



# ENHANCING NATIONAL GHG INVENTORIES WITH FACILITY-LEVEL DATA GUILLAUME JACQUIER CITEPA

PARTNERSHIP FOR MARKET READINESS

3<sup>RD</sup> REGIONAL MRV TECHNICAL TRAINING
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Facility-level data may be available through multiple sources...

- Compliance to national or international regulations (e.g. ETS, tax on specific pollutants, reporting obligation)
- Voluntary or economic reporting (e.g. facilities monitoring and reporting data for group statistics)
- Research programs



...although they are not always easy to obtain depending on

Price : Free or Paid

Frequency and date of availability

Confidentiality issues

#### Difficulties to include them in a national inventory



And once access is given, many difficulties can arise when trying to include these data in the inventory

- Scopes can be different, e.g.
  - direct/indirect emissions,
  - emissions reported for certain equipments or activities only
  - consistency with national statistics (energy balance, production statistics...)
- Reporting nomenclatures can be different, e.g.
  - overall emissions to be split between combustion / process
  - accounting for biomass
  - GHG GWP
  - fuel nomenclature vs. national nomenclature
- Requirements compliance can be difficult, e.g.
  - Transparency: source or value of EF used not always clear
  - Time series consistency: emissions widely different between years, missing data for some years
  - Accuracy: depending on monitoring frequency and methodology and verification rules



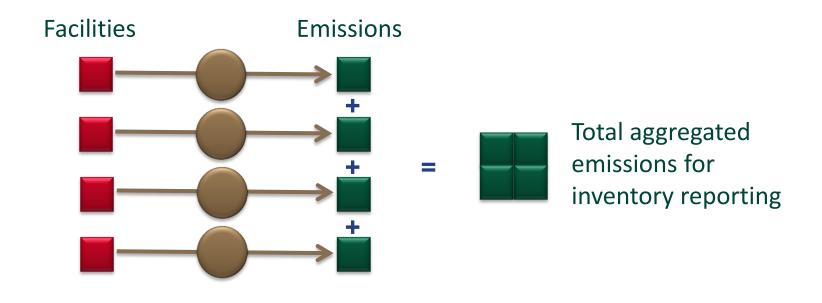
MAIN ADVANTAGES	BUT
More specific data	-
More accurate data	Depending on:         • monitoring frequency         • monitoring methodology         • reporting quality         • verification procedures
Enhance harmonization between national inventory and other reportings	Inclusion in the national inventory could be time consuming in terms of normalization and QA/QC



# Case 1

Facility-level data covers a complete reporting category of the inventory

#### Full "bottom-up" approach



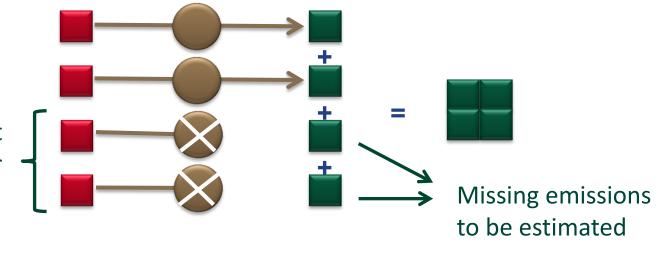


# Case 2

Facility-level data covers only part of a reporting category of the inventory

## Mixed approach

Facilities not reporting their emissions (e.g. lot of small emitters under reporting threshold)





# Mixed approach in case of missing data

Some emissions for the considered sector are covered by facility-data reporting, but missing emissions must be calculated.

Bottom-up approach

sum of source specific emissions

#### Missing emissions

- Determination of missing activity data
- Default EF (literature)
- Average EF of known emission sources
- Expert opinion

Overall emissions of considered sector

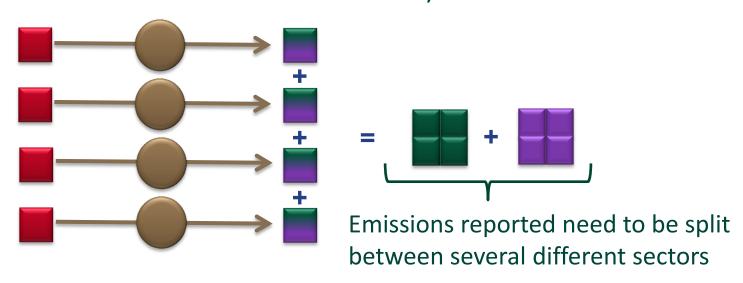


# Case 3

Facility-level data covers multiple reporting categories of the inventory

### Mixed approach

Emissions belong to several reporting sectors of the inventory

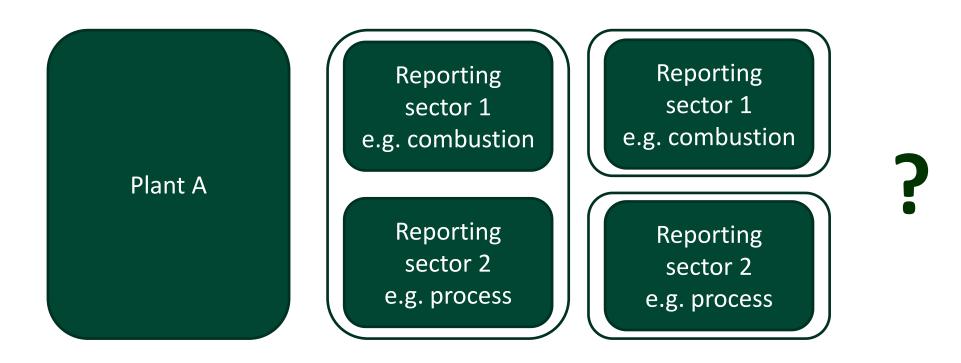




# Mixed approach: multiple reporting categories

A plant "A" reports its total emissions and these emissions must be split between two different reporting sectors (e.g. combustion and process).

#### How can it be done?





# Mixed approach: multiple reporting categories

#### **Possible solutions**

- Design facility-data reporting requirements to fit inventory reporting requirements
- Contact plants to obtain information
- Affect all emissions to one of the reporting categories and neglect the other(s)
- Use literature references or expert opinion to apply a ratio to split total emissions

There is no "bad" solution, the important thing is that the chosen solution(s) must be justified and described in detail (transparency) and applied to the entire period covered by the inventory (consistency).

However, no "bad" solutions does not mean there are equivalent, and some solutions above could make it difficult to track mitigation actions.



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