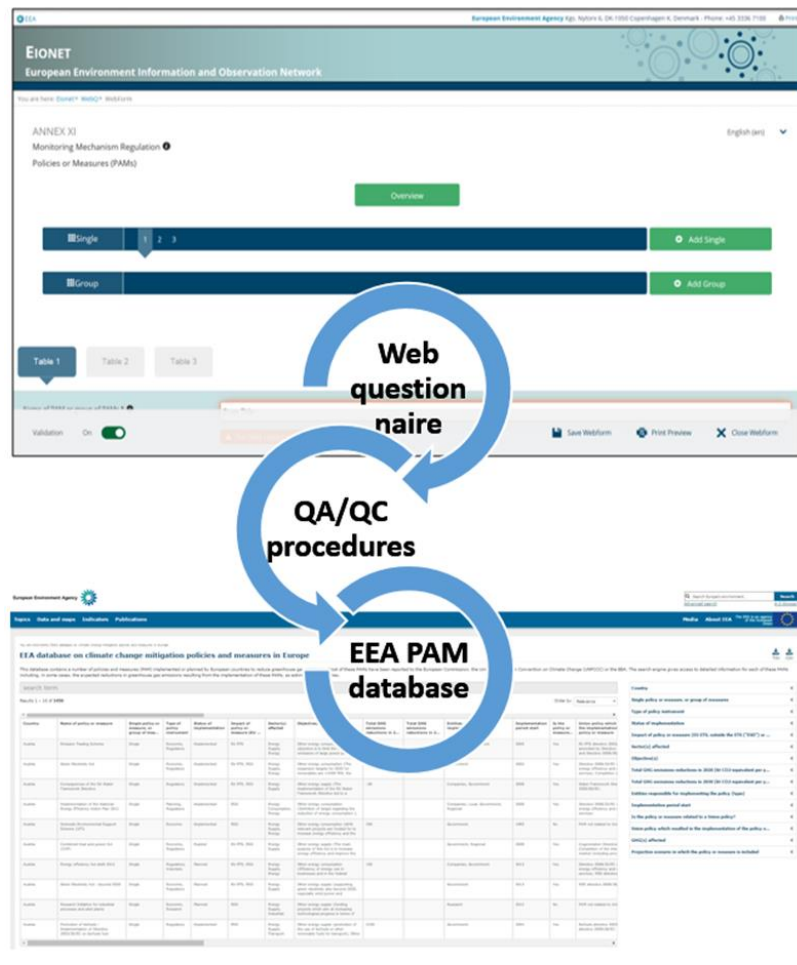




Guidelines for reporting on policies and measures by Member States under Regulation (EU) No 525/2013 (EU Monitoring Mechanism Regulation)



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Abbreviations

EC	European Commission
EEA	European Environment Agency
EIONET	European Environment Information and Observation Network
ETC/CME	European Topic Centre on Air Pollution and Climate Change Mitigation
WEM	With Existing Measures
WAM	With Additional Measures
WOM	Without Measures
EU	European Union
MMR	Monitoring Mechanism Regulation
PaM	Policies and measures



1 Introduction

Under Article 13 of Regulation [\(EU\) 525/2013](#), the Monitoring Mechanism Regulation (MMR), Member States are required to submit information on national policies and measures (PaMs) to the European Commission (EC) on a biennial basis.

The Commission Implementing Regulation (EU) 749/2014 specifies that Member States shall use the ReportNet tools of the EEA for the submission of this information.

To that effect, the EEA provides:

- A [Central Data Repository \(CDR\)](#), which is part of the ReportNet architecture. The CDR is like a bookshelf, with data reports on the environment submitted under various reporting requirements or processes – including the MMR.
- A specific [online questionnaire](#), consistent with the tabular formats set out in Annex XI to Regulation (EU) 749/2014¹. It is a form to be filled-in by the Member State (MS) in order to produce final xml file.

The submitted information undergoes quality checks performed by the EEA and its European Topic Centre for Air Pollution and Climate Change Mitigation (ETC/CME)² before it is aggregated in a database. The database is made available by the EEA on its web site (see [EEA database on climate change mitigation policies and measures in Europe](#)).

These guidelines cover all aspects related to the reporting of information on PaMs under article 13 of the EU MMR. The purpose of the guidelines is to support Member States in reporting this information by explaining:

- how to access the web questionnaire;
- how to fill in or edit the mandatory and recommended information in the questionnaire;
- how to submit a completed questionnaire;
- background information and examples for the information required;
- the quality checks carried out by the EEA and its ETC/CME and the related procedures.

Ultimately, the goal is to improve the quality of the information reported by Member States and disseminated through the EEA web site, by making it more timely, transparent, complete, consistent, comparable and accurate.

Some additional and background information is annexed to this document:

- Annex 1 - The Union system for policies and measures and projections
- Annex 2 – Reporting requirement on policies and measures under the Monitoring Mechanism Regulation
- Annex 3 - Where to find Member States submissions
- Annex 4 – Glossary
- Annex 5 – List of EU policies and measures that Member States should take into account when preparing projections
- Annex 6 – List of references on the evaluation of policies and measures

¹ Chapter 2 explains how to access an empty questionnaire. Select: 'create new session file'-> 'MMR Policies and measures (Article 13)'-> 'Edit with 'MMR Policies and measures (Article 13)' webform'

² ETC/CME is a consortium of European institutes assisting the EEA in its support to European Union (EU).



A specific guidance on the evaluation of PaMs, as well as a guidance for the quantification of costs and benefits is currently not available, but Annex 6 presents a list of references to available studies.

2 Accessing the web questionnaire on PaMs

Two methods can be used to access the web questionnaire on PaMs:

1. The first method is available to anyone with internet access and does not require an Eionet account. It allows the user to create a new questionnaire or open an existing one, fill in or edit information and save the questionnaire as a file. It does not allow the submission of a questionnaire under the MMR.
2. The second method requires an Eionet account as well as 'reporter'³ permission for the MMR. In addition to the possibilities offered with the first method, it allows the reporter to officially submit the questionnaire under the MMR.

Accessing the questionnaire without an Eionet account

This method allows several persons to work successively⁴ (but not parallel) on the questionnaire, without a need to have any specific permission, access, or even an Eionet account. It is important to organize the submission process within a Member State. The questionnaire doesn't have an 'online editing functionality' which means that national experts can only work simultaneously on individual files, not together on a shared file.

Creating a new questionnaire

Please follow these steps:

1. Go to <https://webforms.eionet.europa.eu/>;
2. Click on 'Create new session file';
3. Select questionnaire 'MMR policies and measures (Article 13)';
4. Click on 'Save file in session';
5. Click on Edit with 'MMR Policies and measures (Article 13)' web form;
6. Fill in the information in the questionnaire (see Chapter3)

Starting from an existing questionnaire

It is possible to edit an existing questionnaire. Such a questionnaire can be the questionnaire previously submitted under the MMR. It includes all the information previously filled in, reported and checked by the ETC/CME in the previous reporting cycle. It can also be a questionnaire 'in progress', on which you or a colleague has already worked on for the current reporting cycle.

Using the previous submission as a starting point

In order to obtain the questionnaire pre-filled with information already reported in a previous year, you can either:

³ MMR reporter permission is needed to submit a PaM report on behalf of a Member State. Member States itself nominated two responsible persons per article in MMR. The list of MMR reporters: <http://rod.eionet.europa.eu/contacts?roleId=extranet-mm-reporter>

⁴ One expert works after another, i.e. person 1 uploads, edits, downloads and sends it to the next person, then person 2 uploads, edits, downloads.... and the MMR 'reporter' uploads the final PaM questionnaire to CDR.



1. Go to your country folder at the CDR <http://cdr.eionet.europa.eu/>;
2. Select 'European Union (EU) obligations'
3. Select 'Greenhouse gas Monitoring Mechanism Regulation (MMR)'
4. Select 'Art. 04, 13 & 14 - Low-carbon development strategy, policies and measures, projections'
5. Select 'Art. 13 Policies and measures and LCDS updates'
6. Select 'Policies and measures (PaMs)'
7. Create a new envelope. By default, the new questionnaire created in the CDR will be pre-filled with the information previously submitted and quality checked by the ETC/CME.
8. Activate task;
9. Click on modify the 'MMR_PAM' questionnaire;
10. Fill in the information in the questionnaire (see Chapter 3);

Alternatively follow these steps:

1. Access the latest National folder with a PaM questionnaire (when a new envelope is created the latest version of the questionnaire is automatically uploaded in the folder);
2. Identify the relevant submission on PaMs and click on it;
3. Save the 'Original' xml file on computer⁵;
4. Go to <https://webforms.eionet.europa.eu/>;
5. Click on 'Upload session file';
6. Find relevant xml file in your computer and open it ;
7. Click on 'Edit with 'MMR Policies and measures (Article 13)' web form';
8. Fill in the information in the questionnaire (see Chapter 3);



By default, the new questionnaire created in the CDR will be pre-filled with the information previously submitted and quality checked by the ETC/CME.

Make sure to delete the redundant web form and ensure that **only one web form is included in the envelope**. This way it is completely clear what the correct web form is. Including two web forms could also interfere with a correct processing of the xml files after submission.

Accessing the questionnaire with an Eionet account and MMR reporter permission

This method can be used by nominated MMR reporters³. It follows the same steps as for a formal submission. It is however possible to save the questionnaire and work on it again at a later stage. Inserted answers can be saved at any time by clicking on the 'Save Webform' button at the bottom of the page.

⁵ Depending on the web browser (Internet Explorer, Google Chrome, etc) or computer (PC, Mac, etc) the way of saving of the file may differ slightly. One can right click on the 'Original' and select 'Save link as...' (Google Chrome) or 'Save target as...' (Internet Explorer). After clicking on 'Original' the file can be saved using Ctr+S (PC) or Command+Shift+S (Mac).



Section 4 describes the delivery process in detail. Step 1 (chapter 4) to Step 6 (chapter 4) detail how to access the questionnaire with an Eionet account and MMR reporter rights.

3 Filling in the web questionnaire on PaMs

The web questionnaire – a few tips

The web questionnaire contains three tables consistent with those from Annex XI of the Commission Implementing Regulation [\(EU\) 749/2014](#).

Overview Table

PAM number	Name of policy or measure	PAM or group of PAMs	Table 1: Sectors and gases for reporting on policies and measures and groups of measures, and type of policy instrument	Table 2: Available results of ex-ante and ex-post assessments of the effects of individual or groups of policies and measures on mitigation of climate change	Table 3: Available projected and realised costs and benefits of individual or groups of policies and measures on mitigation of climate change
1	Delete	Single	Create Table	Create Table	Create Table

In the following section you will find guidance on how to complete the three tables in the web questionnaire. If the Member State has a different understanding or interpretation of how to fill in certain fields, provide your view of the “General comment” field at the end of table 1. This will help to increase the transparency across Member States and allows the reviewer to better understand your national circumstances.

General Guidance:

Transparency

- Do not use abbreviations which might not be clear for a non-expert or that could be ambiguous (e.g. ESD could be used for both Effort Sharing Decision and the Energy Savings Directive) for any PaMs as each entry should be treated independently.
- Ensure the PaMs titles and descriptions are clear and distinctive and names and descriptions are unique. When two PaMs are related, make the distinction between them as clear as possible in the description. The PaM name should be understandable also for other Member States and the interested public. In case the national PaM name is different to the PaM name reported, the national name can be entered in brackets.
- If quantitative values are provided (e.g. for impacts, indicators, costs) ensure that the appropriate unit and suitable references are provided.
- It is recognized that national public discussions on PaMs take place in the respective national language. Nonetheless, Member States are encouraged to provide the information here in English.
- Use understandable phrases, and avoid the listing of single words, as this may hamper the comprehensibility of the information provided.

Completeness

- Make sure all implemented, adopted or planned national level PaMs are reported, including those that have been implemented in response to Union policies and clearly link these to the reporting Table 1 of the web questionnaire (Union policy which resulted in the implementation of the PaM). Important Union policies- that have not been linked



to - could indicate missing PaMs. A list of EU PaMs is provided in the web questionnaire⁶, and they can be linked to the national PaM by selecting the appropriate one(s).

- If measures are expired – meaning that the corresponding implementing action is finalised or the corresponding legal act is expired – but impacts are still considerable, they should be reported as well.
- Whenever in the web form the orange field, “This field cannot be empty”, appears, the user is reminded that this is a mandatory reporting item and must be filled in.
- Member States are encouraged to submit the mandatory and the recommended information, including ex post data.

Consistency

- Make sure the description of the PaM matches with the implementation status, the assigned sectors, gases, policy instruments and scenario.
- Make sure that the years of data provided for ex ante and ex post are consistent with the stated implementation status and period.

Accuracy

- Check that the estimates for *ex post* and *ex ante* impact of PaMs are plausible. Compare savings to total historic or projected emission levels and expected target reductions could be an indication of the accuracy. The total impact of existing or additional (planned) policies could also be compared with the difference between respectively the without and existing measures projection, and the existing and additional measures projections. Due to overlapping effects, this check will serve as an indication if impacts are plausible.
- Ensure that there is a split of emission reductions covered under the EU Emission Trading System (EU ETS) and reductions covered under the Effort Sharing Decision (ESD, Table 2), where this is available. If a PaM only affects one of the sectors (either ETS or ESD), fill in the reduction for the relevant sector, and the same number under ‘Total’, as the other one is zero. This would be the case for an emission reduction from reduced fuel consumption in transport, which is relevant for the ESD sector.

⁶ Annex 5 – List of EU policies and measures that Member States should take into account when preparing projections .



Table 1: Sectors and gases for reporting on policies and measures and groups of measures, and type of policy instrument

1. Select the PaM ID

[Overview](#)

Single
1
Add Single

Group
Add Group

Table 1
Table 2
Table 3

PaM ID *

Purpose

Select the PaM ID. By default the PaM ID follows the order of the reporting sequence. It is also possible to adjust the PaM ID. This was the order of the PaMs can be adjusted to group PaMs. It is not possible to have the same ID more than once in the questionnaire.

Guidance

There are two options to order the PaMs:

- PaMs are given the correct, but not necessarily consecutive, ID number when added to the questionnaire for the first time, or;
- when all PaMs have been added to the questionnaire, the ID can be changed to reorganize the PaMs

There is no requirement to order PaMs in a certain way. This is only for the convenience of the reporters, so PaMs can be switched places and grouped if this is deemed appropriate.



2. Select whether a single PaM or a group of PaMs is reported

ANNEX XI
Monitoring Mechanism Regulation
Policies or Measures (PAMs)

English (en)

Overview

Single 1 Add Single

Group Add Group

Table 1 Table 2 Table 3

Name of PAM or group of PAMs: Energy labelling of household electrical appliances

Is this a single PAM or a group of PAMs? Single Group

ANNEX XI
Monitoring Mechanism Regulation
Policies or Measures (PAMs)

English (en)

Overview

Single 1 Add Single

Group Add Group

Table 1 Table 2 Table 3

Name of PAM or group of PAMs: Enter Title

This field cannot be empty

Purpose

It is necessary to decide if the PaM is a single PaM or a group of PaMs. The reporting of a single PaM is recommended, if sufficient information on impacts and costs (Table 2 and 3) is available on the policy level. If this information is not available on a single policy level, but for a group of PaMs, then the latter should be selected.

Guidance

The MMR allows the reporting of single PaMs or groups of PaMs. Deciding on whether a PaM should be reported as a single PaM or a group of PaMs can be based on the following characteristics:

Single PaM	Group of PaMs
<ul style="list-style-type: none"> • Unique policy intervention (e.g. mineral oil tax increase) • Pursuing a well identified and specific objective • Possible overlaps with other PaMs can be restrained • Monitoring and evaluation is possible • Impact can be estimated (<i>ex ante</i> and <i>ex post</i>) • Specific time-frame • Clear assignment to an implementing entity • Information on costs and benefits is available 	<ul style="list-style-type: none"> • Coherent set of individual measures • Following the same concrete objective (overarching framework like a national strategy) but with different implementing actions • Often use of the same type of instrument (e.g. public awareness measures, carbon tax) • Monitoring and evaluation is only possible on group level • Better data availability on group level to estimate impact • Data on costs and benefits only available on group level • Consists of specific, clearly identified mitigation actions



-
- Individual measures that are grouped belong to the same projections scenario (WEM or WAM).
-

A group of PaMs should always consist of PaMs that have also been reported as single PaMs, even when the available level of detail differs. When reporting information on a group of PaMs, the fields *objective*, *sector(s) affected* and *type of policy instrument* will be automatically filled on the basis of the information reported for the individual PaMs. The rest of the information to be filled in Table 1 for groups must be provided with the same level of detail as for individual PaMs.

Reporting on a group of measures is particularly relevant in case quantitative information (such as *ex post/ex ante* emission savings or costs) is only available for this package of measures, while the impacts of the individual measures included in the package are not available (due for example to strong interactions between these measures). However, all available estimates of impacts or costs should be reported: quantitative information can also be provided for single measures which are part of a group.

If a policy includes various implementing actions, which have different implementation or adoption dates, it is recommended to report this policy as a group of measures.

Good examples

Examples of groups of PaMs:

- ‘National strategy to increase energy efficiency in buildings’, includes:
 - Information campaign on energy savings for households;
 - Financial rebate for insulation work on existing homes;
 - New obligation on regular checks of boilers and stoves.
- ‘Plan on modal shift in transport’, includes:
 - Deployment programme of “park & ride” facilities;
 - Parking regulations;
 - Car sharing initiative;
 - Financial support for e-bikes;
 - Free public transport for commuters;
 - Awareness raising campaign.
- ‘Energy efficiency package in public bodies’, includes:
 - Renovation of central government buildings;
 - Green procurement by public bodies;
 - Financing of energy efficiency measures in public bodies.
- ‘Renewable Energy Action Plan’, includes:
 - Feed-in tariff for renewable energy;
 - Promotion of the use of biofuels.

Not recommended

Grouping of all measures included in one sector or grouping of all measures included in one scenario is not seen as appropriate, and will most probably be flagged up during the quality checks (unless the measures concerned form part of a coherent policy action). Not recommended examples are:

- Group: All measures [too general]
- Group: Waste group [too general, title does not provide sufficient information to understand the policy’s main idea]
- Group: With existing measures scenario for agriculture sector [main idea not clear, affiliation of single PaMs to one sector should not be the motivation to report it as a group of PaMs]
- Group: Renewable energy with additional measures [main idea not clear, avoid using the scenario definition in wording].
- Single: Group of energy efficiency measures [not coherent, should be reported as group]

Mandatory

Yes



3. Name of PaM or group of PaMs

ANNEX XI
Monitoring Mechanism Regulation
Policies or Measures (PAMs)

English (en) ▼

Overview

Single 1 Add Single

Group Add Group

Table 1 Table 2 Table 3

Name of PAM or group of PAMs •

Enter Title

▲ This field cannot be empty

Purpose

The name of policy or measure is key to allow reader to get a clear idea what the policy or measure is about.

Guidance

Each policy shall have a unique name, which allows clear understanding of what the measure is about. It must be comprehensible for interested members of the public and ideally should only consist of a few words.

If a reported PaM corresponds to a legal act (law, decree, regulation, etc.), it is good practice to report its exact name, preferably in English.

National measures should not have the same name as EU Directives, since Directives are supposed to be transposed in national law. An exception to this rule could be made for the EU ETS, which is an EU Directive implemented in a consistent manner EU-wide.

It is recommended to use the same names as those used to report information on PaMs under the UNFCCC (Biennial Update Reports, National Communication).

If an internal code is used, the name of the PaM must be added, otherwise it will not be understandable for others. If it is important to keep the national code it could be entered in brackets at the end of the PaM name. The name shall not exclusively consist of the reference to legal national/international documents, but provide information on what the legislation is about. The use of abbreviations will also hinder the comprehensiveness, especially abbreviations in the national languages.

Good examples

- 'Improvement of production efficiency in existing coal-fired power plants';
- 'Eco driving';
- 'Nitrate Action Plan';
- 'Taxation of energy products';
- 'Implementation of the EU Emissions Trading System';
- 'Financial support for improving the equipment and the technology of production in agriculture'.
- Emission reduction through livestock and feeding management

Not recommended

- 'Economic and tax tools'
This is too general, it does not indicate to which emission source the tools are referring, or to which products/services it relates, or what is the objective.
- 'Strategy for growth'
As single title it is too general, as it is normally associated to economic growth, whereby the linkage to climate change mitigation is not clear.
- 'IPPC'



Using abbreviations is not recommended, as these are not necessarily understood by others. Furthermore, the IPPC Directive is an EU law, which must have been transposed into national law. The purpose of the MMR is for Member States to report on their national laws. The link to an EU Directive can be made in a separate part of the questionnaire.

- '3rd party financing'
It is not clear what is financed by the 3rd party, so linkage to the action should be made. (e.g. 3rd party financing for efficiency improvements or for awareness raising).
- 'Regulating measures'
It is not clear to what these regulating measures refer to.
- 'WAM scenario Transport Sector'
This does not correspond to any specific policy.

Mandatory

Yes

4. Name of PaM or group of PaMs in national language

Purpose

To increase transparency, the name of the PaM can be added in the national language.

Guidance

Most Member States report their information on PaMs in English. This translation could make the link with the national PaM less clear. To increase transparency, it is possible to include the name in the national language. This will make the link between the entry in the questionnaire and the EEA PaM database, and other information sources (e.g. a national website on this PaM) clear.

Mandatory

No

5. Short description

Short description: *

⚠ This field cannot be empty

Purpose

Not all information that is relevant for the PaM database is captured in the different sections below. The short description should make it possible to have a good understanding of what the PaM is. The following questions should be answered in the short description:

- Which problem is the policy or measure addressing?
- What is the objective of the measure?
- What are the actions taken?
- How and when is it implemented?
- Who is responsible for implementation?

Guidance

The description shall provide a condensed explanation of how the PaM will deliver the policy objective, which is understandable for non-experts. This implies that the policy objective, the actions taken, and the



target group/sector are evident from the description. For example, how emission savings will be achieved and from which emission sources. This should be done as specific as possible. The length should be roughly 30-100 words.

Good examples

Examples of good descriptions (not necessarily good policies/measures!):

- ‘The measure stipulates minimum requirements as regards the energy performance of new and existing buildings, requires the certification of their energy performance and the regular inspection of boilers and air conditioning systems in buildings.’
- ‘“Better Home” is a new scheme from the Danish Energy Agency focusing on energy renovation of private homes. The aim is to make it easier for homeowners to energy renovate their homes by creating a “one stop shop” for energy renovation for private home owners, where the owner only has to contact one certified building contractor and to get an overall counselling on energy renovation of the entire building. Skilled workers are educated under the Better Home program to be advisors on energy renovation in private homes. The Danish Energy Agency educates and approves professionals like architects, engineers, craftsmen/women, energy consultants and building designers to advisors. A Better Home advisor can manage the process and can follow the project all the way from plan to completed renovation.’
- ‘Incorporate a price signal for carbon on the non-ETS sector, specifically fuels used for heating and transport. The tax applies to petrol, diesel, kerosene, marked gas oil (for agricultural use), Liquid Petroleum Gas (LPG), fuel oil, natural gas, coal and commercial peat.’
- ‘There are a number of waste measures whose overarching objective is to increase recycling/reuse and reduce harmful disposal. These include the Waste Framework Directive (2008/98/EC), Landfill Directive (1999/31/EC) and the UK Landfill Tax, an escalating tax on biodegradable waste. The Waste Framework Directive is the general framework of waste management requirements and sets rules governing the separate collection of waste. The Landfill Directive and the UK Landfill Tax sets rules governing the disposal of waste to landfill. There are other waste measures targeting other waste streams. The overall effect is reducing landfill of biodegradable waste and associated CH₄ emissions.’
- ‘The aim of the group of measures is to promote efficiency in the public transport system including: Eco-driving in buses; Efficiency in suburban electric rail; Efficiency in national rail network’

Not recommended

- ‘The objective of the particular agreement is to achieve in the company the energy saving of at least 10%.’
[The target is mentioned, but it is not described how this energy saving will be achieved and in which type of companies, commercial or industrial sector.]
- ‘Implementation of the best available techniques, promotion of environmentally friendly and effective practices and technologies in industrial activities and support for the development of environment-friendly and technically cost-effective methods for greenhouse gas emission reductions.’
[The actions are described in a very general way, so it is not clear by which means this will be achieved, or to which industrial sector this applies, or by whom its triggered and monitored (government, industries?). It is recommended to provide some more specific information.]
- ‘Policy includes: taxation of road vehicles proportional to CO₂ emissions, regulation on CO₂ from cars, energy labelling for cars and tyres, green public procurement, financial incentives for clean cars and promotion activities’
[This description includes many different elements, which is possible for the description of a group measures, but not suitable for a single measure description. If the listed actions are part of a coherent approach – like a transport strategy – it is recommended to be reported as a group.]
- ‘Reduction of amount of landfill waste and from CH₄ emissions from landfill sites’
[It would be good to provide information on how the amount of landfill waste will be reduced (enforced waste separation, other waste treatment, etc) and how the CH₄ emissions will be reduced (e.g. less C content in disposed waste, flaring of landfill gas, aeration, etc)]
- Supporting of energy saving 2008-2012 (Energy Efficiency)
[This is too general, as it does not provide information how energy savings will be achieved, and by which sector, who is the target group, which policy instruments will be used, etc.]



- The main aim is to decrease car traffic volumes especially in urban agglomerations. The tools of the management mobility are based on information, communication, organization and coordination. The constitution of the mobility management responded to the need of such approaches in the solution of the oppressive problem of considerably increasing mobility demand which simply do not rely on new road construction or introduction of the advanced technologies
 [It would be good, to provide more concrete information how car traffic volumes will be decreased. Currently it mainly describes the need for this policy, but the role of the constitution is not clear.]

Mandatory

Yes

6. Is the policy or measure envisaged with a view to limiting GHG emissions beyond the Member State commitments under Decision No 406/2009/EC?

Is the policy or measure envisaged with a view to limiting GHG emissions beyond the Member State commitments under Decision No 406/2009/EC? *

Yes No

▲ This field cannot be empty

Purpose

The answer to this question shall allow the EC to assess any PaMs, which might lead to an over-delivery by the respective Member States.

This information is also required according to the Effort Sharing Decision No 406/2009/EC in accordance with Article 6(1)(d) ‘information on planned additional national PaMs envisaged with a view to limiting greenhouse gas emissions beyond their commitments under this Decision and in view of the implementation of an international agreement on climate change, as referred to in Article 8.’ It allows assessing the need for additional EU PaMs in view of the greenhouse gas emission reduction commitments of the EU and of Member States in view of international agreement on climate change.

Guidance

Member States shall answer the question by either selecting ‘yes’ or ‘no’.

Mandatory

Yes

7. Sector(s) affected

Sector(s) affected: * ⓘ

Greenhouse gas(es) affected: * ⓘ

Select Sector(s)

- Energy consumption
- Transport
- Industrial processes
- Agriculture
- Land use, land-use change and forestry
- ...

Purpose

Here the sector(s) should be selected in which the impact on GHG emissions is most significant in affecting GHG emissions and removals. Indirectly affected sectors should not be selected. . An indication if the sector should be selected, might give the consideration if the impact of the PaM is detectable in the corresponding emission source/sink of the GHG inventory. Guiding questions to decide if a sector should



be ticked or not, are: “In which sector is this measure supposed to solve a problem?” “In which sector might the impact of the PaM be verifiable?”

If the selection of sectors is based on a different understanding, Member States are encouraged to provide information on their interpretation in the field ‘general comments’ at the end of Table 1. Further information can also be provided in the accompanying report (e.g. measure causes an emission decrease in one sector, and an increase in another).

Guidance

Select the sectors from the predefined list, more than one sector can be chosen.

Member States must select from the following sectors:

- Energy supply (comprising extraction, transmission, distribution and storage of fuels as well as energy and electricity production);
- Energy consumption (comprising consumption of fuels and electricity by end users such as households, services, industry and agriculture);
- Transport;
- Industrial processes (comprising industrial activities that chemically or physically transform materials leading to greenhouse gas emissions, use of greenhouse gases in products and non-energy uses of fossil fuel carbon);
- Agriculture;
- Forestry/LULUCF;
- Waste management/waste;
- Cross-cutting;
- Other Sectors.

Good practice is to be consistent with the reporting under the UNFCCC (Biennial Reports, National Communication).

Good examples

- Use of agricultural waste as energy source: In this case the GHG emissions from the energy sector will be influenced. The agricultural sector is merely providing the resource. But if the agricultural waste has contributed to emissions through e.g. biological degradation, before the PaM was implemented the agriculture sector should be selected as well.
- Use of captured methane for electricity production: This concerns the waste and the energy sector, as CH₄ emissions are avoided by capturing and the fossil fuels can be replaced to a certain extent by biogas use.
- Installation of waste incineration plant: This concerns the waste and the energy sector, assuming that the waste was deposited on landfills and emitted during degradation, before the implementation of the PaM. The energy sector is relevant as waste incineration with energy recovery is part of the energy sector.
- Renewable energy for domestic heating: This PaM influences emissions from CRF category 1A4, assuming that renewable energy replaces the use of fossil fuels in residential buildings for heating. Therefore energy consumption should be selected. The energy supply sector should be ticked additionally if the renewable energy is centrally produced and then distributed to households.
- Use of biofuels: The main impact of this PaM is with the transport sector, therefore it should be selected. The energy supply sector (which includes the emissions of a biorefinery) is only of minor importance and it should not be selected.

Mandatory

Yes



8. Greenhouse gas(es) affected

Greenhouse gas(es) affected: *

Objective(s) *

Quantified Objective

Carbon dioxide (CO2)

Methane (CH4)

Nitrous oxide (N2O)

Hydrofluorocarbons (HFC)

Perfluorocarbons (PFC)

Sulfur hexafluoride (SF6)

Purpose

The purpose is to understand on which GHG the PaM will have a significant impact.. More than one can be selected.

Guidance

The most relevant GHGs shall be selected, e.g. agricultural measures commonly target either N2O or CH4 emissions but hardly CO2. Also waste measures mainly target CH4 emissions. Combustion measures relate to CO2 emissions.

Guiding questions are: “Which of the GHG(es) will change most due to the implementation of the PaM? What is/are the key GHGs affected by the PaM?” In most cases, this question can be answered by selecting one or two GHGs, other GHGs with minor impact can be neglected.

If also other gases are selected (maybe because you have calculated also the effects for other gases), an explanation to the ‘general comment’ field at the end of Table 1 should be added

Good examples

PaM: ‘National Climate change action programme’ all GHGs can be selected.

PaM: ‘Fuel switching in power plants’: CO2 is selected.

PaM: ‘Increased waste incineration’: select CH4 as less waste is deposited and emits less CH4, but also CO2 due to the combustion.

PaM: ‘Feeding measures for cattle’: select CH4 as main emission from enteric fermentation.

Not recommended

Selection of gases which are not emitted by the concerned emission source or sink (e.g. CO2 for measures from waste water)

Mandatory

Yes

9. Objective(s)

Objective(s) *

Select Objective(s)

Select Objective(s)

▲ This field cannot be empty

Purpose

Following the Commission Implementing Regulation (EU) 749/2014, all the relevant objectives should be selected concerned by the policy or measure. Several predefined objectives per sector can be selected.



Guidance

Member States shall select from the following objectives (more than one objective can be selected, additional objectives could be added and specified under ‘other’):

Energy supply:

- Increase in renewable energy;
- Switch to less carbon-intensive fuels;
- Enhanced non-renewable low carbon generation (nuclear);
- Reduction of losses;
- Efficiency improvement in the energy and transformation sector;
- Carbon capture and storage;
- Control of fugitive emissions from energy production;
- Other energy supply

Energy consumption:

- Efficiency improvements of buildings;
- Efficiency improvement of appliances;
- Efficiency improvement in services/tertiary sector;
- Efficiency improvement in industrial end-use sectors;
- Demand management/reduction;
- Other energy consumption.

Transport:

- Efficiency improvements of vehicles;
- Modal shift to public transport or non-motorized transport;
- Low carbon fuels/electric cars;
- Demand management/reduction;
- Improved behaviour;
- Improved transport infrastructure;
- Other transport.

Industrial processes:

- Installation of abatement technologies;
- Reduction of emissions of fluorinated gases;
- Replacement of fluorinated gases by other substances;
- Improved control of fugitive emissions from industrial processes;
- Other industrial processes.

Waste management/waste:

- Demand management/reduction;
- Enhanced recycling;
- Enhanced CH₄ collection and use;
- Improved treatment technologies;
- Improved landfill management;
- Waste incineration with energy use;
- Improved wastewater management systems;
- Reduced landfilling;
- Other waste.

Agriculture:

- Reduction of fertilizer/manure use on cropland;
- Other activities improving cropland management;
- Improved livestock management;
- Improved animal waste management systems;
- Activities improving grazing land or grassland management;
- Improved management of organic soils;
- Other agriculture.

Forestry/LULUCF:

- Afforestation and reforestation;
- Conservation of carbon in existing forests;



- Enhancing production in existing forests;
- Increasing the harvested wood products pool;
- Enhanced forest management;
- Prevention of deforestation;
- Strengthening protection against natural disturbances;
- Substitution of GHG intensive feedstocks and materials with harvested wood products;
- Prevention of drainage or rewetting of wetlands;
- Restoration of degraded lands;
- Other LULUCF.

Cross-cutting:

- Framework policy;
- Multi-sectoral policy;
- Other cross-cutting.

It is important that for each of the selected sector(s) at least one corresponding objective is selected.

Select the option 'other' only, if the predefined objectives of the drop-down menu are not appropriate.

In that case an additional field will open, where the objective (but not actions, activities or instrument types) should be formulated.

Mandatory

Yes

10. Quantified objective

Quantified Objective ⓘ

Purpose

The knowledge of a quantified objective allows a better understanding of the ambition and the envisaged impact.

Guidance

If the policy has one or more quantified objectives, the figure(s) shall be entered, whereby it is important to also include the units and timeframe. For example:

- GHG reduction in the sector agriculture of 10% by 2030 (compared to 2010);
- Stabilisation of gross inland energy consumption at the level of 2005, which is 3000PJ);
- Share of electric vehicle in total fleet in 2030 of 40%.

The objective should focus on the key purpose and benefit of the PaM.

Mandatory

Yes (if the objective is quantified)



11. Type of policy instrument

Type of policy Instrument: *

Union policy which resulted in the implementation of the PAM: * ⓘ

- Economic
- Fiscal
- Voluntary/negotiated agreements
- Regulatory
- Information

Purpose

It facilitates understanding of how the measure is implemented.

Guidance

Member States shall select from the following policy implementation types (more than one can be selected)

- **Economic:** a PaM that provides an economic incentive to reduce GHG emissions. This includes measures such as infrastructure programmes, subsidies, investment programmes, feed-in tariffs, loans/grants and trading schemes (e.g. ETS), charges and fees for non-beneficial actions (e.g. waste fees or congestion charges etc).
- **Fiscal:** a PaM that provides a financial incentive via taxes. This includes both increases and decreases in taxes.
- **Voluntary/negotiated agreements:** a binding or voluntary standard/regulation as in regulatory and information measures, but agreed between regulators and target group (e.g. automotive industry, farmers).
- **Regulatory:** measures that set binding standards and regulations or permitting systems. This includes for instance building regulations, eco-design standards, establishment of permit and inspection procedures.
- **Information:** measures such as labelling, awareness rising, voluntary standards. The objective is to disseminate information to the general public or specific target groups.
- **Education:** measures such as training programmes, workshops, seminars at all levels (e.g. primary school, adult education, off-the-job training)
- **Research:** includes the provision of funds to allow for research programmes and demonstration projects for private and public institutions
- **Planning:** measures such as waste management plan, transport plan, urban planning, land use plan, which direct the development of the subject in a specific direction (ideally climate friendly and sustainable)
- **Other:** measures that do not fit in any of the above.

Largest ambiguity is when to use economic and when to use fiscal. Taxes should always be considered as fiscal instruments, even if the sole objective of the tax is to provide a financial incentive to reduce GHG emissions (and not to increase tax revenue).

If the selection of 'type of instrument' is based on a different understanding, Member States are encouraged to provide information on their interpretation in the field 'general comments' at the end of Table 1. Further information can also be provided in the accompanying report.

Mandatory

Yes



12. Union Policy which resulted in the implementation of the PaM

Union policy which resulted in the implementation of the PaM: *

Related
 Non related

✖ Other (Union policy not listed above or additional Union policy)
 ✖ Effort Sharing Decision 406/2009/EC

Other Union Policy 1

This field cannot be empty

Other Union Policy 2

This field cannot be empty

Purpose

Some Member States' PaMs are the result of implementation of EU legislation, and some are national PaMs. In order to find out about if and how EU legislation is implemented in Member States and which domestic measures are set by the Member States independently, this information is needed.

Guidance

Member States shall select a policy from the predefined list which opens when clicking on the white field. Member States shall select the European Union policy (or policies) implemented through the national policy or where national policies are aimed directly at meeting objectives of Union policies. More than one Union policy can be selected. The selection should be limited to these Union policies directly related to the national mitigation measure.

Secondary Union policy: Member State shall indicate any Union policy not listed in the previous column or an additional Union policy if the national policy or measure relates to several Union policies.

If the appropriate Union policy is not listed, 'other' can be chosen, then an additional white field will appear where additional Union policies can be entered.

If the PaM is not related to a Union policy, i.e. it is a national policy, then the option 'PaM not related to Union policies' should be selected.

Guidance on when to select an Union policy:

- 1) A national PaM that is the translation of Union policy into national legislation (e.g. eco-design).
- 2) A national PaM that is implemented in direct response to a Union policy (e.g. implementation of the EU ETS).
- 3) A national PaM that was implemented to achieve an EU target (e.g. an energy efficiency subsidy to achieve the EE target).

This would mean that chronologically, the national PaM should follow after the Union policy, although in certain cases national PaMs could have been implemented in response to a planned Union policy and therefore precede the Union policy.

A Union policy should NOT be selected in case a national PaM contributes to the achievement of an EU target, but was not implemented specifically for this or existed already before the Union policy being in force. For instance, numerous policies will contribute to the achievement of the Effort Sharing Decision, although few will be specifically implemented by the Member States in response to this policy.

One or more of the following Union policies can be selected:

CROSS-CUTTING

- "Effort Sharing Regulation": "Effort Sharing Regulation EU 2018/842",
- "ETS_directive": "EU ETS directive 2003/87/EC as amended by Directive 2008/101/EC, Directive 2009/29/EC and Directive 2018/410 and implementing legislation, in particular 2010/2/EU, 2011/278/EU, 2011/638/EU, 176/2014/EU, and Decision (EU) 2015/1814",
- "Effort_Sharing_Decision": "Effort Sharing Decision 406/2009/EC",



- “Multiannual_Financial_Framework”: “Provisions on the European Regional Development Fund, the European Social Fund, the Cohesion Fund, the European Agricultural Fund for Rural Development and the European Maritime and Fisheries Fund under the Multiannual Financial Framework”
- “ESD_AEA_Decision”: “ESD Annual Emission Allocation (AEA) Decision 2013/634/EU and Commission Decision (EU) 2017/1471 amending Decision 2013/162/EU”

ENERGY CONSUMPTION

- "Energy_Efficiency_Directive": "Energy Efficiency Directive 2012/27/EU and amended by Directive 2018/2002", "Recast_of_EPBD": "Recast of the Energy Performance of Buildings Directive (Directive 2010/31/EU) and amended by the Directive 2018/844",
- "Eco-design_Labelling_directives": "Eco-design framework Directive 2009/125/EC, 2008/28/EC and its implementing Regulations, combined with Labelling Directive 2017/1369 repealing 2010/30/EC",
- "End-use_and_energy_services": "Directive 2006/32/EC on end-use energy efficiency and energy services",
- "Energy_Star_Program": "Energy Star Program",

ENERGY SUPPLY

- "RES_directive": "RES directive 2009/28/EC and RES recast (Directive 2018/2001)",
- "Geological_storage": "Directive on the geological storage of CO2 2009/31/EC",
- "Cogeneration_Directive": "Cogeneration Directive 2004/8/EC",
- "Energy_Taxation_Directive": "Energy Taxation Directive 2003/96/EC",
- "Internal_energy_market": "Completion of the internal energy market (including provisions of the 3d package)",

TRANSPORT

- “Alternative_Fuel_Directive”: “Directive on the deployment of alternative fuels infrastructure 2014/94/EU”
- "Eurovignette_Directive": "Eurovignette Directive on road infrastructure charging 2011/76/EU",
- "FQD": "Fuel Quality Directive 2009/30/EC",
- "Clean_and_Energy_Efficient_Vehicles": "Directive on the Promotion of Clean and Energy Efficient Road Transport Vehicles 2009/33/EC",
- "CO2_and_cars_and_vans_regulations": "Regulation on CO2 from cars and vans (2009/443/EC, (EU) No 510/2011, (EU) No 397/2013, (EU) No 333/2014, (EU) No 253/2014, 2013/128/EU, (EU) No 396/2013, (EU) No 114/2013)",
- "Euro_6_for_HDV": "Regulation Euro VI for heavy duty vehicles 2009/595/EC",
- "EURO_5_and_6": "Regulation Euro 5 and 6 2007/715/EC",
- "Biofuels_directive": "Biofuels directive 2003/30/EC",

INDUSTRIAL PROCESSES

- "Fgas_regulation": "F-gas Regulation 517/2014",
- "MACs Directive": "Mobile Air-conditioning system (MACs) Directive 2006/40/EC",
- "F-gas_Regulation": "F-gas Regulation 2006/842/EC",

AGRICULTURE

- "CAP_Reform": "CAP Reform 2014-2020: Regulation 1305/2013; Regulation 1306/2013; Regulation 1307/2013 and Regulation 1308/2013, and their transitory measures for 2014 (Regulation 1310/2013, 2006/144/EC",
- "Cap_reform": "CAP Reform 2013 regulations: Rural Development (1305/2013), 'Horizontal' issues (1306/2013), Direct payments (1307/2013) and Market measures (1308/2013)",
- "CAP_Health_Check_and_Set_aside": "CAP “Health Check” 2008 and the “Set aside” regulation 73/2009",



- "Nitrate_Directive": "Nitrate Directive 1991/676/EEC",

WASTE

- "Waste_Management_Framework_Directive": "Waste Management Framework Directive 2008/98/EC, amended by Directive 2018/851",
- "Waste_Directive": "Waste Directive 2006/12/EC",
- "Waste incineration Directive": "Waste incineration Directive 2000/76/EC 2000/76/EC",
- "Landfill_Directive": "Landfill Directive 1999/31/EC, amended by Directive 2018/850",

LULUCF

- "LULUCF_Regulation": "LULUCF Regulation 2018/841",
- "LULUCF_Decision": "LULUCF Decision No 529/2013/EU",

OTHER

- "IED": "Industrial emissions Directive 2010/75/EU (Recast of IPPC Directive 2008/1/EC and Large Combustion Plant Directive 2001/80/EC) and its associated Best Available Technique Reference Documents",
- "NEC": "Directive 2016/2284 on the reduction of national emissions of certain atmospheric pollutants, amending Directive 2003/35/EC and repealing Directive 2001/81/EC",
- "Water_Framework": "Water Framework Directive 2000/60/EC",
- "Other_EU": "Other (Union policy not listed above or additional Union policy)",
- "Medium_Combustion_Plant_Directive": "Medium Combustion Plant Directive 2015/2193"

Any reference to a title of legislation transposing EU law should be in line with the title notified for EurLex in the overview of the national transposition. For example for RES directive 2009/28/EC: <http://eur-lex.europa.eu/legal-content/EN/NIM/?uri=CELEX:32009L0028&qid=1475670249990>

Mandatory

Yes

13. Status of Implementation

Status of Implementation: *

Implementation Period:

- Planned
- Adopted
- Implemented
- Expired

This field cannot be empty

Purpose

The status reflects at which stage of implementation the policy is, whether the policy is in the planning stage, adopted, implemented or expired.

Guidance

Member States shall select from the following categories:

- Implemented: national legislation is in force, financial resources have been allocated, one or more voluntary agreements have been established



- Adopted: clear commitment to proceed with the implementation, official government decision has been made;
- Planned: PaMs under discussion, realistic chance of being adopted and implemented in the future ;
- Expired: legislation expired, funding has stopped or agreements have expired.

The status should correspond to the projections scenario that the policy impact should be captured under. All impacts of PaMs in the WEM (with existing measures) scenario should be ‘implemented’ or ‘adopted’, whereas for the PaMs in the WAM (with additional measures) scenario the status should be ‘planned’.

Expired PaMs should be reported in the template only if they still have a substantial impact on GHG emissions in the WEM scenario (i.e. in a potential WOM scenario the impact of expired PaMs is not considered).

If for an existing policy a significant change is planned, it is recommended to enter it as a new policy, so it becomes visible as a *planned* measure.

- ! A group of measures should only include measures which are attributed either to the WEM or to the WAM scenario.

Further definitions can be found in Annex 4 – Glossary

Mandatory

Yes

14. Implementation Period

Implementation Period:	Start *	Finish
	2010	2020

Purpose

Here the time period (start year and end year) during which the policy will be/is/was implemented shall be entered. This may be different from the time period during which the policy impacts GHG emissions.

Guidance

The start of the implementation period is the year the policy is implemented at national level. It could be possible that the policy consists of several instruments with a different starting date (e.g. if a national policy needs to be implemented in different regions). In this case the start year of the overarching policy should be considered. Existing PaMs (expired and implemented) have a start year in the past, and adopted or planned PaMs have a start year in the future.

The finish year is the date the policy is currently planned to run until, and not the year when the impacts of the policy are projected to persist until (which may be longer than the implementation period). For policies that have already expired this is the date the policy ended, or was replaced. If the policy does not expire or end in a specific year leave the field empty.

Considering that the implementation status and the start and/or end year of the PaM are closely linked, some combinations are not consistent (e.g. a PaM starting in 2012 cannot be planned). The questionnaire checks consistency of the implementation status and the start and/or end year and signals when reporting is conflicting.

In case, the implementing actions have different time periods or an existing measure has been changed (e.g. change in tax value), there are two possibilities: (1) Either the overarching dates are used and any update(s) are explained in the short description, or (2) a new policy is added (e.g. increase in fuel tax), and the “old” one is treated as expired. The choice on this is depending on the policy and the importance which is attributed to this change.

Additional information can be provided in the textual description in the accompanying report and in the text box below the start and end year entry. You can use this box to add any additional information or clarification on the start or end year, for example if it is not known.

**Mandatory**

Yes (start year)

15. Projections scenario in which the PaM is included

Projections scenario in which the PaM is included: *

Entities responsible for implementing the policy: *

With existing measures

With additional measures

Without measures scenario

Not included in a projection scenario

Purpose

Each PaM shall be allocated to the projection scenario, in which the impact is taking effect.

Guidance

Member States shall select one scenario:

- With existing measures, shall encompass currently implemented and adopted PaMs. In that case the status must be implemented or adopted.
- With additional measures, also encompass planned PaMs. In that case the status must be planned and the implementation period must be in the future.
- Without measures scenario, excludes all PaMs implemented, adopted or planned after the year chosen as the starting point for this projection. This is a voluntary reported scenario, which contains only measures which have been implemented before the chosen reference year.

Not included in a projection scenario: For some measures it might not be possible to allocate them to a specific scenario, e.g. projections have already been finalised, and a specific policy has not been considered in the projections due to time constraints. If possible, the use of this option should be avoided, and if yes it is encouraged to provide a reason for it.

Mandatory

Yes

16. Entities responsible for implementing the policy

Entities responsible for implementing the policy: *

Indicators used to monitor and evaluate progress over time (ex-post or ex-ante):

Entity 1

Type

Select Type

National government

Regional entities

Local government

Companies / businesses / industrial associations

Research institutions

Name

Unit

Year #1: Year #2: Year #3:

Purpose

For each policy or measure one or more entities are responsible for the implementation e.g. for setting the regulations needed, providing the funding, , planning, monitoring, evaluation.

Guidance



Member States shall choose the relevant entity responsible for the implementation and enter the specific name of the entity (e.g. Ministry for Agriculture) in the empty field. More than one entity can be selected:

- National government;
- Regional entities;
- Local government;
- Companies/ businesses/industrial associations;
- Research institutions;
- Others not listed.

Report only entities that are responsible for the actual implementation of the PaM, and not entities who are benefitting or just concerned by the PaM (e.g. Companies profiting from a subsidy should not be included).

Mandatory

Yes

17. Indicators used to monitor and evaluate progress over time (*ex post* or *ex ante*)

Indicators used to monitor and evaluate progress over time (*ex post* or *ex ante*):

Indicator 1		Unit	
Description			
share of electric vehicles in fleet		%	
Year #1:	Year #2:	Year #3:	Year #4:
2010	2015	2020	2025
Value #1:	Value #2:	Value #3:	Value #4:
1%	3%	10%	25%

Purpose

For each policy or measures any indicator that has been used to project, monitor and evaluate progress of PaMs shall be provided, including the indicator values for the years available. Those values can be either *ex post* or *ex ante*.

Guidance

One or more indicators shall be given, if used for monitoring and evaluation of progress over time.: The 'description' field requires the name of the indicator and the 'unit' field the corresponding unit (e.g. t CO₂ eq., number of cars, %, number of CHP installations, energy consumption, etc.). The description field should include a reference to the underlying data. In the boxes below, indicator values for 4 specified years can be entered, whereby it is important that the value corresponds to the unit entered above. The indicators can refer to the past (*ex post*) or to projected development (*ex ante*). The year for which the value applies shall be specified as well.

Note, that specific indicators are also reported following Annex 3 of the MMR, and that also the implementing regulation in Annex XII-Table 2 asks for 'Indicators to monitor and evaluate projected progress of PaMs'. These indicators can also be reported hereunder, if appropriate.

Good examples

- Number of people trained;
- Number of organic farms;
- Share of electric vehicles in fleet;
- Energy consumption (GJ) in households;
- Average fuel consumption per car;
- Emission per dairy cow.

Mandatory

Yes (if used)



18. Reference to assessments and underpinning technical reports

Reference to assessments and underpinning technical reports:	Reference
	URL:

Purpose

This is to provide access to any underlying reports, studies, webpages which provide further information on the policy in general, but also information on how the underlying data has been gained.

Guidance

Member States are encouraged to enter here the title of any underlying reports, webpages, etc., together with the URL of the webpage. More than one reference can be added.

Mandatory

No

19. General comments

General Comments:	
-------------------	--

Purpose

Member States have the possibility to provide any remarks, comments, explanations etc. to increase the transparency and comprehensiveness of the reported PaM- or any additional policy relevant information which was not possible to provide in the boxes above.

Guidance

Here the following issues could be mentioned:

Explanation, if one of the fields above is interpreted differently and therefore not following the recommendations of the guidelines.

Reference to the accompanying report providing further information on general national PaM situation or information on specific PaMs.

Any background information relevant for the PaM

This field can also be used for e.g. name or organisation that provided the information for this policy for reference use by the Member States.

Mandatory

No



Table 2: Available results of ex ante and ex post assessments of the effects of individual or groups of policies and measures on mitigation of climate change

A specific guidance on the assessment of *ex ante* and *ex post* effects is not available, but compiled useful literature can be found in



Annex 6 – List of references on the evaluation of policies and measures.

Generally speaking there are two approaches, bottom-up and top-down. The bottom-up approach assesses the effects of individual PaMs, and the top-down approach tries to disaggregate individual policy effects from annual total GHG emissions.

Bottom-up Approach:

Art. 20(e) of the Commission Implementing Regulation ((EU) No 749/2014) requires the reporting of “the description of the process for selecting assumptions, methodologies and models for policy evaluation, and for making projections of anthropogenic greenhouse gas emissions”. This requirement implies that PaM evaluation and compilation of projection cannot be seen as detached products. The assumptions taken for the development of activity data and/or emission factors (necessary for projections), which include the expected impact of a specific PaM should be used as a starting point to estimate the *ex ante* effects of PaMs. In many cases it might be possible to use the methods described in the 2006 IPCC Guidelines to estimate the effects of an individual PaM or a group of PaMs.

Outline of a possible approach to estimate the effect of a policy:

- (1) First the data (activity data, emission factor, other parameter), which is influenced by the policy, has to be identified.
- (2) Then the values for the change have to be determined, based on assumptions (whereby these should be documented) for the appropriate time series.
- (3) Calculation of emissions following the methodology applied for the inventory with two datasets (one considering the impact of the PaM and one not considering the impact of the PaM).
- (4) Comparison of the results indicates the effect of a PaM

Some simplified examples:

- Measure to reduce the amount of waste deposited: Assuming that the amount of waste deposited decreases each year by 2 %, *ex ante* emission values can be calculated and compared with emission values when the amount of waste deposited is kept constant.
- Mineral oil tax increase: Assuming how the tax increase will influence consumption of mineral oil (activity data) and calculate sectoral emissions using unchanged data and assumed activity data.

Top-down modelling:

This requires the emission values in the specific years of a ‘Without Measures’ (WOM) scenario, ‘With Existing Measures’ (WEM) scenario and a ‘With Additional Measures’ (WAM) scenarios as a starting point. To estimate the impact of existing and adopted measures, the difference between WOM and WEM (respectively WEM and WAM for planned measures) on sector level is analysed, and serves as an indication to the impact of the PaMs included hereunder. This approach has several challenges, and is therefore in many cases not applicable. These challenges are: WOM scenario is not available, overlaps with external drivers impacting emissions (e.g. GDP, heating degree days), impacts of PaMs are often interacting and cross-sectoral. The top-down approach is used for quality checking of the PaM reporting, which compares the total impact of PaMs with relevant projection scenario.

Member States shall include all the PaMs or groups of PaMs for which an assessment of *ex ante* and *ex post* effects is available.



1. Policy impacting EU ETS or ESD emissions

Policy impacting EU ETS or ESD emissions: *

Ex-ante assessment

|

EU ETS

ESD

Land use, land-use change and forestry

Purpose

Allocation of policy to EU ETS, ESD or Land use, land-use change and forestry emissions/sinks.

Guidance

In general the EU Emission Trading Scheme, covers emissions from Sector 1 ‘Fuel Combustion’ and Sector 2 ‘Industrial processes and product use’, and is therefore relevant for all measures targeting power plants and industrial installations covered in the EU ETS.

Note that policies affecting electricity consumption by end users, affect EU ETS emissions, as electricity production is covered in the sector “Electricity and heat production (CRF 1A1). All other sectors (Transport except domestic aviation (CRF category 1A3 minus 1A3a), agriculture (CRF Sector 4), emissions from households (CRF category 1A4+1A5), waste) is covered under the Effort Sharing Decision (EC 406/2009/EC). A table listing the allocation of all CRF categories and GHGs either to ESD or ETS is provided at <http://cdr.eionet.europa.eu/help/mmr> in the document ‘Guidance for reporting of ETS and ESD projections’.

For all policies targeting the LULUCF sector, LULUCF should be chosen.

More than one item can be selected. Complete this field even if quantitative information is missing.

Mandatory

Yes

2. Ex ante assessment

Ex-ante assessment

GHG emissions reductions for year 2020 (kt CO2-equivalent per year)		
EU ETS	ESD	Total
<input type="text"/>	<input type="text"/>	<input type="text"/>
GHG emissions reductions for year 2025 (kt CO2-equivalent per year)		
EU ETS	ESD	Total
<input type="text"/>	<input type="text"/>	<input type="text"/>
GHG emissions reductions for year 2030 (kt CO2-equivalent per year)		
EU ETS	ESD	Total
<input type="text"/>	<input type="text"/>	<input type="text"/>
GHG emissions reductions for year 2035 (kt CO2-equivalent per year)		
EU ETS	ESD	Total
<input type="text"/>	<input type="text"/>	<input type="text"/>
Documentation/ Source of estimation if available		
Reference <input type="text"/>	Weblink <input type="text"/>	<input type="button" value="OK"/>

Purpose

Reporting the effect of a policy or measure in specified future years on GHG emissions reductions.

Guidance

A quantitative estimate of the expected impact of the policy or measure in the given years (2020, 2025, 2030, 2035) shall be reported in kiloton (kt) CO2 equivalent per year (same as Gg CO2 equivalent per year), where available. Note, that the effects shall not be reported as cumulative values, instead as an estimated emission reduction in the specific year. If only cumulative values are available, note this in the



'documentation box' and provide the cumulative estimates and background information in the accompanying report.

The estimated GHG reduction can be allocated to EU ETS, ESD and/or Total, whereby the sum of EU ETS and ESD should be the same as the total (except if LULUCF is included). In most cases the GHG reductions of a policy will be entered either to EU ETS or ESD. It is only possible to enter numbers.

Further information on the *ex ante* assessment (e.g. overlap with other measures, underlying assumptions, uncertainty) should be provided in the accompanying report.

A specific guidance on the assessment of *ex ante* impacts is currently not available, but compiled useful literature can be found in Annex 6.

Mandatory

Yes (where available)

3. *Ex post* assessment

Ex-post assessment

GHG emissions reductions (kt CO₂-equivalent per year):

Year for which reduction applies: Average emission reduction:

Explanation of the basis for the mitigation estimates: *

Factors affected by PaM: *

Documentation/ Source of estimation if available:

Reference: Weblink:

Purpose

Reporting estimates of the GHG mitigation effect of a policy or measure for one or more past years (*ex post*).

Guidance

The effect of the implemented PaM shall be entered, whereby the year can be freely chosen, and the average emission reduction must be given in kt CO₂ eq per year. If data are available for more than one year, more fields can be added.

An explanation of the basis for the mitigation estimates must be provided, such as: Detail for the methodology used to estimate the emission reduction e.g. calculated against a national business-as-usual projection or calculation based on extrapolation of the trend seen in the year(s) before implementation of the policy.

The field "Factors affected by the PaM" foresees a brief description of the factors affected by the measure resulting in the emission reduction or additional saving e.g. change in activity data or change in emission factors.

The field "Documentation/ Source (reference) of estimation if available" requires the title and the web link of a report/document where the *ex post* estimate of emission reduction has been referenced from. Or if this is not available, the type of methodology used for example, top-down model, bottom-up model, accounting model, expert judgement, etc.

A specific guidance on the assessment of *ex post* impacts is currently not available, but useful literature has been compiled in Annex 5.

Mandatory

Yes (where available)

Table 3: Available projected and realised costs and benefits of individual or groups of policies and measures on mitigation of climate change

Specific guidance on the assessment of *ex ante* and *ex post* impacts is currently not available, but useful literature can be found in Annex 6 – List of references on the evaluation of policies and measures.



Member States are encouraged to report available data on costs and benefits, as long as the description specifies and explains the data provided.

Simple guideline to estimate costs and benefits:

- List all costs and benefits related to the mitigation measure (costs: investment cost, wages, taxes, time, human resources, operating expenses ,etc; benefits: less time needed, less emissions, higher employment rate, improved health, etc.)
- Try to link the collected costs and benefits to monetary values, at least for the ones which are expected to have significant influence on the costs or benefits
- Then calculate the net costs (costs minus benefits)

As this general procedure allows great latitude, it is important to document all data sources and assumptions. This ensures transparency, which is especially important as the outcome depends very much on the input considered.

1. Projected costs and benefits

Projected costs and benefits	Cost	Benefit	Net cost
	Costs in EUR per tonne CO ₂ eq reduced/ sequestered:	Benefits in EUR per tonne CO ₂ eq reduced/ sequestered:	Net costs in EUR per tonne CO ₂ eq reduced/ sequestered:
	<input type="text"/>	<input type="text"/>	<input type="text"/>
	Absolute costs per year in EUR:	Absolute benefit per year in EUR:	Net Cost per year in EUR:
	<input type="text"/>	<input type="text"/>	<input type="text"/>
	Year(s) for which cost has been calculated: 	<input type="text"/>	
	Price reference year:		
	<input type="text"/>		
	Description of cost estimates (basis for cost estimate, what type of costs are included in the estimate, methodology): 		
	<input type="text"/>		
	Documentation/ Source of cost estimation:		
	Reference:	Weblink:	
	<input type="text"/>	<input type="text"/>	

Purpose

Information on expected costs and benefits compared to counterfactual scenario due to the implementation of the policy.

Guidance

For reporting of projected costs, the year for which costs have been calculated must be in the future. Six parts should be filled, if the information is available.

The year(s) for which costs have been calculated, whereby also a range of years can be given. If a range of years is given, the absolute costs per year shall be given as the average over this period.

The price reference year (a year in which the price index equals 100), should be entered to set a benchmark. If current (unadjusted, nominal prices as actually observed year by year) costs have been calculated, the price reference year should be the same as the ‘year(s) for which cost has been calculated’.

For example, if a measure was implemented in 2012, and at that point of time the costs for the years 2015-2020 have been estimated at 5 million EUR (in 2012 values), one would fill in the following:

- year(s) for which costs have been calculated: 2015-2020
- price reference year: 2012
- absolute costs per year in €: 1 000 000 €



Costs in € per tonne CO₂ equivalent and absolute costs per year in €. Cost should be entered as positive values. Costs could include administrative costs, implementation costs, investment costs, etc⁷.

Benefits can be filled as benefits in € per tonne CO₂ and/or absolute benefit per year in €. A benefit must be indicated as a negative cost. Benefits include reduced energy consumption, monetary benefits from better public health, higher tax revenues, etc⁷.

Net Costs are the costs less the benefits, and can be given as net costs in € per tonne CO₂ equivalent and/or as net cost in € per year.

Description of cost estimate should provide a brief description of the type of methodology used to calculate the costs, as well as details of the costs included and excluded in the estimate. For example, it may include cost for a ministry to run the training programme, however not the costs incurred by individuals conducting the workshop. Alternatively it may include both costs. Regardless of the selection, the user is encouraged to provide an as detailed description as possible. Documentation/Source of Information: The title and/ or the web link of a report/ document where the quantitative cost estimate of emission reduction has been referenced from. Or if this is not available, the type of methodology used for example, cost-benefit-analysis, accounting model or expert judgement.

Mandatory

Yes (where available)

2. Realised costs and benefits

Cost	Benefit	Net cost
Costs in EUR per tonne CO ₂ eq reduced/ sequestered: 15	Benefits in EUR per tonne CO ₂ eq reduced/ sequestered: -12	Net costs in EUR per tonne CO ₂ eq reduced/ sequestered: 3
Absolute costs per year in EUR: 500000	Absolute benefits per year in EUR: -360000	Net Cost per year in EUR: 140000
Year(s) for which cost has been calculated: 2010-2015	Year(s) for which benefits has been calculated: 2010-2015	Year(s) for which net cost has been calculated: 2010-2015
Price reference year: 2010		
Description of cost estimates (basis for cost estimate, what type of costs are included in the estimate, methodology): The cost and benefit estimate is based on a study carried for this specific policy, whereby data from the statistical Office and the involved industrial installations have been used. The costs include investments needed for efficiency improvement (electrity metering, detection of electricity surface leakage, energy saving installations, energy saving campaigns, etc.). The benefits are based on electricity costs per saved kWh.		
Documentation/ Source of cost estimation: Reference: Impact assessment of energy efficiency program Weblink: www.energyefficiency.xy		

Purpose

Information on realized costs and benefits due to the implementation of the policy.

Guidance

For reporting of realized costs, the year for which costs have been calculated must be in the past. For guidance on how to fill this part, please see the section above 'Projected costs and benefits'.

Mandatory

Yes (where available)

⁷ It can cover a number of aspects and the Member States can select what they report. Nonetheless, the description of the costs and benefits must be thorough.



Saving, merging, exporting and printing the reported information

Download and print out

The filled-in information shall be saved (using 'Save Webform' button inside the webform) and downloaded as an xml file. The file can then be reopened, shared and further edited (see chapter 2).

It is also possible to print the filled-in questionnaire (using 'Print Preview' button).

Merging multiple PaM questionnaires

The merge-functionality has been developed by the EEA. It allows to merge multiple PaM questionnaires, i.e. different policies filled-in by different experts. This functionality exists however there are some limitations, which the user should be aware of. The numbering of the entered PaMs is not preserved, so all references to single PaMs from a group PaM will be lost or point to the wrong single PaMs after merging. When using this functionality, the MMR reporter shall double check the PaM numbering especially for group of PaMs. Please follow these steps:

1. Click on 'Upload session file';
2. Find relevant xml files in your computer and upload them;
3. Select all files you wish to merge;
4. Click 'Merge selected files';
5. Save the merged file;
6. Edit the merged file and double check the PaM numbering.

The screenshot shows the EIONET Web Questionnaires interface. At the top, there is a navigation bar with 'SERVICES', 'REPORTNET', 'TOOLS', and 'TOPICS (ETCS)'. Below this, the 'Web Questionnaires' section provides instructions on how to use the tool and includes buttons for 'Create new session file' and 'Upload session file'. The 'My session files' section displays a table of files with checkboxes for selection. Three files are selected: 'single_pam_1.xml', 'single_pam_2.xml', and 'single_pam_0.xml'. A mouse cursor is shown clicking on the 'Merge selected files' button at the bottom of the table. The footer contains contact information for the European Environment Agency.

Two export to excel functions

1) MS Excel (UNFCCC BR)



Information on PaMs has to be reported under other reporting obligations e.g. United Nations Framework Convention on Climate Change (UNFCCC) in so called Biennial Reports (BR). The requested information should be submitted through the biennial reporting common tabular format (BR CTF) application. The EEA has developed an export function that allows to reuse information that was entered into the PaM web form. This information can be exported into an excel file⁸ by following these steps:

1. Find a relevant submission on PaMs and click on it;
2. Click on ‘MS Excel (UNFCCC BR)’ button;
3. The file is generated.

2) MS Excel (full export)

In order to support the Member States in reusing the entered information on PaMs the EEA has developed a full export function as well. It exports all entered information into a flat table with 65 columns. Please follow these steps:

1. Find a relevant submission on PaMs and click on it;
2. Click on ‘MS Excel (full export)’ button;
3. The file is generated.

The screenshot shows the EIONET Central Data Repository interface. A file named 'BG_MMR_PAM_20160929_updated_ETC.xml' is selected. A mouse cursor points to the 'MS Excel (full export)' option in the file properties menu. Blue arrows illustrate the process: 'Web questionnaire' leads to 'Excel export functions', which results in a 'UNFCCC BR Full PaM report'. Below the interface, a portion of an Excel spreadsheet is visible, showing a table with columns for 'Name of mitigation action', 'Sector affected', 'GHGAs affected', 'Objective/aim/ activity affected', 'Type of instrument', 'Status of implementation', 'Year of implementation', 'Implementing entity or entities', and 'Estimate of mitigation impact from measures, in t CO2 eq/2020'. The table contains several rows of data related to energy efficiency and renewable energy measures.

⁸ Reproducing the BR CTF ‘Table 3: Progress in achievement of the quantified economy-wide emission reduction target: information on mitigation actions and their effects’



4 Submitting the web questionnaire and other information on PaMs in the CDR

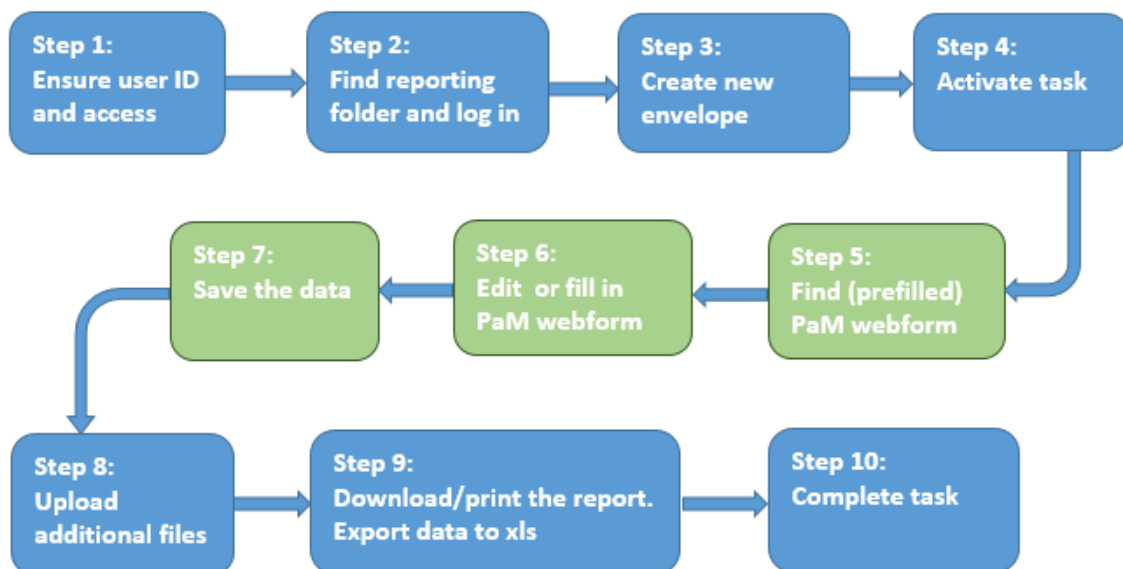
Who can submit

The person(s) responsible for the official submission of the information on PaMs under Article 13 of the MMR must have been officially nominated by the Permanent Representative to the Commission. The Commission then informs the EEA about the names of the official reporters. The EEA creates an Eionet account for reporters and grants them 'reporter' permission. This permission allows them to submit data and reports on their country's MMR folder in the [Reportnet Central Data Repository \(CDR\)](#) which is the EEA's main repository for delivered data or reports. In case a reporter changes in a country, the country should officially notify the Commission of this change.

The delivery process

The following steps should be followed in PaM delivery process:

Figure 4-1 Steps for delivering information on PaMs

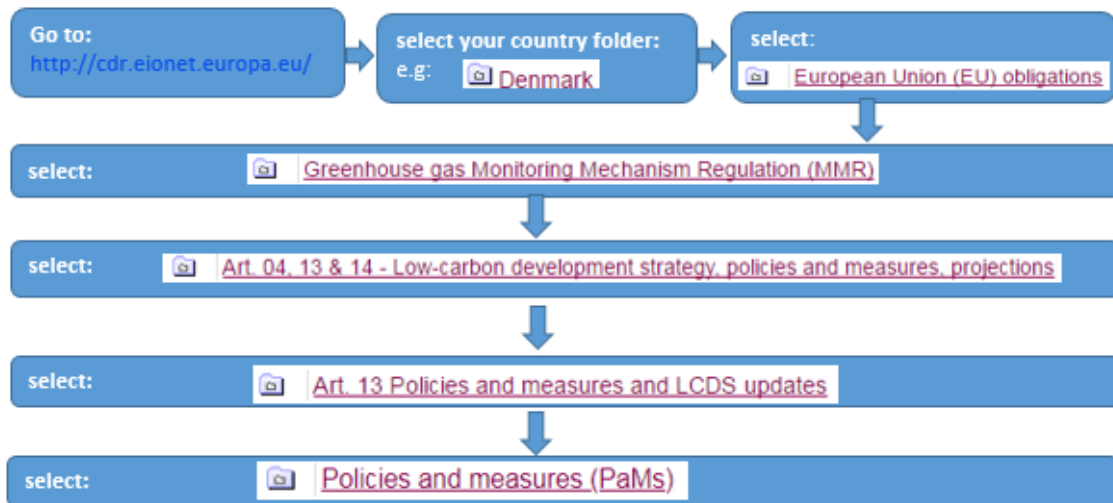


Step 1: User accounts and access permissions

In order to report, an Eionet account with user name and password is required as well as permission to upload the national delivery. An Eionet account is not needed to access and fill in PaM webform.



Step 2: Find reporting folder and login to the Central Data Repository



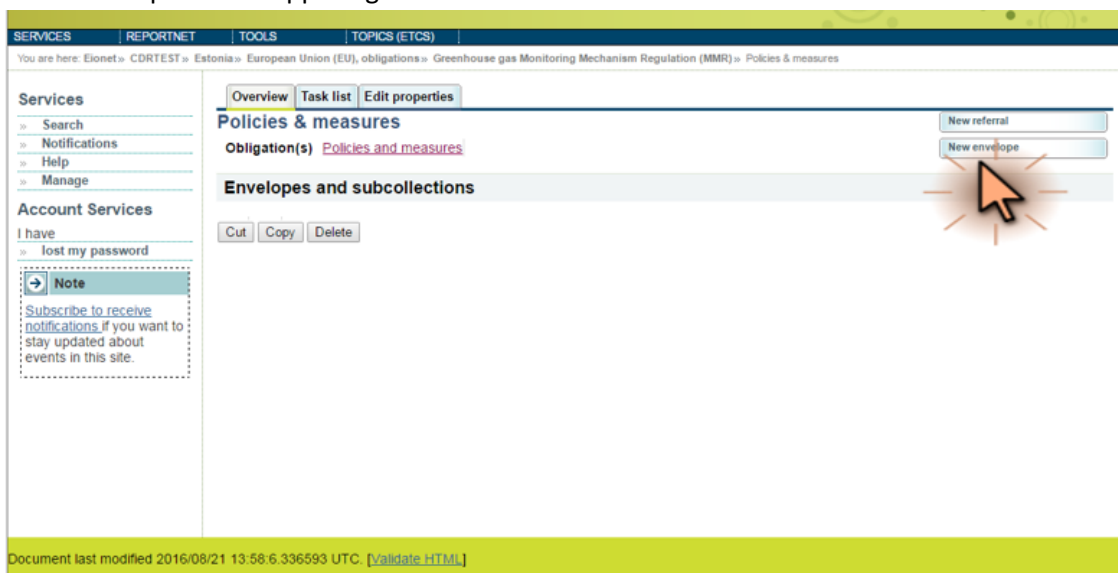
You can access the CDR at <http://cdr.eionet.europa.eu>. Navigate to the respective country/obligation folder and log in by using your Eionet user name and password. You can change the order and log-in first before finding the country/obligation folder.

It is also possible to use this link:

[http://cdr.eionet.europa.eu/ Member States/eu/mmr/art04-13-14 lcds pams projections/pams/pams/](http://cdr.eionet.europa.eu/Member%20States/eu/mmr/art04-13-14%20lcds%20pams%20projections/pams/pams/) (where Member States is to be replaced with the country code e.g. for Denmark: [http://cdr.eionet.europa.eu/dk/eu/mmr/art04-13-14 lcds pams projections/pams/pams/](http://cdr.eionet.europa.eu/dk/eu/mmr/art04-13-14%20lcds%20pams%20projections/pams/pams/)). Check also Annex 3 - Where to find Member States submissions where the links to all Member States’ submissions are provided.

Step 3: Create a new envelope

Now create a new envelope, which will contain your data delivery, by clicking on the button ‘New envelope’ at the upper right corner of the screen.



Provide meaningful metadata about your delivery on the ‘Add Envelope’ page. At least ‘Title’ and ‘Relating to which year’ fields have to be filled in. The envelope title should briefly summarise the delivery by providing the information about the reporting country, obligation



and year. Then it will be easier for the reporter and other stakeholders to find the delivery. 'Relating to which year' indicates the period the report will cover.

SERVICES | **REPORTNET** | **TOOLS** | **TOPICS (ETCS)**

You are here: Eionet » CDRTTEST » Estonia » European Union (EU), ... » Greenhouse gas ... » Policies & measures

Services

- » Search
- » Notifications
- » Help
- » Manage

Account Services

I have

- » lost my password

Note

Subscribe to receive notifications if you want to stay updated about events in this site.

Add Envelope

Fill out the fields in this report profile and click **Add**. This will create an envelope into which you make the delivery.

Title MMR PaMs Estonia 2017

Description

Relating to which year 2017 Whole Year to

Please enter the year covered by the dataset you are reporting

Coverage Estonia

Coverage note

Add

Document last modified 2016/08/21. [Validate HTML]

After clicking 'Add' button the envelope is created and listed in the PaMs reporting folder.

Step 4: Activate task

The way to start the work in the envelope is to enter the envelope by clicking on the envelope name and activate the draft task by clicking on the 'Activate task: Draft' link or by pressing the "Activate task" button. Activating means that you have reserved the envelope for yourself to work on. Other users will not be able to modify it until the envelope is deactivated or released. Your new envelope is now in draft status and files can be added.

SERVICES | **REPORTNET** | **TOOLS** | **TOPICS (ETCS)**

You are here: Eionet » CDRTTEST » Estonia » European Union (EU), ... » Greenhouse gas ... » Policies & measures » MMR PaMs Estonia 2017

Services

- » Search
- » Notifications
- » Help
- » Manage

Account Services

I have

- » lost my password

Note

Subscribe to receive notifications if you want to stay updated about events in this site.

Overview | **Edit properties** | **History**

MMR PaMs Estonia 2017 [Zip envelope](#)

Description

Obligations [Policies and measures](#)

Period 2016 - Whole Year

Coverage Estonia

Status Task(s) waiting to be assigned: [Activate task: Draft](#) (You have to activate this task first before you can upload your files.)

Note

If you want to stay updated about events in this envelope [Subscribe to receive notifications](#) for this country and the current dataflow(s).

Files in this envelope

1 [EE_MMR_PAM_20150622.xml](#) | 21 Aug 2016 | 245 KB

Remember to release the envelope when you have uploaded all files

Feedback for this envelope

No feedback posted in this envelope

Activate task

Document last modified 2016/08/21. [Validate HTML]

Step 5: Find prefilled PaM webform

The prefilled PaM webform with the information submitted in the previous reporting cycle is automatically uploaded to your envelope (xml file).



SERVICES | REPORTNET | TOOLS | TOPICS (ETCS)

You are here: Eionet » CDREST » Estonia » European Union (EU), obligations » Greenhouse gas Monitoring Mechanism Regulation (MMR) » Policies & measures » Common

Services

- Search
- Notifications
- Help
- Manage

Account Services

I have

- lost my password
- Note
 - Subscribe to receive notifications if you want to stay updated about events in this site.

Overview | **Draft delivery** | Edit properties | History

Draft delivery

This dataflow can be delivered with webforms. Either follow the steps below and fill in the webform(s) or upload regular files using the right side buttons.

Modify the [MMR_PAM](#) questionnaire

1) Your first step is to [upload](#) one or more files into this envelope. You can always interrupt your work and continue your contribution at a later time without losing data.

2) Once you are satisfied with the contribution, you choose [Release envelope](#) and your delivery will be released to the public.

Files in this envelope

	EE_MMR_PAM_20150622.xml	21 Aug 2016 245 KB	Run QA #1
--	---	--------------------	---------------------------

[Rename](#) [Cut](#) [Copy](#) [Delete](#)

Feedback for this envelope

No feedback posted in this envelope

Document last modified 2016/05/23 09:00:52.363315 UTC. [\[Validate HTML\]](#)

Step 6: Edit, fill in or replace PaM webform

Step 6a) You can now edit the PaM related information in the web form.

SERVICES | REPORTNET | TOOLS | TOPICS (ETCS)

You are here: Eionet » CDREST » Estonia » European Union (EU), obligations » Greenhouse gas Monitoring Mechanism Regulation (MMR) » Policies & measures » 2017 » EE_MMR_PAM_20150622.xml

Services

- Search
- Notifications
- Help
- Manage

Account Services

I have

- lost my password
- Note
 - Subscribe to receive notifications if you want to stay updated about events in this site.

File: EE_MMR_PAM_20150622.xml [Back to envelope](#)

View file as

- Original
- HTML report
- Export to excel (UNFCCC BR)

Change file

- [Edit the file with Webform](#)

Edit file properties

Title

Schema location http://dd.eionet.europa.eu/schemas/mmr-pams/MMR_PAMs.xsd

File size 245 KB (250571 Bytes)

Last uploaded 05 Oct 2016 17:20

Restricted from public view [Change](#)

Quality assessment

Run XML Schema Validation [Run QA #1](#)

Feedback posted for this file

No feedback available for this file

Document last modified 2016/10/05. [Legal notice](#)



European Environment Information and Observation Network

You are here: [Home](#) > [WebQ](#) > [WebForm](#)

ANNEX XI
Monitoring Mechanism Regulation
Policies or Measures (PAMs)

English (en)

Overview

Single 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43
44 45 46 47 48 51 52 53 54 55 56 57 58 59 60 61 62 Add Single

Group 49 50 Add Group

Overview Table

PAM number	Name of policy or measure	PAM or group of PAMs	Table 1: Sectors and gases for reporting on policies and measures and groups of measures, and type of policy instrument	Table 2: Available results of ex-ante and ex-post assessments of the effects of individual or groups of policies and measures on mitigation of climate change	Table 3: Available projected and realised costs and benefits of individual or groups of policies and measures on mitigation of climate change
1 Delete	Improvement of the efficiency of the use of oil shale (2x215MW)	Single	Edit Table	Edit Table	Edit Table
2 Delete	Improvement of the efficiency of the use of oil shale (300 MW)	Single	Edit Table	Edit Table	Edit Table
3 Delete	Support for renewable and efficient CHP based electricity production	Single	Edit Table	Edit Table	Edit Table

Validation: On Investment support for wind parks Single [Save Webform](#) [Print Preview](#) [Close Webform](#)

Step 6b) You can replace the prefilled PaM web form from the previous reporting cycle with another filled in PaM web form. When the xml is uploaded please continue with step 8: upload additional files.

- Make sure to delete the redundant web form and ensure that **only one web form is included in the envelope**. This way it is completely clear what the correct web form is. Including two web forms could also interfere with a correct processing of the xml files after submission.

Step 7: Save the data

The web questionnaire does NOT save your changes automatically. Inserted answers can be saved at any time by clicking on the 'Save Webform' button at the bottom of the page. The data is saved in the XML file (MMR_PaMs_questionnaire_1.xml) in CDR envelope. The questionnaire warns you if there are missing mandatory fields or some fields are entered incorrectly. All data are still saved in the envelope, even if they don't pass the validation process.

You don't have to fill in all the questions at one time. You can go back and modify the online questionnaire for completions or amendments later at any time in CDR:

- either by clicking on the 'Modify the MMR Annex XI questionnaire' link on envelope page;
- or by clicking on the corresponding XML file name in the list of files and then clicking on the 'Edit the file with Webform' link on document details page.

Step 8: Upload additional files

An envelope represents your submission. It may include one or several documents.

In addition to the information reported through the questionnaire, the submission must also include a document including qualitative information regarding the links between the different PaMs reported in the online questionnaire, and the way such PaMs contribute to the different projection scenarios including an assessment of their contribution to the achievement of a low-carbon development strategy.



Step 9: Complete task

If you do not want to submit your envelope immediately, you may 'Deactivate the task'. This makes the questionnaire available for viewing/editing by you or by another MMR reporter of your country. The questionnaire remains a draft. Once the questionnaire is ready for submission, you should (re)activate a task to proceed with the submission. When you finish the drafting of your work, you need to click on the right side button 'Release envelope'.

Once the envelope is released, your submission is considered as delivered.

After the PaM information is submitted

Now the report is submitted and received by the EU and the envelope is available to the public. After a few minutes, confirmation of receipt message and automatic feedback is stored automatically in the envelope's feedback area. The result of the automatic quality assessment contains technical information about the validity of reported data and is useful for data receivers.

It is not possible for the report to 'revoke' /'back to drafting' of the released/submitted envelope. If the envelope was released by mistake you can contact the EEA (mmr.support@eea.europa.eu) and ask to put your envelope back to draft. In this case, please provide a reason/explanation.

Additional feedback might be provided by the Commission, the EEA or the ETC/CME. Based on the feedback received, you will be invited either to modify your submission (cf. above) or to make this submission final. To do so, you will have the possibility to click on 'Activate task: Redeliver or finish'. By clicking on 'Finish', you make your submission fully final, with no further possibility to change it. Note however that you can always create a new envelope with a new questionnaire.

For information on the quality control procedures at EU level please see Chapter 5 of this document.

Locking and unlocking submissions

Default settings

Following the MMR, the EEA strongly encourages Member States to make their submissions fully available to the public.

When a new questionnaire is created and subsequently submitted, it is by default unrestricted from public view. The restrictions can be managed for each individual file, i.e. there can be in the same submission one file available for public view and one file which is not.

How to lock or unlock files in an existing submission

The removing/adding a file's access restrictions can be done by a Member State MMR reporter. The simple procedure is as follows:

1. Select the submission for which you want to unlock/lock one or several files;
2. Login to the envelope;
3. Click on the relevant file name;
4. Tick or untick the box 'Restricted from public view';
5. Click on 'Change' button.



Access restrictions can always be modified by reporters, also for files in released and completed envelopes.

Getting help

CDR help and the reporting manual are available at: <http://cdr.eionet.europa.eu/help>

For technical assistance with access to CDR and the submission process: helpdesk@eionet.europa.eu

EEA project manager for PaM reporting: Magdalena.Jozwicka@eea.europa.eu

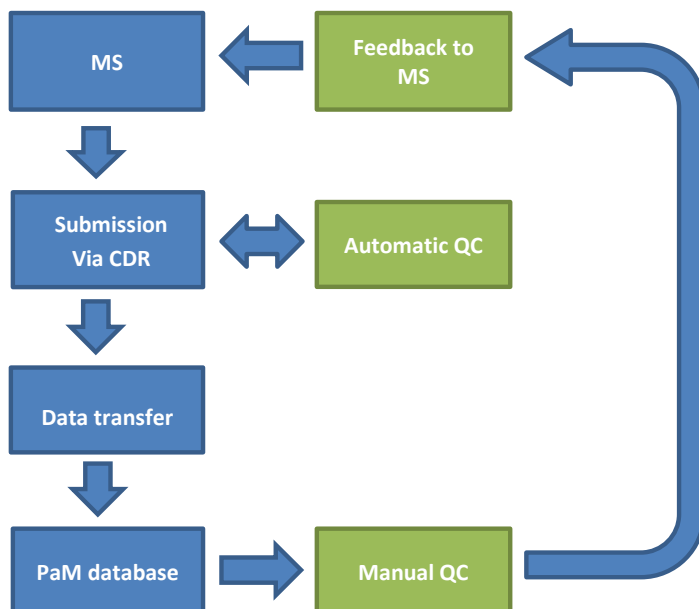
For other issues related to MMR reporting contact: mmr.support@eea.europa.eu

5 Quality assurance and quality control performed by the EEA and the ETC/CME

Quality assurance and quality control structure

To ensure timeliness, completeness, consistency, comparability, transparency and accuracy of the PaMs information, specific quality checks are performed on the submissions by Member States and the automatically aggregated information. On behalf of the EEA the ETC/CME carries out these quality checks. However, Member States are strongly encouraged to adhere as much as possible to the reporting guidelines and also conduct a quality control of the information on national PaMs. The results of the quality checks are communicated to Member States. After quality control, the data is published in the EEA PaM viewer⁹. Figure 2 presents an overview of the process done on the reported information on PaMs.

Figure 5-1 Overview of the quality control process for PaMs



The quality control procedure is aligned with the key reporting principles set out in the 2006 IPCC Guidelines for National Greenhouse Gas Inventories¹⁰. More specifically, the information reported by Member States is assessed against six criteria (five quality criteria so called ‘TCCCA criteria’ and timeliness) (Table 5-1):

- Transparency;
- Completeness;
- Consistency;
- Comparability;
- Accuracy;

⁹ <http://pam.apps.eea.europa.eu>

¹⁰ <http://www.ipcc-nggip.iges.or.jp/public/2006gl/>



- Timeliness.

The new IPCC guidelines also included a criterion called improvement, which can only be assessed once first submissions rounds under the new MMR are completed. The online questionnaire offers reporters the opportunity to update the information reported in previous years and therefore enables a continuous improvement of the information reported each reporting cycle. By performing quality checks each reporting cycle and providing additional reporting guidelines, the aim is to improve reporting along the six criteria listed above.

Each criterion corresponds to a number of specific checks, which are performed in the sequential order given in Table 5-1. These checks are described in more detail in the following chapters.

Table 5-1 Timeline and the description of the action required by the organizations involved.

Criteria	Objective	Checking Frame
Timeliness	To assess if data and report was submitted on time and identify as early as possible any gaps or inconsistencies to inform Member States about the need for a resubmission.	Record the dates the Member States submission is uploaded to the EIONET's ReportNet Central Data Repository ¹¹ (CDR). Track the number of revised submissions made by the Member States after 15 March.
Transparency	To ensure the PaM is identifiable and underlying methods are clearly referenced.	To check that enough information is provided in the name, objective and description for the PaM to be distinguished from other similar national policies. Check that references and methodology descriptions are provided as links in the template or in the report, if available.
Completeness	To ensure that all relevant climate mitigation PaMs are included. To ensure that all information available on national climate PaMs is provided.	Check that all relevant national climate PaMs have been included and that information is reported for national implementation of all existing EU policies. Check that all mandatory information is included and all non-mandatory information is reported where this is available (e.g. on impacts, and costs and benefits). For instance by cross-checking with other information sources, such as the National Communication or Biennial Report.
Consistency	Ensure that the reporting is consistent and in line with good practices and guidelines. Checks ensure both internal consistency and consistency across years.	Internal consistency: assess for each policy reported whether the information reported under different columns is internally consistent (e.g. are individual policies consistent with the stated policy objectives).

¹¹ Eionet is a partnership network of the EEA and its member and cooperating countries (39 countries) involving approximately 1 800 experts and more than 400 national institutions.



	To assess whether the reported PaMs are coherent with GHG projections reporting.	Compare WEM and WAM GHG projections and whether differences are supported by planned PaMs. Assess if differences in GHG projections from previous reporting can be explained by newly implemented and planned PaMs.
Comparability	Ensure that the reporting across Member States is comparable.	Comparability across Member States – record whether the template is used as the template aims to facilitate the reporting of comparable information. Assess whether each policy is recorded under the correct sector, objective, entity, instrument type, affected GHG and implementation status in line with section 2 and IPCC guidelines.
Accuracy	To assess whether <i>ex ante</i> estimates of policy impacts are credible.	Compare the quantitative <i>ex ante</i> policy saving estimates with other Member States and other data sets. A number of checks are based on comparisons against the reported projections and other datasets.

Timeline & Communication

Timeliness of reporting is an important quality criterion that helps ensure the smooth running of the quality control process. Member States must submit information on PaMs required under the MMR by 15 March to allow for proper quality checking at EU level, prior to the compilation and publication of EU-wide projections in October.

The number and the dates of additional resubmissions are also tracked. The main steps between the initial submission of information by the Member States, and the publication of the EU’s progress report are described below. This includes the initial submission, quality control, a communication period, and the finalization and subsequent publication of the information. The Member States, ETC/CME, EEA and the European Commission are involved in these steps. The timeline below sets out the key dates associated with each of these steps (Table 5-2). The effective implementation of the procedure requires efficient responses from all parties at each step and therefore the timeline is only indicative, assuming submission, quality control and resubmission is not delayed due to circumstances.

Table 5-2 Indicative timeline and the description of the action required by the organizations involved.

When	What	Who
Before 15 March	<ul style="list-style-type: none"> ▪ Preparation of the submission and completion of the reporting PaM web questionnaire; ▪ Internal quality checks; ▪ Submission to the ReportNet 	Member States
15 March – 15 April	Quality control (transparency, comparability, completeness, consistency and accuracy checks simultaneously). This includes feedback to Member States and communication on any issues found.	ETC/CME



	Changes to Member States submissions will only be made, if Member States provide updates or corrections based on the findings communicated by the ETC/CME.	
15 April-15 May	If necessary, adjustment of the PaM report and resubmission via the PaM web questionnaire.	Member States
15 May-1 June	Review of the resubmitted report, if needed final follow up with the Member States.	ETC/CME (and Member States)
Mid-June	Delivery of final PaM information by Member States to the EEA for publication in the EEA database on PaMs.	ETC/CME
End-August	Final checking of whole EU database and preparation of Report compiling the outcome of the implementation of the quality control procedure on EU level, including individual feedback to Member States.	ETC/CME
October/November	Publication in the EEA database on PaMs (http://pam.apps.eea.europa.eu) and PaM dataviewer	EEA
September-November	Assessment, analysis and reporting in progress reports.	EEA, EC

The central document in this quality control circle is the PaM quality check feedback report. It ensures a consistent and complete quality control process and is a template to communicate the findings to the Member States. Every finding is added to the feedback report. The report is uploaded via ReportNet. If needed Member States will be asked to adjust the submission and resubmit the PaM information.

If reviewers have a specific question concerning the questionnaire, the Member States will be asked for clarification via the feedback report. The Member States then have the responsibility to provide a clarification, adjust the information provided (report or data) and release the questionnaire again via ReportNet. The Member States are responsible for making the necessary changes to the questionnaire. Reviewers will not change information submitted by the Member States, apart from where this is deemed appropriate in a second phase. For example where this is upon request of the Member State, when the Member State agreed with the comment from the reviewer but did not implement the changes in the questionnaire or in cases where there is an obvious error remaining in the questionnaire (e.g. typo's, ...).

Description of checks

In the following section the checks are described according to the tables provided in the Annex XI of implementing regulation (EU) 749/2014.

- Table 1: Sectors and gases for reporting on PaMs and groups of PaMs, and type of policy instrument.
- Table 2: Available results of *ex ante* and *ex post* assessments of the effects of individual or groups of PaMs on mitigation of climate change.
- Table 3: Available projected and realized costs and benefits of individual or groups of PaMs on mitigation of climate change.

General checks



The first set of checks apply to the reporting as such and are not specific to the reporting tables of the questionnaire:

- *Timeliness*: Has the PaM questionnaire been submitted before, on or after the reporting deadline of 15 March?
- *Transparency*: Are the information and any underlying assumptions and methods applied clearly explained in the web questionnaire, or if not then in the accompanying report. Member States are allowed to report in their own language, although for transparency reasons Member States are encouraged to report it in English. It is also checked if a report on the National System for reporting on policies and measures and for reporting on projections.
- *Comparability*: Did the Member States use for its submission the online questionnaire? Member States should use EIONET and the reporting web questionnaire for preparing and submitting their report. It has specifically been designed to facilitate the comparable reporting of information by Member States and also includes a number of automated checks
- *Completeness*: Have Member States included a link to the most important EU climate PaMs? Member States have to report if a PaM has been implemented in response to an EU PaM. Important EU PaMs that have not been included could indicate missing PaMs.
- *Completeness*: Has the number of reported PaMs changed significantly compared to the last submission? The number of PaMs a country has reported must be compared with the number of PaMs reported in previous submission. If numbers differ significantly, Member States are encouraged to submit an explanation in their accompanying report. Are important PaMs missing compared to other information sources (e.g. most recent National Communication or Biennial Report)?
- *Completeness*: Have PaMs been reported for each sector and GHG? Sectors or GHGs that are not included, could indicate missing PaMs.
- *Consistency of PaMs and projections*: Can differences between WEM and WAM projections be explained by planned PaMs? Can differences between projections from different reporting years be explained by changes in reported PaMs?
- *Accuracy*: Is the total *ex ante* impact of PaMs plausible (as compared to total historic or projected emission levels or compared to the difference between WOM, WEM and WAM scenario, if available)?

Table 1

The checks carried by reviewers will look at the following issues:

- *Completeness*: All mandatory information (i.e. name, objective, description, type of instrument, status and indicators (where used)) is reported by the country.
- *Consistency*: Is/are the selected sector(s) consistent with the name, objective and description of the PaM?
- *Consistency*: Is the PaM a single PaM or is it composed of different single instruments that should be reported separately?
- *Consistency/Completeness*: One or more objectives have to be selected from a drop down menu. Member States also have the option to add objectives under 'other'. The reviewer checks if the list of selected objectives is consistent with the name and description of the PaM and that the list of objectives is complete and that objectives are not missing from the list. Objectives are grouped in sectors, which should correspond with the selected sector(s) that are affected by the PaM.
- *Consistency*: Is/are the selected objective(s) consistent with the name/sector(s)/description of the PaM?



- *Transparency*: Is the description of the PaM distinctive (i.e. PaMs can be distinguished based on the description)? Different PaMs should not have the same name and PaMs should not be named the same as an EU directive (unless this is appropriate (e.g. for the ETS).
- *Transparency*: Is the description of the PaM understandable and clear? Are all uncommon abbreviations explained?
- *Consistency*: Is/are the type of instrument(s) consistent with the name, objective and description of the PaM?

Member States can select one or more policy instruments. For a definition of these:

- Economic: A PaM that provides an economic incentive to reduce GHG emissions. This includes measures such as infrastructure programmes, subsidies, investment programmes, feed-in tariffs, loans/grants and trading schemes (e.g. ETS).
 - Fiscal: A PaM that provides a financial incentive via taxes. This includes both increases and decreases in taxes.
 - Voluntary/negotiated agreements: A binding or voluntary standard/regulation as in regulatory and information measures, but agreed between regulators and the sector targeted.
 - Regulatory: Measures that set binding standards and regulations. This includes for instance building regulations or ecodesign standards.
 - Information: Measures such as labelling, awareness rising, voluntary standards. The objective is to disseminate information to the general public or specific target groups.
 - Education: Measures such as training programmes, capacity building.
 - Research: Research programmes and demonstration projects.
 - Planning: Measures such as waste management plan, transport plan, urban planning.
 - Other: Measures that do not fit in any of the above.
- *Consistency*: Does the selected Union policy correspond with the name, objective and description of the PaM? If 'PaM not related to Union policies' is selected, there is no Union policy that aligns with the national PaM.
 - *Completeness*: How many Union policies have been linked to national PaMs? This is only indicative. In the case when Union policies are missing that require transposition into national legislation, this should result in a question to the Member States. The Union policies will be available in the corresponding cell as a drop down list.
 - *Consistency*: Is the selected projection scenario in line with the implementation status?
 - *Consistency*: Does the implementation status of a PaM correspond to the description and implementation period of the PaM?
 - *Consistency*: Is the selected responsible entity in line with the description of the PaM?
 - *Consistency*: Is the indicator appropriate to monitor progress over time. Where necessary, is a description of the indicator given?
 - *Consistency*: Are the years consistent with the implementation period, if *ex ante* and/or *ex post* assessments are given?
 - *Consistency*: Is/are the factor(s) affected by the PaM consistent with the name, objective and description of the PaM?
 - *Consistency*: Are the appropriate GHGs selected? In the web form, Member States can select one or more GHGs from a drop-down list. Only those gases have to be selected where the impact is expected to be 10% or more. If the PaM has only a very minor and/or indirect impact on certain GHG(s) this does not have to be reported. This will imply that in most cases only CO₂ will be selected.

**Table 2**

- *Completeness*: If an impact assessment is provided for a PaM or group of PaMs, information in table 2 is complete including a reference to the documentation/source of information. Information on the affected sector (EU ETS, ESD and/or LULUCF) is always selected.
- *Consistency*: Is the selection of EU ETS, ESD and/or LULUCF consistent with the name, objective and description of the PaM.
- *Accuracy*: Is the impact assessment expressed in the correct unit (kt CO₂-eq), if an *ex post* and/or *ex ante* assessment is given.
- *Completeness*: Is the impact divided over ETS and ESD emissions when appropriate, if an *ex ante* assessment is given.
- *Consistency*: Are the years consistent with the implementation period, if *ex ante* and/or *ex post* assessments are given?
- *Completeness*: If emission savings are quantified, are references and links to methodology documents provided so users can access further information about key assumptions, parameters and any limitations associated with the estimates?

Table 3

- *Accuracy*: Has the correct unit been used? In column 2, the costs have been reported in EUR/ton CO₂ and in column 3, the costs have been reported in EUR/year. Costs are expressed as positive values, benefits as negative values.
- *Transparency*: Is the description of the cost estimates sufficiently clear and does it include the basis, the type of costs included and methodology?
- *Completeness*: If a cost estimation is given for a PaM or group of PaMs, information reported in table 3 is complete including a reference to documentation/source of cost estimation.

Assessment of Member States submissions

After the checking procedure has been concluded a short report presenting the outcome of the quality checks will be prepared. This will include information on:

- List of checks done;
- Overview of findings;
- Overview of corrective actions;
- An EU assessment summarizing the outcome of the implementation of the quality checking procedure;
- Recommendations for further improvements in reporting PaMs.



Annexes

Annex 1 - The Union system for policies and measures and projections

The Union system for PaMs and projections represents the institutional, legal and procedural arrangements established for reporting on PaMs and projections of anthropogenic emissions by sources and removals by sinks of greenhouse gases not controlled by the Montreal Protocol. It seeks to ensure the timeliness, transparency, accuracy, consistency, comparability and completeness of the information on PaMs and projections compiled by the European Commission (EC) assisted by the European Environment Agency (EEA) on the basis of the information reported by Member States pursuant to Article 13 and Article 14 of [Regulation \(EU\) No 525/2013](#), the Monitoring Mechanism Regulation (MMR).

This system has been established according to Art. 12 of the MMR, and is also valid for reporting to the UNFCCC. It shall ensure that the data reported by Member States is reliable and useful for informing Union policy decisions.

The EEA is responsible for the following activities:

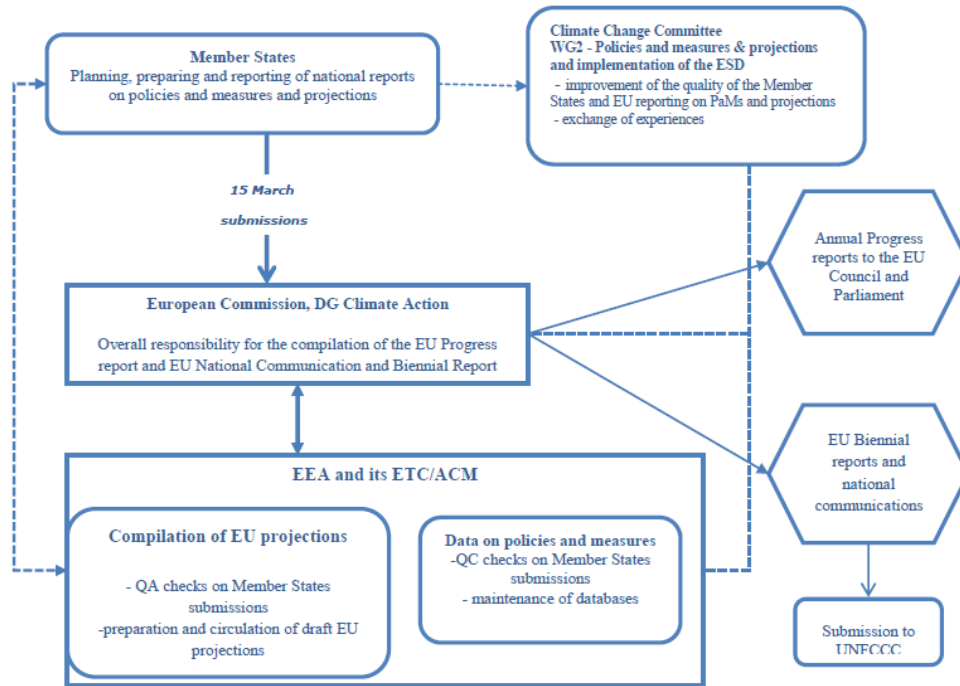
- preparation and circulation of PaM reported information based on Member States' submissions;
- maintenance of databases and archives;
- development and implementation of quality control procedures;
- consultation with Member States in order to clarify data and other information provided.

The EEA is assisted in its work by the ETC/CME, an international consortium working with the EEA under a framework partnership agreement.

Along with data on GHG emissions and projections, the information on PaMs is used to evaluate and report on the progress of the EU and Member States towards their commitments under the UNFCCC and the Kyoto Protocol (e.g. the annual EEA report: Trends and projections in Europe).



Figure 0-1 Union System for Policies and Measures and Projections





Annex 2 – Reporting requirement on policies and measures under the Monitoring Mechanism Regulation

Article 13(c) of MMR concerning a mechanism for monitoring and reporting greenhouse gas (GHG) emissions and for reporting other information at national and Union level and Article 22 of the [Implementing Regulation \(EU\) 749/2014](#) specifies the information that needs to be provided by Member States with regards to reporting of PaMs.

Member States shall use the tools of the EEA in the reporting process (Art 5 of EU 749/2014).

Article 13 of the Monitoring Mechanism Regulation

Reporting on policies and measures

By 15 March 2015, and every two years thereafter, Member States shall provide the Commission with the following:

- a) (...)
- b) (...)
- c) information on national policies and measures, or groups of measures, and on implementation of Union policies and measures, or groups of measures, that limit or reduce greenhouse gas emissions by sources or enhance removals by sinks, presented on a sectoral basis and organised by gas or group of gases (HFCs and PFCs) listed in Annex I. That information shall refer to applicable and relevant national or Union policies and shall include:
 - (i) the objective of the policy or measure and a short description of the policy or measure;
 - (ii) the type of policy instrument;
 - (iii) the status of implementation of the policy or measure or group of measures;
 - (iv) where used, indicators to monitor and evaluate progress over time;
 - (v) where available, quantitative estimates of the effects on emissions by sources and removals by sinks of greenhouse gases broken down into:
 - the results of *ex ante* assessments of the effects of individual or groups of policies and measures on the mitigation of climate change. Estimates shall be provided for a sequence of four future years ending with 0 or 5 immediately following the reporting year, with a distinction between greenhouse gas emissions covered by Directive 2003/87/EC and those covered by Decision No 406/2009/EC;
 - the results of *ex post* assessments of the effects of individual or groups of policies and measures on the mitigation of climate change, with a distinction between greenhouse gas emissions covered by Directive 2003/87/EC and those covered by Decision No 406/2009/EC;
 - (vi) where available, estimates of the projected costs and benefits of policies and measures, as well as estimates, as appropriate, of the realised costs and benefits of policies and measures;
 - (vii) where available, all references to the assessments and the underpinning technical reports referred to in paragraph 3;

Article 22 of Implementing Regulation

Reporting on policies and measures

1. Member States shall report the information on policies and measures referred to in Article 13(1)(c), (d) and (e) of Regulation (EU) No 525/2013 in accordance with the tabular formats set out in Annex XI to this Regulation and using the reporting template provided and the submission process introduced by the Commission.
2. Member States shall report qualitative information regarding the links between the different policies and measures reported pursuant to paragraph 1 and the way such policies and measures contribute to the different projection scenarios including an assessment of their contribution to the achievement of a low-carbon development strategy, in a textual format in addition to the tabular format referred to in paragraph 1.



Annex 3 - Where to find Member States submissions

The provided below links direct Member States to where they should upload their new PaM questionnaire.

In order to access other submissions go to CDR (<http://cdr.eionet.europa.eu/>), search by obligation (button is on the right side), and select [Policies and Measures](#) under Greenhouse gas Monitoring Mechanism Regulation (MMR). Then specific reporting years (“covering year”) or countries can be chosen. Or use the link:

http://cdr.eionet.europa.eu/recent_etc?RA_ID=696&mindate=2014-01-01 that shows all the uploads for PaMs in chronological order. This information has now been added to the Guidelines as well.

Country Name	Hyperlink to national folder
Austria	http://cdr.eionet.europa.eu/at/eu/mmr/art04-13-14_lcds_pams_projections/pams/pams/
Belgium	http://cdr.eionet.europa.eu/be/eu/mmr/art04-13-14_lcds_pams_projections/pams/pams/
Bulgaria	http://cdr.eionet.europa.eu/bg/eu/mmr/art04-13-14_lcds_pams_projections/pams/pams/
Croatia	http://cdr.eionet.europa.eu/hr/eu/mmr/art04-13-14_lcds_pams_projections/pams/pams/
Cyprus	http://cdr.eionet.europa.eu/cy/eu/mmr/art04-13-14_lcds_pams_projections/pams/pams/
Czech Republic	http://cdr.eionet.europa.eu/cz/eu/mmr/art04-13-14_lcds_pams_projections/pams/pams/
Denmark	http://cdr.eionet.europa.eu/dk/eu/mmr/art04-13-14_lcds_pams_projections/pams/pams/
Estonia	http://cdr.eionet.europa.eu/ee/eu/mmr/art04-13-14_lcds_pams_projections/pams/pams/
Finland	http://cdr.eionet.europa.eu/fi/eu/mmr/art04-13-14_lcds_pams_projections/pams/pams/
France	http://cdr.eionet.europa.eu/fr/eu/mmr/art04-13-14_lcds_pams_projections/pams/pams/
Germany	http://cdr.eionet.europa.eu/de/eu/mmr/art04-13-14_lcds_pams_projections/pams/pams/
Greece	http://cdr.eionet.europa.eu/gr/eu/mmr/art04-13-14_lcds_pams_projections/pams/pams/
Hungary	http://cdr.eionet.europa.eu/hu/eu/mmr/art04-13-14_lcds_pams_projections/pams/pams/
Ireland	http://cdr.eionet.europa.eu/ie/eu/mmr/art04-13-14_lcds_pams_projections/pams/pams/
Iceland	http://cdr.eionet.europa.eu/is/eu/mmr/art04-13-14_lcds_pams_projections/pams/pams/
Italy	http://cdr.eionet.europa.eu/it/eu/mmr/art04-13-14_lcds_pams_projections/pams/pams/
Latvia	http://cdr.eionet.europa.eu/lv/eu/mmr/art04-13-14_lcds_pams_projections/pams/pams/
Lithuania	http://cdr.eionet.europa.eu/lt/eu/mmr/art04-13-14_lcds_pams_projections/pams/pams/
Luxembourg	http://cdr.eionet.europa.eu/lu/eu/mmr/art04-13-14_lcds_pams_projections/colvbug4w/
Malta	http://cdr.eionet.europa.eu/mt/eu/mmr/art04-13-14_lcds_pams_projections/colwkw8yg/pams/
Netherlands	http://cdr.eionet.europa.eu/nl/eu/mmr/art04-13-14_lcds_pams_projections/pams/pams/
Norway	http://cdr.eionet.europa.eu/no/eu/mmr/art04-13-14_lcds_pams_projections/pams/pams/
Poland	http://cdr.eionet.europa.eu/pl/eu/mmr/art04-13-14_lcds_pams_projections/pams/pams/
Portugal	http://cdr.eionet.europa.eu/pt/eu/mmr/art04-13-14_lcds_pams_projections/pams/pams/
Romania	http://cdr.eionet.europa.eu/ro/eu/mmr/art04-13-14_lcds_pams_projections/pams/pams/
Slovakia	http://cdr.eionet.europa.eu/sk/eu/mmr/art04-13-14_lcds_pams_projections/pams/pams/
Slovenia	http://cdr.eionet.europa.eu/si/eu/mmr/art04-13-14_lcds_pams_projections/pams/pams/
Spain	http://cdr.eionet.europa.eu/es/eu/mmr/art04-13-14_lcds_pams_projections/pams/pams/
Sweden	http://cdr.eionet.europa.eu/se/eu/mmr/art04-13-14_lcds_pams_projections/pams/pams/
United Kingdom	http://cdr.eionet.europa.eu/gb/eu/mmr/art04-13-14_lcds_pams_projections/pams/pams/



Annex 4 – Glossary

Term	Definition	Source
Cost-benefit analysis	A technique for deciding whether to make a change. As its name suggests, it compares the values of all benefits from the action under consideration and the costs associated with it.	OECD glossary of statistical terms
Evaluation	<p>There are many definitions of evaluation, some more relevant than others for environment and climate policy evaluation. The EEA frequently uses two of these definitions.</p> <ol style="list-style-type: none"> 1. The first definition stresses the real-world utility of evaluation, and the fact that <i>ex post</i> evaluation should aim to be relevant: '[...] evaluation is minimally defined as careful retrospective assessment of public-sector interventions, their organization, content, implementation and outputs or outcomes, which is intended to play a role in future practical situations' (Vedung, 2010). 2. The second definition of evaluation (EC, 2015b) emphasises a set of evaluation criteria commonly used in evaluations and, like the first definition, accentuates the retrospective (<i>ex post</i>) character of evaluation: 'Evaluation is defined as an evidence-based judgement of the extent to which an intervention has: <ul style="list-style-type: none"> • been effective and efficient; • been relevant given the needs and its objectives; • been coherent both internally and with other [EU] policy interventions; and • achieved [EU] added-value.' 	EEA report No18/2016 'Environment and climate policy evaluation'
<i>Ex ante</i> assessment of PaMs	An evaluation of the projected effects of a policy or measure.	MMR, article 3
<i>Ex post</i> assessment of PaMs	An evaluation of the past effects of a policy or measure.	MMR, article 3
Group of PaMs	Group of individual PaMs. Grouping allows reporting on a higher level, as maybe some information (e.g. past or projected effects, costs) is only available at this level.	
Indicator	A quantitative or qualitative factor or variable that contributes to better understanding progress in implementing PaMs and greenhouse gas emission trends	MMR, article 3
Measure	<p>A measure is commonly understood as concrete actions undertaken to implement a certain policy. A measure is more concrete than a policy.</p> <p>Examples are: Introduction of a carbon tax, insulation of buildings, installation of a new waste treatment plant, awareness raising for the use of public transport, etc.</p>	GHG Projection Guidelines
Policies and measures	All instruments which aim to implement commitments under Article 4(2)(a) and (b) of the UNFCCC, which may include	MMR, article 3



Term	Definition	Source
	<p>those that do not have the limitation and reduction of greenhouse gas emissions as a primary objective.</p> <p>A frequently used phrase -- sometimes abbreviated as PaMs - referring to the steps taken or to be taken by countries to reduce greenhouse-gas emissions under the UNFCCC and the Kyoto Protocol. Some possible PaMs are listed in the Protocol and could offer opportunities for intergovernmental cooperation.</p>	<p>UNFCCC</p>
Policy	<p>A policy is commonly understood as the overarching framework to achieve certain objectives, which sets the overarching frame for actions. A policy may include several measures. Examples are: <i>Renewable Energy Strategy, Green Fund, Reduction of Energy Consumption in Households, Mobility Plan, Sustainable Forest Management, etc.</i></p> <p>The term 'policy' is typically used to refer to objectives and actions in relation to a political issue. These can be, for example but not exclusively, financial programmes, public interventions, strategic plans and legislative measures. Today, many environment and climate policies combine different types of public interventions, such as:</p> <ul style="list-style-type: none"> • traditional regulatory approaches, sometimes labelled 'command-and-control measures' (e.g. emission standards, bans of toxic substances or land planning instruments); • market-based instruments (e.g. environmental taxes and emissions trading) (EEA, 2016a); • awareness raising (e.g. energy efficiency labels or communication campaigns). <p>These interventions are expected to lead to changes, for example changes in the behaviour of a target group. Understanding the mechanism through which a change is expected or assumed to be brought about, understanding the choice of the target group and considering the resources set aside for the implementation of a policy are all important for the better understanding of the functioning of a policy, and its ultimate successes and/or failures.</p>	<p>EEA report No18/2016 'Environment and climate policy evaluation'</p>
Policy objective	<p>In the European context, environment and climate policy objectives are often expressed in terms of the expected effect of a policy on the situation it is designed to influence. Objectives reflect the desired change from a baseline and are linked to the problem to be solved.</p> <p>Different levels of precision and specification of objectives are used for different purposes. Their distinction is also useful for analytical purposes. The different types of objectives are described below.</p> <ul style="list-style-type: none"> • General objectives are the overall goals of a policy, expressed in terms of a 'policy outcome' or the ultimate 'policy impact'. Such general objectives can be expressed in strategic programmes and are often reiterated in preambles of legislation. • Specific objectives are the targets that must be reached for general objectives to be achieved. The specific 	<p>EEA report No18/2016 'Environment and climate policy evaluation'</p>



Term	Definition	Source
	<p>objectives of a policy are typically formulated as a result of an intervention among those directly affected by the intervention.</p> <ul style="list-style-type: none"> Operational objectives refer to those deliverables that a policy is expected to produce. Their achievement is usually under the direct control of those managing the intervention, and can be directly verified. 	
Projection Scenarios	There are three projection scenarios: WOM, WEM and WAM (see below)	GHG Projection Guidelines MMR, article 3
Without measures (WOM)	<p>it is assumed that none of the existing or additional PaMs are implemented from a chosen base year</p> <p>‘projections without measures’ means projections of anthropogenic greenhouse gas emissions by sources and removals by sinks that exclude the effects of all PaMs which are planned, adopted or implemented after the year chosen as the starting point for the relevant projection;</p>	
With existing measures (WEM)	<p>A WEM projection encompasses currently adopted PaMs at the time of the projection compilation and that following these adopted PaMs can be assumed to be implemented in the projected years.</p> <p>‘projections with measures’ means projections of anthropogenic greenhouse gas emissions by sources and removals by sinks that encompass the effects, in terms of greenhouse gas emissions reductions, of PaMs that have been adopted and implemented;</p>	GHG Projection Guidelines MMR, article 3
With additional measures (WAM)	<p>A WAM scenario encompasses in addition to currently adopted PaMs (as in the WEM scenario) also planned PaMs that have not been adopted yet, but are expected to be adopted and implemented from a specific future year onwards.</p> <p>projections with additional measures’ means projections of anthropogenic greenhouse gas emissions by sources and removals by sinks that encompass the effects, in terms of greenhouse gas emissions reductions, of PaMs which have been adopted and implemented to mitigate climate change as well as PaMs which are planned for that purpose;</p>	GHG Projection Guidelines MMR, article 3
Quality assurance (QA)	A planned system of review procedures to ensure that data quality objectives are met and that the best possible estimates and information are reported to support the effectiveness of the quality control programme and to assist Member States.	MMR, article 3
Quality control	A system of routine technical activities to measure and control the quality of the information and estimates compiled with the purpose of ensuring data integrity, correctness and completeness, identifying and addressing errors and omissions, documenting and archiving data and other material used, and recording all QA activities.	MMR, article 3



Term	Definition	Source
System for PaMs and projections	A system of institutional, legal and procedural arrangements established for reporting PaMs and projections of anthropogenic emissions by sources and removals by sinks of greenhouse gases not controlled by the Montreal Protocol as required by Article 12 of [the MMR].	MMR, article 3
Types of measures	<p>Existing Measure: is an already implemented measure, for which one or more of the following applies: (1) national legislation is in force; (2) one or more voluntary agreements have been established; (3) financial resources have been allocated; and (4) human resources have been mobilized</p> <p>Adopted Measure: an official government decision has been made and there is a clear commitment to proceed with implementation</p> <p>Planned Measure: options are under discussion or announced and with a realistic chance of being adopted and implemented in the future by governments at the national, state, provincial, regional and local levels, as applicable</p> <p>Furthermore, PaMs reported may also include those adopted in the context of regional or international efforts (e.g. EU PaMs).</p> <p>Expired Measures have become to the end of the period of validity, but should be reported if they have an effect, or they are expected to continue to have an effect on greenhouse gas emissions.</p>	FCCC/SBI/2016/I.22



Annex 5 – List of EU policies and measures that Member States should take into account when preparing projections

This is a section from the 'Commission guidance and recommendations for reporting on GHG projections in 2017'. The full document is available at the CIRCABC ([Working Group 2 under the CCC](#))

Annex I: list of EU measures

The list includes PaMs already expected to be covered in prior reporting exercises as well as EU legislative provisions adopted until May 2016 that are defined in such a way that there is almost no uncertainty how they should be implemented in the future. On particular relevant new initiatives or elements, further indications are provided.

The recommendations with regard to classification of EU directives into existing measures or additional measures are indicative. As far as Member States' projections are concerned, the inclusion of these Union policies in the "with (existing) measures" scenario or the "with additional measures" scenario should be based on the implementation status of the corresponding national measures.

Key EU measures

EU ETS directive 2003/87/EC as amended by Directive 2008/101/EC and Directive 2009/29/EC and implementing legislation, in particular 2010/2/EU, 2011/278/EU, 2011/638/EU, 176/2014/EU, and Decision (EU) 2015/1814

- Amended and strengthened ETS will lead to sustained EU carbon prices which should be taken into account in a consistent way (see values recommended in Annex II).
- Also the change in the scope of the EU ETS from 2012/13 should be taken into account, in particular when projecting non-ETS emissions, i.e. the inclusion of certain industrial plants that are now in the non-ETS sector (e.g. CO₂ chemicals etc, non-CO₂ aluminium, nitric and adipic acid) and the inclusion of aviation from 2012.
- Changes in allocation rules could also be taken into account if possible
 - o Gradual introduction of full auctioning, which will be fully applicable from 2020 onwards, in line with the specifications of the amended ETS Directive should be taken into account in the power sector.
 - o For the other sectors (aviation and industry) the specifications in the Directive on the evolution of auctioning shares and the provisions for free allocation for energy intensive sectors based on benchmarking should be reflected if possible.

An overview of agreed implementing legislation with exact references can be found in Annexes 6.1 and 6.2 of

http://ec.europa.eu/clima/policies/ets/cap/auctioning/docs/swd_2012_234_en.pdf

Effort Sharing Decision 406/2009/EC, ESD Annual Emission Allocation (AEA) Decision 2013/634/EU and Renewable Energy Sources (RES) Directive 2009/28/EC

- Key for the quality of the projections is an appropriate split between the ETS and non-ETS sectors, as these are covered under different regulatory frameworks (see also above and further indications).
- Given that these pieces of legislation (related to ESD and RES) do not prescribe the measures to achieve the targets, and leave significant flexibility on how they can be implemented domestically, it is suggested that not the legally binding national ESD and RES targets, but only already implemented national RES and ESD related measures are taken into account under WM (With -existing- measures; i.e. WEM) scenario. Planned



measures to reach the targets should be part of the WAM (With additional measures) projections.

LULUCF Decision No 529/2013/EU of the 21st of May 2013. Decision No 529/2013/EU of the European Parliament and of the Council of 21 May 2013 on accounting rules on greenhouse gas emissions and removals resulting from activities relating to land use, land-use change and forestry and on information concerning actions relating to those activities.

F-Gases Regulation: Regulation (EU) 517/2014 prescribing a cap and subsequent reduction of HFCs that can be placed on the EU market (“phasedown”), thus eliminating 79 % of the current consumption levels of HFCs by 2030, leading to a two-thirds reduction of emissions. The new F-Gases Regulation also includes a number of bans - F-gases with high global warming potential (GWP) are restricted from use in new equipment in refrigeration, small air conditioners, fire protection, foams and technical aerosols. In addition, a “service ban” requires operators of existing equipment to start using more climate-friendly alternatives from 2020 onwards.

Regulation on CO₂ from cars and vans: Agreed standards for new cars and vans should be taken into account, including their impact on the evolution of transport energy demand, which are expected to be considerable, in particularly post 2020 due to the stock turnover effects:

- CO₂ and Cars: Commission Regulation (EU) No 397/2013 of 30 April 2013 amending Regulation (EC) No 443/2009 as regards the monitoring of CO₂ emissions from new passenger cars. Regulation (EU) No 333/2014 on modalities for reaching the 2021 target for cars;

- CO₂ and Vans: Regulation (EU) No 510/2011 limiting CO₂ emissions from new vans to a fleet average of 175 g/km by 2017 and 147 g/km by 2020. Regulation (EU) No 253/2014 of the European Parliament and of the Council amending Regulation (EU) No 510/2011 to define the modalities for reaching the 2020 target to reduce CO₂ emissions from new light commercial vehicles.

- Commission Implementing Decision 2013/128/EU of 13 March 2013 on the approval of the use of light emitting diodes in certain lighting functions of an M1 vehicle as an innovative technology for reducing CO₂ emissions from passenger cars pursuant to Regulation (EC) No 443/2009 of the European Parliament and of the Council.

- Commission Implementing Regulation (EU) No 396/2013 of 30 April 2013 amending Regulation (EU) No 1014/2010 as regards certain requirements for the monitoring of CO₂ emissions from new passenger cars.

- Commission Delegated Regulation (EU) No 114/2013 of 6 November 2012 supplementing Regulation (EU) No 510/2011 of the European Parliament and of the Council with regard to rules for the application for derogation from the specific CO₂ emissions targets for new light commercial vehicles.

Energy Efficiency Directive: Directive 2012/27/EU on energy efficiency, amending Directives 2009/125/EC and 2010/30/EU and repealing Directives 2004/8/EC and 2006/32/EC. The Directive entered into force on 4 December 2012. Most of its provisions will have had to been implemented by the Member States by 5 June 2014. The most notable additional effects are expected from the energy savings obligations or equivalent measures (Art. 7).

Recast of the Energy Performance of Buildings Directive (Directive 2010/31/EU)



In particular requirements for new buildings should be reflected in WM scenario; relevant mainly for post 2020 projections.

Eco-design framework Directive 2009/125/EC, 2008/28/EC and its implementing Regulations, combined with Labelling Directive 2017/1369 repealing 2010/30/EC

Given the now existing set of agreed implementing measures, their effect on energy demand should be considered. As requirements and labelling concern only new products, the effect will be gradual (none in 2010; rather small in 2015, full effect by 2030):

- Stand-by Regulation 2008/1275/EC
- Simple Set-to boxes regulation 2009/107/EC
- Office/street lighting regulations 2009/245/EC, No 859/2009 and No 347/2010
- Household lighting regulation 2009/244/EC
- External power supplies regulation 2009/278/EC
- TVs (+labelling) Regulation No 642/2009, 1062/2010
- Electric motors Regulation No 640/2009
- Circulators Regulation No 641/2009
- Freezers/refrigerators (+labelling) Regulation No 643/2009, 1060/2010
- Household washing machines (+ labelling) Regulation No 1015/2010, 1061/2010
- Household dishwashers (+labelling) Regulation No 1016/2010, 1059/2010
- Industrial fans Regulation No 327/2011
- Air conditioning and comfort fans (Regulation No 206/2012, 392/2012)
- Labelling for tyres Regulations No 1222/2009, 228/2011 and 1235/2011

New eco design standards

- Water pumps (547/2012)
- Household tumble driers (932/2012)
- Directional lamps (1194/2012)
- Computers and servers (617/2013)
- Vacuum cleaners (666/2013)
- Networked standby (801/2013)
- Heaters (813/2013)
- Water heaters (814/2013)
- Circulators (amending Regulation 641/2009) (622/2012)
- Industrial electric motors (amending Regulation 640/2009) (4/2014)
- Domestic ovens, hobs and range hoods (66/2014)
- Small, medium and large power transformers (548/2014)
- Ventilator units (1253/2014)
- Professional refrigerated storage cabinets (2015/1095)
- Local space heaters (2015/1188)(2015/1185)
- Solid fuel boilers (2015/1189)
- Air heating products, cooling products, high temperature process chillers and fan coil units (2016/2281)

New energy labelling supplementing Regulations

- Electrical lamps and luminaires (874/2012)
- Vacuum cleaners (665/2013)
- Heaters (811/2013)
- Water heaters (812/2013)
- Domestic ovens and range hoods (65/2014)
- Energy related products on internet (518/2014)



- Residential Ventilation Units (1254/2014)
- Professional refrigerated storage cabinets (2015/1094)
- Local space heaters (2015/1186)
- Solid fuel boilers (2015/1187)

Voluntary Agreements

- Complex set top boxes COM (2012) 684
- Imaging equipment COM (2013) 23
- Games consoles COM (2015)178

Full overview of the existing ecodesign and energy labelling measures can be found at:
https://ec.europa.eu/energy/sites/ener/files/documents/list_of_ecodesign_measures.pdf
https://ec.europa.eu/energy/sites/ener/files/documents/list_of_energylabelling_measures.pdf

Full list of Union measures:

CROSS-CUTTING

- "Effort Sharing Regulation": "Effort Sharing Regulation EU 2018/842",
- "ETS_directive": "EU ETS directive 2003/87/EC as amended by Directive 2008/101/EC, Directive 2009/29/EC and Directive 2018/410 and implementing legislation, in particular 2010/2/EU, 2011/278/EU, 2011/638/EU, 176/2014/EU, and Decision (EU) 2015/1814",
- "Effort_Sharing_Decision": "Effort Sharing Decision 406/2009/EC",
- "Multiannual_Financial_Framework": "Provisions on the European Regional Development Fund, the European Social Fund, the Cohesion Fund, the European Agricultural Fund for Rural Development and the European Maritime and Fisheries Fund under the Multiannual Financial Framework"
- "ESD_AEA_Decision": "ESD Annual Emission Allocation (AEA) Decision 2013/634/EU and Commission Decision (EU) 2017/1471 amending Decision 2013/162/EU"

ENERGY CONSUMPTION

- "Energy_Efficiency_Directive": "Energy Efficiency Directive 2012/27/EU and amended by Directive 2018/2002", "Recast_of_EPBD": "Recast of the Energy Performance of Buildings Directive (Directive 2010/31/EU) and amended by the Directive 2018/844",
- "Eco-design_Labelling_directives": "Eco-design framework Directive 2009/125/EC, 2008/28/EC and its implementing Regulations, combined with Labelling Directive 2017/1369 repealing 2010/30/EC",
- "End-use_and_energy_services": "Directive 2006/32/EC on end-use energy efficiency and energy services",
- "Energy_Star_Program": "Energy Star Program",

ENERGY SUPPLY

- "RES_directive": "RES directive 2009/28/EC and RES recast (Directive 2018/2001)",
- "Geological_storage": "Directive on the geological storage of CO2 2009/31/EC",
- "Cogeneration_Directive": "Cogeneration Directive 2004/8/EC",
- "Energy_Taxation_Directive": "Energy Taxation Directive 2003/96/EC",
- "Internal_energy_market": "Completion of the internal energy market (including provisions of the 3d package)",

TRANSPORT

- "Alternative_Fuel_Directive": "Directive on the deployment of alternative fuels infrastructure 2014/94/EU"
- "Eurovignette_Directive": "Eurovignette Directive on road infrastructure charging 2011/76/EU",



- "FQD": "Fuel Quality Directive 2009/30/EC",
- "Clean_and_Energy_Efficient_Vehicles": "Directive on the Promotion of Clean and Energy Efficient Road Transport Vehicles 2009/33/EC",
- "CO2_and_cars_and_vans_regulations": "Regulation on CO2 from cars and vans (2009/443/EC, (EU) No 510/2011, (EU) No 397/2013, (EU) No 333/2014, (EU) No 253/2014, 2013/128/EU, (EU) No 396/2013, (EU) No 114/2013)",
- "Euro_6_for_HDV": "Regulation Euro VI for heavy duty vehicles 2009/595/EC",
- "EURO_5_and_6": "Regulation Euro 5 and 6 2007/715/EC",
- "Biofuels_directive": "Biofuels directive 2003/30/EC",

INDUSTRIAL PROCESSES

- "Fgas_regulation": "F-gas Regulation 517/2014",
- "MACs Directive": "Mobile Air-conditioning system (MACs) Directive 2006/40/EC",
- "F-gas_Regulation": "F-gas Regulation 2006/842/EC",

AGRICULTURE

- "CAP_Reform": "CAP Reform 2014-2020: Regulation 1305/2013; Regulation 1306/2013; Regulation 1307/2013 and Regulation 1308/2013, and their transitory measures for 2014 (Regulation 1310/2013, 2006/144/EC",
- "Cap_reform": "CAP Reform 2013 regulations: Rural Development (1305/2013), 'Horizontal' issues (1306/2013), Direct payments (1307/2013) and Market measures (1308/2013)",
- "CAP_Health_Check_and_Set_aside": "CAP "Health Check" 2008 and the "Set aside" regulation 73/2009",
- "Nitrate_Directive": "Nitrate Directive 1991/676/EEC",

WASTE

- "Waste_Management_Framework_Directive": "Waste Management Framework Directive 2008/98/EC, amended by Directive 2018/851",
- "Waste_Directive": "Waste Directive 2006/12/EC",
- "Waste incineration Directive": "Waste incineration Directive 2000/76/EC 2000/76/EC",
- "Landfill_Directive": "Landfill Directive 1999/31/EC, amended by Directive 2018/850",

LULUCF

- "LULUCF_Regulation": "LULUCF Regulation 2018/841",
- "LULUCF_Decision": "LULUCF Decision No 529/2013/EU",

OTHER

- "IED": "Industrial emissions Directive 2010/75/EU (Recast of IPPC Directive 2008/1/EC and Large Combustion Plant Directive 2001/80/EC) and its associated Best Available Technique Reference Documents",
- "NEC": "Directive 2016/2284 on the reduction of national emissions of certain atmospheric pollutants, amending Directive 2003/35/EC and repealing Directive 2001/81/EC",
- "Water_Framework": "Water Framework Directive 2000/60/EC",
- "Other_EU": "Other (Union policy not listed above or additional Union policy)",
- "Medium_Combustion_Plant_Directive": "Medium Combustion Plant Directive 2015/2193"

With regard to directives which need to be transposed into national law, it is necessary to identify which national measures have been (existing measures) or will be (additional measures) put in place to implement such legislation and other EU PaMs and what effect they will have and when.



Annex 6 – List of references on the evaluation of policies and measures

In 2018 the ETC/ACM looked into the available guidelines for policy evaluation and the national evaluations and prepared an overview that can be downloaded from <http://cdr.eionet.europa.eu/help/mmr> (file: MMR Article 13 Overview of policy evaluation guidelines).

Title	Publisher	Publishing date	Weblink
Environment and climate policy evaluation, EEA Report No 18/2016	European Environment Agency	2016	http://www.eea.europa.eu/publications/environment-and-climate-policy-evaluation
COMMISSION STAFF WORKING DOCUMENT Better Regulation Guidelines	European Commission	2015	http://ec.europa.eu/smart-regulation/guidelines/docs/swd_br_guidelines_en.pdf
Policy and Action Standard. An accounting and reporting standard for estimating the greenhouse gas effects of policies and actions	World Resource Institute	2015	http://ghgprotocol.org/policy-and-action-standard Full Report: http://www.wri.org/sites/default/files/Policy_and_Action_Standard.pdf
Energy Efficiency Evaluation: The evidence for real energy savings from energy efficiency programmes in the household sector	UK Energy Research Centre	2015	http://www.ukerc.ac.uk/programmes/technology-and-policy-assessment/energy-efficiency-evaluation.html
Study to support the definition of a CBA methodology for gas, A report prepared for the European Commission by Frontier Economics	European Commission	2014	https://ec.europa.eu/energy/sites/ener/files/documents/Study%20to%20support%20the%20definition%20of%20a%20CBA%20methodology%20for%20gas.pdf
Guide to Cost-Benefit Analysis of Investment Projects, Economic appraisal tool for Cohesion Policy 2014-2020	European Commission	2014	http://ec.europa.eu/regional_policy/sources/docgener/studies/pdf/cba_guide.pdf
Assessing the costs and benefits of regulation	European Commission	2013	http://ec.europa.eu/smart-regulation/impact/commission_guidelines/docs/131210_cba_study_sg_final.pdf
EVALSED Sourcebook	European Commission	2013	http://ec.europa.eu/regional_policy/en/information/publications/evaluations-guidance-documents/2013/evalsed-the-resource-for-the-evaluation-of-socio-economic-development-sourcebook-method-and-techniques
<i>Ex post</i> quantification of the effects and costs of PaMs	European Commission	2012	https://ec.europa.eu/clima/sites/clima/files/strategies/progress/monitoring/docs/report_expost_quantification_en.pdf
The Magenta Book. Guidance for evaluation	UK	2011	https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/220542/magenta_book_combined.pdf



Title	Publisher	Publishing date	Weblink
Improving the practice of cost benefit analysis in transport, Summary and Conclusions	OECD, International Transport Forum	2011	http://www.itf-oecd.org/sites/default/files/docs/dp201101.pdf
Quantification of the effects on greenhouse gas emissions of PaMs	European Commission	2009	http://ec.europa.eu/clima/policies/strategies/progress/monitoring_en#tab-0-2 https://ec.europa.eu/clima/sites/clima/files/strategies/progress/monitoring/docs/ghgPaMs_report_180110_en.pdf
Guidelines for the monitoring, evaluation and design of energy efficiency policies - How policy theory can guide monitoring & evaluation efforts and support the design of SMART policies -	European Commission	2006	https://ec.europa.eu/energy/intelligent/projects/sites/iee-projects/files/projects/documents/aid-ee_guidelines_en.pdf
The Impacts and Costs of Climate Chang	European Commission	2005	http://ec.europa.eu/clima/policies/strategies/2020/docs/final_report_2_en.pdf
Guide to Cost-Benefit Analysis of Major Projects, in the context of EC Regional Policy 1997 edition	European Commission	1997	http://ec.europa.eu/regional_policy/sources/docgener/guides/cost/pdf/3_full_en.pdf
Contestation, contingency, and justice in the Nordic low-carbon energy transition	European Commission	2017	http://ec.europa.eu/environment/integration/research/newsalert/pdf/nordic_countries_demonstrate_potential_of_low_carbon_energy_policies_494na4_en.pdf
The economic impact of climate change on European agriculture	European Commission	2017	http://ec.europa.eu/environment/integration/research/newsalert/pdf/economic_impact_of_climate_change_on_european_agriculture_488na2_en.pdf
Research for environmental policymaking: how to prioritise, communicate and measure impact	European Commission	2016	http://ec.europa.eu/environment/integration/research/newsalert/pdf/research_for_environmental_policymaking_54si_en.pdf
Scope study in modelling of EU environment policy	European Commission	2016	http://ec.europa.eu/environment/enveco/studies_modelling/pdf/study_modelling.PDF
The challenges of monitoring national climate policy: learning lessons from the EU	Journal: Climate Policy (Author: Jonas Schönefeld)	2016	http://www.tandfonline.com/doi/full/10.1080/14693062.2016.1248887