

## The Montreal Protocol's Technology and Economic Assessment Panel: A Model for Post-Paris Climate-Change Action



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While the Paris Agreement is an historic accord for reducing greenhouse-gas emissions, it was not possible to form consensus at the Twenty-First Conference of the Parties (COP-21) of the United Nations Framework Convention on Climate Change (UNFCCC) in Paris in December 2015—or at meetings of UNFCCC subsidiary bodies during 2016, held in Bonn, Germany—on many details regarding implementation that are technically complicated and time consuming. A UNFCCC “progress tracker” released on October 26, 2016 listed over 100 aspects of the Agreement or its accompanying Decision to be elaborated,<sup>1</sup> a number of which are essential for the Agreement to function.<sup>2</sup>

To speed implementation of the Agreement, which entered into force immediately prior to COP-22 in Marrakech, Morocco in mid-November 2016,<sup>3</sup> the international climate negotiations post-Paris can take a leaf from the Montreal Protocol's Technology and Economic Assessment Panel (TEAP), a standing group for advising on reductions of ozone-depleting chlorofluorocarbons (CFCs) in light of technological advances in non-depleting alternatives.<sup>4</sup> The TEAP has been a core group working through technical challenges that have helped to lay the foundation for continued political support and implementation of Montreal-Protocol commitments. The TEAP has 18 members from

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- 1 The Paris Agreement and Decision 1/CP.21, of which it is formally an Annex, is here: <http://unfccc.int/resource/docs/2015/cop21/eng/10a01.pdf>.
  - 2 The October 26 version and updates, as available, are linked here: [http://unfccc.int/paris\\_agreement/items/9485.php](http://unfccc.int/paris_agreement/items/9485.php).
  - 3 Ed King, “So the Paris Climate Deal Enters Into Force, Then What,” *Climate Change News*, August 26, 2016, [www.climatechangenews.com/2016/08/26/so-the-paris-climate-deal-enters-into-force-then-what](http://www.climatechangenews.com/2016/08/26/so-the-paris-climate-deal-enters-into-force-then-what).
  - 4 Assessment Panels of the Montreal Protocol on Substances That Deplete the Ozone Layer, United Nations System Wide Coordination, Geneva, Switzerland, 1998, [www.un.org/earthwatch/about/docs/scpozone.htm](http://www.un.org/earthwatch/about/docs/scpozone.htm).

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12 countries,<sup>5</sup> with industry, government, and academic experts, including economists, selected primarily on the basis of technical expertise. Attention is given to equitable representation of developed and developing countries, but not with a strict requirement for balance.<sup>6</sup>

An earlier proposal at the climate talks for a UNFCCC technical analysis panel failed in the 1990s, in a political dispute over the balance of representation on that proposed panel, but it may be time to revisit such a body. The core mission of a “climate TEAP” would be to help establish the best set of metrics to track progress in implementing the Paris Agreement at the national scale, but also for state, city, and corporate actors, many of which made emissions-reduction pledges in Paris. A climate TEAP could be instrumental in highlighting and disseminating best practices for mitigation of emissions and adaptation to climate change and in advising on ways to leverage private capital.

A TEAP-like independent body in an advisory role could help to accelerate the next phase for preparation of the modalities, procedures, and guidelines to implement the Paris Agreement. The Montreal Protocol is a relatively business-like operation, exemplified by the TEAP, which parties negotiated in record time in 1985–1987 and which they have amended several times for broader coverage.<sup>7</sup> Of recent note—and relevant to the climate talks—the Montreal parties agreed on October 15, 2016, in Kigali, Rwanda, to phase out hydrofluorocarbons, which had served as substitutes for ozone-depleting refrigerants but which were themselves highly potent greenhouse gases.<sup>8</sup>

By contrast, negotiations in the UNFCCC have historically tended to bog down, which delays progress until the last minute of a negotiation as parties maneuver for perceived political advantage, even on relatively mundane issues such as reporting greenhouse-gas inventories. A recent Chatham House paper described the UNFCCC parties’ pre-Paris negotiating behavior as “typified by maximalist positions, intransigence, and retrenchment” and moving at a glacial pace.<sup>9</sup> The first post-Paris negotiating session in May 2016 in Bonn consumed the first week of a two-week session in an agenda fight, rather than immediately addressing the technical issues that will need to be resolved to operationalize the Agreement.<sup>10</sup>

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5 Members listed at: [http://ozone.unep.org/en/assessment-panels/383/members\\_teap](http://ozone.unep.org/en/assessment-panels/383/members_teap).

6 Assessment Panels, referenced previously, “Organization and Dynamics.”

7 Richard Benedick, *Ozone Diplomacy: New Directions in Safeguarding the Planet*, Harvard University Press, 1991.

8 Coral Davenport, “Nations, Fighting Powerful Refrigerant That Warms Planet, Reach Landmark Deal,” *The New York Times*, October 15, 2016, [www.nytimes.com/2016/10/15/world/africa/kigali-deal-hfc-air-conditioners.html](http://www.nytimes.com/2016/10/15/world/africa/kigali-deal-hfc-air-conditioners.html).

9 Rob Bailey and Shane Tomlinson, “Post-Paris: Taking Forward the Global Climate Change Deal,” Chatham House, April 2016, [www.chathamhouse.org/publication/post-paris-taking-forward-global-climate-change-deal](http://www.chathamhouse.org/publication/post-paris-taking-forward-global-climate-change-deal).

10 *Earth Negotiations Bulletin*, “Summary of the Bonn Climate Change Conference,” May 29, 2016, [www.iisd.ca/vol12/enb12676e.html](http://www.iisd.ca/vol12/enb12676e.html).

Aside from the differences in negotiating styles of the Montreal Protocol and the UNFCCC, a TEAP-like body would have several practical advantages over the Intergovernmental Panel on Climate Change (IPCC), which advises the UNFCCC (and member governments) on scientific aspects of climate change. Compared to the IPCC, the Montreal TEAP is more oriented toward *implementation*—in this case of the next round of reduction of ozone-depleting chemicals. The Protocol’s TEAP is less cumbersome—a much smaller group of scientists than the thousands of lead authors and contributors to IPCC reports.<sup>11</sup> The TEAP also provides more timely and topical advice to Protocol parties, while the IPCC’s comprehensive reports appear in five-to-seven year cycles (although with Special Reports produced more quickly and at shorter intervals). Finally, the TEAP’s reports are peer-reviewed by the broader technical communities of which members are a part and cannot be changed by parties, in contrast to the Summaries for Policy Makers of IPCC reports, whose findings governments can omit or qualify.<sup>12</sup>

The TEAP is more intimately involved with inputs to decisions that the parties make to extend the chemicals-coverage of the Protocol than the IPCC is in parallel UNFCCC decisions. While the TEAP’s findings on specific chemicals are considered in parties’ discussions in this regard, parties to the UNFCCC at the Bonn session in May made little or no reference to the IPCC’s heightened alarm about the acceleration of climate change and the need for urgent action. (The IPCC’s side events at the climate talks did occasionally put the scientific community in direct, informal contact with negotiators.)

The TEAP’s involvement has been critical for the evolution of parties’ commitments to laying the groundwork for adjustments to planned phase-outs—or adding chemicals to new phase-outs—in successive rounds of talks. The Paris Agreement’s provisions for a stock take of progress made in reducing greenhouse-gas emissions and for a five-year cycle for enhancing emissions pledges recall the Protocol’s design for an evolution of commitments.<sup>13</sup> However, the Agreement could use a TEAP’s technical advice to spell out a workable agenda for the stock take, model the economic impacts of a range of enhanced emissions pledges, and examine the costs and benefits of new energy technologies, on which parties can count to help them meet enhanced pledges.<sup>14</sup>

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11 Intergovernmental Panel on Climate Change, “Organization,” World Meteorological Organization, Geneva, Switzerland, 2016, <https://www.ipcc.ch/organization/organization.shtml>.

12 For coordination of the IPCC and TEAP, see Assessment Panels of the Montreal Protocol.

13 See respectively, Article 4.2-3 and Article 14—and corresponding paragraphs in Decision 1/CP.21; <http://unfccc.int/resource/docs/2015/cop21/eng/10a01.pdf>.

14 United Nations Framework Convention on Climate Change, Paris Agreement, Article 14.2, Paris, 2015, <http://unfccc.int/resource/docs/2015/cop21/eng/10a01.pdf>.

The TEAP produces studies of funding requirements for the Multilateral Fund for the Implementation of the Montreal Protocol (MLF), which has provided an incentive for developing economies to participate in the Protocol and consequently helped make the Protocol a universal accord.<sup>15</sup> The Fund is chartered to meet the agreed incremental costs of developing parties to implement chemical control measures.<sup>16</sup> The Fund, in turn, has three implementing agencies that finance working projects, such as converting existing ozone-harmful manufacturers, training personnel, and establishing national ozone offices. The three agencies include the UN Environment Program (UNEP), the UN Development Program (UNDP), and the World Bank.<sup>17</sup>

Comparable TEAP-like studies for the Paris Agreement could help identify funding sources in UNEP and UNDP for the Capacity Building Initiative for Transparency (CBIT) included in the Agreement, which is intended to enhance the transparency of the emissions policies and actions by developing economies that limit their greenhouse-gas emissions.<sup>18</sup> As CBIT's implementing agency, the World Bank's Global Environment Facility (GEF) could be a consumer of potential TEAP-like studies on funding requirements to complement the GEF's internal studies, a TEAP having the advantage of being an independent, objective source of funding ideas drawing on experience of the MLF.

Admittedly, the Montreal TEAP has a smaller writ and impact than a UNFCCC counterpart would have, given the fundamental differences in the structure of the environmental problems. The Protocol and its TEAP are focused on a relatively few ozone-depleting chemical substances, their industrial manufacture, and consumer applications.<sup>19</sup> Emissions of greenhouse gases, on the other hand, arise from energy production and use, which pervade every aspect of the economy, and from agriculture and land use changes—also complex aspects of every economy. The TEAP draws upon more specific research fields of particular chemicals, while the IPCC covers the vast literature of climate science.

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<sup>15</sup> See [www.multilateralfund.org](http://www.multilateralfund.org); and Daniel Esty, "Beyond Kyoto: Learning from the Montreal Protocol," in Joseph E. Aldy and Robert N. Stavins, eds., *Architectures for Agreement: Addressing Climate Change in the Post-Kyoto World*, Cambridge University Press, 2007, p. 266.

<sup>16</sup> Montreal Protocol, Article 10. See United Nations Environment Program, Handbook for the Montreal Protocol on Substances that Deplete the Ozone Layer, "Article 10: Financial Mechanism," <http://ozone.unep.org/en/handbook-montreal-protocol-substances-deplete-ozone-layer/27>.

<sup>17</sup> *Ibid.* While not specified in the Protocol text, the UN Industrial Development Organization (UNIDO) also collaborates.

<sup>18</sup> UNFCCC, Decision 1/CP.21, par. 85, Paris, 2015, <http://unfccc.int/resource/docs/2015/cop21/eng/10a01.pdf>.

<sup>19</sup> Gernot Wagner and Martin Weitzman, *Climate Shock: The Economic Consequences of a Hotter Climate*, Princeton University Press, 2015, pp. 44–45.

Nonetheless, the pragmatic approach and tools the TEAP has developed in the context of the Montreal Protocol could be applied by a TEAP-like body to select provisions of the Paris Agreement that are likely to bog down with “maximalist positions, intransigence and retrenchment” in the next few years. Provisions that are particularly vulnerable to difficult negotiations and that can probably use an objective voice to find middle ground among the parties include stock take and transparency. Developing economies will be sensitive to how these provisions are implemented, in particular with regard to rules and guidelines for tracking emissions or policy implementation that they may consider intrusive.<sup>20</sup> An initial facilitative dialogue in 2018 will force the issue of transparent actions well ahead of the 2023 stock take and would provide an opening for a TEAP to offer its lessons learned.

The idea of a TEAP-like body of experts could be vetted initially in a side event at one of the upcoming COPs or intermediate sessions in Bonn. If the idea gains traction, it would probably be wise for a TEAP to proceed on a selective or experimental basis until its good faith and credibility are well-established with the UNFCCC parties, which are not as accustomed as Protocol parties to active participation by such a body. A key will be to populate a TEAP with scientists and economists with high-standing in their professions who can command the respect of negotiators.

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<sup>20</sup> Gregory Miner and Sara Moarif, “Unpacking Provisions Related to Transparency of Mitigation and Support in the Paris Agreement,” Paper 2016/(2), Organization for Economic Cooperation and Development, Climate Change Expert Group, May 2016, [www.oecd.org/environment/cc/Unpacking-transparency-provisions-Paris-Agreement-CCXG-May2016.pdf](http://www.oecd.org/environment/cc/Unpacking-transparency-provisions-Paris-Agreement-CCXG-May2016.pdf).

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