



## carbonn Cities Climate Registry 2011 Annual Report

*Local Response to  
Measurable, Reportable, Verifiable  
Global Climate Action*

[www.citiesclimateregistry.org](http://www.citiesclimateregistry.org)





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**Marcelo Ebrard**

Mayor of Mexico City, Chair of World Mayors Council on Climate Change

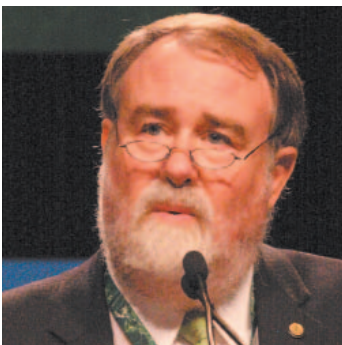
**Deep frustrations from the 2009 Copenhagen Climate Conference** for the lack of progress towards a global consensus of nations on a strong and global climate regime was the main challenge I faced in the early days of my office as the Chair of the World Mayors Council on Climate Change.

Building upon two decades of local climate advocacy, the World Mayors Summit on Climate, convened in Mexico City on 21 November 2010 in collaboration with ICLEI – Local Governments for Sustainability, United Cities and Local Governments (UCLG), and the Club of Madrid, enabled us to communicate worldwide that during a time of inaction by global leaders, local governments are once again taking a leadership role in the battle against climate change.

Just one year later, I am proud and impressed to see the enormous dynamism of local climate action and bold actions taken by my fellow Mayors worldwide, which are presented in the first Annual Reports of the Mexico City Pact and the carbonn Cities Climate Registry (cCCR).

I am particularly happy to observe that signatories to the Mexico City Pact constitute a significant majority of cCCR Reporting Cities in 2011, which clearly indicates the value of political commitments in facilitating and advancing measurable, reportable, verifiable climate actions. The Mexico City Pact and the carbonn Cities Climate Registry will continue to demonstrate achievements of local action regardless of whether nations agree on a global deal.

It is my great pleasure to announce that both the Mexico City Government and the World Mayors Council on Climate Change are committed to assume leadership in scaling up these efforts in the years ahead.



**David Cadman**

Deputy Mayor of City of Vancouver,  
President of ICLEI –  
Local Governments for Sustainability

**It was exactly 20 years ago**, in 1991, when ICLEI sparked the first lights of a globally coordinated local climate action through a small project implemented in a handful of countries. From small communities in deserts to megacities on coasts, from commuters trapped in traffic jams to dwellers in shanty towns, the diversity of cities and local governments engaged in carbonn Cities Climate Registry 2011 Annual Report excites me particularly by demonstrating that within two decades, the spirit of ambitious local climate action has now turned into a mainstream global model.

It is sad to see, however, that our collective efforts have not yet succeeded in reversing the tendency of human destruction on Earth. And for me, here lies the true value of the cCCR; a mirror in our own hands that reflects our success to partners worldwide but enlightens as well the way to go forward for a more rapid action and radical solutions, in line with the mandate adopted by more than 1200 members of ICLEI at our World Congress in Edmonton in 2009.

The release of this first cCCR Annual Report in Durban concludes an important phase of the Local Government Climate Roadmap, where local governments are finally recognized as governmental stakeholders of the global climate community and committed to strengthening their own political, technical and institutional framework, regardless of the lack of leadership and commitment at the global level.

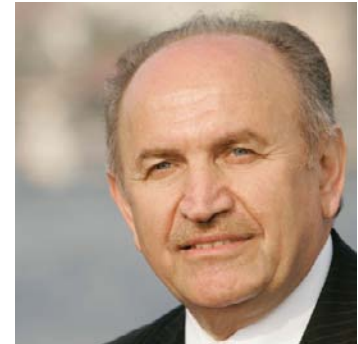
Thus, I would like to thank all our partners for their fruitful collaboration and their dedicated work. I am confident that this truly global, self-driven and progressive spirit of local governments in advancing climate action will encourage citizens, corporations and governments of the world so that the 21st century will be recognized as a low-carbon, climate resilient and urban civilization.

Cities are showing that their carbon reductions are measurable, reportable and verifiable. National governments can no longer claim this as an excuse. In fact we invite more cities, more subnational provinces and states and, yes, even national governments to report through carbonn so that we can truly see where and by whom progress towards a low carbon future is being made.

**Local and regional governments the world** round have long been working to protect and improve the quality of life of their communities. These actions, increasingly linked with climate change issues, are based on the sustainable management of the relationship between inclusive governance, urban development, energy consumption and protection of the environment. United Cities and Local Governments (UCLG), with members in 140 countries across seven world regions brings the voice of its members to the international debates. It further fosters commitment of local and regional authorities to adopt mitigation and adaptation initiative, through cooperation between local governments, and within the wider international community.

The launch of the Mexico City Pact following the UCLG World Congress in Mexico City in 2010 is a clear example of the collaboration among international local government organizations and the will of cities and regions to undertake concrete steps towards a sustainable future through emission reduction actions implemented in a verifiable and measurable manner.

Convinced that climate change is not only an environmental issue, we believe it has to be addressed from a governance perspective. We need to work on well designed and well governed territories, to anticipate risk but furthermore to work towards a mentality change: the services we provide need to fulfill the needs of our populations while keeping in mind the safeguard of the quality of life of future generations.



**Dr. Kadir Topbas**  
Mayor of Istanbul, President of UCLG

**One year ago, the Club de Madrid**, supported the launch of the Global Cities Covenant on Climate Change - the Mexico City Pact and the carbonn Cities Climate Registry. This initiative is essential because the real climate mitigation and adaptation potential in the world lies in cities; it is at the local level where the real implementation takes place. The sum of these actions at the city level, from all the cities in a particular country supports enormously the achievement of the national climate commitments. In conclusion, focusing at the city level is a key entry point to combat climate change.

The Club de Madrid is proud to support cities in this process. Cities have not been waiting for a comprehensive and global climate deal to emerge or for 'instructions' from national governments to act. Local authorities have already acted on climate change as the present report clearly shows; nevertheless, to continue with this fight in an effective way, local climate action deserves full recognition.

Both, the effective potential of cities to reduce emissions and their proximity to local realities support the rationale for engaging cities in the fight to climate change, and that is why, the Club de Madrid and its Members, 87 democratic Heads of State and Government, have been supporting and continue to support the important initiatives that local governments put in place in regards to climate change mitigation and adaptation.



**Carlos Westendorp**  
Secretary General  
Club de Madrid

**Local governments have made significant efforts** to plan their climate actions, but limited progress has been achieved in assessing the performance of their actions in a transparent manner.

The ICLEI Japan Office is collaborating with the Japanese Ministry of the Environment and a group of experts on climate policy in Japan, as well as with the ICLEI World Secretariat to facilitate the engagement of Japanese local governments in this endeavor. The Japanese experience, inspired by the global vision of cCCR and enhanced by the technical and institutional support of local and national actors, further demonstrates the importance and benefit of establishing local-national-global partnership models in scaling up the integration of local information into global processes.

We would like to thank the UK Foreign and Commonwealth Office for their valuable support to the relevant process in Japan.



**Prof. Hironori Hamanaka**  
Chair of ICLEI Japan Office, Chair of the Board of Directors, Institute for Global Environmental Strategies (IGES)



**Christiana Figueres**  
Executive Secretary UNFCCC

The momentum to respond to climate change is steadily **growing** in all areas and at all levels of society, and the first carbonn Cities Climate Registry report is a good example of this. I am heartened by the fact that 51 cities and local authorities participated in this report, and that this effort has been undertaken with such commitment, energy and rigor. Many other cities and local and regional administrations can be inspired to take action and to report to the carbonn Cities Climate Registry. Just as importantly, national governments can be encouraged to take ever bigger and more ambitious steps to fight climate change.

Clearly, cities and urban areas have a great deal to win and a great deal to lose in the fight against climate change. More than half the world's population lives in urban conglomerations today, which account for around 70% of global greenhouse emissions. Over the coming decades, more and more people will move to urban settlements. UN-HABITAT projects that by 2030, around 60 per cent of the world's population will live in urban areas, the majority of them in developing countries. Designing and building low-carbon urban infrastructure is the equivalent of job creation, and businesses and administrations are increasingly taking advantage of the opportunities emerging from low-carbon housing and transport.

At the same time, cities are already suffering and will in the future more strongly suffer from the accelerating impacts of climate change. Many cities are built on coasts or in river deltas and already suffer from floods, sea level rise and a lack of clean drinking water. UN-HABITAT has this year painted a stark picture of a world in which the forces of nature will increasingly be in collision with human settlements if greenhouse emissions are not curbed. Sadly, the vast majority of city dwellers in developing countries are poor, which further increases their vulnerability to climate change impacts. Any attempts to reduce emissions and adapt to the inevitable effects of the climate change in developing countries must therefore at the same time address what can be done to lift them out of poverty. In many instances this double goal can be best pursued through a collaboration of the public and the private sectors.

Public-private partnerships in urban areas can improve the lives of individuals and of entire communities, while at the same time respond to climate change. There are some examples of such activities which deserve to be better known, and which can encourage businesses and administrations at all levels of government to cooperate with each other. The UNFCCC Secretariat will be launching a new initiative to showcase such "light house" projects over the coming years, which I hope can be inspiration to both urban communities and national governments. The initiative will be launched at the UN Climate Change Conference in Durban. Always a front-runner, one of ICLEI's projects has also been chosen as a light house project and will be among those presented in Durban.

In keeping with the front-runner tradition, I urge ICLEI to continue the excellent work, leading the way into a better future for city dwellers.

**51** cities

**19** countries

**83** million inhabitants

**447** million tCO<sub>2</sub>e/yr

**90** GHG inventories

**107** commitments

**555** actions

---

**1** GLOBAL GOAL





**Konrad Otto-Zimmermann**  
Secretary General, ICLEI –  
Local Governments For Sustainability

**ICLEI responded to the adoption** by Heads of States and Governments of the UN Framework Convention on Climate Change in Rio de Janeiro 1992 by convening the first Municipal Leaders Summit on Climate Change at the UN Headquarters in January 1993. Eight months after Rio, we launched the Cities for Climate Protection (CCP) Campaign. Over the years, we guided over thousand cities through a process of climate action planning – from inventory and analysis to program of measures to implementation. While we provided hundreds of cities with software tools for greenhouse gas emissions accounting, it was only years later that we developed a common standard, the International Local Government Greenhouse Gas Emissions Analysis Protocol, but we still did not have a mechanism for cities to report and compare their emissions, policies and actions.

We seized the opportunity of support from the City of Bonn, Germany, the State of North Rhine-Westphalia, the European Union, and UNEP, to conceive and establish the Bonn Center for Local Climate Action and Reporting (*carbonn*). The functions of *carbonn* are to operate the Cities Climate Registry (cCCR), to provide a common standard for cities' greenhouse gas emissions accounting, maintain a library of tools for GHG emissions accounting, hold technical workshops and symposia, and organize the cCCR annual reporting to the UN Climate Secretariat and UNFCCC Conference of the Signatories.

The Global Cities Covenant on Climate - Mexico City Pact – launched in November 2010 and signed by over 200 local governments worldwide -- has created a political movement, moreover, political commitments to local climate action combined with global accountability. Article.4 of the Mexico City Pact laid the foundation to measure, report, and in the future, verify, the greenhouse gas emissions inventories, energy and climate commitments and mitigation and adaptation actions and action plans of local governments worldwide.

This inaugural 2011 Annual Report of the *carbonn* Cities Climate Registry (cCCR) is presented to the Conference of the Parties to the UNFCCC, the UN Climate Secretariat, and the global climate community, in particular to stakeholders engaged around the 17th Conference of Parties being held in Durban, South Africa from 28 November – 9 December 2011.

The true genesis of and inspiration for this report can be found in the two decades of leadership of local governments turning the “talk” of global climate challenge into the “walk” of climate action. Cities have demonstrated the critical role they play in achieving low carbon growth and climate resilient development and contributing to national and international mitigation and adaptation efforts – all of which is underscored by the data in this report.

While this report presents information provided by 51 cCCR Reporting Cities as of 15 November 2011, we invite you to check [www.citiesclimateregistry.org](http://www.citiesclimateregistry.org) and [www.carbonn.org](http://www.carbonn.org) in order to access the most up-to-date and more specific data.

Cities take seriously their leadership role to advance measurable, reportable, verifiable global climate action. With this report and in future endeavors, the cCCR presents **Local Climate Action that the World Can COUNT On.**



## 1 carbon insights

### What is the relevance of measurable, reportable and verifiable climate action for local governments?

These three concepts “Measurable, Reportable, Verifiable (MRV)” have been the buzzwords of the global climate community since the UN Conference in Bali in 2007. From a local government point of view, we believe: *Measurement* helps local leaders and staff to identify the drivers and scale of greenhouse gas emissions and allows them to monitor progress achieved over time. *Reporting* helps policymakers arrive at informed decisions for advancing local climate action, creates accountability for achieving results, and makes the process transparent. *Verification* allows quality assurance and comparability of information, which can later enhance local governments’ access to national and global climate funds.

## 2 carbon insights

### How does the reporting structure of cCCR address the concept of MRV?

We benefit from ICLEI’s vast experience in planning and implementing climate mitigation projects in local governments worldwide through its long-running Cities for Climate Protection Campaign. The cCCR reporting system focuses on three key areas: Performance, Commitments, and Actions. GHG Performance, presented in the format of government and community (i.e. city-wide) inventories, ensures that progress in reducing emissions is quantified. Commitments help local governments translate a broad vision for moving towards a low carbon and climate resilient future into tangible and measurable goals and targets. Actions are then the concrete steps which need to be taken in order to bring emissions and climate preparedness to the level to which the city has committed.

## 3 carbon insights

### What is the biggest challenge that cities face in reporting their climate information to a global registry?

In general terms, local governments are looking forward to ensuring synergies among national-regional-global processes to avoid duplicating their efforts. In specific terms, data availability for GHG performance, comparability with the base year for commitments, and securing and diversifying financing for actions are the key common challenges we have found with the cCCR reporting.

## 4 carbon insights

### How can stakeholders benefit from the experience of this global registry of local governments?

First, reporting cities might be more committed to advance their efforts because they have a better understanding of their strengths and potential for further progress. Second, we, communities and networks of cities, can strengthen our proposals to integrate local action into the institutional and financial architecture of the evolving climate regime at the national, regional and global levels. And finally, citizens, by being equipped with such an overview, will be better informed and may be more committed to engage in actions within their community or in collaboration with their local governments.

## 5 carbon insights

### We hear a lot of bad news about global climate change. How does the cCCR experience of local governments relate to that?

The lack of global political leadership on climate protection is certainly not good news. Despite that, cCCR data shows that the active engagement of local governments has the potential to bring much-needed momentum to those national and global efforts. Already the emissions reduction commitments reported to cCCR exceed those in the Kyoto Protocol. Since 2010, local governments have for the first time been recognized as government stakeholders in global climate negotiations. Each year this cCCR annual report will be officially submitted at the Conference of the Parties, and with it we can show what is possible and inspire ambitious commitments and actions at the local, national and global levels. And that is good news.

This Annual Report of the carbonn Cities Climate Registry (cCCR) presented to the 17th Conference of the Parties to the UNFCCC, the UN Climate Secretariat and the global climate community assembled in Durban, reflects the determination of cities worldwide to pursue their climate policies and actions with transparency and accountability. Over the past year, 51 cities – diverse in geography, economies, size and structure – have voluntarily submitted a range of data that we have condensed into an easily accessible format. We have established several key findings that can serve as the basis for a climate roadmap for cities and those who support them.

We see clearly the accomplishments to date:

### Cities have demonstrated their willingness to quantify their actions and achievements:

Despite the huge diversity in typology, 67% of cCCR Reporting Cities have provided data on each reporting element, and 78% of them have provided at least one government or community GHG inventory.

### Cities matter in terms of global GHG emissions:

Even the limited group of 40 cities who have so far reported community (i.e. city-wide) GHG emissions are together responsible for 447 million tCO<sub>2</sub>e/yr, which is more than the individual annual GHG emissions of 167 countries that are Party to the UNFCCC. And it is comparable to 14% the aggregate GHG emissions (Scope-1 and Scope-2), reported by the first 270 business corporations out of total 332 listed in ascending order by amount of aggregated GHG emissions in the Carbon Disclosure Project Global 500 2011 Report.

### Cities can help raise ambitions of global GHG reductions:

75% of community GHG commitments aim for GHG reductions of more than 1.0 % per year, which exceeds the reduction commitments of most national governments under the Kyoto Protocol, as well as scientific recommendations for the post-2012 period.

### Cities commit their own resources to face the climate challenge:

Notwithstanding their high ambitions, 92% of the completed or in-progress actions by local governments are financed by local resources.

**40** cities

**90** GHG inventories

**447** million tCO<sub>2</sub>e/year

**75%**

of community GHG reduction commitments exceed 1%/year

**92%**

of implemented actions are locally financed

# Executive Summary

No	City/Local Government Name	Country	Population	cCCR Reporting Elements					
				I. Reported GHG Emissions			II. # of Reported Commitments	III. # of Reported Actions and Action Plans	Signatory to the MXC Pact?
				Government Emissions (tCO <sub>2</sub> e/yr)	Community Emissions (tCO <sub>2</sub> e/yr)	Community per capita GHG Emissions (tCO <sub>2</sub> e/cap.yr)			
1	Aguascalientes	Mexico	797.010	–	–	–	0	23	Yes
2	Aichi Prefecture	Japan	7.417.204	124.432	78.388.554	10,6	2	2	
3	Almada	Portugal	173.298	20.584	246.916	1,4	1	0	Yes
4	AmuwoOdofinLocalGov.LagosState	Nigeria	1.500.000	–	–	–	1	1	
5	Bhubaneswar	India	837.737	11.436	971.473	1,2	0	3	
6	Bruxelles	Belgium	1.089.538	–	3.606.303	3,3	1	25	Yes
7	Buenos Aires	Argentina	2.890.151	789.664	14.857.048	5,1	0	35	Yes
8	Calgary	Canada	1.100.000	286.712	16.508.131	15,0	3	9	Yes
9	Cape Town	South Africa	3.700.000	219.672	19.949.346	5,4	6	7	Yes
10	City of Kawasaki	Japan	1.426.538	396.144	25.172.300	17,6	2	8	
11	City of Ligao	Philippines	108.109	–	–	–	0	17	Yes
12	City of Nagoya	Japan	2.266.249	682.583	15.989.000	7,1	2	5	Yes
13	City of North Little Rock	UnitedStates	62.304	13.383	1.038.747	16,7	1	17	Yes
14	City of North Vancouver	Canada	47.733	2.318	130.340	2,7	2	10	Yes
15	City of Paris	France	2.225.000	184.100	7.233.200	3,3	7	47	Yes
16	City of Richmond	Canada	188.100	–	–	–	1	0	
17	City of Sapporo	Japan	1.921.831	648.046	11.819.902	6,2	3	5	
18	City of Surrey	Canada	460.000	15.240	2.416.027	5,3	3	7	
19	City of Victoria	Canada	350.000	–	–	–	2	0	
20	Coimbatore	India	913.474	13.717	1.394.642	1,5	0	3	
21	Copenhagen	Denmark	528.208	97.000	2.510.035	4,8	1	7	Yes
22	Delta	Canada	100.000	7.102	917.329	9,2	2	25	Yes
23	District of West Vancouver	Canada	42.131	–	–	–	4	0	Yes
24	Durban	South Africa	3.500.000	1.074.884	21.094.816	6,0	2	50	Yes
25	Fujisawa City	Japan	413.685	–	2.896.773	7,0	1	2	Yes
26	GreaterVancouverRegionalDistrict	Canada	2.369.000	–	–	–	2	7	Yes
27	Hiroshima City	Japan	1.180.133	307.372	6.899.000	5,8	3	7	
28	Iida City	Japan	105.036	21.059	744.859	7,1	2	2	Yes
29	Itabashi city	Japan	535.759	24.168	1.947.457	3,6	2	9	Yes
30	JejuSpecialSelf-GoverningProvince	South Korea	600.000	–	–	–	1	25	Yes
31	Jerusalem	Israel	773.000	68.140	2.349.473	3,0	1	5	Yes
32	KanagawaPrefecturalGovernment	Japan	9.059.589	346.148	69.277.028	7,6	2	6	
33	Kitakyushu City	Japan	988.710	336.894	16.315.000	16,5	2	2	
34	Kumamoto City	Japan	723.111	199.547	4.245.000	5,9	4	5	
35	Kyoto City	Japan	1.473.656	394.000	6.185.000	4,2	3	5	Yes
36	Lautaro	Chile	35.236	–	–	–	3	8	Yes
37	Mexico City	Mexico	8.720.916	4.313.506	27.590.943	3,2	5	63	Yes
38	Nagpur	India	2.447.000	121.185	1.534.552	0,6	2	4	Yes
39	Nantes Metropole	France	580.000	–	2.076.210	3,6	1	7	Yes
40	Oeiras	Portugal	172.063	–	737.209	4,3	3	1	Yes
41	Okayama City	Japan	699.695	73.352	5.408.000	7,7	2	5	Yes
42	Palmerston North City Council	NewZealand	82.000	7.155	475.234	5,8	5	17	
43	Quezon City Government	Philippines	3.066.600	–	–	–	0	10	Yes
44	Quito Metropolitan District	Ecuador	2.239.191	–	17.892.303	8,0	1	9	Yes
45	Suwon City	South Korea	1.109.262	–	–	–	1	7	Yes
46	Sumida City	Japan	250.366	21.418	1.338.000	5,3	2	0	
47	Taipei	ChineseTaipei	2.618.772	–	15.960.500	6,1	1	19	Yes
48	The District of Maple Ridge	Canada	76.418	2.335	363.776	4,8	4	12	Yes
49	TokyoMetropolitanGovernment	Japan	13.187.461	–	65.904.620	5,0	3	6	Yes
50	Ube City	Japan	173.953	45.345	6.068.863	34,9	3	3	
51	YamanashiPrefecturalGovernment	Japan	864.782	32.557	7.217.000	8,3	2	3	Yes
		<b>TOTAL</b>	<b>83.232.840</b>	<b>10.901.198</b>	<b>446.509.609</b>		<b>107</b>	<b>555</b>	

Table.1 Overview of information provided by cCCR Reporting Cities \*

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\* All information is based on non-verified data provided by city officials. Please refer to Section VI. Notes for full explanation of data compilations

**Yet challenges remain. The data available so far suggests areas for future action:**

**Engage partners to scale-up:** 12% of actions are listed by cities as 'contingent to financing'. Collaboration with national, regional and international partners will help cities to scale up their investments and strengthen their capacity, including for regular data collection.

**Strengthen accountability of their commitments:** Only with regular time series of data will cities be able to measure progress achieved and compare performance where appropriate.

**Feet on the ground, eyes on tomorrow:** In keeping with their focus on tangible results, 78% of the commitments aim at delivering results before 2020. Many investments for low carbon urban development influence total GHG emissions in the next 20-50 years; consequently, cities will have to look at increasing their long-term commitments towards 2050.

**Size matters? Perhaps less than we think:** We did not find in the group of reporting cities a specific correlation between population size and per capita GHG emissions. Thus, much will depend on the initiative and leadership a city takes to tackle climate change regardless of its size.

**Caution with interpreting data and simplistic comparison.** Per capita GHG emissions need to be interpreted carefully, taking into consideration additional information like existence of carbon intensive facilities, services and goods which might go beyond the control of the local governments. With the refinement of the methodology for accounting and reporting community GHG emissions of cities, on which ICLEI, C40, and other partners are currently working, it will be possible to clearly identify root causes of those emissions so that more focused action can be developed.

**Convert challenges into opportunities:** The growing size and diversity of urban agglomerations underline the need for appropriate integration of local GHG emissions with national and international processes. Harmonization of community GHG inventories horizontally (among cities, globally) and vertically (within nations) might enable local governments to play a more active role in the effectiveness and integrity of sub-national and regional mechanisms which have already started to be considered by a wide variety of countries.

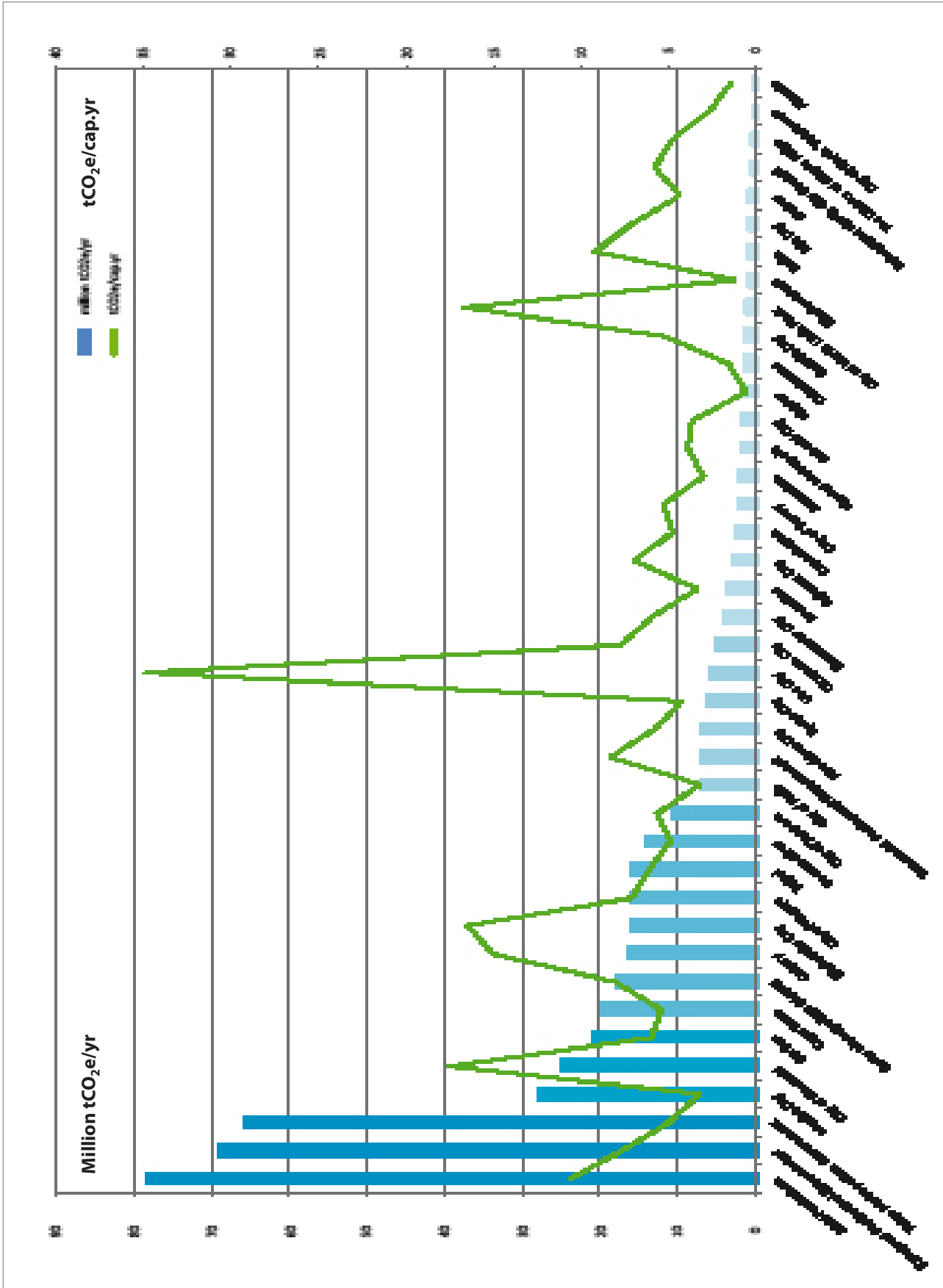
## On the Horizon

This inaugural cCCR Annual Report is an initial step by local governments to collectively share with the global climate community their contributions to measurable, reportable and verifiable climate action. As the first of its kind, the report does not claim to be an exhaustive compilation but rather a snapshot of what cities have accomplished so far, an indication of where cCCR-participating cities and partners are headed, and a foundation for future cCCR reports.

In the next years, the cCCR will in particular focus on:

- Harmonization of the methodology for community GHG inventories that enables compatibility with national GHG inventories;
- Development of globally acceptable and nationally appropriate verification models, in particular for GHG emissions inventories and progress achieved in fulfilling commitments;
- Strengthening the data collection and reporting capacity of cities and the cCCR.

The data and analysis in this report confirm that cities are responsible for a significant amount of GHG emissions. **The report also tells us that the pioneer cCCR Reporting Cities are taking serious steps to be a significant part of the solution, with transparency and accountability as guiding principles.**



**Fig.1 cCCR Reporting Cities in descending order by annual community GHG emissions, with indicative figures of per capita GHG emissions \***

\* All information is based on non-verified data provided by city officials. Please refer to Section VI. Notes for full explanation of data compilations

# I. Flashback

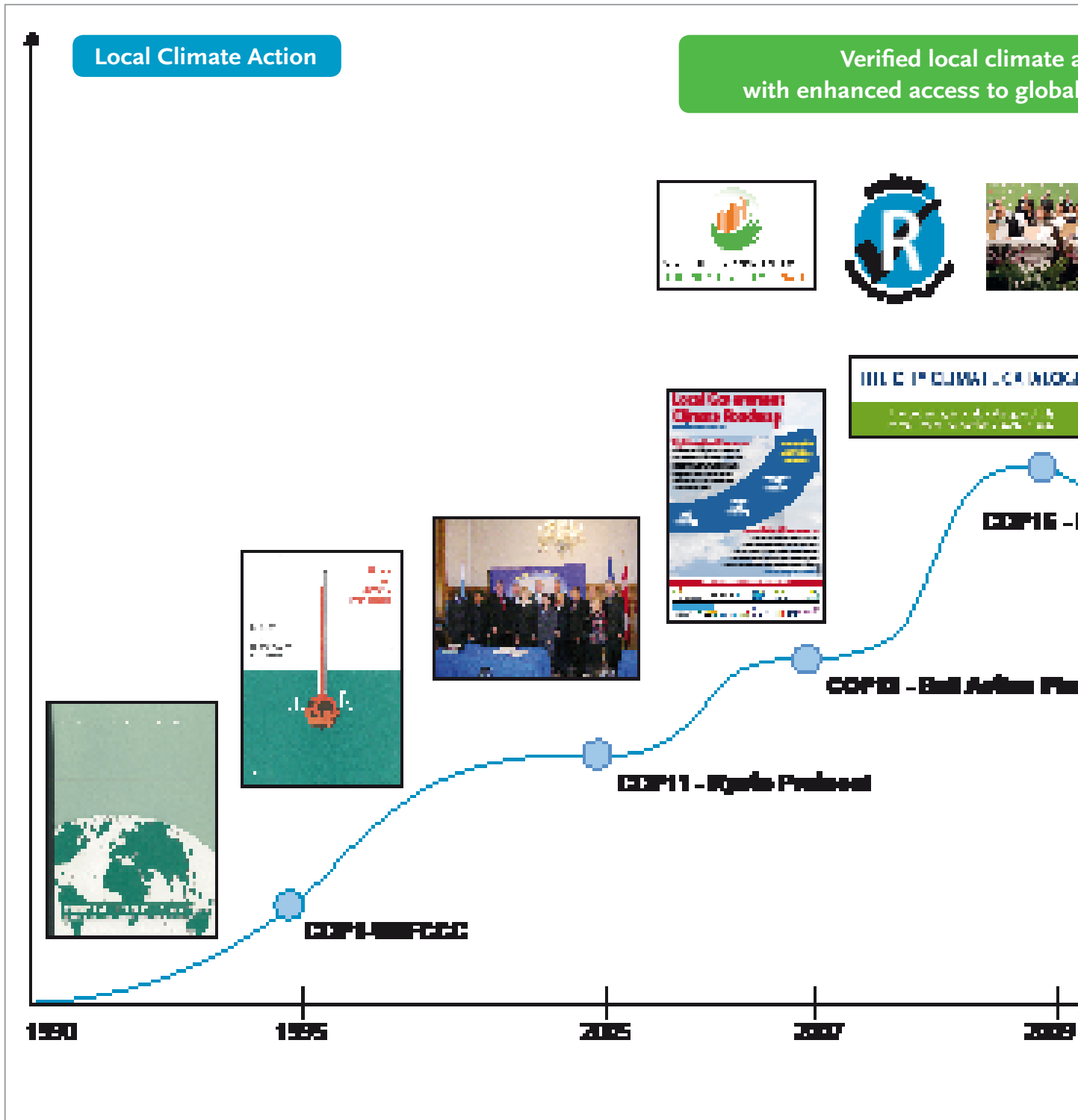
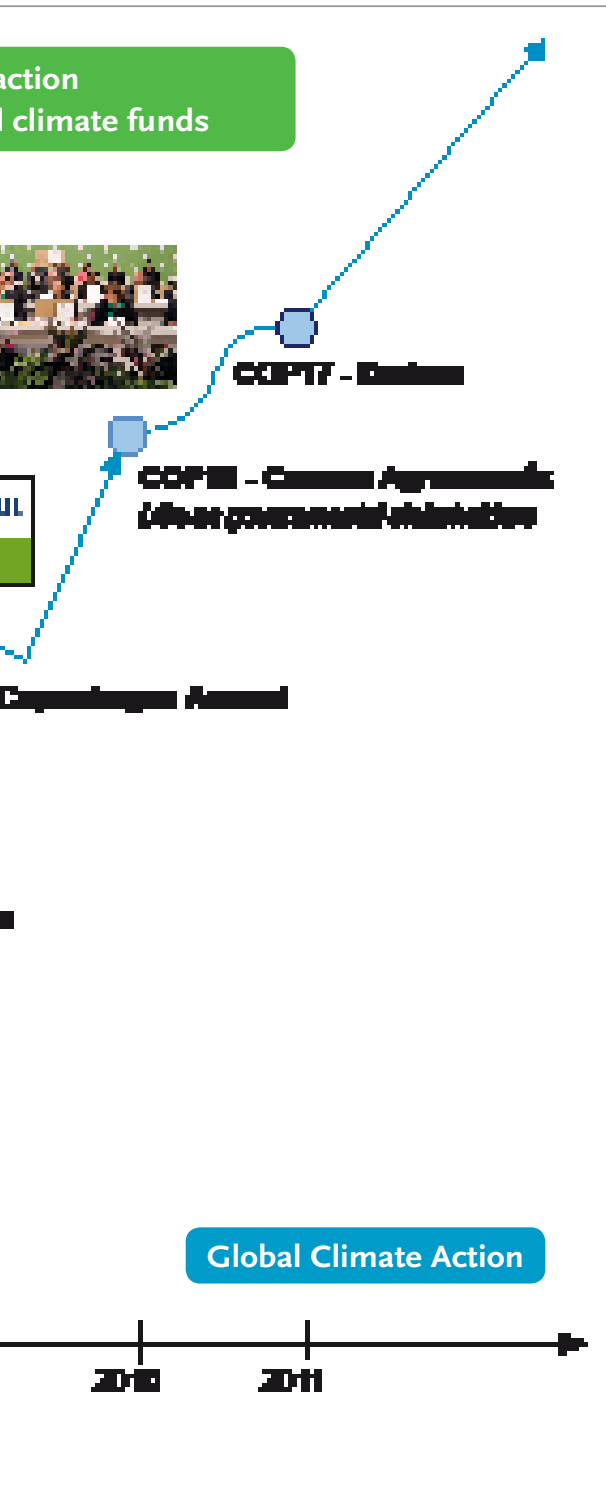


Fig. I.1 Illustrating local action mirroring global efforts (not-to-scale) © ICLEI e.V.2011

## Two decades of Local Climate Action



The commitments and actions of the cities outlined in this report are not tales of overnight success, and local government leadership on our global climate change response is not a new phenomenon. As Figure 1.1 details, local climate action has been advancing along the same track as international efforts for nearly two decades. This report builds on that legacy and represents the continuing evolution of how we measure our collective progress.

The First Municipal Leaders' Summit on Climate Change in New York, convened by ICLEI in January 1993 just 8 months after the adoption of the United Nations Framework Convention on Climate Change, marked the first globally coordinated response of local governments to climate change. ICLEI's Cities for Climate Protection was then launched as a process of globally coordinated local climate action and mainstreaming the voice of local governments at the UN-FCCC process.

Since 2005, initiatives such as the US Mayors Climate Protection Agreement and the birth of new alliances like World Mayors Council on Climate Change and C40 Climate Leadership Group facilitated deeper awareness and collaboration.

The Local Government Climate Roadmap, a global response of local governments to the Bali Action Plan of UNFCCC in 2007, played an instrumental role in formulating concrete inputs into climate negotiations, as well as enhancing dialogue and mobilization at all levels. A year later the Covenant of Mayors in Europe was launched as a prominent model of multi-level partnership on local climate action.

In 2009, local governments raised ambitions for global mitigation targets by releasing the Copenhagen World Catalogue of Local Climate Commitments which compiled more than 3,000 commitments worldwide.

Strengthened by the outcomes of the World Mayors Summit on Climate in Mexico City on 21 November 2010, global climate advocacy achieved a milestone progress at the UN Climate Conference in Cancun (COP16/CMP6) where local and subnational governments were recognized as "governmental stakeholders" in the global climate regime. (Para.7 of Cancun Outcomes - FCCC/CP/2010/7/Add.1)

# Global Cities Covenant on Climate – the Mexico City Pact

Launched at the World Mayors Summit on Climate in Mexico City on 21 November 2010, the Global Cities Covenant on Climate (Mexico City Pact) scales up the cities' role and efforts in combating climate change globally. By signing the Pact, signatories voluntarily commit to **10 action points** to advance local climate action, including the reduction of emissions, adaptation to the impacts of climate change and fostering city-to-city cooperation.

1. Reduce their local greenhouse gas emissions voluntarily
2. Adopt and implement local climate mitigation measures designed to achieve their voluntary reduction target
3. Develop local adaptation strategies to address the local impact of climate change
4. Register their emission inventories, commitments, climate mitigation and adaptation measures and actions in a measurable, reportable and verifiable (MRV) manner through carbonn Cities Climate Registry

5. Seek the creation of mechanisms that allow direct access to international funding for local climate actions
6. Establish the Mexico City Pact Secretariat
7. Promote the involvement of civil society in the fight against climate change
8. Advocate and seek partnerships with multilateral institutions and national governments on our local climate actions
9. Promote partnerships and city-to-city cooperation
10. Spread the message of the Mexico City Pact

As of November 2011, **more than 200 cities** and local authorities, representing **over 250 million inhabitants worldwide**, have signed the Mexico City Pact.

**69%**  
of cCCR  
Reporting Cities  
are Mexico City  
Pact signatories



The Brussels-Capital Region learned much thanks to the exchanges of knowledge and best practices, in particular through ICLEI and the Mexico City Pact. By 2020, Brussels aims to be an example of a sustainable city. The energy question is crucial in this strategy. And that pays, since energy consumption per cap decreased by 16% since 2004.”

*Minister Evelyne Huytebroeck, Brussels*



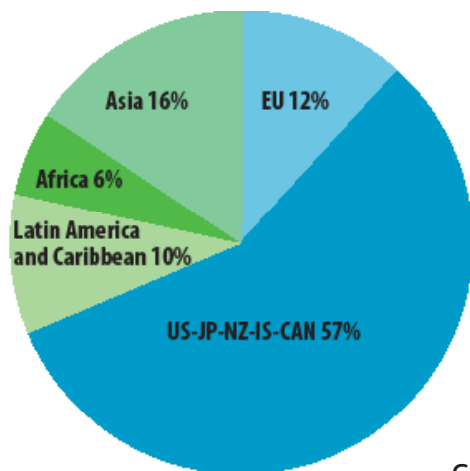




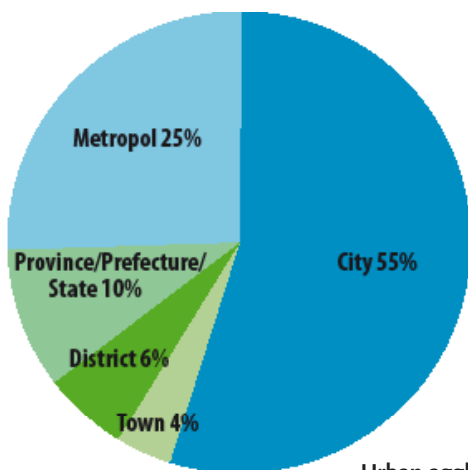
**67%**

**of cCCR Reporting Cities  
provide information  
on all three areas:  
performance,  
commitments, actions**

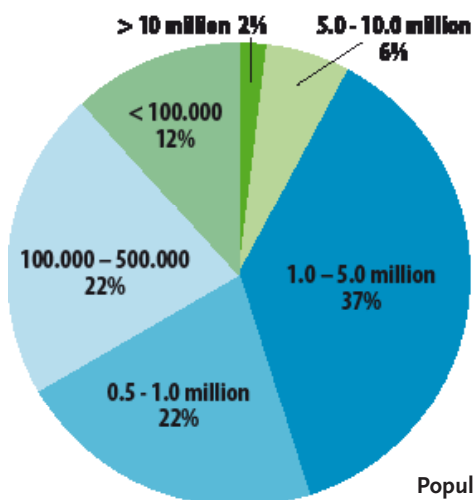




Geography



Urban agglomeration



Population size

The carbonn Cities Climate Registry (cCCR) defines Performance, Commitments and Actions as core elements of measuring, reporting and verifying local climate actions.

**Performance** enables harmonized quantification of government and community GHG emissions, through the guidance provided by the International Local Government GHG Emissions Analysis Protocol (IEAP).

**Commitments** reflects energy and climate related targets that are adopted by the local government to reduce government and community GHG emissions.

**Actions** defines legislative, capacity building, awareness raising and technology investment activities in the key categories of mitigation and adaptation that are implemented, in-progress or contingent on financing. This section also captures action plans which are considered to capture a more strategic vision.



We are pleased to see that the cCCR has become reality and that cities now have a place to deposit their climate data. Paris' participation in the cCCR represents a process that engages local governments globally and complements our involvement in the European Covenant of Mayors. The Climate Protection Action Plan of Paris is also a comprehensive strategy to improve the well-being of the Parisians while tackling the climate change related issues."

*Mayor Bertrand Delanoë, City of Paris*

Fig.II.2a-c Profile of cCCR Reporting Cities by geography, urban agglomeration and population size © ICLEI e.V.2011



The carbonn platform has given us the opportunity to reflect on and be acknowledged internationally for the steps we have taken in dealing with the climate change problems that face our communities, city, country and the world at large. Another important function on the website which we as a developing city see as being significant is that projects can be listed as ‘looking for funding’. We would like to motivate for this function to feature more strongly on the registry.”

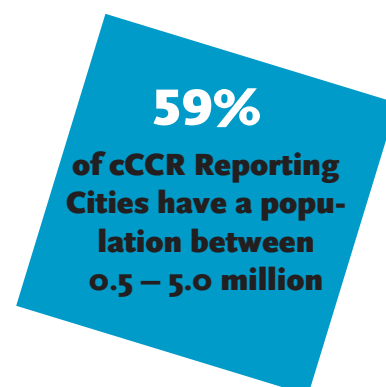
*Mayor James Nxumalo, eThekweni Municipality/Durban*



As of 15 November 2011, **51** cities or local governments have reported local climate action in the cCCR system.

- **33%** of cCCR Reporting Cities are from countries that are not included in Annex-I of the UNFCCC, which demonstrates significant potential and capacity for quantified climate information in developing country cities as well.
- Cities with a population between 0.5 – 5.0 million constitute **59%** of cCCR Reporting Cities. Lautaro (35,236 inhabitants) and Tokyo Metropolitan Government (13,187,461 inhabitants) are recognized as communities that have the smallest and largest number of inhabitants, respectively, in the cCCR.

The online system developed by Bonn Center for Local Climate Action and Reporting – carbonn, enables a continuous updating and synthesis of the data compiled in the cCCR. This dynamic nature in global reporting of local climate information will enable local governments to provide regular input and engagement in ongoing negotiations and processes related to design and implementation of a global climate regime.



cCCR may just be the needed tool relevant to transform this present sorry state of the Earth back to its normal form. Hence, a brotherhood of cities, partners in a common mission to save the Earth to bring quality of life at every corner therein.”

*Mayor Linda P. Gonzalez, Ligao City*



After one year of its establishment, cCCR demonstrated that local governments are able to respond effectively to a globally coordinated measurement and reporting process.

The reporting structure of cCCR enables appropriate integration of cities from all continents, regardless of their development level, the type of municipal administration and size of population, which are factors that reflect the diversity of challenges and opportunities for climate action at the local level.

Cities are recommended to follow the [cCCR User Manual](#) that provides guidance for each reporting element. In the next year of implementation,

cCCR is aiming to develop a globally applicable and nationally appropriate verification process, to be developed in collaboration with respective national and local authorities to ensure data quality and consistence.

Availability of a national support process, as in the case of Japanese cities, or the influence of a political decision, as in the case of Greater Vancouver Region in Canada, demonstrate the added value of creating national and regional partnerships. Jointly implemented capacity building activities and synergies that will be developed in data collection are considered to be core elements to scale up global efforts.

**Mexico City, City of Paris and Durban** are recognized as providing the maximum number of entries in all 3 reporting areas.



Metro Vancouver and its member municipalities are gratified that the very real actions we are collectively taking are helping to reduce GHG emissions. The cCCR registry helps to showcase local government commitment to this issue; also it continues to seek support at the international and national levels. The senior government support is critical if we are to avoid the potentially catastrophic impacts of climate change.”

*Mayor Lois E. Jackson, Chair,  
Metro Vancouver Board of Directors*



In Kyoto city, in 2010 we revised all our regulations relating to global warming countermeasures setting the ambitious goals to reduce the city’s total GHG emissions by 40% by 2030 and 25% by 2020. If every citizen, business and environmental conservation group shares these ambitious goals and works together, we can achieve our reduction target. I am sure of it!”

*Mayor Daisaku Kadokawa, Kyoto City*





**40**

**cities**

**90**

**GHG inventories**

**447**

**million tCO<sub>2</sub>e/year**



### III. Performance

**78%**  
of cCCR Reporting Cities uploaded at least 1 government or community GHG inventory

“ Proud to be one of the pioneer cities in the cCCR, Cape Town is a frontrunner in raising the profile of mitigation in Africa. cCCR enables us to publicly show what we have done so far and what we are aiming for. It is time to start a holistic approach to counteract climate change.”

*Executive Mayor Patricia de Lille, City of Cape Town*



Reported Government GHG Emissions (tCO <sub>2</sub> e/yr)	Name of City/ Local Government	Reported Community GHG Emissions (tCO <sub>2</sub> e/yr)
124.432	Aichi Prefecture	78.388.554
20.584	Almada	246.916
11.436	Bhubaneswar	971.473
	Bruxelles	3.606.303
789.664	Buenos Aires	14.857.048
286.712	Calgary	16.508.131
219.672	Cape Town	19.949.346
396.144	City of Kawasaki	25.172.300
682.583	City of Nagoya	15.989.000
13.383	City of North Little Rock	1.038.747
2.318	City of North Vancouver	130.340
184.100	City of Paris	7.233.200
648.046	City of Sapporo	11.819.902
15.240	City of Surrey	2.416.027
13.717	Coimbatore	1.394.642
97.000	Copenhagen	2.510.035
7.102	Delta	917.329
1.074.884	Durban	21.094.816
	Fujisawa City	2.896.773
307.372	Hiroshima City	6.899.000
21.059	Iida City	744.859
24.168	Itabashi City	1.947.457
68.140	Jerusalem	2.349.473
346.148	KanagawaPrefecturalGovernment	69.277.028
336.894	Kitakyushu City	16.315.000
199.547	Kumamoto City	4.245.000
394.000	Kyoto City	6.185.000
4.313.506	Mexico City	27.590.943
121.185	Nagpur	1.534.552
	Nantes Metropole	2.076.210
	Oeiras	737.209
73.352	Okayama City	5.408.000
7.155	Palmerston North City Council	475.234
	Quito Metropolitan District	17.892.303
21.418	Sumida City	1.338.000
	Taipei	15.960.500
2.335	The District of Maple Ridge	363.776
	TokyoMetropolitanGovernment	65.904.620
45.345	Ube City	6.068.863
32.557	YamanashiPrefecturalGovernment	7.217.000
<b>10.901.198</b>		<b>446.509.609</b>

Table III.1 GHG Emissions of cCCR Reporting Cities \*

© ICLEI e.V.2011

\* All information is based on non-verified data provided by city officials. Please refer to Section VI. Notes for full explanation of data compilations

The International Local Government GHG Emissions Analysis Protocol (IEAP) has been the basis of the guidance provided for cCCR Reporting Cities. The IEAP refers to IPCC guidance in terms of estimations of GHG emissions, but also encourages accounting of Scope-2 and Scope-3 emissions. In this first year, cCCR Reporting Cities are advised to report combined Scope-1 and Scope-2 GHG emissions for buildings, facilities, transport and other

sectors for government inventories and residential, commercial, industrial, transport and other sectors for community inventories. For solid wastes disposal, Scope-1 and upstream Scope-3 from previous years’ GHG emissions are recommended to be integrated. Others section captures CO<sub>2</sub> equivalent values of F-gases and AFOLU so that the final figure represents a complete CO<sub>2</sub>e value.

### III. Performance

- 40 cCCR Reporting Cities have shared 90 GHG emissions inventories. 73% of the inventories reflect emissions for 2007, 2008 and 2009 whereas only 1 inventory was reported for 1990 and 1991. While a low number of reporting previous years data does not imply that these figures are not available, it can still be interpreted that there is a growing interest for local GHG preparations after 2007.
- Among 40 cCCR Reporting Cities that have posted a GHG inventory, only 6 have provided a GHG inventory for more than one year. Thus, as of 2011, it is hard to have a time series analysis of GHG emissions for a significant majority of cCCR Reporting Cities.
- 4 megacities and local governments constitute 50% of reported community GHG emissions.
- Meanwhile, 24 medium size cities (between 0.5 – 5 Million inhabitants) account for 47% of total community GHG emissions.
- Total government emissions of 40 cities is comparable to the first 80 business corporations listed in ascending order by amount of aggregated GHG emissions in the Carbon Disclosure Project Global 500 2011 Report. The analysis and monitoring of government GHG emissions also demonstrate the potential to ensure effectiveness of municipal services and enable local governments to lead by example of transitioning to low carbon service and products.

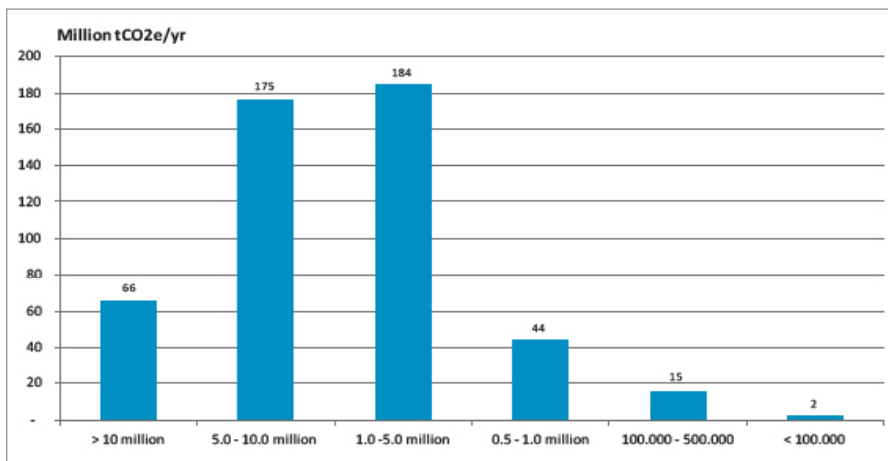


Fig. III.1 Annual GHG emissions by size of population

© ICLEI e.V.2011

“Developing a greenhouse gas inventory and setting targets is the first step to reducing our carbon footprint, and is the foundation upon which Surrey’s ENERGYShift program rests. Through the cCCR, we are able to join an international community of leaders and support other cities from around the world in taking action.”

Mayor Dianne Watts,  
The City of Surrey

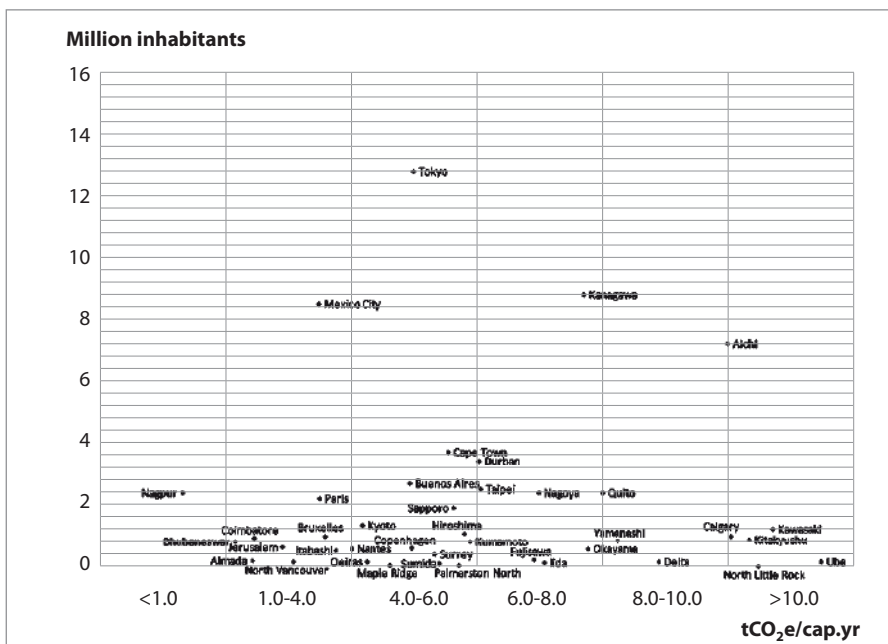


Fig. III.2 Population and per capita community GHG emissions matrix of cCCR Reporting Cities

© ICLEI e.V.2011

The matrix presented in Fig.III.2 demonstrates that a direct correlation does not exist between population figure of a city and its per capita GHG emissions. Moreover, per capita GHG emissions can provide meaningful results only when they are supported with additional information like the existence of carbon intensive facilities, services and goods which might go beyond the control of the local governments. Thus, much will depend on the initiative and leadership a city takes to tackle climate change regardless of their size.

### III. Performance

Aggregated community GHG emissions of 40 cCCR Reporting Cities reach 447 million tCO<sub>2</sub>e/yr which exceeds individual annual GHG emissions of 167 countries that are Party to the UNFCCC.

Total community emissions are comparable to 14% the aggregate GHG emissions (Scope-1 and Scope-2), reported by the first 270 business corporations out of total 332 listed in ascending order by amount of aggregated GHG emissions in the Carbon Disclosure Project Global 500 2011 Report.

The growing size and diversity of urban agglomerations underscore the need for appropriate integration of local GHG emissions with national and international processes. Harmonization of community GHG inventories horizontally (among cities, globally) and vertically (within nations) might enable local governments to play a more active role in the effectiveness and integrity of sub-national and regional mechanisms which have already started to be considered by a wide variety of countries.

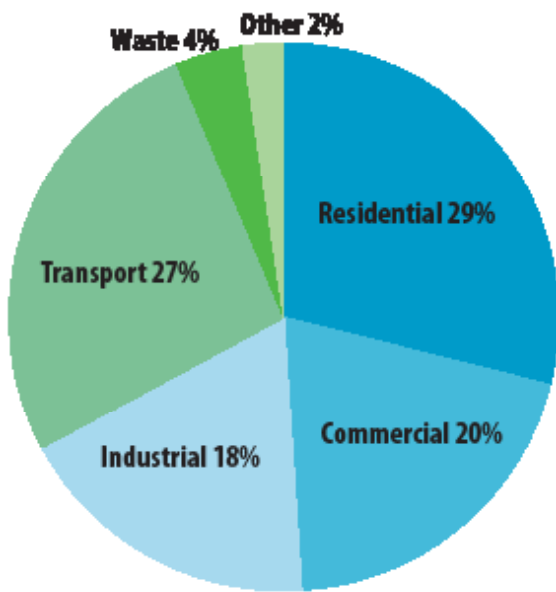


Fig. III.4 Sectoral breakdown of aggregated annual community GHG emissions of cCCR Reporting Cities © ICLEI e.V.2011



We recognize the real impact that climate change has on cities worldwide. In 2009, the City of Buenos Aires launched the Climate Change Action Plan, which became a state policy since the enactment of the Climate Change Act in October, 2011 outlining a long term strategy in climate action. We are happy to continue this process by making the information about our GHG emission levels and the actions that we take to mitigate them publicly available through the cCCR.”



Mayor Mauricio Macri, Buenos Aires

**Brussels** uploaded community GHG inventories for 5 different years.

While **75%** of cities that report community GHG inventories come from developed countries, they constitute **60%** of the Top 10 list of cities based on highest community GHG emissions and **90%** of Top 10 list of cities based on per capita community GHG emissions. Shares of residential, commercial, industrial, transport, waste and other sectors might reach as high as as **48%**, **49%**, **66%**, **59%**, **17%**, **32%**, respectively, in specific cases.

**167**  
**No. of UNFCCC Parties whose individual emissions are less than total community GHG emissions reported to the cCCR**





**75%**

**of community  
GHG reduction  
commitments  
exceed 1%/year**



# Commitments

Informed by more than 3000 entries in the 2009 Copenhagen World Climate Catalogue of Local Climate Commitments, the Commitments section of the cCCR aims to primarily focus on GHG and energy related commitments, due to their strong interrelation and easier access to quantified information.

The cCCR enables local governments to report their GHG emissions (CO<sub>2</sub> or CO<sub>2</sub>e) reduction goals on absolute or business-as-usual basis or targets for enhancing the use of renewable energy and increase energy efficiency, both for their governmental operations and for their communities. The concept of decreasing carbon intensity is also introduced as an option to define a commitment, but as of 2011, no cCCR Reporting City has indicated such a commitment.

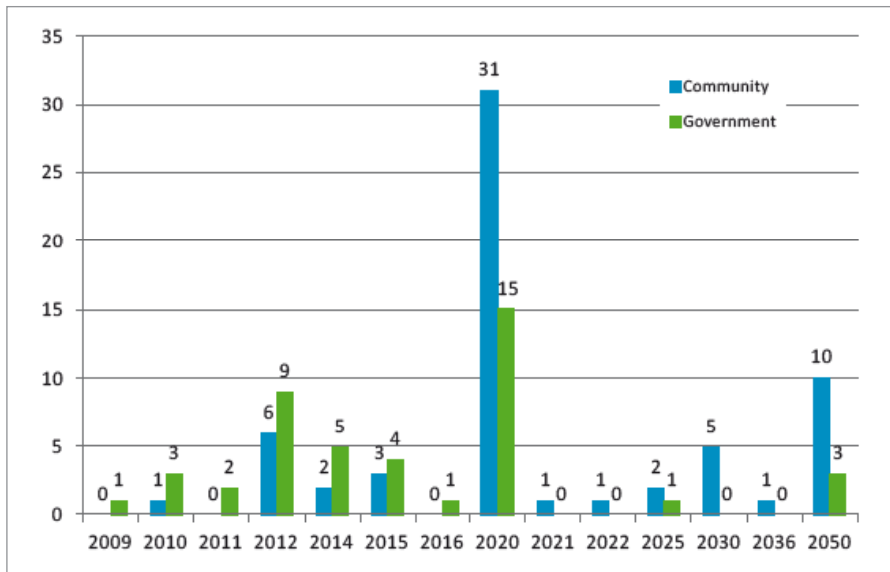


Fig. IV.1 Number of government and community commitments by years © ICLEI e.V.2011

78% of commitments of cCCR Reporting Cities focus on a medium term until 2020. While medium term commitments are advantageous for ease of tracking, it might also be recommendable to consider additional commitments for a longer term up to 2050, since many investments for low carbon urban development influence total GHG emissions in the next 20-50 years.

**78%**  
of commitments  
refer up to  
2020

“The cCCR should be accessible via various mediums, also a single national reporting framework for the reporting and dissemination of information about GHG emissions. Facilities should also be provided for the accurate measurements of GHG, while access to funding for developing countries to help develop their calculations and better position them amongst the developed nations of the world.”

Mayor Ayodele Adewale,  
Amuwo Odofin Local Government Lagos State



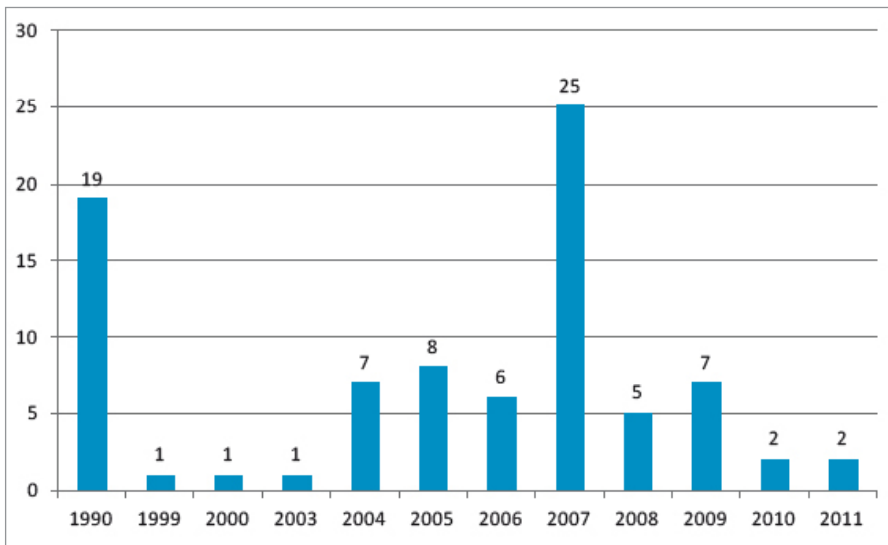


Fig. IV.2 Number of GHG commitments by base year

© ICLEI e.V.2011

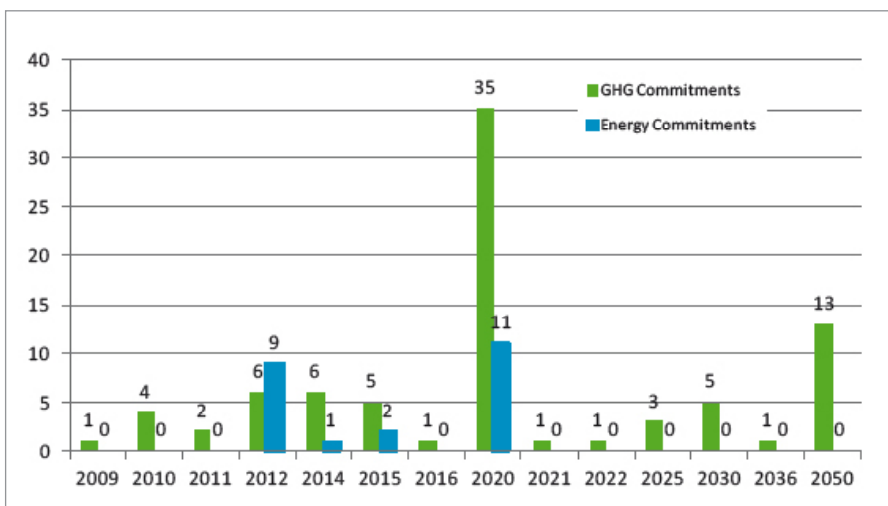


Fig. IV.3 Number of GHG and energy commitments by years

© ICLEI e.V.2011

There exists a significant challenge to track how commitments with 1990 as the base year will be fulfilled, since only 1 GHG emissions inventory is reported for 1990. cCCR Reporting Cities can be encouraged to share their 1990 GHG inventories as well, or revise their existing commitments with the availability of GHG inventories of most recent years supported with an extension of the time span.

The year 2007 also coincides with the adoption of Bali Action Plan at the UN-FCCC and the start of the Local Government Climate Roadmap as a parallel track of global advocacy of local governments.

None of the cCCR Reporting Cities has adopted a renewable energy or energy efficiency commitment beyond 2020. However, longer term commitments in the energy sector can have a catalyzing effect to increase longer term GHG commitments.

**2007**  
Most popular base year for GHG commitments



In 2009, the City of Copenhagen was proud to launch the ‘Copenhagen World Catalogue of Local Climate Commitments’ in collaboration with ICLEI. We are happy to see that cCCR have now taken this idea a step further by creating a platform where cities across countries can report their action plans and tangible results alongside their overall goals. In relation to our goal of becoming the first carbon neutral capital in the world by 2025, this opportunity for comparing our performance with other cities, and identifying best practices, is very useful for us.”

*Environment Mayor Ayfer Baykal, Copenhagen*



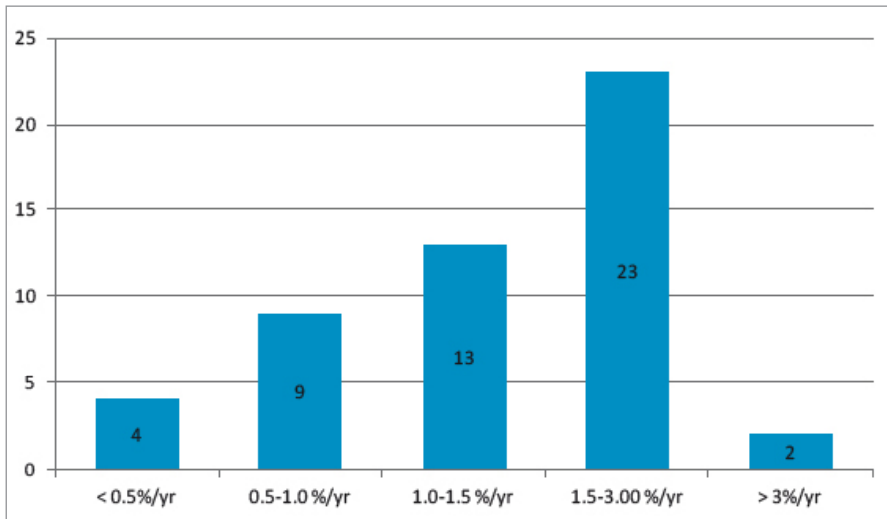


Fig. IV.4 Breakdown of community GHG reduction commitments by degree of ambitions © ICLEI e.V.2011

75% of community GHG commitments aim for GHG reductions of more than 1.0% per year which exceeds the reductions commitments of most national governments under the Kyoto Protocol, as well as recommendations of IPCC for the post-2012 period. Thus, cCCR concretely demonstrates that national and global goals for reducing GHG emissions can significantly be leveraged if commitments of local governments are better integrated and enabling environments for rapid investment and suitable financing opportunities are created.

**Calgary and Palmerston North City Council** are aiming for 100% renewables for their government operations by 2012 and 2015 respectively.



In the 87.87 km<sup>2</sup> that North Little Rock encompasses, we work to reduce our carbon footprint and adapt to climate change in order to ensure North Little Rock's quality of life is protected not only for ourselves, but also for our grandchildren. Committed to expand local climate action at the global level, the City of North Little Rock is happy to be the first US city engaged in the cCCR."

*Mayor Patrick Henry Hays, The City of North Little Rock*



**Copenhagen** aims to be the world's first carbon neutral capital by 2025. **Metro Vancouver** aims to reach carbon neutrality for their government operations by 2050. **Mexico City** and **Cape Town** lead cities from developing countries in terms of adopting ambitious targets that result in absolute GHG emission reductions in the scale of million tCO<sub>2</sub>e.



**92%**

**of implemented  
actions are  
locally financed**



# Actions

The Actions section of the cCCR enables local governments to report their completed, in-progress and planned mitigation/adaptation actions and action plans.

It is expected that the information provided will enhance both sharing of experience and preparing local governments for the new concepts of global climate like nationally appropriate mitigation actions or low emission development strategies.

Sectoral Breakdown		Type of actions	Primary source of Financing Actions	Status of Implementation
Mitigation	Adaptation			
Buildings	Water	Legislation	Local	Completed
Facilities	Coastal	Awareness Raising	(Sub) National	
Waste	Land	Technology Investment	ODA	In Progress
Transport	Health	Capacity Building	Climate Finance	
Energy	Agri-Food			
Other	Other			
				Contingent to Financing

Table V.1 – Information categories for reporting Actions in cCCR

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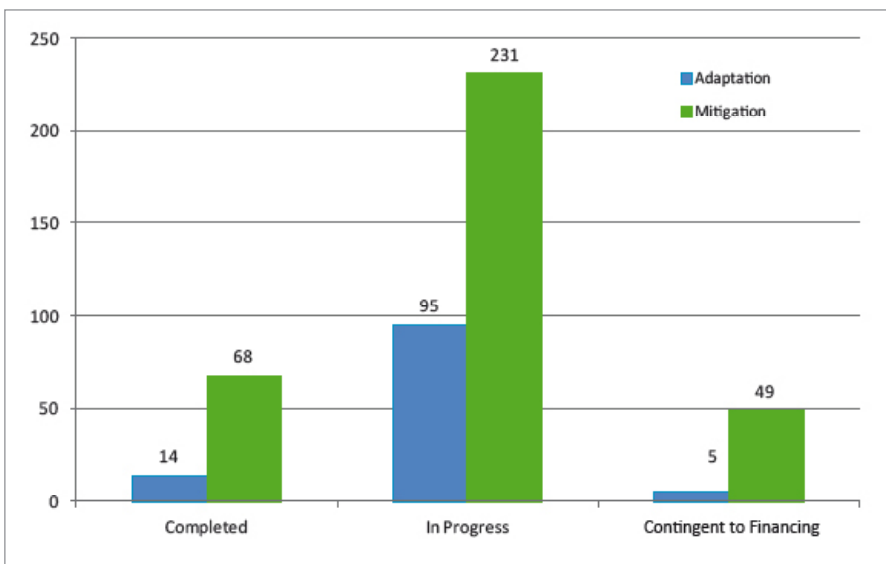


Fig.V.1 Status of implementation of reported actions

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75% of all reported actions focus on mitigation. This can be an expected outcome as local mitigation actions has a longer history of capacity building and availability of tools, whereas there is still a need to advance in the field of local adaptation. Meanwhile, 71% of cCCR Reporting Cities have also reported cross-sectoral action plans that demonstrate the high recognition of holistic approaches for low-carbon, climate resilient cities.



The importance of the availability of data on environmental conditions prevailing in communities and the attention required from local governments to confront and resolve existing problems is instrumental for the creation of a Climate Action Plan. The promotion of precise laws among other measures added to the willingness of the citizenship to guarantee a better present, but, above all, to ensure a more favorable environment for future generations.”

*Mayor Lorena Martínez Rodríguez, Aguascalientes*



**93**  
**Action Plans announced**

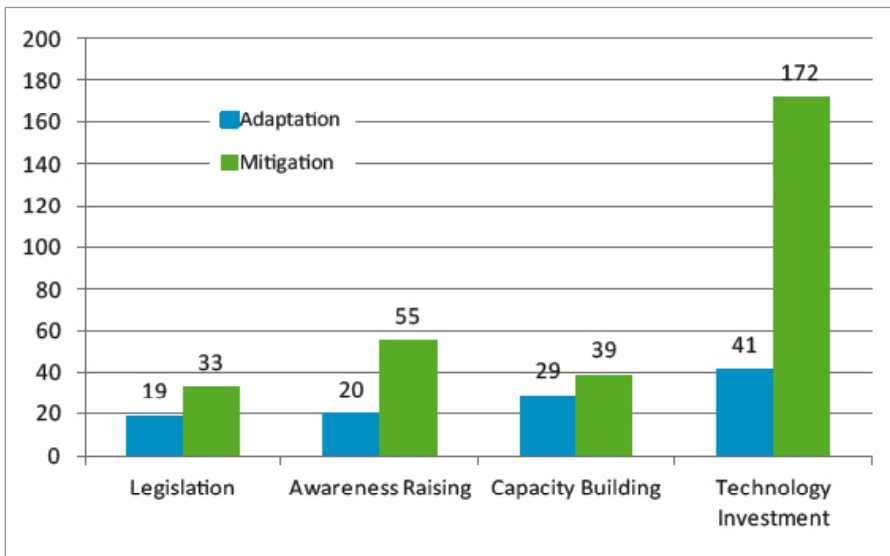


Fig. V.2 Breakdown of Completed and In-Progress actions

© ICLEI e.V.2011

52% of completed or in-progress actions focus on technological investments. However, cities are encouraged to increase their action on legislative, capacity building and awareness raising initiatives through which significant progress in GHG reductions and climate adaptation can be achieved as well.

**75%**  
of actions  
focus on  
mitigation

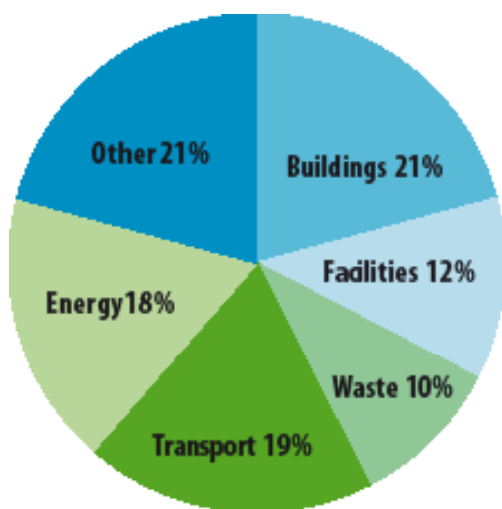


Fig. V.3 Sectoral Breakdown of Completed and In-Progress Adaptation Actions

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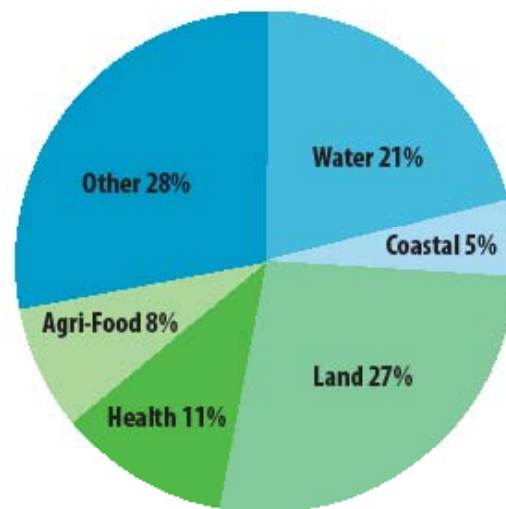


Fig. V.4 Sectoral Breakdown of Completed and In-Progress Mitigation Actions

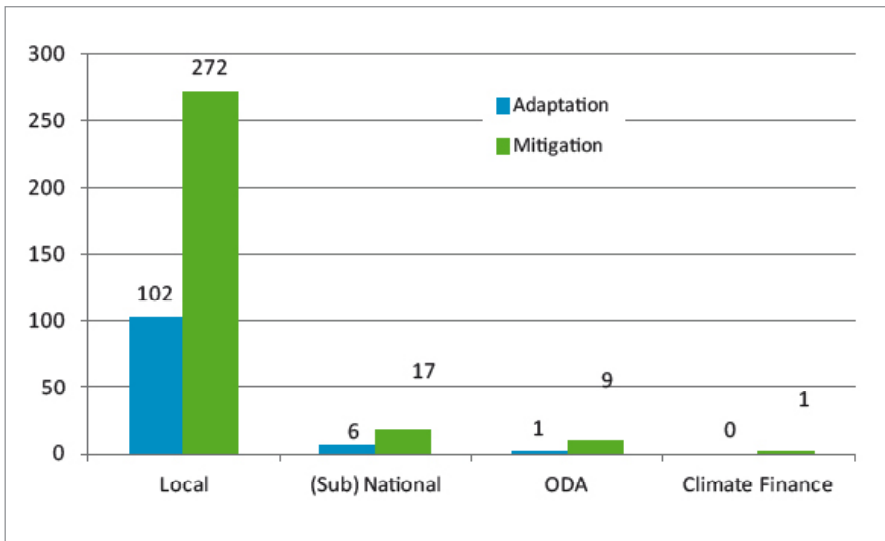
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“Sustainability and climate protection have long been a part of the City of North Vancouver’s core values and programs. The cCCR demonstrates the power of local governments to lead by example. Through emissions reductions in municipal operations and the community, the City is building a resilient community for future generations.”

*Mayor Darrell Mussatto, City of North Vancouver*



# Actions



**39%**  
of actions  
contingent on  
financing are  
related to  
transport sector

Fig. V.5 Financing sources of completed or in-progress actions

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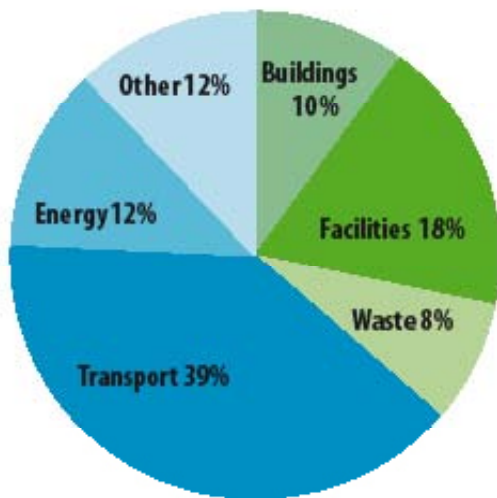


Fig. V.6 Sectoral Breakdown of Mitigation Actions Contingent to Funding

© ICLEI e.V.2011



The Mexico City Pact signatories with all around the world are demonstrating leadership. But we are also busy implementing its reporting mechanism and registering our climate action plans and GHG emissions reduction in the cCCR. This mechanism is helping cities around the world achieve transparency and accountability of their local climate actions. The information is available to citizens everywhere, who can see what their leaders and communities are doing, and compare this with the actions of other cities.”



Mayor Marcelo Ebrard, Mexico City



## I. Data collection process

- Guidance for data input in the carbonn Cities Climate Registry is explained in User Manual v.2 (August 2011) which is available at [http://citiesclimateregistry.org/fileadmin/user\\_upload/carbonn/User\\_Manual/User\\_Manual\\_for\\_carbonn\\_V2.o\\_Final\\_electronic.pdf](http://citiesclimateregistry.org/fileadmin/user_upload/carbonn/User_Manual/User_Manual_for_carbonn_V2.o_Final_electronic.pdf)
- Each cCCR Reporting City is entitled to have one user account which is provided to the respective staff or the individual appointed by the Mayor's Office.
- Throughout the reporting process, the carbonn Team supported cCCR Reporting Cities via online communications in order to ensure that the reported data is consistent with the guidance presented in User Manual v.2.
- The cCCR 2011 Annual Report is based on the information provided by cCCR Reporting Cities as of 15 November 2011. Any updated information by any new cCCR Reporting Cities can be found online at <http://citiesclimateregistry.org/cities/reporting-cities/>
- Third Parties can access searchable information or carbonn City Climate Reports of cCCR Reporting Cities by registering online at <http://carbonn.org/login/>.
- As of 2011, no verification process, neither by the carbonn Team nor by third parties has been applied to data provided by the cCCR Reporting Cities.

## II. Table.1 on page 11 and Fig.1 on Page 13

- The notation “-“ indicates that the respective city has not reported data on this section as of 15 November 2011. All reported data can be revised or new data can be provided by the designated contact person of the respective cCCR Reporting City any time after 15 November 2011.
- Population data is considered to be the most recent information provided by the city.
- Total population data does not reflect the absolute sum of all 51 cities since some urban agglomerations are covering a number of local governments. These include Aichi Prefecture (covering also City of Nagoya), Kanagawa Prefectural Government (covering also City of Kawasaki), Greater Vancouver Regional District (covering also City of Richmond, City of North Vancouver, City of Surrey, City of Victoria, Delta, District of West Vancouver, the District of Maple Ridge).
- Government emissions and community emissions data reflect the value of the most recent year provided by the City, which is further explained below.
- Total community emissions data does not reflect absolute sum of all 40 cities since some urban agglomerations are covering a number of local governments. These include Aichi Prefecture (covering also City of Nagoya), and Kanagawa Prefectural Government (covering also City of Kawasaki). Community emissions

of City of Richmond, City of North Vancouver, City of Surrey, City of Victoria, Delta, District of West Vancouver, District of Maple Ridge are included in the total sum since Greater Vancouver Regional District has not reported a community emissions inventory in the cCCR as of 15 November 2011.

- 'Per Capita Community GHG Emissions' is a value calculated by dividing the most recent community GHG emissions value by the population value provided by the cCCR Reporting City. Since it is possible that population value and community GHG emissions value might not refer to the same year, it is not recommended to attribute the per capita values for a single year.

## III. Table II.1 on page 21

- Each cCCR Reporting City may choose to upload a government or a community GHG inventory for any given year.
- The reported GHG inventory does not imply that this is the base year for any energy or climate commitment.
- Each cCCR Reporting City may choose to upload government or community GHG inventory for more than one year, as in the case of Delta (4 government inventories for 2010, 2009, 2008, 2007), Brussels (5 community inventories reported for 1990, 2000, 2005, 2007, 2009), Copenhagen (2 community inventories for 2009, 2010), City of Paris (2 government and 2 community inventories for 2004 and 2009), Palmerston North City Council (4 government inventories for 2006, 2007, 2008, 2009) and District of Maple Ridge (4 government inventories for 2007, 2008, 2009, 2010).
- Government inventories: 2010 (City of Kawasaki, City of North Vancouver, Delta, Durban, Iida City, Kitakyushu City, Mexico City, Palmerston North City Council, District of Maple Ridge, Ube City, Yamanashi Prefectural Government.), 2009 (Aichi Prefecture, Calgary, City of Nagoya, City of Paris, City of Sapporo, Coimbatore, Copenhagen, Delta, Hiroshima City, Itabashi City, Kanagawa Prefectural Government, Kumamoto City, Kyoto City, Okayama City, Palmerston North City Council, Sumida City, District of Maple Ridge), 2008 (Buenos Aires, City of North Little Rock, Delta, Palmerston North City Council, The District of Maple Ridge), 2007 (Bhubaneswar, Cape Town, City of Surrey, Delta, Jerusalem, Nagpur, Palmerston North City Council, District of Maple Ridge), 2006 (Almada, Palmerston North City Council), 2004 (City of Paris).
- Community inventories: 2010 (Copenhagen, Durban, Mexico City). 2009 (Aichi Prefecture, Brussels, Calgary, City of Paris, City of Surrey, Coimbatore, Copenhagen, Iida City, Itabashi City, Kanagawa Prefectural Government, Taipei) 2007 (Brussels, Bhubaneswar, Cape Town, City of North Vancouver, Delta, Jerusalem, Quito Metropolitan, Nagpur, District of Maple Ridge) 2006 (Almada, Oeiras, Okayama City). 2005, 2004, 2003, 2001, 2000, 1990 (Brussels, City of Paris, Nantes Metropole, Palmerston North City Council, Brussels and Brussels).

	Scope 1	Scope 2	Scope 3
<b>Residential</b>	✓	✓	X
Single family homes	✓	✓	X
Multi-family homes	✓	✓	X
Other residential emissions	✓	✓	X
<b>Commercial</b>	✓	✓	X
Offices	✓	✓	X
Hotels	✓	✓	X
Educational institutions	✓	✓	X
Shops	✓	✓	X
Terminals and ports	✓	✓	X
<b>Industrial</b>	✓	✓	X
Power generation facilities	✓	✓	X
Other industrial plants	✓	✓	X
<b>Transport</b>	✓	✓	X
Transit vehicles	✓	✓	X
Non-transit vehicles	✓	✓	X
<b>Waste</b>	✓	X	✓
Solid waste disposal	✓	X	✓
Biological treatment of solid	✓	X	X
Incineration and open burning	✓	X	X
(Waste)water treatment and discharge	✓	X	X
<b>Other emissions</b>	✓	X	X
F-Gases (tCO <sub>2e</sub> for HFC, PFC, SF <sub>6</sub> )	✓	X	X
Other industrial emissions	✓	X	X
Agriculture, forestry and land use	✓	X	X
Fugitive emissions	✓	X	X

**Table VI.1 Community GHG inventory reporting structure** (All entries are in tCO<sub>2e</sub> of CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, except F-Gases. Carbon recommended cCCR Reporting Cities not to report Scope1 of power generation facilities in order to avoid risk of double counting which is being addressed in the development of the Global GHG Community Protocol in collaboration with ICLEI and C40 and guiding will be adjusted accordingly in future reporting cycles.) © ICLEI e.V.2011



# ANNEX-I: Acknowledgement

This report has been FOR, and – most importantly – BY cities. Without the dedication and leadership of these 51 local governments, we would not be able to share their progress and performance with the global community.

We wish to congratulate these cities; thank their political leaders for having the courage to position their cities at the leading edge of this movement; and recognize the hard work that their staff contributed throughout the reporting process.

City/Local Government	Political Contact	Technical Contact
Aguascalientes Municipality	Lorena Martínez Rodríguez	Mariana Lopez Medellin
Aichi Prefecture	Hideaki Ōmura	Junichi Bando
Almada Municipality	Maria Emilia Neto de Sousa	Catarina Freitas, João Cleto
Amuwo Odofin Local Government Lagos	Ayodele Adewale	Kamorudeen Ogunbadejo
Bhubaneswar	Vishal K Dev	Vishal K Dev
Bruxelles	Evelyne Huytebroeck	Sophie Vanhomwegen
Buenos Aires	Mauricio Macri	Inés Lockhart
Calgary	Naheed Nenshi	Linda Harvey
Cape Town	Patricia de Lille	Sarah Ward
City of Kawasaki	Takao Abe	Atsushi Ida
City of Ligao	Linda Gonzalez	Maria Soledad Prena
City of Nagoya	Takashi Kawamura	Miyuki Okumura
City of North Little Rock	Patrick Henry Hays	Terry Kessinger
City of North Vancouver	Darrell Mussatto	Caroline Jackson, Laura Krohn
City of Paris	Bertrand Delanoë	Yann Francoise
City of Richmond	Malcolm Brodie	Cecilia Achiam
City of Sapporo	Fumio Ueda	Kojiro Ito
City of Surrey	Dianne Watts	Maggie Baynham
City of Victoria	Dean Fortin	Allison Ashcroft
Coimbatore	T K Ponnusamy	T K Ponnusamy
Copenhagen	Ayfer Baykal	Thøger Lund-Sørensen
Delta	Lois Jackson	Angela Danyluk
District of West Vancouver	Trish Panz	Brent Leigh
Durban	James Nxumalo	Derek Morgan, Jonathan Ramayia
Fujisawa City	Yasunori Ebine	Tsuyoshi Yamaguchi
Greater Vancouver Regional District	Lois Jackson	Roger Quan
Hiroshima City	Kazumi Matsui	Junya Miura
Iida City	Mitsuo Makino	Hiroshi Ogawa
Itabashi City	Takeshi Sakamoto	Hitoshi Kaji
Jeju Special Self-Governing Province	Keun-min Woo	Seungmin Lee
Jerusalem	Naomi Tsur	Nimrod Levy
Kanagawa Prefectural Government	Yuji Kuroiwa	Shuntaro Matsui
Kitakyushu City	Kenji Kitahashi	Aya Shuto
Kumamoto City	Seishi Kōyama	Shoko Ueda
Kyoto City	Daisaku Kadokawa	Takatoshi Niiyama
Lautato	Don Renato Hauri Gomez	Marco Arriagada Galdames
Mexico City	Marcelo Ebrard	Francisco Miranda
Nagpur	Archana Dehankar	Prakash Urade
Nantes Metropole	Jean-Marc Ayrault	Alban Mallet
Oeiras	Silvia Breu	Cristina Garrett
Okayama City	Shigeo Takaya	Hiroyuki Nagata
Palmerston North City Council	Jono Naylor	Geoff Wilkinson
Quezon City Government	Herbert M. Bautista	Frederika C. Rentoy, Regina A. Samson, Andrea Valentine Po
Quito Metropolitan District	Augusto Barrera	Ramiro Morejon
Sumida City	Noboru Yamazaki	Akiko Hakata
Suwon City	Tae-Young Yeom	Young Joo Lee
Taipei	Lung-Pin Hau	Lihao Hsu
The District of Maple Ridge	Jim Rule	Laura Benson
Tokyo Metropolitan Government	Shintarō Ishihara	Kaoru Nakanishi
Ube City	Kimiko Kubota	Noriko Suizu
Yamanashi Prefectural Government	Shōmei Yokouchi	Katsuhiko Ikeda



Fig. II.1 Instruments for global reporting of local climate action

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## Bonn Center for Local Climate Action and Reporting – carbonn™

With a vision to enhance cities' action towards local low-carbon communities, the Bonn Center for Local Climate Action and Reporting – carbonn:

- Operates the Cities Climate Registry as a platform of cities to report publicly their commitments, actions and performance in greenhouse gas emissions and reductions (Section-1);
- Provides guidance on standards and tools for local greenhouse gas emissions accounting and reporting (Section-2);
- Serves as a forum for sharing information and experience on urban climate data and actions;
- Convenes expert meetings and symposia on methodological questions related to cities' emissions measurement, accounting and reporting;
- Preparing and presenting annual reports on cities' climate commitments, actions and performance and presents them to the UN Climate Secretariat and UNFCCC Conference of Parties.

The four main principles that will guide activities of carbonn are:

- **Local Government Ownership:** Local governments through their legitimate associations and technical agencies shall lead and manage the reporting and management of data related to urban/local GHG emissions.
- **Global Perspective:** The proposed harmonization and standardization of data generation and processing shall respect regional differentiations within developed countries and priorities of the developing countries.
- **City-based priorities:** Any reporting and harmonization efforts shall be able to highlight the unique priorities of cities, which cannot be easily tracked with the existing national and corporate standards.
- **Compatibility with other initiatives:** The proposed efforts of local governments shall follow the global trends that are being followed by national governments (including IPCC guidelines) and corporations.



For GHG inventories, carbonn is following the guidance presented by the International Local Government GHG Emissions Analysis Protocol (IEAP), which is the first global standard for local GHG emissions launched by ICLEI in October 2009. Since January 2010, carbonn is further engaged in the drafting of the ISO 14069 focusing on the carbon footprint of organizations, as well as in a collaboration between ICLEI and C40 on developing a global standard for community GHG emissions which is scheduled to be finalized by end of 2011.



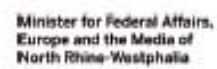
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