

3. The gap in 2030 between emission levels under full implementation of conditional NDCs and those consistent with least-cost pathways to the 2°C target is 13 GtCO<sub>2</sub>e. If only the unconditional NDCs are implemented, the gap increases to 15 GtCO<sub>2</sub>e. The gap in the case of the 1.5°C target is 29 GtCO<sub>2</sub>e and 32 GtCO<sub>2</sub>e respectively. This gap has increased compared with 2017 as a result of the expanded and more diverse literature on 1.5°C and 2°C pathways prepared for the IPCC Special Report.

The 2018 Emissions Gap Report draws on a substantial number of new, least-cost scenarios for meeting the 2°C and 1.5°C warming limits. Last year 16 scenarios were available for both the 1.5°C and 2°C pathway categories; this year, there are a total of 85. These new scenarios are more diverse and often set a lower maximum potential for carbon dioxide removal, which in turn results in

deeper emissions reductions over the coming decades to stay within the same overall carbon budget. Each of the scenarios considers least-cost climate change mitigation pathways that start reductions from 2020 and is based on the climate model and set-up used in the IPCC 5<sup>th</sup> Assessment Report.

Three temperature levels – 2°C, 1.8°C and 1.5°C – are chosen to provide a more nuanced overview of pathways that keep warming in the range of 2°C to 1.5°C, including providing an overview of the peak and 2100 temperature outcomes associated with different likelihoods (table ES.1). The inclusion of the 1.8°C level allows a more nuanced interpretation and discussion of the Paris Agreement’s temperature targets.

Current policies are estimated to reduce global emissions in 2030 by around 6 GtCO<sub>2</sub>e compared with

Figure ES.3: Global greenhouse gas emissions under different scenarios and the emissions gap in 2030 (median estimate and 10<sup>th</sup> to 90<sup>th</sup> percentile range).

