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# “Covenant of Mayors Perspectives”

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**PROMOTING SUSTAINABLE ENERGY**  
Data quality to support local action

**Turin, 19 November 2015**





## Outline

- 1. The role of the JRC in the Covenant of Mayors (CoM)**
- 2. The CoM and the Sustainable Energy Action Plan process**
- 3. Assessing the starting point: the BEI**
- 4. The planning phase**
- 5. The monitoring phase**
- 6. Future developments and conclusions**



# 1. The role of the JRC in the Covenant of Mayors (CoM)



## Scientific-technical support to the development, implementation and monitoring of the CoM

- **Research** on methodologies and tools for the development of a SEAP
- Development of the **guidebook** “How to develop a SEAP”
- Continuous improvement of **data collection** process
- **Evaluation** of submitted SEAPs, with **feedback** to Covenant cities
- Development of **monitoring template** & instructions for signatories
- Overall assessment of the initiative and publication of **reports**

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## **2. The CoM and the Sustainable Energy Action Plan process**

# Why?



- **European cities: home to 72% of Europe's population**
- **Urban areas represent 70% of primary energy demand of the EU**
- **Vulnerable areas to the impacts of climate change**
- **Cities and Regions: a huge potential for a sustainable energy use, with a positive impact on local economies**

# What?



**Voluntary initiative launched by DG ENERGY in 2008**

**Mayors commit to:**

**at least 20% CO<sub>2</sub> reduction  
in their respective territories by 2020**

- Define a Baseline Emission Inventory (BEI)
- Prepare a Sustainable Energy Action Plan (SEAP)
- Implement their SEAP and report periodically on progress

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# How?



## STEP 1 Signature of the Covenant of Mayors

Initiation

Feedback Monitoring

## STEP 3 Submission of your Implementation Report

Monitoring and reporting progress

Implementation of concrete CO<sub>2</sub> reduction policies and measures



- Adaptation of the administrative structure
- Building support from stakeholders and citizens
- Compilation of a Baseline Emission Inventory
- Establishment of a long-term vision with clear objectives
- Development and approval of the action plan

## STEP 2 Submission of your Sustainable Energy Action Plan (SEAP)

Implementation



# The Covenant of Mayors: An unprecedented success...

- 56 COUNTRIES
- 6 600 signatories
- 211 million citizens

**Covenant EU**  
28 Member States

**Covenant East**  
Armenia,  
Azerbaijan,  
Belarus, Georgia,  
Kazakhstan,  
Kyrgyzstan,  
Moldova,  
Tajikistan,  
Turkmenistan,  
Ukraine and  
Uzbekistan.

**Covenant South**  
Algeria, Egypt, Israel, Jordan, Lebanon, Libya,  
Morocco, Palestine, Syria, Tunisia



# 3. Assessing the starting point: the BEI

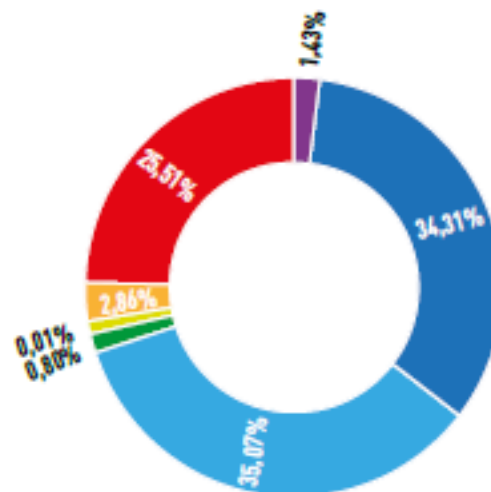
# Baseline emission inventory (BEI)



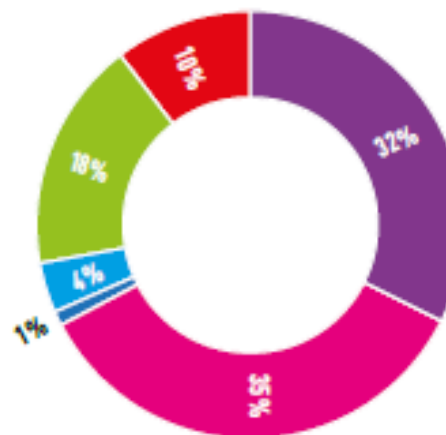
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## A prerequisite to SEAP elaboration:

the BEI quantifies the amount of CO<sub>2</sub> emitted due to energy consumption in the municipality's territory, and helps to select the appropriate actions



- EDIFICI, ATTREZZATURE/IMPIANTI COMUNALI
- EDIFICI, ATTREZZATURE/IMPIANTI TERZIARI (NON COMUNALI)
- EDIFICI RESIDENZIALI
- ILLUMINAZIONE PUBBLICA COMUNALE
- PARCO AUTO COMUNALE
- TRASPORTI PUBBLICI
- TRASPORTI PRIVATI E COMMERCIALI



- ELETTRICITÀ
- GAS NATURALE
- GAS LIQUIDO
- OLIO COMBUSTIBILE
- DIESEL
- BENZINA

### Example: Venice

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# Guiding principles of the CoM approach



- **Scientific soundness** → knowledge of starting point (BEI)
- **Territorial approach**
- **Focus on FINAL energy consumption:**
  - In Buildings, equipment/facilities (and industries):
    - Municipal sector (exemplary role of the local authority)
    - Residential sector
    - Tertiary sector
  - Transport



## Actions on Energy Efficiency and Renewable Energies

|   |   |
|---|---|
| <b>Other not energy-related emission sources (e.g. waste, wastewater)</b> | <b>Not mandatory</b>                              |
| <b>Local electricity generation</b>                                       | <b>Indirectly considered, if included in SEAP</b> |

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# Some considerations on BEIs



## **BUILDINGS:**

Energy consumption data are generally **easier to find** (but differences across countries)

## **TRANSPORT:**

Data are **more difficult** to gather. Methodologies to obtain data depend on cities' size.

## **OTHER SECTORS** (not energy-related):

No guidance from the CoM (not a priority).

Data type can be very diverse (e.g. direct emissions vs. indirect emissions).

## **LOCAL ENERGY PRODUCTION:**

Data may be hard to find when plants are privately operated



## 4. The planning phase



## Measures in the field of EE and RES

The choice of sectors to tackle and of specific measures to implement is **entirely left to the responsibility** of the Signatory, depending on:

- **political mandate** of the Mayor
- **national framework** (regulations, grants, incentives, etc.)
- **size of the local authority** (human & financial resources, expertise, etc.)

## But also...



### Strategic urban planning:

- **The SEAP can help to prevent rapid and uncontrolled city growth (e.g. mixed land use, encouraging not motorized mobility)**

***Ex. Stockholm: efficient social planning, anticipating the increased demand for housing and transportation***

### Working with citizens and stakeholders:

- **Coordination with citizens and other actors,**
- **Consensus-building approaches,**
- **Reduced duplication of efforts.**

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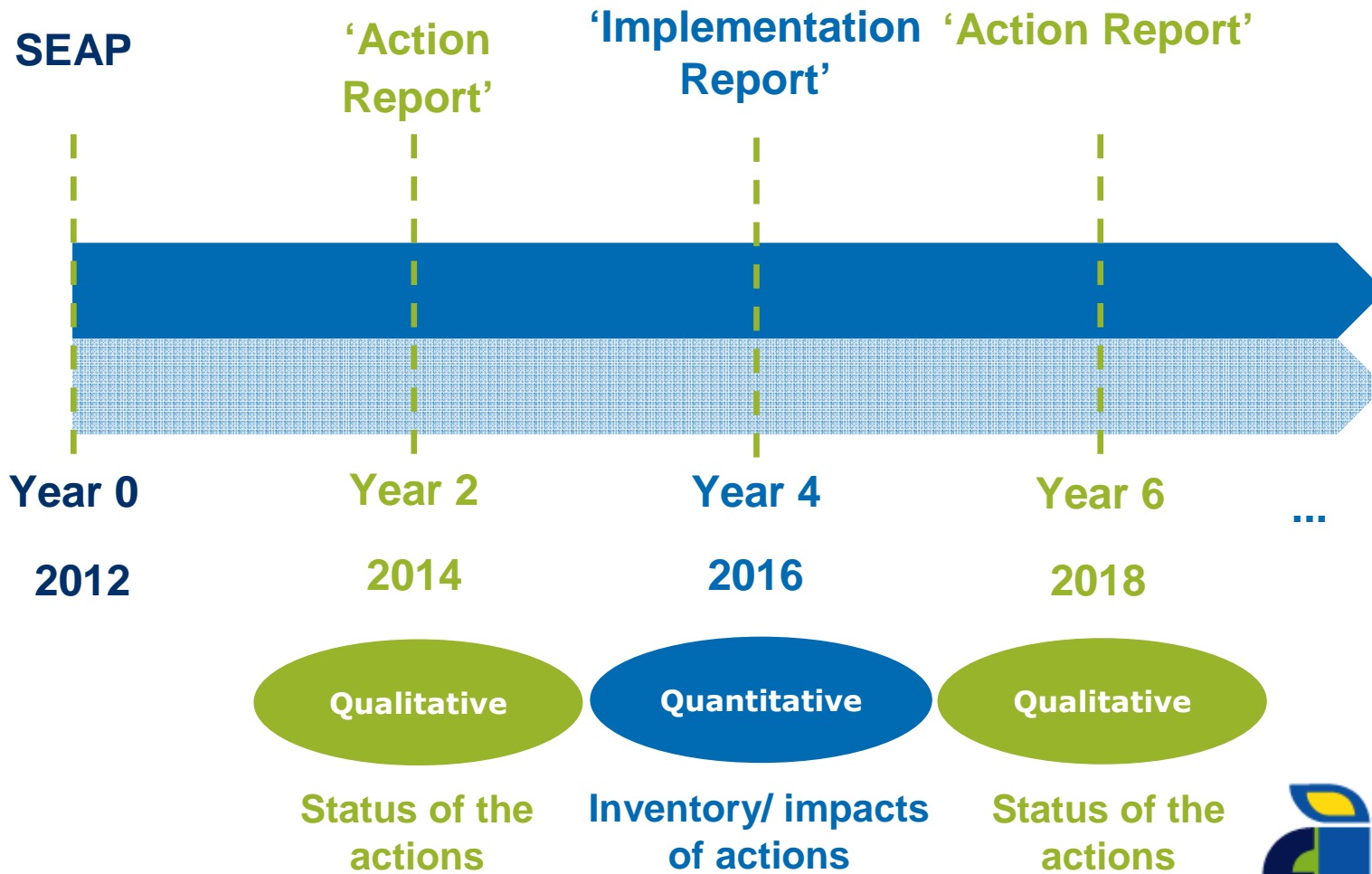


## A threefold document

- **Political document**: it shows how CoM signatories want to achieve their target: detailed measures and long term strategies
- **Technical document**: based on the results of the BEI, it allows to identify the most appropriate actions
- **Communication and promotion instrument**: a clear and structured document for citizens and stakeholders

# 5. The monitoring phase

# The CoM monitoring requirements



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# What is monitored under the CoM



## Based on quantitative reports

It will be possible to analyse trends in:

- **Energy consumption per capita**
- **Share of biofuels on total fuel consumption**
- **Share of local energy production on total energy consumption**
- **Emissions per capita**

# Performance indicators



In the context of the Covenant, the main indicators are those linked to **energy consumption or level of emissions per unit of measure, e.g.:**

- Per capita energy consumption, by fuel and mode [MWh/capita]
- Carbon intensity of transport [t CO<sub>2</sub>/pkm] or [t CO<sub>2</sub>/Vkm]

## Other suggested indicators:

- Public transport ridership [pkm/capita]
- Car passenger traffic [pkm/capita]
- Number of vehicles passing fixed point per year/month
- % of population living within 400 m of a bus service
- ...



## 4. Future developments and conclusions

# Towards 2030



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## New Integrated Covenant of Mayors for Climate and Energy

Priority action in the EU Action Plan for Energy Efficiency

Launch of the Covenant of Mayors initiative

Launch of Mayors Adapt on adaptation to climate change



2006

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2008



2014

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MAYORS ADAPT



2015

23



Covenant of Mayors  
Committed to local sustainable energy



## The New Integrated Covenant of Mayors for Climate and Energy

At least **40%** reduction in CO2 emissions by **2030**

Inclusion of both the **mitigation and adaptation** pillars

Moving towards a **global scope** by setting a benchmark worldwide





## Smart Cities and Communities lighthouse project SCC-1-2016-2017

**Objectives:** solutions at district scale integrating smart buildings, smart grids [...] energy storage, electric vehicles and smart charging infrastructures, using the latest generation ICT platforms [...].

**SEAPs (or equivalent) approved by the Covenant of Mayors initiative are obligatory.**

**Deadline: 5 April 2016**

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# Measuring and monitoring energy efficiency at the city level can be challenging...

Data collection difficulty has to be taken into account when identifying relevant indicators

## ...but can provide an aid in sustainable energy planning

Indicators can help local governments to identify which **strategies** allow the **greatest improvement**

# Thank you!



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# Multi-level governance in the CoM



## The role of Covenant Territorial Coordinators (CTC)

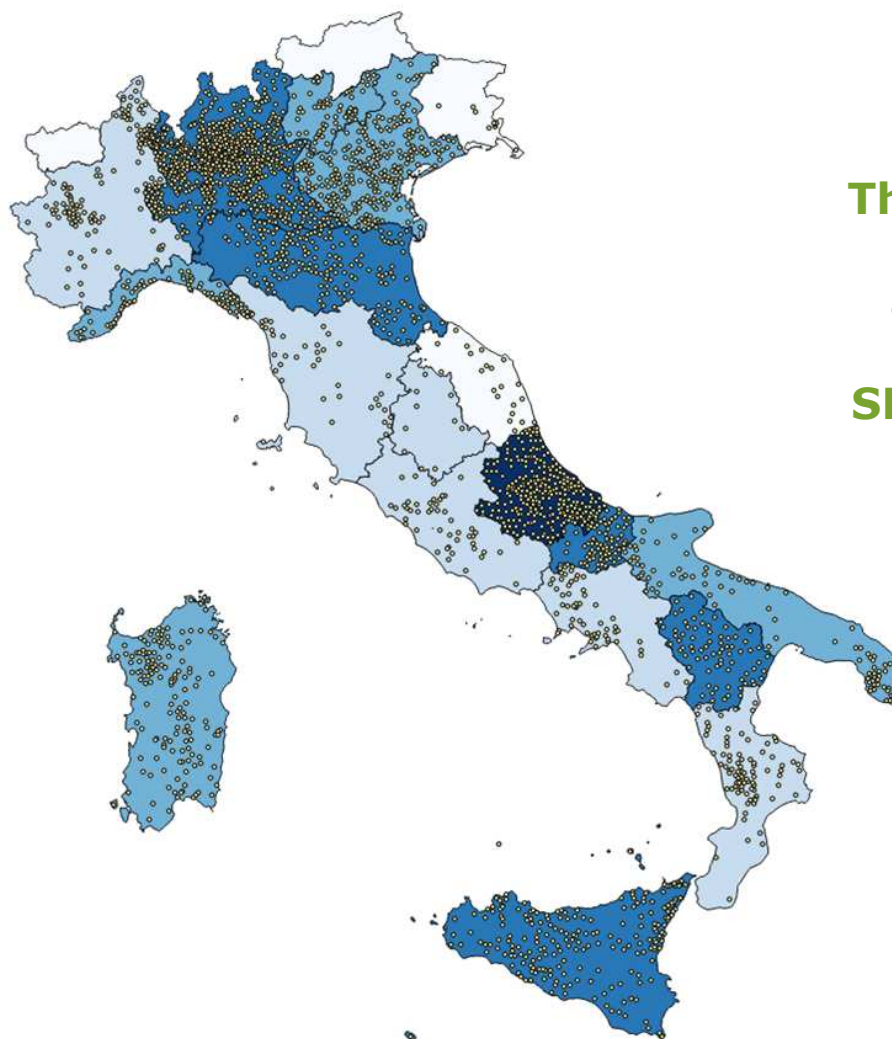
Regions and provinces acting as Covenant Territorial Coordinators (CTCs) to provide:

- **Technical** and strategic **assistance** to municipalities lacking the necessary resources to prepare a Sustainable Energy Action Plan (SEAP)
- **Financial** support and opportunities to the municipalities for the **development and implementation** of their SEAP
- **Support and coordination** to promote accession to the Covenant among municipalities in their territory

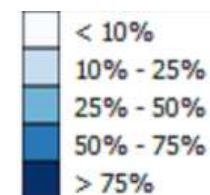
# Italian SEAPs received



## No. SEAPs over no. of municipalities by region



The involvement of a CTC is generally associated with a higher number of SEAPs received from a certain region.



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