The Paris Agreement, a landmark climate accord, was finalized on December 12, 2015, at the Twenty-First Conference of the Parties (COP-21) of the United Nations Framework Convention on Climate Change (UNFCCC) in Paris, France. The Agreement provides a foundation for meaningful progress on climate change, and represents a dramatic departure from the past 20 years of climate negotiations. Further, it provides a foundation for the increasing emergence and development of carbon-pricing policy instruments around the world, as well as their linkage in pursuit of a common global shadow price on carbon.

Background

For many years, I have viewed the dichotomous distinction between Annex I and non-Annex I countries as the major stumbling block to progress in the international climate negotiations. That distinction was first introduced in the climate negotiations at COP-1 in Berlin in 1995, and was an unfortunate and narrow interpretation of the equity principle in the United Nations Framework Convention on Climate Change (UNFCCC, 1992) – “common but differentiated responsibilities and respective capabilities.” It was codified two years later in the Kyoto Protocol.

Robert Stavins is the Albert Pratt Professor of Business and Government, John F. Kennedy School of Government, Harvard University, Director of the Harvard Environmental Economics Program, Director of Graduate Studies for the Doctoral Program in Public Policy and the Doctoral Program in Political Economy and Government, Co-Chair of the Harvard Business School-Kennedy School Joint Degree Programs, and Director of the Harvard Project on Climate Agreements.
The Kyoto Protocol, which has been the primary international agreement to reduce greenhouse gas emissions, featured mandatory emissions-reduction obligations for developed countries, but no commitments for developing countries. The dichotomous distinction between the developed and developing world in the Kyoto Protocol made progress impossible, because significant growth in emissions since the Protocol came into force in 2005 has been entirely in the emerging and large developing countries—China, India, Brazil, Korea, South Africa, Mexico, and Indonesia.

The big break came at the annual UNFCCC negotiations in Durban, South Africa in 2011, where a decision was adopted to “develop [by December 2015, in Paris] a protocol, another legal instrument or an agreed outcome with legal force under the Convention applicable to all Parties.” This “Durban Platform for Enhanced Action” broke with the Kyoto Protocol and signaled a new opening for innovative thinking (which we, at the Harvard Project on Climate Agreements, took to heart).

Historical Context

In Paris, representatives of 195 countries adopted a new hybrid international climate policy architecture that includes: bottom-up elements in the form of “Intended Nationally Determined Contributions” (INDCs), which are national targets and actions that arise from national policies; and top-down elements for oversight, guidance, and coordination. Now, all countries will be involved in taking actions to reduce emissions.

Remarkably, 186 of the 195 members of the UNFCCC submitted INDCs by the end of the Paris talks, representing some 96 per cent of global emissions. Contrast that with the Kyoto Protocol, which now covers countries (Europe and New Zealand) accounting for no more than 14 per cent of global emissions (and 0 per cent of global emissions growth).

This broad scope of participation under the Paris Agreement is a necessary condition for meaningful action, but, of course, it is not a sufficient condition. Also required is adequate ambition of the individual contributions. But this is only the first step with this new approach. The INDCs will be assessed and revised every five years, with their collective ambition ratcheted up over time. That said, even this initial set of contributions could cut anticipated temperature increases this century to about 3.5 degrees Centigrade (C), more than the frequently-discussed aspirational goal of limiting temperature increases to 2 degrees C (or the new aspirational target from Paris of 1.5 degrees C), but much less than the 5-6 degrees C increase that would be expected without this action. (An amendment to the Montreal Protocol to address hydrofluorocarbons (HFCs) is likely to shave an addition 0.5 C of warming.)

Of course, the new climate agreement is only a foundation for moving forward. But it is a sufficiently broad foundation and structure to make increased ambition over time feasible. Whether the Agreement is truly successful, whether this foundation for progress is effectively exploited over the years ahead by the Parties to the Agreement, is something we will know only ten, twenty, or more years from now.

What is key in the Agreement is the following: the centrality of the INDC structure; the most balanced transparency requirements ever promulgated; provision for heterogeneous linkage, including international carbon markets (through “internationally transferred mitigation outcomes” – ITMOs); explicit clarification that “loss and damage” does not provide a basis for liability or compensation; and 5-year periods for stocktaking and improvement of the INDCs.

Key Elements

Article 2 of the Agreement reaffirms the goal of limiting the global average temperature increase above the pre-industrial level to 2 degrees C, and adds 1.5 degrees C as something even more aspirational.

Article 3 makes it clear that the INDC structure is central and universal for all parties, although Article 4 blurs this a bit with references to the circumstances of developing country Parties. But throughout the Agreement, it is made clear that the firewall from the 1995 Berlin Mandate has
finally been breached. In addition, five-year periods for the submission of revised INDCs (and global stocktaking of the impact of the Paris Agreement) are included in Article 14. The first stocktaking review will be in 2018, with the start date for new INDCs set for 2020.

Article 4 describes transparency requirements (domestic monitoring, reporting, and verification). This is crucial, and represents a striking compromise between the U.S. and Europe, on the one hand, and China and India, on the other hand. All countries must eventually face the same monitoring and reporting requirements, regardless of their status as developed or developing.

Article 6 provides for international policy linkage, and is thereby exceptionally important for the successful exploitation of the foundation provided by the Paris Agreement. The necessary language for heterogeneous international policy linkage (not only international carbon markets, but international linkage of other national policy instruments) is included. I have written about this key issue many times over the past ten years. It can bring down compliance costs greatly, and thereby facilitate greater ambition over time. (See our paper on this from the Harvard Project on Climate Agreements: “Facilitating Linkage of Heterogeneous Regional, National, and Sub-National Climate Policies Through a Future International Agreement” By Daniel Bodansky, Seth Hoedl, Gilbert E. Metcalf and Robert N. Stavins, November 2014.) The Paris Agreement accomplishes this through provision for “internationally transferred mitigation outcomes” (ITMOs). I believe this will eventually prove to be a critical element of the Paris Agreement's policy architecture, because it is this element that provides a mechanism for diverse national policy instruments – including cap-and-trade mechanisms, carbon taxes, and performance standards – to be linked to one another, and thereby to facilitate convergence of diverse carbon shadow prices over time. It is too much to expect that a single global carbon price will emerge any time soon, but if this element of the Agreement is exploited, and linkages occur, then the movement will clearly be in that direction.

In addition, there is considerable discussion of “finance” in Article 9, but the numbers do not appear in the Agreement, only in the accompanying Decision, where item 54 states that by 2025, the Parties will revisit the total quantity of funding, using the current $100 billion target as a “floor.” Finally, the Agreement’s Article 8 on Loss and Damage was necessary from the point of view of the most vulnerable countries, but the most contentious issue is settled in Decision 52, where the Parties agree that this “does not involve or provide a basis for any liability of compensation.” That decision was absolutely essential from the perspective of the largest emitters.

**Anticipated Impacts**

Impacts on businesses will come largely not directly from the Paris Agreement, but from the policy actions that the various Parties undertake domestically in their respective jurisdictions to comply with the Paris Agreement. I am again referring to the 186 countries which submitted INDCs under the Agreement.

In the case of the United States, for example, those policies that will enable the country to achieve its submitted INDC are: the Clean Power Plan (which will accelerate the shift in many states from coal to natural gas for electricity generation, as well as provide incentives in some states for renewable electricity generation, and is already causing many states to think carefully about developing or joining existing cap-and-trade mechanisms); CAFE (motor vehicle fuel efficiency) standards increasing over time (as already enacted by Congress); appliance efficiency standards moving up over time (as also already enacted by Congress); California’s very aggressive climate policy (AB-32); and the northeast states’ Regional Greenhouse Gas Initiative (RGGI).

A number of other countries have put forward fiscal policies and other market-based mechanisms to implement their INDCs. This includes for example, carbon pricing policies (carbon taxes in Chile, India, Mexico and South Africa, a nationwide carbon emission trading system in China, revisions to the EU emissions trading scheme), reforms to fossil fuel subsidies (in Egypt, Ethiopia, India, Morocco, Vietnam), energy tariff and pricing reforms (China, UAE), and subsidies and market-mechanisms to support clean energy (Australia, China, Ghana, Jordan).
These various policies are credible, and they will send price signals that affect business decisions (though only a national carbon tax or a national carbon cap-and-trade system provides across the board incentives with ideal efficiency). In terms of impacts on specific companies, impacts will continue to vary greatly. But a useful generalization is that a major effect of most climate policies is to raise energy costs, which tends to be good news for producers of energy-consuming durable goods (for example, the Boeing Company), because of more rapid turnover of the capital stock, and bad news for consumers of those same energy-consuming durable goods (for example, United Airlines), because of increased operating costs.

An Assessment

In November, 2015, a month before the Paris climate talks commenced, I developed a scorecard with which to assess five key elements that I said would constitute a successful 21st Conference of the Parties:

1. **Include approximately 90 per cent of global emissions** in the set of INDCs that are submitted and part of the Paris Agreement (compared with 14 per cent in the current commitment period of the Kyoto Protocol). This was obviously **achieved**, with total coverage reaching 96 per cent of global emissions.
2. **Establish credible reporting and transparency** requirements. This was **achieved**, through long negotiations between China and India, on the one hand, and Europe and the United States, on the other.
3. **Move forward with finance for climate adaptation (and mitigation)** - the famous $100 billion commitment. This was **achieved**.
4. **Agree to return to negotiations periodically, such as every 5 years**, to revisit the ambition and structure of the INDCs. This was **achieved**.
5. **Put aside unproductive disagreements**, such as on so-called “loss and damage,” which appears to rich countries like unlimited liability for bad weather events in developing countries. Another issue was the insistence by some parties that the INDCs themselves be binding under international law, which would have required Senate ratification of the Agreement in the United States and would have meant that the United States would **not** be a party to the Agreement. There was **success** on both of these.

Conclusion

The Paris Agreement provides a new foundation for meaningful progress on climate change, and represents a dramatic departure from the past 20 years of international climate negotiations. Of course, the problem has not been solved, and it will not be solved for many years to come. But the new approach brought about by the Paris Agreement can be a key step toward reducing the threat of global climate change. One key aspect of the new policy environment fostered by the Agreement will likely be the emergence of more carbon-pricing regimes in diverse countries and regions around the world. The climate talks were a success, but whether the Paris Agreement itself is ultimately successful is something that will be known only after a decade or more. Time will tell.
2. What's New On The Network?

**Blogs on fiscal policies and climate change after Paris**

Recent blog posts by Network members examine how fiscal policies can support climate action following the Paris Agreement.

- [Climate Change: How To Price Paris](#) (IMF Direct)
- [After the agreement in Paris: What next?](#) (UNEP)
- [INDCs at the heart of the Paris Climate Summit: What is the role of fiscal instruments?](#) (UNEP)
- [Fossil Fuel Subsidy Reform: Big at the Climate Talks and in the Agreement?](#) (IISD/GSI)

**#dieselgate: what taxes can do**

At a recent hearing in the European Parliament, Green Budget Europe (GBE) called for ending the preferential tax treatment of diesel cars in the EU given harmful impacts on air pollution and global warming.

See [GBE Briefing](#) and [website](#) for further information.

**Publications**

A number of new publications have been added to the Network website. This includes some of the latest reports and insights on green fiscal policy reforms from the IMF, UNEP, IISD/GSI, GIZ, GBE, Earth Track, and the World Bank. To review the latest publications, please visit the [Policy Insights](#) and [Case Studies](#) pages of the website.

**Country Profiles**

The Network website includes profiles of green fiscal reforms in more than 30 countries around the world. These profiles provide an overview of the fiscal, social and environmental situation in each country and information on green fiscal measures in each country. Please visit the [Country Profiles](#) pages for more details.
3. Recent Events

**Economic Instruments, Fossil Fuel Subsidies and Climate Change – Global Subsidies Initiative**
16 February 2016, Geneva

The Global Subsidies Initiative (GSI) of the International Institute for Sustainable Development (IISD) hosted a webinar on the role of economic instruments—including fossil fuel subsidies, transport fuel duties and carbon taxes—in supporting climate mitigation. Discussions examined the potential of such measures to lower greenhouse gas emissions and generate revenues, and the scope for further integration of economic instruments in countries’ Intended Nationally Determined Contributions (INDCs) moving forward.

**Making Paris Happen: Carbon Markets, Taxes, and Other Policy Solutions for Climate Action – Centre for Global Development**
11 January 2016, Washington DC

The Center for Global Development (CGD) hosted a panel discussion on policy options to spur climate action envisioned in the Paris Agreement. Discussions examined economic tools involving fiscal, financial and macroeconomic policies at the domestic and international level and policy design considerations to help countries meet mitigation pledges, mobilize financing, guide investment and pool climate-related risks.

**Fossil Fuel Subsidies and Climate Change: National action and international phase out – Friends of Fossil Fuel Subsidy Reform & Global Subsidies Initiative**
7 December 2015, Paris

At this event organised by the Friends of Fossil Fuel Subsidy Reform (FFFSR) and Global Subsidies Initiative, participants called for an early end to fossil fuel subsidies, and investments by governments in renewable energy, health and education.

**How fiscal policy reforms can drive a low carbon, inclusive green economy - Green Fiscal Policy Network**
4 December 2015, Paris

The Network together with the German Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety (BMUB) organized a side-event at the COP21 on how fiscal policies, in particular fossil fuel subsidy reform, can support climate objectives. Discussions focused on experiences with fossil fuel subsidy reform, how to better integrate subsidy reform in Intended Nationally Determined Contributions (INDCs), challenges and the way forward.

**High-level event on Carbon Pricing, IMF**
1 December 2015, Paris

The IMF organized a side-event on the role of carbon pricing in countries mitigation pledges put forward for the COP21 in Paris. Discussions examined the case for carbon pricing and key design considerations, the global context of carbon pricing, lessons learnt from country experiences and interactions between carbon pricing and a sustainable financial system.

**Fossil Fuel Subsidy Reform Communiqué Event**
30 November 2015, Paris

The need to phase out fossil fuel subsidies was stressed by heads of state and government from Denmark, New Zealand Norway and Sweden at an event organised by the Friends of Fossil Fuel Subsidy Reform. A Communiqué on Fossil Fuel Subsidy Reform was presented at the event. The
Communiqué, affirmed by more than 40 countries, The Prince of Wales’s Corporate Leaders Group, other corporate entities and international organisations, calls on the international community to increase efforts to phase out perverse fossil fuel subsidies by promoting transparency, ambitious reform and targeted support for the poorest.

**Carbon Pricing Leadership Coalition and Heads of State Carbon Pricing Event**  
30 November 2015, Paris

The [Carbon Pricing Leadership Coalition (CPLC)](https://www.greenfiscalpolicy.org) was officially launched on the opening day of the COP21 with the support of 21 governments and more than 90 businesses and civil society partners. A high-level media event on carbon pricing brought together heads of state and government from France, Chile, Ethiopia, Germany, Mexico and Canada, the President of the World Bank Group, IMF Managing Director and OECD Secretary General. At the event, leaders called on countries and companies to start pricing carbon to help address climate change and transform the global economy.

### 4. Quick Links

- [Green Fiscal Policy Network website](https://www.greenfiscalpolicy.org)
- IMF and Reforming Energy Subsidies
- [UNEP Green Economy Initiative](https://www.unep.org)
- GIZ Environment and Climate Change

The Green Fiscal Policy Network is a partnership between the United Nations Environment Programme (UNEP), the International Monetary Fund (IMF) and Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) which aims to facilitate knowledge sharing, learning and dialogue on fiscal policies to support the green economy. The Network is supported by the International Climate Initiative (IKI) and the German Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety (BMUB).

We invite readers to visit our website, subscribe to our newsletter, send us details of recent or forthcoming events and information on research and initiatives on green fiscal policies. Please also contact us if you are interested in contributing a guest article or other information for future editions of the newsletter.

**Contact:** [greenfiscalpolicy@gmail.com](mailto:greenfiscalpolicy@gmail.com)