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SUMMARY

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Jane A. Leggett
Specialist in Energy and Environmental Policy

The United Nations Framework Convention on Climate Change, the Kyoto Protocol, and the Paris Agreement: A Summary

The United Nations Framework Convention on Climate Change (UNFCCC) has been the principle forum for cooperation among nations on greenhouse gas (GHG)-induced climate change since its adoption in 1992. Its objective is "to stabilize greenhouse gas concentrations in the atmosphere at a level that will prevent dangerous human interference with the climate system, in a time frame which allows ecosystems to adapt naturally and enables sustainable development."

Stabilizing GHG concentrations in the atmosphere requires that the balance of "gross" emissions of GHG minus the removals of GHG from the atmosphere reach "net zero."

Two principles agreed in the UNFCCC are that (1) Parties should act "on the basis of equity and in accordance with their common but differentiated responsibilities and respective capabilities" and (2) developed country Parties should take the lead in combating climate change. The bifurcation of responsibilities among Parties into developed (Annex I) and developing countries has been a major point of contention. Annex I Parties, including the United States, had stronger obligations, such as more rigorous reporting and reviews. A subset listed in Annex II, including the United States, committed to provide agreed financial resources and technology transfers. The commitments are qualitative and collective, not binding on individual Parties.

The first subsidiary agreement to the UNFCCC was the 1997 Kyoto Protocol (KP), which entered into force in 2005. The United States signed but did not ratify the KP and so is not a Party. The developed Parties agreed to reduce GHG emissions by 5% below their 1990 levels, with different targets for each Party.

In 2009, a political declaration, the Copenhagen Accord, led to explicit pledges from many Parties to mitigate GHG, though they remained bifurcated as Annex I and non-Annex I (i.e., developing countries) by both the type of action and the frequency and format of the reporting requirements. In 2010, the Cancun agreements took note of a Copenhagen pledge by developed country Parties to jointly mobilize $100 billion per year by 2020. Funds provided "may come from a wide variety of sources, public and private, bilateral and multilateral, including alternative sources."

The Paris Agreement (PA) is the second major subsidiary agreement under the UNFCCC. The PA defines a collective, long-term objective to hold the GHG-induced increase in temperature to well below 2° Celsius (C) and to pursue efforts to limit the temperature increase to 1.5° C above the pre-industrial level. In the PA, for the first time under the UNFCCC, all Parties participate in a common framework with common guidance, though some Parties are allowed limited flexibility.

The negotiators intended the PA to be legally binding on its Parties, though not all provisions are mandatory. All Parties must submit "Nationally Determined Contributions" (NDCs) containing nonbinding pledges to mitigate GHG emissions. The Parties are to update or submit new NDCs by 2020 and every five years thereafter. Each successive NDC of a Party "will represent a progression" and "reflect its highest possible ambition, reflecting its common but differentiated responsibilities and respective capabilities, in light of different national circumstances."

The PA reiterates the obligation in the UNFCCC for developed country Parties to seek to mobilize financial support to assist developing country Parties with climate change mitigation and adaptation efforts, encouraging *all* Parties to provide financial support voluntarily. The decision to carry out the PA calls for continuing the Cancun collective mobilization through 2025. The Parties agree to set, prior to their 2025 meeting, a new collective, quantified goal of not less than $100 billion annually to assist developing country Parties.

President Trump announced his intention in 2017 to withdraw the United States from the PA as soon as it was eligible. The U.S. Department of State notified the United Nations of U.S. withdrawal on November 4, 2019. The withdrawal takes effect on November 4, 2020, unless the U.S. government postpones or rescinds the withdrawal. A Party may reenter the PA 30 days after depositing notice that it has ratified, accepted, or acceded to the PA.

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Introduction

Multiple decades of scientific studies find that human activities induce global climate change by emitting greenhouse gases (GHGs) from fuel combustion, certain industries, deforestation, and other activities. Scientists researched and assessed the science of GHG-induced climate change for more than 150 years before government policymakers around the world agreed to cooperate to consider how to address its risks to humans and ecosystems.[1] Following several international scientific meetings in 1985-1987, governments decided to establish the Intergovernmental Panel on Climate Change (IPCC), under the auspices of the United Nations Environment Programme and the World Meteorological Organization, to provide them with assessments of climate change science, projected social and economic impacts, and potential response strategies.[2] In 1989, the U.N. General Assembly provided a mandate to negotiate what became, in 1992, the U.N. Framework Convention on Climate Change (UNFCCC).[3]

The UNFCCC has been the primary multilateral vehicle since 1992 for international cooperation among national governments to address GHG-induced climate change. While the UNFCCC is a focal point for national governments, its periphery is one forum, among others, for information sharing, collaboration, and activism also for subnational governments, financial institutions, the private sector, and nongovernmental organizations. This report is not describing these other, increasingly important aspects of international cooperation on climate change.

This report summaries the content of the UNFCCC and its two subsidiary international treaties: the 1997 Kyoto Protocol (KP) and the 2015 Paris Agreement (PA). It also describes the existing guidelines to implement the PA, known as the 2018 Katowice Climate Package. The report highlights information relevant to the 2019 climate change conference, known as COP25. This report is not comprehensive. A number of other CRS reports provide greater detail and nuance on these and other aspects of the international climate change negotiations and cooperation. Some are listed at the end of this report.

The U.N. Framework Convention on Climate Change

The UNFCCC has been the primary multilateral vehicle since 1992 for international cooperation to address GHG-induced climate change.[4] As of January 1, 2020, there are 197 Parties to the UNFCCC that have ratified, accepted, or acceded to the international treaty, including the United States.[5] There is broad agreement that participation of all countries would be necessary to achieve the objective of the UNFCCC, which is stated as follows:

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[1] See CRS Report R45086, *Evolving Assessments of Human and Natural Contributions to Climate Change*, by Jane A. Leggett.

[2] Notable scientific conferences included the International Conference on the Assessment of the Role of Carbon Dioxide and of Other Greenhouse Gases in Climate Variations and Associated Impacts at Villach, Austria, in October 1985, as well as workshops in Villach, Austria, and Bellagio, Italy, in 1987. See the IPCC's history at https://www.ipcc.ch/about/history/.

[3] U.N. General Assembly, "Protection of Global Climate for Present and Future Generations," Resolution 43/53, 1989.

[4] UNFCCC, agreed on May 9, 1992, entered into force March 21, 1994, 1771 U.N.T.S. 107; United Nations, *Treaty Series*, vol. 1771, p. 107; and U.S. depositary notifications C.N.148.1993.

[5] U.N. Treaty Collection, Chapter XXIII. 7. President George H. W. Bush transmitted the signed treaty to the Senate for

> to stabilize greenhouse gas concentrations in the atmosphere at a level that will prevent dangerous human interference with the climate system, in a time frame which allows ecosystems to adapt naturally and enables sustainable development.[6]

Achieving the objective would require both abatement of GHG emissions and facilitation of adaptation to adverse impacts of climate change in order to enable sustainable development. Stabilizing GHG concentrations in the atmosphere requires that net GHG emissions—the balance of "gross" emissions of GHG to the atmosphere and removals of GHG from the atmosphere—reach "net zero" or "carbon neutrality." Removals and sequestration can occur by photosynthesis (vegetation, sea algae) or through advanced technologies.[7] Some increased level of removals, or "sinks," could allow for some amount of human-related GHG emissions to continue. The United States and other Parties to the UNFCCC agreed to this objective when they ratified the treaty.

As a framework convention, this international treaty provides the structure for collaboration and evolution of efforts over decades, as well as the first qualitative step in that collaboration. The UNFCCC does not, however, include quantitative and enforceable objectives and commitments for any Party.

The UNFCCC was adopted in 1992 and entered into force in 1994. The UNFCCC's governing body, the Conference of the Parties (COP), met in its 25th session (COP25) from December 2 to 13, 2019, in Madrid, Spain. Initially, Chilean President Sebastián Piñera stepped forward to host COP25 in place of Brazil following the election of President Jair Bolsonaro.[8] Piñera sought to underscore his efforts to address climate change but ultimately decided that the summit should take place elsewhere due to mass protests in Chile.[9]

All Parties to the UNFCCC, including the United States, have a set of common obligations under the treaty:

- to inventory, report, and mitigate their human-related GHG emissions, including emissions and removals from land uses;
- to cooperate in preparing to adapt to climate change; and
- to assess and review, through the COP, the effective implementation of the UNFCCC, including the commitments therein.

Certain obligations are additional or more specific for the countries that had higher incomes in 1992, and those countries are listed in Annex I of the Agreement. They are commonly referred to as Annex I Parties. All others are non-Annex I Parties. These additional or more specific obligations included more frequent reporting and providing financing and technology transfers, among others.

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its advice and consent in 138 *Congressional Record* 23902 (September 8, 1992). The U.S. Senate gave its advice and consent to ratification in 138 *Congressional Record* 33527 (October 7, 1992). See also S. Treaty Doc. 102-38 (1992); S. Exec. Rept. 102-55. President Bush signed the instrument of ratification and submitted it to the United Nations on October 13, 1992. Depositary notification C.N.148.1993.

[6] UNFCCC, Article 2.

[7] See, for example, CRS Report R41371, *Geoengineering: Governance and Technology Policy*, by Kelsi Bracmort and Richard K. Lattanzio.

[8] Reportedly, Brazil's foreign minister notified the UNFCCC in November 2018 that Brazil would not host the conference. UNFCCC, "Statement on COP25 Host," November 30, 2018, https://unfccc.int/news/statement-on-cop25-host.

[9] See, for example, Ernesto Londoño and Somini Sengupta, "Chile, Rocked by Unrest, Withdraws from Hosting Climate and Trade Summits," *New York Times*, November 1, 2019, https://www.nytimes.com/2019/10/30/world/americas/chile-cop25-apec.html.

The bifurcation of Parties and commitments has been a major point of contention and, some would argue, delay in negotiation and implementation of the climate change agreements (see text box). The UNFCCC and its subsidiary agreements do not define the terms *developing country* or *developed country*. In the 1990s, the Annex I Parties anticipated that developing country Parties would "graduate" into specific commitments and become donor countries as their incomes and emissions grew. As discussed later, related disagreements directly contributed to U.S. nonparticipation in the KP, the collapse of negotiations in Copenhagen in 2009, and the withdrawal or decision of some Parties not to adopt GHG abatement targets in the second period of the KP from 2013 to 2020.

The Copenhagen Accord

In Copenhagen at COP15 in 2009, the COP was unable to adopt an agreement among all Parties as Bolivia, Cuba, Peru, and Venezuela opposed the text. The decision of the COP included a nonbinding political statement, the Copenhagen Accord,[10] which began a turn toward more explicit commitments by non-Annex I Parties to GHG mitigation under the UNFCCC. The Copenhagen Accord specified that the Annex I Parties would implement quantified economy-wide GHG targets for 2020 in an agreed reporting format. Non-Annex I Parties to the UNFCCC would commit to implement mitigation actions to be submitted in an alternative agreed format. At least 43 Annex I Parties (15 Parties, including the United States, plus the EU-28 jointly submitting a pledge) and 47 non-Annex I Parties had submitted nonbinding pledges.[11] While most countries participated, the pledges remained bifurcated by both the type of action and the reporting requirements. Among other differences, Annex I Parties were to submit quantified economy-wide GHG emissions targets for 2020 relative to a baseyear, while non-Annex I Parties were to submit "nationally appropriate mitigation actions" with no associated dates. The submissions would be compiled separately by the Secretariat of the UNFCCC.

[10] "The Copenhagen Accord," in Report of the Conference of the Parties on Its Fifteenth Session, Held in Copenhagen from 7 to 19 December 2009 - Addendum: Part Two: Action Taken by the Conference of the Parties at Its Fifteenth Session: Decisions Adopted by the Conference of the Parties, Decision 1/CP.15, UNFCCC, 2010, https://unfccc.int/process-and-meetings/conferences/past-conferences/copenhagen-climate-change-conference-december-2009/cop-15/cop-15-decisions.

[11] Katarina Buhr et al., *Comparisons of the Copenhagen Pledges*, Centre for Climate Science and Policy Research, 2012, http://www.diva-portal.org/smash/record.jsf?pid=diva2%3A570663&dswid=1644.

Continuing Challenge: Common but Differentiated Responsibilities

Two principles in the UNFCCC are that (1) Parties should act "on the basis of equity and in accordance with their common but differentiated responsibilities and respective capabilities" and (2) that developed country Parties should take the lead in combating climate change.

Thus, the 1992 UNFCCC bifurcated Parties into two broad categories: (1) the 35 highest-income countries at that time, which were listed in Annex I and accepted more specific commitments regarding national plans, reporting, and assisting low-income countries; and (2) all other Parties—the non-Annex I Parties.

As a subset, Annex II Parties are those Annex I Parties (primarily members of the Organisation for Economic Co-operation and Development at that time) that took on further responsibilities (Article 4.3 and 4.4) to provide new and additional financial resources to meet the agreed full costs incurred by "developing country Parties" in complying with the obligation for reporting their emissions, policies, and measures (as listed in Article 12). Annex II Parties also agreed to provide "financial resources, including for the transfer of technology, to meet the agreed full incremental costs in implementing measures" to meet general, common, and unenforceable commitments (as listed in Article 4.1).

The UNFCCC recognizes that the extent to which developing country Parties implement their commitments under the UNFCCC would depend on effective implementation by "developed country Parties" of the commitments regarding financial resources and transfer of technology. The term *non-Annex I Parties* is often treated synonymously with *developing country Parties*—though a number of non-Annex I Parties are now, more than 25 years later, classified by the World Bank as middle- to high-income.

Because GHG emissions come from sources in all countries, only limitations then reductions by all major emitters can stabilize the rising GHG concentrations in the atmosphere. The UNFCCC states that the developed country Parties would take the lead in abating GHG emissions. Many of the delegations negotiating the treaty believed that the non-Annex I Parties would follow with significant GHG mitigation thereafter. By 1995, however, a position of "no new commitments for developing countries" from some leading non-Annex I Parties effectively blocked non-Annex I Parties' participation in quantitative mitigation commitments—even by willing emerging economies—in the KP and prevented a legal agreement in Copenhagen in 2009.

A turning point occurred in the 2009 Copenhagen COP, when the non-binding Copenhagen Accord invited GHG mitigation pledges, albeit differently described, from all Parties. Subsequently, the submission before COP21 in 2015 by China and many other non-Annex I Parties of intended nationally determined contributions (NDCs) contributed to the successful negotiation of the PA in 2015.

Arguably the most significant outcome of the PA is that, for the first time under the UNFCCC, all Parties agreed to participate in a common framework with common guidance, though some Parties are allowed flexibility in line with their capacities. This largely supersedes the bifurcated mitigation obligations of developed and developing countries that held the negotiations in often-adversarial stasis for many years. Still, many discussions under the PA return to debates about how to take into account equity and the principle of common but differentiated responsibilities and respective capabilities in light of different national circumstances.

The Kyoto Protocol (KP)

The first subsidiary agreement to the UNFCCC was the 1997 KP, which entered into force in 2005.[12] The United States signed but did not ratify the KP and so is not a Party to it. The KP established legally binding targets for 37 high-income countries and the European Union (EU) to reduce their GHG emissions on average by 5% below 1990 levels during 2009-2012. It precluded GHG mitigation obligations for developing countries.

All Parties with the Quantified Emissions Limitation and Reduction Obligations (QELROS) under the KP (i.e., GHG targets) were judged in compliance after the end of the first commitment period of 2009-2012.[13] The domestic GHG emissions of some Parties were higher than their

[12] U.N. Treaty Collection, Chapter XXVII Environment, 7.1, "Kyoto Protocol to the United Nations Framework Convention on Climate Change," December 11, 1997, https://treaties.un.org/Pages/ViewDetails.aspx?src=TREATY&mtdsg_no=XXVII-7-a&chapter=27&clang=_en.

[13] UNFCCC, "Assessment of First Phase of Kyoto Protocol," https://unfccc.int/news/assessment-of-first-phase-of-

targets, but as envisioned under the KP, Parties could fulfil their obligations by acquiring emission reduction credits through the three market mechanisms of the treaty: the Clean Development Mechanism, Joint Implementation, and emissions trading.[14]

Most of the high-income Parties—mostly the EU members and other European nations—took on further GHG reduction targets for 2013-2020. The Secretariat's assessment of the emissions of the KP Parties with QELROS, as of November 2018, found:

> Annex I Parties are progressing towards their 2020 targets but gaps remain. Individual Parties have made varying progress towards their 2020 targets: most Parties' emission levels are already below their 2020 targets; some Parties must make further efforts to meet their targets by strengthening implementation of their existing [policies and measures]; and using units from MBMs [market-based mechanisms], if needed, and the contribution from LULUCF [land use, land use change, and forestry], if applicable; other Parties' emissions remained above their base-year level, owing mainly to inadequacy of domestic [policies and measures], high marginal mitigation costs or energy system constraints—they indicated that the use of units from MBMs and, if applicable, the contribution from LULUCF are expected to make a sizable contribution towards achieving their targets.[15]

The United States did not join the KP, and Canada withdrew before the end of the first commitment period. At least in part, their reasons for disengaging from the KP included the non-Annex I Parties' objections to acceding to quantified GHG reduction commitments. While negotiating the second KP commitment period, Australia, Japan, and other Parties also decided to seek an agreement that included commitments on the same terms from all Parties. This led to a mandate, negotiated at the 2011 COP17 in Durban, South Africa, to develop a protocol, another legal instrument, or an agreed outcome with legal force under the UNFCCC applicable to all Parties no later than 2015. The Durban Mandate resulted in the 2015 PA, discussed below.

The Paris Agreement (PA)

The PA is the second major subsidiary agreement under the UNFCCC. The PA is to eventually replace the KP as the primary subsidiary vehicle for process and actions under the UNFCCC. Obama Administration officials stated that the PA is not a treaty requiring Senate advice and consent to ratification.[16]

The U.N. Climate Conference in Madrid included COP25 and the second session of the "Conference of the Parties serving as the meeting of the Parties to the Paris Agreement" (CMA2), along with meetings of other related bodies. Though the United States has given notice of

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kyoto-protocol-published. Several studies found that the Clean Development Mechanism (CDM) approvals of GHG mitigation credits were likely corrupt due to "inappropriate validation of projects, including overestimation, double-counting, or fraudulent trade of carbon credits." Transparency International, "Global Corruption Report: Climate Change—A User's Guide," 2011. A study commissioned by the EU confirmed problems, leading to a decision by the EU that it would not accept CDM credits to count against member state targets, leading to a collapse of credit prices. Öko-Institut e.V., "How Additional Is the Clean Development Mechanism? Analysis of the Application of Current Tools and Proposed Alternatives," March 2016, https://ec.europa.eu/clima/sites/clima/files/ets/docs/clean_dev_mechanism_en.pdf. This is leading many Parties to negotiate for stricter rules for validating and reporting use of emissions trading under the PA, as discussed later in this report.

[14] UNFCCC, "Mechanisms Under the Kyoto Protocol," https://unfccc.int/process/the-kyoto-protocol/mechanisms.

[15] Subsidiary Body for Implementation, "Compilation and Synthesis of Third Biennial Reports of Parties Included in Annex I to the Convention: Executive Summary," FCCC/SBI/2018/INF.8, November 22, 2018.

[16] U.S. Department of State, "Background Briefing on the Paris Climate Agreement," December 12, 2015, https://2009-2017.state.gov/r/pa/prs/ps/2015/12/250592.htm. For example, "In terms of congressional approval, this agreement does not require submission to the Senate because of the way it is structured. The targets are not binding; the elements that are binding are consistent with already approved previous agreements."

withdrawal from the PA, its withdrawal is to take effect no earlier than November 4, 2020. Until then, the United States may participate as a Party. After withdrawal takes effect, the United States may participate in a more limited way as an Observer State.

The PA was intended to be legally binding on its Parties, though not all provisions in it are mandatory. The PA requires that Parties submit nonbinding pledges, in NDCs, to mitigate their GHG emissions and enhance removals. NDCs may also articulate goals to adapt to climate change and cooperate toward these ends, including mobilization of financial and other support. Some provisions are binding, such as those regarding reporting and review, while others are recommendations or collective commitments to which it would be difficult to hold an individual Party accountable. Key aspects of the agreement include:

- **Temperature goal.** The PA defines a collective, long-term objective to hold the GHG-induced increase in temperature to well below 2º Celsius (C) and to pursue efforts to limit the temperature increase to 1.5º C above the pre-industrial level. As discussed below, a periodic "Global Stocktake" is to assess progress toward the goals.
- **Single GHG mitigation framework.** The PA establishes a process, with a ratchet mechanism in five-year increments, for all countries to set and achieve GHG emission mitigation pledges until the long-term goal is met. For the first time under the UNFCCC, all Parties participate in a common framework with common guidance, though some Parties are allowed flexibility in line with their capacities.
- **Accountability framework.** To promote compliance, the PA balances accountability to build and maintain trust (if not certainty) with the potential for public and international pressure ("name-and-shame"). Also, the PA establishes a compliance mechanism designed to use expert-based and facilitative review and response rather than punitive measures. Many Parties and observers are to closely monitor the effectiveness of this strategy.
- **Adaptation.** The PA also requires "as appropriate" that Parties prepare and communicate their plans to adapt to climate change. Parties agreed that adaptation communications would be recorded in a public registry.
- **Collective financial obligation.** The PA reiterates the collective obligation in the UNFCCC for developed country Parties to provide financial resources—public and private—to assist developing country Parties with mitigation and adaptation efforts. It urges scaling up from past financing. The Parties agreed to set, prior to their 2025 meeting, a new collective quantified goal for mobilizing financial resources of not less than $100 billion annually to assist developing country Parties.

The Katowice Package

At COP24/CMA1 in Katowice, Poland, in 2018, the PA Parties agreed to many of the guidelines and processes so that Parties may implement the PA as intended. Despite these agreements, Parties did not resolve several issues of significance. Negotiations on these issues will likely continue at COP26/CMA3 in Glasgow, Scotland, in November 2020. The Katowice Package, as it is often called, clarified some ambiguities in the PA that were considered important to U.S. interests, including guidelines for Parties to report their NDCs, and the Enhanced Transparency Framework (ETF) with guidelines and formats to allow a Party's NDC to be clearly understood. The Katowice Package thereby supports the effectiveness of the consultative compliance

mechanism of the PA (discussed below). Below are brief summaries of key aspects of the Katowice Package.

NDC Guidelines

The Parties to the PA agreed to new guidelines on how to report NDCs. NDCs are to be updated every five years and "will" represent a progress in ambition to abate GHG emissions beyond the previous NDC. While Parties agreed that they "should" use a prescribed format for communicating NDCs, the details are still to be worked out. There is not agreement yet on "common timeframes" for NDCs—whether NDCs should look five or 10 years into the future. Those Parties that submitted NDCs with time frames up to 2025 (including the United States) must communicate "new" NDCs by 2020.[17] Those Parties with NDCs with time frames up to 2030 must communicate or update their NDC in 2020. Were the United States to remain in the PA, it would be required to submit a new NDC in 2020.

The content of NDCs continues to be nationally determined and nonbinding, but it should reflect what a Party intends to achieve. The guidelines apply to NDCs submitted in 2025, but Parties are invited to use an agreed format in updating their NDCs in 2020. The guidelines also address how to report adaptation measures for Parties that wish to include them in their NDCs.

Voluntary Cooperation and Market Mechanisms

The PA provides in Article 6 for Parties to choose voluntary cooperation with other Parties to implement their NDCs. The purpose is to allow "higher ambition in their mitigation and adaptation actions and to promote sustainable development and environmental integrity" (Article 6.1). This article, in other words, allows the use of market mechanisms to achieve GHG mitigation at the lowest possible cost and in concert with sustainable development. This, in theory, can induce Parties to take on stronger GHG mitigation commitments while ensuring that the GHG mitigation constitutes real emission reductions. The debate about the purpose for voluntary cooperation and market mechanisms—and the rules by which they are put into operation—was a major area of work undecided in Katowice.

Adaptation Reporting

Parties agreed to provide information on adaptation priorities, needs, plans, and actions in new "adaptation communications," as well as through the NDCs.

Parties agreed in Katowice that the Adaptation Fund, originally established under the 1997 Kyoto Protocol, will serve the PA. It will be one of the operating entities to the financial mechanism of the PA in addition to the Global Environment Facility and the Green Climate Fund, discussed below

Global Stocktake

As prescribed by the PA, a Global Stocktake is to be held every five years. Parties agreed that the Global Stocktake will consider progress toward the UNFCCC's objective and the PA's aims

[17] Parties to the UNFCCC submitted Intended Nationally Determined Contributions before or after COP21 in Paris, before the PA's entry into force on November 4, 2016. Almost all of the INDCs became NDCs without resubmission by Parties. Parties had not anticipated such rapid entry into force, and the PA was written so that Parties should submit their NDCs by 2020. Consequently, Parties must submit their NDCs by 2020, though they could be identical to existing NDCs, could be new in some aspects, and could be "enhanced"—increasing the ambition of the GHG mitigation pledge therein.

overall. It will use best available science and will cover mitigation, adaptation, financial flows, equity, and means of implementation and support. It will not examine the situations of individual Parties. Parties decided that the next Global Stocktake would be held in 2023.

A number of decisions were reached regarding the Global Stocktake, including the information it is expected to receive from the ETF (discussed below) and other sources from PA processes. Input may also come from nonstate actors, including non-Parties, localities and subnational governments, the business community, and all parts of civil society.

The Enhanced Technology Framework (ETF)

Setting strong requirements for the transparency of each Party's efforts has been a priority of the United States since the negotiation of the UNFCCC. ETF guidelines specify the information that Parties must report with their NDCs. That information is expected to support a "facilitative multilateral consideration of progress," along with biennial transparency reports. Methods for GHG emission estimation and other technical issues will continue to rely on the IPCC's technical advice. According to the U.N. Climate Change Secretariat, all Parties must provide information on the following, as applicable to their NDCs:

- Quantifiable information on the reference point for GHG mitigation actions or targets;
- Time frame and/or periods (i.e., the start and end dates) for implementation;
- Scope and coverage of the NDC (i.e., the quantitative target, which sources and gases are covered);
- National planning processes for developing the NDC and, if available, implementation plans taking into account national circumstances;
- All assumptions and methodological approaches;
- How the Party determines that its NDC is fair and ambitious; and
- How the NDC contributes toward achieving the objective of the UNFCCC.[18]

The guidelines are to facilitate review and, under the committee (below), consultation intended to encourage compliance with commitments. Whether a Party supplies a timely NDC and reports its NDC according to the guidelines is subject to review by a technical group of experts. The adequacy and appropriateness of Parties' NDCs are not subject to review under the ETF.

Flexibility in reporting under the PA is afforded only for those provisions in the modalities, procedures, and guidelines that are specified to allow flexibility. These provisions include (1) the frequency and level of details of reporting, (2) the modalities of the review, and (3) the modalities of the facilitative multilateral consideration of progress. A Party may determine whether to make use of flexibilities. That said, using the flexibilities is not without checks in the review processes.

A developing country that claims inadequate capacity to meet the guidelines and elects to apply a flexibility must make clear in its Biennial Transparency Report that it has applied a flexibility. It must explain the capacity constraint, how it intends to address the constraint, and its intended time frame to make improvements to the constraint(s).[19] The technical review teams may not review these flexibilities.

[18] See U.N. Climate Change Secretariat, "FAQ's on the Operationalization of the Enhanced Transparency Framework," https://unfccc.int/enhanced-transparency-framework.

[19] Decision 18/CMA.1, para. 6, 2018.

Committee

The Parties established a 12-member committee to "facilitate implementation" of the PA. The committee is intended to support Parties' efforts to meet their obligations under the PA as a soft, pro-compliance mechanism. The PA's compliance processes are consultative, not punitive. The committee may initiate a "consideration" should a Party not submit or update its NDC as required or provide mandatory communications.

Financing

In 2009 and 2010, developed countries pledged collectively to mobilize US$100 billion per year by 2020, from public and private sources, to support mitigation and adaptation activities in low-income countries. COP decision 1/CP.21 to adopt the PA (not the PA itself) stated that developed countries intend to continue their existing collective mobilization goal through 2025. Prior to 2025, the Parties shall set a new collective quantified goal for financial resources from a floor of US$100 billion per year. The goal should take into account the needs and priorities of developing countries. Parties may take into consideration the information from the Warsaw International Mechanism for Loss and Damage associated with Climate Change Impacts.

The financial pledges are not an enforceable commitment by developed country Parties. Many stakeholders argue, nonetheless, that the resources are essential to help low-income countries contribute to GHG abatement and adaptation in the context of sustainable development. The financial flows are also important politically—in part to build confidence in the functionality of the UNFCCC and PA and to build trust between the lower and higher income economies.

At COP24 and since then, some countries made pledges toward this goal. Some developing country Parties submitted NDCs with GHG mitigation targets they would achieve unconditionally and more ambitious targets that they would achieve with adequate financial and technical support.

The Green Climate Fund (GCF) was proposed, during the 2009 COP in Copenhagen to be a new international financial institution connected to the UNFCCC.[20] The fund and its design was agreed during the 2011 COP in Durban, South Africa. The GCF was made operational in 2014. The GCF aims to assist lower-income countries in their efforts to combat climate change through the provision of grants and other concessional financing for mitigation and adaptation projects, programs, policies, and activities. The GCF is capitalized by contributions from donor countries and other sources, potentially including innovative mechanisms and the private sector.

The GCF officially opened for capitalization at the U.N. Climate Summit in September 2014. The GCF's initial resource mobilization lasted from 2015 to 2018. As of the most recent published reporting (April 30, 2019), the GCF had raised over $10.2 billion in signed pledges from 48 countries/regions/cities during the resource mobilization period. The GCF board recently approved 10 new projects, increasing the GCF portfolio to 111 projects and increasing the level of related GCF funding to over $5.2 billion in 99 developing countries. On October 25, 2019, during the Pledging Conference for GCF's First Replenishment in Paris, 27 countries made pledges totaling $9.8 billion to cover the next four years of the fund.

Parties agreed in Katowice that the Adaptation Fund, which was established under the KP, will serve the PA, in addition to the Global Environmental Facility[21] and the GCF. Thus far, the

[20] For more information on the GCF and other financial mechanisms under the UNFCCC, see CRS Report R41889, *International Climate Change Financing: The Green Climate Fund (GCF)*, by Richard K. Lattanzio and related products listed below.

[21] For more information, see CRS In Focus IF10144, *The Global Environment Facility (GEF)*, by Richard K. Lattanzio.

Adaptation Fund has been financed by a share of the proceeds of the emissions trading mechanisms under the KP, as well as by voluntary contributions. With a transition from the KP to the PA, arrangements for the flow of funds are not completely agreed upon. Parties agreed that a share of the proceeds from one of the new cooperative mechanisms will continue to provide a share of its proceeds to the Adaptation Fund. A number of Parties oppose proposals—particularly from Parties that are relatively small and perceived to be especially vulnerable to climate change—to use the other two market mechanisms under Article 6 to finance the Adaptation Fund.

Beginning in 2020, developed countries are to submit biennial communications on expected levels of climate finance. The communications are to contain both quantitative and qualitative information. The biennial communications and Secretariat synthesis of the information therein is to inform the Global Stocktakes.

Starting in 2020, the Standing Committee on Finance is to report on the determination of support needs of developing countries to implement the UNFCCC and the PA. The committee is also to consider financial needs consistent with long-term low-emissions and sustainable development pathways.

Technology

The Technology Framework of the PA is to provide overall guidance to the Technology Mechanism that was established under the UNFCCC. The purpose of both is to foster sharing of information and cooperation to develop new, low-emission technologies and technologies to increase resilience to climate change. Supporters viewed the technology mechanisms as important in transforming the set of technologies available, and the economies that use them, as a means to meet the objective of the UNFCCC.

The Technology Framework is to have five focus areas: (1) innovation, (2) implementation, (3) enabling environments and capacity-building, (4) collaboration and stakeholder engagement, and (5) support. The Parties intend that the framework should facilitate the active participation of all relevant stakeholders and take into account sustainable development, gender, the special circumstances of the least developed countries and small island developing states, and the enhancement of capacities of indigenous people and "endogenous technologies." The Executive Committee of the Technology Framework is expected to report on the progress and challenges of its work in joint annual reports with the Climate Technology Centre established under the UNFCCC.

Related CRS Products

- CRS Report R44609, *Climate Change: Frequently Asked Questions About the 2015 Paris Agreement*, by Jane A. Leggett and Richard K. Lattanzio
- CRS In Focus IF10239, *President Obama Pledges Greenhouse Gas Reduction Targets as Contribution to 2015 Global Climate Change Deal*, by Jane A. Leggett
- CRS Report R44092, *Greenhouse Gas Pledges by Parties to the United Nations Framework Convention on Climate Change*, by Jane A. Leggett
- CRS In Focus IF10668, *Potential Implications of U.S. Withdrawal from the Paris Agreement on Climate Change*, by Jane A. Leggett

- CRS Report R44761, *Withdrawal from International Agreements: Legal Framework, the Paris Agreement, and the Iran Nuclear Agreement*, by Stephen P. Mulligan
- CRS Legal Sidebar WSLG1836, *Constitutional Limits on States' Efforts to "Uphold" the Paris Agreement*, by Stephen P. Mulligan
- CRS Report R41889, *International Climate Change Financing: The Green Climate Fund (GCF)*, by Richard K. Lattanzio
- CRS Report R41845, *The Global Climate Change Initiative (GCCI): Budget Authority and Request, FY2010-FY2016*, by Richard K. Lattanzio
- CRS In Focus IF10248, *China's "Intended Nationally Determined Contribution" to Addressing Climate Change in 2020 and Beyond*, by Jane A. Leggett
- CRS In Focus IF10296, *New Climate Change Joint Announcement by China and the United States*, by Jane A. Leggett
- CRS Report R40001, *A U.S.-Centric Chronology of the United Nations Framework Convention on Climate Change*, by Jane A. Leggett
- CRS In Focus IF10904, *Potential Hydrofluorocarbon Phase Down: Issues for Congress*, by Jane A. Leggett

Author Information

Jane A. Leggett
Specialist in Energy and Environmental Policy

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