

Chapter 1

Scoping the Emissions Gap Report 2017

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1.1 Moving towards implementation of the Paris Agreement: 2018 as a critical juncture

The adoption of the Paris Agreement at the 2015 Conference of the Parties to the United Nations Framework Convention on Climate Change (UNFCCC) marks a milestone in international efforts to establish a universal foundation for ambitious climate change action. The Agreement builds on national plans and contributions submitted by almost all Parties to the Convention during 2015: the Intended Nationally Determined Contributions (INDCs). The Agreement entered into force on November 4, 2016, following a very rapid ratification process. As of 15 October 2017, 168 of the 197 Parties to the Convention have ratified the Agreement, thereby turning their Intended Nationally Determined Contributions into Nationally Determined Contributions (NDCs). This report consequently refers to NDCs, unless specifically mentioning a country that has not yet ratified the Agreement.

The Paris Agreement's long-term goal of "holding the increase in the global average temperature to well below 2°C above pre-industrial levels and to pursue efforts to limit the temperature increase to 1.5°C above pre-industrial levels" (UNFCCC, 2015:22) accentuates the urgency of enhanced and immediate mitigation action. In 2015 and 2016, the UN Environment Emissions Gap Reports undertook thorough assessments of the aggregate effects of the NDCs on global greenhouse gas emissions in 2025 and 2030 – the years referred to in the NDCs (UNEP, 2015; 2016). The overall conclusion of these assessments was that although NDCs represent an increase in ambition compared with global greenhouse gas emission levels resulting from a projection of the impacts from the current policies, these contributions are far from the level of ambition required for an emissions pathway consistent with staying below a 2°C, let alone a 1.5°C, temperature increase. Currently, the NDCs cover only around one third of the emission reductions needed by 2030.

Recognizing this significant gap and the urgent need to bridge it, Article 4 of the Paris Agreement specifies that "Each Party shall communicate a nationally determined contribution every five years" and furthermore that "Each Party's successive nationally determined contribution will represent a progression beyond the Party's then current nationally determined contribution and reflect its highest possible ambition" (UNFCCC, 2015a:22). The successive NDCs are to be informed by the global stocktakes, which are specified in Article 14 of the Paris Agreement (UNFCCC, 2015). These stocktakes will take place every five years, starting from 2023, to assess the collective progress towards achieving the objective of the Agreement and its long-term goal.

However, as an important precursor to the global stocktakes, a Facilitative Dialogue will take place during 2018. In line with the subsequent global stocktakes, the purpose of the Facilitative Dialogue is "to take stock of the collective efforts of Parties in relation to progress towards the long-term goal and to inform the preparation of nationally determined contributions" (UNFCCC 2015:4).

During 2017, there have been extensive consultations with Parties on the organization of the Facilitative Dialogue, with a view to reporting their findings to the 23rd Conference of the Parties (COP23) taking place in November 2017. Initial feedback indicates that the dialogue is likely to consist of a preparatory and political phase, with the preparatory phase starting officially at the intersessionals in Bonn in May 2018 and continuing until the 24th Conference of the Parties (COP24) in December 2018. The preparatory phase will include absorbing the information from the 2018 special report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways that the Intergovernmental Panel on Climate Change (IPCC) was invited to produce in the decision to adopt the Paris Agreement (UNFCCC, 2015). The political phase, which is expected to take place at the 24th Conference

of the Parties, will focus in particular on how to strengthen the next NDCs (UNFCCC, 2017).

The year 2018 and the Facilitative Dialogue will be a critical juncture for countries to identify and pursue opportunities to strengthen their mitigation action and raise the ambition of their NDCs by 2020. Indeed, the outcome of the Facilitative Dialogue and the 2020 submission of new or updated NDCs are likely to determine whether it will be feasible to bridge the emissions gap by 2030.

Time lags between implementing policies and actions and the resulting mitigation benefits imply that by delaying the strengthening of NDCs until after the global stocktake in 2023, the opportunity to bridge the emissions gap by 2030 will be lost.

1.2 The Emissions Gap Reports and new aspects included in 2017

The 2017 Emissions Gap Report is the eighth assessment undertaken by UN Environment to provide countries with an independent scientific assessment of how actions and pledges by countries affect the global greenhouse gas emissions trend, and how this compares to emissions trajectories consistent with the long-term goal of the Paris Agreement. The difference has become known as the 'emissions gap'. The reports additionally provide information on options to achieve the emissions reductions necessary to bridge the gap. Based on requests by countries, UN Environment has prepared this eighth Emissions Gap Report to inform the political process, as we move towards full implementation of the Paris Agreement.

In line with previous years, the report provides an update on the progress of G20 members in achieving their Cancun Pledges for 2020 and an overview of global emission trends (Chapter 2). This is followed by an update of the estimated gap between countries' mitigation actions and NDCs for 2030 and the emission levels consistent with pathways that are aligned with the long-term temperature goal of the Paris Agreement (Chapter 3). New for 2017 are brief assessments of the potential implications on the gap of the Kigali Amendment to the Montreal Protocol, and the new global

market-based Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA) under the auspices of the International Civil Aviation Organization (ICAO).

In addition, and to inspire the process of strengthening the NDCs, this 2017 Emissions Gap Report assesses a number of the issues that will be central to bridging the 2030 emissions gap. Firstly, the report provides a systematic review of the sectoral mitigation potential by 2030. The results are positive and unambiguous: technologies and institutional innovations are available to bridge the emissions gap by 2030 at reasonable cost (Chapter 4). Secondly, the report includes a detailed assessment of global developments in the coal sector that also examines the options and barriers for a gradual coal phase-out (Chapter 5). Thirdly, the report looks into the opportunities offered by limiting emissions of short-lived climate pollutants (SLCPs). Reducing these pollutants will limit the rate of short-term warming and, when sustained and combined with CO₂ reductions, will help limit long-term warming, which is the ultimate aim of closing the emissions gap (Chapter 6). Finally, options for land-based and technological carbon dioxide removal that will become increasingly critical over this century to stay within the Paris goals are assessed (Chapter 7).

As in previous years, the 2017 report is based on an assessment approach and has been prepared by a wide range of scientists from around the world. This year, 63 scientists from 49 institutions in 23 countries have contributed to the report.

The assessment builds on all available information, including that reviewed by the IPCC in its fifth assessment report, as well as more recent scientific studies. The assessment production process has been transparent and participatory, involving two rounds of external reviews and overseen by a steering committee. The governments of the countries with specific mention in the report have been invited to comment on the specific assessment findings during the production process.