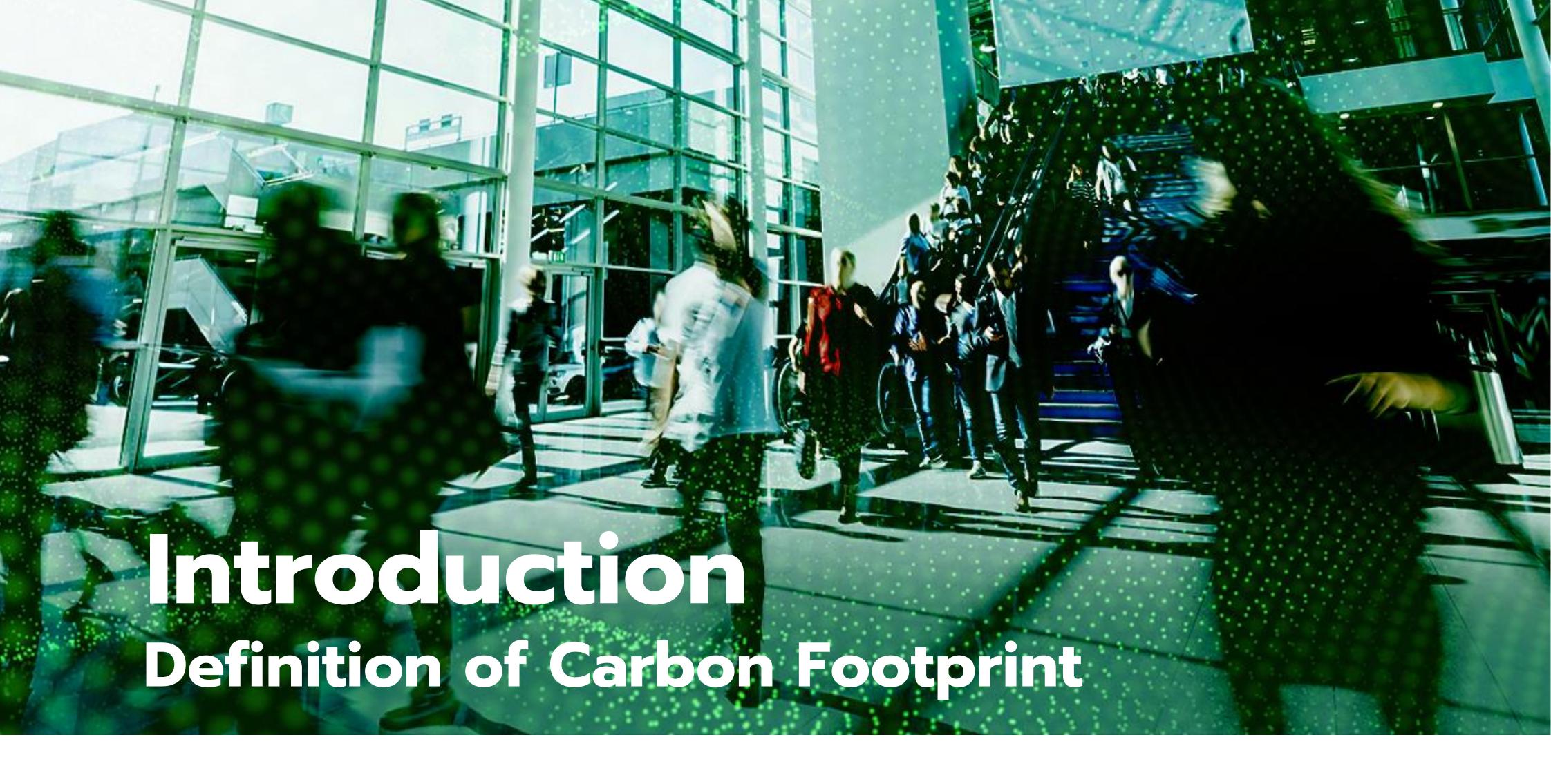




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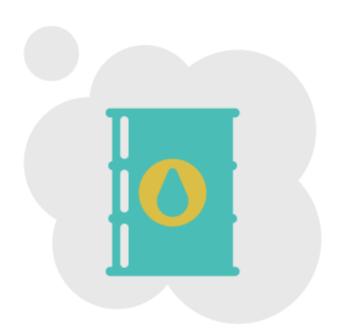
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Appendix



Carbon Footprint: The amount of greenhouse gases emitted from activities or processes, measured in units of "kilograms of carbon dioxide equivalent (kgCO₂e)"

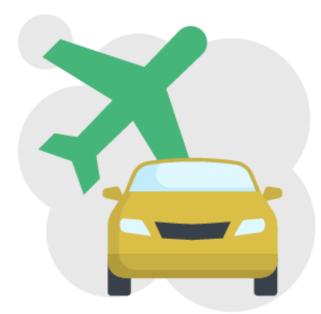
Key Sources of Carbon Footprint from Organizing MICE Events



Direct Combustion



Food & Beverage



Transportation



Lodging



Energy Use



Materials



Waste Management



The Importance of Avoiding – Reducing / Offsetting Carbon Footprint from Organizing MICE Events.

Concept of "Avoid - Reduce / Offset" in context of MICE Events



Avoid:

Designing event or set in measurement to reduce greenhouse gas emission such as selecting a location that is easily accessible via a public transport, using digital media instead of printed media or preparing seasonal local food.



Reduce:

Improving a process or selecting a device which consumes less energy, such as using LED lighting, reducing leftover food or managing transportation which minimizes redundant travel.



Offset:

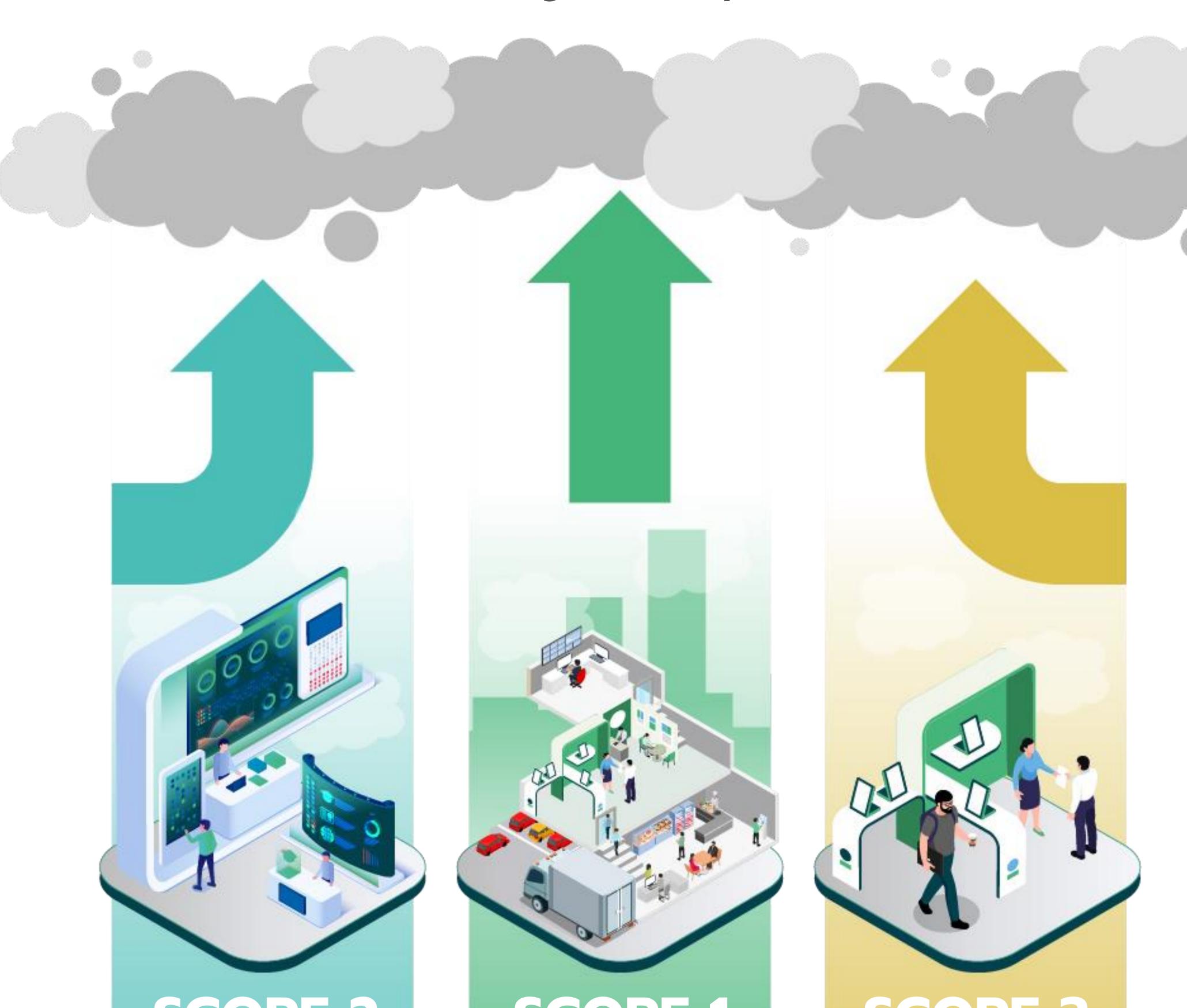
Offsetting remaining greenhouse gas emitted with carbon credits project or support forestation, renewable energy or other greenhouse gas reduction projects.

Defining Scope of Carbon Footprint from MICE Events

Carbon footprint management starts with defining boundaries of greenhouse gas emissions using international standards for calculating and reporting greenhouse gas (GHG) emissions.

Which is divided into 3 main scopes: scope 1, scope 2 and scope 3.

Divide according to the scopes as follows



SCOPE 2

Indirect
Greenhouse
Gas Emissions
from Energy
Usage

SCOPE 1

Direct
Greenhouse
Gas Emissions

SCOPE 3

Other Indirect
Greenhouse
Gas Emissions



SCOPE 1

Direct Greenhouse Gas Emissions

means emissions that occur directly from sources controlled by an owner or an organizer, such as fuel-powered company vehicles (trucks or company's cars), fuel backup generators at an event and tools which uses fuel for cooking.

Examples:

Reducing Scope 1:

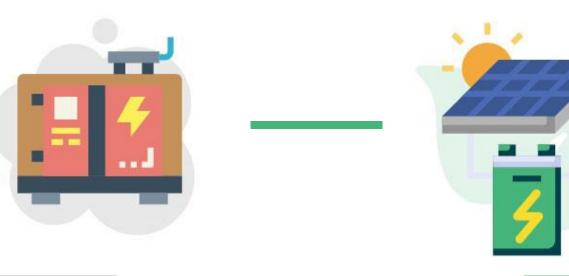
Organizer's cars or trucks used to transport stage equipment exhibition booths





Use electric or biofuelpowered transportation

Diesel generators used during events in case of power outage or additional power required



Reduce generator usage by planning energy consumption efficiently

Using of gas or coal stove for cooking for party in the events or for food selling in the event





Switch to electric or clean energy stoves, such as infrared stove, solar stove, or biofuel instead of gas and charcoal



SCOPE 2

Indirect Greenhouse Gas Emissions from Purchased Energy

means Indirect emissions resulting from using of electricity, steam, or heating purchased from utility providers.

Examples:

Reducing Scope 2:

Electricity used in air conditioning system, lighting, and facilities in convention centers or hotels





Select a venue that has energy saving measures or supports renewable energy usage (e.g. solar rooftop) to reduce emissions from electricity generation sources

Large LED screens or various sound equipment





Using natural light instead of electric lighting



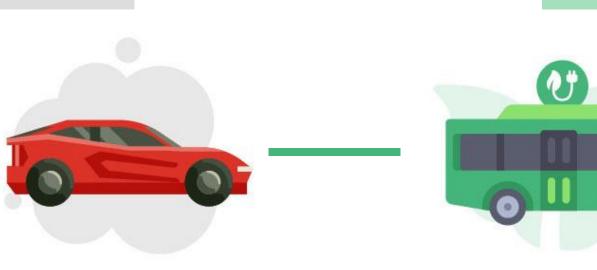
SCOPE 3

Other Indirect Greenhouse Gas Emissions

means greenhouse gas emissions throughout value chain that are beyond the direct control of the organization, such as emissions from traveling of participants, consumable production, or waste management.

Examples:

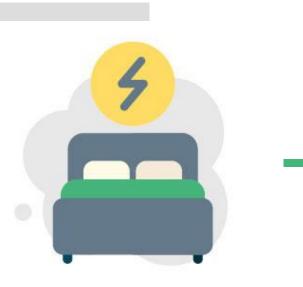
Traveling of participants: by airplanes, private cars, public transportation, etc.



Reducing Scope 3:

Promote use of electric vehicles (EV), carpooling, or public transportation

Accommodation: energy, water and other utilities consumption in hotels





Stay at a hotel that operates with low greenhouse has emissions goals, uses renewable energy, and has sustainability certifications

Event materials: exhibition boards, signs, brochures, printed materials, which muse energy for production and transportation or decorations that are discarded after the event





Switch to digital media instead of printed documents.

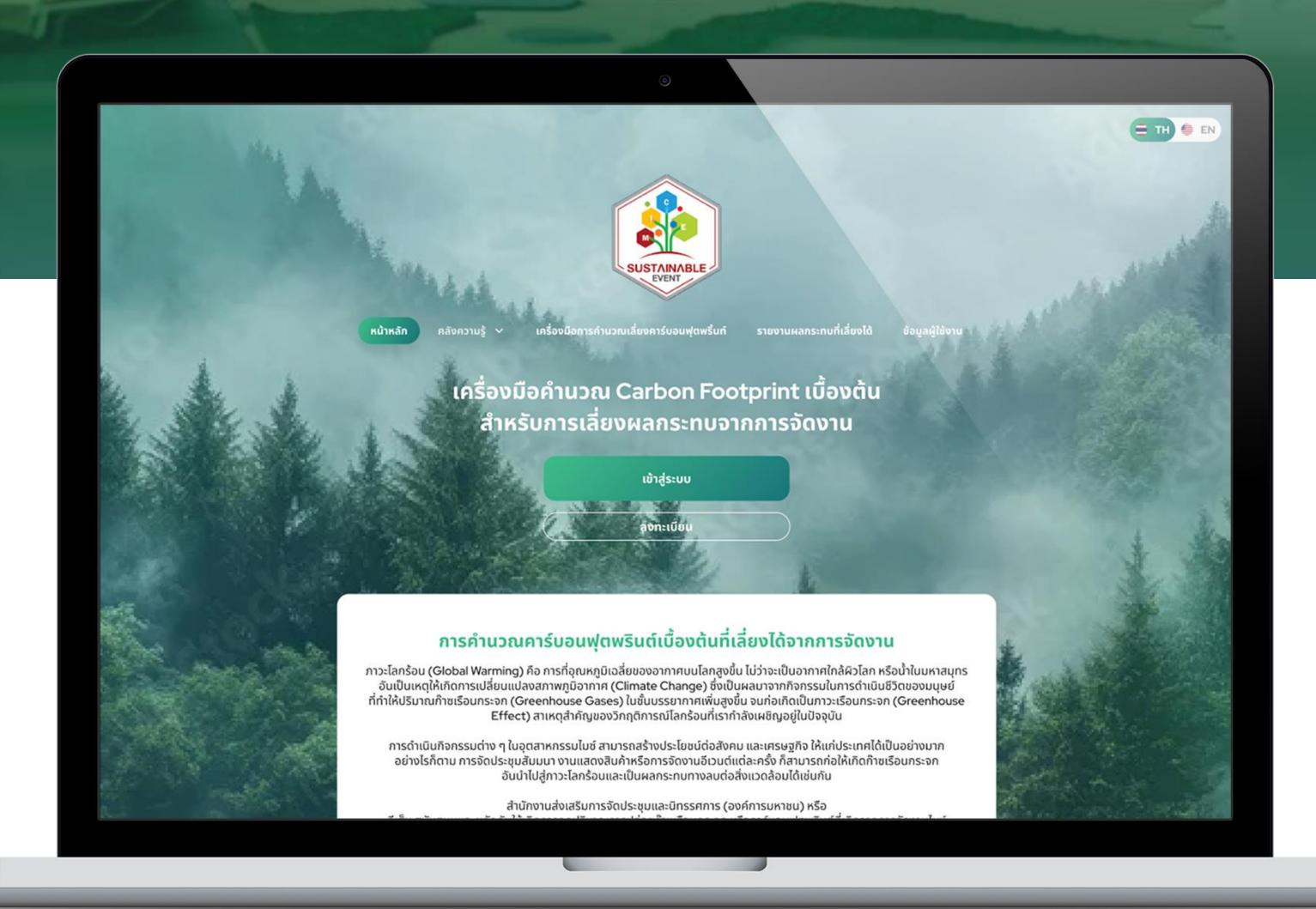
Waste, food waste, packaging





Set up waste separation system and recycle or use biodegradable containers.

Chapter 2 Calculating Avoiding – Reducing / Offsetting Carbon Footprint from Organizing MICE Events



Login

- Access website https://climateaction.tceb.or.th

 (Log in with an existing account or sign up for a new account)
- Fill in information for calculating carbon footprint avoidance According to the relevant data types in each scope
- The system calculates amount of carbon footprint avoidance/reduction

By using standard values for each scope and displays a result of the amount of carbon avoidance/reduction

Download a report

Download the avoidable impacts report, which supports PDF and PNG files

Calculation Tools and Offsetting Carbon Footprint (Carbon Neutral Events).

TGO provides tools for calculation and offsetting carbon footprint for organizing Carbon Neutral Events in 2 types.



1. Self-Declaration(Zero Carbon App)

Scope of operation:
event organizers can calculate
and declare their carbon
footprint results on their own
using the Zero Carbon App









Channels for downloading Zero Carbon App

Steps:

Fill in information about an event

Examples: Energy consumption, travel, and waste volume

The system calculates amount of greenhouse gas emissions

Users can purchase carbon credits

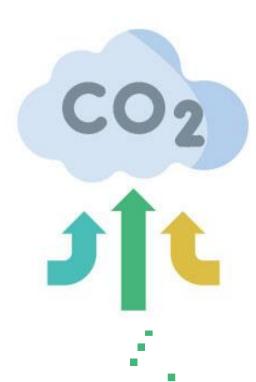
To offset greenhouse gas emissions

Advantages: Easy to use, suitable for organizations that want to start and manage processes on their own.

2. Having a verifier

Scope of operation: carbon footprint calculation will be conducted by experts and verified by an accredited verification agency certified by the Thailand Greenhouse Gas Management Organization (Public Organization)

Steps:



Provide information about greenhouse gas emissions by Scope 1,2 and 3



Calculate amount of greenhouse gas emissions



Verifier verifies accuracy and certifies the result



Purchase carbon credits to offset gas emissions



Organize the event in Carbon Neutral status

Advantages: Achieve trustworthy and verifiable results, suitable for organizations that require high standards or use in official reports.

Carbon Credit

Carbon credit means unit of measurement for reduction or avoidance of greenhouse gas emissions, which can be traded in carbon markets to help mitigate environmental impact. One unit of carbon credit is equivalent reducing / offsetting one ton of carbon dioxide emissions (tCO₂e).



Example: Renewable energy projects



Example: Reforestation projects

Carbon credit





Greenhouse gas reduction:

Entities that can reduce emissions, such as renewable energy projects or reforestation, can issue carbon credit for sale in markets as exchangeable unit.

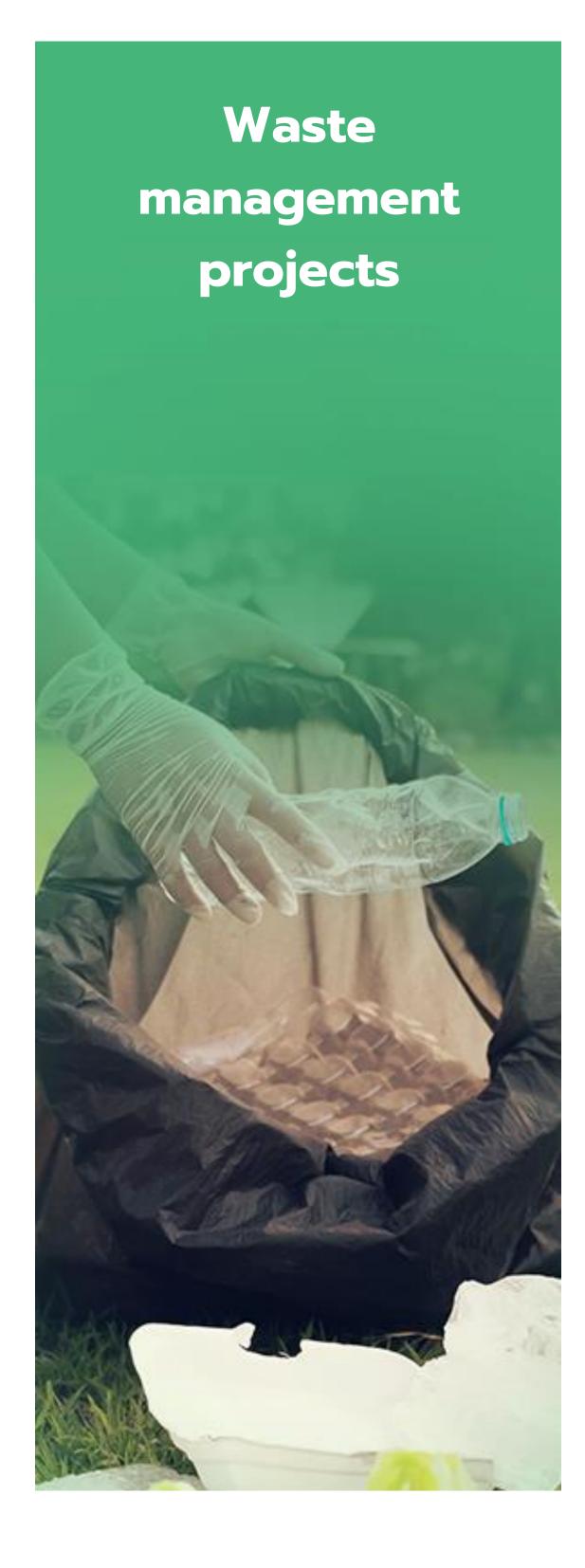
Carbon offsetting:

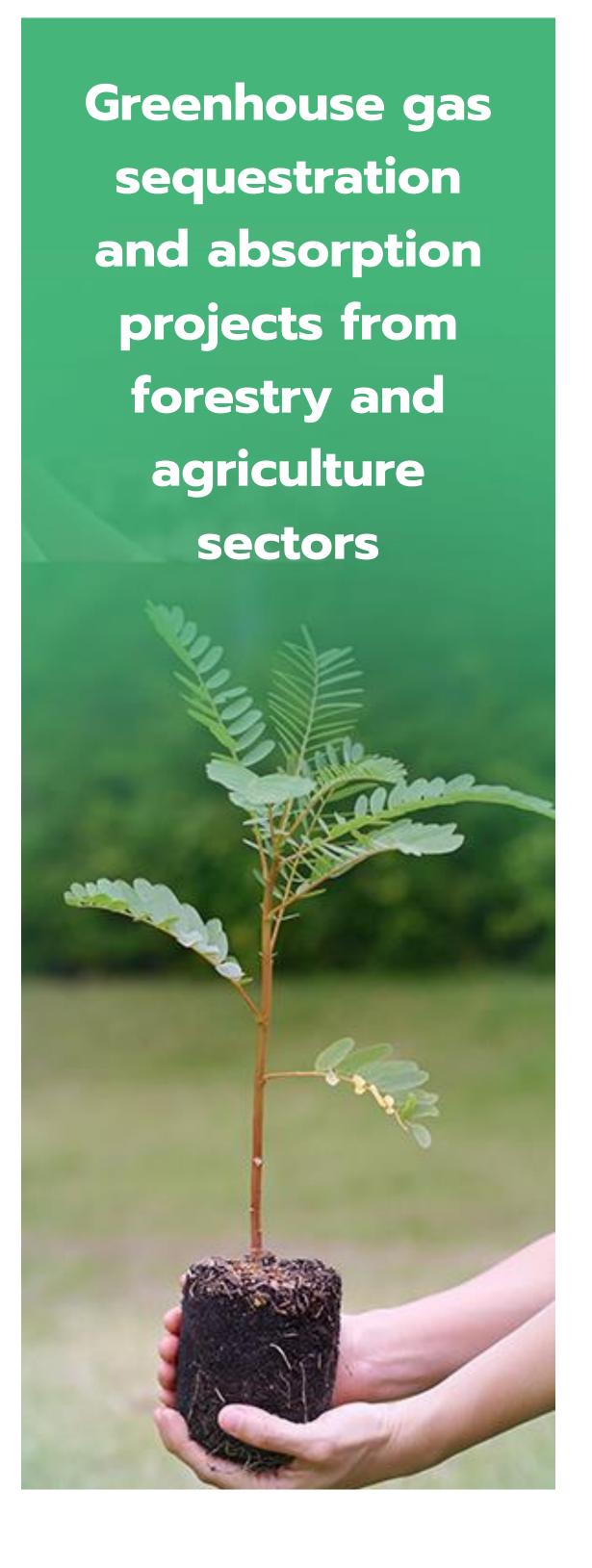
For organizations or event organizers that are not yet able to fully reduce their emissions, can purchase carbon credits to offset the impact

Current Carbon Credit Trading Places

To undertake activities that reduce or sequester greenhouse gases must be certified by a recognized or internationally accepted certifying body. This is required to register the project and receive carbon credits. In Thailand, the Thailand Voluntary Emission Reduction Program (T-VER) has been established for voluntary greenhouse gas reduction projects. The Thailand Greenhouse Gas Management Organization (TGO) is the entity responsible for project registration and carbon credit certification, operating under Governmental Crediting Mechanism.

Types of voluntary carbon credit projects in Thailand







Reference: Thailand Greenhouse Gas Management Organization. (n.d.). Carbon Market Thailand. Thailand Greenhouse Gas Management Organization. Retrieved January 26, 2025, from https://carbonmarket.tgo.or.th



Organizing Reduced / Avoided Carbon Footprint Events and Organizing Carbon Neutral Events

Organizing events that reduce or avoid carbon footprint and aiming to organize events as carbon neutral events not only help mitigate environmental impact but also reflect the organizers' responsibility towards society and the future of our planet.

By implementing strategies such as energy reduction, using sustainable materials, and offsetting remaining greenhouse gas emissions with carbon credits, will help activities in MICE industry aligned with sustainable development goals (SDGs) and create value for all stakeholder involved.

Organizing reduced / avoided carbon footprint events and aiming carbon neutral event not only a goal to reduce environmental impacts, but also create long term economic, social, and environmental stability, as well as increase organization's competitiveness and positive image in the eyes of participants and business partners.



Contact Information

Thailand Convention and Exhibition Bureau (Public Organization) 989 Siam Piwat Tower Building, 25th and 26th floor, Rama 1 Road, Pathumwan, Bangkok 10330

Tel. +662 694 6000, +662 658 1412

E-mail: capabilities@tecb.or.th

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