Scope 4 Emission and Difference Between Scope 1, 2, and 3

Learn about the different scopes of greenhouse gas emissions and their implications for sustainability and corporate responsibility.

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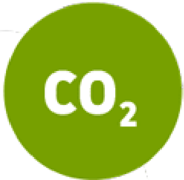

SCOPE 2
INDIRECT

Purchased electricity, steam, heating and cooling for own use

SCOPE 1
DIRECT

Company facilities

Company vehicles

SCOPE 3
INDIRECT

Purchased goods and services

Capital goods

Fuel and energy related activities

Transportation and distribution

Waste generated in operations

Business travel

Employee commuting

Leased assets

SCOPE 3
INDIRECT

Transportation and distribution

Processing of sold products

Use of sold products

End-of-life treatment of sold products

Leased assets

Franchises

Investments

Scope 1 Emissions

Definition and Examples

Scope 1 emissions are direct greenhouse gas emissions from sources owned or controlled by an organization, such as fuel combustion and on-site energy production.

Significance within Greenhouse Gas Accounting

Tracking and reducing scope 1 emissions is crucial for organizations to measure their carbon footprint accurately and take meaningful climate action.

SCOPE 2
Indirect

SCOPE 1
Direct

SCOPE 3
Indirect

SCOPE 3
Indirect

purchased electricity, steam, heating & cooling for own use

purchased goods and services

capital goods

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transportation and distribution

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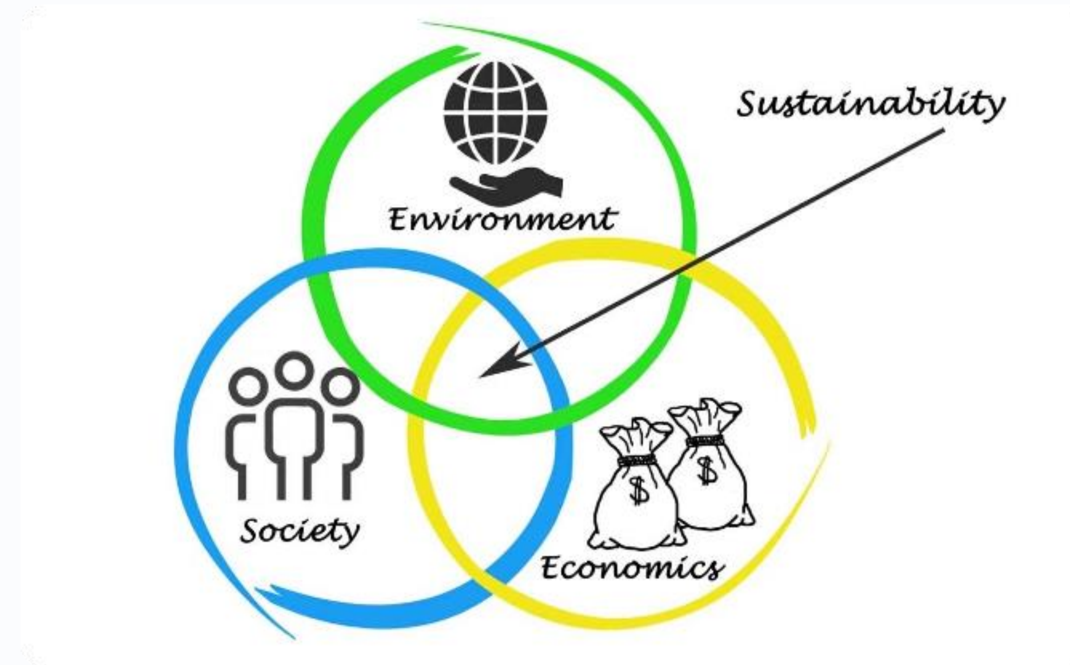
UPSTREAM ACTIVITES

REPORTING COMPANY

DOWNSTREAM ACTIVITES

Scope 2 Emissions



Definition and Examples

Scope 2 emissions refer to indirect greenhouse gas emissions resulting from the consumption of purchased electricity, heat, or steam.

Role in Corporate Sustainability

Managing scope 2 emissions involves promoting the use of renewable energy sources and reducing reliance on fossil fuels.

What are Scope 1, 2 & 3 Emissions?

Direct emissions

Emissions from operations or processes your company directly controls.

Indirect emissions

Greenhouse gas emissions generated by your company's acquisition of energy.
(e.g. electricity, steam, heating or cooling)

Indirect emissions

All emissions, excluding those covered in scope 2, created by your organization's supply chain, upstream or downstream.

Scope 3 Emissions

Definition and Examples

Scope 3 emissions are indirect emissions that occur as a result of an organization's activities but are not owned or controlled by them, such as business travel and supply chain emissions.

Considerations for Indirect Emissions

Addressing scope 3 emissions requires collaboration and engagement with suppliers, customers, and other stakeholders throughout the value chain.

Upstream Activities

Scope 2
Indirect

Upstream Activities

Scope 3
Indirect

Reporting Company

Scope 1
Direct

Downstream Activities

Scope 3
Indirect

CO_2

PCFs

HFCs

CH_4

N_2O

NF_3

SF_6

Key Differences between Scope 1, 2, and 3 Emissions

1

Measurement and Reporting Approaches

Each scope requires different methodologies for measurement and reporting to accurately capture the emissions footprint of an organization.

2

Implications for Emission Reduction Strategies

Understanding the distinctions between the scopes enables organizations to develop targeted strategies to reduce emissions and mitigate climate change impact.

3

Collaboration and Stakeholder Engagement

Scope 3 emissions necessitate collaboration with suppliers, customers, and partners due to their indirect nature, creating opportunities for shared sustainability goals.

What is Scope 4 emission

Scope 4 emissions focus on the indirect impacts of an organization's value chain, including its customers and suppliers. These emissions encompass activities that occur upstream and downstream of an organization's operations, such as the extraction, production, and transportation of raw materials, as well as the use and disposal of products by customers.

1 Scope

GHG emissions directly emitted by sources the reporting company owns and controls.

DIRECT EMISSIONS

2 Scope

GHG emissions that come from the generation of purchased electric, heating, cooling, gas, steam, and electric vehicles.

INDIRECT EMISSIONS

3 Scope

GHG value chain emissions that include both upstream and downstream of an organisation's main operations. The scope 3 emissions for one organization are the scope 1 and 2 emissions of another organization.

INDIRECT EMISSIONS

4 Scope

Emission reductions that happen outside of a product's life cycle or value chain, but as a result of the use of that product.

AVOIDED EMISSIONS

Difference Between Scope 1, 2, 3, and 4

Conclusion

So, what sets Scope 4 apart from the other scopes?

While Scope 1, 2, and 3 emissions are primarily within an organization's control, Scope 4 emissions require collaboration and engagement with external stakeholders. Organizations must work closely with suppliers, customers, and partners to understand and address the environmental impacts associated with their value chain. This collaborative approach is crucial for achieving a holistic and comprehensive sustainability strategy.

Managing and reducing greenhouse gas emissions across all scopes is essential for organizations striving for environmental stewardship and sustainable business practices.