

## GHG Accounting Fundamentals

Have a question about Greenhouse Gas (GHG) accounting? Get your answer here.

FAQ	ANSWER
<b>WHAT IS GHG ACCOUNTING?</b>	A way to account for the emissions and reductions of greenhouse gases in the atmosphere.
<b>WHY ACCOUNT FOR GHG EMISSIONS?</b>	You cannot manage what you do not measure. Information presented in a GHG inventory can help inform corporate strategies and prioritize actions to reduce emissions.
<b>WHEN TO DO A GHG ACCOUNTING?</b>	Now! There is no better time to start identifying and tracking your emissions, especially with government proposed regulations to start mandating emissions reporting.
<b>WHAT IS THE GHG PROTOCOL?</b>	Comprehensive global standardized frameworks to measure and manage greenhouse gas (GHG) emissions. It is comprised of two separate but linked standards: 1) Corporate Accounting and Reporting Standard (guide to quantifying GHG emissions) and 2) Project Quantification Standard (focus on quantification of GHG reductions).
<b>HOW TO DO A GHG ACCOUNTING?</b>	PSC can provide you with a guided approach to measure and manage your organization's environmental footprint and identify opportunities and provide strategies to reduce greenhouse gas emissions. PSC also has the ability to help set you up to do the work in-house using a online software program. Contact your PSC Member Services team member for more details. You can also find more information on the United States Environmental Protection Agency ( <a href="#">EPA website</a> ) that provides guidance and information on how to start the inventory development process. <a href="#">The GHG Protocol website</a> also provides organizations with guidance and requirements when preparing for a GHG inventory.
<b>WHAT ARE COMMON BUSINESS GOALS FOR COMPLETING A GHG ACCOUNTING?</b>	<ul style="list-style-type: none"> <li>• Comply with the reporting of mandatory programs (e.g., Kyoto Protocol, EU Emissions Trading System (EU ETS), etc.)</li> <li>• Manage GHG risks and identify reduction opportunities</li> <li>• Increasing regulations make emissions a risk to businesses</li> <li>• Public reporting and participation in voluntary GHG programs</li> <li>• Increasing stakeholders' interest on corporate disclosure (consumers, employees, socially responsible investors)</li> <li>• Participation in accredited programs</li> <li>• Participation in the carbon markets (voluntary or mandatory)</li> <li>• Recognition of early voluntary action (Note: Early voluntary action that are not documented may not be recognized by future regulations)</li> <li>• The investment community is increasingly demanding that companies are measuring their GHG emissions as part of their due diligence for investment</li> <li>• Businesses in your supply chain are requiring GHG Accounting as part of their own environmental goals.</li> </ul>

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This glossary alphabetically lists the terms relevant to Greenhouse Gas (GHG) accounting and provides a definition of each term, along with examples, where appropriate.

TERM	DEFINITION
<b>ABATEMENT</b>	Refers to reducing the degree or intensity of greenhouse-gas emissions.
<b>ADDITIONALITY</b>	To avoid giving credits to projects that would have happened anyway, rules have been specified to ensure additionality of the project i.e. to ensure the project reduces emissions more than would have occurred in the absence of the project. A project is additional if its proponents can document that realistic alternative scenarios to the proposed project would be more economically attractive or that the project faces barriers that carbon finance helps it overcome.
<b>AFFORESTATION</b>	Planting of new forests on lands that historically have not contained forests.
<b>ANNEX I PARTIES</b>	The industrialized countries listed in Annex I to the Convention, which committed to returning their greenhouse-gas emissions to 1990 levels by the year 2000 as per Article 4.2 (a) and (b). They have also accepted emissions targets for the period 2008-12 as per Article 3 and Annex B of the Kyoto Protocol. They include the 24 original OECD members, the European Union, and 14 countries with economies in transition. (Croatia, Liechtenstein, Monaco, and Slovenia joined Annex 1 at COP-3, and the Czech Republic and Slovakia replaced Czechoslovakia.)
<b>ANNEX II PARTIES</b>	The countries listed in Annex II to the Convention which have a special obligation to provide financial resources and facilitate technology transfer to developing countries. Annex II Parties include the 24 original OECD members plus the European Union.
<b>ANTHROPOGENIC EMISSIONS</b>	GHGs emitted into the atmosphere as a direct result of human activities (i.e., the burning of fossil fuels).
<b>ASSIGNED AMOUNT UNIT (AAU)</b>	A Kyoto Protocol unit equal to 1 metric tonne of CO <sub>2</sub> equivalent. Each Annex I Party issues AAUs up to the level of its assigned amount, established pursuant to Article 3, paragraphs 7 and 8, of the Kyoto Protocol. Assigned amount units may be exchanged through emissions trading.
<b>BASELINE SCENARIO / YEAR</b>	Refers to scenarios / years 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.
<b>BIODIVERSITY</b>	Biological diversity means the variability among living organisms from all sources, this includes diversity within species, between species and of ecosystems.
<b>BIOFUEL</b>	Fuel made from biomass, including wood and wood waste, sulphite lyes (black liquor), vegetal waste (straw, hay, grass, leaves, roots, bark, crops), animal materials/waste (fish and food meal, manure, sewage sludge, fat, oil and tallow), turpentine, charcoal, landfill gas, sludge gas, and other biogas, bioethanol, biomethanol, bioETBE, bioMTBE, biodiesel, biodimethylether, fischer tropsch, bio oil, and all other liquid biofuels which are added to, blended with, or used straight as transportation diesel fuel.
<b>BIOGENIC EMISSIONS</b>	Carbon dioxide (CO <sub>2</sub> ) generated during the combustion or decomposition of biologically-based material.
<b>BIOMASS</b>	Living or recently dead organic material.
<b>BLUE CARBON</b>	Blue carbon is the carbon captured by living organisms in coastal (e.g., mangroves, salt marshes, seagrasses) and marine ecosystems, and stored in biomass and sediments.
<b>CAP-AND-TRADE</b>	A government regulated carbon market that places a limit on GHG emissions.

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<b>CARBON ACCOUNTING</b>	Also known as greenhouse gas (GHG) accounting is the tracking of changes in carbon pools associated with human-induced sources and sinks of greenhouse gas emissions. It covers a wide range of practices to calculate how much carbon dioxide and other greenhouse gases a company or country directly and indirectly emits (Scopes 1, 2, and 3).
<b>CARBON ASSESSMENT</b>	Study to address the environmental aspects and potential environmental impacts from associated carbon emissions (e.g. use of resources and the environmental consequences of releases) throughout a product's life cycle from raw material acquisition through production, use, end-of-life treatment, recycling and final disposal (i.e. cradle-to-grave).
<b>CARBON BUDGET</b>	The amount of CO <sub>2</sub> the world can emit while still having a likely chance of limiting warming to the 2°C target. The Intergovernmental Panel on Climate Change's Fifth Assessment Report, issued in 2014, estimates the world has burned through two-thirds of the budget, and WRI calculates we could spend it entirely in two decades if emissions continue unabated.
<b>CARBON CYCLE</b>	The term used to describe the flow of carbon (in various forms, e.g., as carbon dioxide (CO <sub>2</sub> ), carbon in biomass, and carbon dissolved in the ocean as carbonate and bicarbonate) through the atmosphere, hydrosphere, terrestrial and marine biosphere and lithosphere.
<b>CARBON DIOXIDE</b>	A naturally occurring gas, CO <sub>2</sub> is also a by-product of burning fossil fuels (such as oil, gas and coal), of burning biomass, of land-use changes and of industrial processes (e.g., cement production). It is the principal anthropogenic greenhouse gas (GHG) that affects the Earth's radiative balance. It is the reference gas against which other GHGs are measured and therefore has a global warming potential
<b>CARBON DIOXIDE CAPTURE AND STORAGE (CCS)</b>	A process in which a relatively pure stream of carbon dioxide (CO <sub>2</sub> ) from industrial and energy-related sources is separated (captured), conditioned, compressed and transported to a storage location for long-term isolation from the atmosphere. Sometimes referred to as Carbon capture and storage.
<b>CARBON DIOXIDE CAPTURE AND UTILISATION (CCU)</b>	A process in which CO <sub>2</sub> is captured and then used to produce a new product. If the CO <sub>2</sub> is stored in a product for a climate-relevant time horizon, this is referred to as carbon dioxide capture, utilisation and storage (CCUS). Only then, and only combined with CO <sub>2</sub> recently removed from the atmosphere, can CCUS lead to carbon dioxide removal. CCU is sometimes referred to as carbon dioxide capture and use.
<b>CARBON DIOXIDE EQUIVALENT (CO<sub>2</sub>E)</b>	The unit of measurement that is used to compare the relative climate impact of the different greenhouse gases. The CO <sub>2</sub> e quantity of any greenhouse gas is the amount of carbon dioxide that would produce the equivalent global warming potential.
<b>CARBON DIOXIDE REMOVAL (CDR)</b>	Anthropogenic activities removing CO <sub>2</sub> from the atmosphere and durably storing it in geological, terrestrial, or ocean reservoirs, or in products. It includes existing and potential anthropogenic enhancement of biological or geochemical sinks and direct air capture and storage, but excludes natural CO <sub>2</sub> uptake not directly caused by human activities.
<b>CARBON FLUX</b>	When carbon moves between systems such as land, oceans, and the atmosphere.
<b>CARBON FOOTPRINT</b>	A carbon footprint is the total set of greenhouse gas (GHG) emissions caused by an organisation, event or product over a set period of time, typically 1 year. For simplicity of reporting, it is often expressed in terms of the amount of carbon dioxide, or its equivalent of other GHGs, emitted.
<b>CARBON INTENSITY</b>	The amount of emissions of carbon dioxide (CO <sub>2</sub> ) released per unit of another variable such as gross domestic product (GDP), output energy use or transport.

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<b>CARBON MARKET</b>	A system to reduce GHGs by putting a price on carbon and trading carbon credits.
<b>CARBON NEGATIVE</b>	This means removing CO <sub>2</sub> from the atmosphere, or sequestering more CO <sub>2</sub> than is emitted. This might include a bioenergy process with carbon capture and storage.
<b>CARBON NEUTRAL</b>	Carbon neutrality, or having a net zero carbon footprint, refers to achieving net zero carbon emissions by balancing a measured amount of carbon released with an equivalent amount sequestered, avoided or offset
<b>CARBON OFFSET</b>	One Carbon Offset represents a quantity of greenhouse gas (GHG) emissions reductions, measured in units (metric tons) of carbon dioxide equivalent (CO <sub>2</sub> e) that occur as a result of a discrete project. The emissions reductions from that project can be sold to enable the purchaser/owner to claim those GHG reductions as their own. These reductions can then be used to reduce, or offset, any GHG emissions for which the purchaser is responsible.
<b>CARBON OFFSET STANDARD</b>	A standard that helps to ensure that carbon offset projects meet certain quality requirements, such as additionality and third party verification. Several offset standards exist within the voluntary and compliance carbon markets and each has a different set of requirements depending on its focus and scope.
<b>CARBON SEQUESTRATION</b>	The process of storing carbon in a carbon pool.
<b>CARBON SINK</b>	A source that removes CO <sub>2</sub> from the atmosphere.
<b>CARBON TAX</b>	A fee for GHG emissions.
<b>CARBON TRADING</b>	A market used to manage greenhouse gas emissions; instead of cutting their own emissions to meet mandatory targets, companies can pay someone else to cut theirs, or to sequester carbon.
<b>CERTIFIED EMISSION REDUCTION (CER)</b>	A carbon credit created by a Clean Development Mechanism (CDM) project. One CER corresponds to one ton of CO <sub>2</sub> e emission reductions.
<b>CLEAN DEVELOPMENT MECHANISM (CDM)</b>	A mechanism defined under Article 12 of the Kyoto Protocol through which investors (governments or companies) from developed (Annex B) countries may finance greenhouse gas (GHG) emission reduction or removal projects in developing countries (Non-Annex B), and receive Certified Emission Reduction Units (CERs) for doing so.
<b>CLIMATE CHANGE</b>	A change in the state of the climate that can be identified (e.g., by using statistical tests) by changes in the mean and/or the variability of its properties and that persists for an extended period, typically decades or longer. Climate change may be due to natural internal processes or external forcings such as modulations of the solar cycles, volcanic eruptions and persistent anthropogenic changes in the composition of the atmosphere or in land use. Note that the Framework Convention on Climate Change (UNFCCC), in its Article 1, defines climate change as: 'a change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods.' The UNFCCC thus makes a distinction between climate change attributable to human activities altering the atmospheric composition and climate variability attributable to natural causes.

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<b>CLIMATE NEUTRALITY</b>	Concept of a state in which human activities result in no net effect on the climate system. Achieving such a state would require balancing of residual emissions with emission (carbon dioxide) removal as well as accounting for regional or local biogeophysical effects of human activities. The same concept as carbon neutrality but rather than solely focusing on CO <sub>2</sub> emissions, it extends to zero net anthropogenic greenhouse gas emissions (i.e. including emissions beyond carbon dioxide).
<b>CONTINUOUS EMISSION MONITORING SYSTEM (CEMS)</b>	Monitors installed in energy and industrial operations to continuously collect, record and report emissions data.
<b>CORPORATE SOCIAL RESPONSIBILITY (CSR)</b>	Organizational self-regulation whereby an organization measures and ensures it is operating with current ethical, legal, environmental and international standards and norms.
<b>CRADLE-TO-CRADLE</b>	The life cycle of a product that can be reused and recycled without loss of material integrity.
<b>CRADLE-TO-GATE</b>	The life cycle of a product from generation to when the product leaves the reporting company, i.e. at the factory gates.
<b>CRADLE-TO-GRAVE</b>	The life cycle of a product from generation to disposal.
<b>DECARBONIZATION</b>	The process by which countries, individuals or other entities aim to achieve zero fossil carbon existence. Typically refers to a reduction of the carbon emissions associated with electricity, industry and transport.
<b>DEFORESTATION</b>	Conversion of forest to non-forest.
<b>DIRECT EMISSIONS</b>	Emissions from sources within the reporting organization's organizational boundaries that are owned or controlled by the reporting organization, including stationary combustion emissions, mobile combustion emissions, process emissions, and fugitive emissions.
<b>ENVIRONMENTAL, SOCIAL, &amp; CORPORATE GOVERNANCE (ESG)</b>	Business and investment behaviors that promote environmental sustainability and social equity.
<b>EMBODIED CARBON</b>	The carbon emissions emitted in the creation of any product or service over its lifetime. This is the primary factor in determining the carbon mitigation potential of a technology (Hondo, 2005).
<b>EMISSION FACTOR</b>	GHG emissions expressed on a per unit activity basis (e.g., metric tons of CO <sub>2</sub> emitted per million Btus of coal combusted, or metric tons of CO <sub>2</sub> emitted per kWh of electricity consumed).
<b>EMISSIONS TRADING</b>	A market-based instrument aiming at meeting a mitigation objective in an efficient way. A cap on GHG emissions is divided in tradeable emission permits that are allocated by a combination of auctioning and handing out free allowances to entities within the jurisdiction of the trading scheme. Entities need to surrender emission permits equal to the amount of their emissions (e.g., tonnes of CO <sub>2</sub> ). An entity may sell excess permits to entities that can avoid the same amount of emissions in a cheaper way. Trading schemes may occur at the intra-company, domestic, or international level (e.g., the flexibility mechanisms under the Kyoto Protocol and the EU-ETS) and may apply to carbon dioxide (CO <sub>2</sub> ), other greenhouse gases (GHGs), or other substances.

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<b>ENERGY ATTRIBUTE CERTIFICATE</b>	A category of contractual instruments that conveys information about energy generation to organizations involved in the sale, distribution, consumption, or regulation of electricity (e.g., renewable energy certificates).
<b>EMISSION REDUCTION UNIT</b>	A Kyoto Protocol unit equal to 1 metric tonne of CO <sub>2</sub> equivalent. ERUs are generated for emission reductions or emission removals from joint implementation projects.
<b>FOSSIL FUELS</b>	Carbon-based fuels from fossil hydrocarbon deposits, including coal, oil, and natural gas.
<b>FUGITIVE EMISSIONS</b>	Intentional or unintentional releases from the production, processing, transmission, storage, and use of fuels and other substances, that do not pass through a stack, chimney, vent, exhaust pipe or other functionally equivalent opening (such as releases of sulfur hexafluoride from electrical equipment; hydrofluorocarbon releases during the use of refrigeration and air conditioning equipment; landfill gas emissions; and CH <sub>4</sub> leakage from natural gas transport).
<b>GLOBAL WARMING POTENTIAL</b>	Describes how much impact a gas will have on atmospheric warming over a period of 100 years* compared to carbon dioxide. Each greenhouse gas has a different atmospheric warming impact, and some gases remain in the atmosphere for longer than others. *This standard, also known as GWP100, is the internationally accepted measure, but alternatives exist, including GWP20, modelling impact over 20 years, and GWP*
<b>GREENHOUSE GAS (GHG)</b>	Greenhouse gases are those gaseous constituents of the atmosphere, both natural and anthropogenic, that absorb and emit radiation at specific wavelengths within the spectrum of terrestrial radiation emitted by the Earth's surface, the atmosphere itself and by clouds. This property causes the greenhouse effect. Water vapour (H <sub>2</sub> O), carbon dioxide (CO <sub>2</sub> ), nitrous oxide (N <sub>2</sub> O), methane (CH <sub>4</sub> ) and ozone (O <sub>3</sub> ) are the primary GHGs in the Earth's atmosphere. Moreover, there are a number of entirely human-made GHGs in the atmosphere, such as the halocarbons and other chlorine- and bromine-containing substances, dealt with under the Montreal Protocol. Beside CO <sub>2</sub> , N <sub>2</sub> O and CH <sub>4</sub> , the Kyoto Protocol deals with the GHGs sulphur hexafluoride (SF <sub>6</sub> ), hydrofluorocarbons (HFCs) and perfluorocarbons (PFCs).
<b>GREENWASHING</b>	The deceptive or misleading use of advertising and marketing to overstate an organizations' environmental or sustainable practices.
<b>HYDROFLUORCARBONS</b>	A group of manmade chemicals with various commercial uses (e.g., refrigerants) composed of one or two carbon atoms and varying numbers of hydrogen and fluorine atoms. Most HFCs are highly potent GHGs with 100-year GWPs in the thousands.
<b>INDIRECT EMISSIONS</b>	Emissions that are a consequence of activities that take place within the organizational boundaries of the reporting organization, but that occur at sources owned or controlled by another organization. For example, emissions of electricity used by a manufacturing company that occur at a power plant represent the manufacturer's indirect emissions.
<b>INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE (IPCC)</b>	International body of climate change scientists. The role of the IPCC is to assess the scientific, technical and socio-economic information relevant to the understanding of the risk of human-induced climate change ( <a href="http://www.ipcc.ch">www.ipcc.ch</a> ).
<b>KYOTO MECHANISMS</b>	Three procedures established under the Kyoto Protocol to increase the flexibility and reduce the costs of making greenhouse-gas emissions cuts. They are the Clean Development Mechanism, Emissions Trading and Joint Implementation.

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<b>KYOTO PROTOCOL</b>	The Kyoto Protocol to the United Nations Framework Convention on Climate Change (UNFCCC) is an international treaty adopted in December 1997 in Kyoto, Japan, at the Third Session of the Conference of the Parties (COP3) to the UNFCCC. It contains legally binding commitments, in addition to those included in the UNFCCC.
<b>LEAKAGE</b>	When an emission reduction from a carbon offset project in one area causes an increase in emissions somewhere outside of the project scope i.e. where conserving a forest in one region shifts logging activity to another area of forest.
<b>LIFE CYCLE</b>	Consecutive and interlinked stages of a product system, from raw material acquisition or generation from natural resources to final disposal.
<b>LIFE CYCLE ASSESSMENT (LCA)</b>	Compilation and evaluation of the inputs, outputs and the potential environmental impacts of a product or service throughout its life cycle.
<b>LOCATION-BASED METHOD</b>	Scope 2 method that quantifies the average emissions from energy generated and consumed in an organization's geographic region(s) of operations within the organization's defined boundaries, primarily using grid average emission factors.
<b>MARKET-BASED METHOD</b>	Scope 2 method that quantifies emissions from energy generated and consumed within the organization's defined boundaries, that the organization has purposefully purchased, using emission factors conveyed through contractual instruments between the organization and the electricity or product provider.
<b>METHANE (CH<sub>4</sub>)</b>	Methane is one of the two main greenhouse gases emitted by agriculture, with 28 times the impact of carbon dioxide (CO <sub>2</sub> e). It is largely a product of livestock production, mostly from enteric fermentation in ruminants but also from slurry, manure and waterlogged land.
<b>MITIGATION</b>	The process of finding ways to reduce the greenhouse gas emissions created by human activities.
<b>MOBILE EMISSIONS</b>	Emissions from the combustion of fuels in transportation sources (e.g., cars, trucks, buses, trains, airplanes, and marine vessels), emissions from non-road equipment such as equipment used in construction, agriculture, and forestry and other mobile sources.
<b>MOBILE SOURCE</b>	Emissions sources designed and capable of emitting GHGs while moving from one location to another. An emissions source is not a mobile source if it is a piece of equipment that is designed and capable of being moved from one location to another but does not combust fuel while it is being moved (e.g., an emergency generator).
<b>NATIONALLY DETERMINED CONTRIBUTIONS (NDCs)</b>	A term used under the United Nations Framework Convention on Climate Change (UNFCCC) whereby a country that has joined the Paris Agreement outlines its plans for reducing its emissions. Some countries' NDCs also address how they will adapt to climate change impacts, and what support they need from, or will provide to, other countries to adopt low-carbon pathways and to build climate resilience. According to Article 4 paragraph 2 of the Paris Agreement, each Party shall prepare, communicate and maintain successive NDCs that it intends to achieve.
<b>NEGATIVE EMISSIONS</b>	Removal of greenhouse gases (GHGs) from the atmosphere by deliberate human activities, i.e., in addition to the removal that would occur via natural carbon cycle processes.
<b>NET ZERO CO<sub>2</sub> EMISSIONS</b>	Net zero carbon dioxide (CO <sub>2</sub> ) emissions are achieved when anthropogenic CO <sub>2</sub> emissions are balanced globally by anthropogenic CO <sub>2</sub> removals over a specified period. Net zero CO <sub>2</sub> emissions are also referred to as carbon neutrality.

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<b>NET ZERO EMISSIONS</b>	Net zero emissions are achieved when anthropogenic emissions of greenhouse gases to the atmosphere are balanced by anthropogenic removals over a specified period. Where multiple greenhouse gases are involved, the quantification of net zero emissions depends on the climate metric chosen to compare emissions of different gases (such as global warming potential, global temperature change potential, and others, as well as the chosen time horizon).
<b>NITROUS OXIDE (N<sub>2</sub>O)</b>	Nitrous oxide is the other of the two main greenhouse gases emitted by agriculture, mostly from cropped land – it has 298 times the global warming potential (CO <sub>2</sub> e) of carbon dioxide, and is mostly created by fertiliser production and its breakdown in the soil, together with the decay of other organic matter.
<b>OFFSETS</b>	Represent the reduction, removal, or avoidance of GHG emissions from a specific project that is used to compensate for (i.e., offset) GHG emissions occurring elsewhere.
<b>PARIS AGREEMENT</b>	The Paris Agreement under the United Nations Framework Convention on Climate Change (UNFCCC) was adopted on December 2015 in Paris, France, at the 21st session of the Conference of the Parties (COP) to the UNFCCC. The agreement, adopted by 196 Parties to the UNFCCC, entered into force on 4 November 2016 and as of May 2018 had 195 Signatories and was ratified by 177 Parties. One of the goals of the Paris Agreement is 'Holding the increase in the global average temperature to well below 2°C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5°C above pre-industrial levels', recognising that this would significantly reduce the risks and impacts of climate change. Additionally, the Agreement aims to strengthen the ability of countries to deal with the impacts of climate change. The Paris Agreement is intended to become fully effective in 2020.
<b>PERMANENCE</b>	An offset quality criterion which relates to the robustness and durability of the emission reduction generated by a carbon offset project.
<b>PROCESS EMISSIONS</b>	Emissions resulting from physical or chemical processes other than from fuel combustion. Examples include emissions from manufacturing cement, aluminum, adipic acid, ammonia, etc.
<b>PURCHASE POWER AGREEMENT</b>	A type of contract that allows a consumer, typically a large industrial or commercial entity, to form an agreement with a specific energy generating unit. The contract itself specifies the commercial terms including delivery, price, payment, etc. In many markets, these contracts secure a long-term stream of revenue for an energy project. In order for the consumers to say they are buying the electricity of the specific generator, attributes must be contractually transferred to the consumer with the electricity.
<b>REDUCING EMISSIONS FROM DEFORESTATION AND FOREST DEGRADATION (REDD+)</b>	An effort to create financial value for the carbon stored in forests, offering incentives for developing countries to reduce emissions from forested lands and invest in low-carbon paths to sustainable development (SD). It is therefore a mechanism for mitigation that results from avoiding deforestation. REDD+ goes beyond deforestation and forest degradation, and includes the role of conservation, sustainable management of forests and enhancement of forest carbon stocks.
<b>REFORESTATION</b>	Planting of forests on lands that have previously contained forests but that have been converted to some other use.
<b>REGISTRY</b>	A publicly accessible database that tracks ownership of carbon offsets over their lifetime.
<b>RENEWABLE ENERGY</b>	Energy generated from naturally replenished resources such as sunlight, wind, water and biomass.

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<b>RENEWABLE ENERGY CERTIFICATE (REC)</b>	A type of energy attribute certificate. In the U.S. a REC represents the property rights to the environmental, social and other non-power qualities of renewable electricity generation.
<b>REPORTING YEAR</b>	The year in which the emissions occurred. Members must report emissions on an annual basis (i.e., calendar year or fiscal year).
<b>RETIRE</b>	To permanently remove carbon offsets from market to ensure that they are not re-sold. Offsets are usually retired by giving them individual serial numbers and placing them in an official registry.
<b>SCOPE 1 EMISSIONS</b>	Direct anthropogenic GHG emissions that occur from sources that are controlled or owned by an organization (e.g., emissions associated with fuel combustion in boilers, furnaces, vehicles).
<b>SCOPE 2 EMISSIONS</b>	Indirect anthropogenic GHG emissions associated with the consumption of purchased or acquired electricity, steam, heating, or cooling (collectively referred to as consumed energy).
<b>SCOPE 3 EMISSIONS</b>	All other (non-Scope 2) indirect anthropogenic GHG emissions that occur in the value chain of the reporting company, including both upstream and downstream emissions. Examples include emissions resulting from the extraction and production of purchased materials and fuels, transport-related activities in vehicles not owned or controlled by the reporting organization, use of sold products and services, outsourced activities, recycling of used products, and waste disposal.
<b>SOIL CARBON</b>	Also soil organic carbon (SOC) is carbon stored in organic matter in the soil. It comes from decomposing plant material and is vital for soil health. About 58% of soil organic matter is carbon.
<b>SPECIAL POWER PRODUCT (SPP)</b>	A consumer option offered by an energy supplier distinct from the standard offering. The electricity associated with SPPs is often derived from renewable or other low-carbon energy sources, demonstrated by energy attribute certificates or other contracts.
<b>STATIONARY COMBUSTION EMISSIONS</b>	Emissions from the combustion of fuels in any stationary equipment including boilers, furnaces, burners, turbines, heaters, incinerators, engines, flares, etc.
<b>STATIONARY SOURCE</b>	An emissions source that is confined to a distinct geographic location and is not designed to operate while in motion.
<b>SUSTAINABLE DEVELOPMENT GOALS (SDGs)</b>	The 17 global goals for development for all countries established by the United Nations through a participatory process and elaborated in the 2030 Agenda for Sustainable Development, including ending poverty and hunger; ensuring health and well-being, education, gender equality, clean water and energy, and decent work; building and ensuring resilient and sustainable infrastructure, cities and consumption; reducing inequalities; protecting land and water ecosystems; promoting peace, justice and partnerships; and taking urgent action on climate change.
<b>TIPPING POINT</b>	A level of change in system properties beyond which a system reorganizes, often abruptly, and does not return to the initial state even if the drivers of the change are abated. For the climate system, it refers to a critical threshold when global or regional climate changes from one stable state to another stable state.
<b>TRIPLE BOTTOM LINE</b>	How some organizations measure the economic, social, and environmental performance of a project. Also known as "people, planet, profit" or "the three pillars."

We hope that this list will help guide you as you choose to learn more about Greenhouse Gas (GHG) emissions and accounting. If you notice there is a term that should be added to this list, or would like to learn more about GHGs, please contact us at [info@petsustainability.org](mailto:info@petsustainability.org).

## GHG Accounting Fundamentals

TERM	DEFINITION
<b>UNITED NATIONS FRAMEWORK CONVENTION ON CLIMATE CHANGE (UNFCCC)</b>	The UNFCCC was adopted in May 1992 and opened for signature at the 1992 Earth Summit in Rio de Janeiro. It entered into force in March 1994 and as of May 2018 had 197 Parties (196 States and the European Union). The Convention's ultimate objective is the 'stabilisation of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system.' The provisions of the Convention are pursued and implemented by two treaties: the Kyoto Protocol and the Paris Agreement.
<b>VALIDATION</b>	An independent assessment of the carbon offset project design and baseline calculations by an accredited third-party auditor that takes place before the project activity is underway.
<b>VERIFICATION</b>	An independent assessment of quantification of actual emission reductions achieved by a carbon offset project, carried out by an accredited third-party auditor after the project is underway.
<b>VERIFIED EMISSION REDUCTION (VER)</b>	A carbon credit created by a project which has been verified outside of the Kyoto Protocol. One VER corresponds to one ton of CO <sub>2</sub> e emission reductions.
<b>VOLUNTARY CARBON MARKET</b>	The segment of the carbon market for carbon offset transactions outside of government-related regulatory schemes i.e. offsets purchased by organisations wishing to offset their carbon on a voluntary basis.

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