



Climate Alliance



## Climate Alliance and the Covenant of Mayors initiative:

Providing technical support to local authorities on sustainable energy planning

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## 1. GETTING TO KNOW CLIMATE ALLIANCE

Climate Alliance: A strong community for global climate protection

“Climate Alliance of European Cities with Indigenous Rainforest Peoples” is the European network of local authorities committed to the protection of the world's climate. The member cities and municipalities aim to reduce greenhouse gas emissions at their source. Their allies in this endeavour are the Indigenous Peoples of the rainforests in the Amazon Basin.

Climate Alliance members

Founded in 1990, more than 1.600 cities, municipalities and districts in 18 European countries have since joined Climate Alliance. Regional governments, NGOs and other organisations are able to join as associated members.

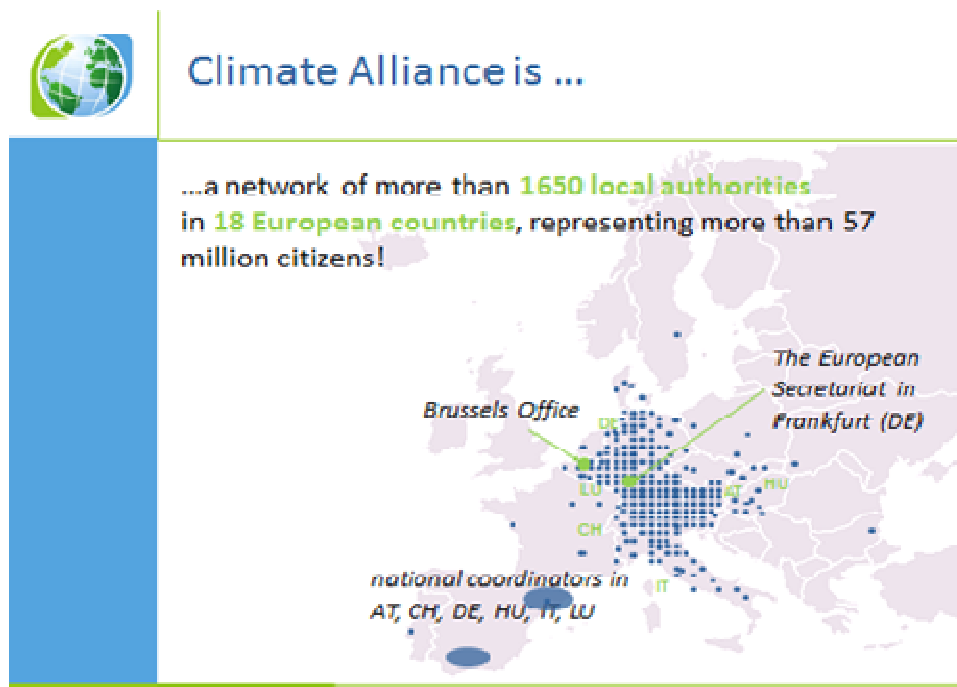


Figure 1 – Members of the Climate Alliance.

The “Climate Alliance of European Cities with Indigenous Rainforest Peoples” has an internationally composed board and its activities are coordinated by the European Secretariat. There are as well additional agencies: an office in Brussels and several national and regional offices.

### 1.1. Our objectives

The member cities and municipalities of the Climate Alliance are committed to the protection of the global climate. They have set themselves the following goals:

- Reducing their greenhouse gas emissions.

- Supporting indigenous rainforest peoples.
- Conserving the tropical rain forests and their biological diversity.

In 2006, Climate Alliance's General Assembly enacted a new CO<sub>2</sub> reduction target:

"The members of the Climate Alliance commit themselves to reducing their greenhouse gas emissions continuously. The aim is to cut CO<sub>2</sub> emissions by 10 % every 5 years. The important milestone of halving per capita emissions (baseline year 1990) shall be achieved at the latest in 2030.

In the long-term, Climate Alliance members aim at a sustainable level of 2,5 tons CO<sub>2</sub> equivalent emissions per capita and year by energy saving, energy efficiency and the use of renewable energy sources.

Reaching these goals, however, requires concerted efforts by all decision-making levels (EU, national states, regional/province governments, municipalities), as they cannot be achieved by measures taken by municipalities alone. In order to document their efforts undertaken, Climate Alliance members will draw up a report regularly."

## 1.2. What we do

Climate Alliance's European Secretariat, its Brussels Office and national coordination offices support the member cities and municipalities in their endeavour to protect the global climate.

We provide advice and services such as:

- Promoting the exchange of experience by conferences, workshops and publications,
- Showcasing the members' achievements (e.g. at the European Climate Star Award and in various databases),
- Providing recommendations, aids and tools for local climate change policies (e.g. local climate plans, individual themes and measures, CO<sub>2</sub> monitoring, etc.),
- Lobbying for improved framework conditions for local climate change policies on international, European and national level,
- Developing and coordinating European projects and campaigns.

Together with our indigenous partner organisations, we

- Organise campaigns and political initiatives on the conservation of the tropical rainforests and the defence of indigenous rights
- Raise awareness on the situation and positions of the indigenous peoples in Amazonia
- Inform and educate about the impacts of our action on the rainforests and the indigenous peoples
- Collaborate in practical partnership projects.

### 1.2.1. Methods and tools

One of the most important tasks of Climate Alliance is the elaboration of methods and tools for the member cities and municipalities, which support the elaboration of climate action plans, the implementation of individual measures and the monitoring of achievements.

#### 1.2.1.1. CO<sub>2</sub> monitoring methodology

Cities and towns committed to climate protection and aiming to reduce greenhouse gas emissions need regular emission inventories to verify and authenticate success in their local climate change and energy policy, and it is for this reason that the “CO<sub>2</sub> Monitoring at Climate Alliance” working group works since 1993 about the development of the a Climate Alliance methodology for CO<sub>2</sub> monitoring as well as the development of data procurement rules and processing procedures.

The monitoring tool implemented by Climate Alliance is currently used by around 850 cities, municipalities and districts in Germany in addition to 70 municipalities and regions in Italy, 10 municipalities in the Ukraine and 6 in Luxembourg. Several German federal states offer their municipalities support in the preparation of municipal CO<sub>2</sub> inventories with the help of the Climate Alliance methodology. In Hesse, Climate Alliance is a partner in the “100 Kommunen für den Klimaschutz” (“100 municipalities for climate protection”) project within the scope of Hesse’s sustainability strategy, offering training, meetings for experience exchanges, and a CO<sub>2</sub> monitoring hotline. The Province of Rome, in collaboration with Climate Alliance, calculated its energy and CO<sub>2</sub> inventory for the years 1990-2007 and presented the results during COP15 in Copenhagen

A big milestone was the official recognition by the European Commission as adequate tool for the elaboration of Sustainable Energy Actions Plans in the framework of the Covenant of Mayors.

At the present works the Climate Alliance, in charge of the Environmental Ministries of Austria and Germany, in the development of a CO<sub>2</sub>-Monitoring methodology available for free for all the municipals in both countries (2,357 and 11,253 respectively), this new CO<sub>2</sub>-Monitoring tool will be able at 2014.

The Climate Alliance has developed a set of CO<sub>2</sub>-Monitoring rules especially designed for local authorities, in this methodological document are explain important methodological issues, like CO<sub>2</sub>-inventory boundaries, the calculation of the transport that implicate always a lot of difficulties or the local energy production

#### **What are the benefits for the local authority using this methodology?**

This methodology provides a full calculation of the local energy consumption and CO<sub>2</sub> emissions per energy carrier and sector, what makes possible the monitoring of the overall CO<sub>2</sub> reduction in a municipality during a certain period of time or the progress within a specific sector. The Climate Alliance tool provides

an inventory that can be used retroactively until 1990 considering the following sectors: public facilities, households, agriculture, industry, services and private, public and freight transport.

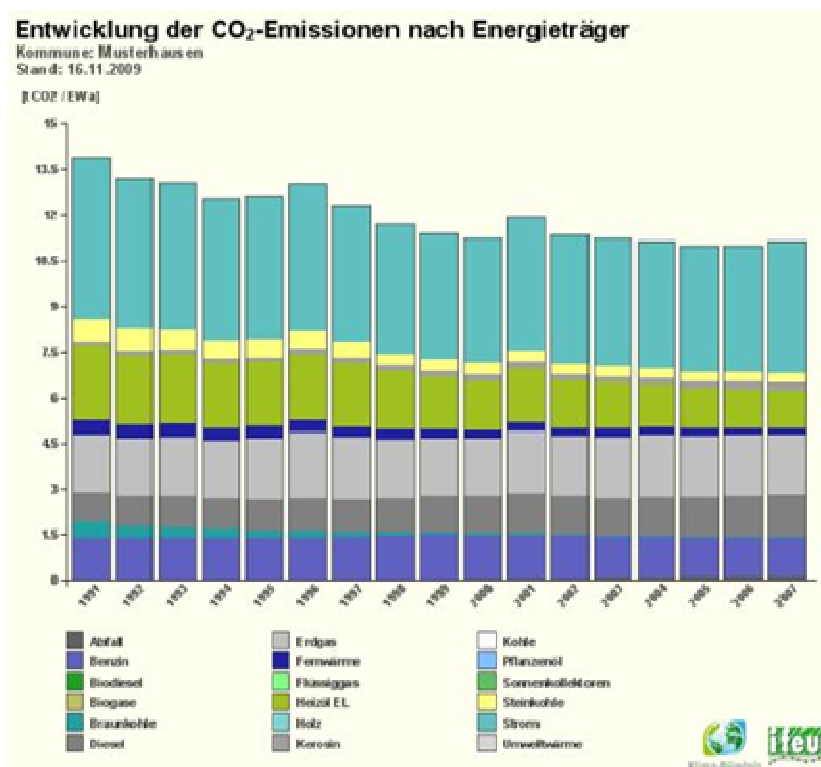
As an internet based tool, no software installations are needed. The country specific and comprehensive data for energy consumption, CO<sub>2</sub>-Emissions and further environmental factors are updated each year, making the tool easy to handle without oneself having to care about current energy data.

The methodology is standardized, making possible the monitoring of CO<sub>2</sub>-Emissions for a long period of time, so as the comparison of the local emissions among different municipalities.

A monitoring of different CO<sub>2</sub> reduction targets, like Climate Alliance, the Covenant of Mayors target or other individual reduction goals are possible to calculate.

Example of graph

The following graph displays a municipal CO<sub>2</sub> balance by energy carriers from 1990 to 2010.



### 1.2.1.2. [Climate Cities Benchmark](#)



Local authorities pursuing an active climate protection policy often care about regular evaluation and improvement of their climate protection activities. Against this background Climate Alliance together with IFEU Institute in the framework of a research project of the German Federal Agency for Environment

developed the Climate Cities Benchmark. This tool is at present only available in Germany.

The internet-based monitoring tool enhances mutual learning of local authorities in sustainable energy policies and climate action, and allows stable conclusions referring to the state and the effects of local endeavours in climate protection. The results of the benchmarking can be incorporated in local climate action plans with indications on the starting position with the specific strengths and weaknesses in comparison to the national mean value and the mean and best value of the "community", i.e. all cities participating in a certain size category. Due to the link to a best practice database, the benchmark can not only be used as a visual output of its cities climate actions, but also as a working tool for municipality employees.

Actually, almost 250 cities in Germany are using the benchmark-tool. Climate Alliance wants to develop the tool further so that counties can participate in the tool.

### 1.2.1.1. [Climate Cities Benchmark. CO2 emission display](#)

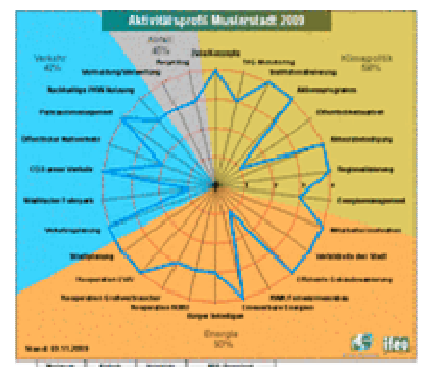
The Climate Cities Benchmark consists of four elements

#### 1. City fact sheets

A brief overview of city characteristics defines the cities' capacities and potentials for activities. The evaluation of the city's profiles in terms of achievements in climate protection is carried out taking into consideration these local circumstances. One important input is the size of the city because the comparison is done within 3 different size categories.

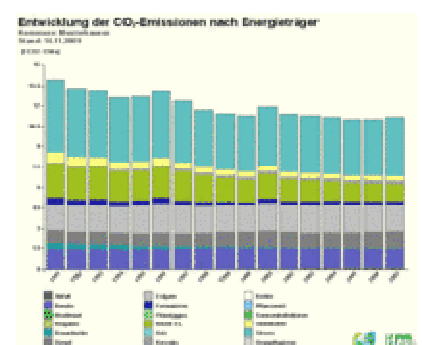
#### 2. Activity profiles

Activity profiles are used to show the state of climate protection activities within the city. The matrix of activities includes 26 action fields in the following categories: climate policy, energy, transport and waste. Each activity has been divided into four ambition levels from beginner to leader. The activity profile is linked to a database with best practices, so every user gets specific examples how to improve in any action field.



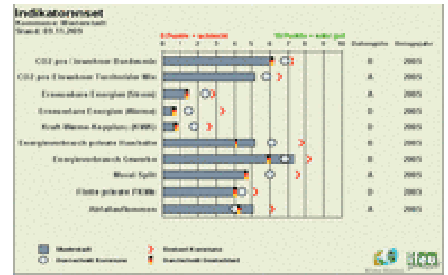
#### 3. CO2 emission display

The historic development of city-wide emissions is a major indicator concerning climate issues. The display allows automatic import from the Climate Alliance's or inclusion from other CO2 emission inventory tools. These figures are important for the calculation of indicators.



#### 4. Set of indicators

A set of 17 indicators completes the benchmarking system, gathering facts on the climate impact of the city. It reveals the fields in which the city has achieved significant progress and which actions should be enforced. The indicators are divided into two main categories: 10 indicators for the whole city and 7 indicators for municipal buildings.



#### 1.2.1.1. Capacity building: Local Climate Protection Ukraine

A secure energy supply and energy efficiency are the greatest challenges for the Ukraine. However, the municipalities are aware that in most cases, they lack the necessary specialist expertise and financial means. Activities already undertaken within the scope of the project include adaptation and translation of several Climate Alliance tools for use in the Ukraine in addition to training sessions and internships for Ukrainian energy managers within German local authorities. In 2010, a climate protection conference took place in Lviv, and various workshops were held on the Ukrainian version of the Climate Alliance methodology for CO2-Monitoring and to develop ten local energy action plans. The project was funded by the German Federal Environment Ministry's international climate protection initiative. At the present, an implementation of the Benchmarking for Ukrainian municipalities is being planned.

The Climate Alliance assists the GIZ-Partner municipalities for the draft of their SEAP and organizes workshops with different key points to help them to design a SEAP but also to put the commitments into practice.



## 2. THE COVENANT OF MAYORS INITIATIVE

### 2.1. The start of the Covenant

The Covenant of Mayors was first mentioned in the EU Action Plan for Energy Efficiency: 'A "Covenant of Mayors" will be created by the Commission in 2007 bringing together in a permanent network the mayors of 20-30 of Europe's largest and most pioneering cities. The aim is to exchange and apply best practices thereby improving energy efficiency significantly in the urban environment, where local policy decisions and initiatives are important, including transport' (EC, 2006).

This initial approach focused on a group of pilot large cities has rapidly evolved into a new approach, open to any European city unilaterally committed to achieve quantitative objectives through the effective implementation of actions. If this was received positively by cities, the Covenant of Mayors would be endorsed by the EU, considered as mainstream policy issue and led by local authorities themselves. For this, it was agreed that the initiative would only be launched if a minimum of 25 cities would express interest to join. By December 2007, 96 cities expressed interest to join. As a result, the Covenant of Mayors was launched in January 2008 (Ballesteros Torres & Doubrava, 2010).

Local authorities willing to join the Covenant of Mayors need a decision by the City Council or equivalent decision-making body. Signatories formal commit to meet and go beyond the EU target of **20% CO<sub>2</sub> emissions reduction by 2020** through the implementation of a **Sustainable Energy Action Plan**, addressing energy conservation, energy efficiency and the use of renewable energy.

### 2.2. A growing community committed to local sustainable energy

One year after the launch of the Covenant of Mayors in 2008, the initiative has experienced an unprecedented growth (see Figure 2). By **May 2012, 3,956 cities** have signed the Covenant and this number is expected to continue increasing. Current signatory cities are dispersed in **46 countries** and represent **163 million citizens**. Being an EU initiative the initial target of the initiative were cities from EU countries, but the initiative has expanded far beyond the EU borders due to the interest also shown by cities outside EU. In Figure 3 it is possible to visualize the geographical distribution of signatory cities in Europe.

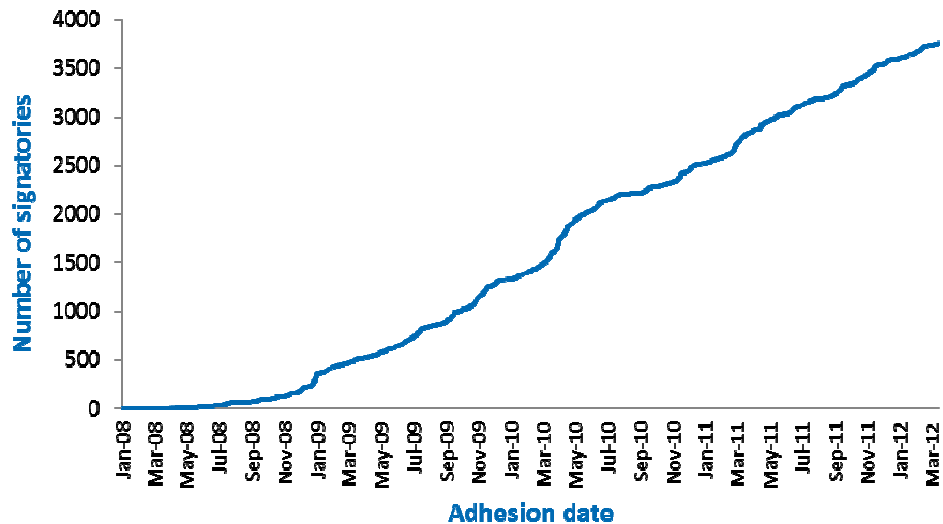


Figure 2 – Evolution of the number of signatories joining the Covenant of Mayors.



Figure 3 – Map of Covenant Signatories.

The evidence that cities are taking their commitments seriously is the growing number of SEAPs submitted to the Covenant of Mayors Office (see Figure 4). By **May 2012**, more than **1 360 SEAPs** were submitted, and this number is expected to continue growing exponentially as observed during the past year. Facing several barriers, such as the collection of data which usually is not readily available at the local level, the lack of staff and financial capacities and/or political instability, cities are making a remarkable effort with the elaboration of their action plans.

According to an analysis of 1 000 submitted SEAPs, signatory cities are responsible **today** for about **6 tonnes CO<sub>2</sub> eq./capita**. Together they commit to reduce **128, 5 million tonnes CO<sub>2</sub> eq.**, representing more than the total emissions of Belgium in 2009 (Eurostat, 2012). This represents an overall reduction of **30%** by 2020 which highlights the ambitious level of cities in going beyond the EU CO<sub>2</sub> reduction target.

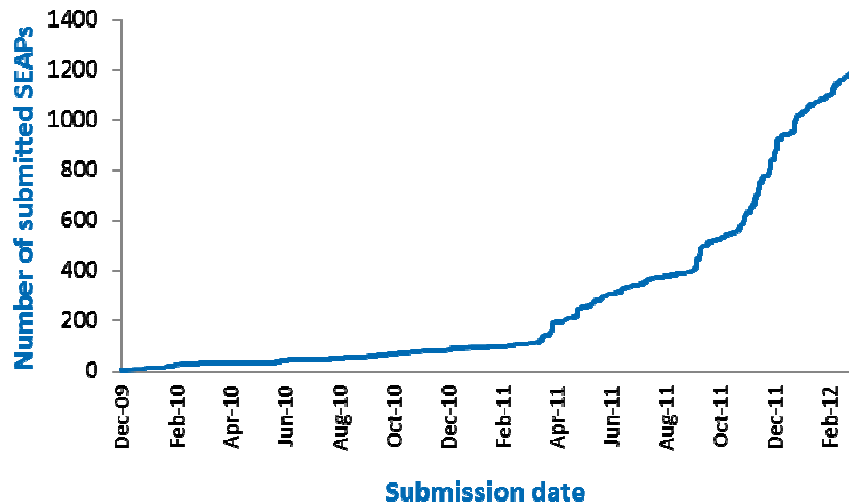


Figure 4 – Evolution of the number of Sustainable Energy Action Plans submitted.

But cities are not the only actors in the Covenant of Mayors. Cities need support in order to face technical and financial difficulties. For this, the Covenant of Mayors recognizes the importance of entities such as provinces, regions, metropolitan areas, national bodies, networks of cities and regions and other institutional structures acting as **Supporting Structures** to the signatory cities. Indeed, the Covenant of Mayors owes a great deal of the soaring number of signatories and SEAPs to the active participation of the supporting structures that put their resources and know-how at the service of signatories. Provincial and regional authorities categorised as **'Territorial Coordinators'**, together with national energy agencies and ministries acting as **'National Coordinators'** have established a close cooperation with signatory cities for the development and implementation of their SEAPs. Also, networks of local and regional authorities categorised as **'Supporters'** have been providing assistance to their members in the administrative and technical processes and organising experience-sharing activities. The participation of Coordinators and Supporters has been rising significantly and by **May 2012, 170 Coordinators and Supporters** have joined the Covenant (see Figure 5).

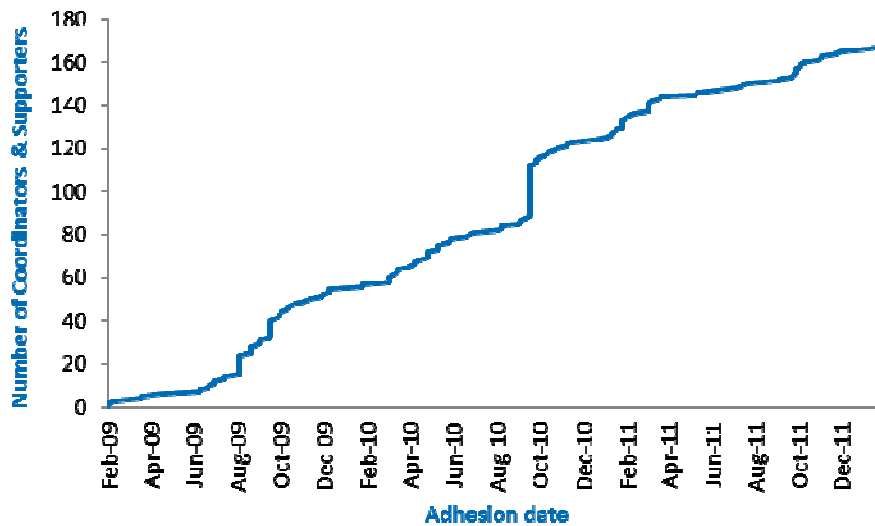


Figure 5 – Evolution of the number of Coordinators & Supporters joining the Covenant of Mayors.

### 2.3. Overview of the Covenant process

Cities engaging in the Covenant of Mayors, commit to a series of steps (see Figure 6):

- **Step 1 – Signature of the Covenant of Mayors:** The Covenant commitments need a formal decision by the City Council or equivalent decision-making body to ensure sufficient empowerment and support at political level.
- **Step 2 – Development of the Sustainable Energy Action Plan (SEAP):** The SEAP is the outcome of the energy planning stage in which it is strongly recommended to engage the stakeholders and citizens. The SEAP should be submitted one year after official adhesion and should be approved by the City Council or equivalent decision-making body. It should include a Baseline Emission Inventory (BEI), a vision, a clear CO<sub>2</sub> emissions reduction target, and concrete actions to be implemented.
- **Step 3 – Monitoring and reporting:** This phase aims at monitoring the status of implementation of the actions defined in the SEAP as well as changes in energy consumption and CO<sub>2</sub> emissions. The main objective is to verify if the municipality is on the right track to reach the 2020 target. Every two years after SEAP submission, signatories should report on their SEAP implementation.

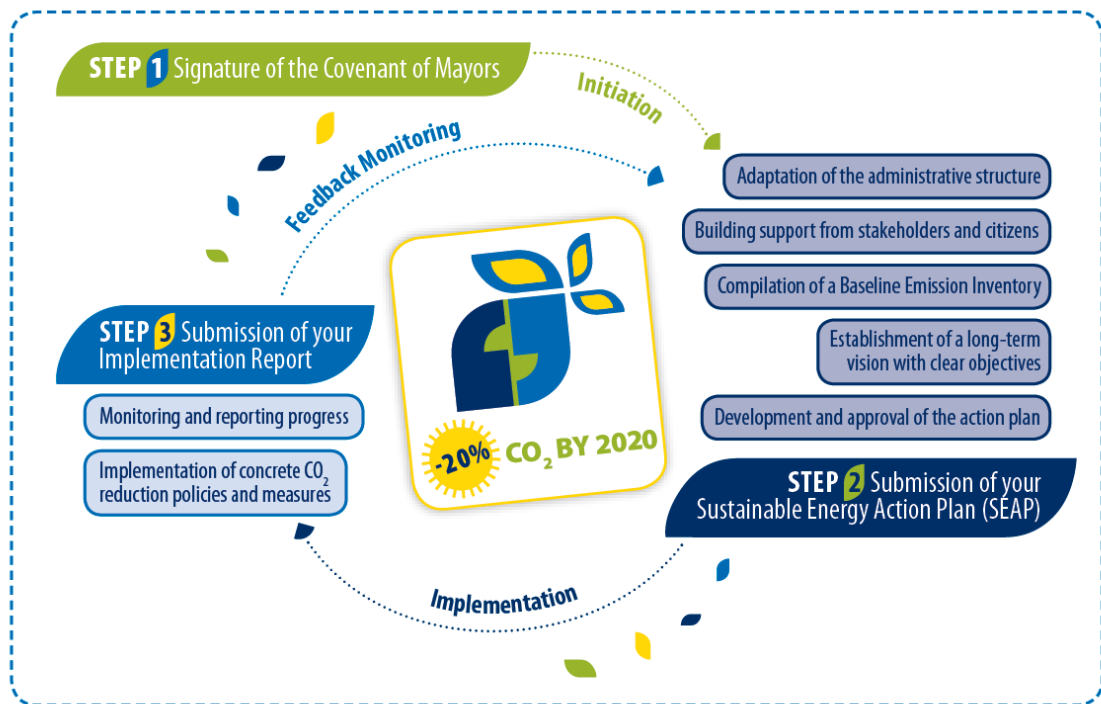


Figure 6 – The Covenant of Mayors process.

#### 2.4. Covenant methodological framework ‘snapshot’

The Covenant of Mayors provides a methodological framework on sustainable energy planning. Although Covenant Signatories should adopt the major guidelines outlined in the methodological framework, there is not a standard model, method or tool for the development of action plans.

‘The approach to mitigate climate change should be **holistic, integrated, long-term** and most of all, based on **citizen participation**’ (Ballesteros Torres & Doubrava, 2010). The sustainable energy planning methodology endorsed by the Covenant of Mayors relies on the ‘umbrella’ concepts mentioned above.

When describing the present situation, local authorities should address **all the different consumers in their territory** (see Figure 7). Sectors such as the residential, tertiary (or services), municipal (buildings and facilities) and transport are considered to be the key demand-side sectors in the Covenant of Mayors initiative, where local authorities can implement actions within their fields of competence. The description of the present situation should be comprehensive by addressing the whole energy system: **demand and supply sides**. Energy consumption is satisfied by several energy carriers (e.g. electricity, heat, diesel, solar radiation, etc.) and associated emissions are determined by applying an **emission factor**. While some energy carriers such as diesel or gasoline for transport produce direct emissions in the local authority’s territory, there are other energy carriers that are consumed within the territory but are produced

elsewhere. For instance, in the case of grid-supplied electricity, emissions need to be addressed based on a consumption approach.

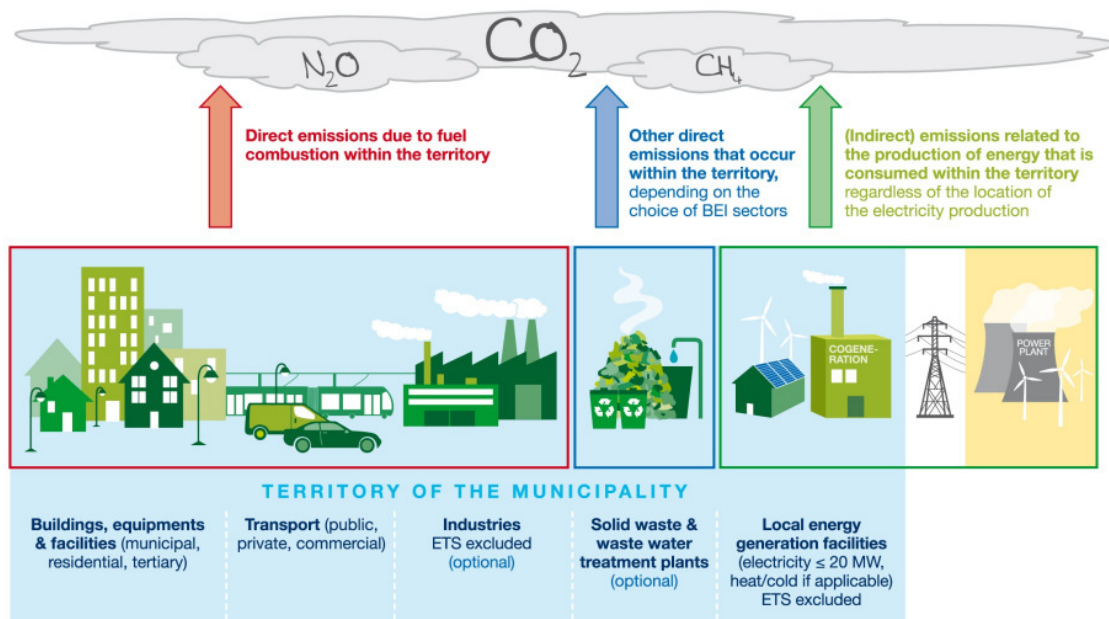


Figure 7 – Scope of an emission inventory, including emission sources and boundaries.

After having a comprehensive view of the current situation, local authorities should define, quantify expected impacts and prioritize **actions** that once implemented, will allow reaching the pre-defined Covenant of Mayors target of at least 20%  $CO_2$  emissions reduction by 2020. When defining actions, the integrated approach should be kept in mind. Actions should target the key demand-side sectors, but also the supply side by promoting the use of local renewable energy resources to match future local energy demand.

## 2.5. The Covenant of Mayors Office

### 2.5.1. Who we are

The Covenant of Mayors Office (CoMO) was established in January 2009 and is funded by the European Commission. It is formed by a consortium of local and regional authorities' networks: Energy Cities, Climate Alliance, Council of European Municipalities and Regions (CEMR), Eurocities and Fedarene. CoMO is responsible for the daily management of the initiative. It provides signatories with administrative support and technical guidance, facilitates networking between Covenant stakeholders and ensures the promotion of their activities.

### **2.5.2. What we do – a focus on the role of Climate Alliance**

As a leader of the **Helpdesk** and **Monitoring** work, Climate Alliance works in close cooperation with the Joint Research Centre of the European Commission to equip signatories with clear technical guidelines and templates in order to assist them in the delivery of their Covenant commitments.

The technical experience of Climate Alliance on the fields of local sustainable energy planning and local emission inventories provided significant inputs to design of the overall methodological framework of the Covenant of Mayors initiative. As a bottom-up initiative, the methodology was consulted with experienced municipalities. New methodological developments in the Covenant, such as the current preparation of the monitoring template and guidelines, are made in close collaboration with a group of practitioners (i.e. advanced municipalities) in order to collect their feedback. Climate Alliance also liaises with local and national experts for the design of methodological materials.

The Covenant Technical Helpdesk deals with thousands of scientific / technical questions from signatories – mostly related to emissions inventories and action plans. The Covenant Administrative Helpdesk deals daily with inquiries concerning adhesion procedures, SEAP submission procedures, access to the Covenant website restricted area, and delay requests for SEAP submission.

### **2.6. Climate Alliance acting as ‘Covenant Supporter’**

Climate Alliance has committed to support its members and maximise the impact of the initiative. As an official ‘Covenant Supporter’ since October 2009, we organise promotional activities, develop tailored supporting tools & methods and offer experience-sharing platforms. Reinforcing the assistance provided and consolidating the results on the ground are some of our key commitments.

Climate Alliance has developed a comprehensive methodology to support its members in implementing local energy and climate policies. The methodology includes tools on how to elaborate a GHG emissions inventory, or how to set up an action plan and implement it.

## 2.7. Covenant on the ground



### **Birmingham (UK) | Retrofit programme for residential buildings**

Estimated CO<sub>2</sub> reduction: **60% by 2026**  
Estimated investment: **£1-2b**  
Houses to be retrofitted: **200 000**  
(20 year programme)



### **Worms (DE) | Solar energy plant at hospital's car parking**

Renewable energy produced: **620 000 kWh/year**  
(equivalent of a supply of 160 households)



### **Cascais (PT) | Energy audits in buildings: 'Wattsbusters'**

CO<sub>2</sub> reduction: **27.68 t CO<sub>2</sub> eq./year**  
Energy saving: **75 000 kWh/year**  
Financial savings: **99.5 €/household/year**  
Investment: **55 000€**



### **Città di Castello (IT) | Cyclepath for home-workplace travels**

Estimated CO<sub>2</sub> reduction: **108 t CO<sub>2</sub>/year**  
Estimated energy saving: **450.1 MWh/year**  
Investment: **200 000€**



### **Sabadell (ES) | Smart-metering in households**

Estimated CO<sub>2</sub> reduction: **144.6 kg CO<sub>2</sub>/year/household**  
Estimated energy saving: **134 kWh/year/person**  
Investment: **34 000€**

Figure 8 – Examples of actions from Covenant Signatories.



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