

BEYOND

SMART CITIES

FUNDAMENTALS OF ORGANIZATIONAL GHG ACCOUNTING

FOR ENVIRONMENTAL AND GHG SPECIALISTS

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ENVIRONMENTAL SPECIALIST CURRICULUM

CERTIFIED GREENHOUSE GAS ACCOUNTING SPECIALIST

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GREENHOUSE

ORGANIZATIONAL BOUNDARIES

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LEARNING OBJECTIVES



Organizational Boundaries to understand what organizational boundaries are, and why they are necessary

To become familiar with the two approaches for consolidating organizational boundaries

To be able to determine an entity's organizational boundaries based on the two different approaches

To understand why an entity might choose one approach over another

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"BOUNDARIES" IN A GHG INVENTORY

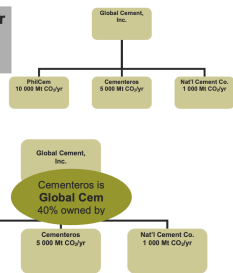
- ✓ Boundaries are imaginary lines encompassing the emissions to be included in a GHG inventory
- ✓ Organizational boundaries determine which operations are owned or controlled by the company and therefore should be included in the inventory. The more complex the corporate structure, the more important organizational boundaries become. Conversely, in companies with a very simple corporate structure, it may matter little how organizational boundaries are chosen. Regardless of corporate complexity, though, organizational boundaries must still be defined.
- ✓ Operational boundaries determine which operations and sources generate emissions, and which sources should be included in the inventory, and how those sources should be classified.

WHY ARE ORGANIZATIONAL BOUNDARIES IMPORTANT?

- ✓ Organizational boundaries are important because of the complex business structure of many companies
- ✓ For example, many companies consist of:
 - Subsidiaries
 - Joint ventures
 - Franchises
- ✓ Organizational boundaries establish a consistent method – based on financial accounting – for accounting for the emissions from all parts of a company

EXAMPLE: WHAT ARE GLOBAL CEMENT'S EMISSIONS?

16 000 Mt CO₂/yr

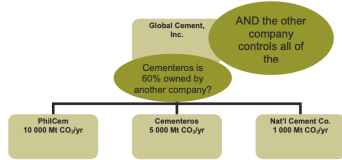


Imagine a hypothetical company – GlobalCement, Inc. – which consists of 3 affiliated companies:

CemIndia, with emissions of 10 000 Mt CO₂/year
Cementeros, with emissions of 5 000 Mt CO₂/year, and
National Cement Co., with emissions of 1 000 Mt CO₂/year

Logically, you would expect that Global Cement's emissions would be the sum of its parts – 16 000 Mt CO₂/year.
But what if...?

EXAMPLE: WHAT ARE GLOBAL CEMENT'S EMISSIONS?



Would it count all of Cementeros' emissions, for a total of 16,000? Would it count 60% of Cementeros' emissions, for a total of 14,000? Or would it not count any of Cementeros' emissions, for a total of 11,000?

And what if...?

And how would that change if Global Cement only owned 40% of Cementeros?

Organizational Boundaries

✓ Global Cement's total emissions depend on how the company sets its organizational boundaries

✓ For companies that have jointly owned or controlled operations, organizational boundaries determine which operations (and what percentage of them) should be included in the inventory

CONSOLIDATION APPROACH

✓ Organizational boundaries can be established based on one or more "consolidation approaches":

- 1) Equity share approach
- 2) Control approach

✓ Companies must consistently apply their selected approach across the organization to define those businesses and operations that constitute the company for purposes of the GHG inventory

1-EQUITY SHARE APPROACH

- ✓ This approach accounts for emissions according to the equity share the company holds in the operation
- ✓ Example: If your company owns 40% of an operation, it must account for 40% of the GHG emissions from that operation, regardless of who "controls" the operations
- ✓ The equity share reflects economic interest, which is the extent of rights a company has to the risks and rewards in an operation that is aligned with the company's percentage ownership of that operation. Equity share is normally the same as the ownership percentage. Where this is not the case, the economic substance of the relationship the company has with the operation always overrides the legal ownership form to ensure that equity share reflects the percentage of economic interests.

2- CONTROL APPROACH

- ✓ This approach accounts for 100% of the emissions from operations over which the company has "control"
- ✓ Emissions from operations where the company has an economic interest, but does not have operational control of the plant or organization's operations are excluded.
- ✓ Control can be defined in one of two ways:
a) Financial control b) Operational control

2A- FINANCIAL CONTROL

- ✓ A company has financial control over an operation if the company has the ability to direct the financial and operational policies of the operation with the goal of gaining economic benefits.
- ✓ To determine whether a company has financial control, consider its:
 - Corporate voting rights
 - Company's financial reports
- ✓ Emissions from joint ventures where the partners have joint financial control are accounted for based on the equity share approach

2A- FINANCIAL CONTROL +



If a business unit is treated as a group company or subsidiary in the parent company's financial reports, then the parent company is considered to have financial control.

Under the financial control approach, the economic substance of the relationship between the company and the operation takes precedence over the legal ownership status, so that the company may have financial control over the operation even if it has less than a 50 percent interest in that operation.

2B- OPERATIONAL CONTROL



✓Operational control exists when a company, or one of its subsidiaries, has the full authority to introduce and implement operating policies at the operation.

✓This approach is consistent with the common practice of reporting emissions for each facility or plant operated by the company.

✓The company must report 100% of the emissions from each operation under its operational control, regardless of its financial stake in the operation.

Having operational control does not necessarily mean that a company has authority to make all decisions concerning an operation. For example, large capital investments may require the approval of all the partners having joint financial control. Having operational control just means that a company has the authority to introduce and implement its operating policies.

ORGANIZATIONAL BOUNDARIES & DOUBLE-COUNTING



✓Companies holding interest in joint operations have the potential to double-count or under-count their emissions if they choose different consolidation approaches.

✓For example, imagine the following:

•Facility A is owned 60% by Company X (who also has financial and operational control of the facility) and 40% by Company Y.

■If Company X chooses the control approach and Company Y chooses the equity share approach, Facility A's emissions will be counted at 140% their actual level.

■If Company X chooses the equity share approach and Company Y chooses the control approach, Facility A's emissions will be under-counted at 60% their actual level.

Therefore, coordination with joint owners is very important in choosing a consolidation approach.

Companies involved in joint ventures can draw up contracts to specify ownership of GHG emissions and associated risks.

FACTORS IN SELECTING CONSOLIDATION APPROACH



Consider how the following factors might lead a company to choose one consolidation approach over another:

- ✓ **Reflection of commercial reality** – The equity share approach most closely reflects the company's commercial reality.
- ✓ **Influence over emissions reductions** – Having operational or financial control over a business unit is an important factor in the amount of influence the company wields over emission reductions.
- ✓ **Program and regulatory requirements** – Most government regulations use operational control as a basis. However, GHG reporting programs may require one of the other consolidation approaches.
- ✓ **Risk and corporate responsibility** – The equity share approach is most closely aligned with financial risk management.

FACTORS IN SELECTING CONSOLIDATION APPROACH +



- ✓ **Alignment with financial accounting** – Financial accounting is done by both equity share and financial control.
- ✓ **Administrative costs and access to data** – Companies with operational control are more likely to have access to the necessary data for preparing the inventory.
- ✓ **Completeness of reporting** – The most complete GHG reports use both equity share and one of the control approaches, as does financial reporting.

SUMMARY



- ✓ **Organizational boundaries** determine which parts of the company are included in the inventory, and at what percentage
- ✓ **Organizational boundaries** can be based on equity share and/or control consolidation approach
- ✓ **Total emissions** accounted can vary significantly depending on chosen consolidation approach
- ✓ **Some GHG programs** require one or both approaches
- ✓ **Companies** can use both approaches to get a more thorough assessment of their emissions.