

The Emissions Gap Report 2013

A UNEP Synthesis Report

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Glossary

The entries in this glossary are adapted from definitions provided by authoritative sources, such as the Intergovernmental Panel on Climate Change.

Additionality A criterion sometimes applied to projects aimed at reducing greenhouse gas emissions. It stipulates that the emission reductions accomplished by the project would not have happened anyway had the project not taken place.

Aerosols Airborne solid or liquid particles, with a typical size of 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 through scattering and absorbing radiation, and indirectly by modifying the optical properties and lifetime of clouds.

Agroforestry Farming management practice characterized by the deliberate inclusion of woody perennials on farms, which usually leads to significant economic and/or ecological benefits between woody and non-woody system components. In most documented cases of successful agroforestry, tree-based systems are more productive, more sustainable and more attuned to people's cultural or material needs than treeless alternatives. Agroforestry also provides significant mitigation benefits by sequestering carbon from the atmosphere in the tree biomass.

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

Biomass plus carbon capture and storage (BioCCS) Use of energy produced from biomass where the combustion gases are then captured and stored underground or used, for example, in industrial processes. Gases generated through, for example, a fermentation process (as opposed to combustion) can also be captured.

Black carbon The substance formed through the incomplete combustion of fossil fuels, biofuels, and biomass, which is emitted in both anthropogenic and naturally occurring soot. It consists of pure carbon in several linked forms. Black

carbon warms the Earth by absorbing heat in the atmosphere and by reducing albedo, the ability to reflect sunlight, when deposited on snow and ice.

Bottom-up model In the context of this report, a model that represents a system by looking at its detailed underlying parts. For example, a bottom-up model of emissions would compute the various sources of emissions, sector-by-sector, and then add these components together to get a total emissions estimate.

Business-as-usual In the context of this report, a scenario used for projections of future emissions that assumes that no new action will be taken to mitigate emissions.

Carbon credits Tradable permits which aim to reduce greenhouse gas emissions by giving them a monetary value.

Carbon dioxide equivalent (CO₂e) A simplified way to place emissions of various radiative forcing agents on a common footing by accounting for their effect on climate. It describes, for a given mixture and amount of greenhouse gases, the amount of carbon dioxide that would have the same global warming ability, when measured over a specified time period. For the purpose of this report, greenhouse gas emissions (unless otherwise specified) are the sum of the basket of greenhouse gases listed in Annex A of the Kyoto Protocol, expressed as carbon dioxide equivalents assuming a 100-year global warming potential.

Carbon leakage The increase in greenhouse gas emissions occurring outside countries taking domestic mitigation action.

Conditional pledge Pledges made by some countries that are contingent on the ability of national legislatures to enact the necessary laws, ambitious action from other countries, realization 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. **Emission pathway** The trajectory of annual global greenhouse gas emissions over time.

Greenhouse gases covered by the Kyoto Protocol These include the six main greenhouse gases, as listed in Annex A of the Kyoto Protocol: carbon dioxide (CO_2) ; methane (CH_4) ; nitrous oxide (N_2O) ; hydrofluorocarbons (HFCs); perfluorocarbons (PFCs); and sulphur hexafluoride (SF_6) .

Integrated assessment models Models that seek to combine knowledge from multiple disciplines in the form of equations and/or algorithms in order to explore complex environmental problems. As such, they describe the full chain of climate change, including relevant links and feedbacks between socio-economic and biophysical processes.

International cooperative initiatives Initiatives outside of the United Nations Framework Convention on Climate Change aimed at reducing emissions of greenhouse gases by promoting actions that are less greenhouse gas intensive, compared to prevailing alternatives.

Kyoto Protocol The international environmental treaty intended to reduce greenhouse gas emissions. It builds upon the United Nations Framework Convention on Climate Change.

Later-action scenarios Climate change mitigation scenarios in which emission levels in the near term, typically up to 2020 or 2030, are higher than those in the corresponding least-cost scenarios.

Least-cost scenarios Climate change mitigation scenarios assuming that emission reductions start immediately after the model base year, typically 2010, and are distributed optimally over time, such that aggregate costs of reaching the climate target are minimized.

Lenient rules Pledge cases with maximum Annex I land use, land-use change and forestry (LULUCF) credits and surplus emissions units, and maximum impact of double counting.

Likely chance A likelihood greater than 66 percent. Used in this report to convey the probabilities of meeting temperature limits.

Medium chance A likelihood of 50-66 percent. Used in this

No-tillage agriculture Farming practice characterized by the elimination of soil ploughing by seeding a crop directly under the mulch layer from the previous crop. It relies on permanent soil cover by organic amendments, and the diversification of crop species grown in sequences and/or association. This approach avoids emissions caused by soil disturbances related to ploughing, and from burning fossil fuels to run farm machinery for ploughing.

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, and subsequently revised and updated in some instances.

Radiative forcing Change in the net, downward minus upward, irradiance, expressed in watts per square meter (W/m^2) , at the tropopause due to a change in an external driver of climate change, such as, for example, a change in the concentration of carbon dioxide or the output of the Sun. For the purposes of this report, radiative forcing is further defined as the change relative to the year 1750 and, unless otherwise noted, refers to a global and annual average value.

Scenario A description of how the future may unfold based on if-then propositions. 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 land use, land-use change and forestry (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 energy, transportation, agriculture and industry.

Transient climate response Measure of the temperature rise that occurs at the time of a doubling of CO_2 concentration in the atmosphere.

Transiant climata response to sumulative carbon omissions

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