



# The Emissions Gap Report 2012

A UNEP Synthesis Report



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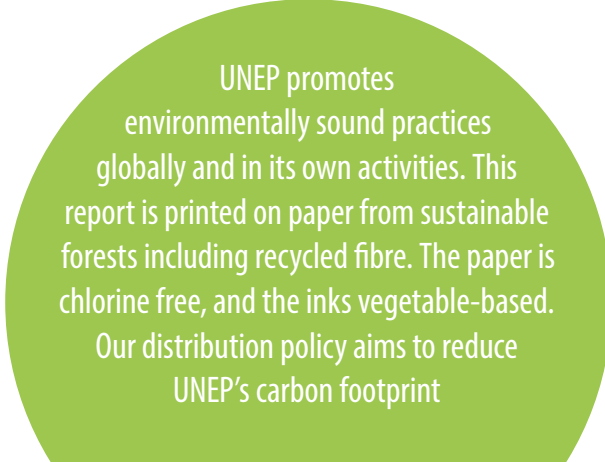
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# Glossary

**Annex I Countries** – the industrialised countries (and those in transition to a market economy) which took on obligations to reduce their greenhouse gas emissions under the United Nations Framework Convention on Climate Change.

**Aerosols** – are collections of airborne solid or liquid particles, with a typical size between 0.01 and 10 micrometer (a millionth of a meter) that reside in the atmosphere for at least several hours. They may influence the climate directly by scattering and absorbing radiation, and indirectly by acting as cloud condensation nuclei or modifying the optical properties and lifetime of clouds.

**BioCCS (Bioenergy and Carbon Capture and Storage)** – is the use of energy produced from biomass where the combustion gases are then captured and stored underground or elsewhere.

**Black Carbon** – a form of air pollution consisting of carbon particles produced by incomplete combustion of fuels. It is produced especially by diesel-powered vehicles, open biomass burning, cooking stoves and other sources.

**'Bottom up' Model** – a model which represents reality by aggregating characteristics of specific activities and processes, considering technological, engineering and cost information.

**Business-as-Usual** – a scenario used for projections of future emissions assuming no action, or no new action, is taken to mitigate emissions.

**Carbon Credits** – tradeable permits which aim to reduce greenhouse gas emissions by giving them a monetary value.

**Carbon Dioxide Equivalent (CO<sub>2</sub>e)** – a simple way to place emissions of various climate change agents on a common footing to account for their effect on climate. It describes, for a given mixture and amount of greenhouse gas, the equivalent weight of carbon dioxide that would have the same global warming ability, when measured

over a specified timescale. For the purpose of this report, greenhouse gas emissions (unless otherwise specified) are the sum of the basket of greenhouse gases listed in this glossary under the entry: "Greenhouse Gases covered by the Kyoto Protocol".

**Carbon Leakage** – according to the IPCC, carbon leakage occurs when there is an increase in carbon dioxide emissions in one country as a result of an emissions reduction by a second country. For example, an increase in local fossil fuel prices resulting from mitigation policies may lead to the re-allocation of production to regions with less stringent mitigation rules (or with no rules at all), thus causing higher emissions in those regions.

**Conditional Pledges** – pledges made by some countries that may be contingent on the ability of national legislatures to enact the necessary laws, or ambitious action from other countries, or realisation of finance and technical support, or other factors.

**Double Counting** – in the context of this report, "double counting" refers to a situation in which the same emission reductions are counted towards meeting two countries' pledges.

**Emissions Pathway** – the trajectory of annual global greenhouse gas emissions over time.

**EU27** – The 27 Member States of the European Union.

**Global Warming Potential (GWP)** – A relative index that enables comparison of the climate effect of the emissions of various greenhouse gases (and other climate changing agents). Carbon dioxide, the greenhouse gas that causes the greatest radiative forcing because of its overwhelming abundance, is chosen as the reference gas.

**Greenhouse Gases covered by the Kyoto Protocol** – include the six main greenhouse gases, as listed in Annex A of the Kyoto Protocol: Carbon dioxide (CO<sub>2</sub>); Methane (CH<sub>4</sub>); Nitrous oxide (N<sub>2</sub>O); Hydrofluorocarbons (HFCs); Perfluorocarbons (PFCs); and Sulphur hexafluoride (SF<sub>6</sub>).



**Integrated Assessment Models** – are models of climate change that seek to combine knowledge from multiple disciplines in the form of equations and/or algorithms. As such, they describe the full chain of climate change, including relevant linkages and feedbacks between socio-economic and biophysical processes.

**Kyoto Protocol** – the international environmental treaty intended to reduce greenhouse gas emissions. It adds additional provisions to the United Nations Framework Convention on Climate Change.

**Lenient Rules** – pledge cases with maximum Annex I “lenient LULUCF credits” and surplus emissions units.

**Likely Chance** – a greater than 66% likelihood. Used in this report to convey the probability of meeting temperature limits.

**Medium Chance** – a 50 to 66% likelihood. Used in this report to convey the probability of meeting temperature limits.

**Montreal Protocol** – the multilateral environmental agreement dealing with the depletion of the earth’s ozone layer.

**Non-Annex I Countries** – a group of developing countries that have signed and ratified the United Nations Framework Convention on Climate Change. They do not have binding emission reduction targets.

**Pledge** – for the purpose of this report, pledges include Annex I targets and non-Annex I actions as included in Appendix I and Appendix II of the Copenhagen Accord.

**Radiative Forcing (RF)** – is the global mean radiation imbalance over the radiation ‘budget’ of the earth’s atmosphere. A positive forcing warms the system, while a negative forcing cools it.

**Scenario** – a description of how the future may unfold based on ‘if-then’ propositions. Climate change scenarios typically include an initial socio-economic situation and a description of the key driving forces and future changes in emissions, temperature, or other climate change-related variables.

**Strict Rules** – pledge cases in which the impact of “lenient LULUCF credits” and surplus emissions units are set to zero.

**‘Top down’ Model** – a model that applies macroeconomic theory, econometric and optimisation techniques to aggregate economic variables. Using historical data on consumption, prices, incomes, and factor costs, top-down models assess final demand for goods and services, and supply from main sectors, such as the energy sector, transportation, agriculture and industry.

**Transient Climate Response** – is a measure of the strength and rapidity of the surface temperature response to greenhouse gas forcing, according to the IPCC.

**20<sup>th</sup> – 80<sup>th</sup> percentile range** – results that fall within the 20-80% range of the frequency distribution of results in this assessment.

**Unconditional Pledges** – pledges made by countries without conditions attached to their fulfilment.

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