

Developing a SECAP and reporting through MyCovenant

EU4 Energy Transition: Covenant of Mayors in the Western Balkans and Türkiye

Multi-Level Governance Platform (MLGP4Climate): SECAP Masterclass 2025

Giulia Melica, Joint Research Centre 11 March 2025



Outline

- The JRC and its role in the CoM
- SECAP success criteria
- JRC guidance on SECAP development
- Reporting through MyCovenant



The Joint Research Centre (JRC) and its role in the CoM



Joint Research Centre

- In-house science and knowledge service of the European Commission.
- JRC mission is to support EU policies with independent evidence throughout the whole policy cycle.
- Headquarters in Brussels and research facilities in 5 Member States
- 2800 staff 70% researchers





Role of the JRC in the Covenant



process, step-by-step towards low carbon and climate resilient cities by 2030

Full list of authors in the

Methodological basis (Guidebooks & tools)

Methodological adaptation to world regions



evaluation



FEEDBACK REPORT

Prelog (HR)

The present document is the feedback report from the Joint Research Centre Covenant of Mayors (CoM) team after having completed the analysis of your Sustainable Energy and Climate Action

The analysis is essentially focusing on the compliance of the SECAP documents with th Covenant formal comminments and principles as well as on the evaluation of the completeness and consistency of the data inserted in the SECAP template and provided documents. The selection and definition of adequate actions aiming at achieving your emissions reduction objective and adaptation goals are entirely left to your responsibility made on your territorial circumstances.

The feedback report serves the purpose of informing the signatory on whether its SECAP fulfils the following criteria, defined in the framework of the Covenant of Mayors:



Trainings & capacity building

Helpdesk & technical support



Data

Overall assessment



JRC SCIENCE FOR POLICY REPORT

Covenant of Mayors: 2022 assessment

Climate change mitigation and adaptation at local level





European and Global Covenant of Mayors

The European
Commission launches the
EU **Covenant of Mayors**(CoM)



CoM and MA merge under the Covenant of Mayors for Climate and Energy



The EU CoM increases its ambition towards climate neutrality by 2050

(2008)



2015







The European Commission launches Mayors Adapt (MA)







The EU CoM and the Compact of Mayors join forces becoming the Global Covenant of Mayors (GCoM)





Covenant of Mayors Europe - commitments

Mitigation

 reduce greenhouse gas emissions on local governments' territory, with a goal to achieve climate neutrality by 2050

Adaptation

• increase resilience and prepare for the adverse impacts of climate change



Energy poverty

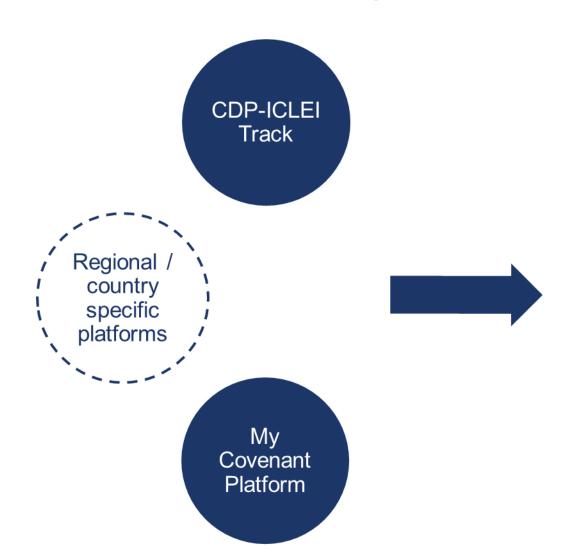
 tackle energy poverty as one key action to ensure a just transition.

NEW!

Translate their political commitment into practical measures by developing and implementing a Sustainable Energy and Climate Action Plan (SECAP).



GCoM reporting platforms







SECAP Success criteria



Sustainable Energy and Climate Action Plan

Covenant signatories translate their commitment into concrete actions through **Sustainable Energy and Climate Action Plans.**

Climate Mitigation

Prepare a **Greenhouse Gas** (GHG) **emissions inventory**. The inventory determine baseline emissions, identifying main emission sources and reduction opportunities.

Climate Adaptation

Prepare a Climate Change Risk and Vulnerability Assessment (RVA). RVA determines the nature and extent of risks by analyzing potential hazards and assessing the vulnerabilities.

Energy Access/Poverty

Prepare an Energy Access and Poverty Assessment. The assessment provides a sound knowledge of current condition in terms of Energy Access and Poverty



Establishment of the vision – TARGET and GOAL Elaboration of the PLAN - ACTIONS



10 key elements of a successful SECAP (1/3)

- 1. Formal adoption of the plan by the municipal council (or equivalent decision-making body)
 - •Strong political support is essential to ensure the success of the process, from CAP design to implementation and monitoring
- 2. Definition of clear target(s) / goal(s)
 - •The document must contain a clear reference to the core emission reduction commitment taken by the local authority and to the adaptation and energy access/poverty goals
- 3. Sound assessment of the local situation
 - •The results of both the BEI, the RVA and the energy access/poverty assessment have to be included in the CAP document.

10 key elements of a successful SECAP (2/3)

- 4. Comprehensive measures addressing the key sectors of activity as identified in the signatory's assessments
 - •The plan has to contain a coherent set of mitigation, adaptation and energy access/poverty measures covering possibly all the key sectors
- 5. Strategies and actions until 2030 (or until the target year)
 - •The plan must contain a clear outline of the strategic actions that the local authority intends to take in order to reach its commitments (incl. long-term strategy & goals and detailed measures for the coming years)
- 6. Mobilization of all municipal departments involved
 - •The plan should outline which structures are in place or will be organised in order to implement the actions and follow the results. It should also specify the human resources made available.

10 key elements of a successful SECAP (3/3)

7. Engagement of citizens and stakeholders

•The plan has to describe how the citizens and stakeholders have been involved in its elaboration, and how they will be involved in implementation and follow up.

8. Identification of the key financing resources

•A plan cannot be implemented without adequate financial resources. The plan should identify the key financing resources that will be used to finance the actions.

9. Monitoring and reporting

•The plan should contain an outline on how the local authority intends to ensure the follow-up of the actions and monitor the results.

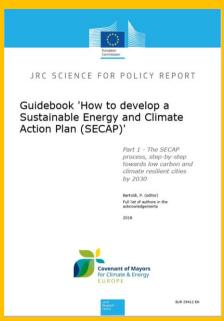
10. SECAP submission

•Signatories commit to submitting their plan within two years following adhesion.

JRC guidance on SECAP development

https://publications.jrc.ec.europa.eu/repository/handle/JRC112986

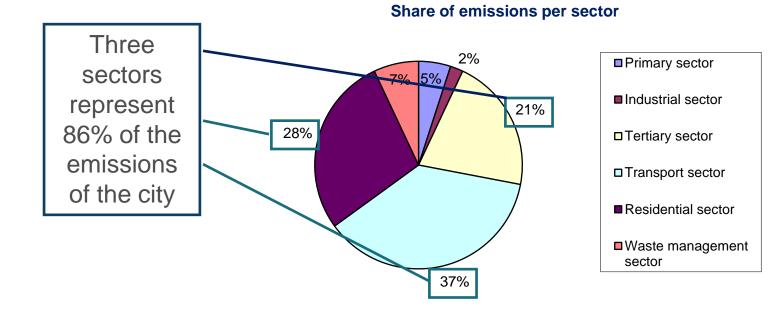
(currently being updated)





Baseline Emission Inventory (BEI)

 The BEI quantifies the amount of GHG emitted due to final energy consumption in given activity sectors on the municipality's territory within a calendar year and helps to select the appropriate actions.





BEI - Type of emissions to be included

- **✓** Direct emissions due to final energy consumption
 - in stationary and mobile sources
- ✓ Indirect emissions related to consumption of grid-supplied energy (electricity and heat/cold) within the local territory boundary
 - accounted for through the local emission factor for electricity and for heat/cold
- ✓ Direct non-energy related emissions
 - CO₂, CH₄ and N₂O emissions from waste and other non-energy related sectors

BEI - CoM EU key sectors of activity

- The Covenant key sectors are indicated with a 'key' icon in MyCovenant and are the following:
- ✓ Municipal buildings, equipment/facilities
- √ Tertiary (non-municipal) buildings, equipment/facilities
- ✓ Residential buildings
- ✓ Transport



BEI - How to calculate emissions

X

Activity Data

Activity data (AD) quantifies the human activity occurring in the territory of the local authority

Examples of AD are:

- Electricity consumed
- Diesel used in transportation

It is strongly recommended to used data relevant to the local territory

Emission factors

Emission factors (EF) quantifies the GHG emitted per unit of activity (IPCC, LCA, national/regional)

Examples of EF are:

- CO₂ emitted per unit of electricity
 - CO₂ emitted per unit of diesel

GHG Emissions

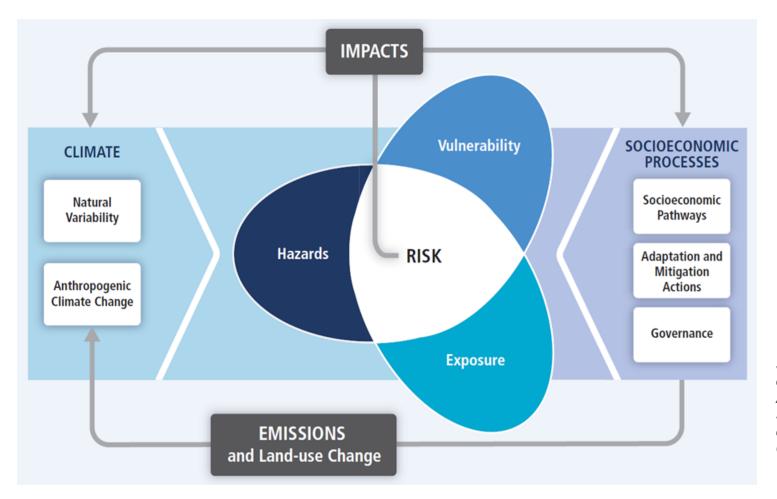
total amount of GHG emitted [tCO₂]

Total amount of GHG emissions:

- GHG emissions due to electricity;
 - GHG emissions due to diesel



Visualizing climate risks: the IPCC framework



Source: IPCC, 2012. Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation. A Special Report of Working Groups I and II of the Intergovernmental Panel on Climate Change.



Key steps for the Risk and Vulnerability Assessment (1/4)

Step 1 : Identification of climate hazards and impacts

Local authorities shall identify the most significant climate hazards and their impacts (at different timescales):

- Identifying past climate hazards and their impacts
- Identifying current and future climate hazards and their impacts





Key steps for the Risk and Vulnerability Assessment (2/4)

Step 2: Vulnerability and adaptive capacity

The local authorities should provide information on:

- Vulnerable population groups according to the local context for each hazard
- Vulnerable sectors
- Categories and factors that can affect the local government's adaptive capacity and enhance climate resilience





Key steps for the Risk and Vulnerability Assessment (3/4)





Key steps for the Risk and Vulnerability Assessment (4/4)



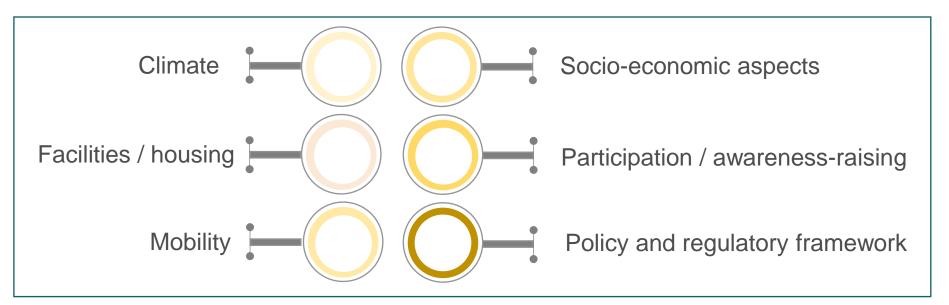


Energy Poverty Assessment

Within the Covenant of Mayors – Europe, the third pillar is formalized as **Energy poverty**.

In addition to the mandatory indicator:

Share of households or population within the city boundary spending up to X% of income on energy services local authorities within CoM Europe can also report against several identified regional indicators aggregated into six **macro-areas**.





SECAP actions



Mitigation action: Large scale building retrofit programme in Ljubljana

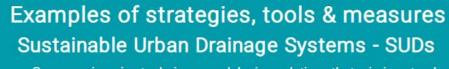
- ✓ Total project budget: €14.9 million
- ✓ Payback period: 15 years
- 48 buildings retrofitted, many of them city-owned (e.g. sports facilities, schools, kindergartens, administrative buildings, libraries and health centres).
- Energy-saving interventions: replacing standard lighting with LEDs, modernising heating and air-conditioning, insulating walls and roofs and switching from fossil fuels to sustainable energy sources.
- Buildings directly connected with the private partner's surveillance centre
 immediate response to any malfunctioning.
- Knock-on benefits: improved quality of life and comfort for building users, extra income due to energy savings (about €50,000 annually) allocated to a programme targeting school pupils to teach them about energy saving behaviours and renewable resources, increased consciousness of locals about sustainability issues





• [Source: eumayors.eu]

Adaptation actions (1/2)



Green engineering techniques and design solutions that mimic natural processes of rain water drainage. Not a specific technique but a general design approach, with the following features:

- Integrated system of managing storm runoff, consisting of a number of treatment stages
- · Ability to handle stormwater runoff in extreme rain events
- Multi-functionality, other benefits (amenity, ecology)
- Cost efficiency and ease of maintenance



Green roof - Hammarby Sjöstad, Stockholm @image from flickr



Drainage channel with vegetation filter



Courtyard with pond



Adaptation actions (2/2)





Energy poverty action: Energy Advisory Points in Barcelona



Energy Advisory Points (EAPs) in Barcelona aim to identify and address energy poverty and improve energy efficiency in Barcelona.

Every citizen can contact the EAP to find out about their energy rights and receive advice on reducing the additional costs of basic supply services.

Furthermore, the service aims to avoid energy and water cuts due to consumers' inability to pay, guaranteeing their right to energy.

The program hired 32 long-term unemployed people trained as energy advisers in a previous pilot project "Energia la Justa".



Reporting through MyCovenant

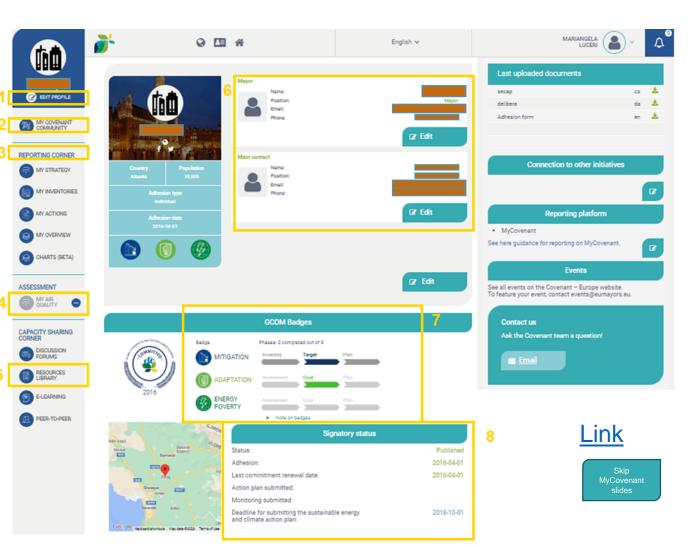
See also the **Covenant of Mayors for Climate & Energy Reporting Guidelines - https://eu-mayors.ec.europa.eu/en/node/254**

and the **Reporting guidelines on energy poverty** - https://eu-mayors.ec.europa.eu/en/Reporting-Guidelines-on-Energy-Poverty-EN



MyCovenant - signatory's view

- Edit profile → access to info on commitments & targets, address, reporting platform used and other EU initiatives
- My Covenant Community → access to Coordinators and Supporters
- 3. Reporting Corner
- 4. My Air Quality Tool (JRC)
- 5. Resource Library → dedicated to Covenant members only
- Contact information → management of contact information for both MyCovenant and CoM-Europe website
- 7. GCoM badges
- 8. Signatory's status → upcoming deadlines, latest submitted templates / commitments





My Strategy -> My Action Plan Documents

- To report general information about the action plan:
 - Title
 - Approval date,
 - Approval Decision Body;
 - Indication of the year in relation to which GHG emission reduction estimates are reported (can be different to the BEI).
- To upload the action plan document(s)



My Strategy → My Strategy

- Targets and goals in relation to the three pillars of the initiative (N.B. reporting on the energy poverty pillar became mandatory as of 1 January 2025)
- Administrative structures
- Staff capacity allocated
- Stakeholders engagement
- Budget
- Financing sources
- Monitoring process



My Inventories -> Emission inventory

- Inventory year Mandatory
- Population in the inventory year Mandatory
- Emission factor type (IPCC, LCA, National/sub-national) Mandatory
- Emission reporting unit (tonnes CO₂ or tonnes CO₂eq) Mandatory
- CO₂ emission factors Mandatory
- Final energy consumption (by sector and carrier) Mandatory
- Certified green electricity Optional
- Local energy production Optional
- Non-energy related sectors Optional
- Emission inventory (by sector and carrier) Automatically calculated



Example - Final energy consumption table



Final energy consumption "NO" = not occurring, "IE" = included elsewhere, "NE" = not estimated, "C" = confidential FINAL ENERGY CONSUMPTION [MWh] Fossil fuels Sector Lignite Plant oil **BUILDINGS, EQUIPMENT/FACILITIES AND INDUSTRIES** Municipal buildings. 420823.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 420823.00 equipment/facilities - Municipal buildings, 0.00 equipment/facilities 54948.00 - Public lighting 54948 - Other 365875.00 365875 Tertiary (non municipal) buildings, 2298505.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 2298505.00 equipment/facilities Institutional buildings 2298505.00 2298505 Residential buildings 1636322 1636322.00 2345350.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 2345350.00 - Industry Non-ETS 2345350 2345350.00 0.00 - Industry-ETS NE NE Buildings, equipment/facilities non 11017432 3911061 NE NE NE NE NE 1573919 NE NE NE NE 16502412.00 NE allocated Subtotal 6701000.00 11017432.00 3911061.00 0.00 0.00 0.00 0.00 0.00 0.00 1573919.00 0.00 0.00 0.00 0.00 23203412.00 TRANSPORT Municipal fleet 0.00 0.00 0.00

Possible to use notation keys to accommodate data limitations



My Inventories -> Risks and vulnerability

- Climate hazards Mandatory
 - Current hazards (with probability and impact) Mandatory
 - Future hazards (with expected changes in intensity, frequency and timeframe) Mandatory
- Vulnerable sectors in relation to each hazard Mandatory
 - Level of vulnerability Mandatory
 - Indicator, Indicator unit, value Optional
- Adaptive capacity factors in relation to each sector Optional
- Vulnerable population groups (in relation to each hazard) Optional



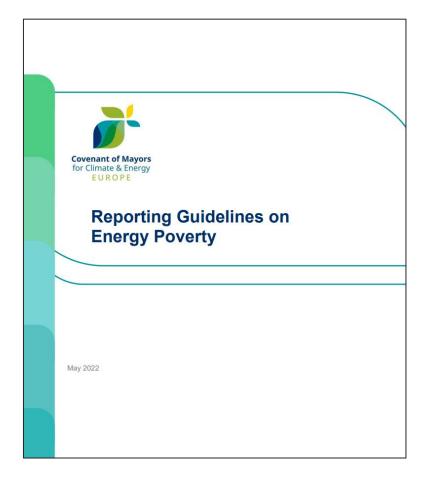
My Inventories → Energy poverty assessment

To report on one or more indicators considered relevant by the city, in relation to the following macro-areas:

- Climate
- Facilities / housing
- Mobility
- Socio-economic aspects
 - The indicator "Percentage of persons / households spending up to XX% of their income on energy services" will become mandatory
- Policy and regulatory framework
- Participation / awareness-raising



Reporting





Macro-area	Used indicator(s)	Unit	Households /Persons	Base year	Current level	Use for monitoring	Target level
Climate	Frequency of heat waves 1	Average per monthly/year		1990 🗸	NE ~		
	Frequency of cold waves ①	Average per monthly/year		1990 ~	NE v		
	Number of heating degree days per year 1	Number of HDD and CDD /year		1990 ~	NE ~		
	Number of cooling degree days per year 3	Number of HDD and CDD /year		1990 ~	NE v		
	F+G + H band (EPC) dwelling / total number of dwelling 1	[%]		1990 ∨	NE v		
	Energy consumption (electricity + heating) per capita / national energy consumption (electricity + heating) per capita 1	[%]		1990 🗸	NE ~		
	Share of buildings renovated per year 1	[%]		1990 🗸	NE v		
Facilities / housing	Share of households / population with presence of leak, damp, rot in their dwelling / total households or population	[%]	Households V	1990 🗸	NE V		
	Percentage of households / persons within the municipality experiencing heating discomfort	[%]	Households 🗸	1990 ~	NE ~		
	Percentage of households / persons within the municipality experiencing cooling discomfort	[%]	Households V	1990 ~	NE v		
	Households / persons connected to the electricity grid / total households or persons	[%]	Households V	1990 🗸	NE ~		

https://eu-mayors.ec.europa.eu/sites/default/files/2022-10/Covenant-reporting-guidelines-energy%20poverty-final.pdf



My Actions – My Actions Overview

Mitigation:

 Number of actions included in the plan for each mitigation sector, with estimates on energy savings, renewable energy production, CO₂ emission reduction by the target year mandatory

Adaptation:

- Number of actions by adaptation sector Mandatory
- Energy poverty:
 - Number of actions by macro-area Mandatory



My Actions – My Action details

- Mitigation:
 - At least 3 key actions Mandatory
- Adaptation:
 - At least 3 key actions Mandatory
- Energy poverty:
 - At least 1 key action Mandatory

Action	Туре	Key action	Origin of the action	Implementation timeframe		Status of Implementati
	All v	action	action	Start	End	on
AOS1.1: Establishing the necessary tools, mechanisms and management structure for the effective implementation of climate change adaptation strategies	Adaptation	☆	Local authority	2021	2025	Ongoing
AOS1.3: Develop an administrative organisational structure for the implementation and monitoring of GCAP and SECAP actions	Adaptation		Local authority	2020	2021	Ongoing
B1.11: Explore ways to support residential retrofits being undertaken to a higher and greener energy performance standard	Mitigation		Local authority	2020	2030	Not started
B1.3: Review and update the local- level policies, planning regulations and guidelines for future and new municipality development around energy efficiency ®	Mitigation	☆	Local authority	2022	2030	Ongoing



My Actions – Key action form

- Type of action (Mitigation/Adaptation/Energy poverty)
- Title of the action
- Key action?
- Key Action Title
- Origin of the action
- Responsible body
- Short description of the action
- Implementation timeframe and status
- Action stakeholders
- Total cost
- Source of funding

- Mitigation action details:
 - Sector / area of intervention / policy instrument/
 - Estimated impacts (energy savings, energy production, emission reduction)
- Adaptation action details:
 - Climate hazard(s) addressed
 - Sector(s)
 - Outcome(s) reached (description)
 - Vulnerable population group(s) targeted
- Energy poverty action details:
 - Macro area(s)
 - Outcome(s) reached (description)
 - Vulnerable population group(s) targeted



GCoM badges

Badge Phases: 6 completed out of 9 Inventory Target Plan Assessment Goal Plan Note on badges Signatory cities earn a badge when the information reported via one of the official Global Covenant reporting platforms meets the requirements for a corresponding phase. Badges are organised around the three pillars of the initiative (mitigation, adaptation and energy poverty/energy access) and capture signatories' progress

across the different phases and milestones in each pillar.

More information here.

Note that the badges displayed here have been generated based on the dataset you previously submitted in MyCovenant (before June 2019). Your badges will be automatically updated once you submit a new dataset.

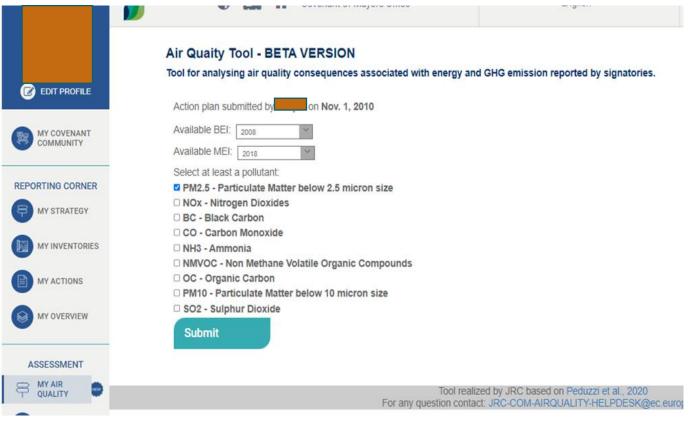
Covenant Europe website



- Showed both on the signatory's public profile and on the MyCovenant dashboard
- Automatically assigned



Air Quality Tool Assessment



- Developed by JRC
- Particularly relevant for small and medium size municipalities
- Available if the signatory has reported a BEI and at least a MEI
- After running the tool, the signatories is provided with a full explanation of the indicators, the table and the plots proposed



SECAP Evaluation

JRC Analysis Mitigation



If you have questions about the analysis, please email to JRC-COM-TECHNICAL-HELPDESK@ec.europa.eu

JRC Analysis Adaptation

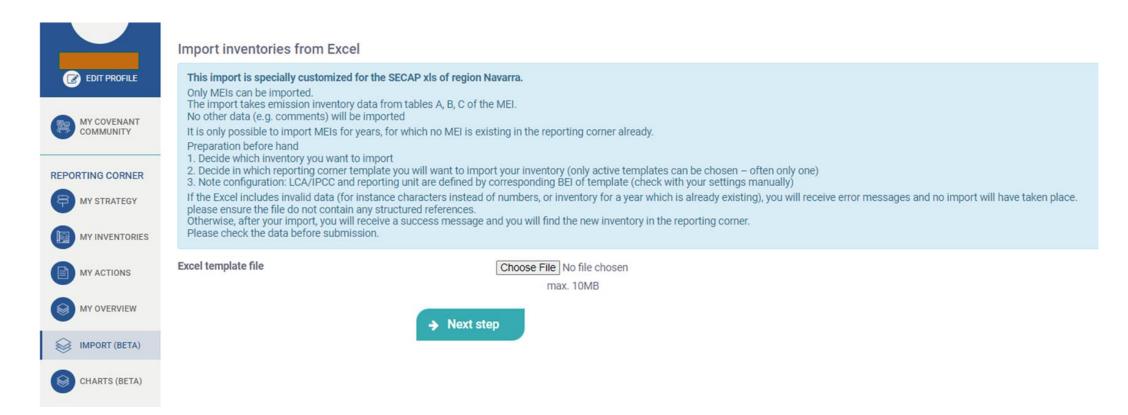
Analysis date	Analysis status	Internal created date	User	Internal Comment	Document
18.01.2023	under_evaluation	2023-01-18 14:41:40.96533+00		I	•
New analysis state		Analysis date 2023-01-18	Internal comment	Save new analysis statu	s

- Analysis carried out by JRC
- Available in the signatories reporting corner
- Easy to check the status of the evaluation of the action plan
- Feedback report provided when action plan accepted / rejected.

If you have questions about the analysis, please email to JRC-COM-TECHNICAL-HELPDESK@ec.europa.eu



Import of emission inventories

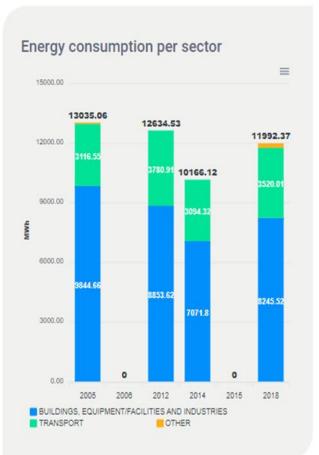


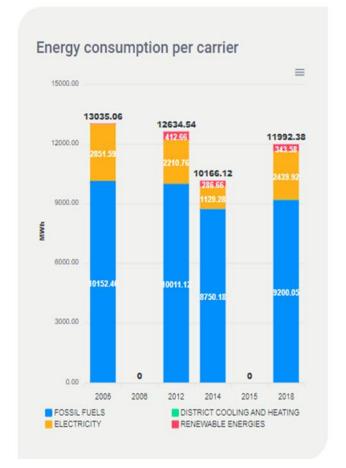
Standard template provided by CoM Europe

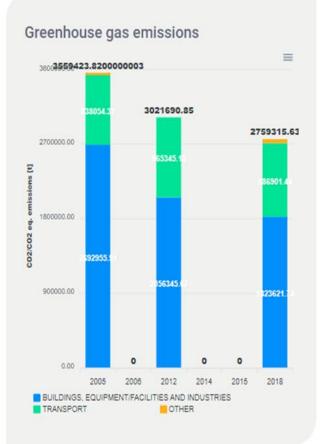


Charts











Thank you

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