

# Quick Reference Guide

## Monitoring SEAP implementation

### Why is monitoring important?

Establishing a monitoring process is an important part of the Covenant of Mayors commitments, which allows you to **measure progress toward the targets** set in your Sustainable Energy Action Plan (SEAP). It enables you to **track the impacts of the actions** included in the SEAP and compare estimated impacts to what is actually achieved in terms of energy savings, renewable energy production and CO<sub>2</sub> emissions reduction. Assessing the implementation status of the actions and their effects also allows you to determine whether the action is performing well and to identify corrective measures, in case specific actions are not delivering their expected impacts. Monitoring is furthermore an important exercise to help **understanding the barriers to the implementation of the SEAP** and determine the cause of failure to implement specific measures. It is also a good opportunity to **identify and document best practices** or success stories to be shared with other stakeholders, for instance using the Covenant [Benchmarks of Excellence](#). In addition, you can also identify **new opportunities for action** and assess side benefits that arise from the implementation of your SEAP actions. Monitoring energy consumption and CO<sub>2</sub> emissions allows you to understand whether you are **on track to reach the target** and to identify factors that affect results, such as weather or population changes.

### How to carry out a monitoring process?

The monitoring process should be defined at the time of preparing your SEAP and can be further refined as it is an ongoing process. Some elements to take into account when ensuring an effective monitoring process are listed below.

#### Tips for a successful monitoring process

- Assign a dedicated person to coordinate the process, and if deemed necessary establish a team or committee to meet periodically.
- Identify the data to be collected and consistent methods for data collection.
- Identify the data sources, including departments and external stakeholders that will be able to provide data.
- Establish the frequency of monitoring.
- Ensure that the data collected is reliable and comparable along time.
- Define monitoring indicators and set specific benchmarks to compare their performance.
- Define a communication plan to communicate results to policy makers and other stakeholders and tailor the information to address each audience.
- Ensure a link between the results of the monitoring report and the municipal budget planning cycles, so that any adjustments to your SEAP can be incorporated, if necessary.

## What to report to the Covenant of Mayors?

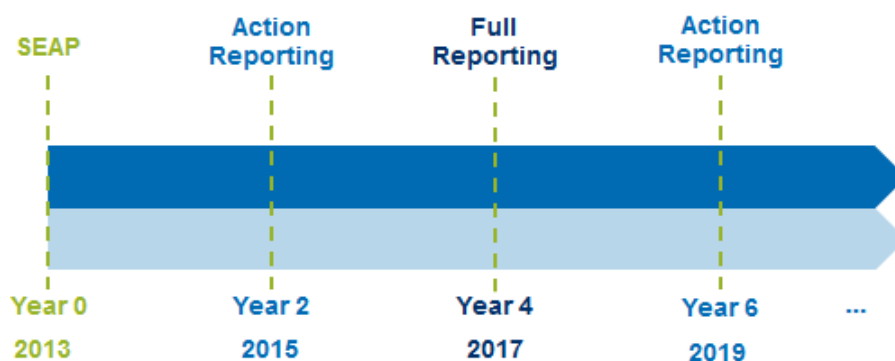
The Covenant of Mayors offers two types of reporting: 1) **Action Reporting**, which focus only in reporting the status of implementation of the actions outlined in the SEAP and their impacts; and 2) **Full Reporting**, which besides reporting on the status of implementation of the actions and their impacts, includes at least one recent Monitoring Emission Inventory (MEI). The table below shows the parts of the Monitoring template that are required to be completed for each type of reporting.

	Action Reporting	Full Reporting
<b>Part I – My Overall Strategy</b> <i>Report any changes to the initial strategy as well as updated information on human and financial resources.</i>	✓	✓
<b>Part II – My Emission Inventories</b> <i>Provide final energy consumption and CO<sub>2</sub> emissions data by energy carrier and by sector for a recent monitoring year.</i>	✗	✓
<b>Part III – My Sustainable Energy Action Plan</b> <i>Report the implementation status of the key actions and update their impacts.</i>	✓	✓

## What are the minimum Covenant reporting requirements?

By signing up to the Covenant of Mayors, you have committed to submit **a monitoring report at least every second year** after submission of the Action Plan for evaluation, monitoring and verification purposes. This commitment is translated in the **submission of a Monitoring template** via the restricted website area "[My Covenant](#)". If you find that carrying out a full report every two years puts too much pressure on human or financial resources, you may decide to carry out an emission inventory every four years instead of two. Hence the **minimum requirements** would be to adopt: 1) the **action reporting approach every two years**, i.e. submit a monitoring template which does not include an emission inventory and 2) the **full reporting approach every four years**, i.e. submit a monitoring template which includes all the three parts. Uploading a monitoring report remains optional.

The figure below illustrates the minimum requirements concerning the submission of monitoring templates. For instance, in the case of a signatory who has submitted its SEAP in 2013; he must carry out an 'Action reporting' in 2015 and a 'Full reporting' in 2017. Failure to submit a monitoring template in two successive periods, i.e. after four years, results in termination of the membership to the Covenant of Mayors.



## How are signatories monitoring their SEAP?

### Vila Nova de Gaia, Portugal

The city of Vila Nova de Gaia was the first to submit its monitoring results to the Covenant of Mayors in end-July 2014. Vila Nova de Gaia's report concludes that CO<sub>2</sub> emissions in the city have been reduced by 16% compared to 2005 according to the compiled Monitoring Emission Inventory for 2011. The greatest reductions were observed in the transport sector, while the buildings sector's emissions have slightly increased (5%). Despite the fact that the economic crisis also gave its contribution to the drop in CO<sub>2</sub> emissions, significant reductions were also achieved through the implementation of measures

such as [landfill biogas recovery for electricity production](#) and subway line expansion. Other measures showing the exemplary role of the local authority were the [refurbishment of social housing](#) and municipal fleet renovation. The first set of actions being implemented were financed from local stakeholders, such as the City Council, energy agency, companies in transport and water, wastewater and waste sectors. The local authority itself has invested €12.8 million euros between 2010 and 2013, while the investment from other actors was around €35.7 million for the same period. One quarter of the budget foreseen for implementing the measures outlined in Vila Nova de Gaia's SEAP has already been spent. One of the main challenges pointed out by the energy agency in charge of monitoring the results relates to the fact that the data is too disperse and needs to be gathered from different bodies. To face this situation, the agency has developed an Excel tool for data collection and analysis as well as a web-based tool specific to collect energy consumption data from all municipal buildings and facilities. The lack of National and European funding as well as the lack of interest of Energy Service Companies (ESCOs) on the public sector have been the main barriers to achieving the expected implementation of the measures set out in the SEAP.

#### Key Facts

**Inhabitants: 303,000**

**CO<sub>2</sub> Target: 25% from 2005 to 2020**

**Reduction achieved: 16% in 2011**

### Växjö, Sweden

#### Key Facts

**Inhabitants: 87,000**

**CO<sub>2</sub> Target: 65% per capita from 1993 to 2020 and 100% by 2030**

**Reduction achieved: 47% in 2013**

Växjö owns a long history of climate action initiated back in the 80s. Since 1993 that the city has been carrying out annual energy and CO<sub>2</sub> emissions monitoring reports. The city has been among the first signatories handling the Monitoring template. By 2013 – the year of the latest Monitoring Emission Inventory – the city has reduced its CO<sub>2</sub> emissions per capita by 47% in relation to 1993, reaching 2.4 tonnes CO<sub>2</sub> per capita. The population in Växjö has increased by 20% in the same period, thus the reason for setting the target to be emissions per capita. Fuel shift measures in the buildings and industry sector have

greatly contributed to reduce greenhouse gas emissions in the city. District heating plants running on fossil oil have shifted to bio-oil which resulted in reducing annual emissions by 500 tonnes. The [Lantmännen Reppe Industry](#) which used to use oil to produce steam for its industrial processes has shifted to biomass. With an investment cost of €0.5 million, this has contributed to reduce Växjö's overall CO<sub>2</sub> emissions by 3% and fossil oil consumption by 33%. The monitoring report has also concluded that the transport sector remains Växjö's biggest challenge in reducing emissions due to the high consumption of fossil fuels. Nevertheless, some measures have taken place, such as the production of biogas to be used in public transport and cars in the newly constructed biogas plant with an investment of close to €9 million made by the local authority or the [optimisation of freight transport in the city](#) concerning municipal purchases.



Watch the [webinar recording](#) where Vila Nova de Gaia and Växjö explain their monitoring experience!

Colmar carries out an evaluation every six months in order to measure the progress in their SEAP implementation, using both qualitative and quantitative indicators. Based on this, the project team and steering committee analyse the results and decide on potential changes to the plan. For each SEAP action, there is an action fiche where the action is described in detail, including means of implementation, human resources, partners, timeframe, expected results and monitoring indicators. Colmar's monitoring report shows that the city is half way to achieve the target. It has reduced its greenhouse gas emissions per capita by 10% in the period 2007-2013. As part of the local authority's strategy, a number of grants and subsidies have been provided to improve the energy performance of residential buildings and promote sustainable urban transport. An amount of €0.5 million has been granted to improve the thermal performance of 780 dwellings, leading to a reduction of 3.1 ktonnes CO<sub>2</sub> eq. Colmar has also implemented a [grant scheme to promote the use of bicycles](#). Citizens can benefit from a €120 grant when purchasing a new bicycle and €200 when purchasing an electrical bicycle. By 2014, 16,523 persons have benefited from this measure which involved a city budget of close to €1.7 million. This measure has also been accompanied by investments in cycle paths. Colmar has set an objective of 100 km cycle paths by 2014, which has been achieved. The results show an increase in the use of bicycles, which now represents 11% in total urban transport, and a reduction in greenhouse gas emissions of 8.7 ktonnes.

#### Key Facts

**Inhabitants: 68,000**

**CO<sub>2</sub> Target: 20% per capita from 2007 to 2020**

**Reduction achieved: 10% in 2013**

#### Key Facts

**Inhabitants: 411,980**

**CO<sub>2</sub> Target: 20% from 2007 to 2020 and 40% by 2030**

**Reduction achieved: 10% in 2011**

The City of Tallinn has committed to reduce its CO<sub>2</sub> emissions by 20% by 2020 and by 40% by 2030 from 2007 levels. According to the Monitoring Emission Inventory carried out for 2011, the city has already reduced its CO<sub>2</sub> emissions by 10%. The construction of a Combined Heat and Power Plant (Tallinna EJ) using wood chips, which accounted for an investment of €85 million, has contributed to reduce CO<sub>2</sub> emissions associated to end-users heat consumption by 150 ktonnes. In addition, renovation measures currently ongoing in residential and commercial buildings are expected to reduce CO<sub>2</sub> emissions by some

100 ktonnes and result in approximately 400 GWh energy savings. The lion's share of the first set of implemented actions took place in the municipal sector. Some examples are the renovation of [school buildings](#) and [kindergartens](#) using Public Private Partnerships. This accounted to close to €12 million invested (without accounting for investments already made during 2009-2010) leading to more than 500 MWh annual energy savings. Actions at the level of improving the building envelope of social houses and the sport hall have also been carried out by the local authority. The full implementation of Tallinn's SEAP will require an investment of more than €1.4 billion, of which 45% is foreseen to come from other actors than the local authority. In the period 2011-2013, 24% of this budget has been spent in the implementation of SEAP actions. Nevertheless, limited financial resources are pointed out by the city as a strong barrier to SEAP implementation that needs to be overcome in order for the city to succeed in achieving its targets.