

# GHG inventories at national and regional/city level



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# Why do they develop a GHG inventory?

| National inventory   | Local inventory   |
|--|---|
| <p>Under UNFCCC/KP articles/decisions</p> <ul style="list-style-type: none"> <li>• As part of National Communications, BR/BUR, and annual GHG inventory</li> <li>• Policy instrument</li> </ul> <p>Management tool for low-carbon society</p> <p>Database for PR</p> | <p>Not an international requirement, but national mandate or <b>voluntary action</b></p> <ul style="list-style-type: none"> <li>• As part of low-carbon action plan</li> <li>• Policy instrument</li> </ul> <p>Management tool for low-carbon society</p> <p>Database for PR</p> <p>→ <b>Attracting investments</b> for improving local environment &amp; quality of life</p> |

# Who does make a GHG inventory & how?

| National inventory   | Local inventory  |
|--|--|
| <p>Based on the COP/CMP decisions</p> <p>IPCC guidelines</p> <p>Ministry in charge coordinates data collection and inventory compilation</p> | <p>Based on the law/regulations/incentives</p> <p>IPCC guidelines, GPC protocol, manuals specified by the national governments</p> <p>If there is appropriate institutional setup, assigned department conducts data collection &amp; inventory compilation</p> <p>Otherwise local/international consultants</p> <p>→ <b>Cross-departmental cooperation</b> is essential, but difficult in general</p> |

# Principles of a GHG inventory

| National inventory |  | Local inventory  |   |
|--------------------|--|------------------|---|
| Comparability      | Data should be comparable with other Party's data                      | <b>Relevance</b> | Data is collected to serve the needs of target users (policymakers, staff etc.) |
| Completeness       | Covers all GHG emission activities and sources                         | Completeness     | Same as left  |
| Consistency        | Methods used should allow meaningful comparison and analysis over time | Consistency      | Same as left  |
| Transparency       | Methods and issues should be properly explained                        | Transparency     | Same as left  |
| Accuracy           | Data can be trusted, should reflect 'real' GHG emissions               | Accuracy         | Same as left  |

# Subject of estimation (Sectors)

| National inventory | Local inventory                      | Modified                             |
|--------------------|--------------------------------------|--------------------------------------|
| • Energy           | • Stationary Units<br>• Mobile Units | • Stationary Units<br>• Mobile Units |
| • IPPU             | • IPPU                               | • IPPU                               |
| • AFOLU            | • AFOLU                              | • AFOLU                              |
| • Waste            | • Waste/wastewater                   | • Solid waste                        |
| • Other            | • Others/Fugitive Emissions          | • Water & Wastewater                 |

Energy

IPPU

Waste

**Almost the same**

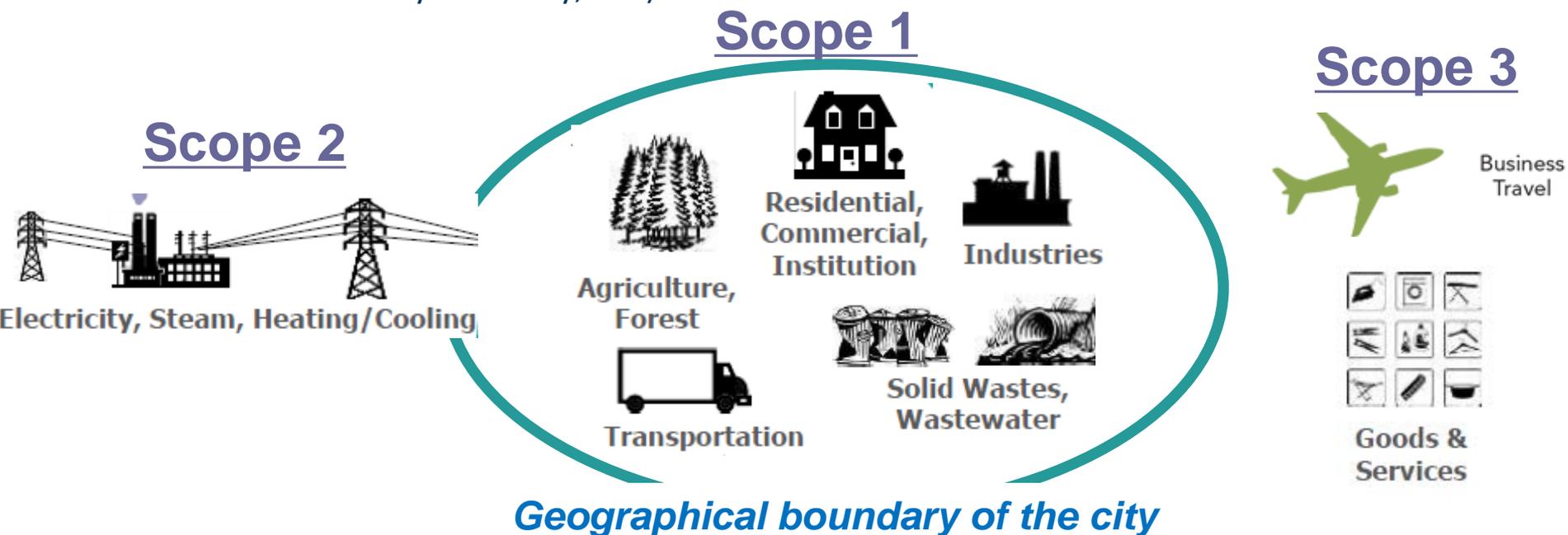
In response to the local needs  
 → Better linkage between inventory & mitigation baseline

# Concept of scope 1, 2, and 3

Scope 1: All direct GHG emission sources from activities within the city's geographical boundary.

Scope 2: Energy-related indirect emissions from consumption, within the city, of grid-supplied electricity, steam, heating/cooling

Scope 3: All other indirect emissions that occur as a result of activities within the city's geographical boundary (e.g. Use of products which are manufactured outside the city, business trips to outside of the city boundary, etc.)



Source: Global Protocol for Community-Scale Greenhouse Gas Emissions (GPC) Pilot Project 2013, <http://www.ghgprotocol.org/files/ghgp/First-Pilot-Cities-Webinar.pdf>

## Summary

- There is certain freedom for developing a GHG inventory at city level.
- There is no direct linkage between national and regional/city level inventories. However, “vertical” information exchange should help improve GHG accounting skills of both governments (e.g., collect data, institutional arrangements).

# THANK YOU FOR YOUR ATTENTION

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IGES Kitakyushu Urban Centre: <http://www.iges.or.jp/en/sustainable-city/index.html>