Paris Agreement, and support from the business community is unusually broad and deep. If necessary, the U.S. can seek to revise the specific U.S. pledge under Paris made by the Obama administration, while remaining a party to the Agreement. But given the pace of emissions reductions already achieved,

combined with ongoing state and federal climate policies, it is not clear that those targets need to be changed.

In light of the diverse set of considerations that should bear upon this U.S. decision, we find the arguments for the country remaining in the Paris Climate Agreement to be compelling. The truth is that in the 47 years since the first Earth Day, much has been accomplished. But much of that remarkable progress could be undone in the short span of four years or less. We are confident—or at least hopeful—that this will not happen.

Notes

¹ For more information about Earth Day, see www.earthday.org.

² See the International Institute on Sustainable Development's 2015 report, *Global Goals and the Environment: Progress and prospects*, accessible at www.iisd.org/library/global-goals-and-environment-progress-and-prospects.

³ Further information on the threats posed by global climate change is available from the Intergovernmental Panel on Climate Change (IPCC) at www.ipcc.ch.

⁴ See www.ipcc.ch and especially the IPCC's Fifth Assessment Report, Working Group I, Chapter 8, "Anthropogenic and Natural Radiative Forcing," www.ipcc.ch/pdf/assessment-report/ar5/wg1/WG1AR5_Chapter08_FINAL.pdf.

⁵ See www.nasa.gov/press-release/nasa-noaa-data-show-2016-warmest-year-on-record-globally.

⁶ See www.nytimes.com/2017/03/22/climate/arctic-winter-sea-ice-record-low-global-warming. html.

⁷ For more information from IPCC Working Group II on climate change impacts, adaptation, and vulnerabilities, see www.ipcc-wg2.awi.de.

⁸ Marshall Burke, Solomon M. Hsiang, and Edward Miguel, "Global Non-linear Effect of Temperature on Economic Production," *Nature 527* (November 12, 2015), pp. 235–239, www. nature.com/nature/journal/v527/n7577/full/nature15725.html.

⁹ For more on the meaning of different values of atmospheric carbon dioxide concentrations see http://scripps.ucsd.edu/programs/keelingcurve/2015/05/12/what-does-this-number-mean.

¹⁰ On the term "global commons," see Robert N. Stavins, "The Problem of the Commons: Still Unsettled after 100 Years," *American Economic Review* 101 (February 2011), pp. 81–108, http:// pubs.aeaweb.org/doi/pdfplus/10.1257/aer.101.1.81. ¹¹ Information on the United Nations Framework Convention on Climate Change can be accessed at unfccc.int/2860.php.

¹² For more on the Paris Agreement, see http://unfccc.int/paris_agreement/items/9485.php. For more on the Kyoto Protocol, see http://unfccc.int/kyoto_protocol/items/2830.php.

¹³ The EPA website provides a profile of the Agency's current administrator, Scott Pruitt, at www. epa.gov/aboutepa/epas-administrator. The text of the Byrd-Hagel resolution can be accessed at www.nationalcenter.org/KyotoSenate.html.

¹⁴ The text of the executive order is accessible at www.whitehouse.gov/the-pressoffice/2017/03/28/presidential-executive-order-promoting-energy-independence-andeconomi-1.

¹⁵ For an example of media coverage of this campaign pledge, see www.bbc.com/news/electionus-2016-36401174.

¹⁶ For an example of reporting on Secretary Tillerson's statements on this topic, see www. nature.com/news/trump-nominee-backs-paris-climate-agreement-and-questions-iran-nucleardeal-1.21291.

¹⁷ See, for example, http://thehill.com/policy/energy-environment/323959-trumps-defense-secretary-calls-climate-change-a-national-security.

¹⁸ Following are links to corporate statements and media reports concerning various companies' positions on climate change and the Paris Agreement:

www.pge.com/en/about/newsroom/newsdetails/index.page?title=20151215_pge_declares_support_for_landmark_global_climate_agreement_in_paris_

http://3blmedia.com/News/National-Grid-Makes-Climate-Pledge-White-House-Signs-American-Business-Act

http://money.cnn.com/2017/04/18/investing/big-oil-paris-deal-trump

http://thehill.com/policy/energy-environment/328356-businesses-pressure-trump-to-stay-in-paris-climate-deal

http://fortune.com/2017/03/29/exxon-mobil-donald-trump-paris-agreement-climate-change

www.shell.com/sustainability/environment/climate-change.html

www.gmsustainability.com/approach/accelerating-ahead.html

www.thenewamerican.com/tech/environment/item/25780-three-big-coal-companies-ask-trump-to-honor-unratified-paris-climate-agreement

www.reuters.com/article/us-usa-trump-coal-idUSKBN1762YY

¹⁹ See, for example, www.politico.com/story/2017/03/trump-paris-climate-pact-coal-companies-236730.

²⁰ For details of the voluntary emissions mitigation targets put forward by the Obama administration under the Paris Agreement, see www4.unfccc.int/ndcregistry/ PublishedDocuments/United%20States%20of%20America%20First/U.S.A.%20First%20NDC%20 Submission.pdf. Representative Cramer's statement was reported in a recent *New York Times* article: www.nytimes.com/2017/04/18/us/politics/trump-advisers-paris-climate-accord.html.

²¹ Data on 2016 emissions are from the U.S. Energy Information Administration; see www.eia.gov/ todayinenergy/detail.php?id=30712.

²² For more information on state climate change policies, see:

http://climatechange.ca.gov

www.e2.org/wp-content/uploads/2016/07/Oregon_Business_Climate_Report.pdf

www.climatesolutions.org/policy/washington

www.rggi.org

²³ A summary of state renewable energy policies is available from the National Conference of State Legislatures; see www.ncsl.org/research/energy/renewable-portfolio-standards.aspx. For reporting on Republican governors' views, see www.bloomberg.com/news/articles/2017-02-13/ governors-of-red-blue-states-urge-trump-to-support-clean-energy.

²⁴ See, for example, www.wsj.com/articles/wind-solar-companies-get-boost-from-tax-creditextension-1450311501.

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The goal of the Harvard Project on Climate Agreements is to help identify and advance scientifically sound, economically rational, and politically pragmatic public policy options for addressing global climate change. Drawing upon leading thinkers in Argentina, Australia, China, Europe, India, Japan, and the United States, the Project conducts research on policy architecture, key design elements, and institutional dimensions of international and domestic climate policy. The Project is directed by Robert N. Stavins, Albert Pratt Professor of Business and Government at the Harvard Kennedy School.

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