GREENHOUSE GAS PROTOCOL

Global Protocol for Community-Scale Greenhouse Gas Emission Inventories

An Accounting and Reporting Standard for Cities

WORLD RESOURCES INSTITUTE

C40 CITIES

ICLEI Local Governments for Sustainability

BIPM Workshop on Global to Urban Scale Carbon Measurements

1 July 2015
Sèvres, France

Maryke van Staden
ICLEI – Local Governments for Sustainability

www.ghgprotocol.org/city-accounting

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

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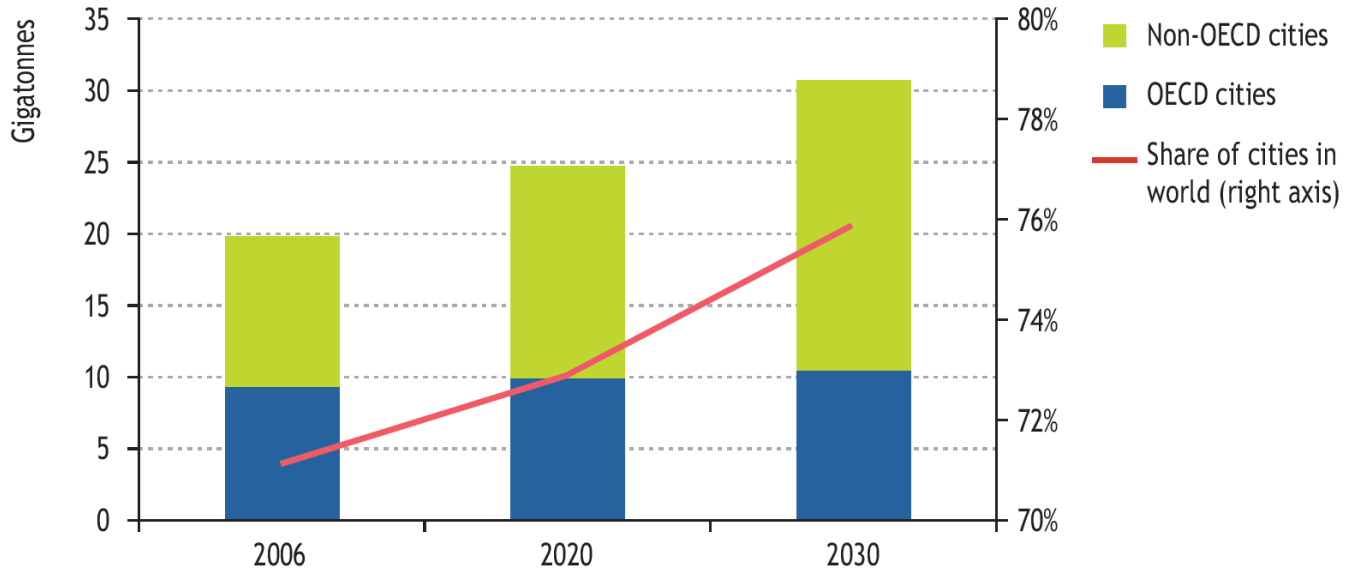
Cities' Contribution To Global GHG Emissions



>70% of global energy-related CO_2 emissions are attributable to cities

www.ghgprotocol.org/city-accounting

Source: World Energy Outlook

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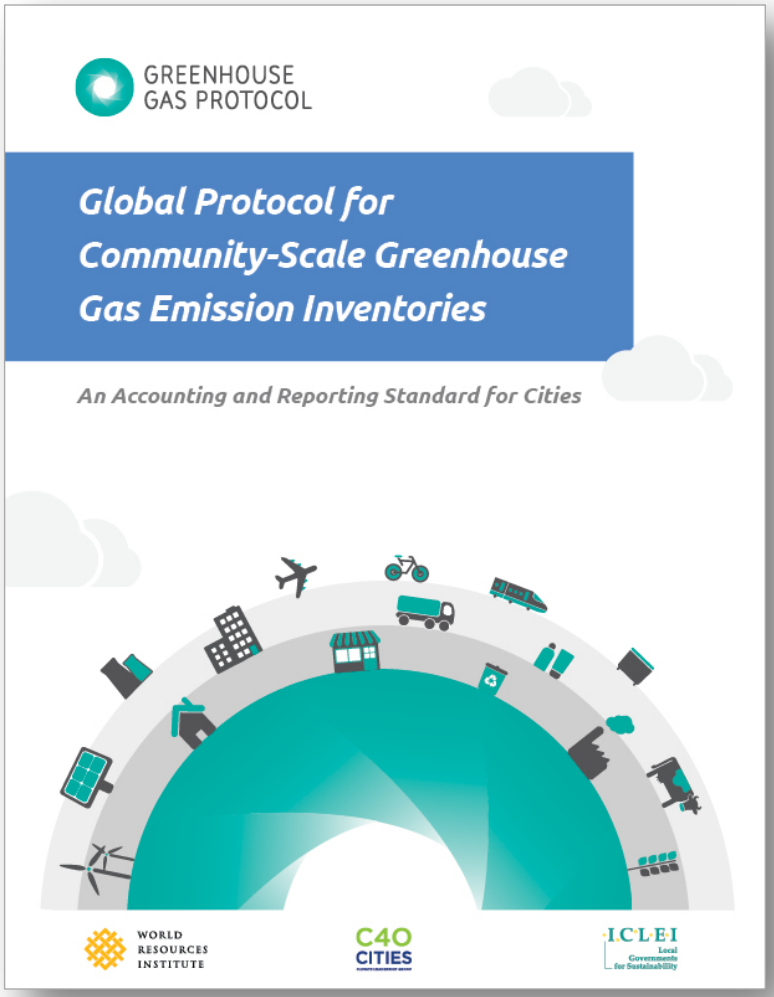
A new era ... the GPC era



The **GPC** offers the first, global standard to consistently measure city-level emissions.

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Core Partners and Lead Authors

WORLD RESOURCES INSTITUTE

C40 CITIES
CLIMATE LEADERSHIP GROUP

ICLEI
Local Governments for Sustainability

30 years experience in promoting sustainability worldwide

14 years of GHG accounting standard development experience

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

Represent **>1000** local government members in 86 countries

25 years experience in addressing urban sustainability issues

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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**

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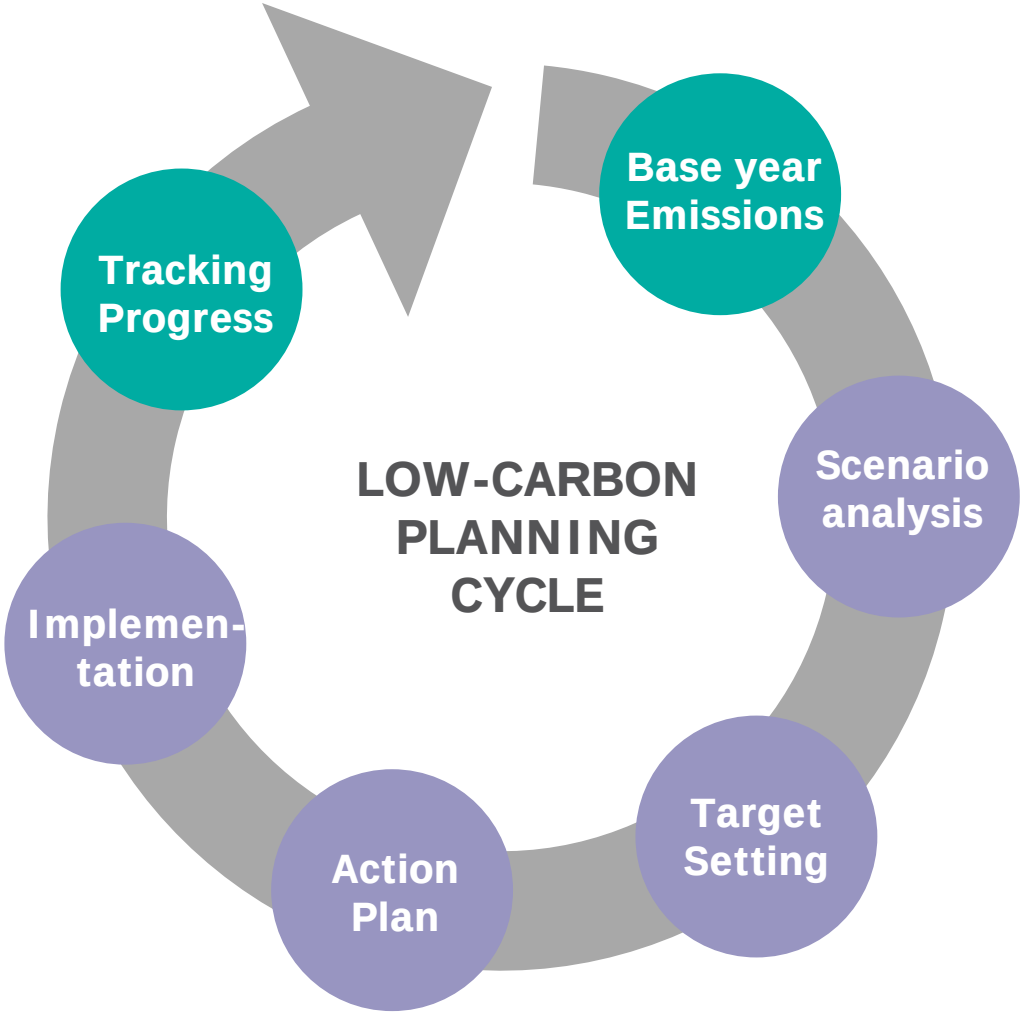
Why Measure Emissions?

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



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Greenhouse gases

- Carbon dioxide (CO_2)
- Methane (CH_4)
- Nitrous oxide (N_2O)
- Hydrofluorocarbons (HFCs)
- Perfluorocarbons (PFCs)
- Sulphur hexafluoride (SF_6)
- Nitrogen triflouride (NF_3)

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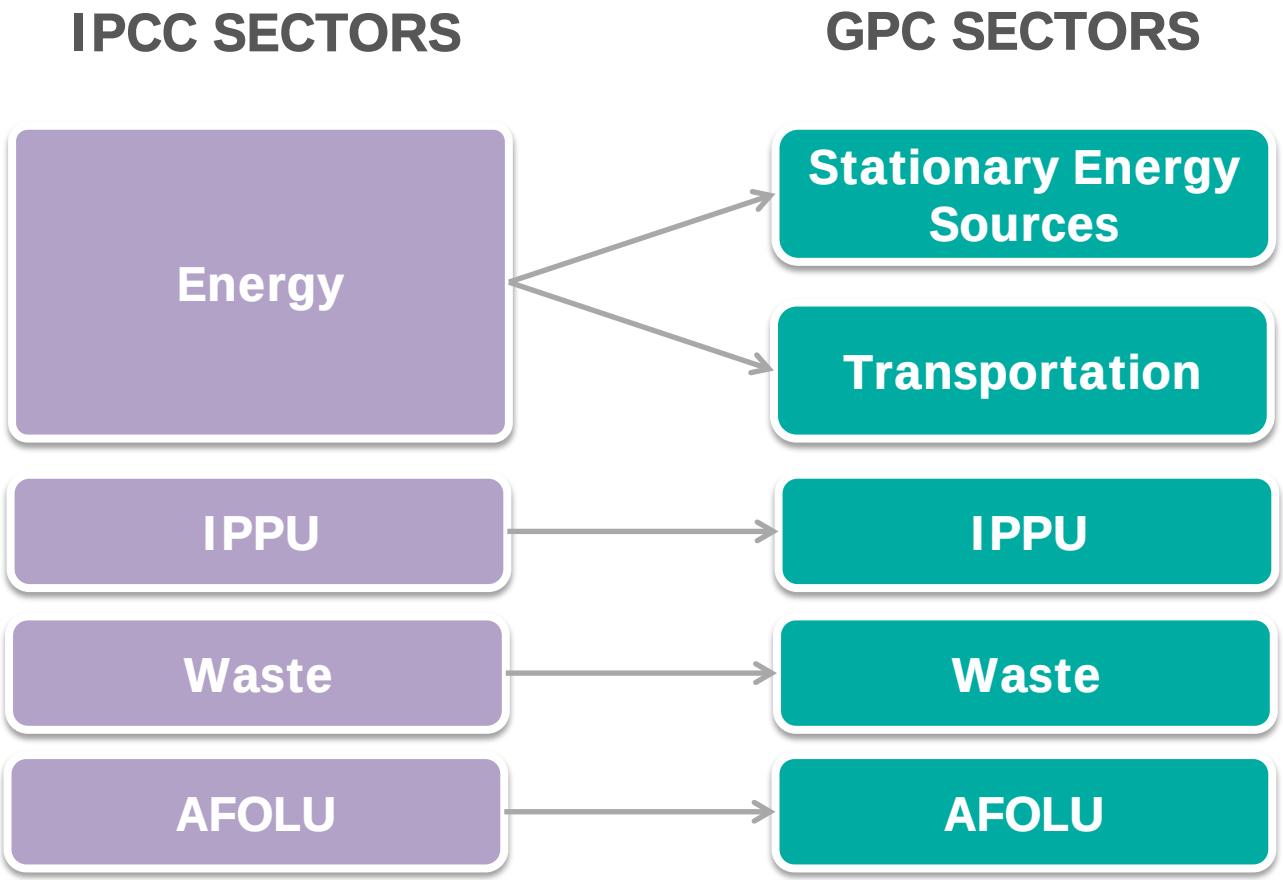
GHG emission sources



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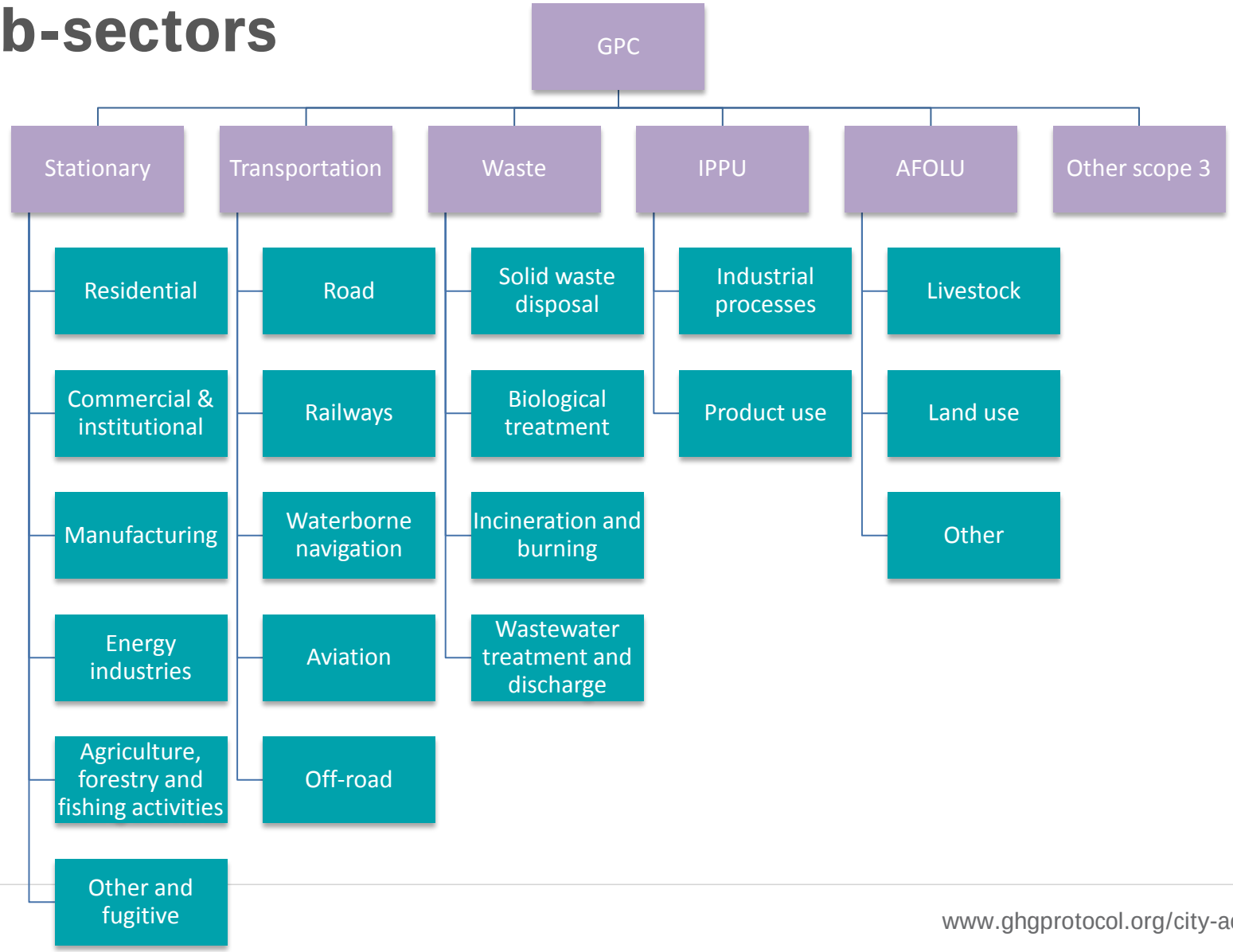
Sub-sectors



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Reporting requirements

Assessment boundary

- Geographic boundary and city overview
- Reporting period (12 consecutive months)
- Gases (CO_2, CH_4, N_2O, HFCs, PFCs, SF_6, and NF_3)
- 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 CO_2e
- Separately report fossil CO_2 from biogenic CO_2
- 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)

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GHG emissions summary

Sector		Total by scope (tCO_2e)				Total by city-induced reporting level (tCO_2e)	
		Scope 1 (Territorial)	Scope 2	Scope 3 included in BASIC/ BASIC+	Other Scope 3	BASIC	BASIC+
Stationary Energy	Energy use (all emissions except I.4.4)						
	Energy generation supplied to the grid (I.4.4)						
Transportation (all II emissions)							
Waste	Generated in the city (all III.X.1 and III.X.2).						
	Generated outside city (all III.X.3)						
IPPU (all IV emissions)							
AFOLU (all V emissions)							
Total		(All territorial emissions)				(All BASIC emissions)	(All BASIC & BASIC+ emissions)

- 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

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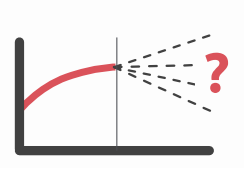
Why GPC?

WITHOUT GPC

Different types of measurements

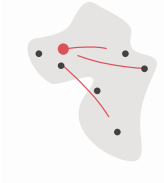
Account for only a portion of emissions

Unclear if targets will be met



Incomplete data limits investment

Unable to relate to national climate action

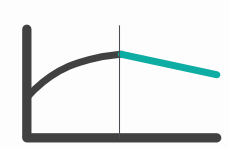


WITH GPC

One measurement

Consistently account for all emissions

Emissions trajectory will be understood



Good data drives investment

Can measure city's contribution to national action

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Assessment boundaries

- Time period
- Greenhouse gases
- Geographic boundaries
- Emission sources

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Endorsed And Supported By

THE WORLD BANK

UNEP

UN HABITAT
FOR A BETTER URBAN FUTURE

Cities Alliance Joint Work Program

URBAN LEDS
URBAN LOW EMISSION DEVELOPMENT STRATEGIES

COMPACT *of* MAYORS

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- 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

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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

Special Invitees

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

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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

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Pilot Tested by 35 Cities

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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 whre calculation methodologies/data are more readily available

- **BASIC+** level reporting:

  More comprehensive coverage of emissions sources

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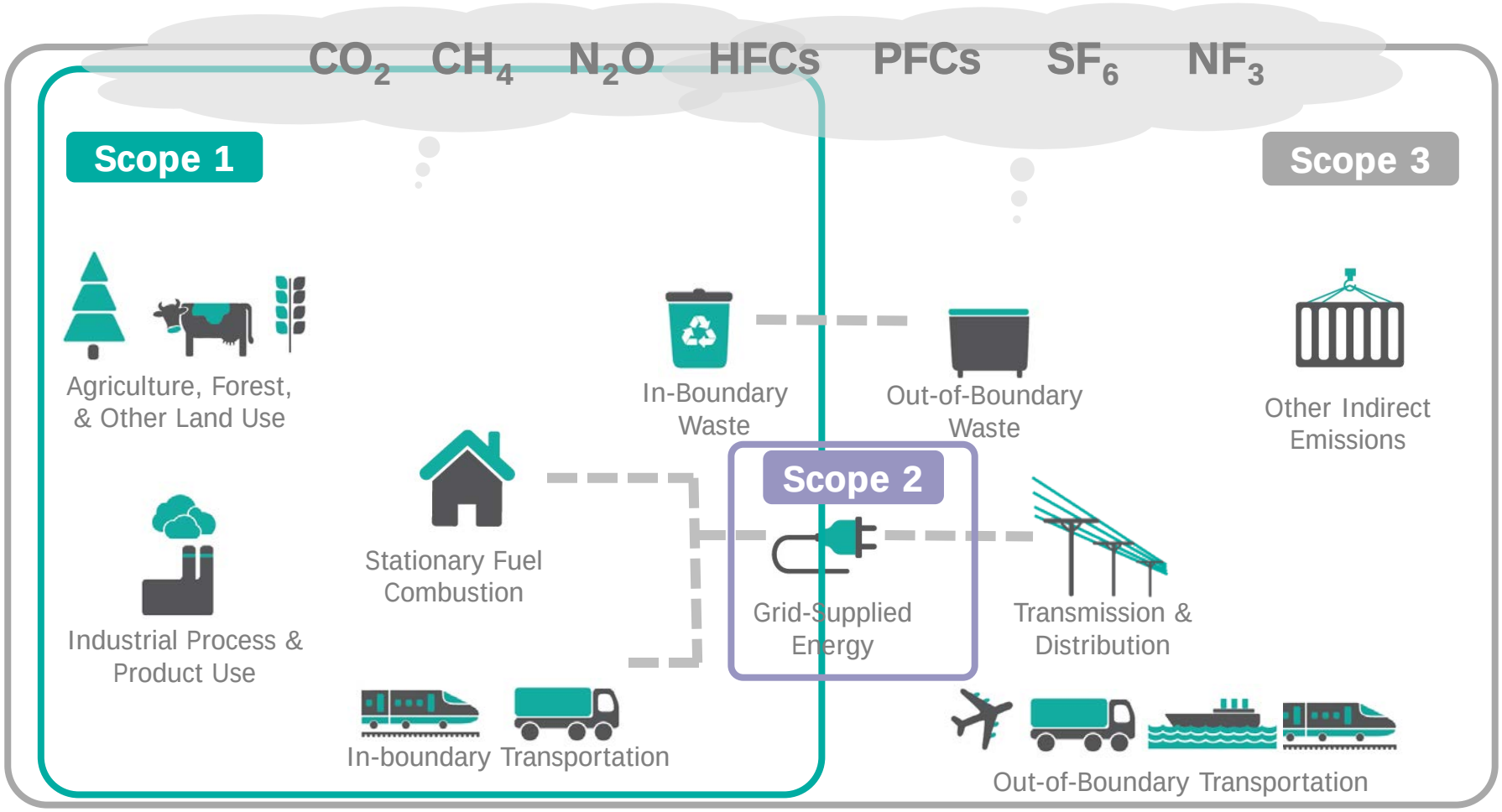
Scope Framework



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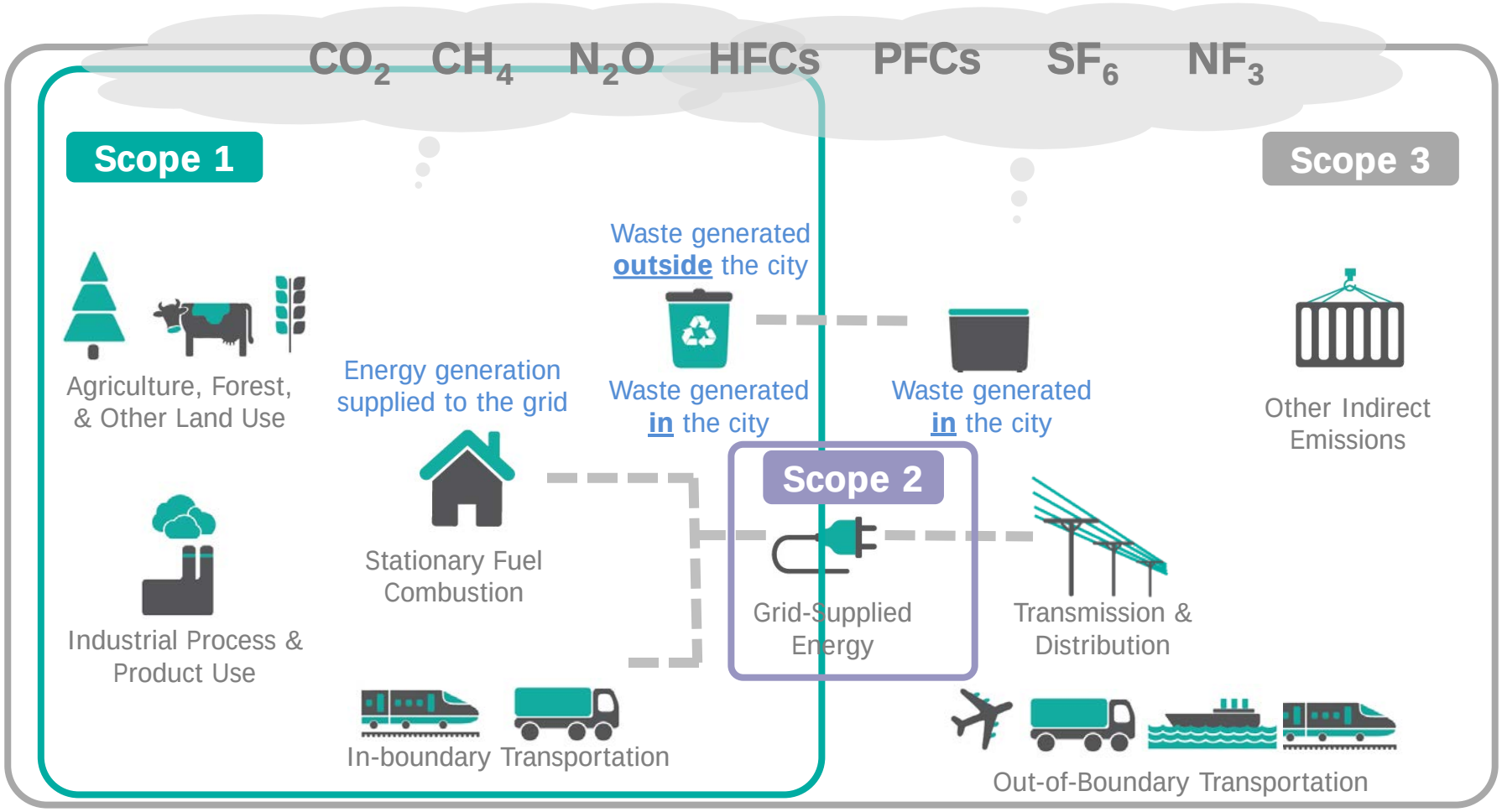
City-Induced Framework



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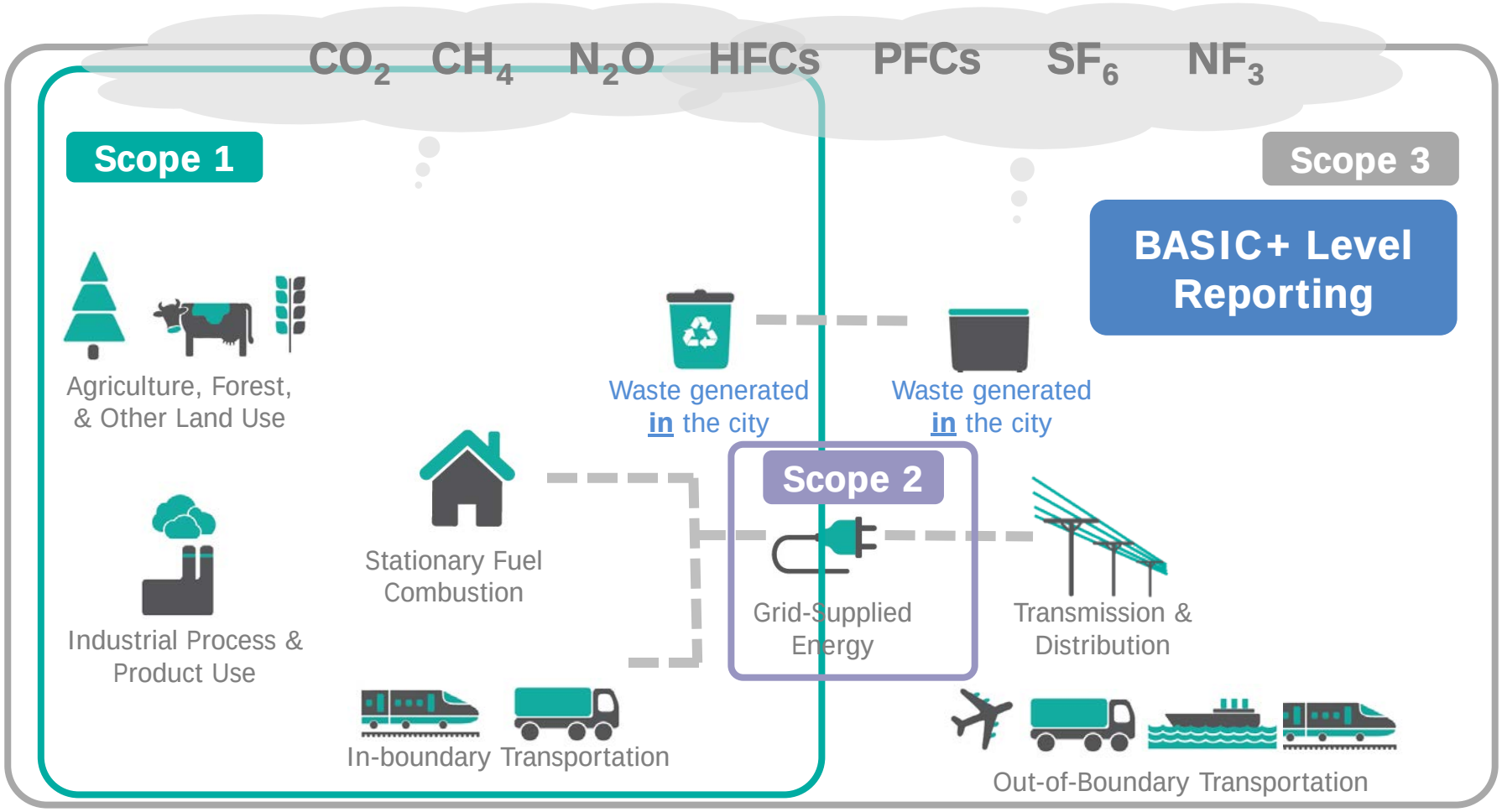
City-Induced Framework



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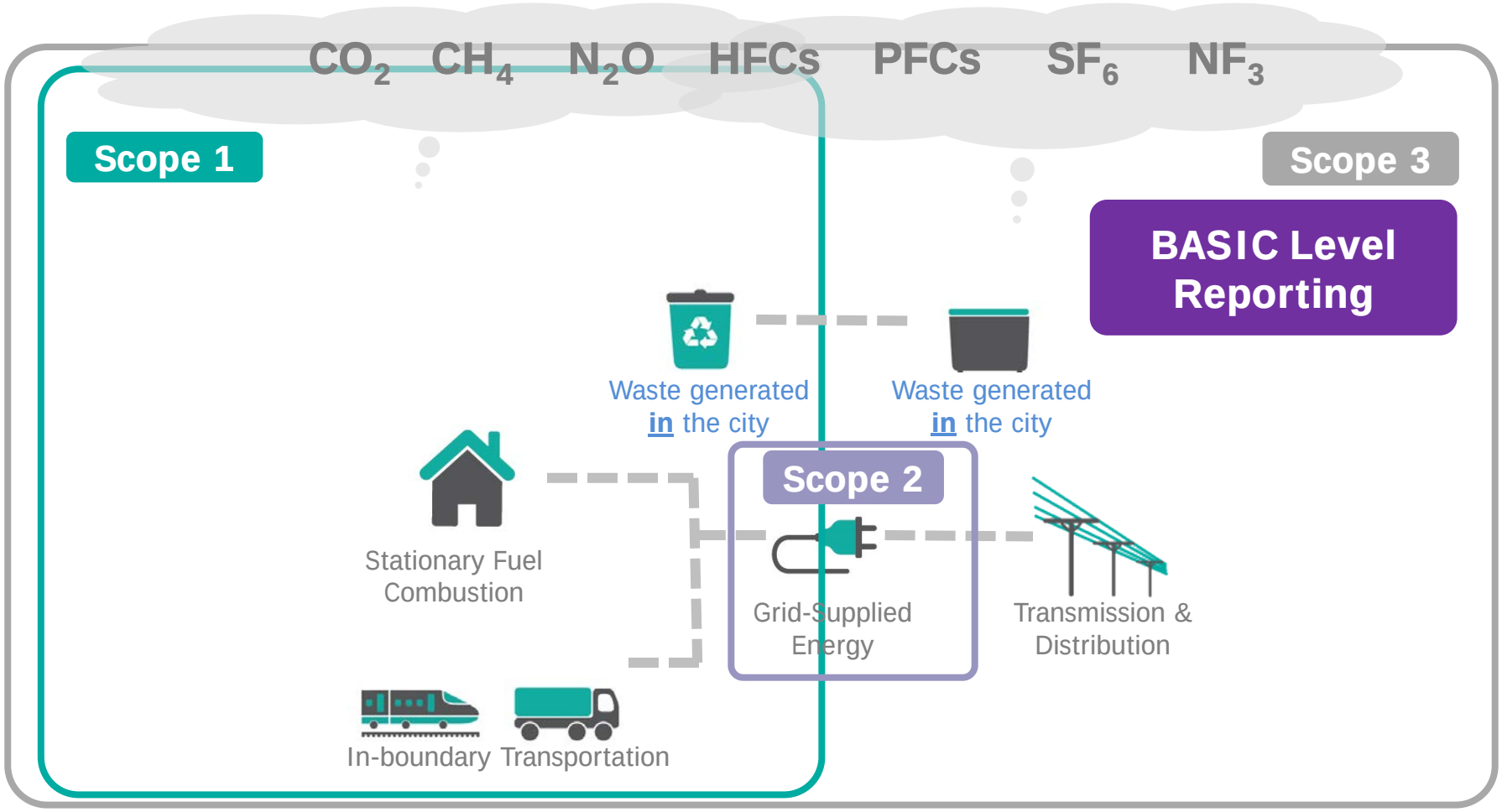
City-Induced Framework



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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

carbon*n* Climate Registry (cCR)
Global reporting platform

→ Report commitments, performance and actions. Supports transparency.

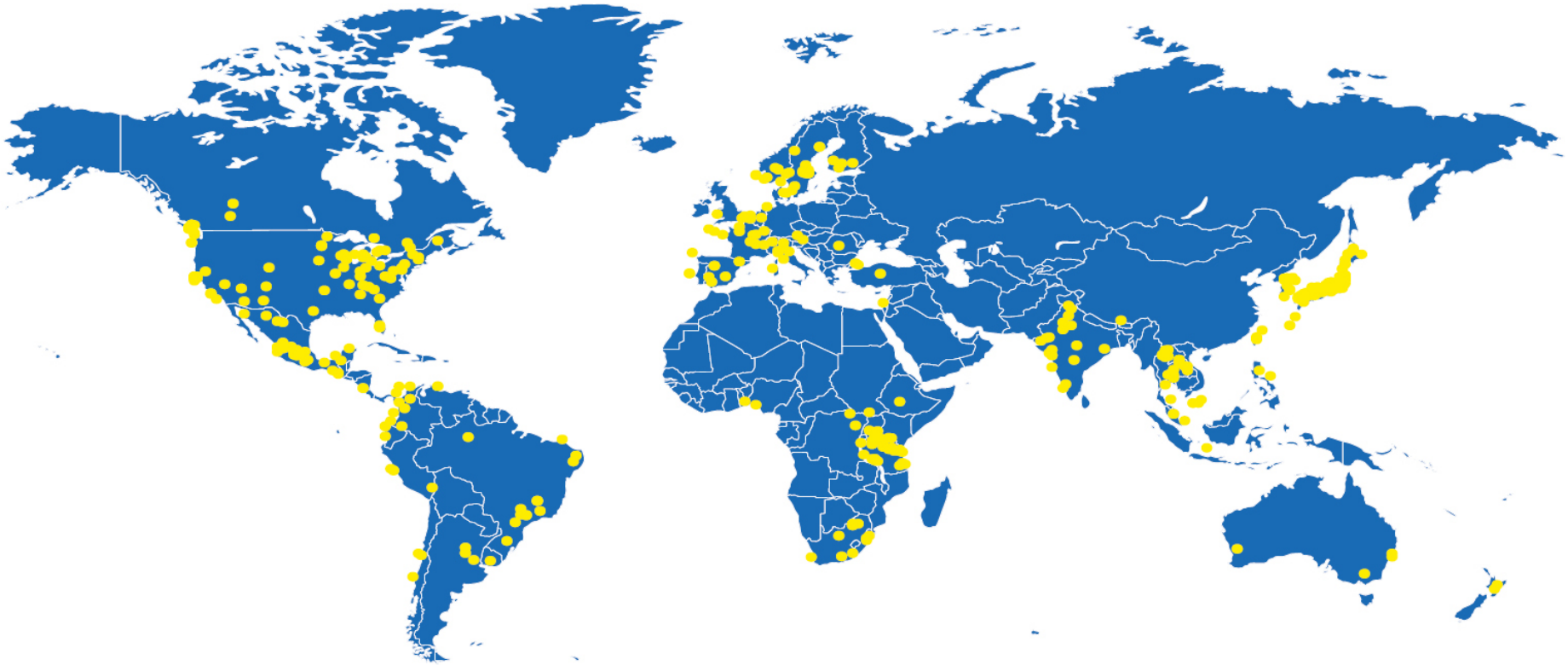
Support package for cities / regions

- 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 Emisisons Inventories (GPC) – new protocol
  - MRV process for local climate action
  - Global reporting platform for local & subnational climate action (carbon*n* Climate Registry)
  - Voluntary commitments (Compact of Mayors, ...)
  - Urban Solutions Gateway, Pool of Experts

carbonn Climate Registry - www.carbonn.org
World's leading reporting platform of local and subnational government climate action

carbonn center.org

Local Government Climate Roadmap
Recognize • Engage • Empower



524	50	480	1099	5201	1.0 billion
Number of reporting cities and regions	Countries	Population in millions (15% of world's urban population)	Energy and climate commitments	Reported mitigation and adaptation actions (4013 mitigation & 1188 adaptation actions)	Committed GHG emissions reductions by 2020

Contact

Thank you!

Questions? Ask our in-house expert:

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www.ghgprotoco.org/city-accounting

Contact

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Low Carbon City Program Manager

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