

BRIEFING PAPER

THE 2015 CLIMATE NEGOTIATIONS: INTERPRETING PARIS

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INTRODUCTION

From 30 November to 12 December 2015, world leaders gathered in Paris for the 21st Conference of the Parties (COP21), an annual conference held since 1995 among UN member states to coordinate cooperation on international climate change. The ultimate objective was to achieve a legally binding agreement to cut global emissions to prevent global warming from exceeding 2°C above pre-industrial levels, which is regarded as the benchmark for dangerous, unmanageable climate change. The UN has been attempting to orchestrate such a global agreement for over 20 years now, starting in 1992 with a treaty struck in Rio de Janeiro. This was followed by the 1997 Kyoto Protocol, a treaty that imposed emission limits on developed countries only, and by a failed attempt to forge a new deal at Copenhagen in 2009.¹ Despite numerous attempts to curb carbon pollution, global CO₂ emissions have kept rising, increasing by more than 50% over the past two-and-a-half decades.² After years of political deadlock, leaders at COP21 managed, 18 years later, to achieve a universally binding climate accord to replace the Kyoto Protocol, and to signal the beginning of progressive decarbonization of the global economy. This briefing paper aims to offer insights and background information on international climate action, leading up to and including COP21.

¹ Pilita Clark, "Climate Deal: Carbon Dated?," *Financial Times*, December 15, 2015, <http://www.ft.com/intl/cms/s/0/58ecb88c-a30e-11e5-8d70-42b68cfae6e4.html-axzz3uTYWSGji>.

² "Energy and Climate Change: World Energy Outlook Special Report" (Paris: International Energy Agency (IEA), 2015), 26.

EVOLUTION OF THE INTERNATIONAL CLIMATE EFFORT

The world faced its first atmospheric crisis in the 1980s, when the danger of stratospheric ozone depletion became the focus of public attention. That crisis, popularly called the ozone hole, was a consequence of chemicals known as chlorofluorocarbons (CFCs), invented in the late 1920s as a safe alternative to the toxic substances used as early refrigerants and spray can propellants. Their usage grew enormously before it became known that the chemicals had an adverse effect of breaking down the stratosphere, rich in ozone, which protects the earth from the sun's ultraviolet radiation.³ Mounting evidence and the discovery of the Antarctic ozone hole in 1985, led to the adoption of the *Montreal Protocol on Substances That Deplete the Ozone Layer* in 1987, which introduced a freeze on the production of halons and cuts in CFC use and production.⁴ The signing of the Montreal Protocol – the first international agreement to address a global environmental challenge – represented a major accomplishment and a shift in the approach to handling global environmental problems. In the words of Kofi Annan, former UN Secretary-General, it was “perhaps the single most successful international agreement to date”.⁵

Following the Montreal template, in 1988 the UN General Assembly passed a resolution setting up the *Intergovernmental Panel on Climate Change (IPCC)*. The IPCC was tasked to prepare assessments on all aspects of climate change and its impacts, based on available scientific information.⁶ The scientific evidence brought forward by the first IPCC Assessment Report in the 1990s highlighted the importance of climate change as a challenge, which needed international cooperation to tackle its consequences.⁷ Moreover, the same assessment report confirmed that human-made emissions were substantially increasing the atmospheric concentrations of greenhouse gases. IPCC findings thus played a decisive role and contributed to the first UN General Assembly negotiations in December 1990 on what was to become the Framework Convention.

THE UNFCCC REGIME

The foundations of the contemporary climate regime were laid down in 1992, when the text of the *United Nations Framework Convention on Climate Change (UNFCCC)* was adopted, and was subsequently opened for signature at the Earth Summit in Rio de Janeiro in June 1992. Based on the findings presented by the IPCC, Article 2 of the treaty set as its ultimate objective the “stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous

³ The World Bank Group, “Ozone-Depleting Substances: Alternatives,” in *Pollution Prevention and Abatement Handbook* (Washington DC: The International Bank for Reconstruction and Development/The World Bank, 1998), pp. 250–57.

⁴ Ibid.

⁵ “Background for International Day for the Preservation of the Ozone Layer - 16 September,” *United Nations*, accessed August 20, 2015, <http://www.un.org/en/events/ozoneday/background.shtml>.

⁶ “IPCC: History,” *Intergovernmental Panel on Climate Change (IPCC)*, accessed August 20, 2015, https://www.ipcc.ch/organization/organization_history.shtml.

⁷ Ibid.

anthropogenic interference with the climate system”.⁸ However, the convention left decisions about how this was to be accomplished to future negotiations. Every year, the signatories were required to hold a meeting known as a *COP* – short for *Conference of the Parties* – at which operational issues and the future direction of the global climate regime were to be agreed.⁹ Also left unresolved was *how* such decisions would be reached in the future, as there was no agreement on the voting rule. The treaty recognized different responsibilities for greenhouse gas emissions, making a distinction between developed (Annex I and II) and developing (non-Annex I) countries. The latter were exempt from emission reductions and were to be provided with assistance to cope with the adverse effects of climate change (in terms of adaptation costs).¹⁰ Each block saw its interests very differently, resulting in conflicting positions that not only accompanied the adoption of the UNFCCC, but have troubled climate negotiations ever since.¹¹ The UNFCCC entered into force in 1994 and has been ratified, to date, by 197 Parties (196 States and 1 regional economic integration organization).¹²

THE KYOTO PROTOCOL

The third COP produced the *Kyoto Protocol* – an agreement adopted in 1997 that managed to fill in some of the Framework Convention’s gaps. The Protocol was considered “ground breaking” by many in that it imposed specific emission reduction targets on roughly forty industrialized countries of the global North.¹³ As Figure 1 demonstrates, these targets varied from one country to another: while the European Union Member States, for instance, were jointly expected to cut their emissions by 8%, the United States was supposed to achieve a 7% reduction against the 1990 baseline.¹⁴ The overall objective for the Annex I countries was to reduce their aggregate emissions by 5% compared to 1990 levels. Developing countries, however, were not given any targets, as it was considered that they had the right to develop economically without greenhouse gas emission constraints.

Although participating countries were expected to meet their targets primarily through national measures, the Protocol offered three mechanisms to this aim, namely *Emissions Trading*, the *Clean Development Mechanism (CDM)*, and *Joint Implementation (JI)*.¹⁵ These market-based mechanisms instigated the emergence of a global cap-and-trade system. For the Protocol to come into force, ratification by at

⁸ “United Nations Framework Convention on Climate Change” (United Nations, 1992), <http://unfccc.int/resource/docs/convkp/conveng.pdf>.

⁹ Camilla Bausch, Camilla and Michael Mehling, “‘Alive and Kicking’: The First Meeting of the Parties to the Kyoto Protocol,” *Review of European Community & International Environmental Law* 15, no. 2 (September 2006), p. 194.

¹⁰ “United Nations Framework Convention on Climate Change.”

¹¹ Elizabeth Kolbert, “The Weight of the World: Can Christiana Figueres Persuade Humanity to Save Itself?,” August 24, 2015, <http://www.newyorker.com/magazine/2015/08/24/the-weight-of-the-world>.

¹² “UNFCCC: Status of Ratification of the Convention,” *UNFCCC*, accessed August 21, 2015, http://unfccc.int/essential_background/convention/status_of_ratification/items/2631.php.

¹³ During the first commitment period (2008-2012), 37 industrialized countries and the European Community committed to reduce GHG emissions to an average of five percent against 1990 levels. See: “UNFCCC: Kyoto Protocol,” *UNFCCC*, accessed August 23, 2015, http://unfccc.int/kyoto_protocol/items/2830.php.

¹⁴ “Kyoto Protocol: Targets for the First Commitment Period,” *UNFCCC*, accessed August 23, 2015, http://unfccc.int/kyoto_protocol/items/3145.php.

¹⁵ “UNFCCC: Kyoto Protocol.”

least 55 states responsible for at least 55% of global greenhouse gas emissions was required.¹⁶ This finally occurred in 2005, 90 days after Russia ratified the Protocol.

Annex I Parties	Emission target
Austria, Belgium, Bulgaria, Czech Republic, Denmark, Estonia, European Community, Finland, France, Germany, Greece, Ireland, Italy, Latvia, Liechtenstein, Lithuania, Luxembourg, Monaco, Netherlands, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, United Kingdom.	- 8%
United States of America	- 7%
Canada, Hungary, Japan, Poland	- 6%
Croatia	- 5%
New Zealand, Russian Federation, Ukraine	0%
Norway	+ 1%
Australia	+ 8%
Iceland	+ 10%

FIGURE 1: QUANTIFIED TARGETS AS CONTAINED IN ANNEX B TO THE KYOTO PROTOCOL.¹⁷

Before the Kyoto Protocol came into effect, the seventh COP held in 2001 produced the so-called *Marrakesh Accords*. They set out the operational details of the Kyoto Protocol and, in essence, established a functional and effective climate management regime. This regime was institutionally strong, yet complex, with curtailed effectiveness in order to accommodate key ratification countries.¹⁸ Nevertheless, the Accords constituted a clear signal that the world community was prepared to go ahead with the agreement reached in Kyoto, even without the backing of the United States. The Accords related mainly to the rules for implementation of the Kyoto Protocol's market-based mechanisms, the establishment of a compliance mechanism – perhaps the most important component of the Accords – and the elaboration of permissible land use, land-use change and forestry (LULUCF) activities.¹⁹ In addition, the Accords set out details on funding arrangements and capacity-building provisions for developing countries, and provided guidelines for the preparation and implementation of National Adaptation Programmes for Action (NAPAs).²⁰ The agreement reached in Marrakesh thus paved the way for the Protocol's entry into force in February 2005.

To date, 191 states have ratified the Protocol, with the United States remaining the most prominent absentee. Despite the initial degree of enthusiasm for action expressed by the Clinton administration, the Bush administration abandoned previous efforts, refusing to ratify the treaty in 2001.²¹ Although the treaty survived

¹⁶ "UNFCCC: Status of Ratification of the Kyoto Protocol," UNFCCC, accessed August 23, 2015, http://unfccc.int/kyoto_protocol/status_of_ratification/items/2613.php.

¹⁷ "Kyoto Protocol Reference Manual: On Accounting of Emissions and Assigned Amount" (Bonn, Germany: UNFCCC Secretariat, 2008).

¹⁸ Suraje Dessai and Emma Lisa Schipper, "The Marrakesh Accords to the Kyoto Protocol: Analysis and Future Prospects," *Global Environmental Change* 13 (2003): 379.

¹⁹ Philippe Sands and Jacqueline Peel, *Principles of International Environmental Law* (Cambridge: Cambridge University Press, 2012), 285.

²⁰ Ibid.

²¹ Kolbert, "The Weight of the World: Can Christiana Figueres Persuade Humanity to Save Itself?"

in the absence of the United States, Canada did not meet its obligations and, in 2011, became the first country to withdraw from the agreement.²²

²² Ian Austen, "Canada Announces Exit From Kyoto Climate Treaty," *The New York Times*, December 11, 2011, <http://www.nytimes.com/2011/12/13/science/earth/canada-leaving-kyoto-protocol-on-climate-change.html>.

THE COPENHAGEN ACCORD

Since the Kyoto Protocol's entry into force in 2005, world attention has focused on what would follow after the Protocol's first commitment period in 2012. In 2009, the world leaders reconvened for the fifteenth COP in Copenhagen with the aim to reach a formal decision on the future and the nature of a post-2012 climate regime.²³ As it became clear that the emission reduction provisions set out in the Convention were insufficient to limit global temperature rise to 2°C above pre-industrial levels, the Copenhagen talks attempted to establish a stricter compliance regime, and to ensure emission reduction targets for a sufficiently large number of countries, including major developing countries such as China, Brazil and India.²⁴ Despite high expectations, the conference did not result in a legally binding agreement, but it did reach a political agreement – the *Copenhagen Accord* – negotiated among twenty-eight parties to the Convention, including all the world's major economies.²⁵

Country	Voluntary Accord Pledges
Australia	-5% up to -15% or -25% below 2000 levels
Brazil	36.1% to 38.9% below business as usual (BAU) by 2020
Canada	17% below 2005 levels
China	40-45% CO ₂ intensity reduction below 2005 levels by 2020
European Union	20% to 30% below 1990 levels
India	20-25% emissions intensity reduction below 2005 levels by 2020 (excluding agriculture)
Japan	25% below 1990 levels
Mexico	Up to 30% reduction below BAU by 2020
Russian Federation	15-25% reduction below 1990 levels
South Korea	30% below BAU by 2020
United States	In the range of 17% below 2005 levels

FIGURE 2: PLEDGES BY MAJOR ECONOMIES UNDER THE COPENHAGEN ACCORDS FOR 2020.²⁶

Due to objections of a few, the Accord was 'noted' rather than 'adopted', leaving its future status uncertain.²⁷ Nevertheless, a number of key issues were advanced in Copenhagen. First, the long-term goal of limiting the global increase of temperature to 2°C was set. Although no specific limits or national commitments were mandated, the Accord adopted a bottom-up approach and called for voluntary emission reduction pledges from all participating nations. Second, a "pledge and review" framework was established of mitigation commitments by developed countries and mitigation actions by developing countries.²⁸ The Copenhagen talks made it clear that developing countries – not subject to emission reduction – decided to play a more active role in addressing climate change. The countries from the BASIC group

²³ Sands and Peel, *Principles of International Environmental Law*.

²⁴ Melissa Low and Elise Chagué, "COP21 Climate Change Conference: Will Paris Succeed Where Copenhagen Failed?," ESI Policy Brief (Singapore: Energy Studies Institute (ESI), April 21, 2015).

²⁵ Sands and Peel, *Principles of International Environmental Law*.

²⁶ "Appendix I - Quantified Economy-Wide Emissions Targets for 2020," UNFCCC, accessed September 29, 2015, http://unfccc.int/meetings/copenhagen_dec_2009/items/5264.php; "Appendix II - Nationally Appropriate Mitigation Actions of Developing Country Parties," UNFCCC, accessed September 29, 2015, http://unfccc.int/meetings/cop_15/copenhagen_accord/items/5265.php.

(Brazil, South Africa, India and China) supported the renewal of the Kyoto Protocol and played an active role in the negotiation process. As Figure 2 shows, it was also the first time that both developed and developing nations agreed to voluntary emission reduction pledges.²⁹ Altogether, countries accounting for over 80% of the world's emissions came forward with national commitments. Third, significant new funds were put on the table, both for the short and medium term. A *Green Climate Fund* was established and developed countries pledged to support mitigation and adaptation efforts in the developing world in the amount of 30 billion USD for the period 2010-2012, and an additional 100 billion USD by 2020.³⁰

While the status of the Copenhagen agreement was uncertain, Accord pledges were formalized in Cancún in 2010. Emission reduction commitments were formally recognized, an *ad hoc* process was established to clarify the pledges, and a review process was launched as to whether the pledges were adequate.³¹ The Copenhagen Accord (a political agreement) and the *Cancún Agreements* (a set of COP decisions) thus considerably reverted the original UNFCCC approach, establishing a highly flexible architecture, under which developed and developing countries alike could define their own mitigation contributions.³² The final legal form of the regime, however, was left open.

THE DURBAN PLATFORM: TOWARDS A NEW PARADIGM

The subsequent Conferences began to sketch the broad parameters of a new paradigm for the next stage of the regime's evolution. In 2011, an agreement was reached in Durban (COP17) that prolonged the life of the Kyoto Protocol until 2020, created a *Durban Platform for Enhanced Action*, and launched the negotiating process towards a new global agreement in Paris in December 2015.³³ The Durban Platform specified that the Paris outcome was to be "a protocol, another legal instrument or an agreed outcome with legal force under the Convention applicable to all Parties".³⁴

In 2012, the eighteenth COP in Doha, Qatar, adopted the second commitment period of the Kyoto Protocol, to run from 2013 until 2020, and a more detailed roadmap to a 2015 global agreement. The second commitment period required the thirty-eight parties to reduce their overall emissions by at least 18 percent against the 1990 baseline.³⁵ However, the composition of Parties in the second commitment period differed from the first: already in 2011, before the second commitment period began, Canada withdrew from the Protocol; and Russia, Japan and New

²⁷ Daniel Bogdansky, "The Copenhagen Climate Change Conference: A Postmortem," *American Journal of International Law* 104, no. 2 (2010).

²⁸ Sands and Peel, *Principles of International Environmental Law*.

²⁹ Bogdansky, "The Copenhagen Climate Change Conference: A Postmortem."

³⁰ Sands and Peel, *Principles of International Environmental Law*, 295.

³¹ Daniel Bogdansky and Sandra Day O'Connor, "Building Flexibility and Ambition into a 2015 Climate Agreement" (Center for Climate and Energy Solutions (C2ES), June 2014).

³² *Ibid.*

³³ Luigi Carafa, "Climate Change and the 'Big Three': Preparing the Ground for a Post-2020 Global Climate Regime?," Notes Internacionales (Barcelona: Barcelona Centre for International Affairs (CIDOB), November 2014).

³⁴ "Ad Hoc Working Group on the Durban Platform for Enhanced Action," UNFCCC, accessed August 27, 2015, <http://unfccc.int/bodies/body/6645.php>.

³⁵ "UNFCCC: Kyoto Protocol."

Zealand did not renew their commitments for the 2013-2030 period.³⁶ Moreover, regardless of their voluntary pledges, BASIC nations were not legally bound to cut their emissions during either commitment period. As a consequence, the *Doha Amendment* covered only 15 percent of global emissions, and therefore a new mitigation instrument was needed.³⁷

At the nineteenth COP, held in Warsaw in late 2013, a call was made for parties to put forward their “intended nationally determined contributions” to the Paris Agreement in the first quarter of 2015.³⁸ INDC submissions were to indicate the level of commitment ahead of Paris, and to serve as key input for negotiations on post-2020 climate action.

EMISSION CUTS AHEAD OF PARIS CLIMATE TALKS

In the course of 2015, both developed and developing countries were formally submitting their post-2020 climate commitments, known as *Intended Nationally Determined Contributions (INDCs)*. A country’s INDC provided information on its strategic efforts to combat climate change through actions tailored to its own national circumstances.³⁹ These voluntary submissions were to indicate the level of commitment ahead of the Paris talks, and to serve as a building block of the Paris negotiations on post-2020 climate action. Parties were given two implicit deadlines to submit their pledges: 31 March 2015 and 1 October 2015. Based on the submitted INDCs, on 30 October 2015 the UNFCCC Secretariat published a synthesis report, which assessed the aggregate effects of these contributions and indicated opportunities for enhanced action to address climate change in the longer term.⁴⁰

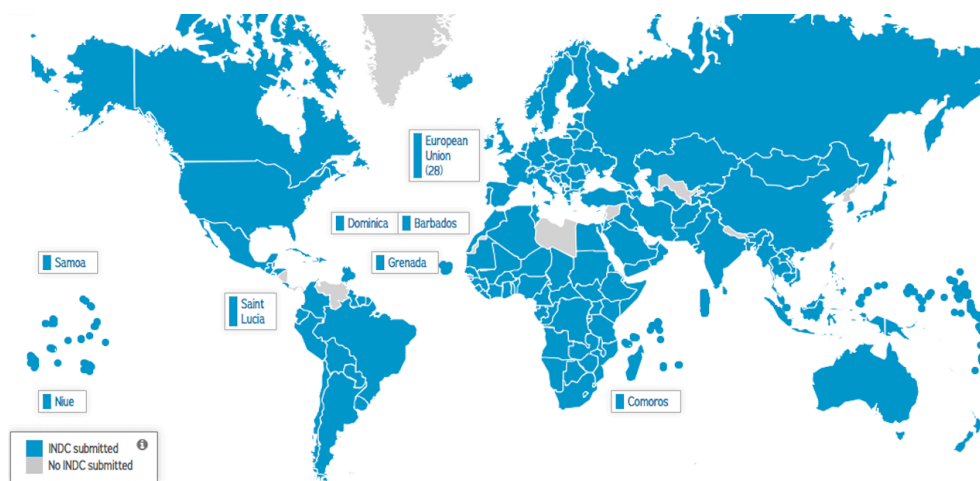


FIGURE 3: MAP OF INDCs SUBMITTED BY 30 NOVEMBER 2015.⁴¹

³⁶ Shawkat Alam et al., *International Environmental Law and the Global South* (Cambridge University Press, 2015).

³⁷ Ibid.

³⁸ “Outcomes of the U.N. Climate Change Conference in Warsaw” (Arlington, VA: Center for Climate and Energy Solutions (C2ES), November 2013).

³⁹ “UNFCCC Opens Portal for Countries to Submit Climate Plans,” *UN Climate Change Newsroom*, accessed September 1, 2015, <http://newsroom.unfccc.int/unfccc-newsroom/unfccc-portal-open-for-countries-to-submit-climate-plans/>.

⁴⁰ “Synthesis Report on the Aggregate Effects of the Intended Nationally Determined Contributions” (UNFCCC, October 30, 2015).

⁴¹ “CAIT Paris Contributions Map – Explore Intended Nationally Determined Contributions (INDCs).”

By 1 October 2015, the second implicit submission deadline, 119 INDCs had been submitted, representing 147 Parties to the UNFCCC – or around 75% of the governments that were expected to forge a global climate agreement in Paris.⁴² By the beginning of the Conference on 30 November 2015, the number of submissions had increased to 155, representing 183 Parties to the UNFCCC (including the European Union), accounting for over 97% of global GHG emissions (see Figure 3).⁴³

⁴² “INDCs - Intended Nationally Determined Contributions,” UNFCCC, accessed October 2, 2015, http://unfccc.int/focus/indc_portal/items/8766.php.

⁴³ Ibid.; “CAIT Paris Contributions Map – Explore Intended Nationally Determined Contributions (INDCs),” World Resource Institute (WRI), accessed November 30, 2015, <http://cait.wri.org/indc/>.

THE PARIS AGREEMENT

Now, how do we judge the outcome of Paris? On the one hand, the general interpretation is that the climate pledges are not sufficient to limit global temperature rise to the recommended 2°C by the end of the century, let alone to 1.5°C, as demanded by the most vulnerable countries. On the other hand, if we do not consider Paris as an end in itself, but as a part of a long-term process of decarbonizing the global economy, the climate pledges signal a breakthrough in terms of international efforts to bend the curve of future emissions, slow the temperature rise and – if strengthened over time – they keep the door open to the 2°C goal.⁴⁴

THE OUTCOME OF THE CONFERENCE

The two-week UN climate summit resulted in the adoption of a universal, legally binding agreement adopted by 196 Parties on 12 December 2015. It opened for ratification in April 2016 and will enter into force in January 2020, when the Kyoto Protocol expires.⁴⁵ The final agreement consists of 29 articles and 31 pages, and revolves around five key points: long-term mitigation goals, strengthening of climate action in five-year cycles, enhanced transparency, adaptation to dangerous impacts of climate change, and climate finance.



FIGURE 4: TIMELINE FOR SIGNATURE AND RATIFICATION OF THE PARIS AGREEMENT.⁴⁶

In the Paris Agreement there are both binding and non-binding components: the nationally-determined targets themselves are not binding, but it is mandatory for all countries to prepare, communicate and maintain their targets, and pursue domestic measures in order to achieve them.⁴⁷ The legally binding provisions relate to measurement, reporting and verification of emission reduction commitments.

⁴⁴ "Synthesis Report on the Aggregate Effects of the Intended Nationally Determined Contributions".

⁴⁵ "Adoption of the Paris Agreement: Proposal by the President" (Paris: United Nations Framework Convention on Climate Change (UNFCCC), December 12, 2015).

⁴⁶ Eliza Northrop and Katherine Ross, "After COP21: What Needs to Happen for the Paris Agreement to Take Effect?," *World Resource Institute (WRI)*, January 21, 2016, <http://www.wri.org/blog/2016/01/after-cop21-what-needs-happen-paris-agreement-take-effect>.

⁴⁷ Jennifer Morgan and Eliza Northrop, "Form AND Function: Why the Paris Agreement's Legal Form Is So Important," *World Resource Institute (WRI)*, December 16, 2015, <http://www.wri.org/blog/2015/12/form-and-function-why-paris-agreement%E2%80%99s-legal-form-so-important>.

Signatories to the Agreement will be required to use the same methods to measure their emissions, report on them in the same format and frequency, and have them verified through an independent technical process, which will allow tracking the progress of implementing commitments, as well as “naming and shaming” of those countries that default.⁴⁸ However, no punishment or penalties were set up within the agreement.

The Paris deal specifies a temperature limit of “well below 2°C”, and states there should be “efforts” to limit temperature rise to 1.5°C above pre-industrial levels (Article 2), as demanded by the most vulnerable countries. To achieve this goal, countries will aim to peak global GHG emissions “as soon as possible” and to achieve a “balance” between emissions and sinks in the second half of the century (Article 4). This effectively means reaching net-zero GHG emissions after 2050, although no specific timeline is provided. Countries will do so taking equity, sustainable development and poverty into account. Countries further agreed to increase ambition over time, acknowledging that the current provisions are not sufficient to achieve the long-term 2°C temperature limit. By 2020, signatories are required to come back with new or updated national climate plans, and to submit new contributions every five years thereafter (Article 4). Each subsequent national climate plan should be more ambitious. In addition, the Agreement established a regular assessment of collective efforts – called the ‘Global Stocktake’ – taking into account mitigation, adaptation and support (Article 14). In 2018, a facilitative dialogue will take place to take stock of the collective efforts, in order to gather information to prepare future commitments (CP.20). This process will be repeated every five years and the first post-2020 stocktake will take place in 2023 (Article 14; see Figure 5).

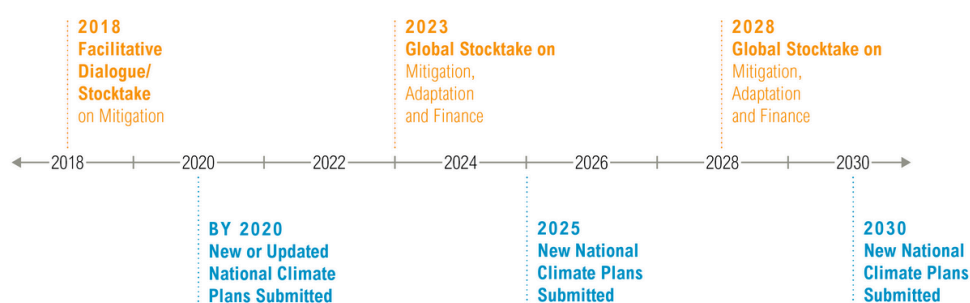


FIGURE 5: AMBITION MECHANISM IN THE PARIS AGREEMENT.⁴⁹

The agreement recognizes adaptation as a central issue for global climate action, on par with mitigation (Article 7). Signatories recognize a global goal of “enhancing adaptive capacity, strengthening resilience and reducing vulnerability to climate change”, including an adequate adaptation response in the light of the 2°C long-term goal. The countries are bound to engage in an adaptation planning process, and are

⁴⁸ Ibid.

⁴⁹ Eliza Northrop, “Not Just for Paris, but for the Future: How the Paris Agreement Will Keep Accelerating Climate Action,” *World Resource Institute (WRI)*, December 14, 2015, <http://www.wri.org/blog/2015/12/not-just-paris-future-how-paris-agreement-will-keep-accelerating-climate-action>.

required to “submit and update periodically” their adaptation communications. This cycle of action is similar to the mitigation cycle.

The Paris Agreement places a legal obligation on developed countries to continue to provide and mobilize finance means to support developing countries in their mitigation and adaptation efforts (Article 9). The Agreement also encourages other countries to provide support on a voluntary basis. Developed countries further agreed to continue their 2020 commitment of mobilizing USD 100 billion annually, and to set a “new collective quantified goal” by 2025, from a floor of USD 100 billion per year, which is the current ambition (CP.54).

The Agreement acknowledges the importance of loss and damage, which refers to the serious impacts of climate change when mitigation and adaptation fail. The Agreement sets out details of what needs to be considered as loss and damage, separating the issue of loss and damage from adaptation, makes permanent the Warsaw International Mechanism (WIM) on Loss and Damage, and establishes a task force on climate-related displacement within the WIM (Article 8, CP. 48-52).⁵⁰ Liability and compensation were, however, deliberately excluded.

The Agreement establishes an enhanced transparency framework and binds all countries to report “regularly” on their emissions and their efforts to reduce them (Article 13). For “those developing country Parties that need it in the light of their capacities”, the Agreement sets out “flexible” rules on reporting. The information provided by all countries will be subject to a “facilitative, non-intrusive, non-punitive” system of review that will track countries’ progress. In addition, developing countries are required to report on the finance and support needed and received; and developed countries on the finance and support they provide.

SUCCESS, FAILURE, OR UNDECIDED?

In its *Synthesis report on the aggregate effects of the intended nationally determined contributions (INDCs)*, the UNFCCC provided an estimate of emissions resulting from the INDCs in 2025 and 2030. According to the report, implementation of the INDCs communicated by 1 October 2015 would put 2025 global emissions at 55.2 (52.0 to 56.9)⁵¹ GtCO₂-equivalent and 56.7 (53.1 to 58.6) GtCO₂-equivalent in 2030.⁵² The synthesis report did not directly assess temperature change by 2100 under the INDCs.⁵³ However, other analyses did. For instance, the Climate Action Tracker (CAT)

⁵⁰ “At COP19 (November 2013) in Warsaw, Poland, the COP established the Warsaw International Mechanism for Loss and Damage associated with Climate Change Impacts (Loss and Damage Mechanism), to address loss and damage associated with impacts of climate change, including extreme events and slow onset events, in developing countries that are particularly vulnerable to the adverse effects of climate change.” See full explanation by the UNFCCC at: UNFCCC, “Warsaw International Mechanism for Loss and Damage”, accessed October 1, 2015, http://unfccc.int/adaptation/workstreams/loss_and_damage/items/8134.php.

⁵¹ Ranges indicate 20 to 90 percent ranges and single values indicate medians. The estimates are presented as median values and associated ranges, owing to the various assumptions and conditions specified by Parties in their submissions and uncertainties associated with gaps in information.

⁵² “Synthesis Report on the Aggregate Effects of the Intended Nationally Determined Contributions”, 9.

⁵³ “Global Response to Climate Change Keeps Door Open to 2 Degree C Temperature Limit,” UNFCCC, October 30, 2015, <http://newsroom.unfccc.int/unfccc-newsroom/indc-synthesis-report-press-release/>.

estimates the impact of the INDCs on temperature to around 2.7°C by 2100.⁵⁴ According to CAT, this is an improvement of 0.4°C compared to the predicted results of December 2014, before any INDCs were formally submitted.⁵⁵

The analysis of CAT suggests that the outcome is insufficient in terms of climate result. However, as mentioned before, if we do not consider Paris as an end in itself, but as part of a long-term process of decarbonizing the global economy, the climate pledges represent a slowdown in future emissions growth, making it possible to stay below the 2°C temperature rise.⁵⁶

The level of participation can be considered an important sign of success. For the first time in the history of climate negotiations, a large number of nations have come forward with their own voluntary climate pledges in a relatively short period of time. By the beginning of the negotiations on 30 November 2015, 184 Parties to the UNFCCC (including the European Union) had submitted their INDCs in preparation for the Paris talks.⁵⁷ The Paris Agreement concluded with pledges from 187 countries, together accounting for over 97% of global GHG emissions recorded in 2012.⁵⁸ Undoubtedly, there is a shared awareness that climate change poses a real danger – an awareness accompanied by an unprecedented level of support for the need to act.

Moreover, the division between developing and developed countries that accompanied previous negotiations has been removed. Exempt from obligatory emission reduction targets under the Kyoto Protocol, developing countries came forward with their voluntary pledges ahead of the Paris talks, and played an active role throughout the negotiation process, voicing their concern over the negotiating text as well as over the insufficient levels of financing.⁵⁹ In addition, ‘deserters’ of the Kyoto Protocol re-entered into the joint process. Canada – the first nation to pull out of the Protocol in 2011⁶⁰ – has made a turn-around on climate needs, following Trudeau’s arrival into office.⁶¹ In a similar vein, Japan and Russia are back on board and joining forces on climate change action. The United States, which never ratified the Kyoto Protocol in the first place, has been leading global efforts to address climate change ahead of the Paris talks. It is evident that after a period of disagreements over a Kyoto-style framework, the major emitters and past ‘deserters’ have joined forces again, which helped to build momentum for the Paris

⁵⁴ “2.7°C Is Not Enough - We Can Get Lower: Climate Action Tracker Update” (Climate Action Tracker, December 8, 2015).

⁵⁵ Ibid.

⁵⁶ “Synthesis Report on the Aggregate Effects of the Intended Nationally Determined Contributions.”

⁵⁷ “INDCs - Intended Nationally Determined Contributions.”

⁵⁸ “CAIT Paris Contributions Map – Explore Intended Nationally Determined Contributions (INDCs).”

⁵⁹ Ed King, “UN Climate Text Swells as G77 Flexes Muscles in Bonn,” *Climate Home - Climate Change News*, October 19, 2015, <http://www.climatechangenews.com/2015/10/19/un-climate-text-swells-as-g77-flexes-muscles-in-bonn/>; Ed King, “Life or Death: G77 Demands Climate Finance Guarantee,” *Climate Home - Climate Change News*, October 22, 2015, <http://www.climatechangenews.com/2015/10/22/life-or-death-g77-demands-climate-finance-guarantee/>.

⁶⁰ Austen, “Canada Announces Exit From Kyoto Climate Treaty.”

⁶¹ Charles Mandel, “Canada’s Remarkable Turn-around on Climate Needs to Be Backed by Policy: Stephen Lewis,” *National Observer*, December 8, 2015, <http://www.nationalobserver.com/2015/12/08/news/canadas-remarkable-turn-around-climate-needs-be-backed-policy-stephen-lewis>.

climate talks. The Paris Agreement thus marks a new type of international agreement where developed and developing countries are all involved, engaged contributors, and are united in a common framework.⁶² Moreover, the Paris Agreement and the expected follow-up can be seen as an open invitation to all energy industries to develop their technologies such that they continue to fit within the world carbon budget and even contribute to sustainable development.

SHARED PRIORITIES AND THE COAL CONUNDRUM

The fact that Parties to the UNFCCC agreed on a number of priority areas in the implementation of their INDCs can also be considered a success. Although voluntary in nature, submitted climate pledges reveal shared priority areas worldwide that will define the direction and the speed of decarbonization following COP21.

As Figure 6 illustrates, INDCs signal momentum for action in the areas of renewable energy and energy efficiency, sustainable transport, reduction of methane and other non-CO₂ emissions, as well as in conservation and sustainable management of forests.⁶³

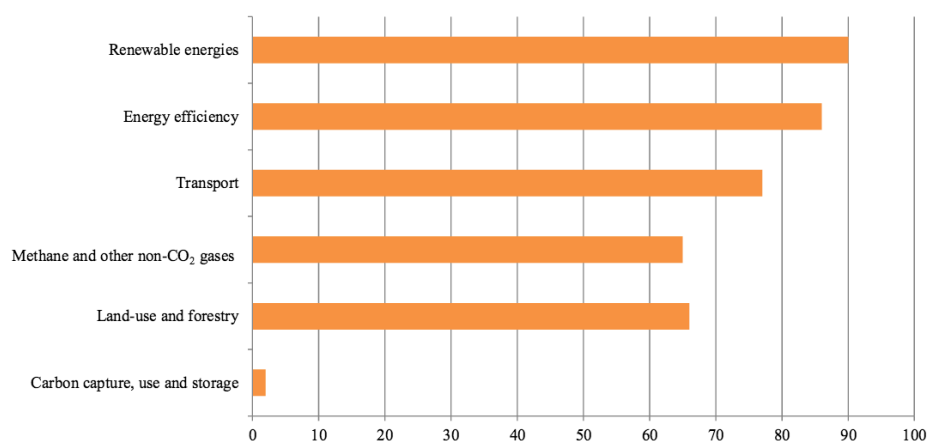


FIGURE 6: PRIORITY AREAS FOR IMPLEMENTATION HIGHLIGHTED IN THE INDCs.⁶⁴

As Figure 6 shows as well, carbon capture, use and storage (CCS) is not considered a priority area by many. This is a sensitive issue, as emerging and developing nations face a two-fold energy challenge: meeting their swelling energy needs in the most affordable way, while simultaneously addressing climate change and participating in a global transition to a clean, low-carbon economy. To satisfy the needs of billions of people who still lack access to basic energy, cheap and locally available fuel is still preferred, which has resulted in soaring global coal use. Compared to other fossil fuels, coal is cheaper, abundant, easy to use, transport and store, as well as free of

⁶² David Waskow and Jennifer Morgan, "The Paris Agreement: Turning Point for a Climate Solution," *World Resource Institute (WRI)*, December 12, 2015, <http://www.wri.org/blog/2015/12/paris-agreement-turning-point-climate-solution>.

⁶³ "Synthesis Report on the Aggregate Effects of the Intended Nationally Determined Contributions," 7.

⁶⁴ "Synthesis Report on the Aggregate Effects of the Intended Nationally Determined Contributions," 34.

geopolitical tensions – attributes that have increased the attractiveness of coal over time.⁶⁵

As coal is the most carbon-intensive fossil fuel, ongoing reliance on coal (without CCS) has had serious implications for climate change mitigation strategies. The lack of progress on a comprehensive international climate change treaty prior to the Paris Agreement can be best understood when taking into account the lack of affordable low-carbon technologies to push out coal. Access to viable alternatives to cheap coal will determine the participation of developing countries in global climate change mitigation efforts in the years to come. This holds particularly true for Asian economies, which have driven the global coal demand in the past years.

Until recently, China's significant and growing coal consumption constituted a considerable complicating factor in climate negotiations. Coal has fuelled much of China's economic growth and constituted as much as 74% of China's energy mix in the mid-2000s.⁶⁶ As the largest consumer of coal, China became the world's biggest CO₂ emitter in 2006 – overtaking the U.S. – and has remained “the centre of the coal world” ever since.⁶⁷ Although coal remains the dominant fuel, the country has been waking up to environmental concerns and has taken steps to reduce coal consumption in its power sector through direct state action. This, in addition to a slowing economic growth, has resulted in falling coal imports and a plateau of China's coal use in 2014.

A shift in the Chinese attitude was also visible throughout the negotiation process. In November 2014, China sent a strong political signal by joining the U.S. in announcing its post-2020 emission reduction targets.⁶⁸ Let us recall that the U.S. and China never agreed to Kyoto, and the divide between the two derailed the Copenhagen talks too.⁶⁹ China's leading role, and the improved U.S.-China relationship on climate change, including close coordination between the U.S. and Chinese negotiation teams, proved crucial in bringing the Paris negotiations to a final deal.⁷⁰

While China's coal demand has seen a declining trend in 2014 and 2015, India and other emerging economies in Southeast Asia – with hundreds of millions of people off-grid – remain committed to coal, which is primarily used for cheap power generation. In its national contribution to a UN climate deal, India outlined the importance of coal fired power generation, stating that coal – currently accounting for 61% of installed capacity – will continue to dominate power generation in 2030.⁷¹ Efforts are underway to substantially increase coal production over the next few

⁶⁵ “Coal,” *International Energy Agency (IEA)*, accessed December 15, 2015, <http://www.iea.org/topics/coal/>.

⁶⁶ “BP Statistical Review 2015: China's Energy Market in 2014” (BP, 2015).

⁶⁷ “Medium-Term Coal Market Report 2014 Factsheet” (International Energy Agency (IEA), 2014).

⁶⁸ The U.S. committed to achieving economy-wide emissions reduction of 26-28% below 2005 levels by 2025, while making its best efforts to achieve the upper end of this target. China committed to peak its emissions by around 2030 (possibly earlier) and to achieve a share of 20% non-fossil fuel use in primary energy consumption by 2030. Source: Shannon Tiezzi, “The US and China Play Chicken Over Climate Change,” *The Diplomat*, November 26, 2013, <http://thediplomat.com/2013/11/the-us-and-china-play-chicken-over-climate-change/>.

⁶⁹ Ibid.

⁷⁰ Shannon Tiezzi, “China Celebrates Paris Climate Change Deal,” *The Diplomat*, December 15, 2015, <http://thediplomat.com/2015/12/china-celebrates-paris-climate-change-deal/>.

⁷¹ “India's Intended Nationally Determined Contribution: Working Towards Climate Justice,” October 2015.

years: India intends to double the coal output by 2020, and plans to build 446 additional coal plants by 2030.⁷²

Although India has repeatedly refused binding emission reduction targets, it has voluntarily embarked on policies to reduce carbon intensity of its economy by 33-35% by 2030, compared to 2005 levels.⁷³ Perhaps the most remarkable policy announcement made by the Modi government in this regard is the intention to increase renewable energy capacity five times the current level, to 175GW by 2022.⁷⁴ However, many in India – including supporters of renewable power generation – see the target for renewable energy as ‘aspirational’, in contrast to the target for coal, which is seen as ‘achievable’.⁷⁵ Meeting the renewable energy target would require India to set up, in just five years, the solar photovoltaic (PV) capacity that the entire world managed to set up until 2013.⁷⁶ In the meantime, India’s carbon output is increasing faster than that of any other country. If India follows the same growth pathway as China, and ‘locks in’ to a high-carbon future, the outlook for global climate efforts is gloomy.

⁷² “India Aims to Start Asia’s Biggest Coal Mine in Five Years,” *The Economic Times*, October 6, 2015, <http://economictimes.indiatimes.com/industry/indl-goods/svs/metals-mining/india-aims-to-start-asias-biggest-coal-mine-in-five-years/articleshow/49235473.cms>; “The Coal Gap: Planned Coal-Fired Power Plants Inconsistent with 2°C and Threaten Achievement of INDCs” (Climate Action Tracker, December 1, 2015).

⁷³ “India’s Intended Nationally Determined Contribution: Working Towards Climate Justice.”

⁷⁴ Lydia Powell, “India’s Approach to Climate Negotiations: From the South to the North?” (Institut français des relations internationales (Ifri), September 2015), 17.

⁷⁵ *Ibid.*, 18.

⁷⁶ *Ibid.*

CONCLUSION

Considering the numerous challenges facing energy security and environment today, international cooperation on energy may have never been as strong as in the run-up to Paris. The joint UNFCCC process was revitalized and the Agreement drew an unprecedented level of support, reflecting a sense of urgency at the highest political level.

If COP21 is considered as part of an ongoing process that was initiated some 20 years ago, enthusiasm is justified. One could argue that the agreement signed in Paris takes the world further than it has ever been on climate policy: not only does it establish a clear pathway for future emissions, but it also strongly recognizes the risks of climate impact, and shifts finance towards low-carbon development. At present national pledges are not enough to limit the temperature increase to the necessary levels. But, as the UNFCCC Synthesis report reveals, the national climate plans bend the curve of future emissions and, if strengthened over time, leave the door open to the 2°C goal.⁷⁷

While one could argue that COP21 is a success in terms of setting a new governance framework for the global climate agenda, it is premature to measure its success in terms of CO₂ emission reduction potential. In order to avoid the outcome of COP21 merely resulting in an empty governance structure, its building blocks – INDCs – need to be translated into concrete CO₂ abatement policy measures. As mentioned, substantial obstacles threaten the translation of intention into action – a prominent one being the importance of coal for the economies and societies of some large CO₂ emitting countries. In this perspective, a final verdict on the extent to which COP21 has been a success or a failure, can only be reached with hindsight.

⁷⁷ “Synthesis Report on the Aggregate Effects of the Intended Nationally Determined Contributions”.



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