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# MRV Process and Water-Energy GHG Protocol Development

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# Community of Members



DIGITAL REALTY



BENTLEY



**THE WESTIN**  
MISSION HILLS  
RESORT & SPA  
PALM SPRINGS





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# The Climate Registry's MRV Process

1

Identify your reporting boundaries

2

Select your facilities based on your boundaries

3

Organize and collect data on emission sources

4

Quantify and report emissions

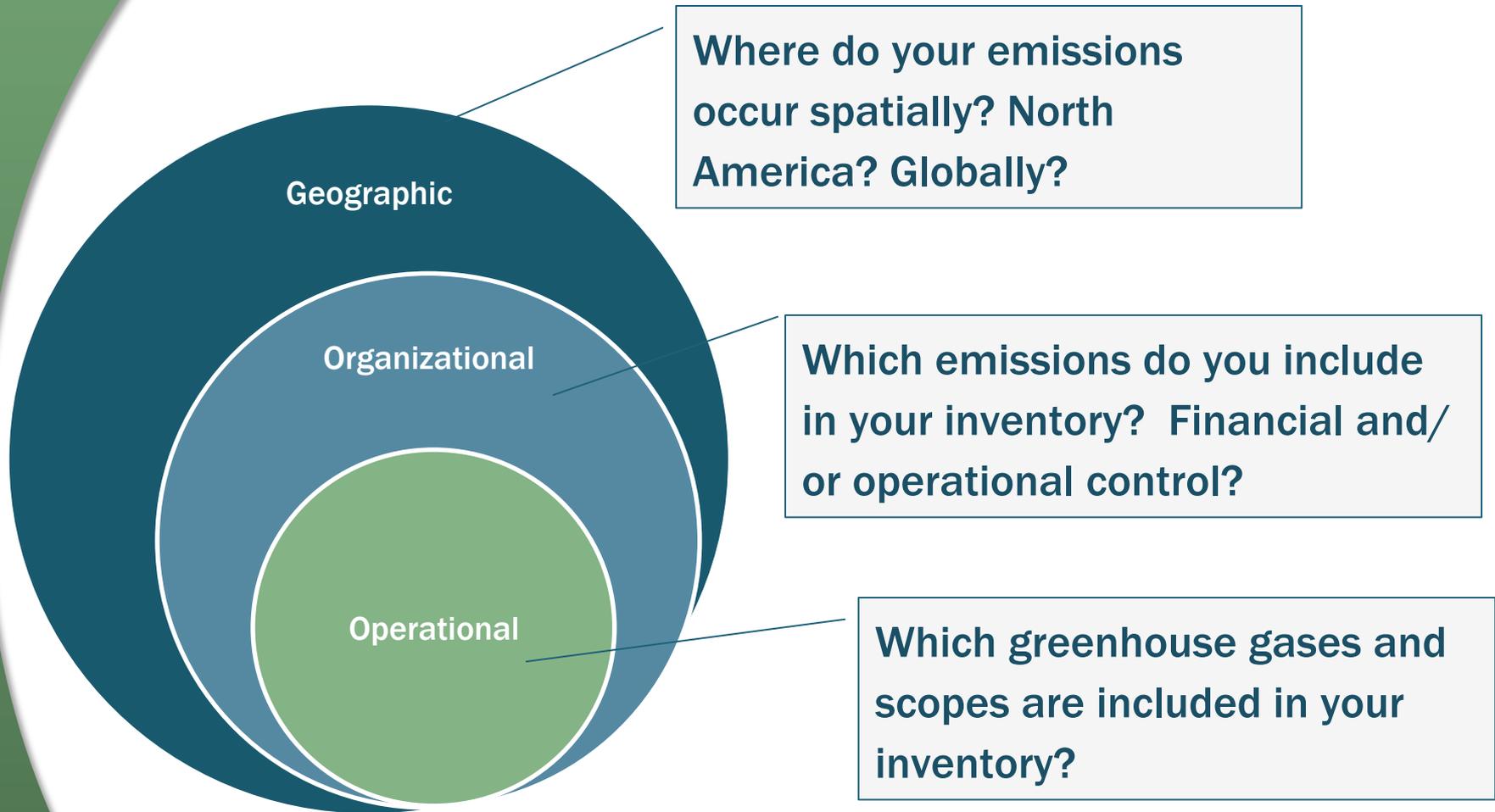
5

Verify by independent third-party





# Step 1: Identify your reporting boundaries





## **Step 2: Determine specific facilities based on your boundaries**

**Stationary** – warehouse, retail store, manufacturing plant, office building

**Mobile** – passenger cars, train fleet, tractors, marine vessels, aircraft, “special facilities” including oil and gas wells, pipelines, electricity transmission and distribution systems, and water conveyance systems



# Step 3: Organize and collect data on emission sources

- **Scope 1 emissions**
  - ✓ mobile combustion from vehicles
  - ✓ fuel usage logs or annual mileage records
- **Scope 2 emissions**
  - ✓ purchased electricity and/or steam; heating or cooling
  - ✓ accounting records or obtain data from utility provider
- **Scope 3 emissions**
  - ✓ employee commuting or business travel
  - ✓ employee reimbursement forms and/or receipts



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# Step 4: Quantify and report emissions

**Activity Data:** the amount of fuel or material that, when used, causes GHGs



**Emission Factor (EF):** converts activity data into GHGs



x EF =



**Global Warming Potential (GWP):** converts non-CO<sub>2</sub> emissions into CO<sub>2</sub>e



x EF x GWP =





# Step 4: Quantify and report emissions

## Enter Source-Level Data

Instructions [Additional Help](#) [+Show](#)

Entity	Third Sal Inc.	Emissions Year	2013
Inventory Status	Checked in	Reporting Progress	Draft

[View](#)

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Source:

Source ID\*:

Facility Name:

Source Name\*:

Description:

Country\*:

State/Province\*:

Activity Type\*:

Fuel Type\*:

Fuel\*:

End Use Sector\*:

Technology\*:

Bituminous

Lignite

Sub-Bituminous

Unspecified

[Save & close](#) [Calculate](#) [Cancel](#) [Delete](#)



# Step 5: Verify by independent third party

- **Optional, but highly encouraged**
- **Ensures conformance with:**
  - Reporting requirements
  - Principles (completeness, transparency, and accuracy)
  - Minimum quality standard
- **Places credible data in the public domain**
- **TCR's verification program is unique, robust, and requires verifiers to be accredited by ANSI (American National Standards Institute).**



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# Water-Energy GHG Protocol



Source: <http://words.usask.ca/sustainability/>



# Protocol Development Process

- 1. Research topic area & existing data**
- 2. Relate to existing MRV best practices in GHG accounting**
- 3. Propose MRV process for protocol**
- 4. Open, consensus driven stakeholder process**
- 5. Operationalize protocol in CRIS**



# Step 1: Research topic area & existing data



**What unit of measurement?**

**What data is available?**

**How to account for water loss?**



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## Step 2. Relate data to existing MRV best practices in GHG accounting

**Organizational boundary?**

**Emission Factors?**

**Verification?**



Source: Pacific Institute



## Step 3. Propose MRV process for protocol

- ✓ Follow TCR's GRP to develop a GHG Inventory
- ✓ Collect additional data
- ✓ Calculate water-energy inventory (Scope 3 emissions relevant to water)
- ✓ Calculate intensity metrics
- ✓ Enter data into CRIS
- ✓ Verify GHG data



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**Step 4: Open,  
consensus driven  
stakeholder  
process**



**Step 5:  
Operationalize  
protocol in CRIS**



Source: [www.ridgehead.com](http://www.ridgehead.com) & [www.clipart.com](http://www.clipart.com)



## Conclusion

**Information:** carbon data related to water conveyance and use in North America

**Timeframe:** 2016-17, WEG protocol will be updated periodically as new data and policy emerges.

**Collaborate:** share potential of available data and participate in stakeholder process