

Carbon Jargon

For Concrete Producers

Carbon

A chemical element. Solid at room temperature, carbon atoms are extremely abundant and stored in soils, plants and fossil fuels. It is often incorrectly and confusingly used as shorthand for carbon dioxide.

Carbon Dioxide

Gaseous molecule made up of one carbon atom and two oxygen atoms. It is mainly emitted by respiration and combustion, and as the benchmark global warming agent is assigned a potential of 1. It persists in the atmosphere for 300-1,000 years according to Nasa.

Carbon Footprint

The impact of a production process on climate change is calculated and expressed as its carbon footprint.

Carbon Mineralization

Carbon mineralization is the process by which carbon dioxide becomes a solid mineral, such as calcium carbonate. It is a chemical reaction that happens when certain rocks are exposed to carbon dioxide or when carbon dioxide is introduced into fresh concrete during mixing.

Carbon Reduction

Cutting the amount of emissions that would happen under business-as-usual circumstances.

Carbon Removal

Drawing carbon dioxide out of the atmosphere and storing it in natural reserves such as soil or plants. Also known as "sequestration".

Carbon Reversal

Release of carbon stored in trees or soil back into the atmosphere, whether intentionally or unintentionally.

Carbon Sequestration

Process by which carbon dioxide is removed from the atmosphere and stored in solid or liquid form.

Carbon Sink

If the carbon sequestered exceeds the amount emitted, the store of carbon is increasing and is known as a carbon sink.

Carbon Neutral

When the amount of carbon being removed from the atmosphere by a process or action is exactly equal to the carbon emitted.

Carbon Intensity

Every product or action has a different carbon "cost". The amount of carbon emitted per action is its carbon intensity – for example, the amount of carbon dioxide created for every pound of cement produced.

Carbon Credit

Permit that allows the owner to emit a certain amount of carbon dioxide or other greenhouse gas. Usually one credit allows emissions of 1t of carbon dioxide equivalent.

Carbon Offsets

Reduction or removal of carbon dioxide emissions, or other greenhouse gases, to compensate for emissions made elsewhere. Offsets are measured in tonnes of carbon dioxide equivalent (CO₂e).

Carbon Insets

Offsetting emissions through a carbon project within the same supply chain. In contrast, carbon offsetting is when an organisation buys carbon credits to offset its emissions externally.

Net Zero

Target of completely negating the amount of greenhouse gases produced by human activity.

Net zero is achieved by reducing emissions and implementing methods of absorbing carbon dioxide from the atmosphere.

Global Warming Potential (GWP)

Measurement of carbon dioxide in the atmosphere, taking into consideration the effect of short-lived gases. It is common to see the GWP of a product or service (such as cement or concrete production).

Greenhouse Gas (GHG)

Gases that trap heat when released into the atmosphere, causing global warming and climate change.

Additionality

Reductions by a genuine carbon offset must be “additional” to what would have been achieved had the project not been carried out.

Permanence

The Green House Gas must be permanently sequestered or reduced. Permanence is defined as providing lasting benefits to the environment for a long period of time.

Co-benefits

Additional environmental, social, health, or economic benefits that accompany a carbon project.

These additional benefits often support the United Nations sustainable development goals and can help bolster the value of a carbon credit.