Introducing ICLEI

- **ICLEI - Local Governments for Sustainability (ICLEI).**
- **Global city network** advancing **local sustainability** with **17 Offices** around the globe.
- Established in **1990** in New York by cities, for cities.
- **Today 1000+ members in 86 countries,** representing **700 million people** - in mega-cities, super-cities, urban regions, large cities, small and medium-sized cities & towns.
- **ICLEI offers process and technical guidance,** supports **city-to-city exchanges** and represents **members and local governments** on climate.
ICLEI supports local governments

Political

Processes and systems

Technical
Cities’ Contribution To Global GHG Emissions

>70% of global energy-related CO₂ emissions are attributable to cities

Source: World Energy Outlook
A new era ... the GPC era

The **GPC** offers the first, global standard to consistently measure city-level emissions.
Core Partners and Lead Authors

- **World Resources Institute**
  - 30 years experience in promoting sustainability worldwide

- **C40 Cities Climate Leadership Group**
  - Represent >70 largest cities from around the world committed to implementing meaningful and sustainable climate-related actions

- **ICLEI Local Governments for Sustainability**
  - Represent >1000 local government members in 86 countries
  - 25 years experience in addressing urban sustainability issues

www.ghgprotocol.org/city-accounting
Purpose of the GPC

1. Help cities develop a comprehensive and robust GHG inventory to support **climate action planning**

2. Ensure **consistent** and **transparent** measurement and reporting of GHG emissions between cities

3. Empower city’s endeavor in reporting its mitigation performance in **national or international framework**

4. Demonstrate the importance of cities play in tackling climate change, and facilitate insight through **benchmarking**, and **aggregation**, of **comparable data**
Why Measure Emissions?

- Establish base year emissions
- Identify emission sources and reduction opportunities
- Set target and develop action plans
- Track progress
- Benchmarking
Greenhouse gases

- Carbon dioxide (CO₂)
- Methane (CH₄)
- Nitrous oxide (N₂O)
- Hydrofluorocarbons (HFCs)
- Perfluorocarbons (PFCs)
- Sulphur hexafluoride (SF₆)
- Nitrogen trifluoride (NF₃)
GHG emission sources

**IPCC SECTORS**

- Energy
- IPPU
- Waste
- AFOLU

**GPC SECTORS**

- Stationary Energy Sources
- Transportation
- IPPU
- Waste
- AFOLU
Reporting requirements

**Assessment boundary**
- Geographic boundary and city overview
- Reporting period (12 consecutive months)
- Gases (CO₂, CH₄, N₂O, HFCs, PFCs, SF₆, and NF₃)
- Reporting level (Basic/Basic+)

**Emissions reporting**
- Cover emission sources required for reporting level
- Emissions disaggregated by gas, source, scope
- Report by gas in metric tonnes of CO₂e
- Separately report fossil CO₂ from biogenic CO₂
- Total emissions using two distinct frameworks

**Methodologies & data quality**
- Use notation keys (exclusion or partial accounting)
- Data-quality assessment of activity data and emission factors
- Describe methodologies used
- Disclose sources of data (AD, EF and GWP)
# GHG emissions summary

<table>
<thead>
<tr>
<th>Sector</th>
<th>Total by scope (tCO₂e)</th>
<th>Total by city-induced reporting level (tCO₂e)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Scope 1 (Territorial)</td>
<td>Scope 2</td>
</tr>
<tr>
<td>Stationary Energy</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Energy use (all emissions except I4.4)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Energy generation supplied to the grid (I4.4)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transportation (all II emissions)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Waste</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Generated in the city (all III.X.1 and III.X.2)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Generated outside city (all III.X.3)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IPPU (all IV emissions)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AFOLU (all V emissions)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>(All territorial emissions)</td>
<td></td>
</tr>
</tbody>
</table>

- Sources required for BASIC reporting
- Sources required for BASIC+ reporting
- Sources included in Other Scope 3
- Sources required for territorial total but not for BASIC/BASIC+ reporting (italics)
- Non-applicable emissions

[www.ghgprotocol.org/city-accounting](http://www.ghgprotocol.org/city-accounting)
### Why GPC?

<table>
<thead>
<tr>
<th>Without GPC</th>
<th>With GPC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Different types of measurements</td>
<td>One measurement</td>
</tr>
<tr>
<td>Account for only a portion of emissions</td>
<td>Consistently account for all emissions</td>
</tr>
<tr>
<td>Unclear if targets will be met</td>
<td>Emissions trajectory will be understood</td>
</tr>
<tr>
<td>Incomplete data limits investment</td>
<td>Good data drives investment</td>
</tr>
<tr>
<td>Unable to relate to national climate action</td>
<td>Can measure city’s contribution to national action</td>
</tr>
</tbody>
</table>

www.ghgprotocol.org/city-accounting
Assessment boundaries

- Time period
- Greenhouse gases
- Geographic boundaries
- Emission sources
• 3 Years of development
• 3 Lead author organizations
• 29 Advisory Committee Members
• Input from more than 200 stakeholders, many workshops
• 35 Pilot testing cities

1 Inclusive Global Standard for Community-scale GHG Inventories
Guided by 29 Advisory Committee Members

### Advisory Committee
1. Pankaj Bhatia, WRI/GHGP (Chair)
2. Seth Schultz, C40
3. Yunus Arikan, ICLEI
4. Stephen Hammer, World Bank
5. Robert Kehew, UN-HABITAT
6. Soraya Smaoun, UNEP
7. Matthew Lynch, WBCSD
8. Sergey Kononov, UNFCCC
9. Kiyoto Tanabe, IPCC
10. Junichi Fujino, IGES/NIES
11. Kyra Appleby, CDP
12. Jan Corfee-Morlot, OECD
13. Maria Varbeva-Daley, BSI
14. Michael Steinhoff, ICLEI US
15. Alvin Meijia, Clean Air Asia
16. Carina Borgström-Hansson, WWF
17. Christophe Nuttall, R20
18. Yoshiaki Ichikawa, ISO
19. Adam Szolyak, Covenant of Mayors

### Cities
20. Buenos Aires, Argentina
21. Arendal, Norway
22. London, UK
23. Mexico City, Mexico
24. Tokyo, Japan

### National Governments
25. France (ADEME)
26. Indonesia (NCCC)

### Foundations
27. CIFF
28. Siemens
29. Bloomberg Philanthropies
Input from 200+ Stakeholders Worldwide

Beijing
April 2013

Sao Paulo
May 2013

London
September 2013

Dar es Salaam
October 2013

New Delhi
December 2013

Jakarta
January 2014
Pilot Tested by 35 Cities

Two parallel Reporting Frameworks

**Scope Framework**

Comprehensively report all GHG emissions from:

- In-boundary sources (scope 1, or “territorial”)
- Grid-supplied energy sources (scope 2)
- Out-of-boundary sources as a result of activities in the city (scope 3)

**City-induced Framework**

Report only GHG emissions that attributable to activities in the city:

- **BASIC** level reporting:
  Cover sources that occur in almost all cities and were calculation methodologies/data are more readily available
- **BASIC+** level reporting:
  More comprehensive coverage of emissions sources
Scope Framework

Scope 1
- Agriculture, Forest, & Other Land Use
- Industrial Process & Product Use
- In-boundary Transportation

Scope 2
- Stationary Fuel Combustion
- Grid-Supplied Energy
- Transmission & Distribution

Scope 3
- Other Indirect Emissions
- In-boundary Waste
- Out-of-Boundary Waste
- Out-of-Boundary Transportation

Greenhouse Gas Protocol

CO₂  CH₄  N₂O  HFCs  PFCs  SF₆  NF₃
City-Induced Framework

**Scope 1**
- Agriculture, Forest, & Other Land Use
- Industrial Process & Product Use
- In-boundary Transportation

**Scope 2**
- Grid-Supplied Energy
- Transmission & Distribution
- Out-of-Boundary Transportation

**Scope 3**
- Waste generated *outside* the city
- Energy generation supplied to the grid
- Waste generated *in* the city
- Waste generated *in* the city
- Other Indirect Emissions

**Indirect Emissions**
- CO₂
- CH₄
- N₂O
- HFCs
- PFCs
- SF₆
- NF₃
City-Induced Framework

**Scope 1**
- Agriculture, Forest, & Other Land Use
- Industrial Process & Product Use

**Scope 2**
- Grid-Supplied Energy
- Stationary Fuel Combustion
- In-boundary Transportation

**Scope 3**
- Waste generated in the city
- Transmission & Distribution
- Out-of-Boundary Transportation

**BASIC+ Level Reporting**

**GHG Gases**
- CO₂
- CH₄
- N₂O
- HFCs
- PFCs
- SF₆
- NF₃

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City-Induced Framework

Scope 1
- In-boundary Transportation
- Grid-Supplied Energy
- Stationary Fuel Combustion
- In-boundary Transportation

Scope 2
- Waste generated in the city
- Grid-Supplied Energy
- Transmission & Distribution

Scope 3
- Waste generated in the city

Basic Level Reporting

Greenhouse Gas Protocol
Key features of the GPC

- Emphasis on both production and consumption-based emissions
- Emphasis on boundary issues to separate in-boundary & trans-boundary emissions (to enable data aggregation)
- Reporting levels and flexibilities (notation keys)
- Requirements & guidance
Towards MRV for local climate action

Global Protocol on Community-scale GHG Emissions Inventories (GPC)
Accounting and reporting guidance

New protocol to harmonize accounting in support of MRV.

Harmonized Emissions Analysis Tools plus (HEAT+)
Emissions quantification and monitoring tool

Conduct regular emissions inventories, plan Low Emission Development

carbonn Climate Registry (cCR)
Global reporting platform

Support package for cities / regions

- Wide range of support available to local and subnational governments:
  - GHG inventory tools that are compliant with GPC (e.g. HEAT+, ClearPath)
  - Global Protocol for Community-scale GHG Emissions Inventories (GPC) – new protocol
  - MRV process for local climate action
  - Global reporting platform for local & subnational climate action (carbonn Climate Registry)
  - Voluntary commitments (Compact of Mayors, ...)
  - Urban Solutions Gateway, Pool of Experts
Contact

Thank you!

Questions? Ask our in-house expert: Chang Deng-Beck
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www.ghgprotocol.org/city-accounting
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