



# The Emissions Gap Report 2016

A UNEP Synthesis Report



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# Glossary

*This glossary is compiled according to the Lead Authors of the Report drawing on glossaries and other resources available on the websites of the following organizations, networks and projects: Intergovernmental Panel on Climate Change (Switzerland), Non-State Actor Zone for Climate Action (Germany), United Nations Environment (Kenya), United Nations Framework Convention on Climate Change (Germany) and World Resources Institute (United States).*

**Adaptation:** The process of adjustment to actual or expected climate and its effects. In human systems, adaptation seeks to moderate or avoid harm or exploit beneficial opportunities. In some natural systems, human intervention may facilitate adjustment to expected climate and its effects.

**Avoid Shift Improve:** A framework proposed for mitigation from the transport sector. Avoid refers to the need to improve the efficiency of the transport system such as through integrated land-use planning. Shift involves servicing demand using low-carbon modes like using public transport instead of motorized private vehicles. Improve relies on vehicle efficiency improvement or alternative vehicle technologies to reduce emissions such as using a vehicle powered by alternative fuels.

**Baseline/reference:** The state against which change is measured. In the context of transformation pathways, the term 'baseline scenarios' refers to scenarios that are based on the assumption that no mitigation policies or measures will be implemented beyond those that are already in force and/or are legislated or planned to be adopted. Baseline scenarios are not intended to be predictions of the future, but rather counterfactual constructions that can serve to highlight the level of emissions that would occur without further policy effort. Typically, baseline scenarios are then compared to mitigation scenarios that are constructed to meet different goals for greenhouse gas emissions, atmospheric concentrations or temperature change. The term 'baseline scenario' is used interchangeably with 'reference scenario' and 'no policy scenario'. In much of the literature the term is also synonymous with the term 'business as usual (BAU) scenario', although the term 'BAU' has fallen out of favour because the idea of 'business as

usual' in century-long socioeconomic projections is hard to fathom.

**Bottom-up model:** In the context of this assessment, a model that represents a system by looking at its detailed underlying parts. Compared to so-called top-down models, which focus on economic interlinkages, bottom-up models of energy use and emissions can provide greater resolution with regards to sectors or mitigation technologies.

**Cancun Pledge:** During 2010, many countries submitted their existing plans for controlling greenhouse gas emissions to the Climate Change Secretariat and these proposals were formally acknowledged under the United Nations Framework Convention on Climate Change (UNFCCC). Developed countries presented their plans in the shape of economy-wide targets to reduce emissions, mainly up to 2020, while developing countries proposed ways to limit their growth of emissions in the shape of plans of action.

**Carbon dioxide budget (or carbon budget):** For a given temperature rise limit, for example a 1.5°C or 2°C long-term limit, the corresponding carbon budget reflects the total amount of carbon emissions that can be emitted for temperatures to stay below that limit. Stated differently, a carbon budget is the area under a carbon dioxide (CO<sub>2</sub>) emission trajectory that satisfies assumptions about limits on cumulative emissions estimated to avoid a certain level of global mean surface temperature rise.

**Carbon dioxide equivalent (CO<sub>2</sub>e):** A 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 CO<sub>2</sub> 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 to the Kyoto Protocol, expressed as CO<sub>2</sub>e assuming a 100-year global warming potential.

**Carbon intensity:** The amount of emissions of CO<sub>2</sub> released per unit of another variable such as gross domestic product, output energy use or transport.

**Carbon offset:** See *Offset*.

**Carbon price:** The price for avoided or released CO<sub>2</sub> or CO<sub>2</sub>e emissions. This may refer to the rate of a carbon tax or the price of emission permits. In many models that are used to assess the economic costs of mitigation, carbon prices are used as a proxy to represent the level of effort in mitigation policies.

**Carbon sequestration:** The process of removing carbon from the atmosphere and depositing it in a reservoir.

**Carbon stock:** The quantity of carbon contained in a carbon pool or reservoir.

**Carbon tax:** A levy on the carbon content of fossil fuels. Because virtually all of the carbon in fossil fuels is ultimately emitted as CO<sub>2</sub>, a carbon tax is equivalent to an emission tax on CO<sub>2</sub> emissions.

**Co-benefits:** The positive effects that a policy or measure aimed at one objective might have on other objectives, without yet evaluating the net effect on overall social welfare. Co-benefits are often subject to uncertainty and depend on, among others, local circumstances and implementation practices. Co-benefits are often referred to as ancillary benefits.

**Conditional INDC:** INDC proposed by some countries that are contingent on a range of possible conditions, such as the ability of national legislatures to enact the necessary laws, ambitious action from other countries, realisation of finance and technical support, or other factors.

**Conference of the Parties (COP):** The supreme body of the Convention. It currently meets once a year to review the Convention's progress.

**Current policy trajectory:** This trajectory is based on estimates of 2020 emissions considering projected economic trends and current policy approaches including policies at least through 2012. Estimates may be based on either official data or independent analysis.

**Double counting:** In the context of this assessment, double counting refers to a situation in which the same emission reductions are counted towards meeting two countries'

**Greenhouse gases:** The atmospheric gases responsible for causing global warming and climatic change. The major greenhouse gases are carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>) and nitrous oxide (N<sub>2</sub>O). Less prevalent, but very powerful, GHGs are hydrofluorocarbons (HFCs), perfluorocarbons (PFCs) and sulphur hexafluoride (SF<sub>6</sub>).

**Gross domestic product:** The sum of gross value added, at purchasers' prices, by all resident and non-resident producers in the economy, plus any taxes and minus any subsidies not included in the value of products in a country or geographic region for a given period, normally one year. Gross domestic product is calculated without deducting for depreciation of fabricated assets or depletion and degradation of natural resources.

**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, from production of greenhouse gases to atmospheric responses. This necessarily includes relevant links and feedbacks between socio-economic and biophysical processes.

**Intended Nationally Determined Contribution (INDC):** Submissions by Parties which identify actions each national government intends to take under the Paris Agreement. INDCs are, in effect, the basis of post-2020 global emission reduction commitments included in the Paris Agreement.

**International Cooperative Initiatives (ICIs):** Initiatives outside the UNFCCC aimed at reducing emissions of climate forcers by, for example, promoting actions that are less greenhouse gas intensive, compared to prevailing alternatives. Cooperative initiatives also involve national and sub-national partners (they are often referred to as, simply, 'cooperative initiatives').

**Kyoto Protocol:** An international agreement, standing on its own, and requiring separate ratification by governments, but linked to the UNFCCC. The Kyoto Protocol, among other things, sets binding targets for the reduction of greenhouse gas emissions by industrialized countries.

**Land use, land-use change and forestry (LULUCF):** A

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