

Taking the pulse of global climate action

IIASA plays a leading role in shaping the annual Emission Gap Reports, launched by the UN Environment Programme (UNEP) in 2010. These reports assess whether emissions pledges from countries during the international climate negotiations are on track to limit temperature increase to 2°C or less this century. The reports appear each year to inform governments and the international policy community about the possible gap that needs to be closed in order for the world to follow a globally sustainable pathway toward wider objectives, such as the green economy.

UNEP Emission Gap Reports respond to the yearly needs of the international climate negotiations of the UN Framework Convention on Climate Change (UNFCCC) and complement the scientific assessments of the Intergovernmental Panel on Climate Change (IPCC), which have a 6-7 year publication cycle. IIASA has contributed to all the IPCC reports since 1990, and has been closely involved in shaping the research conducted for the Emission Gap Reports since their 2010 introduction.

The Emission Gap Reports are conceived as a scientific assessment of the peer-reviewed literature on climate change mitigation scenarios. They focus on examining the gap in 2020 or 2030 between emission levels consistent with achieving the 2°C limit in 2100 and the levels expected if country pledges are met.

In each of the five reports in the series to date, UNEP has documented that the gap is large, but can be bridged through urgent collective action that promotes both development goals and climate change mitigation. The 2014 Emissions Gap Report showed, for instance, a gap of approximately 8-10 metric gigatons of CO₂ equivalent (GtCO₂e) in global emissions in 2020 if countries were to implement their current pledges.

IIASA research and expertise in leading roles

IIASA Energy Program researchers have been invited to lead and co-author the UNEP Emissions Gap Report's assessment every year since 2010. They have played leading roles at various stages of the report: both in developing its initial concept and elaborating the analyses. They have also helped redirect the focus of the reports toward emission budgets, and they were instrumental in the analyses underlying estimates of when global CO₂ emissions reach zero levels in scenarios that limit global warming to 2°C.

IIASA models, in particular the MESSAGE Integrated Assessment Modelling framework, have contributed extensively to the UNEP

assessments. Together with its partners, IIASA has also coordinated many of the underlying international model comparisons and is currently hosting various databases on which the UNEP assessment is based.

Impacts

- The UNEP Emissions Gap Report has become one of the most highly cited documents in country interventions in the international climate negotiations, illustrating policymakers' urgent need for pertinent information on these issues.
- IIASA experts have been invited to present and discuss the results of the UNEP Emissions Gap Reports at all climate summits since 2010, facilitating an intense science-policy dialogue.
- IIASA researchers have been invited to the UNFCCC Structured Expert Dialogue (SED). The SED directly informs the UNFCCC's assessment of the adequacy of the long-term global goal of 1.5°C.
- Since the climate summit in Durban (South Africa) in 2011, the UNEP's yearly stocktaking has been fully accepted by UNFCCC process countries. As a result its conclusions have been mirrored in the final decision texts of the subsequent climate summits.
- Many of the concepts and the analysis of the UNEP Gap reports have found their way into the UNFCCC climate negotiations texts, thereby critically and continuously influencing the international climate policy process.



Further information

www.iiasa.ac.at/impacts/emissionsgap