www.carbonn.org

carbonn® Climate Registry

5 Year Overview Report (2010 - 2015)

553 million

8% of the world population represented

608

Number of reporting entities

62

Countries

GHG

1.0 $GtCO_{2e}$

Committed GHG emission reductions by 2020

Imprint

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Disclaimer:

The information contained in this publication is based on self-reported largely non-verified data which has undergone a simple quality check, as reported to the carbon*n*® Climate Registry (cCR) as of 13 November 2015. 15 Initiatives have contributed to the data collection process.

Individual profies of the reporting jurisdictions are available at www.carbonn.org/data

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URBAN LOW EMISSION DEVELOPMENT STRATEGIES

ICLEI Local Governments for Sustainability

UN HABITAT FOR A BETTER URBAN FUTURE

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Contents

Mayor Ashok Sridharan
Bonn, Germany
Co-chair of World Mayors Council on Climate Change and ICLEI's special Messenger to the UNFCCC

"The carbonn® Climate Registry has grown tremendously since its launch in 2010. With over 600 reporting jurisdictions representing 8% of the global population, the Registry sends a powerful signal that cities, towns and regions are rapidly advancing. The release of five years of data at COP21 is an important milestone and a testament to the scale of local action."

04 Executive Summary

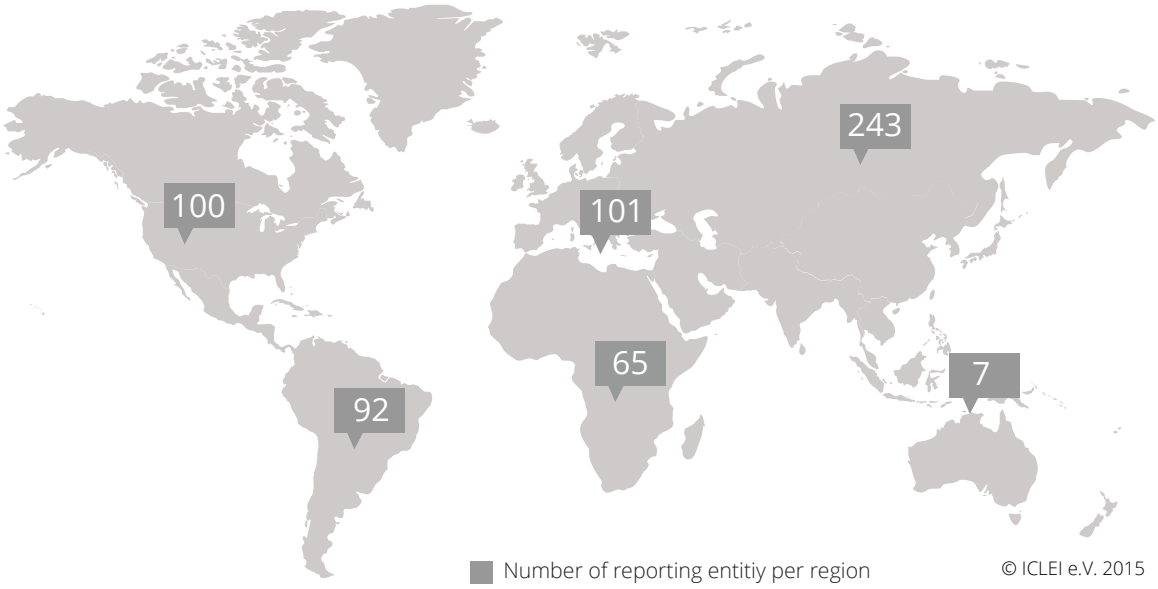
This Five Year Overview Report of the carbonn® Climate Registry (cCR) provides a synopsis of reporting trends by local and subnational governments around the world that have been reporting their climate commitments, performance (greenhouse gas inventories) and actions between November 2010 and November 2015.

Starting with 51 pioneer cities in 2010, today the Registry is used by 608 cities, towns and regions from 62 countries. These "reporting entities" represent 553 million people - 8 percent of the world population - and are diverse in terms of size, geographical location, and local climate conditions. The cCR reporting entities are action-oriented, taking responsibility and showing leadership by tackling climate change. Reporting focuses on climate change mitigation (often referred to as low emission development in the Global South), as well as adaptation and resilience - with a relatively balanced share. Many reporting local and subnational governments also monitor co-benefits, covering a diversity of sectors and action areas.

15 Initiatives use the cCR reporting platform, forging strong partnerships that enhance reporting (see comprehensive partnership list on page 10 and 11). Reports received from initiatives' participants and voluntory local and subnational reporting entities shows a clear trend towards greater transparency and accountability, with 90% of the cCR reporting entities publishing their information. Reporting also has a specific purpose to address measurable, reportable and verifiable (MRV) climate action, which will support credibility of reported data, developments and trends. Many reporting jurisdictions are tracking performance, with 29% verified by an auditor.

Secondary and fast growing cities are active in reporting, with 379 (63%) of reporting jurisdictions representing a population less than 0.5 million, and 184 (30%) of entities representing a population between 0.5 million and 3 million.

Figure 1: Current reporting statistics of the carbonn® Climate Registry



553 million
8% of the world population represented

62
Countries

608
Reporting jurisdictions

1293
Climate commitments

6181
Mitigation and Adaptation actions

GHG
2.2 $GtCO_{2e}$
Reported annual emission released

Multiple levels, multiple processes

The concepts of **horizontal aggregation** and **vertical integration** are emerging, when dealing with reporting.

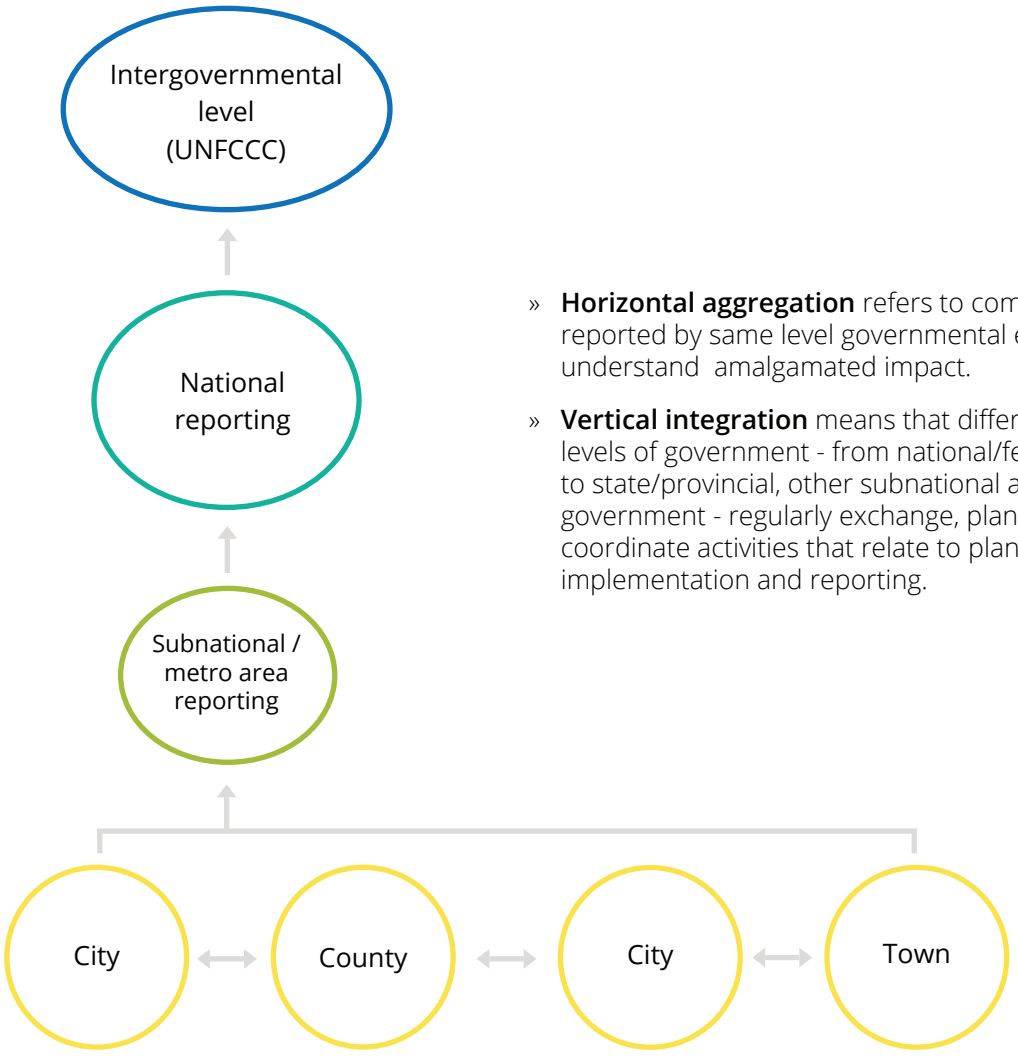
The cCR has been upgraded in 2015 to address both horizontally aggregated - and vertically integrated reporting, with support from the Urban-LEDS project and R20 Regions of Climate Action.

What is not yet clear, is whether reported commitments and performance by local and subnational governments form part of the Intended Nationally Determined Contributions (INDCs) defined by national governments, or if these are in addition to the INDCs. The latter implies that they would raise the level of global and national ambition. Gaining clarification on this will be a priority action for the carbon*n*® Center in the next period.

15 initiatives use the cCR reporting platform, as a win-win partnership.

To accelerate local and subnational climate action, the Transformative Actions Program (TAP) was launched in 2015 (see page 27), using the Registry to monitor developments of TAP projects that will receive financing.

Figure 2: Coordinating climate action: vertical integration and horizontal aggregation



» **Horizontal aggregation** refers to combining data reported by same level governmental entities to understand amalgamated impact.

» **Vertical integration** means that different levels of government - from national/federal to state/provincial, other subnational and local government - regularly exchange, plan and coordinate activities that relate to planning, implementation and reporting.

06 Introduction

The carbon*n*® Climate Registry (cCR) was launched at the World Mayors Summit on Climate in Mexico City on 21 November 2010, as the global response of local governments to measurable, reportable and verifiable (MRV) climate action. Operated by the carbon*n*® Center hosted by the ICLEI World Secretariat, the cCR has over the past 5 years become the world´s leading reporting platform to enhance transparency, accountability and credibility of local and subnational climate action.

Reporting is voluntary. The use of the platform is free. It is open to reporting by any local and subnational government. Data is accessible online (where permission is granted to display publicly).

The Registry has been expanded and upgraded since late 2014 to also address sub-national states and regions (hence the name change from carbon*n*® Cities Climate Registry). It now supports reporting by local and sub-national governments, offering a flexible and robust reporting framework. The new structure supports horizontal aggregation and vertically integrated reporting of climate change mitigation and adaptation - responding to the need to determine where commitments, performance and actions are made and how to avoid double counting.

The carbon*n*® Climate Registry currently supports 15 unique initiatives to strengthen local and subnational climate action. Each initiative addresses a relevant target group and/or theme, coordinated by partners of the cCR (a list of the initiatives using the cCR as their reporting platform is available on pages 10 to 11).

The Registry is also a prime data partner of the UNFCCC's Non State Actor Zone for Climate Action (NAZCA) Platform.

As of November 2015, there are 608 reporting jurisdictions from 62 countries, representing 553 million people on this planet - 8% of the global population and 14% of the world's urban population. Reporting addresses government operations as well as community and territory level. Data used includes bottom-up as well as disaggregated data, depending on data availability and quality.

Core elements

The cCR focuses on three areas of reporting, defining these as core elements to move towards measurable, reportable and verifiable (MRV) local climate action:

» **Commitments** reflect energy and climate related targets or pledges adopted by the local or subnational government to reduce government and community GHG emissions, and to address climate change adaptation and resilience. Note: It is recommended to define necessary ambitious climate commitments and track progress regularly.

» **Performance** enables the quantification of government and community GHG emissions through regular inventories. Note: Reporting jurisdictions interested in a robust and standardized GHG emissions inventory framework are encouraged to use the Global Protocol for Community-Scale Greenhouse Gas Emission Inventories (GPC) - following IPCC 2006 guidance.

» **Actions** include a diversity of measures that are planned, implemented and monitored, for example strategy, action plan or policy; regulation; technical or infrastructure; fiscal or financial mechanism; stakeholder engagement, etc..– addressing mitigation and/or adaptation. Each action is also defined in terms of its status of implementation and financing.

Figure 3: Three key areas of reporting in the cCR

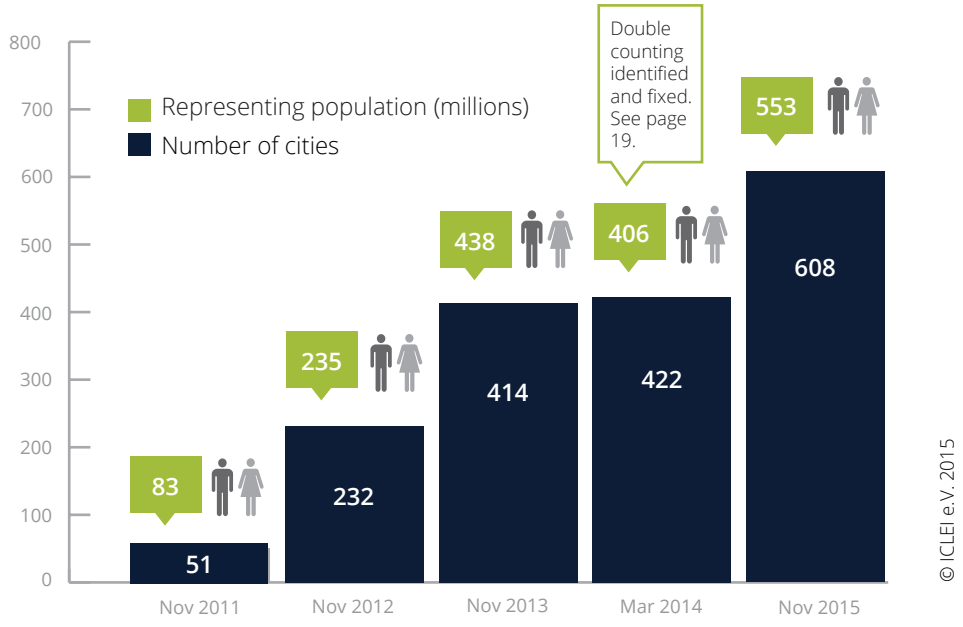
Use of data

Data is made publicly available on the cCR reporting platform, with permission from the reporting entity. The reporting entities may indicate which data is not for public display, but may be used for data analysis. Data is not sold.

All collected data is used for research and analysis to follow developments and determine trends at the local and subnational level in cities, towns and regions. Analyses are conducted with research institutions, academia, and the 15 partner initiatives.

cCR Reports are primarily used to inform the international climate negotiations, all levels of government, as well as UN agencies and key decision-makers around the globe. The cCR was the first data provider of local climate action to the United Nations Framework Convention on Climate Change (UNFCCC) NAZCA portal, supporting its launch in December 2014.

Graph 1: Highlights over five years

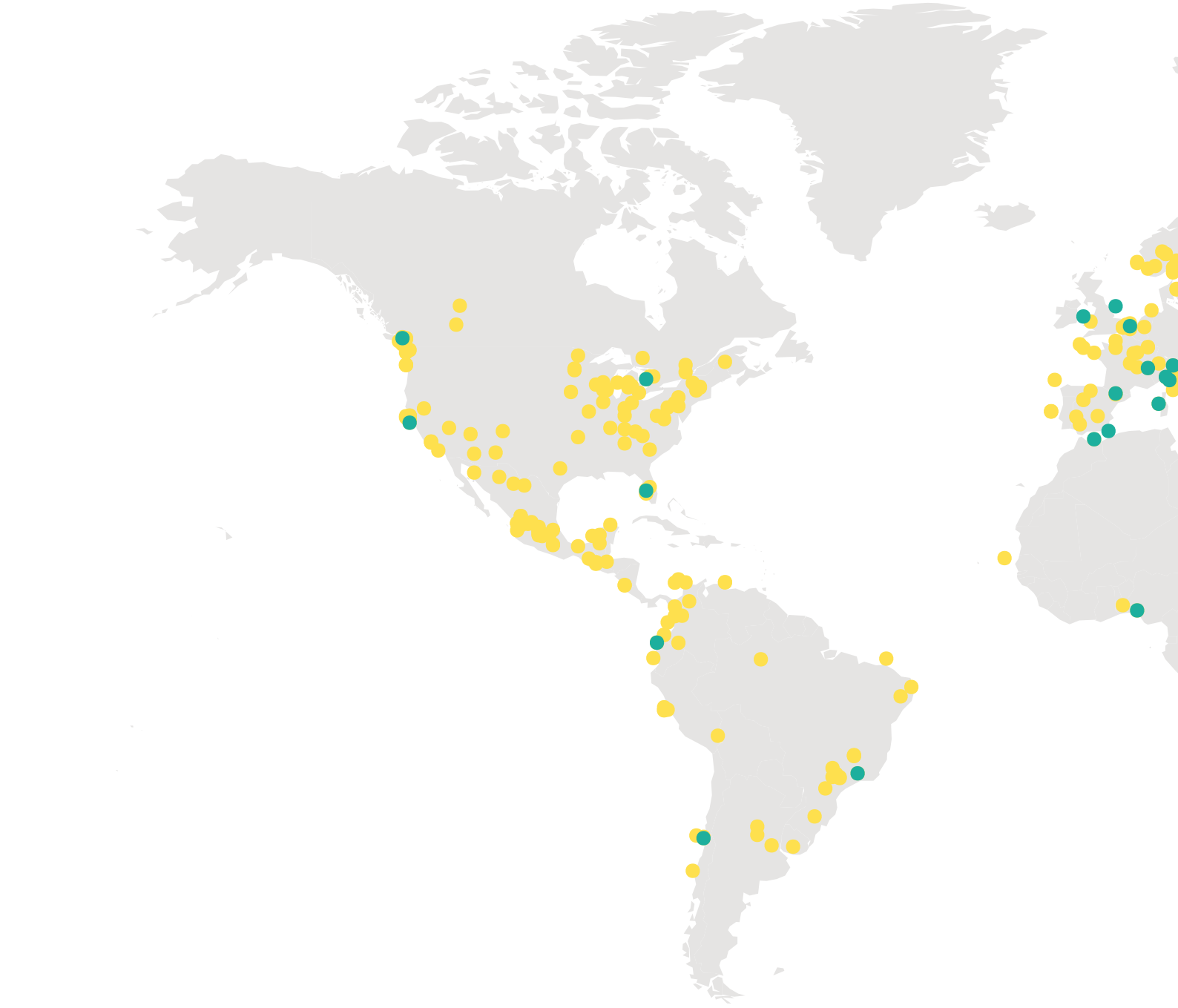


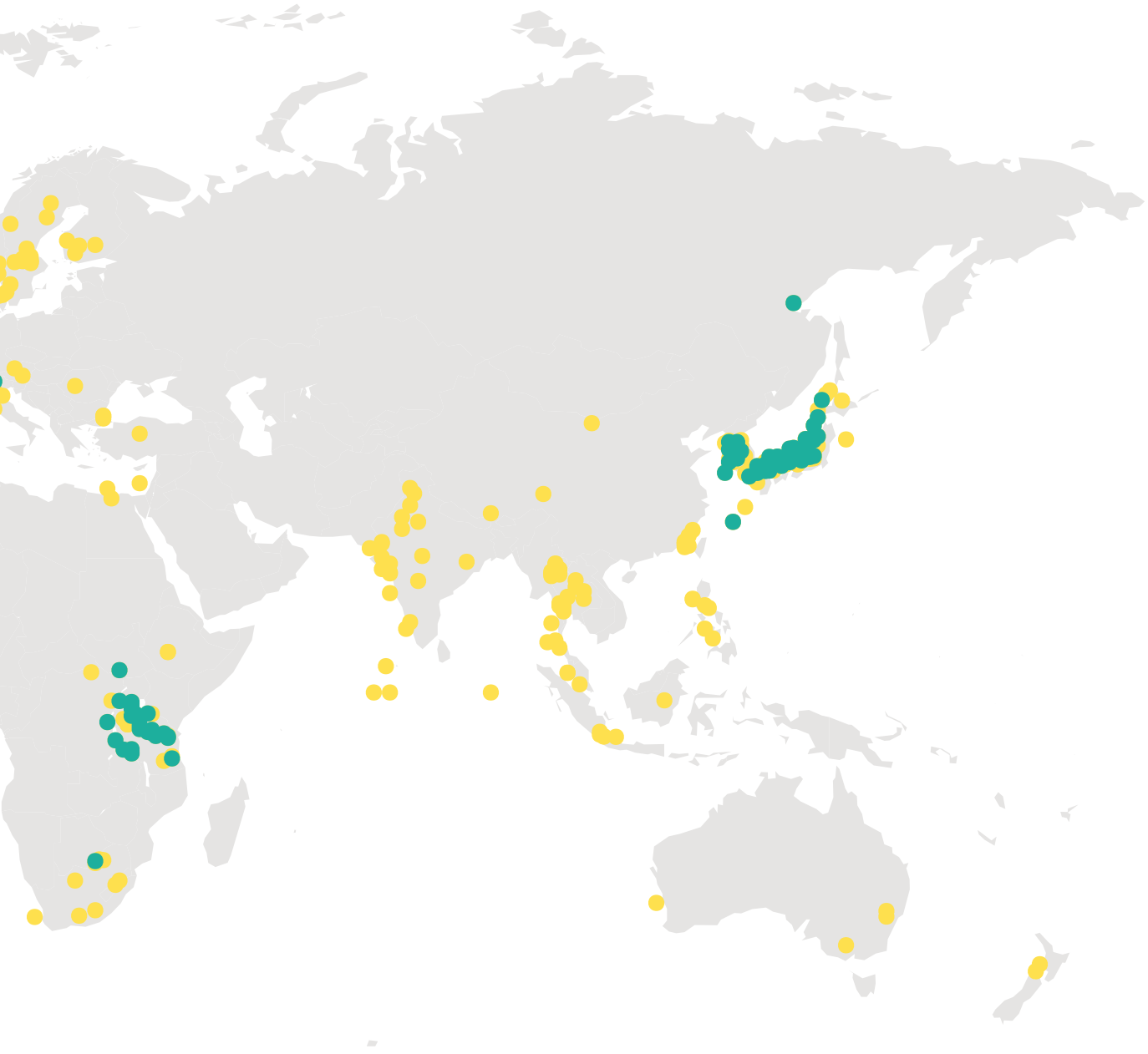
During the past 5 years, cCR has developed as world's leading reporting platform with rapidly growing number of reports, partnership and recognition.

2010 Launch of the Mexico City Pact and the carbonn Cities Climate Registry (cCCR) as its reporting platform
2011 First Registry report presented at the UNFCCC
2012 Japan carbonn Climate Registry connected to the global platform
2012 The Registry becomes the reporting platform of the Earth Hour City Challenge (EHCC)
2013 The Nantes Declaration recognize the Registry as an important reporting platform and source of data
2014 Cooperation with R20 on enhancing the cCR to include sub-national government reporting
2014 Launch of the Compact of Mayors with the cCR a recognized reporting platform and the designated central database for the Compact
2014 cCR supports NAZCA as first data provider on city level commitments and actions
2015 cCR upgrade to allow GPC compliant GHG inventory reporting and a robust reporting framework for Compact of Mayors and Compact of States and Regions

Map of Reporting Local and Subnational Governments

Figure 4: Map of Reporting Entities in the carbonn® Climate Registry as of 13 November 2015





Local governments (cities, towns)
Subnational governments (states, regions)

Multiple initiatives use the carbon*n*® Climate Registry

1. Compact of Mayors

An agreement by city networks and a pledge by city leaders to reduce city-level emissions, reduce vulnerability and enhance resilience to climate change - using a robust reporting framework. The cCR is the recognized reporting platform as well as the designated Compact of Mayors central database.

www.compactofmayors.org

2. Compact of States and Regions

This Compact will provide the first single, global account of greenhouse gas reduction targets made by state and regional governments. It will provide an annual assessment of the commitments and progress toward those commitments.

3. Durban Adaptation Charter (DAC)

A commitment by local governments to local climate action in their jurisdiction that will assist their communities to respond to and cope with climate change risks thereby reducing vulnerability.

www.durbanadaptationcharter.org

4. EcoMobility Alliance

The Alliance encourages EcoMobiolity in cities and towns to provide urban mobility that meets the needs of people.

www.ecomobility.org

5. R20 – Regions of Climate Action

A vertically integrated reporting system for subnational climate action that is Measurable, Reportable, Verifiable (MRV) was developed to encourage States, Provinces and Regions to report.

www.regions20.org

6. Earth Hour City Challenge (EHCC)

A challenge created by WWF to mobilize action and support from cities in the global transition towards a climate friendly one-planet future.

www.wwf.panda.org/what_we_do/footprint/cities/earth_hour_city_challenge/

7. Japan carbon*n* Climate Registry

The first national chapter of the cCR, supporting reporting by Japanese cities, towns and prefectures.

www.registry-japan.org

8. Resilient Communities for America (RC4A)

A national campaign championing the leadership of local elected officials who are building more resilient communities in the USA.

http://www.resilientamerica.org

9. Mexico City Pact

A commitment by Local Governments through the Global Cities Covenant on Climate - Mexico City Pact to scale up their role and efforts in combating climate change globally. This Pact was launched together with the cCR.

10. PACMUN project

The Climate Action Plan for Municipalities Programme (PACMUN - Plan de Acción Climática Municipal) in Mexico helps to build effective synergies between local and national stakeholders to encourage a public policy framework on climate change mitigation and adaptation actions.

www.pacmun.org.mx

11. Urban-LEDS project

Promoting Urban Low Emission Development Strategies (Urban LEDS) in 37 cities in 12 countries, using ICLEI's GreenClimateCities process methodology and reporting regularly on progress.

www.urban-leds.org

12. 100% Renewable Energy Cities and Regions Network (NEW)

Part of the Global 100% RE Campaign hat advocates 100% renewable energy, this network supports local and subnational governments to explore setting targets and progressing with these - towards a 100% RE future. ICLEI coordinated the network.

www. go100re.net

13. Low Carbon City Lab (LoCaL) (NEW)

The climate-KIC funded program initiative "Low Carbon City Lab" (LoCaL), strives to develop innovative new methods to monitor GHG emissions in cities, to provide decision making tools to city authorities based on the obtained data, and to verify implemented actions.

www.climate-kic.org/programmes/low-carbon-city-lab

14. Climate and Clean Air Coalition (CCAC) (NEW)

The Coalition serves as a forum for assessing progress in addressing the challenge of short-lived climate pollutants and for mobilizing resources to accelerate action. It works to catalyze new actions as well as to highlight and bolster existing efforts on near-term climate change and related public health, food and energy security, and environmental issues.

www.unep.org/ccac

15. Transformative Actions Program (TAP) (NEW)

The TAP aims to improve access to existing capital flows to cities and regions, catalyzing and accelerating additional capital flows, and maximizing investment in low-carbon and climate-resilient urban development and governance processes.

www.tap-potential.org

12 Analysis and Highlights of five years

Reporting Entities

Delta State, Nigeria. Delta State was the first state to report on the cCR when the reporting platform was opened up to states, regions and provinces in late 2014. Currently 91 states and regions are reporting to the cCR, in addition to 517 cities, towns and other local and sub-national governments.

608
Reporting entities

62
Countries

553 million
Represening inhabitants around the world

Profile of Reporting Entities

The cCR was created to support reporting on local climate action by local and subnational governments. A diversity of entities in terms of size, geographical location and national contexts use this reporting platform. The platfrm offers a clear framework that can be used by any local or subnational government.

The table below demonstrates local climate leadership in cities, towns and regions. Reporting jurisdictions from 16 countries represent more than a quarter of the country's population. The last five countries listed - all densely populated countries - contain reports from more than 20 jurisdictions.

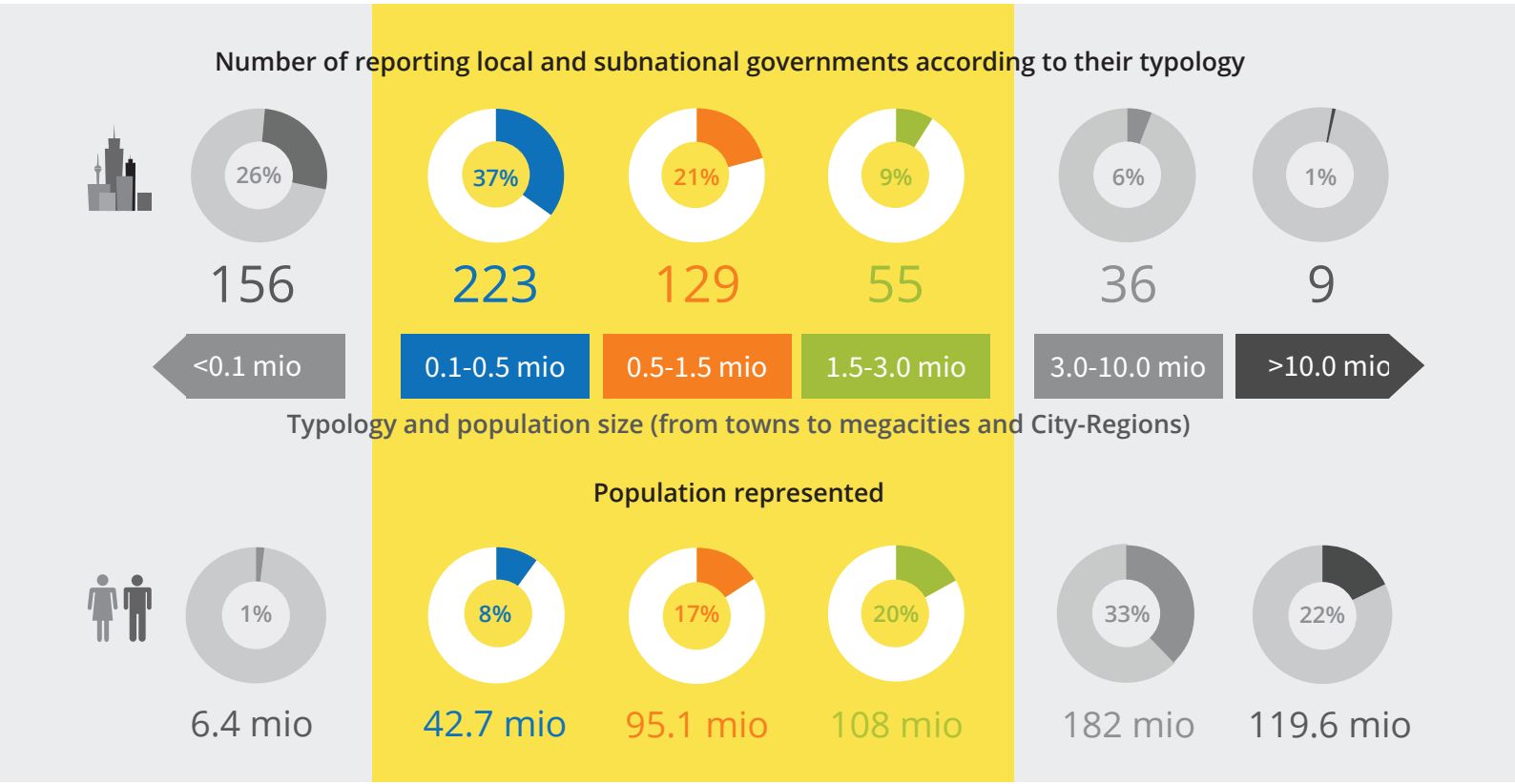
Table 1: Reporting entities combined with covering more than 1/4 of nation population

Country	Number of reporting jurisdictions	Population represented by cCR reporting entities	National population	Percentage of national population represented by cCR reporting entities
Spain	22	12,817,837	46,464,053	28%
Portugal	4	3,016,522	10,427,301	29%
Brazil	17	59,805,488	202,768,562	29%
Peru	5	10,016,188	31,151,643	32%
Tanzania	37	15,744,498	44,928,923	35%
Colombia	13	17,577,185	48,014,026	37%
Iceland	1	121,822	329,100	37%
Sweden	25	3,719,855	9,760,142	38%
South Africa	15	22,584,538	54,002,000	42%
Chile	5	7,847,924	18,006,407	44%
Mongolia	1	1,372,000	3,042,511	45%
Gabon	1	797,003	1,475,000	54%
Republic of Korea	23	38,892,049	50,617,045	77%
Japan	133	118,746,143	126,434,964	94%
Barbados	1	277,821	277,821	100%
Singapore	1	5,469,700	5,469,700	100%
India	21	37,814,200	1,210,193,422	3%
Canada	21	7,168,825	35,675,834	20%
Thailand	26	9,492,110	67,200,000	14%
Mexico	34	21,072,053	118,395,054	18%
United States	79	27,143,621	320,206,000	8%

cCR reporting entities in those countries represent 25% of the national population

More than 20 cCR reporting entities are from each of those countries

Figure 5: Number and type or reporting entities



Why are secondary cities so important?

Secondary cities have between 500,000 to 3 million inhabitants. Secondary cities in the Global South will undergo massive expansion in the next decades, comparable to city growth observed in Europe and North America 100 years ago. As urban population grows, tackling climate change becomes increasingly important - also considering that secondary cities will have a strong influence on future economic development of their countries.*

The carbonn Center encourages juridictions of all sizes to report regularly in the carbonn Climate Registry in order to track developments.

The secondary cities and smaller jurisdictions form the major reporting group on this Registry, contributing more than 90% commitments, performance and actions. A total of 51 small-sized and secondary cities reported at least 3 GHG inventories for the whole community, allowing them to monitor progress.

*Source: Alfredo Brillembourg & Hubert Klumpner, "Gran Horizonte: Taking a Walk in the Urban Planet", Network City and Landscape.

Mitigation and Adaptation Commitments

Paris, France. Reporting in the cCR since 2013, Paris has reported 7 commitments, addressing GHG emission reduction, renewable energy and energy efficiency. In 2007, Paris adopted an ambitious climate change mitigation goal for the community to reduce absolute emissions by 75% by 2050 compared to the base year of 2004.

1268

Mitigation commitments

25

Adaptation commitments

GHG

1.0 $GtCO_{2e}$

Committed GHG emission reductions by 2020

A data-driven change through measurable, reportable and verifiable climate commitments

A commitment reflects energy and climate related targets and/or a pledge to address climate change adaptation and resilience. Such commitments are adopted by the local or subnational government addressing government operations and /or the community. Making a commitment is a common starting point for local climate action.

Climate and energy targets can contribute to the fulfillment of national targets, such as the Intended Nationally Determined Contributions (INDCs).

From 2011, the Registry witnessed an increase of reported climate change mitigation commitments, in particular for energy efficiency and greenhouse gas emission reduction. This gives a direction for the low emission development pathway, helping to monitor it against a base year.

Since 2014 adaptation and resilience commitments are also captured in the Registry.

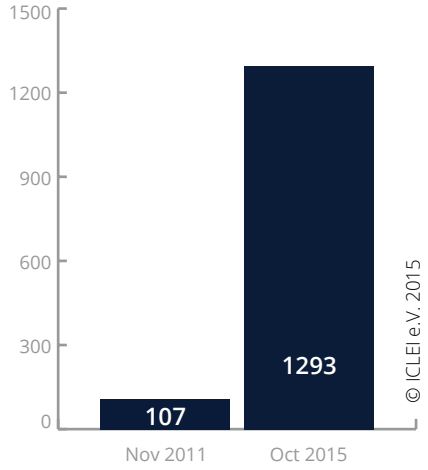
From 2010, 1293 commitments made by 437 reporting entities covering 42 countries were reported.

Defining the commitment boundary is an important element set by the reporting entity - either for the whole community or for government operations. Until November 2015, the Registry received 761 (59%) commitments addressing the whole community's geographic boundary from 364 jurisdictions, 532 (41%) for government's operations, from 306 jurisdictions. 231 jurisdictions made commitments for both governmental operations and whole community.

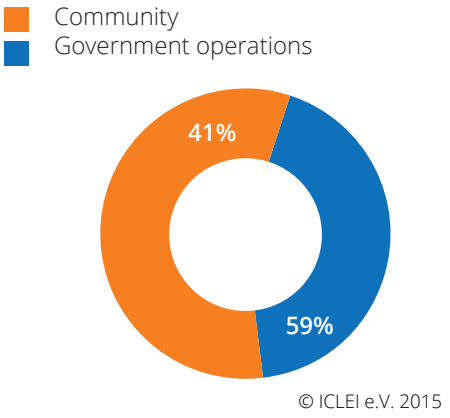
Jurisdictions have set goals that are long term (to be achieved by 2050) and short term (to be achieved by 2020).

Most of the jurisdictions (396) have set a climate and energy commitment towards 2020 (879 commitments - i.e. 73%). However, longer term commitments are also increasing - with 167 local and subnational governments reporting 396 commitments towards 2050 (27%). Interestingly 125 jurisdictions with short term goals have added long term commitments in their recent reports.

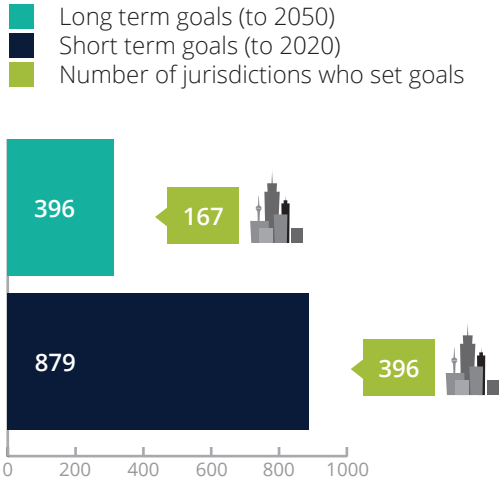
Graph 2: Number of commitments



Graph 3: Commitment boundary



Graph 4: Long and short term targets



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Exploring climate commitments

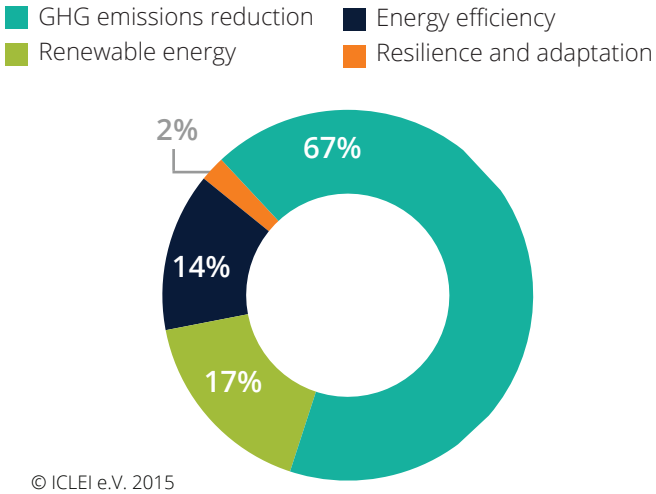
A mitigation commitment is expressed in GHG emissions reduction, alternatively in increased use of renewable energy (RE) or optimization of energy efficiency (EE).

In the cCR report these commitments are converted into carbon dioxide equivalent (CO_{2e}) per year.

Until November 2015, 67% of the commitments were made in terms of GHG reductions, 17% aim at improving the use of renewable energy, and 14% at improving energy efficiency.

From 2015, resilience and adaptation commitments can also be reported - 25 commitments were received this year.

Graph 5: Commitment Type



≈1.0 $GtCO_{2e}$
Committed GHG emission reductions by 2020

=

roughly the equivalent of the total GHG reductions achieved by the European Union between 1990-2012

An aggregation of GHG emission reduction commitments reported to the Registry, shows a combined commitment to reduce almost 1 gigatons of CO2e by 2020, compared to the absolute emissions of the base year.

This committed emissions reduction potential roughly equals that of reductions achieved by the European Union between 1990 to 2012.

Ambitious climate leadership

The lists below show local and subnational governments with the most ambitious targets - set to achieve 100% renewable energy or carbon neutrality by local and subnational governments, addressing the whole community.

The 100% RE Cities and Regions Network, led by ICLEI, is currently establishing and testing a definition and criteria to harmonize approaches and reporting.

100% RE Community

- Cincinnati, United States
- Copenhagen, Denmark
- Evanston, United States
- Gävle, Sweden
- Helsingborg, Sweden
- Malmö, Sweden
- Moshi, Tanzania
- Oslo, Norway
- Piteå, Sweden
- Province of Siena, Italy
- Säffle, Sweden
- Santa Cruz County, United States
- Vancouver, Canada
- Vårgårda, Sweden
- Växjö, Sweden

Carbon Neutral Community

- Copenhagen, Denmark
- Växjö, Sweden
- Seattle, United States
- Östersund, Sweden
- Oslo, Norway
- Province of Siena, Italy
- Antwerp, Belgium
- Gävle, Sweden
- Jeju Special Self-Governing Province, Republic of Korea
- Austin, United States
- Lappeenranta, Finland
- Stockholm, Sweden
- Lunds kommun, Sweden

Climate Performance

Buenos Aires, Argentina. Reporting since 2011, the Autonomous City of Buenos Aires has reported 2 commitments, 27 inventories and 38 actions on the cCR. **As a pioneer from the Global South, Buenos Aires has developed and reported 14 community-level GHG inventories, recording emission trends every year from 2010 to 2013.**

424

Entities

1238

Community GHG Inventories

GHG

2.2

GtCO2e/pa

Reported annual emissions released

Addressing performance - focus on GHG inventories

Performance refers to the measurement of GHG emissions emitted within the community and by government operations. The aim is to track changes in performance over time. To move towards a harmonized quantification of government and community emissions, it is recommended to use the guidance provided by the Global Protocol for Community-Scale Greenhouse Gas Emission Inventories (GPC).

Since November 2010, the Registry has witnessed a growth in the number of reporting subnational entities as well as the frequency of reported inventories addressing both community and government operations. Over the past 5 years, the number of reported inventories has increased by an order of magnitude. A total of 1238 community and government GHG inventories were reported, while 424 entities reported at least one government or one community inventory. In average 2.2Gt of CO2e is reported annually to the Registry.

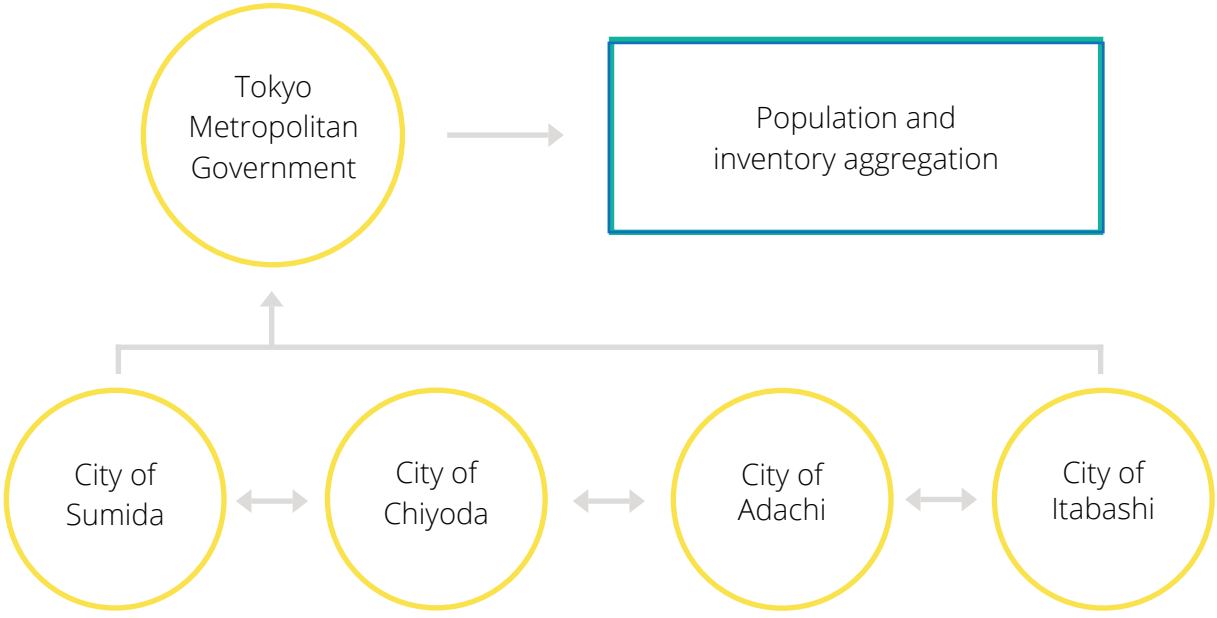
Resolving the issue of double counting

Double counting of population and GHG emissions may occur when aggregating data from local and subnational governments with overlapping jurisdictions.

The cCR has been upgraded to deal with this challenge, by aligning and integrating of accounting and reporting - embedded within an "intelligent jurisdiction mapping " function. This supports data aggregation and vertically integrated reporting. In other words, the cCR system maps out the hierarchical connections between jurisdictions of different levels. When aggregating, the system will only use data from the highest reporting entity from certain jurisdiction to avoid double counting.

For example, Tokyo Metropolitan Government (TMG) and 4 cities within its geographic boundary are reporting to the cCR. When aggregating, and in order to not double count, the system will identify that TMG is the over-arching reporting entity of this geographic jurisdiction, therefore only taking data on population, as reported by TMG, and use it for further aggrgation. However, the reports of commitments and actions from four subsidiary cities are also useful, for example for comparative data analysis and to address integrated action planning.

Figure 6: Simple illustration addressing overlapping jurisdictions



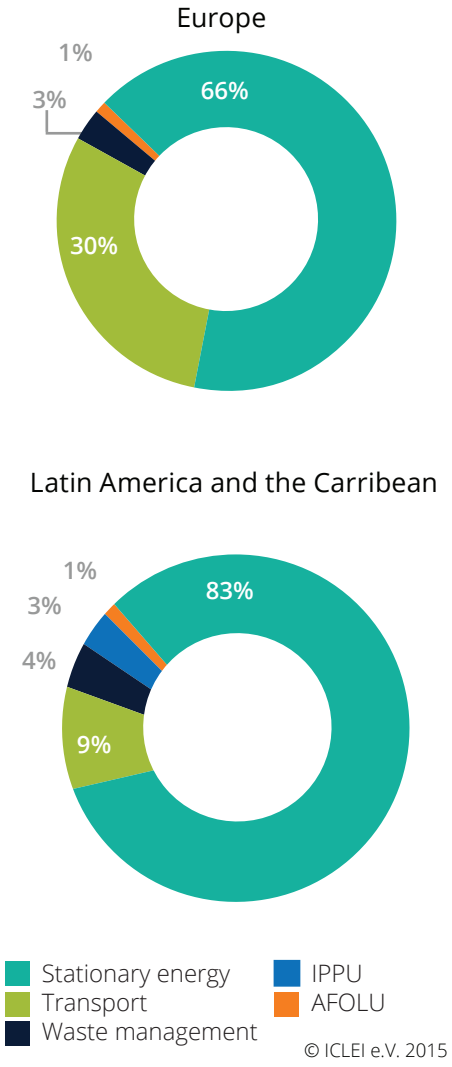
The major GHG emissions sources in the community

According to the 656 community GHG inventories reported from 360 entities, stationary energy and transportation account for the most emissions - approximately 90% of total emissions. The emission patterns vary slightly from region to region. For example, Latin America reported waste as one of the major sources, while in Europe this is much reduced. An analysis of the reasons behind this falls outside the scope of this report.

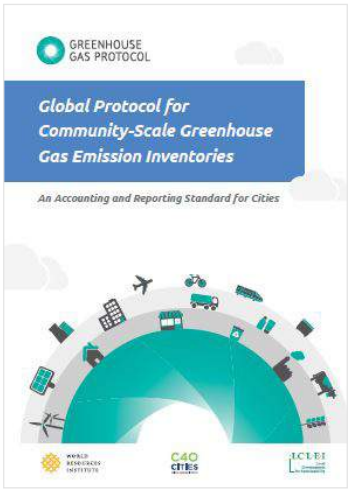
According to the GPC*, GHG emissions from local and subnational jurisdictions shall be classified into six main sectors:

- Stationary energy: emissions from fuel combustion, as well as fugitive emissions released in the process of generating, delivering, and consuming useful forms of energy (such as electricity or heat).
- Transportation: emissions from combustion fuel or consuming grid-delivered electricity in transport vehicles and mobile equipment or machinery.
- Waste: emissions through aerobic or anaerobic treatment of waste and waste water.
- Industrial processes and product use (IPPU): All GHG emissions occurring from industrial processes, product use, and non-energy uses of fossil fuel.
- Agriculture, forestry, and other land use (AFOLU): GHG emissions through a variety of pathways, including land-use changes that alter the composition of the soil, methane produced in the digestive processes of livestock, and nutrient management for agricultural purposes.

Graph 6: Various GHG emission breakdown



*A globally-recognized standard tailor-made for community-scale GHG emissions inventories



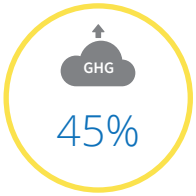
The World Resources Institute, C40 Cities Climate Leadership Group (C40) and ICLEI – Local Governments for Sustainability (ICLEI) have partnered up to create this Protocol for local governments, namely the Global Protocol for Community-Scale Greenhouse Gas Emission Inventories (GPC). The GPC has been designed to allow city inventories to be aggregated at subnational and national levels in order to:

- Improve the data quality of a national inventory, particularly where major cities' inventories are reported;
- Measure the contribution of city mitigation actions to regional or national GHG emission reduction targets;
- Identify innovative transboundary and cross sectorial strategies for GHG mitigation. Aggregation of multiple city inventories can be accomplished by combining the scope 1 (territorial) emissions of cities whose inventory boundaries do not overlap geographically.

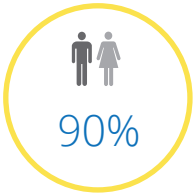
Towards good quality regular reporting

Over the past 5 years an improvement of inventory reporting has been observed. The growing awareness among reporting jurisdictions can be observed through an increase of regular reporting of new inventories and an improved quality of these inventories (i.e. more sectors reported, more comprehensive data). Data verification has been observed as a new trend, though this is not always third party verification.

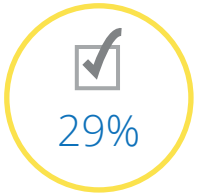
As of November 2015, the performance section contains:



community inventories have been updated since 2010



of reported community inventories are publically accessible



of reported community inventories are verified

entities have updated and reported community inventories regularly for at least 3 times

Going beyond ambitious commitments

Of the 60 entities that report regularly, 19 have achieved and surpassed their voluntary GHG reduction targets. It is worth mentioning that all the achieved and surpassed reduction targets are more ambitious than even the most ambitious national government targets under the Kyoto Protocol.

Table 2: Reporting entities with target surpassed

City	Country	Number of Inventories	Commitment Year*	Commitment Value**
Aichi Prefectural Government	Japan	3	2011	15%
Arendal Municipality	Norway	3	2007	90%
Autonomous City of Buenos Aires	Argentina	14	2009	30%
City of Evanston	United States	10	2008	13%
City of North Vancouver	Canada	7	2010	15%
City of Portland, OR	United States	13	2009	80%
City of Tucson	United States	4	2006	7%
Kitakyushu City	Japan	3	2008	30%
Kristiansand Municipality	Norway	3	2009	20%
Lørenskog Municipality	Norway	3	2010	10%
Nagoya City	Japan	3	2011	25%
Oslo Municipality	Norway	6	2005	50%
Rajkot Municipal Corporation	India	5	2010	14%
Sandnes Municipality	Norway	3	2010	20%
Sapporo City	Japan	3	2010	25%
Sendai City	Japan	3	2010	25%
Seoul Metropolitan Government	Republic of Korea	3	2011	20%
Stavanger Municipality	Norway	3	2010	20%
Umeå Municipality	Sweden	10	2006	50%

*Commitment Year: calender year, when a commitment is made
**Commitment Value: the absolute GHG emission reduction target set by the cCR reporting entities, in comparison with its base year emission.

Analysis of Local Climate Actions

Thane, India. Reporting since 2013 - 2 commitments, 8 inventories and 33 actions - **Thane was awarded National Earth Hour Capital 2015** for impressive ambitious community commitments and a diversity of actions addressing renewable energy and energy efficiency. For example notable actions such as mandatory use of solar water heating system for municipal buildings and the implementation of other solutions such as wind-solar hybrid systems, solar PV for lighting & air-conditioning. Besides, solar roof top net metering based power generation and regular energy audits have also been planned. Other actions include implementation of ESCO (Energy Service Company) project for energy efficient street lighting, commissioning of 15T capacity Bio-Methanation plant to treat municipal solid waste to produce electricity and three cyclic switching units for streetlights usage optimization. An implementation target for development of solar city project in five years period has been set with an objective to meet at least five per cent energy consumption from renewable energy on completion of the solar city project in Thane.

4709

Mitigation actions

1472

Adaptation actions

$

92%

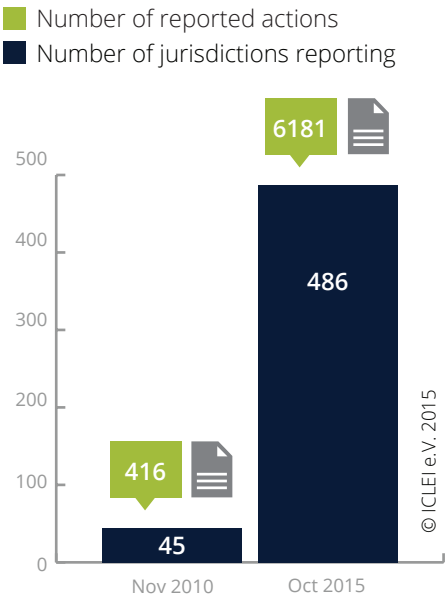
of implemented or in progress actions are locally financed

Focus on actions

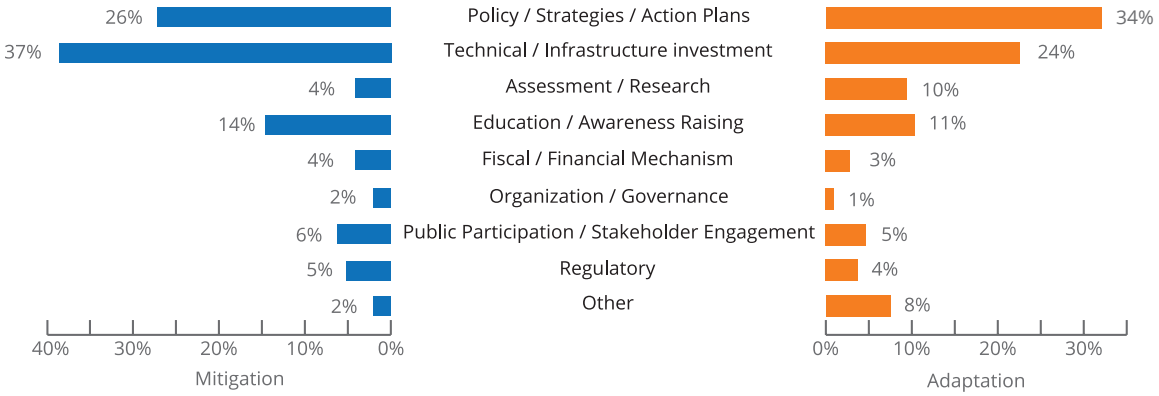
Since November 2010, the Registry witnessed a growing number of local and subnational jurisdictions announcing actions and action plans to address mitigation and adaptation challenges.

In the past 5 years, the number of inventories and reporting jurisdictions increased 10-fold. As of November 2015, a total of 6181 actions and action plans are announced by 486 entities. The actions covering mitigation and adaptation focus on sectors such as buildings, mobility, as well as improving public health and food quality. Their impact often reach far beyond the geographic boundary of the reporting jurisdiction.

Graph 7: Growth of reported climate action



Graph 8: Categorization of methods of climate action



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As the diagram above indicates, regardless of the focus (mitigation or adaptation), the local and subnational governments tend to use "technical/infrastructure investment", "policy/ strategy/ action plans/ and "education/awareness raising" as the main methods of implementation. These typically are areas where the local and subnational government have the mandate and power to act, and can show leadership. The results reported prove the effectiveness of those measures.

On the other hand, "regulatory", "public participation" and "fiscal/ financial mechanisms" are not as extensively reported on. This, however, does not mean that these methods are less important, but local and subnational governments still need to be better empowered.

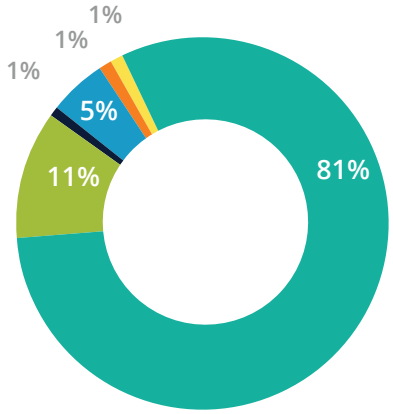
Who invested in local climate actions and how much?

Despite the economic crisis and budget limitations, local and subnational governments around the world are financing local climate action to fulfill ambitious voluntary commitments, as part of their annual budget allocations. As of 2015, over 92% of the implemented actions have been / are financed through local, subnational and national sources. However, there is also a clear signal that additional financing is needed.

Even though only contributing 5%, public-private partnership (PPP) is increasingly becoming popular. With a supportive regulatory framework, more financial assistance from the private sector can be leveraged to achieve a win-win climate friendly sustainable development approach.

International official development assistance (ODA) provide grants to finance actions at local and subnational level, and together with the market mechanisms of the UNFCCC, are not yet widely reported in the Registry on as a major local action finance source on the Registry.

Graph 9: Finance sources of the completed and in-progress actions

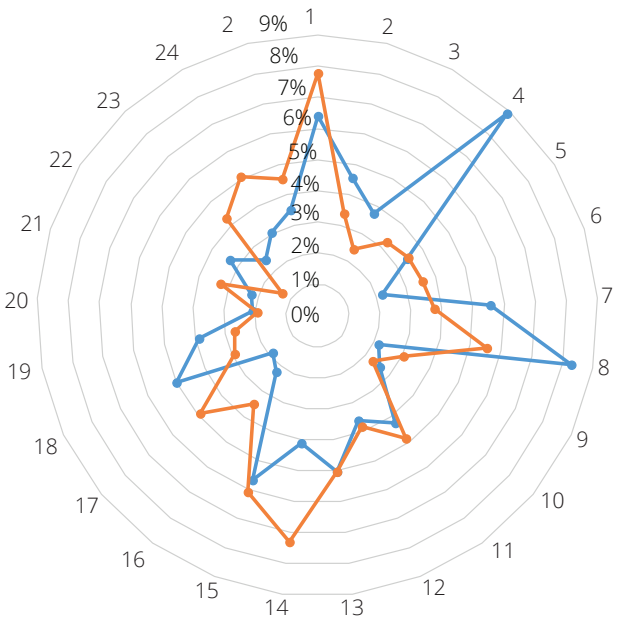


	Finance Sources	Amount (USD)
	Local	859,653,666,296
	Subnational/national	119,070,011,152
	International official development assistance (ODA)	8,630,355,377
	Public Private Partnership	56,428,226,412
	Climate Financing (UNFCCC & Kyoto)	7,826,785,742
	Not Specified	8,210,800,398

In support of paragraph 46(h) of decision 2 adopted at COP17 (Dec.2/CP.17) in Durban on the co-benefits of nationally appropriate mitigation actions, a new reporting section was opened to capture such information on mitigation but also on adaptation actions.

Current data reveals that improving ecosystem, biodiversity and urban livelihoods are the most common co-benefits of adoptation actions. On the other hand, reducing energy consumption and green economy are the most addressed co-benefits of mitigation actions. It is worth mentioning that more than 50% of local actions have positive adaptation impacts.

Graph 10: Co-Benefit of Local Actions



Total adaptation
Total mitigation

1 Urban livelihoods
2 Energy supply
3 Access to energy
4 Reduced noise pollution
5 Increased property values
6 Improved insurability
7 Job and business opportunity creation
8 Green urban economy
9 Supply chain security
10 Gender equalityCommunity building
11 Social equality
12 Governance and multistakeholder engagement
13 Improving ecosystems and biodiversity
14 Public health
15 Sustainable food
16 Water sanitation
17 Sustainable mobility
18 Sustainable housing
19 Recycling
20 Carbon capture
21 Reduced energy consumption
22 Recreational space
23 Urban green space
24 Aesthetics

25 To Paris and Beyond

Local Government Climate Roadmap

Despite the immense potential and power of local and subnational climate action, which has been developing since the early 1990s, neither the UN Framework Convention on Climate Change (UNFCCC) nor its Kyoto Protocol included any reference to local and subnational governments. As a response, the Local Government Climate Roadmap was launched as a global advocacy movement at the UN Bali Climate Conference (COP13) in 2007. It is facilitated by ICLEI – Local Governments for Sustainability in its capacity as the focal point of Local Governments and Municipal Authorities (LGMA) Constituency to the UNFCCC. When it was created, the LGMA had only a handful of members. The LGCR was therefore always kept open to networks who were not accredited to the UNFCCC as well.

How was it developed?

- At COP15 in Copenhagen in **2009**, the Local Government Climate Lounge was hosted in the Blue Zone with more than 1,200 representatives of cities and regions. The Copenhagen World Catalogue of Local Commitments capturing more than 3,000 voluntary targets worldwide was released.
- In **2010**, the Mexico City Pact introduced global transparency and accountability of local commitments via voluntary reporting at the carbonn Cities Climate Registry. At COP16 in Cancun, this resulted in the first dialogue of mayors with the COP Presidency, as well as the adoption of the first COP decision that recognized local and subnational governments as governmental stakeholders.
- At COP17 in Durban in **2011**, the concept of adaptation was cemented in the scope of local climate action thanks to the adoption of the Durban Adaptation Charter.
- In Nantes in **2013**, the strategy towards Paris 2015 was revised, including the creation of Friends of Cities, a group of supportive national governments at the UNFCCC, pushing for the adoption of a 10 Year Action Plan, conducting thematic technical studies and convening Ministerial-Mayoral dialogues.
- At COP19 in Warsaw in **2013**, the ADP convened a workshop on urbanization and the COP Presidency hosted the first Cities and Subnationals Dialogue, gathering mayors and ministers from all geographies and scopes at a roundtable. These interactions resulted in the second COP decision recognizing the role of cities and subnational authorities in raising the global level of ambition in the pre-2020 period.
- In **2014**, the ADP Cities and Subnational Forum and ADP Technical Expert Meeting on Urban Environment were held in June in Bonn. Numerous initiatives were announced at the 2014 UN Climate Summit. The NAZCA Platform was launched at the COP20 in Lima.

What can be expected at COP21?

At COP20 in Lima in **2014**, nations agreed to unite within a bottom-up climate regime, with each country submitting their Intended Nationally Determined Contributions/Commitments (INDCs). However, the current INDCs are far below the level of ambition required to prevent global climate change reaching a point-of-no-return.

"Recognize-Engage-Empower": Mission (almost) accomplished...what next?

- After eight years of immense mobilization at all levels, the Local Government Climate Roadmap managed to reach its overarching goals on **Recognition** (e.g. through COP decisions), **Engagement** (e.g. in ADP Technical Examination Processes, NAZCA Platform, High Level Dialogues and special accreditations) and **Empowerment** (e.g. with new financing programs.)
- An inclusive and ambitious climate agreement to be reached at COP21 in Paris will be an essential requirement to ensure full implementation of all these achievements at all levels.
- Through their voluntary commitments, enormous potential, committed networks and innovative partnerships, local and subnational governments are ready to accelerate action and raise ambitions globally.

Exploring Effective Vertical Integration of Measurable, Reportable and Verifiable (MRV) Reporting

Why should local entities report MRV climate action?

Measurable, reportable and verifiable (MRV) local climate action is critical when tackling climate change. Over the past two decades MRV has developed from a concept for national governments in global negotiations to MRV frameworks for local and subnational governments - to monitor and prove their progress. For example, when exploring climate change mitigation MRV means:

- Measuring community level greenhouse gas (GHG) emissions regularly, to track progress and respond to developments.
- Reporting of GHG inventories that are consistent and comparable between cities, to understand the combined effort - thus also enabling aggregation of data.
- Verifying data to enhance the reliability and credibility of inventory results and the impact of local government policies - thus ideally conducted by a third party.

Why should there be effective vertical integration between levels governments?

National governments can support and accelerate local MRV climate processes through effective vertical integration. This requires coordination of planning, policies, and frameworks for action and reporting. The Global Protocol for Community-Scale Greenhouse Gas Emission Inventories (GPC) was developed in 2014 in accordance with the IPCC 2006 guidelines to support vertically integrated reporting between different levels of government. The GHG inventory tools - Harmonized Emissions Analysis Tool plus (HEAT+) and ClearPath - as well as the reporting platform carbon*n*® Climate Registry (cCR) have been aligned with this new GPC protocol.

Urban planning, the built environment, the transport sector, waste and water management – currently all important greenhouse gas emitting sectors - typically can more easily be addressed by local government. Yet, they often do not have a mandate to deal with climate change or energy. Business-as-usual scenarios envisage that emissions in these sectors will continue to rise due to unmanaged energy and resource use, aggravated by urban growth. To effectively address this challenge, a change in approach is needed – aimed at optimizing the impacts of national and local climate strategies. This can be done by creating closer synergies in planning, coordination, implementation and monitoring, between all levels of government through effective vertical integration approaches.

Also referred to as sub-national integration or a multi-level governance approach, vertical integration means that different levels of government – from national/federal to state/provincial, other subnational and local government – regularly exchange, plan and coordinate activities that relate to planning, implementation and reporting.

The value lies in a frank, regular and structured exchange between peers that is well-coordinated. This implies not using a topdown approach, but rather considering the specific mandates and responsibilities of each level of government, and structuring a coherent approach.

The Transformative Actions Program (TAP)

TAP Transformative Actions Program

The Transformative Actions Program (TAP) - a 10-year action program - was launched in April 2015 to support the development and implementation of climate projects that will raise ambition at all levels and contribute to international climate goals.

The TAP is an inclusive initiative that brings together different types of organizations, including networks of local and regional governments, international development organizations, development banks, non-profit organizations, consultancies and other project implementation organizations.

The Transformative Actions Program is launched and managed by ICLEI – Local Governments for Sustainability and carried out in cooperation with UCLG, C40, R20, Agence Française de Développement (AFD) and WWF, and in synergy with the Cities Climate Finance Leadership Alliance (CCFLA).

The goal of the TAP is to progressively unlock the potential for cities and regions to accelerate implementation of local climate actions. It does so by supporting and encouraging investments in urban areas, contributing to the development of new financing mechanisms and helping to eliminate hurdles in access to climate finance.

The TAP makes its global debut at COP21 by displaying climate actions from more than 120 cities and regions at the Cities & Regions Pavilion – TAP2015.

How does the TAP work?

The TAP has a political ambition: to advocate for better access to climate finance for cities and regions. And it has a local ambition: to connect subnational authorities with financial bodies, and to help cities and regions to design bankable climate projects.

These ambitions will be realized through five interconnected activities:

- **TAP Project Pipeline:** Selection of and facilitating support for up to 100 projects each year
- **TAP Platform:** Presentation of potential for action in structured, interactive format
- **Cities & Regions Pavilion:** Physical space at COPs for showcasing TAP projects
- **TAP Advocacy for Accelerated Climate Action**: High-level awareness-raising
- **TAP Project Implementation:** Assisstance with implementation of transformative projects

Enhancing Local and Subnational Climate Action

The 5-years experience of carbon*n*® Climate Registry by enhancing transparency and accountability of local and subnational climate action presents a wealth of information for further progress. Based on this information, the following lessons can be drived.

Key barriers to raising the level of ambition include:

» Smaller-sized reporting entities (such as Towns) are typically confronted by a lack of capacity, resources and limited public awareness,

» whereas, larger entities (such as Metropolises, Regions and City-Regions) confront barriers due to complexities in multi-level governance structures, scale and intricate public participation processes

Key success factors in ambitious climate action include:

» Vision and guidance presented by political leaders

» Availability of skilled and equipped staff

» Actively and effectively engaging all stakeholders

If local and subnational governments can benfit from these experiences, it will be easier to tap the full potential of climate action at all levels globally, **regardless of their size, geographical location and level of development.**

29 List of Reporting Entities

Until November 2015, carbon*n*® Climate Registry has received reporting from 608 subnational entities around the global, especially from small sized local entities around the globe. Below the full list is provided, also indicating if they are participating in any specific partnership using the cCR as reporting platform. The partnerships are indicated with the numbers listed below.

1 Compact of Mayors
2 Compact of States and Regions
3 Durban Adaptation Charter (DAC)
4 Earth Hour City Challenge (EHCC)
5 EcoMobility Alliance
6 Japan carbon*n* Climate Registry
7 Mexico City Pact
8 PACMUN project
9 R20 – Regions of Climate Action
10 Urban-LEDS project

Algeria										
Oran Province	1	2	3	4	5	6	7	8	9	10
Argentina										
Buenos Aires	1	2	3	4	5	6	7	8	9	10
Rosario	1	2	3	4	5	6	7	8	9	10
Santa Fe de la Vera Cruz	1	2	3	4	5	6	7	8	9	10
Australia										
City of Lake Macquarie	1	2	3	4	5	6	7	8	9	10
City of Melbourne	1	2	3	4	5	6	7	8	9	10
City of Port Phillip	1	2	3	4	5	6	7	8	9	10
City of Subiaco	1	2	3	4	5	6	7	8	9	10
City of Sydney	1	2	3	4	5	6	7	8	9	10
Austria										
Graz	1	2	3	4	5	6	7	8	9	10
Barbados										
Barbados	1	2	3	4	5	6	7	8	9	10
Belgium										
Antwerp	1	2	3	4	5	6	7	8	9	10
Brussels Capital Region	1	2	3	4	5	6	7	8	9	10
Ghent	1	2	3	4	5	6	7	8	9	10
Mechelen	1	2	3	4	5	6	7	8	9	10
Mouscron	1	2	3	4	5	6	7	8	9	10
Namur	1	2	3	4	5	6	7	8	9	10
Belize										
Belmopan	1	2	3	4	5	6	7	8	9	10
Bhutan										
Thimphu	1	2	3	4	5	6	7	8	9	10
Bolivia										
La Paz	1	2	3	4	5	6	7	8	9	10
Brazil										
Belo Horizonte	1	2	3	4	5	6	7	8	9	10
Betim	1	2	3	4	5	6	7	8	9	10
Campinas	1	2	3	4	5	6	7	8	9	10
Contagem	1	2	3	4	5	6	7	8	9	10
Curitiba	1	2	3	4	5	6	7	8	9	10
Diadema	1	2	3	4	5	6	7	8	9	10
Fortaleza	1	2	3	4	5	6	7	8	9	10
Maceió	1	2	3	4	5	6	7	8	9	10
Manaus	1	2	3	4	5	6	7	8	9	10
Porto Alegre	1	2	3	4	5	6	7	8	9	10
Recife	1	2	3	4	5	6	7	8	9	10
Rio de Janeiro	1	2	3	4	5	6	7	8	9	10
Sao Carlos	1	2	3	4	5	6	7	8	9	10
São Paulo	1	2	3	4	5	6	7	8	9	10
Sorocaba	1	2	3	4	5	6	7	8	9	10
State of Minas Gerais	1	2	3	4	5	6	7	8	9	10
State of Rio de Janeiro	1	2	3	4	5	6	7	8	9	10
Cameroon										
Douala	1	2	3	4	5	6	7	8	9	10
Ebolowa	1	2	3	4	5	6	7	8	9	10
Canada										
Ajax	1	2	3	4	5	6	7	8	9	10
Caledon	1	2	3	4	5	6	7	8	9	10
Calgary	1	2	3	4	5	6	7	8	9	10
Colwood	1	2	3	4	5	6	7	8	9	10
Delta	1	2	3	4	5	6	7	8	9	10
District of North Cowichan	1	2	3	4	5	6	7	8	9	10
District of Saanich	1	2	3	4	5	6	7	8	9	10
District of West Vancouver	1	2	3	4	5	6	7	8	9	10
Edmonton	1	2	3	4	5	6	7	8	9	10
Fredericton	1	2	3	4	5	6	7	8	9	10
Greater Sudbury	1	2	3	4	5	6	7	8	9	10
Maple Ridge	1	2	3	4	5	6	7	8	9	10
Metro Vancouver	1	2	3	4	5	6	7	8	9	10
Montréal	1	2	3	4	5	6	7	8	9	10
North Vancouver	1	2	3	4	5	6	7	8	9	10
Richmond	1	2	3	4	5	6	7	8	9	10
Surrey	1	2	3	4	5	6	7	8	9	10
Vancouver	1	2	3	4	5	6	7	8	9	10
Victoria	1	2	3	4	5	6	7	8	9	10
Waterloo Region	1	2	3	4	5	6	7	8	9	10
Yellowknife	1	2	3	4	5	6	7	8	9	10
Chile										
Lautaro	1	2	3	4	5	6	7	8	9	10
Quilpue	1	2	3	4	5	6	7	8	9	10
Recoleta	1	2	3	4	5	6	7	8	9	10
Santiago	1	2	3	4	5	6	7	8	9	10
Santiago Metropolitan Region	1	2	3	4	5	6	7	8	9	10

Colombia										
Armenia	1	2	3	4	5	6	7	8	9	10
Barranquilla	1	2	3	4	5	6	7	8	9	10
Bogotá	1	2	3	4	5	6	7	8	9	10
Bucaramanga	1	2	3	4	5	6	7	8	9	10
Cartagena de Indias	1	2	3	4	5	6	7	8	9	10
Medellín	1	2	3	4	5	6	7	8	9	10
Metropolitan Area of Valle de Aburrá	1	2	3	4	5	6	7	8	9	10
Montería	1	2	3	4	5	6	7	8	9	10
Puerto Leguízamo	1	2	3	4	5	6	7	8	9	10
Santiago de Cali	1	2	3	4	5	6	7	8	9	10
Valledupar	1	2	3	4	5	6	7	8	9	10
Villavicencio	1	2	3	4	5	6	7	8	9	10
Costa Rica										
San José	1	2	3	4	5	6	7	8	9	10
San Rafael de Heredia	1	2	3	4	5	6	7	8	9	10
Croatia										
Koprivnica	1	2	3	4	5	6	7	8	9	10
Denmark										
Copenhagen	1	2	3	4	5	6	7	8	9	10
Ecuador										
Cuenca	1	2	3	4	5	6	7	8	9	10
Pichincha Province	1	2	3	4	5	6	7	8	9	10
Quito	1	2	3	4	5	6	7	8	9	10
El Salvador										
San Salvador	1	2	3	4	5	6	7	8	9	10
Santa Ana	1	2	3	4	5	6	7	8	9	10
Finland										
Espoo	1	2	3	4	5	6	7	8	9	10
Lahti	1	2	3	4	5	6	7	8	9	10
Lappeenranta	1	2	3	4	5	6	7	8	9	10
Tampere	1	2	3	4	5	6	7	8	9	10
France										
Besançon	1	2	3	4	5	6	7	8	9	10
Bordeaux Métropole	1	2	3	4	5	6	7	8	9	10
Brest Métropole	1	2	3	4	5	6	7	8	9	10
European Metropolis of Lille	1	2	3	4	5	6	7	8	9	10
Grand Lyon	1	2	3	4	5	6	7	8	9	10
Grande-Synthe	1	2	3	4	5	6	7	8	9	10
Grenoble	1	2	3	4	5	6	7	8	9	10
Mellac	1	2	3	4	5	6	7	8	9	10
Nantes Métropole	1	2	3	4	5	6	7	8	9	10
Orléans	1	2	3	4	5	6	7	8	9	10
Paris	1	2	3	4	5	6	7	8	9	10
Plaine Commune	1	2	3	4	5	6	7	8	9	10
Toulouse Métropole	1	2	3	4	5	6	7	8	9	10
Gabon										
Libreville	1	2	3	4	5	6	7	8	9	10
Germany										
Bonn	1	2	3	4	5	6	7	8	9	10
Freiburg im Breisgau	1	2	3	4	5	6	7	8	9	10

Greater China										
Shenzhen, PRC	1	2	3	4	5	6	7	8	9	10
Chiayi, Chinese Taipei	1	2	3	4	5	6	7	8	9	10
Kaohsiung, Chinese Taipei	1	2	3	4	5	6	7	8	9	10
New Taipei City, Chinese Taipei	1	2	3	4	5	6	7	8	9	10
Pingtung County, Chinese Taipei	1	2	3	4	5	6	7	8	9	10
Taichung City, Chinese Taipei	1	2	3	4	5	6	7	8	9	10
Tainan, Chinese Taipei	1	2	3	4	5	6	7	8	9	10
Taipei, Chinese Taipei	1	2	3	4	5	6	7	8	9	10
Guatemala										
Guatemala	1	2	3	4	5	6	7	8	9	10
Honduras										
Tegucigalpa	1	2	3	4	5	6	7	8	9	10
Iceland										
Reykjavík	1	2	3	4	5	6	7	8	9	10
India										
Ahmedabad	1	2	3	4	5	6	7	8	9	10
Bhubaneswar	1	2	3	4	5	6	7	8	9	10
Cochin	1	2	3	4	5	6	7	8	9	10
Coimbatore	1	2	3	4	5	6	7	8	9	10
Dehradun	1	2	3	4	5	6	7	8	9	10
Gandhinagar	1	2	3	4	5	6	7	8	9	10
Greater Hyderabad	1	2	3	4	5	6	7	8	9	10
Gwalior	1	2	3	4	5	6	7	8	9	10
Jaipur	1	2	3	4	5	6	7	8	9	10
Kochi	1	2	3	4	5	6	7	8	9	10
Kota	1	2	3	4	5	6	7	8	9	10
Nagpur	1	2	3	4	5	6	7	8	9	10
Nashik	1	2	3	4	5	6	7	8	9	10
New Delhi	1	2	3	4	5	6	7	8	9	10
Panaji	1	2	3	4	5	6	7	8	9	10
Pimpri Chinchwad	1	2	3	4	5	6	7	8	9	10
Pune	1	2	3	4	5	6	7	8	9	10
Rajkot	1	2	3	4	5	6	7	8	9	10
Shimla	1	2	3	4	5	6	7	8	9	10
Surat	1	2	3	4	5	6	7	8	9	10
Thane	1	2	3	4	5	6	7	8	9	10
Indonesia										
Balikpapan	1	2	3	4	5	6	7	8	9	10
Bandung	1	2	3	4	5	6	7	8	9	10
Bogor	1	2	3	4	5	6	7	8	9	10
Cimahi	1	2	3	4	5	6	7	8	9	10
Jakarta	1	2	3	4	5	6	7	8	9	10
Jambi	1	2	3	4	5	6	7	8	9	10
Semarang	1	2	3	4	5	6	7	8	9	10
Israel										
Jerusalem	1	2	3	4	5	6	7	8	9	10
Ma'alot-Tarshiha	1	2	3	4	5	6	7	8	9	10
Italy										
Ancona	1	2	3	4	5	6	7	8	9	10
Florence	1	2	3	4	5	6	7	8	9	10
Forlì	1	2	3	4	5	6	7	8	9	10
Province of Siena	1	2	3	4	5	6	7	8	9	10
Province of Torino	1	2	3	4	5	6	7	8	9	10
Rome	1	2	3	4	5	6	7	8	9	10

Venice	1	2	3	4	5	6	7	8	9	10
Villa di Serio	1	2	3	4	5	6	7	8	9	10
Japan										
Adachi	1	2	3	4	5	6	7	8	9	10
Aichi Prefecture	1	2	3	4	5	6	7	8	9	10
Akashi	1	2	3	4	5	6	7	8	9	10
Akita	1	2	3	4	5	6	7	8	9	10
Akita Prefecture	1	2	3	4	5	6	7	8	9	10
Amami	1	2	3	4	5	6	7	8	9	10
Aomori	1	2	3	4	5	6	7	8	9	10
Aomori Prefecture	1	2	3	4	5	6	7	8	9	10
Asahikawa	1	2	3	4	5	6	7	8	9	10
Atsugi	1	2	3	4	5	6	7	8	9	10
Chiba Prefecture	1	2	3	4	5	6	7	8	9	10
Chigasaki	1	2	3	4	5	6	7	8	9	10
Chiyoda	1	2	3	4	5	6	7	8	9	10
Chuo	1	2	3	4	5	6	7	8	9	10
Edogawa	1	2	3	4	5	6	7	8	9	10
Ehime Prefecture	1	2	3	4	5	6	7	8	9	10
Fuji	1	2	3	4	5	6	7	8	9	10
Fujinomiya	1	2	3	4	5	6	7	8	9	10
Fujisawa	1	2	3	4	5	6	7	8	9	10
Fukui Prefecture	1	2	3	4	5	6	7	8	9	10
Fukuoka	1	2	3	4	5	6	7	8	9	10
Fukushima Prefecture	1	2	3	4	5	6	7	8	9	10
Funabashi	1	2	3	4	5	6	7	8	9	10
Gifu Prefecture	1	2	3	4	5	6	7	8	9	10
Gunma Prefecture	1	2	3	4	5	6	7	8	9	10
Hakodate	1	2	3	4	5	6	7	8	9	10
Hamamatsu	1	2	3	4	5	6	7	8	9	10
Himeji	1	2	3	4	5	6	7	8	9	10
Hirakata	1	2	3	4	5	6	7	8	9	10
Hiroshima	1	2	3	4	5	6	7	8	9	10
Hiroshima Prefecture	1	2	3	4	5	6	7	8	9	10
Hokkaido Prefecture	1	2	3	4	5	6	7	8	9	10
Hokuto	1	2	3	4	5	6	7	8	9	10
Hyogo Prefecture	1	2	3	4	5	6	7	8	9	10
Iida	1	2	3	4	5	6	7	8	9	10
Ishikawa Prefecture	1	2	3	4	5	6	7	8	9	10
Itabashi	1	2	3	4	5	6	7	8	9	10
Iwaki	1	2	3	4	5	6	7	8	9	10
Kagawa Prefecture	1	2	3	4	5	6	7	8	9	10
Kakogawa	1	2	3	4	5	6	7	8	9	10
Kanagawa Prefecture	1	2	3	4	5	6	7	8	9	10
Kasumigaura	1	2	3	4	5	6	7	8	9	10
Kawagoe	1	2	3	4	5	6	7	8	9	10
Kawaguchi	1	2	3	4	5	6	7	8	9	10
Kawasaki	1	2	3	4	5	6	7	8	9	10
Kita	1	2	3	4	5	6	7	8	9	10
Kitakyushu	1	2	3	4	5	6	7	8	9	10
Kitamoto	1	2	3	4	5	6	7	8	9	10
Kobe	1	2	3	4	5	6	7	8	9	10
Kochi Prefecture	1	2	3	4	5	6	7	8	9	10
Kochi-konan	1	2	3	4	5	6	7	8	9	10

Kofu	1	2	3	4	5	6	7	8	9	10
Komoro	1	2	3	4	5	6	7	8	9	10
Koriyama	1	2	3	4	5	6	7	8	9	10
Koto	1	2	3	4	5	6	7	8	9	10
Kumamoto	1	2	3	4	5	6	7	8	9	10
Kurashiki	1	2	3	4	5	6	7	8	9	10
Kurume	1	2	3	4	5	6	7	8	9	10
Kushiro	1	2	3	4	5	6	7	8	9	10
Kyoto	1	2	3	4	5	6	7	8	9	10
Kyoto Prefecture	1	2	3	4	5	6	7	8	9	10
Maebashi	1	2	3	4	5	6	7	8	9	10
Matsuyama	1	2	3	4	5	6	7	8	9	10
Meguro	1	2	3	4	5	6	7	8	9	10
Mie Prefecture	1	2	3	4	5	6	7	8	9	10
Minato	1	2	3	4	5	6	7	8	9	10
Mito	1	2	3	4	5	6	7	8	9	10
Miyagi Prefecture	1	2	3	4	5	6	7	8	9	10
Miyazaki	1	2	3	4	5	6	7	8	9	10
Miyoshi	1	2	3	4	5	6	7	8	9	10
Musashino	1	2	3	4	5	6	7	8	9	10
Nagahama	1	2	3	4	5	6	7	8	9	10
Nagareyama	1	2	3	4	5	6	7	8	9	10
Nagasaki Prefecture	1	2	3	4	5	6	7	8	9	10
Nagoya	1	2	3	4	5	6	7	8	9	10
Naha	1	2	3	4	5	6	7	8	9	10
Nakano	1	2	3	4	5	6	7	8	9	10
Nara	1	2	3	4	5	6	7	8	9	10
Nerima	1	2	3	4	5	6	7	8	9	10
Neyagawa	1	2	3	4	5	6	7	8	9	10
Nihonmatsu	1	2	3	4	5	6	7	8	9	10
Niigata	1	2	3	4	5	6	7	8	9	10
Niigata Prefecture	1	2	3	4	5	6	7	8	9	10
Nishinomiya	1	2	3	4	5	6	7	8	9	10
Odawara	1	2	3	4	5	6	7	8	9	10
Oita Prefecture	1	2	3	4	5	6	7	8	9	10
Okayamad	1	2	3	4	5	6	7	8	9	10
Okazaki	1	2	3	4	5	6	7	8	9	10
Okinawa Prefecture	1	2	3	4	5	6	7	8	9	10
Osaka Prefecture	1	2	3	4	5	6	7	8	9	10
Ota	1	2	3	4	5	6	7	8	9	10
Otsu	1	2	3	4	5	6	7	8	9	10
Sagamihara	1	2	3	4	5	6	7	8	9	10
Saitama	1	2	3	4	5	6	7	8	9	10
Saitama Prefecture	1	2	3	4	5	6	7	8	9	10
Sakai	1	2	3	4	5	6	7	8	9	10
Sapporo	1	2	3	4	5	6	7	8	9	10
Sasebo	1	2	3	4	5	6	7	8	9	10
Sendai	1	2	3	4	5	6	7	8	9	10
Setagaya	1	2	3	4	5	6	7	8	9	10
Settsu	1	2	3	4	5	6	7	8	9	10
Shibuya	1	2	3	4	5	6	7	8	9	10
Shiga Prefecture	1	2	3	4	5	6	7	8	9	10
Shimane Prefecture	1	2	3	4	5	6	7	8	9	10
Shimokawa Town	1	2	3	4	5	6	7	8	9	10

Shimonoseki	1	2	3	4	5	6	7	8	9	10
Shinjuku	1	2	3	4	5	6	7	8	9	10
Shizuoka	1	2	3	4	5	6	7	8	9	10
Shizuoka Prefecture	1	2	3	4	5	6	7	8	9	10
Suita	1	2	3	4	5	6	7	8	9	10
Sumida	1	2	3	4	5	6	7	8	9	10
Taito	1	2	3	4	5	6	7	8	9	10
Takarazuka	1	2	3	4	5	6	7	8	9	10
Takatsuki	1	2	3	4	5	6	7	8	9	10
Tokorozawa	1	2	3	4	5	6	7	8	9	10
Tokushima	1	2	3	4	5	6	7	8	9	10
Tokyo	1	2	3	4	5	6	7	8	9	10
Tottori	1	2	3	4	5	6	7	8	9	10
Tottori Prefecture	1	2	3	4	5	6	7	8	9	10
Toyama	1	2	3	4	5	6	7	8	9	10
Toyama Prefecture	1	2	3	4	5	6	7	8	9	10
Toyonaka	1	2	3	4	5	6	7	8	9	10
Tsukuba	1	2	3	4	5	6	7	8	9	10
Ube	1	2	3	4	5	6	7	8	9	10
Utsunomiya	1	2	3	4	5	6	7	8	9	10
Wakayama Prefecture	1	2	3	4	5	6	7	8	9	10
Yamagata Prefecture	1	2	3	4	5	6	7	8	9	10
Yamaguchi	1	2	3	4	5	6	7	8	9	10
Yamaguchi Prefecture	1	2	3	4	5	6	7	8	9	10
Yamanashi Prefecture	1	2	3	4	5	6	7	8	9	10
Yao	1	2	3	4	5	6	7	8	9	10
Yokohama	1	2	3	4	5	6	7	8	9	10
Yokosuka	1	2	3	4	5	6	7	8	9	10
Malaysia										
Kuching North	1	2	3	4	5	6	7	8	9	10
Melaka Historic City	1	2	3	4	5	6	7	8	9	10
Penang Island	1	2	3	4	5	6	7	8	9	10
Petaling Jaya	1	2	3	4	5	6	7	8	9	10
Shah Alam	1	2	3	4	5	6	7	8	9	10
Mexico										
Aguascalientes	1	2	3	4	5	6	7	8	9	10
Amacuzac	1	2	3	4	5	6	7	8	9	10
Atlatlahucan	1	2	3	4	5	6	7	8	9	10
Atotonilco de Tula	1	2	3	4	5	6	7	8	9	10
Axochiapan	1	2	3	4	5	6	7	8	9	10
Bacalar	1	2	3	4	5	6	7	8	9	10
Chihuahua	1	2	3	4	5	6	7	8	9	10
Cozumel	1	2	3	4	5	6	7	8	9	10
Cuatro Ciénagas	1	2	3	4	5	6	7	8	9	10
Cuautla	1	2	3	4	5	6	7	8	9	10
Guadalajara	1	2	3	4	5	6	7	8	9	10
Hermosillo	1	2	3	4	5	6	7	8	9	10
Jojutla	1	2	3	4	5	6	7	8	9	10
Jonacatepec	1	2	3	4	5	6	7	8	9	10
León	1	2	3	4	5	6	7	8	9	10
Mazatepec	1	2	3	4	5	6	7	8	9	10
Mexico City	1	2	3	4	5	6	7	8	9	10
Naucalpan de Juárez	1	2	3	4	5	6	7	8	9	10

Oaxaca de Juárez	1	2	3	4	5	6	7	8	9	10
Puebla	1	2	3	4	5	6	7	8	9	10
Salamanca	1	2	3	4	5	6	7	8	9	10
San Cristóbal de las Casas	1	2	3	4	5	6	7	8	9	10
San Pedro Tlaquepaque	1	2	3	4	5	6	7	8	9	10
Sierra Mojada	1	2	3	4	5	6	7	8	9	10
Tecalitlan	1	2	3	4	5	6	7	8	9	10
Tepoztlán	1	2	3	4	5	6	7	8	9	10
Tlacotepec de Benito Juarez	1	2	3	4	5	6	7	8	9	10
Tlalnepantla de Baz	1	2	3	4	5	6	7	8	9	10
Toluca de Lerdo	1	2	3	4	5	6	7	8	9	10
Villa de Zaachila	1	2	3	4	5	6	7	8	9	10
Xalapa-Enríquez	1	2	3	4	5	6	7	8	9	10
Yautepec de Zaragoza	1	2	3	4	5	6	7	8	9	10
Yurécuaro	1	2	3	4	5	6	7	8	9	10
Zapopan	1	2	3	4	5	6	7	8	9	10
Mongolia										
Ulaanbaatar	1	2	3	4	5	6	7	8	9	10
Morocco										
Chefchaouen	1	2	3	4	5	6	7	8	9	10
Oriental Region	1	2	3	4	5	6	7	8	9	10
Nepal										
Hetauda	1	2	3	4	5	6	7	8	9	10
New Zealand										
Palmerston North	1	2	3	4	5	6	7	8	9	10
Wellington	1	2	3	4	5	6	7	8	9	10
Nigeria										
Amuwo-Odofin	1	2	3	4	5	6	7	8	9	10
Delta State	1	2	3	4	5	6	7	8	9	10
Norway										
Arendal	1	2	3	4	5	6	7	8	9	10
Kristiansand	1	2	3	4	5	6	7	8	9	10
Lørenskog	1	2	3	4	5	6	7	8	9	10
Oslo	1	2	3	4	5	6	7	8	9	10
Ringerike	1	2	3	4	5	6	7	8	9	10
Sandnes	1	2	3	4	5	6	7	8	9	10
Stavanger	1	2	3	4	5	6	7	8	9	10
Peru										
Chaclacayo	1	2	3	4	5	6	7	8	9	10
Chancay	1	2	3	4	5	6	7	8	9	10
Lima	1	2	3	4	5	6	7	8	9	10
Miraflores	1	2	3	4	5	6	7	8	9	10
San Isidro	1	2	3	4	5	6	7	8	9	10
Philippines										
Cagayan de Oro	1	2	3	4	5	6	7	8	9	10
Catbalogan	1	2	3	4	5	6	7	8	9	10
Ligao	1	2	3	4	5	6	7	8	9	10
Makati	1	2	3	4	5	6	7	8	9	10
Naga	1	2	3	4	5	6	7	8	9	10
Parañaque	1	2	3	4	5	6	7	8	9	10
Quezon City	1	2	3	4	5	6	7	8	9	10
San Carlos City	1	2	3	4	5	6	7	8	9	10
Santa Rosa	1	2	3	4	5	6	7	8	9	10

Poland										
Wrocław	1	2	3	4	5	6	7	8	9	10
Portugal										
Alfândega da Fé	1	2	3	4	5	6	7	8	9	10
Almada	1	2	3	4	5	6	7	8	9	10
Lisbon	1	2	3	4	5	6	7	8	9	10
Oeiras	1	2	3	4	5	6	7	8	9	10
Republic of Korea										
Anyang	1	2	3	4	5	6	7	8	9	10
Asan	1	2	3	4	5	6	7	8	9	10
Changwon	1	2	3	4	5	6	7	8	9	10
Chungcheongnam Province	1	2	3	4	5	6	7	8	9	10
Dobong District	1	2	3	4	5	6	7	8	9	10
Gangneung	1	2	3	4	5	6	7	8	9	10
Gangwon Province	1	2	3	4	5	6	7	8	9	10
Gwangju	1	2	3	4	5	6	7	8	9	10
Gyeonggi Province	1	2	3	4	5	6	7	8	9	10
Gyeongsangbuk Province	1	2	3	4	5	6	7	8	9	10
Gyeongsangnam Province	1	2	3	4	5	6	7	8	9	10
Jeju Special Self-Governing Province	1	2	3	4	5	6	7	8	9	10
Jeollanam Province	1	2	3	4	5	6	7	8	9	10
Osan	1	2	3	4	5	6	7	8	9	10
Pyeongchang County	1	2	3	4	5	6	7	8	9	10
Sejong	1	2	3	4	5	6	7	8	9	10
Seongbuk District	1	2	3	4	5	6	7	8	9	10
Seoul	1	2	3	4	5	6	7	8	9	10
Suwon	1	2	3	4	5	6	7	8	9	10
Ulsan	1	2	3	4	5	6	7	8	9	10
Wanju County	1	2	3	4	5	6	7	8	9	10
Wonju	1	2	3	4	5	6	7	8	9	10
Yeosu	1	2	3	4	5	6	7	8	9	10
Romania										
Pitești	1	2	3	4	5	6	7	8	9	10
Russia										
Khabarovsky krai	1	2	3	4	5	6	7	8	9	10
Rwanda										
Musanze District	1	2	3	4	5	6	7	8	9	10
Nyagatare District	1	2	3	4	5	6	7	8	9	10
Nyarugenge District	1	2	3	4	5	6	7	8	9	10
Senegal										
Dakar	1	2	3	4	5	6	7	8	9	10
Singapore										
Singapore	1	2	3	4	5	6	7	8	9	10
South Africa										
Buffalo City Metropolitan Municipality	1	2	3	4	5	6	7	8	9	10
City of Cape Town	1	2	3	4	5	6	7	8	9	10
City Johannesburg	1	2	3	4	5	6	7	8	9	10
City of Tshwane	1	2	3	4	5	6	7	8	9	10
Ekurhuleni Metropolitan Municipality	1	2	3	4	5	6	7	8	9	10
eThekwini Metropolitan Municipality (Durban)	1	2	3	4	5	6	7	8	9	10
George Local Municipality	1	2	3	4	5	6	7	8	9	10
KwaDukuza Local Municipality	1	2	3	4	5	6	7	8	9	10
Mbombela Local Municipality	1	2	3	4	5	6	7	8	9	10
Mogale City Local Municipality	1	2	3	4	5	6	7	8	9	10
Msunduzi Local Municipality	1	2	3	4	5	6	7	8	9	10
Nelson Mandela Bay Metropolitan Municipality	1	2	3	4	5	6	7	8	9	10
Sol Plaatje Local Municipality	1	2	3	4	5	6	7	8	9	10
Steve Tshwete Local Municipality	1	2	3	4	5	6	7	8	9	10
uMhlathuze Local Municipality	1	2	3	4	5	6	7	8	9	10
Spain										
A Coruña	1	2	3	4	5	6	7	8	9	10
Amurrio	1	2	3	4	5	6	7	8	9	10
Areatza	1	2	3	4	5	6	7	8	9	10
Balmaseda	1	2	3	4	5	6	7	8	9	10
Barcelona	1	2	3	4	5	6	7	8	9	10
Barcelona Province	1	2	3	4	5	6	7	8	9	10
Bilbao	1	2	3	4	5	6	7	8	9	10
Córdoba	1	2	3	4	5	6	7	8	9	10
Donostia / San Sebastián	1	2	3	4	5	6	7	8	9	10
Durango	1	2	3	4	5	6	7	8	9	10
Errenteria	1	2	3	4	5	6	7	8	9	10
Granada	1	2	3	4	5	6	7	8	9	10
Legazpi	1	2	3	4	5	6	7	8	9	10
Madrid	1	2	3	4	5	6	7	8	9	10
Málaga	1	2	3	4	5	6	7	8	9	10
Murcia	1	2	3	4	5	6	7	8	9	10
Palma	1	2	3	4	5	6	7	8	9	10
Soria	1	2	3	4	5	6	7	8	9	10
Tolosa	1	2	3	4	5	6	7	8	9	10
Torrejón de Ardoz	1	2	3	4	5	6	7	8	9	10
Valencia	1	2	3	4	5	6	7	8	9	10
Vitoria-Gasteiz	1	2	3	4	5	6	7	8	9	10
Sweden										
Eskilstuna	1	2	3	4	5	6	7	8	9	10
Gävle	1	2	3	4	5	6	7	8	9	10
Göteborg	1	2	3	4	5	6	7	8	9	10
Haninge	1	2	3	4	5	6	7	8	9	10
Helsingborg	1	2	3	4	5	6	7	8	9	10
Huddinge	1	2	3	4	5	6	7	8	9	10
Karlstad	1	2	3	4	5	6	7	8	9	10
Kristianstad	1	2	3	4	5	6	7	8	9	10
Lund	1	2	3	4	5	6	7	8	9	10
Malmö	1	2	3	4	5	6	7	8	9	10
Örebro	1	2	3	4	5	6	7	8	9	10
Östersund	1	2	3	4	5	6	7	8	9	10
Piteå	1	2	3	4	5	6	7	8	9	10
Säffle	1	2	3	4	5	6	7	8	9	10
Södertälje	1	2	3	4	5	6	7	8	9	10
Sollentuna	1	2	3	4	5	6	7	8	9	10
Stockholm	1	2	3	4	5	6	7	8	9	10
Täby	1	2	3	4	5	6	7	8	9	10
Trollhättan	1	2	3	4	5	6	7	8	9	10
Umeå	1	2	3	4	5	6	7	8	9	10
Upplands Väsby	1	2	3	4	5	6	7	8	9	10
Uppsala	1	2	3	4	5	6	7	8	9	10
Vårgårda	1	2	3	4	5	6	7	8	9	10

Västerås	1	2	3	4	5	6	7	8	9	10
Växjö	1	2	3	4	5	6	7	8	9	10
Tanzania										
Arusha	1	2	3	4	5	6	7	8	9	10
Bagamoyo	1	2	3	4	5	6	7	8	9	10
Buhigwe	1	2	3	4	5	6	7	8	9	10
Bukoba	1	2	3	4	5	6	7	8	9	10
Bukombe	1	2	3	4	5	6	7	8	9	10
Dar es Salaam	1	2	3	4	5	6	7	8	9	10
Gairo	1	2	3	4	5	6	7	8	9	10
Ikungi	1	2	3	4	5	6	7	8	9	10
Ilala	1	2	3	4	5	6	7	8	9	10
Ileje	1	2	3	4	5	6	7	8	9	10
Iramba	1	2	3	4	5	6	7	8	9	10
Kinondoni	1	2	3	4	5	6	7	8	9	10
Kisarawe	1	2	3	4	5	6	7	8	9	10
Kiteto	1	2	3	4	5	6	7	8	9	10
Kongwa	1	2	3	4	5	6	7	8	9	10
Kyela	1	2	3	4	5	6	7	8	9	10
Lindi	1	2	3	4	5	6	7	8	9	10
Magu	1	2	3	4	5	6	7	8	9	10
Manyoni	1	2	3	4	5	6	7	8	9	10
Masasi	1	2	3	4	5	6	7	8	9	10
Maswa	1	2	3	4	5	6	7	8	9	10
Mbeya	1	2	3	4	5	6	7	8	9	10
Mbozi	1	2	3	4	5	6	7	8	9	10
Mkalama	1	2	3	4	5	6	7	8	9	10
Mkuranga	1	2	3	4	5	6	7	8	9	10
Monduli	1	2	3	4	5	6	7	8	9	10
Morogoro (Rural District)	1	2	3	4	5	6	7	8	9	10
Morogoro (Urban District)	1	2	3	4	5	6	7	8	9	10
Moshi	1	2	3	4	5	6	7	8	9	10
Mpwapwa	1	2	3	4	5	6	7	8	9	10
Mtwara	1	2	3	4	5	6	7	8	9	10
Musoma	1	2	3	4	5	6	7	8	9	10
Nkasi	1	2	3	4	5	6	7	8	9	10
Shiyanga	1	2	3	4	5	6	7	8	9	10
Siha	1	2	3	4	5	6	7	8	9	10
Tabora	1	2	3	4	5	6	7	8	9	10
Ushetu	1	2	3	4	5	6	7	8	9	10
Thailand										
Bangkok	1	2	3	4	5	6	7	8	9	10
Chiang Mai	1	2	3	4	5	6	7	8	9	10
Chiang Rai	1	2	3	4	5	6	7	8	9	10
Hat Yai	1	2	3	4	5	6	7	8	9	10
Huai Khao Kam	1	2	3	4	5	6	7	8	9	10
Khon Kaen	1	2	3	4	5	6	7	8	9	10
Khun Han	1	2	3	4	5	6	7	8	9	10
Klaeng	1	2	3	4	5	6	7	8	9	10
Kokkruat	1	2	3	4	5	6	7	8	9	10
Lampang	1	2	3	4	5	6	7	8	9	10
Mae Raeng	1	2	3	4	5	6	7	8	9	10
Map Ammarit	1	2	3	4	5	6	7	8	9	10
Na Kaeo	1	2	3	4	5	6	7	8	9	10
Nang Lae	1	2	3	4	5	6	7	8	9	10
Nong Samrong	1	2	3	4	5	6	7	8	9	10
Nonthaburi	1	2	3	4	5	6	7	8	9	10
Phanat Nikhom	1	2	3	4	5	6	7	8	9	10
Phanom Sarakham	1	2	3	4	5	6	7	8	9	10
Phuket	1	2	3	4	5	6	7	8	9	10
Pong	1	2	3	4	5	6	7	8	9	10
Rong Kwang	1	2	3	4	5	6	7	8	9	10
Sikhio	1	2	3	4	5	6	7	8	9	10
Sisaket	1	2	3	4	5	6	7	8	9	10
Thung Song	1	2	3	4	5	6	7	8	9	10
Umong	1	2	3	4	5	6	7	8	9	10
Yasothon	1	2	3	4	5	6	7	8	9	10
Turkey										
Istanbul	1	2	3	4	5	6	7	8	9	10
Kadıköy	1	2	3	4	5	6	7	8	9	10
Nevşehir	1	2	3	4	5	6	7	8	9	10
Yalova	1	2	3	4	5	6	7	8	9	10
United Kingdom										
Bristol	1	2	3	4	5	6	7	8	9	10
Greater Manchester	1	2	3	4	5	6	7	8	9	10
Wales	1	2	3	4	5	6	7	8	9	10
United States										
Albany, CA	1	2	3	4	5	6	7	8	9	10
Ann Arbor	1	2	3	4	5	6	7	8	9	10
Antioch	1	2	3	4	5	6	7	8	9	10
Asheville	1	2	3	4	5	6	7	8	9	10
Atlanta	1	2	3	4	5	6	7	8	9	10
Austin	1	2	3	4	5	6	7	8	9	10
Baltimore	1	2	3	4	5	6	7	8	9	10
Beaverton	1	2	3	4	5	6	7	8	9	10
Benicia	1	2	3	4	5	6	7	8	9	10
Berkeley	1	2	3	4	5	6	7	8	9	10
Boston	1	2	3	4	5	6	7	8	9	10
Boulder	1	2	3	4	5	6	7	8	9	10
Broward	1	2	3	4	5	6	7	8	9	10
Burlington	1	2	3	4	5	6	7	8	9	10
Burnsville	1	2	3	4	5	6	7	8	9	10
Carson City	1	2	3	4	5	6	7	8	9	10
Charleston	1	2	3	4	5	6	7	8	9	10
Charlottesville	1	2	3	4	5	6	7	8	9	10
Chicago	1	2	3	4	5	6	7	8	9	10
Chula Vista	1	2	3	4	5	6	7	8	9	10
Cincinnati	1	2	3	4	5	6	7	8	9	10
Cleveland	1	2	3	4	5	6	7	8	9	10
Coconut Creek	1	2	3	4	5	6	7	8	9	10
Columbus	1	2	3	4	5	6	7	8	9	10
Dedham	1	2	3	4	5	6	7	8	9	10
Des Moines	1	2	3	4	5	6	7	8	9	10
Duluth	1	2	3	4	5	6	7	8	9	10
El Cerrito	1	2	3	4	5	6	7	8	9	10
Evanston	1	2	3	4	5	6	7	8	9	10
Flagstaff	1	2	3	4	5	6	7	8	9	10
Flint	1	2	3	4	5	6	7	8	9	10

Foster City	1	2	3	4	5	6	7	8	9	10
Fremont	1	2	3	4	5	6	7	8	9	10
Grand Rapids	1	2	3	4	5	6	7	8	9	10
Hamilton Township	1	2	3	4	5	6	7	8	9	10
Hawthorne	1	2	3	4	5	6	7	8	9	10
Hayward	1	2	3	4	5	6	7	8	9	10
Hillsboro	1	2	3	4	5	6	7	8	9	10
Houston	1	2	3	4	5	6	7	8	9	10
Janesville	1	2	3	4	5	6	7	8	9	10
Keene	1	2	3	4	5	6	7	8	9	10
Kenosha	1	2	3	4	5	6	7	8	9	10
Knoxville	1	2	3	4	5	6	7	8	9	10
Las Cruces	1	2	3	4	5	6	7	8	9	10
Las Vegas	1	2	3	4	5	6	7	8	9	10
Lexington	1	2	3	4	5	6	7	8	9	10
Los Altos	1	2	3	4	5	6	7	8	9	10
Los Angeles	1	2	3	4	5	6	7	8	9	10
Manhattan Beach	1	2	3	4	5	6	7	8	9	10
Martinez	1	2	3	4	5	6	7	8	9	10
Miami	1	2	3	4	5	6	7	8	9	10
Minneapolis	1	2	3	4	5	6	7	8	9	10
Morristown	1	2	3	4	5	6	7	8	9	10
Nashville	1	2	3	4	5	6	7	8	9	10
New Rochelle	1	2	3	4	5	6	7	8	9	10
North Little Rock	1	2	3	4	5	6	7	8	9	10
Oak Park	1	2	3	4	5	6	7	8	9	10
Oakland	1	2	3	4	5	6	7	8	9	10
Philadelphia	1	2	3	4	5	6	7	8	9	10
Pinecrest	1	2	3	4	5	6	7	8	9	10
Pittsburg	1	2	3	4	5	6	7	8	9	10
Portland	1	2	3	4	5	6	7	8	9	10
Providence	1	2	3	4	5	6	7	8	9	10
Richmond	1	2	3	4	5	6	7	8	9	10
Rock Hill	1	2	3	4	5	6	7	8	9	10
San Francisco	1	2	3	4	5	6	7	8	9	10
San Rafael	1	2	3	4	5	6	7	8	9	10
Santa Cruz County	1	2	3	4	5	6	7	8	9	10
Santa Fe	1	2	3	4	5	6	7	8	9	10
Santa Monica	1	2	3	4	5	6	7	8	9	10
Seattle	1	2	3	4	5	6	7	8	9	10
Southfield	1	2	3	4	5	6	7	8	9	10
Sunnyvale	1	2	3	4	5	6	7	8	9	10
Tacoma	1	2	3	4	5	6	7	8	9	10
Tucson	1	2	3	4	5	6	7	8	9	10
University City	1	2	3	4	5	6	7	8	9	10
Urbana	1	2	3	4	5	6	7	8	9	10
Waukesha	1	2	3	4	5	6	7	8	9	10
West Palm Beach	1	2	3	4	5	6	7	8	9	10
Uruguay										
San Carlos	1	2	3	4	5	6	7	8	9	10
Venezuela										
Caracas	1	2	3	4	5	6	7	8	9	10
Chacao	1	2	3	4	5	6	7	8	9	10

Vietnam										
Huế	1	2	3	4	5	6	7	8	9	10
Zambia										
Mongu	1	2	3	4	5	6	7	8	9	10

36 Acknowledgements

Celebrating with our partners

From the launch of the carbonn Climate Registry in 2010, the partner list has evolved, with partnerships growing from strength to strength.

THe list of partners is long, and thus we cannot do justice to all partners here. However, we wish to express our sincere thanks to all partners and supporters who have worked with us over the past five years. It has been an intensive journey, culminating in this five year overview.

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