



# carbonn Climate Registry

## User Manual

For cCR V.4.1 – Oct. 2014



## Operated by



&



## In Support of



## Drivers of Reporting

Initiatives that actively encourage reporting of their local and sub-national governments



## Partners

Local and sub-national governments and city networks that recommend and use the platform



## Endorsers

Organizations that support the cCCR through a range of activities



## Financially supported by

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The Urban-LEDS project and this document have been developed with financial assistance from the European Union. The views expressed here can in no way be taken to reflect the official opinion of the European Union.  
(Support since June 2013)

The User Manual to carbonn (Bonn Center for Local Action and Reporting) and the carbonn Climate Registry is published by ICLEI-Local Governments for Sustainability.

It is targeted at all Local and Sub-national Governments wishing to register with the carbonn Climate Registry. The Manual guides Local Governments through the registration process, provides assistance for the input of local climate data and gives a general overview of the reporting system.

**The User Manual to the cCR v.4.1 provides an updated guidance as of May 2014. Please check for the latest version at <http://carbonn.org/>.**

Any feedback and proposals for improvements should be brought to the attention of the carbonn Team at the ICLEI world Secretariat, carbonn@iclei.org.

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## 1. Why join the carbon Cities Climate Registry?

Developed by ICLEI Local Governments for Sustainability and the Bonn Center for Local Climate Action and Reporting, the carbonn Climate Registry (cCR) is the **leading global reporting platform of local climate action (mitigation and adaptation)**, enabling cities and Local Governments to demonstrate their power and potential to reduce climate risks and move towards global low-emission and climate resilient development.

Local and Sub-national Governments are invited to consider several issues when exploring reporting through the cCR:

### a) Credibility

The cCR promotes **transparency, accountability and comparability** of local climate action for local and other subnational governments. This is part of improving an MRV approach - **Measurable, Reportable, Verifiable**.

### b) Visibility and recognition

Be recognized as a **leading community** that publicly shares its commitments, progress and actions - put your community on the map!

### c) Find inspiration

The database of the cCR contains **thousands of entries**. Find action examples, get ideas from others, and accelerate your own community local climate action. And share your own exemplary

### d) Use latest technical framework

The Bonn Center for Local Climate Action and Reporting ensures that the cCR remains compliant with the international frameworks of such as the Global Protocol for Community-scale Greenhouse Gas Emissions (GPC 1.0). – moving towards a standard for community level GHG accounting and reporting.

### e) Engage in global climate advocacy

The cCR is a key instrument of the **Local Government Climate Roadmap**, a global climate advocacy process for sub-national governments around the globe, aimed at raising the global level of ambition through local climate action. The underlying aim is to empower local action and ease city access to global climate funds. cCR annual reports are presented at key events in the United Nations Framework Convention on Climate Change (UNFCCC) - [www.iclei.org/climate-roadmap](http://www.iclei.org/climate-roadmap)

## 1.1 History

The carbonn 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.

The [2011 Annual Report of the carbonn Climate Registry](#) was released on 5 December 2011 in Durban, S. Africa at the United Nations Durban Climate Conference. The report analyzed the data provided by the 51 cCR Reporting Cities as of 15 November 2011, based on the guidance of User Manual v.2. The report was also strengthened by the release of [2011 Annual Report of Mexico City Pact](#). Furthermore, [Durban Adaptation Charter](#) was adopted at the end of Durban Local Government Convention that was held on 2-4 September 2012.

On 9 February 2012, [Local Government Climate Registry Japan](#) was launched as the first national supplement of carbonn Climate Registry.

[On 23 March 2012](#), ICLEI and WWF announced that cCR would become the reporting platform of Earth Hour City Challenge. After two successful collaborations, the cCR is again the reporting platform for EHCC 2014-2015. The respective procedures and criterion for engagement of cities in the EHCC is separately explained in [Instructions for Earth Hour City Challenge Candidates](#).

In November 2012, ICLEI released the [cCR Annual Report November 2012 Update](#).

As of March 2014, 422 cities and local governments representing a population of 406 million inhabitants and controlling community GHG emissions of over 2.25 GtCO<sub>2</sub>e/yr reported 830 climate and energy commitments, 771 GHG inventories and 4208 mitigation and adaptation actions and action plans at the cCR.

For 2014, while existing collaborations have been renewed with all partners, the cCR is inaugurating three new partnerships with the Durban Adaptation Charter, R20 - Regions of Climate Action and the EcoMobility Alliance.

## 1.2 Mechanisms and partnerships supporting the reporting of local climate action

### 1. Voluntary reporting pursuant to a global political commitment

Article 4 of the Global Cities Covenant on Climate (The Mexico City Pact) aims to enhance measurable, reportable and verifiable local climate action. The number of Mexico City Pact Signatory Cities reporting to the cCR increased by 40% in 2012.

**New in 2014**, the cCR is now the official reporting platform for the signatories of the Durban Adaptation Charter (DAC).

### 2. Capacity building at the national level

Local Government Climate Registry Japan is a good example of what can be achieved when national and local stakeholders partner to leverage reporting capacity directly tied to a global initiative. Japanese local governments reporting to the cCR represent approximately 84% of the population and close to 74% of Japan's greenhouse gas (GHG) emissions.

Other mechanisms supporting the cCR include collaboration the EU founded Urban-LEDS project and PACMUN.

**New in 2014**, a partnership with R20 - Regions of Climate Action encourages R20 members to register on the cCR to report climate actions.

**New in 2014**, The carbonn Climate Registry is also taking a new sectoral approach by supporting the reporting of commitments and actions focusing on integrated, socially inclusive, and environmentally-friendly transport options. This will be supported by a partnership with the EcoMobility Alliance.

### 3. Creating incentives

The World Wide Fund for Nature (WWF) Earth Hour City Challenge acts as a powerful incentive to motivate local governments to openly share their progress in climate actions and highlights the value of stakeholder involvement. In 2012, Earth Hour City Challenge (EHCC) Candidates already made up 21% of the total number of cCR Reporting Cities, as well as 49% of the reported mitigation and adaptation actions.

## 1.3 Main modifications since version 4.0 of the cCR

This new version of the User Manual provides an updated guidance to visitors and reporting participants for the use of the cCR website and reporting platform v.4.1

cCR v.4.1 is a minor update since version 4.0. Despite the introduction of a new look for the website and the reporting platform, the general structure of the cCR remains the same with the four sections "city info", "Commitments", "Performances" and "Actions" still forming the backbone of the reporting system.



## 2. Methodological framework

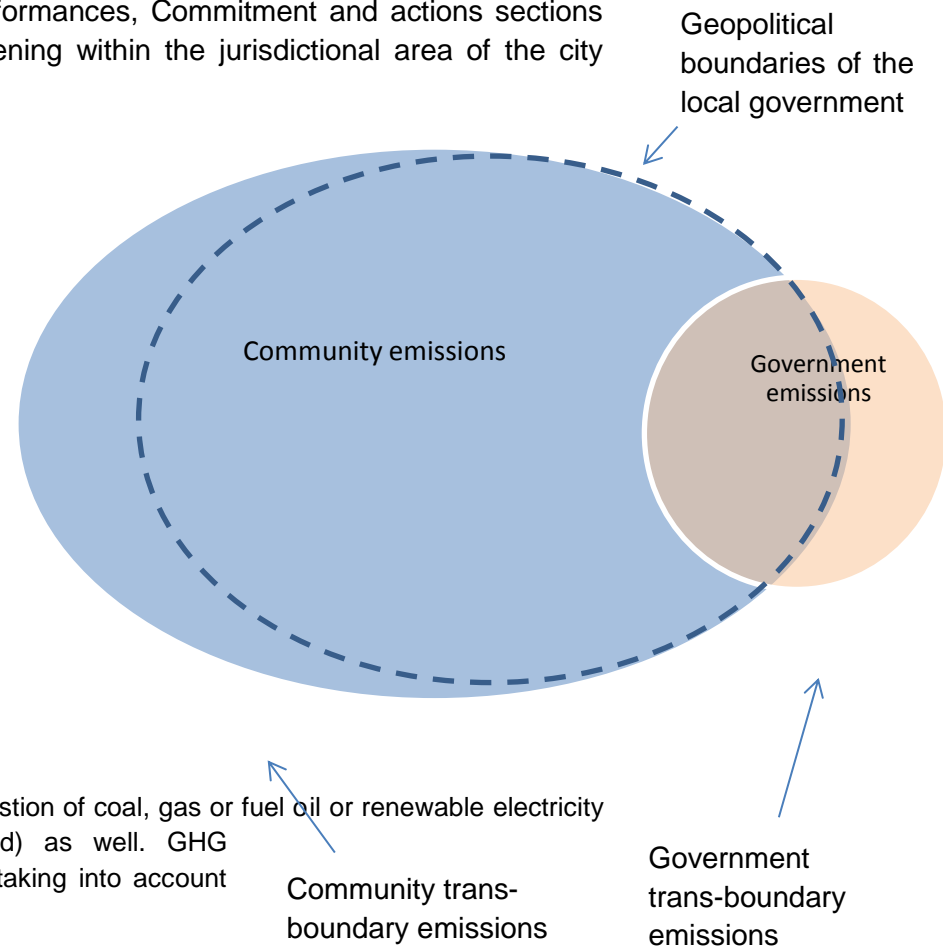
In the cCR commitment, performances and actions sections allow the differentiation between two levels of activities or “boundaries. As shown by the diagram, boundaries of the two entities are different but related. The majority of emissions from local government operations are usually a subset of the community emissions.

Moreover, data on greenhouse gases reported in City Performances, Commitment and actions sections refer to emissions or reductions of greenhouse gas happening within the jurisdictional area of the city meaning that trans-boundary emissions should not be taken into consideration in order to avoid double counting at the local level. Further developments of GHG emission protocol should address this type of issues.

### 2.1 Preventing Double Counting due to Electricity Production by Local Community

In countries where electricity is provided through a national grid system, GHG emissions due to electricity consumption in buildings, facilities and transport systems should be considered as Scope–2 (indirect electricity) emissions since combustion of fuels that lead to GHG emissions occur outside the boundary of local community. The GHG emission factor of national electricity grid usually takes into account emissions due to transmission and distribution losses as well.

There are cases where local communities own or operate local power plants (e.g. thermal power plants that engages combustion of coal, gas or fuel oil or renewable electricity generation from waste-to-energy, hydro, solar, biomass, wind) as well. GHG emissions from each of these sources should be calculated by taking into account



their specific emission factors. GHG emissions from these sources should be considered as Scope-1 emissions.

**In such cases, an adjustment is necessary to prevent double counting** of these Scope-2 and Scope-1 emissions. These procedures are not applied to power plants that are designed for national electricity production. GHG emissions from energy consumption of these plants should be accounted as Scope-1 emissions without any adjustments.

#### **Scenario-1: Limited local electricity production**

This is the case where electricity **production of local community is less than their total consumption** through national grid. In such cases, no change is necessary for Scope-1 emissions from local power production. However Scope-2 emissions from buildings, facilities and transport systems should be adjusted. This is achieved by subtracting the amount of locally produced electricity from total electricity consumption through the national grid system and multiplying the remaining amount of electricity consumption with the national grid emissions factor. The amount of subtraction should be apportioned if it is not possible to track amount of local electricity consumption in each sector.

#### **Scenario-2: Excess local electricity production**

This is the case where local electricity **production of community is higher than their total consumption** through national grid. In such cases, Scope-2 emissions from buildings, facilities and transport systems should be calculated by taking into account the GHG emission factor of the local electricity production. For Scope-1 emissions from local power plants, adjustment is necessary for both total electricity production and local GHG emission factor. Adjusted amount of electricity production should be achieved by subtracting the amount of locally consumed electricity from total electricity production. Adjusted GHG emission factor should be achieved by subtracting national grid emissions factor from local emission factor. The adjusted Scope-1 emissions of local power plants should be calculated by multiplying the adjusted amount of electricity production with the adjusted GHG emission factor. It might be possible that the adjusted GHG emission factor might have a negative value, if carbon content of local electricity production is less than that of the national grid. In this case, a negative value of Scope-2 emissions from power plants should be recorded which helps the local community to reduce their carbon footprint. Calculations for prevention of double counting from locally generated heat or cooling should follow the same principle.

### 3. Platform content and structure

#### 3.1 Overview

There are four reporting areas in the cCR, City info, Commitments, Performances and Actions. Table 1 provides an overview of the content of each section.

CITY INFORMATION	COMMITMENTS	PERFORMANCES	ACTIONS
Local Government Name	City commitments	Inventory Year	Measure Title
Population	Boundary	Administration information	Focus of the action
Census year	Type	Community information	Type of actions
Population forecast	Target Value %	Emission sectors	Boundary
City budget	Base Year	Document upload	Action sectors
Region	Target Year	Confidentiality of data	Methods
Geography	Target Adopted in	Scope 3 analysis	Finance
Predominant economy sector	Total Final Energy consumption	Software Tool Used	Status
Community Type		Expert	Adoption Year of Project
Location and size		Has the GHG inventory been verified?	Anticipated Delivery Year
Affiliations			Quantified achievements of the action
Background information			Summary
			Document upload
			Co-benefits

## 4. Creating an account and login in

Joining the cCR and data input into the system will take place on the carbonn Climate Registry website accessible at [www.carbonn.org](http://www.carbonn.org).

If you are new to the cCR and need to open an account, click on **JOIN** in the top menu and choose your type of registration. If you are an official representative of your local government select the “voluntary reporting” option. If not, click on visitor.

You reach the login page by clicking on **LOGIN** in the navigation menu.



### Note for Earth Hour City Challenge candidates:

If you are a new user of the cCR, follow the link in the top menu under “JOIN” / “WWF Earth Hour City Challenge 2014”.

If you are already a cCR user and would like to become an EHCC candidate, you do NOT need to create a new account, simply send us a request at [carbonn@iclei.org](mailto:carbonn@iclei.org) and we will enroll your city.

For more information about the Challenge we invite you to read the “Instructions for Earth Hour City Challenge candidates” brochure available on the cCR website under “PARTNERSHIPS”/“EHCC 2014” or to follow one of our monthly webinar.



## New to carbonn and the carbonn Cities Climate Registry? Register now!

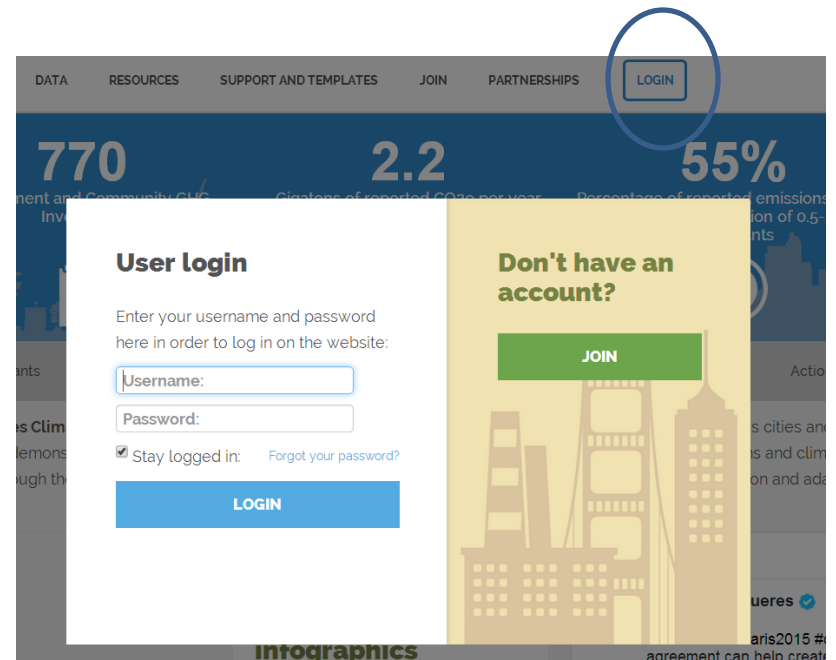
The cCCR supports the global credibility of local climate action by ensuring comparability, transparency and accountability. Local Governments involved in the process will have continuous support in capacity and knowledge development through the Bonn Center for Local Climate Action and Reporting – carbonn®.

### Registration for official representatives of local governments

[REGISTER here for voluntary reporting or if reporting under other supported initiatives](#)

### Registration for visitors

[Sign up here](#)



If you are a government representative, on the next page is the following registration form:

The registration form comprises three parts:

- a) Contact information for the person who will be inputting the local climate data (most likely to be technical staff, such as the climate change coordinator or the energy manager, or even an external consultant);
- b) Contact information for the person in the local government who is authorizing the data input (such as the head of the climate change or energy department); and
- c) Mayor's Information

**DON'T FORGET TO PRESS "ENTER" IN ORDER TO SAVE EVERY ENTRY IN THE SYSTEM!**

- 1) First of all, please input the name of your local government **in English**. This information will later be used to identify your local government, e.g. in the city search, and will appear on the city reports. Please use the name that most people are acquainted with, such as: "Mexico City" for "Ciudad de México"
- 2) Registration will commence once all information is provided and the local government approves by ticking appropriate boxes. Text of Terms and Conditions are provided as Annex of this document.
- 3) Once the above procedures are completed, an automated message appears on the screen informing that a message to advance the registration is sent to the email address of the "Designated Contact Point".
- 4) Registration email will be sent from "Your Carbonn Team", [carbonn@iclei.org](mailto:carbonn@iclei.org) with a subject line "Please confirm your registration with cCR users". (In case you do not receive this confirmation email from carbonn, please check the emails in your spam folder.)

## Your Information

Please fill in the information requested in the form (\* mandatory fields)

Name of your organization \*

Country \*

**1. Designated Contact Point reporting to the carbonn Cities Climate Registry**

First Name \*

Last Name \*

Official Title and Department \*

Division/Department \*

Email Address \*

Confirm your Email Address \*

Phone Number (Country, Area Code, Phone Number) \*

**2. Designated political liaison for contacts with the Mayor/Governor's office**

First Name \*

Last Name \*

Official Title and Department \*

Email Address \*

Phone Number (Country, Area Code, Phone Number) \*

**3. Mayor's Information**

Title

Mayor's First Name \*

Mayor's Last Name \*

I have read and agreed to the [Terms and Conditions](#) \*

The Local Government agrees to make their GHG emissions inventory publicly available through the carbonn reporting system and commence reporting within 8 months of the online registration \*

- 5) The link that leads to the cCR homepage should be followed to complete registration.
- 6) Once logged out from the system, a second email will be sent from “Your Carbonn Team”, [carbonn@iclei.org](mailto:carbonn@iclei.org) with a subject line “You have successfully registered with the carbonn Climate Registry”. This message will include a user specific password which has to be used in the next login at <http://carbonn.org/login/>

From that time on, the local government is recognized as “cCR Registered City” at <http://carbonn.org/data/>

**To access the online reporting form, log into the cCR using your username (email address) and allocated password. Then select DATA INPUT in ACCOUNT from the navigation menu.**



**From the ACCOUNT menu, you can also modify your user settings such as password or email address of the designated contact point. Please keep these information updated and share them with the persons in your organization who will be responsible for reporting the data.**

**From the account Welcome page, users can also access guidance documents such as methodologies, offline reporting sheets or this user guide but also and previous reports.**

## 5. City information

### 5.1 General Information

**PRESS “EDIT” TO BE ABLE TO MODIFY THE FORM AND “SAVE” IN ORDER TO SAVE EVERY ENTRY IN THE SYSTEM!**

1. Local Government Name (English)\*: English name for your local government (if available) otherwise the name it is generally known by. (This is the name that will be referred in the Google Map of the City Climate Report)
2. Local Government Legal Name\*: Full legal name in your local language.
3. Region\*: Available options are: Asia, Africa, Europe, Latin America, North America, Oceania
4. Geography\*: Select the attribute(s) that best describes the geography of your city. Available options are: Coastal, Dryland, Highland, Lowland, Mega Deltas, Small Island
5. Economy\*: Select the predominant type of economy of your city. Available options are: Industry & Manufacturing, Services, Agriculture & Fishing
6. Community Type\*: Select your city’s type of community. Available options are: City Municipality, Country / Province1, District Municipality, Metropolitan Municipality, State / Prefecture / Province2, Town/village
7. Community GDP (USD)\*: Provide the Gross Domestic Product for your community
8. City logo\*: in .jpg format which will be used in relevant documentation of carbonn and cCR

### 5.2 Community Information

1. Population\*: As of last census, will be used in the city report. Please note that another population field exists in the performance section so that a new population can be entered for each inventory year.

Info	Commitments	Performance	Actions
<div style="display: flex; justify-content: space-between;"> <span>Information</span> <span>Background information</span> </div>			
Local Government Name (in English)*	Cape Town		
Local Government Legal Name*	City of Cape Town		
Region*	Asia ▼		
Geography*	Coastal ▼		
Predominant economy sector*	Sector 2: Services ▼		
Community Type*	City municipality ▼		
Community GDP (USD)*	25000000000		
City logo* (max. 1 files)	Capetown_Logo.JPG		
<b>Community Information</b>			
Population*	3740025		
Census year*	2011 ▼		
Estimated population by 2020			
Estimated population by 2050			
Size of Area*	2455		km2
Latitude*	-33.9253		
Longitude*	18.4239		
<b>Affiliations</b>			
Are you a member of ICLEI?	<input checked="" type="checkbox"/>		
<b>National Initiatives</b>			
	Data reporting to national CC databas		
<b>Regional Initiatives</b>			
<b>Global Initiatives</b>			
	Global Cities Covenant on Climate		
	Durban Adaptation Charter 2011 sign		
	Cape Town City energy strategies de		
<input type="button" value="Edit"/>			

2. Census Year\*:
3. Population forecast: If available please provide population forecast by 2050 and or 2020.
4. Latitude: Enter the latitude of your city in decimal degrees.
5. Longitude: Enter the longitude of your city in decimal degrees.
6. Size of Area: Enter the size (km<sup>2</sup>) of the territory under the jurisdiction of the local government.

#### About geographic coordinates

Use decimal degrees:

#### CORRECT:

Latitude -33.9253

Longitude: 18.4239

#### WRONG:

33° 55' 31" S, 18° 25' 26"  
-

### 5.3 Municipal Administration Information

1. Number of Employees: Enter the total number of directly hired employees
2. Budget of City Council (USD): Enter the total budget approved by the City Council for the operations of the city administration (in US \$).

Please note that these entries should be reflecting the information as of the latest available year or the year that Government Emissions inventory is prepared for.

### 5.4 Affiliation

This section is related to membership of your city to national, regional or global initiatives. Please tick as appropriate or indicate any other initiative that is not listed here.

1. Are you an ICLEI member?: Please tick the box if yes
2. Local, National and Global initiatives: **Indicate your involvement in any urban initiative** (you can choose more than one option)
  - C40
  - UCLG
  - Durban Adaptation Charter
  - Resilient Communities for America
  - R20 – Regions of Climate Action
  - Mexico City Pact
  - UN ISDR “My City is Getting Ready”
  - Other national initiative
  - Other global initiative



## 5.5 Additional information

Availability of the below information provides a better understanding of the local government context and greatly improve the quality of the analysis performed at the end of each year. Local governments can consult with their community stakeholders, business groups or other governmental bodies in order to compile these data.

### Mitigation information:

- Total floor size of residential, commercial, institutional buildings (m2)
- Number of passenger cars registered (within jurisdiction of the local government)
- Capacity of public transport (commuters/day) (total figure as a result of bus, train and marine services)
- Breakdown of public transport (% by bus, train, marine) (data can be entered as XX-YY-ZZ)
- Amount of solid wastes generated (ton/day) (that should refer to all solid wastes that are recycled, managed (landfilled, incinerated, composted) and unmanaged (open dumping)
- Area of parks, recreational areas, urban forestry km2
- Number of manufacturing facilities
- Capacity of fossil and nuclear power generation plants in MWh
- Capacity of renewable energy production in MWh

### Adaptation information:

The screenshot displays the CarbonN web application interface. At the top, there are four tabs: 'Info', 'Commitments', 'Performance', and 'Actions'. Below these, there are two sub-tabs: 'Information' and 'Background information'. The 'Mitigation information' section is currently active and contains the following fields:

Total floor size of residential, commercial, institutional buildings	<input type="text" value="25000000"/>	m <sup>2</sup>
Number of passenger cars registered	<input type="text" value="150000"/>	
Capacity of public transport	<input type="text" value="20000"/>	commuters/day
Breakdown of public transport	<input type="text" value="55, 30, 15"/>	% by bus, train, marine
Amount of solid wastes generated	<input type="text" value="8000"/>	ton/day
Area of parks, recreational areas, urban forestry	<input type="text" value="9"/>	km <sup>2</sup>
Number of manufacturing facilities	<input type="text" value="120"/>	
Capacity of fossil and nuclear power generation plants	<input type="text" value="2000"/>	MWh
Capacity of renewable energy production	<input type="text" value="200"/>	MWh
Calculation year*	<input type="text" value="2010"/>	

The 'Adaptation information' section is partially visible below and includes:

- Indicate your preparedness for Adaptation:
- Upload your Local Vulnerability and Risk:

- Damage to urban infrastructure due to extreme weather events
- Increased threats to public health
- Reduced water supply and damage to natural ecosystems
- Increasing economic loss
- Increased urban heat island effect
- Coastal erosion
- Other

**Indicate Top3 of key drivers of your adaptation actions**  
(choose max. 3)

- Reducing economic impacts
- Reducing damage to public health
- Being prepared for future climatic conditions
- Meeting local development goals
- Securing local public services
- Demonstrating leadership
- Other

You can then choose with which section you want to continue: Commitments, Performance or Actions. Remember to **save every new entry** before moving to another tab.

## 6. Commitments (Government and community)

On the commitment overview page, you can see the list of existing commitments. From here, you can decide to **create, edit or delete** entries.

Click **ADD NEW** to add more commitments.



Boundary	Type	Target Value %	Reference	Base Year	Target Year	
Community	CO2e	20	Absolute	1990	2020	Edit Delete

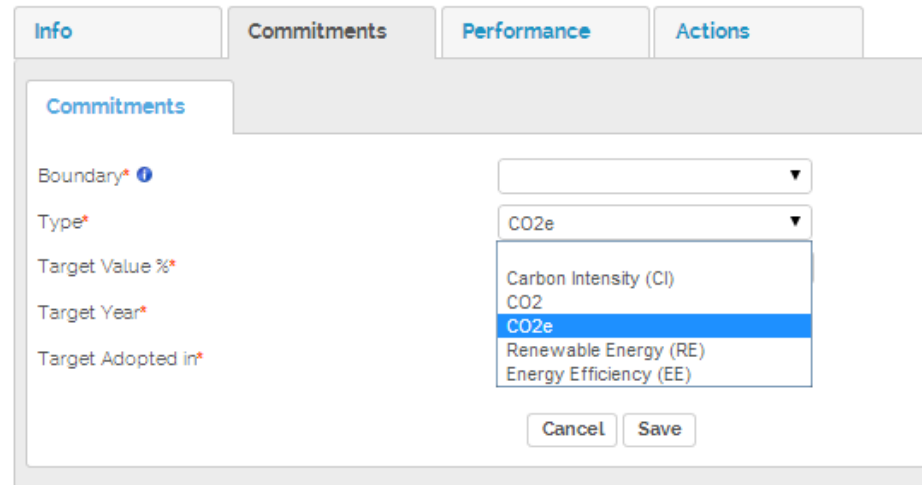
The boundary or scope of a commitment depends whether it affects only government operations or the whole community (including government operations).

In the logic of the cCR, commitments are quantifiable targets set by local government to address the consequences of human induced greenhouse gas emissions. The first step is to define the boundary of the commitment.

The cCR accommodates four different type of targets that can be expressed in the following ways:

- **CO<sub>2</sub> Reduction** (takes into account **only CO<sub>2</sub> emissions**). (The target is set against a base year consumption level or against a business as usual scenario BAU)

- **CO<sub>2</sub>e Reduction** (takes into account **all CO<sub>2</sub>e equivalent** of all 6 Kyoto Protocol gases – CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, HFCs, PFCs, SF<sub>6</sub>) (The target is set against a base year consumption level or against a business as usual scenario BAU)
- **Carbon Intensity:** reduction target of carbon emissions per unit of GDP (tCO<sub>2</sub>e/US\$ 1000) or per capita. You can choose the unit in a drop down menu. (The target is set against a base year consumption level).
- **Energy Efficiency:** Commitment to using x% less energy to provide the same services (The target is set against a base year consumption level).
- **Renewable energy:** percentage of renewable energies in the overall energy consumption. The target is expressed in % of



Info Commitments Performance Actions

Commitments

Reported Commitments

Boundary\*

Type\*

Target Value %\*

Target Year\*

Target Adopted in\*

Cancel Save

renewable energy in the total energy consumption level in a year set in the future.

1. **Boundary:** A commitment can apply to two different boundaries
  - government (= a target a local government sets for its own municipal operations) or
  - community (= a target set by the local government for the entire community. ( includes government operations)
2. **Type:** Choose the type of target you wish to record.

**After “Type” the data input interface changes with the choice of commitment type.**

3. **If CO<sub>2</sub> and CO<sub>2</sub>e, the Reference field requests to choose between:** Absolute or Business As Usual
  - Absolute (i.e. reducing CO<sub>2</sub>e emissions for a target year compared to a base year)
  - Business As Usual (BAU) ( i.e. reducing CO<sub>2</sub>e emissions for a target year, compared to the likely level of emissions of that target year if no actions were undertaken)
4. **If Carbon Intensity target:** the next step is to choose the unit which can be “tCO<sub>2</sub> per unit of GDP” or “tCO<sub>2</sub> per capita” (capita=person/inhabitant)

The static fields required for most of the targets are as follows:

5. **Target value in %\*:** Input the target value of the commitment. Targets must be recorded as a **positive percentage value between 0 – 100%**.
6. **Target year\*:** Target year for the commitment.
7. **Base year:** Year against which the target is measured.

#### **Examples:**

**For CO<sub>2</sub>, CO<sub>2</sub>e and Carbon Intensity the target** value is the REDUCTION value, so if your emissions reduction target is a reduction of 20% of GHG emissions by 2020 compared to 2005 emissions level then the entry should be 20 for the target value, 2005 for the base year and 2020 for the target year.

**An energy efficiency,** a target translates a commitment to using less energy to provide the same services so the value to be entered in this field corresponds to an IMPROVEMENT. If the goal is to improve energy efficiency by 50% by 2020 compared to 2005 energy consumption level then the entry in “target value” has to be 50, the base year, 2005 and target year 2020. With this type of target you have the option to enter information on your local government current final energy consumption.

**For renewable energy targets**, the value corresponds to the targeted share of renewable energy in the total energy mix at a certain point in the future. If the target is 100% renewable energy by 2050, the entry is 100 in target value and 2020 in target year. No base year is required with this type of target. However you have the option here as well to enter information on your local government current final energy consumption which includes a question on the current share of renewable energy in the total final energy consumption.

8. Target adopted in: Year in which the commitment was officially adopted by the local government.

In case of renewable energy or energy efficiency targets, the user fill in the section on Total Energy Consumption (MWh) to increase the value of your commitments

**9. Total Final energy consumption the community/government (MWh)**

Availability of the below information provides a preliminary overview of energy consumption of the community. This can help to have a better understanding of the level of preparedness for the transition of the community to a low-carbon society. This information will not be displayed in City Climate Report. It is expected that once a community GHG inventory is prepared, these information should be readily available as well. Local governments can consult with their community stakeholders, business groups or other governmental bodies in order to compile these data. The information should reflect total consumption of fossil fuels and electricity buildings, transport and industrial



**Conversion to MWh:**

Use an online unit converter if your energy consumption data are in a different unit (MMBtu or toe)

<http://www.convert-measurement-units.com/conversion-calculator.php?type=energy>

Info	Commitments	Performance	Actions
<b>Commitments</b>			
Boundary*	Government ▼		
Type*	Renewable Energy (RE) ▼		
Target Value %*	50		
Target Year*	2020 ▼		
Target Adopted in*	2003 ▼		
Year of reported final energy consumption	2010 ▼		
<b>Total Final Energy consumption by the government/community (MWh)</b>			
Calculation year	2010 ▼		
Fossil fuels - solid (coal etc)	1		
Fossil fuels - liquid (oil etc)	35		
Fossil Fuels - gas (natural gas etc)	10		
Renewables (biofuels, biomass, solar, thermal, geothermal)	42		
Electricity (grid and off-grid)	100		
Heat	50		
<b>Total</b>	<b>238</b>		
% of Renewable Energy in Total Final Energy consumption	18		
<input type="button" value="Cancel"/> <input type="button" value="Save"/>			

operations and should be reported in Megawatt hours (MWh).

- a. Fossil fuels – solid (coal etc.)
- b. Fossil fuels – liquid (oil etc.)
- c. Fossil fuels – gas (natural gas etc.)
- d. Renewables - (biofuels, biomass, solar, thermal, geothermal)
- e. Electricity (grid and off-grid)
- f. Heat
- g. Total (should be sum of all above) **If detailed breakdown is not available**, it is possible to indicate total amount of energy consumption in this box as well.)
- h. % renewable energy: if you do not have exact data but now the current share of renewable energy in total energy mix you can indicate that percentage here, otherwise it should be consistent with the data already entered!

At the end of each entry, press the **SAVE** button to ensure your commitments is entered into the system, or **CANCEL** to abandon the transaction

## 7. City Performance

Starting from 2013, cCR Government and Community GHG Reporting structure is adjusted to comply with the Global Protocol for Community Scale GHG Emissions, developed by ICLEI, C40 and WRI. It's compatibility with IPCC 2006 guidelines and Covenant of Mayor Baseline Emission Inventory sheet is also improved. The annex "Emissions standards matching table for cCR" summarizes the classification of the different emission sectors from common protocols based on the emitting entity and matches them with emission sectors available in the cCR

It is important to note that:

- Local GHG emission inventories can consist of two different categories: **Government** (= emissions arising from municipal operations) or **Community** (= emissions arising from the actions of the entire community). The data input forms are tailored to enable input of both of these inventories separately for each year. In most cases, government emissions are a subset of community emissions.
- The data input form enables local governments to either input emissions data for **overall sectors** or give a more detailed breakdown of numbers for the **subsectors**. The breakdown of these numbers is only available to the local government itself and will not be published. Only the **emissions profile** (i.e. the sectors and their contribution to the overall footprint) of a city will be displayed on individual city reports.
- The current input format requests the data as **a sum of direct emissions (Scope 1) and indirect energy emissions (Scope 2)** unless stated otherwise which are summarized in Table.1 and Table.2 For further definitions of Scopes, please refer to IEAP. In future, advanced options will be available that will allow a further breakdown. It is also recommended to exclude Scope1 emissions of power generation facilities in order to prevent double counting.



Inventory data in the cCR are to be reported  
**in tonnes of CO<sub>2</sub>equivalent (tCO<sub>2</sub>e) not MtCO<sub>2</sub>e**

Table.1 - Government Emissions reporting coverage in carbonn

Sectors	Buildings	Facilities	Transport	Industrial Process and product use (IPPU)	Agriculture, Forestry and Other land use (AFOLU)	Waste		Others Emissions
						Solid Waste Disposal	Other Wastes	
<b>Scope 1</b> (GHG emissions from consumption of fossil fuels or process related emissions)	√	√	√	√	√	√	√	X
<b>Scope 2</b> (GHG emissions due to consumption of electricity or energy (for heating or cooling))	√	√	√	X	X	X	X	X
<b>Scope 3</b> (Other indirect GHG emissions)	X	X	X	X	X	√	X	X

Table.2 - Community Emissions reporting coverage in carbonn

Sectors	Residential	Commercial	Industrial	Transport	Industrial Process and product use (IPPU)	Agriculture, Forestry and Other land use (AFOLU)	Waste		Other Emissions
							Solid Waste Disposal	Other Wastes	



<b>Scope 1</b> (GHG emissions from consumption of fossil fuels or process related emissions)	√	√	√	√	√	√	√	√	√
<b>Scope 2</b> (GHG emissions due to consumption of electricity or energy (for heating or cooling))	√	√	√	√	X	X	X	X	X
<b>Scope 3</b> (Other indirect emissions)	X	X	X	X	X	X	√	X	X

### 7.1 Government Performance

Choose the **CITY PERFORMANCE** tab to view previous entries about your city's Government or Community GHG emissions inventories or to add, delete or modify an entry.

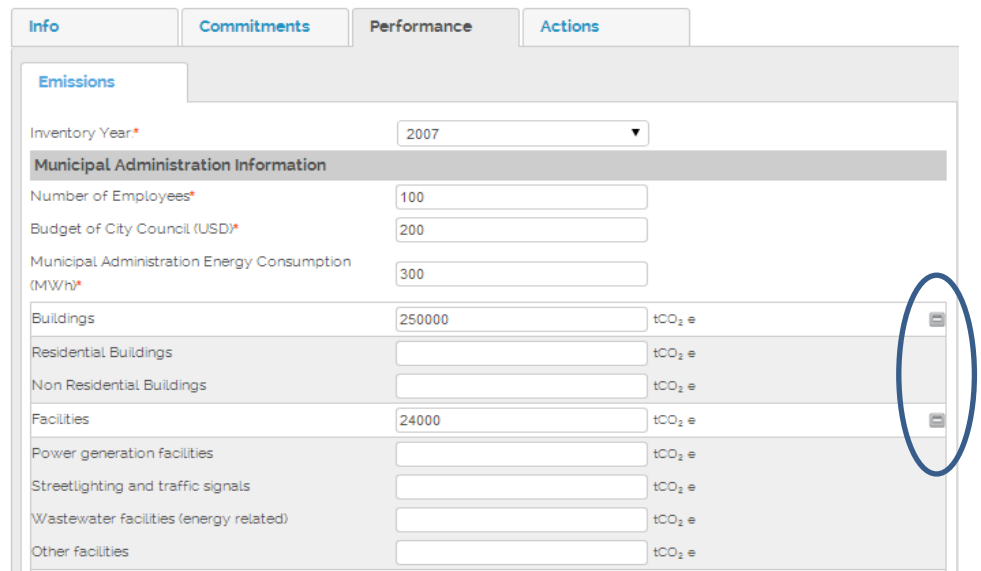
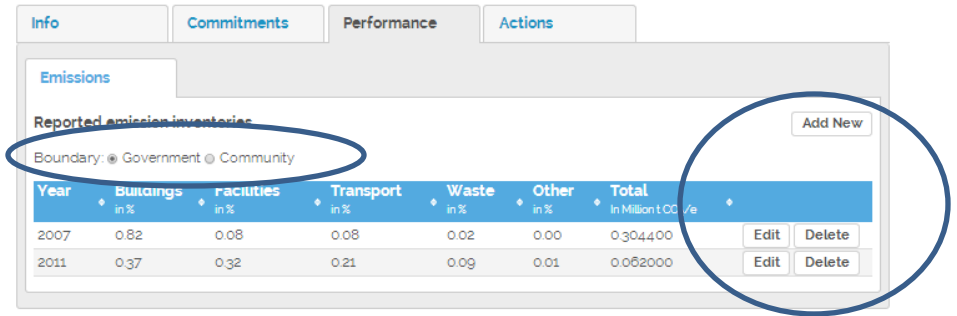
You can navigate with the radio button on top of the page between inventories for your **GOVERNMENT** or **COMMUNITY** emissions.

Enter the emissions of each sector in tons CO<sub>2</sub> equivalent including CO<sub>2</sub>, CH<sub>4</sub> and N<sub>2</sub>O (except the F-Gases field where you can report on any HFC, PFC, SF<sub>6</sub> gases). All entries should indicate sum of GHG emissions (tCO<sub>2</sub>e)

from **Scope 1 and Scope 2**, unless otherwise stated. Note that you can choose to report, either;

- as one single value for the Sector
- or provide detailed breakdown by Sub-sector which automatically adds up to Sector sum (click the “plus” sign to access sub sectors)

1. **Inventory year:** Select the year of your GHG emissions inventory.
2. **Municipal administration information:**
  - a. Number of employees
  - b. Budget of local government as of inventory year
  - c. Municipal Administration Energy Consumption as of inventory year in MWh.
3. **Buildings:** sum of GHG emissions from residential and non-residential buildings.
  - a. Residential buildings: e.g. houses, dormitories.
  - b. Non-residential buildings: e.g. office buildings, hospitals, schools, libraries, community amenities, etc.



4. **Facilities:** sum of GHG emissions from power generation, streetlights and traffic signals, energy related emissions of wastewater facilities and other facilities.

a. **Power generation facilities:** power generation facilities owned or operated by the local government. In case administration owns a fossil fuel powered electricity generation facility and if total electricity consumption is higher than the amount generated, it is recommended to exclude Scope1 emissions to prevent double counting. Please refer to point 2.1 of this manual for further explanations on double counting.

b. **Street lighting and traffic signals:** street lights and traffic lights owned or operated by the local government.

c. **Wastewater facilities (energy related):** emissions from fuel and electricity use in wastewater treatment facilities owned or operated by the local government.

d. **Other facilities:** other facilities owned or operated by the local government, e.g. Asphalt production.

5. **Transport:** sum of GHG emissions from transit and non-transit vehicles.

a. **Transit vehicles:** e.g. Government's cars, ambulances, police cars, public transport (if owned or operated by the local government), including local transit systems.

b. **Non-transit vehicles:** e.g. Construction Cranes.

6. **Industrial Process and Product Use (IPPU):** Sum of process related GHG emissions from:

a. **Mineral, chemical, metal industries**

b. **Non-energy products from fuel and solvent use**

c. **Electronic industry**

d. **Product use as substitutes for ozone depleting substances**

Facilities	24000	tCO <sub>2</sub> e
Power generation facilities		tCO <sub>2</sub> e
Streetlighting and traffic signals		tCO <sub>2</sub> e
Wastewater facilities (energy related)		tCO <sub>2</sub> e
Other facilities		tCO <sub>2</sub> e
Transport (Municipal fleet)	23000	tCO <sub>2</sub> e
Transit vehicles		tCO <sub>2</sub> e
Non-Transit vehicles		tCO <sub>2</sub> e
Industrial processes (IPPU)		tCO <sub>2</sub> e
Agriculture, Forest and Other Land Use (AFOLU)		tCO <sub>2</sub> e
Waste	6200	tCO <sub>2</sub> e
Solid waste disposal	2500	tCO <sub>2</sub> e
Biological treatment of solid waste	3700	tCO <sub>2</sub> e
Incineration and open burning		tCO <sub>2</sub> e
(Waste)water treatment & discharge (direct emissions)		tCO <sub>2</sub> e
Other Emissions	1200	tCO <sub>2</sub> e

e. Other product manufacture and use7. **Agriculture, Forest and Other Land Use (AFOLU)**: all emission from:

- a. Livestock (Enteric fermentation and manure management)
- b. Land (Forest, cropland, grassland, wetland, settlements, Other lands)
- c. Aggregate sources and non-CO2 emissions sources on land.

Industrial processes (IPPU)	<input type="text"/>	tCO <sub>2</sub> e
Agriculture, Forest and Other Land Use (AFOLU)	<input type="text"/>	tCO <sub>2</sub> e
Waste	<input type="text" value="6200"/>	tCO <sub>2</sub> e
Solid waste disposal	<input type="text" value="2500"/>	tCO <sub>2</sub> e
Biological treatment of solid waste	<input type="text" value="3700"/>	tCO <sub>2</sub> e
Incineration and open burning	<input type="text"/>	tCO <sub>2</sub> e
(Waste)water treatment & discharge (direct emissions)	<input type="text"/>	tCO <sub>2</sub> e
Other Emissions	<input type="text" value="1200"/>	tCO <sub>2</sub> e

8. **Wastes**: sum of GHG emissions from waste operations.

- a. Solid waste disposal: Emissions from solid waste disposal, including waste from previous years.
- b. Biological treatment of solid waste
- c. Incineration and open burning
- d. (Waste) water treatment & discharge (direct emissions): Process related emissions.

9. **Other emission**: sum of GHG emissions from other sources.

- a. F-Gases: Emissions of HFC, SF<sub>6</sub>, and PFC from all sources (refrigerants production, aluminum production, etc.).
- b. Fugitive emissions: Emissions from transport of flaring of gas, oil and coal.

If you do not wish to publicly display absolute GHG emissions values, please indicate by ticking relevant box.

You can submit an additional document in .doc or .pdf format that will support your inventory.

*If available, you can also submit a Scope3 analysis of your government GHG emissions in .doc or .pdf format.*

## 10. Supporting information:

- a. Supporting documents\*: In order to increase the quality of the data, local governments are required to upload at least one supporting document proving the existence of a GHG inventory calculation process.
- b. Global Protocol for Community-scale GHG emissions (GPC): Cities selected to test the pilot version of the Global Protocol for Community Scale GHG Emissions can upload their GHG inventory here.
- c. Covenant of Mayor GHG emission inventory: Signatories to the CoM have the possibility to upload their GHG emission inventory using the official CoM excel reporting sheet. In this case they do not need to fill in the data for emission sectors in the cCR performance data entry form.
- d. Internal expert: Please give the name of the Local Government staff working on the GHG emissions inventory.
- e. External expert: If you have worked with an external service provider to reach your GHG emissions baseline, please give the name of the company or individual consultant.
- f. Has your GHG emissions inventory been verified? Please tick, if you had your inventory verified by a third party.
- g. Verifier Name: Please give the name of the company or consultant who has verified the inventory.
- h. Software tool used: If you used software for your GHG emissions accounting, please input the name of the software (e.g. HEAT, ECORegion, etc)

Incineration and open burning		tCO <sub>2</sub> e
(Waste)water treatment & discharge (direct emissions)		tCO <sub>2</sub> e
Other Emissions	1200	tCO <sub>2</sub> e
Supporting document*	<input type="button" value="Upload"/> document.txt	
Please tick, if you would like to keep the absolute government emissions level confidential	<input type="checkbox"/>	
Have you made any analysis of Scope3 emissions of your government GHG emissions, if yes please provide supporting document	<input type="button" value="Upload"/> document_01.txt	
Software Tool Used:	HEAT+	
Internal Expert:		
External Expert:		
Has the GHG inventory been verified?	<input checked="" type="checkbox"/>	
Verifier Name:	John Doe	
<input type="button" value="Cancel"/> <input type="button" value="Save"/>		

Remember to **SAVE** your entry before leaving the page.

Once you save your inventory, the overview table presents % share of each sector and total tCO<sub>2</sub>e of overall sum.

You are then redirected to the commitment overview page, where you can **EDIT** or **DELETE** your entry.

You can click **ADD NEW** button if you would like to add more government GHG emissions inventory.

## 7.2 Community Performance

Enter the emissions of each sector in tons CO<sub>2</sub> equivalent including CO<sub>2</sub>, CH<sub>4</sub> and N<sub>2</sub>O (except the F-Gases field where you can report on any HFC, PFC, SF<sub>6</sub> gases). All entries should indicate sum of GHG emissions (tCO<sub>2</sub>e) from Scope 1 and Scope 2, unless otherwise stated.

1. **Inventory year:** Select the year of your GHG emissions inventory.
2. **Community information:**
  - a. Community population as of inventory year\*
  - b. Community GDP as of inventory year in USD
3. **Residential:** sum of GHG emissions from single-family, multi-family and other residential houses
  - a. Single family homes
  - b. Multi-family homes
  - c. Other residential emissions
4. **Commercial:** sum of GHG emissions from offices, hotels-health centers, educational institutions, shops, terminal and port
  - a. Offices
  - b. Hotels - Health: e.g. hotels, clinics, hospitals, courts and prisons
  - c. Educational institutions: e.g. in schools, universities & museums within the community.
  - d. Shops: e.g. shops, shopping malls & warehouses within the community.
  - e. Terminals and ports: Bus Terminals, Ports & Airports within the community.
  - f. Government buildings
  - g. Government facilities and amenities.
5. **Industrial:** sum of GHG emissions from power facilities and other industrial plants

**Emissions**

Inventory Year\*

Community Population as of Inventory Year\*

Community GDP in Inventory Year (USD)

Covenant of Mayors baseline inventory report (max. 1 files)

Residential	<input type="text" value="400000"/>	tCO <sub>2</sub> e
Single family homes	<input type="text" value="200000"/>	tCO <sub>2</sub> e
Multi family homes	<input type="text" value="180000"/>	tCO <sub>2</sub> e
Other residential emissions	<input type="text" value="20000"/>	tCO <sub>2</sub> e
Commercial	<input type="text" value="17292384"/>	tCO <sub>2</sub> e
Offices	<input type="text" value="1232132"/>	tCO <sub>2</sub> e
Hotels	<input type="text" value="3213213"/>	tCO <sub>2</sub> e
Educational institutions	<input type="text" value="1515156"/>	tCO <sub>2</sub> e
Shops	<input type="text" value="4788666"/>	tCO <sub>2</sub> e
Terminals and ports	<input type="text" value="6543217"/>	tCO <sub>2</sub> e
Industrial	<input type="text" value="8666665"/>	tCO <sub>2</sub> e
Power generation facilities	<input type="text" value="7777777"/>	tCO <sub>2</sub> e
Other Industrial plants	<input type="text" value="888888"/>	tCO <sub>2</sub> e

- a. Power generation facilities In case community electricity consumption is higher than power generation within boundary, it is recommended to exclude Scope1 emissions in order to prevent double counting.
- b. Other industrial plants
6. **Transport:** sum of GHG emissions from transit and non-transit vehicles.
- a. Transit vehicles: e.g. local transit systems, on-road vehicles.
- b. Non-transit vehicles
7. **Industrial Process and product use (IPPU):** Sum of process related GHG emissions from:
- a. Mineral, chemical, metal industries
- b. Non-energy products from fuel and solvent use
- c. Electronic industry
- d. Product use as substitutes for ozone depleting substances
- e. Other product manufacture and use
8. **Agriculture, Forest and Other Land Use (AFOLU):** all emission from:
- a. Livestock (Enteric fermentation and manure management)
- b. Land (Forest, cropland, grassland, wetland, settlements, Other lands)
- c. Aggregate sources and non-CO2 emissions sources on land.
9. **Waste:** sum of GHG emissions from waste operations.
- f. Solid waste disposal: including waste from previous years.
- g. Biological treatment of solid waste
- h. Incineration and open burning
- i. (Waste) water treatment and discharge (direct emissions): Process related emissions from wastewater treatment and discharge.

Residential	400000	tCO <sub>2</sub> e	<input type="checkbox"/>
Single family homes	200000	tCO <sub>2</sub> e	
Multi family homes	180000	tCO <sub>2</sub> e	
Other residential emissions	20000	tCO <sub>2</sub> e	
Commercial	17292384	tCO <sub>2</sub> e	<input type="checkbox"/>
Offices	1232132	tCO <sub>2</sub> e	
Hotels	3213213	tCO <sub>2</sub> e	
Educational institutions	1515156	tCO <sub>2</sub> e	
Shops	4788666	tCO <sub>2</sub> e	
Terminals and ports	6543217	tCO <sub>2</sub> e	
Industrial	8666665	tCO <sub>2</sub> e	<input type="checkbox"/>
Power generation facilities	7777777	tCO <sub>2</sub> e	
Other Industrial plants	888888	tCO <sub>2</sub> e	
Transport	666666	tCO <sub>2</sub> e	<input type="checkbox"/>
Industrial processes (IPPU)	6546546	tCO <sub>2</sub> e	
Agriculture, Forest and Other Land Use (AFOLU)	987654	tCO <sub>2</sub> e	
Waste	654	tCO <sub>2</sub> e	<input type="checkbox"/>
Other Emissions	546	tCO <sub>2</sub> e	<input type="checkbox"/>

Please tick, if you would like to keep the absolute

10. **Other emissions:** sum of GHG emissions from all others

- a. F-Gases from all sources: Emissions of HFC, SF6, and PFC from all sources, e.g. refrigerants production, aluminum production, etc
- b. Fugitive emissions: Emissions from transport of flaring of gas, oil and coal.

Supporting information: This section is similar to one of government inventories. For the description of this section go to the chapter “Government Performance on page “29” of this user manual.

You can submit an additional document in .doc or .pdf format that will support your inventory.

*If available, you can also submit a Scope3 analysis of your community GHG emissions in .doc or .pdf format.*

Further information to support the community GHG inventory include;

Remember to **SAVE** your entry before leaving the page.

Once you save your inventory, the overview table presents % share of each sector and total tCO2e of overall sum.

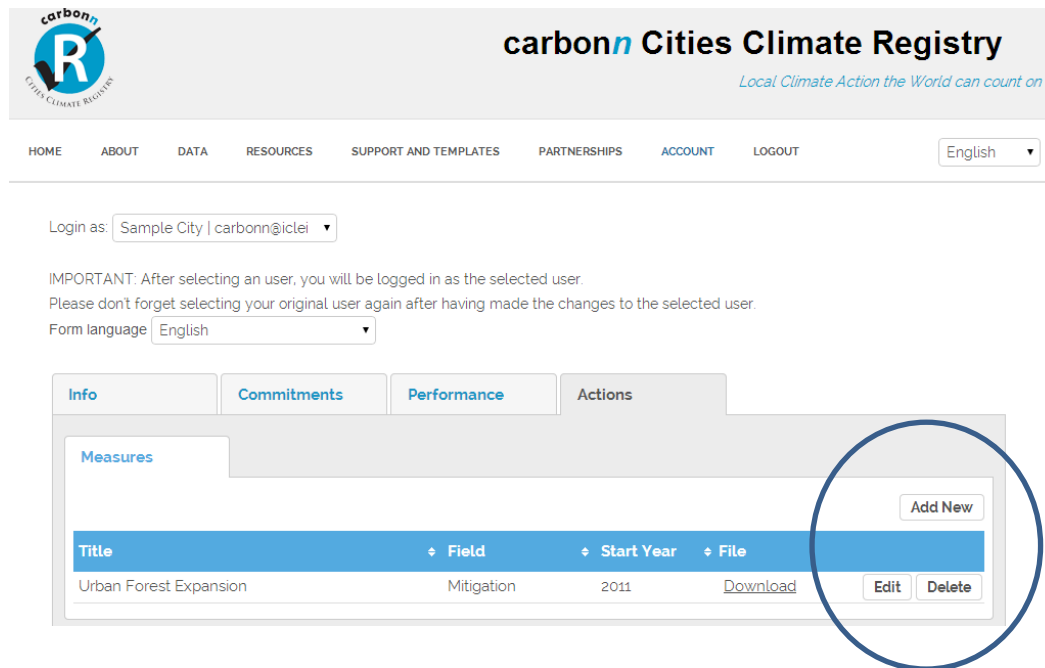
You are then redirected to the commitment overview page, where you can **EDIT** or **DELETE** your entry.



## 8. City Actions

In this section, Local government can report their actions and action plans on climate change mitigation and adaptation, not only those one that have been already implemented but also those actions that are in the progress or planning stages and are still looking for funding.

- Report your mitigation and adaptation actions. Keep in mind that some actions might not necessarily labeled and recognized as a climate action within your local government, but report anything that has an impact on mitigation or adaptation work.
- You are able to enter actions that have been completed, that are currently in progress and even actions that you have planned but might not have yet found funding for. The system will give visibility to such cases and point out any gaps between planned action and gaps in funding.
- Upload any action plans that impact your low carbon or climate resilient development strategies.



To enter a new action, choose the **ACTION** tab to view previous entries about your city's climate action and to delete, edit or add new ones. After typing the name of your action, the system requires that you describe the action via a succession of questions.

Field name	Option	Definition / Example
1. Primary focus:	• Adaptation	Adjustment in natural or human systems in response to actual or expected climatic stimuli or their effects, which moderates harm or exploits beneficial opportunities (R.T. Watson, 2001)
	• Mitigation	An anthropogenic intervention to reduce the sources or enhance the sinks of greenhouse gases (R.T. Watson, 2001). As a rule of thumb, mitigation

		action should result in a measureable reduction of greenhouse gas emissions.
<b>2. Cross-cutting action:</b>	<ul style="list-style-type: none"> <li>• Tick-box</li> </ul>	Adaptation or mitigation action with mitigation respectively adaptation component.
<b>3. Type of action:</b>	<ul style="list-style-type: none"> <li>• Policy / Strategies / Action Plans</li> </ul>	Include: Low emission development strategies, Climate Adaptation Strategies, Plan for integrated management of water resources, Cycling Plan, Food Security and Urban Agriculture Strategy, etc...
	<ul style="list-style-type: none"> <li>• Regulatory</li> </ul>	Municipal building code to use renewable energies whenever feasible, municipal regulations on waste management, green procurement rules, Energy label, certification schemes, etc...
	<ul style="list-style-type: none"> <li>• Technical / Infrastructure investment</li> </ul>	Include all technical and technological measures, from project design to construction and installation of materials, equipment, and facilities. Include replacement of electric boilers by biomass boilers. Installation of solar panels. Electric vehicles fleet and charging stations. Bicycle lanes, etc...
	<ul style="list-style-type: none"> <li>• Fiscal / Financial mechanism</li> </ul>	Public-Private-Partnership contract to secure a funding. Sponsoring from the private sector, concessions, energy performance contract, Municipal cap-and-trades, loans, subsidies
	<ul style="list-style-type: none"> <li>• Organizational / Governance</li> </ul>	Procedures for the operation of municipal infrastructure and assets, including utilities, etc... Environmental management system (ISO 14001). Energy management system (ISO 50001) of municipal operations. Maintenance plan for AC systems in public buildings, etc...
	<ul style="list-style-type: none"> <li>• Education / Awareness Raising</li> </ul>	Communication actions to raise awareness for the general public and other target groups. Communication campaigns. Pilot-projects for demonstration purposes. Special events or initiatives such as “walk to work week”. Power-Saving Campaigns, Promotion of water-saving techniques, etc...
	<ul style="list-style-type: none"> <li>• Assessment and Research</li> </ul>	Climate-Change Vulnerability and Adaptation, Arboreal Health Monitorings, Sea Level Rise Adaptation Study, Housing Energy Rehabilitation Survey, Energy audit of the LG’s buildings and facilities, Assessment of the impacts of alternative policies to the community. Monitoring activities such as GHG emission inventories.

	<ul style="list-style-type: none"> <li>• Public Participation / Stakeholder engagement</li> </ul>	Active engagement of citizens and other stakeholders before the final approval of a strategy/policy document. Public hearings and workshops to get the inputs from citizens and/or specific stakeholder groups. Bilateral meetings with associations of professionals or business sectors, as “multiplier” organizations.
<b>4. Boundary:</b> Refer to point 5 Methodological framework to determine the boundary	<ul style="list-style-type: none"> <li>• Community</li> </ul>	Actions benefiting the whole community within the geopolitical boundaries of the municipal administration
	<ul style="list-style-type: none"> <li>• Government</li> </ul>	Actions implemented in municipal operations of the city administration
	<ul style="list-style-type: none"> <li>• Trans-boundary consumption</li> </ul>	Actions that result in reduction of GHG emitted outside the geopolitical boundaries of the municipal administration
	<ul style="list-style-type: none"> <li>• Trans-boundary and city-to-city partnership</li> </ul>	Actions that result in reduction of GHG emissions through supporting activities in other cities and local governments
<b>5. Mitigation sectors:</b> Which emission sectors of the GHG inventory does this action affect? (community)	<ul style="list-style-type: none"> <li>• Residential</li> </ul>	Actions that lead to reduction of energy consumption and GHG emissions by improving heating, cooling and electricity.
	<ul style="list-style-type: none"> <li>• Commercial</li> </ul>	
	<ul style="list-style-type: none"> <li>• Industrial</li> </ul>	Switch from coal to natural gas; Feedstock switch from fossil sources of CO <sub>2</sub> to renewable sources of CO <sub>2</sub> , Hydropower, Windpower, Solar energy, Biomass-fired boiler
	<ul style="list-style-type: none"> <li>• Transport</li> </ul>	Actions that lead to the abatement of GHG emissions by improving transport systems that result in reduction of consumption of fossil fuels
	<ul style="list-style-type: none"> <li>• Industrial processes and product use (IPPU)</li> </ul>	Actions that reduce greenhouse gas emissions occurring from industrial processes, from the use of greenhouse gases in products and from non-energy uses of fossil fuel.
	<ul style="list-style-type: none"> <li>• Agriculture, Forest and Other Land Use (AFOLU)</li> </ul>	Actions that reduce greenhouse gas emissions occurring from the following land-use categories: forest, land, cropland, grassland, wetlands, settlements other land
	<ul style="list-style-type: none"> <li>• Waste</li> </ul>	Actions that lead to reduction of GHG emissions from waste generated by the whole community
	<ul style="list-style-type: none"> <li>• Other</li> </ul>	Actions reducing F-gases from all sources, fugitive emissions, other indirect emissions

<b>6. Mitigation sectors:</b> Which emission sectors of the GHG inventory does this action affect? (government)	<ul style="list-style-type: none"> <li>• Government buildings</li> </ul>	<p>Actions that lead to reduction of energy consumption and GHG emissions by improving heating, cooling and electricity of government buildings. Examples include switch from coal to natural gas, feedstock switch from fossil sources of CO<sub>2</sub> to renewable sources of CO<sub>2</sub>, Hydropower, Windpower, Solar energy, Biomass-fired boiler</p>
	<ul style="list-style-type: none"> <li>• Government facilities</li> </ul>	<p>Actions that lead to reduction of energy consumption and GHG emissions by improving heating, cooling and electricity of government facilities. Examples of actions include switch to more efficient street lighting and traffic signals technologies.</p>
	<ul style="list-style-type: none"> <li>• Transportation</li> </ul>	<p>Actions that lead to reduction of GHG emissions by improving transport systems that result in reduction of consumption of fossil fuels. Example include fuel switch in Municipal fleets.</p>
	<ul style="list-style-type: none"> <li>• Industrial processes and product use (IPPU)</li> </ul>	<p>Actions that reduce greenhouse gas emissions occurring from industrial processes, from the use of greenhouse gases in products and from non-energy uses of fossil fuel.</p>
	<ul style="list-style-type: none"> <li>• Agriculture, Forest and Other Land Use (AFOLU)</li> </ul>	<p>Actions that reduce greenhouse gas emissions occurring from the following land-use categories: forest, land, cropland, grassland, wetlands, settlements other land</p>
	<ul style="list-style-type: none"> <li>• Waste</li> </ul>	<p>Actions that lead to reduction of GHG emissions from waste generated by government activities</p>
	<ul style="list-style-type: none"> <li>• Other</li> </ul>	<p>Actions reducing F-gases from all sources, fugitive emissions, other indirect emissions</p>
<b>7. Adaptation sectors:</b>	<ul style="list-style-type: none"> <li>• Food Security</li> </ul>	<p>Promotion of research on drought, flood and saline tolerant varieties of crops to facilitate adaptation in future. Promoting adaptation to coastal crop agriculture to combat increased salinity.</p>
	<ul style="list-style-type: none"> <li>• Coastal zones/Marine Ecosystems</li> </ul>	<p>Protection of coastal areas against sea level rise, Community Mangrove, Restoration and Sustainable Use of Natural Resources, Monitoring of Coastal Area Erosion</p>

	<ul style="list-style-type: none"> <li>• Early Warning Systems and Disaster Management</li> </ul>	<p>Weather Forecasting System to Serve Farmers and Agriculture, strengthening/enhancing drought and flood early warning systems, Upgrading of meteorological Services, Construction of artificial islands, Strengthening Community Disaster Preparedness and Response Potential.</p>
	<ul style="list-style-type: none"> <li>• Energy</li> </ul>	Promoting adaptation-oriented technologies
	<ul style="list-style-type: none"> <li>• Health</li> </ul>	Climate proofing sanitation in urban areas, Prevention against water-borne diseases and other seasonal pathologies in rural areas, Fight against malaria, Implementation of capacity building to strengthen the health system
	<ul style="list-style-type: none"> <li>• Infrastructure</li> </ul>	Coastal Infrastructure Management Plans for Highly Vulnerable District, Enhancing resilience of urban infrastructure and industries to impacts of climate change, Rehabilitation and/or construction of protective dams and dykes, Water Gates and Water Culverts Construction, Promoting protection measures adapted to the water supply infrastructures of the city. Relocation of local community at risk of floods and landfalls
	<ul style="list-style-type: none"> <li>• Insurance</li> </ul>	Exploring options for insurance to cope with enhanced climatic disasters, Promoting drought/crop insurance program
	<ul style="list-style-type: none"> <li>• Terrestrial Ecosystems</li> </ul>	Landslide Management & Flood Prevention, Promote Community-based Forest Fire Management and Prevention, Promoting urban and suburban forests, Flood mitigation and improvement of agricultural production through the rehabilitation of watersheds, Eradication of Invasive Alien Species
	<ul style="list-style-type: none"> <li>• Tourism</li> </ul>	Strengthening and stabilizing ecotourism based rural livelihoods, Sustainable Tourism Adaptation Project,
	<ul style="list-style-type: none"> <li>• Water Resources</li> </ul>	Providing drinking water to coastal communities to combat enhanced salinity due to sea level rise, Stabilisation of river dynamics of watercourses and torrents, Development and Improvement of Community Irrigation Systems, Construction of reservoirs at household and community levels
<p><b>8. Methods</b> Actions can have several methods of implementation. You</p>	<ul style="list-style-type: none"> <li>• Low Carbon Energy shift</li> </ul>	<p>Actions that lead to reduction of GHG emissions by combusting fossil fuels that are low in carbon emissions like using natural gas instead of coal in heating or electricity production, using natural gas or biofuels instead of oil in transportation, Blending of cement in order to reduce demand for energy</p>

can indicate more than one using the three primary, secondary and tertiary method fields		intensive clinker production.
	• Renewable Energy energy shift	Actions that lead to reduction of GHG emissions by using renewable energy sources and technologies in heating, cooling, and transportation using energy and electricity that is produced from renewable sources of energy, Hydropower, Windpower, Solar energy, Biomass-fired boiler.
	• Energy Efficiency / Management	Actions that lead to reduction of GHG emissions by improving energy efficiency and / or energy management. Conversion of single cycle to combined cycle gas-fired power plant, Installation of a more efficient steam turbine, Using of highly efficient refrigerators or compact fluorescent lamps, Recovery of waste heat from flue gases, Recovery and use of waste gas in a production process
	• Energy storage	Activities aimed at storing energy such as installation of pump-storage hydroelectricity, batteries, fuel cells.
	• Energy and /or resource conservation	Energy and/or resource savings are achieved through technical and/or behavioral change. Behavioral changes include for instance: public engagement, awareness raising activities. Technological changes include: Motion and occupancy sensors, HVAC systems, recycling and waste segregation schemes not aimed at producing energy including composting of greenwaste. Any action that do not fall in the above categories. Do not use this option for actions covering more than one category. In such a case please use what you think is the main method promoted by the action.
	• Land use management and carbon offsets	Creation of carbon sinks such as green spaces or through tree planting, improved forestry management practices and urban planning measures. Also purchase of carbon credits on the market belongs here.
<b>9. Main origin of funds:</b> The primary source or most important driver in the implementation of the action should be selected	• Local	Implementation of the action is mostly financed by the municipal budget
	• Sub National	When the province, state, or federal/national government budget is the main source of financing.
	• Climate Financing (UNFCCC - Kyoto)	Funded by UNFCCC funds or registered as the Clean Development Mechanism, Joint Implementation project under Kyoto Protocol
	• International (ODA)	Official Development Assistance (grants or loans) from developed countries to developing countries are used
	• Public Private	Implementation of the action is financed thanks to a co-financing

	Partnership	mechanism involving the private sector
<b>10. Total budget of the action</b>		Report the total cost of implementation for the reported action.
<b>11. Total cost for the local government</b>		Fill in if the action is co-financed by another public or private partner which results in a lower financial burden for the reporting entity than the total cost of the action reported above.
<b>12. Status</b>	<ul style="list-style-type: none"> <li>• In progress</li> <li>• completed</li> <li>• looking for funding</li> </ul>	In progress include the assessment, the planning and the construction phases of the action. Completed actions are actions that already yield GHG emission reductions. An action looking for funding is an action whose development is contingent to the availability of funds. <b>If an action is in an assessment or planning phase and full funding is not yet secured the action should be reported under this category.</b>
<b>13. Adoption Year of Project</b>		Year the authorities project received approval from the authorities
<b>14. Anticipated Delivery Year</b>		First year the action results in GHG emission reduction. This year should be consistent with the status of the action. If the action was completed in 2013, the delivery year is 2013.
<b>15. Emission reductions in tCO<sub>2</sub>e per year</b>		Quantity of GHG emissions reduced on an annual basis since the date of completion of the action.
<b>16. Have emission reductions been verified?</b>	Yes/No	
<b>17. Verifier Name</b>		The certified verification body or individual that performed the verification process.
<b>18. Energy savings in MWh per year</b>		How much energy is saved thanks to the action in the total energy consumption of the government / community since the year the action was completed?

19. Renewable Energy in MWh per year		How much renewable energy does the action generate? By how many MWh does the action increase the share of renewable energy in the total energy consumption of the government / community?
20. Summary*		Give a 100 word description of the action summarizing in plain English what the action is about. You can repeat the information provided in the reporting form or provide additional information not captured by the form.
21. Web Page Link		If you would like to direct interested person to a projet website
22. Contact Person Name		If you would like to identify the person that can provide additional information to this action
23. Contact Person E-Mail		The email of the person mentioned above
24. Upload File* (max. 1 file(s))		To encourage the reporting of the most meaningful actions and increase the quality of the data, you are required to provide an additional document supporting the existence of the action. This can be a report, a news article, a study, pictures, a legal document, an action plan. <b>Be aware that this document will be made available for download to the public through your city climate report.</b>
25. Co-benefits for local sustainable development (multiple choice)	<ul style="list-style-type: none"> <li>26. Improving urban air quality</li> <li>27. Improving urban livelihoods</li> <li>28. Securing safe and resilient energy supply</li> <li>29. Increasing access to energy</li> <li>30. Increasing local jobs</li> <li>31. Supporting green urban economy</li> <li>32. Promote gender equality and empowering women</li> <li>33. Preserving ecosystems</li> <li>34. Improving public health</li> <li>35. Increasing access to sustainable food</li> <li>36. increasing access to water/sanitation</li> </ul>	



- |  |  |
|--|--|
|  | <ul style="list-style-type: none"><li>37. increasing access to sustainable mobility</li><li>38. increasing access to sustainable housing</li><li>39. Other</li></ul> |
|--|--|

Remember to **SAVE** your entry before leaving the page.

You are then redirected to the action overview page, where you can **EDIT** or **DELETE** your entry.

You can click **ADD NEW** button if you would like to add more action.

## 9. Annexes

### 9.1 cCR - reporting standards emissions sectors matching table

#### Community activities

Type of emissions	cCR Community sectors	IEAP Community sectors	Global Protocol for Community-based GHG emissions (GPC)	IPCC 2006 Guidelines	Covenant of Mayors Emission Baseline Inventory
Stationary Energy	Residential	Residential	Residential buildings	Energy (Fuel combustion activities, Fugitive emissions from fuels, Carbon Dioxide Transport and Storage)	Residential buildings
	Commercial	Commercial	Commercial		Tertiary (non-municipal) buildings, facilities, Equipment and Facilities
	Industrial	Industrial	Industrial energy use		Industries
Mobile Energy	Transportation	Transportation	Mobile units		Public private and , commercial transport
Industrial processes	Industrial processes and product use (IPPU)	Other	Industrial processes and product use (IPPU)	Industrial processes and product use (IPPU)	Not accounted for
Agriculture	Agriculture, Forest and Other Land Use (AFOLU)	Agricultural emissions	Agriculture, Forest and Other Land Use (AFOLU)	Agriculture, Forest and Other Land Use (AFOLU)	Not accounted for
Forestry and Other Land Use		Other			Not accounted for
Waste	Waste	Waste	Solid Waste disposal	Solid Waste disposal	Waste management
			Biological Treatment of Solid Waste	Biological Treatment of Solid Waste	
			Incineration and open burning of Waste	Incineration and open burning of Waste	
			Wastewater Treatment and Discharge	Wastewater Treatment and Discharge	Waste water management
Indirect emissions	Other	Other	Other indirect emissions	Other	Not accounted for

**Government activities**

Type of emissions	cCR Government sectors	IEAP Government operations	Global Protocol for Community-based GHG emissions (GPC)	IPCC 2006 Guidelines	Covenant of Mayors Baseline Emission Inventory
Stationary Energy	Gov. Buildings (subset of Community commercial buildings emissions)	Buildings and facilities	Institutional facilities	Energy (Fuel combustion activities, Fugitive emissions from fuels, Carbon Dioxide Transport and Storage)	Municipal buildings, Equipment and Facilities
	Facilities (subset of community commercial buildings emissions)	Street lighting and traffic signals			Municipal public lighting
		Water and Wastewater treatment, collection and distribution (energy only)			
Mobile Energy	Government transport (subset of community transport emissions)	Government transport	Mobile units		Municipal fleet
Industrial processes	Industrial processes and product use (IPPU) (subset of community IPPU emissions)	Other	Industrial processes and product use (IPPU)	Industrial processes and product use (IPPU)	Not accounted for
Agriculture	Agriculture, Forest and Other Land Use (AFOLU) (subset of community AFOLU emissions)	Agricultural emissions	Agriculture, Forest and Other Land Use (AFOLU)	Agriculture, Forest and Other Land Use (AFOLU)	Not accounted for
Other Land Use		Other			Not accounted for
Waste	Waste (subset of community waste emissions)	Waste	Solid Waste disposal	Solid Waste disposal	Waste management
			Biological Treatment of Solid Waste	Biological Treatment of Solid Waste	
			Incineration and open burning of Waste	Incineration and open burning of Waste	
			Wastewater Treatment and Discharge	Wastewater Treatment and Discharge	Waste water management
Indirect emissions	Other (subset of community other emissions)	Other	Other indirect emissions	Other	Not accounted for

## 9.2 City Report

At any time and in all tabs of the DATA INPUT menu, Reporting Cities are able to generate two types of reports

- carbonn City Climate Report: This is a 2-page summary of your reported information. It is accessible by any other local governments or registered visitors of carbonn. It is generated by clicking on the **GENERATE CITY REPORT** button is located at the bottom of the DATA INPUT menu or at the **CITY SEARCH** menu . An overview of the data compiled in this report is presented any users of the internet at cCR Reporting Cities page as a quantified information. A cCR Scorecard is also made available when the users of the internet clicks on the hyper link on the name of the city as well. Whenever you have made a new entry, you can immediately review your progress on a newly generated city report, which will always display the most up to date information.
- City Excel Report – is a comprehensive compilation of all reported information in an Excel file, including those that are not displayed in the carbonn City Climate Report. This report is unique for your own use and cannot be generated by other users or visitors of carbonn.

**City Climate Report: Mexico City**  
Commitments and Performance



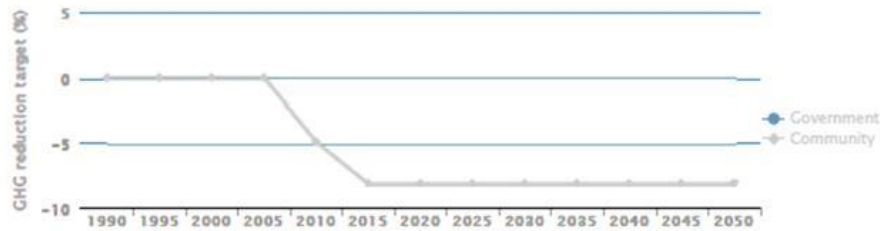
Mexico City  
United Mexican States, Central America  
Population: 8,720,916  
Territory Size: 1,485 km<sup>2</sup>



Commitments

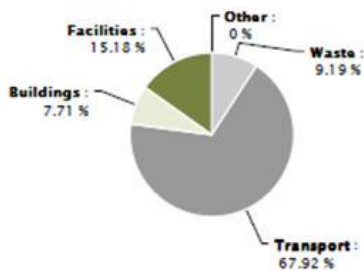
	Government	Community
CO <sub>2</sub> e reduction target:	n/a	8% by 2012 (2007)
CO <sub>2</sub> reduction target:	n/a	n/a
Carbon intensity target:	n/a	n/a
Renewable energy target:	8% by 2012 (2011)	6% by 2012 (2011)
Energy efficiency target:	9% by 2012 (2007)	3% by 2012 (2007)

Government and Community: CO<sub>2</sub>(e) targets

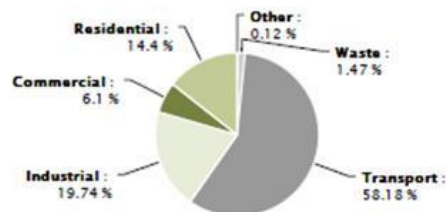


Performance

Government GHG Emissions  
Total ( 2010 ): 4,313,506 tCO<sub>2</sub>e



Community GHG Emissions  
Total ( 2010 ): 27,590,943 tCO<sub>2</sub>e



**City Climate Report: Bruxelles**  
Actions and Action Plans



**Bruxelles**  
Kingdom of Belgium, Western  
Europe  
Population: 1.089.538  
Territory Size: 161 km<sup>2</sup>



Mitigation actions

Action Title	Sector	Field	Funding Source	File	Status
Financial instruments for eco refurbishment	Buildings	Technology Investment	Local		In Progress
Green Certificates	Other	Technology Investment	Local		In Progress
Brussels Sustainable Economy	Other	Technology Investment	(Sub) National		In Progress
Compulsory Energy Audits	Buildings	Legislation	Local		In Progress
New sustainable neighbourhoods	Buildings	Technology Investment	Local		In Progress
New constructions : all passive in 2015	Buildings	Technology Investment	Local		In Progress
Waste Plan	Waste	Capacity Building	Local	<a href="#">download</a>	In Progress
Brussels : green city, nature city	Other	Technology Investment	Local	<a href="#">download</a>	In Progress
Mobility Workplace Plans	Transport	Capacity Building	Local	<a href="#">download</a>	In Progress
The Mobility Plan IRIS 2	Transport	Legislation	Local	<a href="#">download</a>	In Progress
Changing behaviour	Other	Awareness Raising/Education	Local		In Progress
Sustainable neighbourhoods	Other	Capacity Building	Local	<a href="#">download</a>	In Progress
The Employment-Environment Alliance	Buildings	Capacity Building	Local	<a href="#">download</a>	In Progress
Facilitators & Passive House Platform	Buildings	Capacity Building	Local		In Progress
Energy subsidies	Buildings	Awareness Raising/Education	Local	<a href="#">download</a>	In Progress
PLAGE projects	Buildings	Capacity Building	Local	<a href="#">download</a>	In Progress
Public buildings: an exemplary role	Buildings	Technology Investment	Local		In Progress
Exemplary buildings : Stimulating professionals	Buildings	Capacity Building	Local		In Progress
Exemplary buildings : Relaunching innovation	Buildings	Technology Investment	Local	<a href="#">download</a>	In Progress

Adaptation actions

Action plans

Title	Approval Date	Weblink	File
Water Management Plan	2011	<a href="#">www</a>	<a href="#">download</a>
Alliance Emploi Environnement	2010	<a href="#">www</a>	<a href="#">download</a>
Mobility Plan - IRIS 2	2010	<a href="#">www</a>	<a href="#">download</a>
National Renewables Energy Plan	2010	<a href="#">www</a>	<a href="#">download</a>
Waste Plan 2010-2020	2009	<a href="#">www</a>	<a href="#">download</a>
Convenant of Mayors: SEAP	2010	<a href="#">www</a>	<a href="#">download</a>

Document V. Action Plans 10.05.2012

### 9.3 Terms and Conditions

		General		Local Government	
				cCCR	
		General public	Registered users	Registered Cities	Reporting Cities
Accessibility	General Information and overview pages	√	√	√	√
	Climate data input	x	x	√	√
	Tools product sheets	x	√	√	√
	City search & output in list format	x	√	√	√
	City comparison graphs	x	x	√	√
	City reports	x	√	√	√
	Forum	x	x	√	√
Eligibility	Use of Basic cCCR logo	x	x	√	x
	Use of Basic Premium cCCR logo	x	x	x	√
	Knowledge development	x	x	√	√
	Capacity Building	x	x	√	√
	Index development	x	x	x	√
	Certificate of participation	x	x	√	√
Specific Terms and conditions	Registered User	x	√	x	x
	cCCR Registered Cities	x	x	√	x
	cCCR Reporting Cities	x	x	x	√

#### Registered User

1. The term “carbonn” defines the Bonn Center for Local Climate Action and Reporting – carbonn, managed by ICLEI e.V.
2. The term “User” defines any individual or organization that wishes to access publicly available database of carbonn.
3. Any User shall be registered by providing all information requested.
4. User’s access to the system is specific to the person applied and shall not be shared by third parties.
5. Downloaded information shall only be used for information purposes and cannot be the basis of any legal or commercial interest. Any reference to information shall be referenced to carbonn.
6. Carbonn has the right to limit or restrict to the accessibility of database by the User at any time that is deemed necessary.
7. Carbonn has the right to revise or update this Terms and Conditions at any time that is deemed necessary, without prior consent to the User.

#### cCR Registered City

1. The term carbonn defines the Bonn Center for Local Climate Action and Reporting – carbonn, managed by ICLEI e.V.
2. The term “the Mexico City Pact” defines the Global Cities Covenant on Climate that was adopted at the World Mayors Summit on Climate in Mexico City on 21 November 2010.
3. The term “cCR” defines the carbonn Climate Registry as defined in Art.4 of the Mexico City Pact.
4. The term “cCR Registered City” defines the local government that has a user access to the carbonn® Cities Climate Registry.
5. The term “cCR Participant Access Password” defines the information provided to the local government representative to upload data in carbonn.
6. Any cCR Registered City shall be registered by providing all information requested.
7. Only one cCR Participant Access Password is defined for each local government.



8. The cCR Participant Access Password can be delivered to a staff or elected official of a local government, upon confirmation from the Mayor's Office.
9. In case cCR Participant Access Password is requested for an individual other than the staff or elected official, a written confirmation from the Mayor's office has to be provided.
10. carbonn has the right to restrict access of the cCR Registered City or the use of the cCR Participant Access Password if the information provided is found to be incorrect or the Terms and Conditions are violated.
11. The personal information provided by the cCR Registered City shall not be shared by any other third parties.
12. carbonn cannot be held liable due to consequences of the inaccuracy of the data and information provided by the cCR Registered City.
13. The cCR Registered City might participate at the knowledge development and capacity building events of carbonn..
14. carbonn has the right to limit or restrict the rights of the cCR Registered City at any time that is deemed necessary, provided by a written consent to the cCR Registered City.
15. The cCR Registered City has the right to claim to be removed from the carbonn, which is in effect within 1 month after the receipt of the written submission by carbonn. No information will be made available about the cCR Registered City in any carbonn material after this date.
16. The cCR Registered City has the right to change the delegation of the carbonn Participant Access Password at any time that is deemed necessary. The change becomes effective after the relevant procedures are applied by carbonn. The same Terms and Conditions are applicable for the new delegated individual.
17. carbonn has the right to revise or update this Terms and Conditions at any time that is deemed necessary, provided by a written consent to the cCR Registered City. In case these revised Terms and Conditions are not found suitable, carbonn participant has the right to remove from carbonn, pursuant to the procedures stated above.

#### **cCR Reporting City**

1. The term carbonn defines the Bonn Center for Local Climate Action and Reporting – carbonn, managed by ICLEI e.V.
2. The term “the Mexico City Pact” defines the Global Cities Covenant on Climate that was adopted at the World Mayors Summit on Climate in Mexico City on 21 November 2010.
3. The term “cCR” defines the carbonn Climate Registry as defined in Art.4 of the Mexico City Pact.
4. The term “cCR Reporting City” defines the local government that has a user access to the carbonn@ Cities Climate Registry and has uploaded data in at least one of the reporting sections of carbonn.
5. General Terms and Conditions for cCR Reporting City applies to cCR Reporting City as well.
6. The accuracy of uploaded data is under the responsibility of the cCR Registered City. carbonn has the right to ask for additional documentation or evidence to support the accuracy of information. carbonn reserves the right to limit the use of information if the cCR



Registered City fails to provide the additional information or evidence or if it is found inappropriate by carbonn.

7. carbonn cannot be held liable due to consequences of the inaccuracy of the data and information provided by the cCR Reporting City.
  8. carbonn has the right to use the data provided by the cCR Registered City to compile, produce or disseminate aggregated reports.
  9. carbonn has the right to compile, produce or disseminate relevant reports of the carbonn Participant,
10. carbonn and partners involved in the governance have access to the raw data of the cCR Registered City for information purposes.
  11. Integration of raw data of a cCR Reporting City for any fee-based services developed by carbonn to any third Party requires a prior communication of the written approval of the concerned cCR Reporting City to carbonn.

that is available to cCR Registered City users or general public, based on the data provided by the carbonn Participant.

