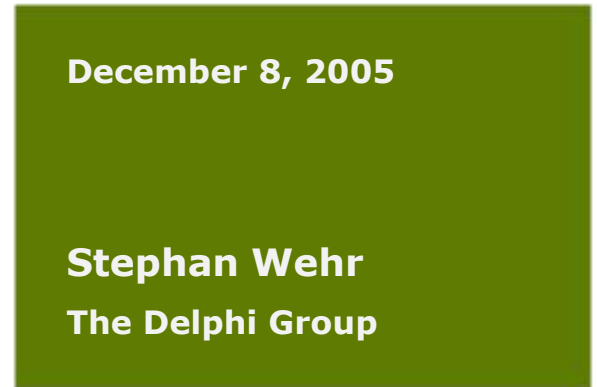




# Balancing Rigour with Practicality in GHG Quantifications





# The Delphi Group

- Ottawa-based strategic consultancy
- 15+ years in the climate change business
- Recent GHG emissions quantification and reporting experience with:
  - TEAM, SDTC, FCM, CDM
  - Project-specific documents and broader protocol work





# Context



- GHG project quantifications involve various aspects, which can be more or less rigorous and more or less practical
- Rigour – how detailed an approach is, with implications for accuracy
- Practicality – how onerous an approach is, with implications for cost and effort required





# Presentation Overview

- Importance of rigour & practicality
- Overview: selecting relevant GHG sources, sinks and reservoirs (SSRs)
- Observations and conclusions regarding rigour
- Recommendations for Offsets





# Why is “Rigour” Important?

- Do not want to overstate (or grossly understate) emission reductions
- For emissions trading systems, want to ensure that only real emission reductions are credited
- Increased rigour generally results in increased accuracy





# Why is “Practicality” Important?

- Want to encourage action to address climate change
- If participation in a GHG system is too expensive, time consuming, or otherwise onerous, fewer entities will participate





# How are “Rigour” and “Practicality” Related?



- Basic relationship:

RIGOUR ↑

PRACTICALITY ↓

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# Rigour in Practice

- Various aspects of GHG quantification can be more or less rigorous, e.g.:
  - Managing data uncertainties
  - Baseline selection
  - Identifying and selecting relevant GHG Sources, Sinks and Reservoirs (SSRs)
- ISO 14064 Part 2 draft is not prescriptive
  - criteria must be established, but specific criteria are up to individual users





# Identifying and Selecting Relevant SSRs - Overview



- **Two-Step Process:**
  1. Identify SSRs
  2. From identified SSRs, select those considered relevant for quantification
- Approaches and requirements are system/program-specific





# Step 1: Identifying SSRs



- Delphi/TEAM Systematic Approach:
  - Identify controlled SSRs
  - Identify related SSRs by tracking inputs upstream and outputs downstream
  - Identify affected SSRs
- Cast a 'wide net' at this stage



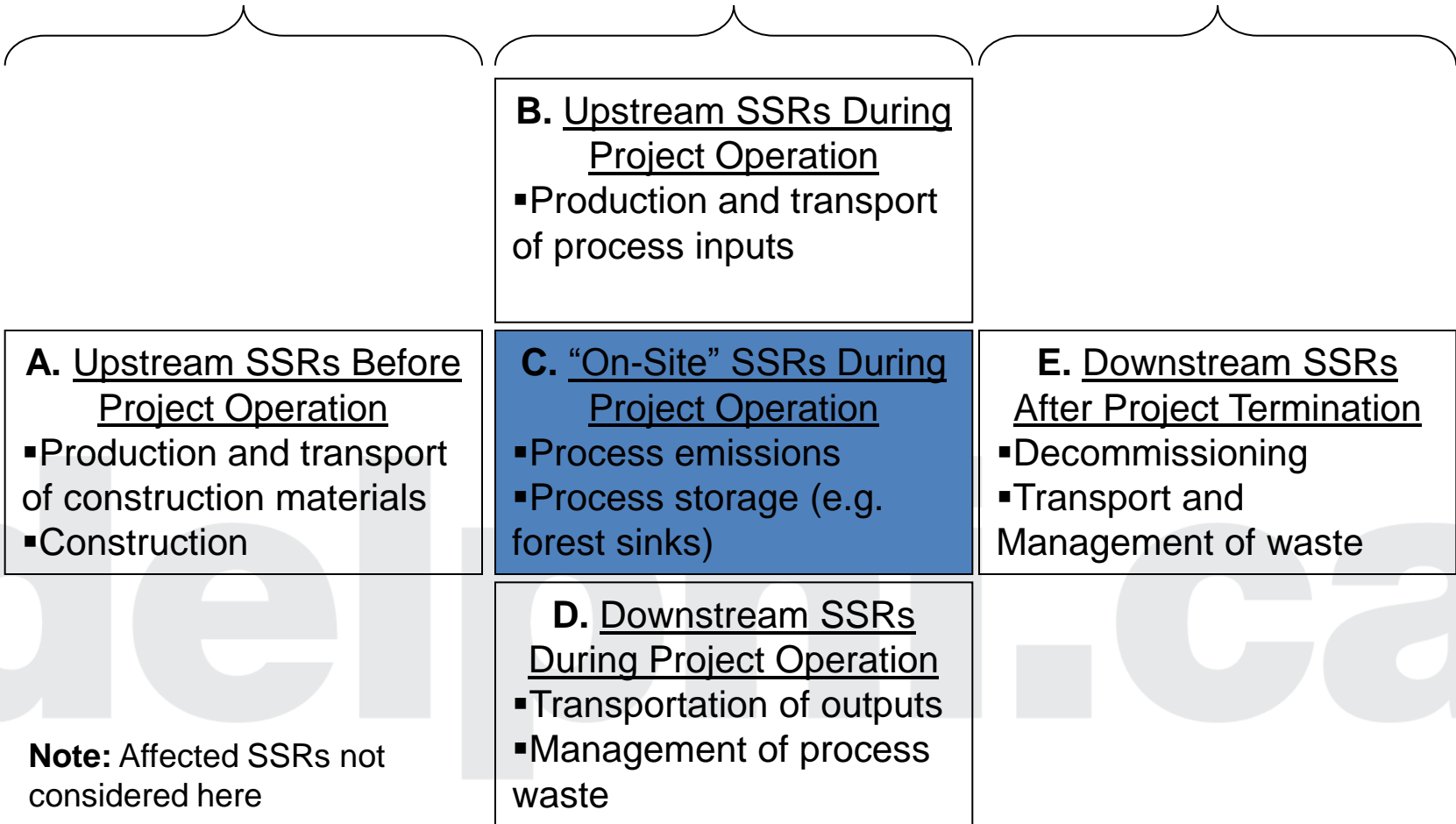


# Expanded SSR Classification

One-Time-Only, Before

On-Going, During

One-Time-Only, After



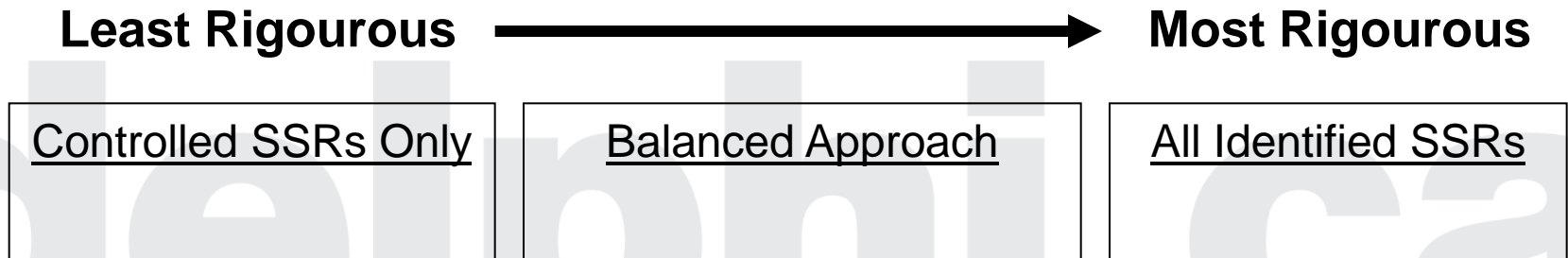
**Note:** Affected SSRs not considered here





## Step 2: Selecting Relevant SSRs

- Must determine which of the identified SSRs warrant quantification
- Various approaches:



- Consider a very rigorous approach...





# Full Life-Cycle Approach

- Typical observations when all SSR categories are considered:

SSR Category	Emission Reduction Magnitude	Effort Required	Uncertainty
<b>C</b> (On-going; "On-Site")	Large	Small	Small
<b>B &amp; D</b> (On-Going; Up / Downstream)	↑	↓	↓
<b>A &amp; E</b> (1-time-only; Up / Downstream)			





# Wind Power Example

- 125 MW offshore wind farm, quantified using Delphi/TEAM Wind Protocol
- Assumptions:
  - Project: all SSR categories quantified, complete lifecycle approach
  - Baseline: Canada's average grid electricity generation intensity ("On-Site" emissions only)
- Results:
  - Total project emissions (mainly Cat. A) = 7% of baseline emissions
  - Almost entire quantification effort devoted to this 7% of emissions





# Delphi Observations

- “80/20 rule”
  - 20% of effort needed to quantify 80% of the emissions, and vice-versa
- Applies to the various project types that Delphi has experience with:
  - e.g. renewable energy, energy efficiency, manure management, transportation
- Does not apply to every project type or in every situation





# Delphi Conclusions

1. Generally reasonable to exclude one-time-only SSRs (Cat. A & E) from quantification
2. On-going upstream and downstream emissions (Cat. B & D), while usually less than “on-site” SSRs, can be significant and bear consideration
3. “On-site” (Cat. C) emissions always bear consideration





# Delphi Conclusions

- When is more rigour appropriate?
  - Significant LCA emissions suspected
  - Very large projects, or where approach can be applied to multiple projects
  - Where specific LCA insight is desired
- When is less rigour appropriate?
  - No significant LCA emissions suspected
  - Upstream / Downstream SSRs controlled by capped sources (e.g. LFEs)





## Practical Application: Recommendations for Offsets

- Delphi recommends that the following SSRs be excluded from quantification:
  1. One-time-only SSRs (Cat. A & E)
  2. SSRs unchanged between project and baseline
  3. SSRs with lower project emissions than corresponding baseline SSRs





- Key Rationale

- Focuses efforts on most significant SSRs
- Over many projects, expected that one-time-only project and baseline emissions will cancel out
- Increases participation without compromising environmental integrity

... a balanced approach between rigour and practicality





Please contact us for more information

**Stephan Wehr**

Manager – GHG Services

(613) 562-2005 x232

*swehr@delphi.ca*

**Michael Gerbis, P.Eng.**

President

(613) 562-2005 x224

*mgerbis@delphi.ca*

**The Delphi Group**

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