

Air pollution policies and measures under the National Emission reduction Commitments Directive (NECD) Update 2024



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Summary

Member States to the European Union are required according to Article 6 of Directive (EU) 2016/2285 on the reduction of national emissions of certain atmospheric pollutants (NECD) to draw up, adopt and implement their respective National Air Pollution Control Programs (NAPCP) to limit their anthropogenic air pollution emissions. This report analyses the policies and measures (PaMs) considered by Member States in order to comply with the emission reduction commitments for 2020, and 2030, intermediate emission levels for 2025. The reporting requires information on individual PAM level on the targeted pollutant, the targeted sector, objective, implementation period, as well as quantified expected emission reduction. In the second reporting period (Jan.2022-Jan. 2024) Romania reported for the first time, while Cyprus, Czechia, Estonia, France, Ireland, Lithuania, Luxembourg, Poland and Spain provided updates of their submissions. Cyprus and Luxembourg reported policies and measures which already have been included in their previous submission.

In period 2 a total of 276 single policies and measures selected for adoption has been reported. NO_x emissions are targeted by most of the PaMs submitted in the 2nd period, with a focus to energy consumption and transport. Regulatory and fiscal policy instruments are selected most for implementation. The number of policies for which the effect has been quantified increased from period 1 to period 2.

1 Introduction

Article 6 of Directive (EU) 2016/2284 on the reduction of national emissions of certain atmospheric pollutants (NECD) sets out the obligation for Member States to draw up, adopt and implement their respective National Air Pollution Control Programs (NAPCP) to limit their anthropogenic air pollution emissions⁽¹⁾. These include policies and measures (PaMs) that the Member States are considering and have selected for adoption in view of fulfilling their emissions reduction commitments. Commission Implementing Decision (EU) 2018/1522⁽²⁾ requires these additional air pollution PaMs to be reported by Member States via an online webtool hosted by the European Environment Agency. This information was reported for the first time in 2019 and analysis was undertaken and presented in previous reports⁽³⁾ and briefing⁽⁴⁾.

This report provides an update to the analysis carried out in 2021. It considers all submissions from the last update report until 31.01.2024. (see Annex 1 Member States submissions for all considered submissions).

Period 1 includes all submissions from 2019 until the end of 2021. Period 2 includes all submissions from 2022 until January 2024.

Romania was the only Member State, who submitted for the first time in the second period. Cyprus, Czechia, Estonia, France, Ireland, Lithuania, Luxembourg, Poland and Spain have provided an updated submission in period 2. All Member States except Bulgaria, Finland and the Netherlands have now submitted their air pollution PaMs under the NECD either in period 1 and/or period 2.

⁽¹⁾ https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv%3AOJ.L_.2016.344.01.0001.01.ENG

⁽²⁾ https://eur-lex.europa.eu/eli/dec_impl/2018/1522/oj

⁽³⁾ <https://www.eionet.europa.eu/etcs/etc-atni/products/etc-atni-reports/etc-atni-report-3-2020-analysis-of-the-air-pollution-policies-and-measures-reported-under-the-national-emissions-reduction-commitments-directive-necd>
<https://www.eionet.europa.eu/etcs/etc-atni/products/etc-atni-reports/etc-atni-report-12-2021-air-pollution-policies-and-measures-reported-under-the-national-emissions-reduction-commitments-directive-necd-2021-update>

⁽⁴⁾ <https://www.eea.europa.eu/publications/measures-to-reduce-emissions-of/actions-to-reduce-air-pollutant>

2 Analysis of NEC PAM submissions reported in the 2nd period

This chapter describes the characteristics of NEC PAM submissions, which have been reported by Member States in the 2nd period.

Romania was the only country that has reported PaMs for the first time.

Cyprus, Czechia, Estonia, France, Ireland, Lithuania, Luxembourg, Poland and Spain provided an updated submission since 2022. Cyprus and Luxembourg provided updated submissions containing PaMs, which were already included in their submission in period 1. Therefore these submissions have not been further analysed, as they are included in previous Eionet report 3/2020 and an update report in 2021.

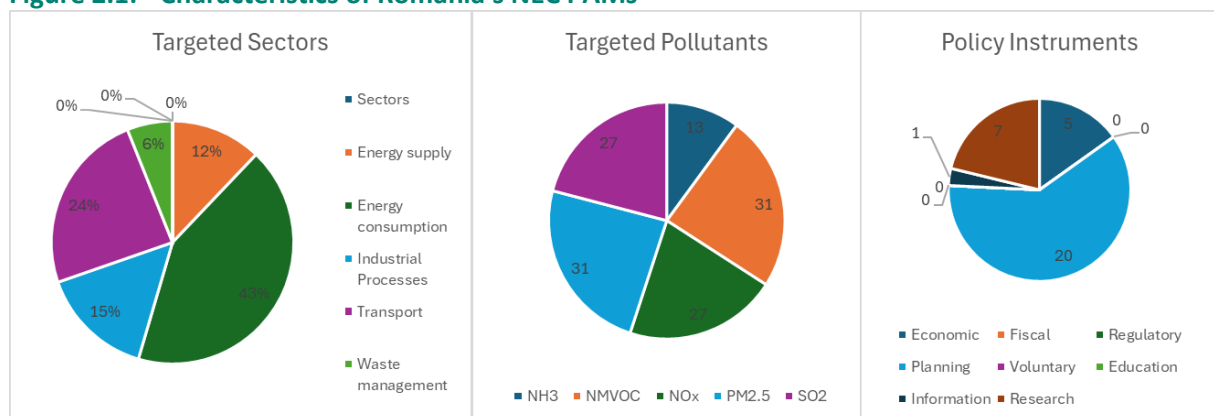
2.1 Analysis of the submission from Romania

2.1.1 Reported effects of policies and measures under the NECD

In 2022, Romania reported for the first on its additional policies and measures selected for adoption to fulfil the emission reduction commitment. The submission included information on 33 policies and measures, whereby 28 of these have been clustered into 8 groups.

The sector targeted most by policies and measures is the energy consumption sector, whereby the objective « other energy consumption » was most frequently (10 times). A review of these PAMs show that these are relating to the improvement of reporting of emissions in specific categories, to support schemes and expansion of gas and distribution networks. The selected PAMs will contribute to emission reduction for all main pollutants, but especially to NMVOC and PM_{2.5}. The policy instruments being most relevant is « planned ». All PAMs reported are included in the ‘with additional measures’ scenario with an implementation period starting in 2023. For 25 of the reported measures the implementation ends by 2029, by the remaining ones earlier than that.

Figure 2.1: Characteristics of Romania’s NEC PAMs



Romania’s NO_x and PM_{2.5} emissions were in 2021 above the emission reduction commitment for NO_x by 8% and PM_{2.5} by 35% ; other pollutants were below the emission reduction commitment. Under this aspect it is interesting to see, that most of the measures address NMVOC and not the pollutants requiring the highest reductions. Looking at the projections, submitted by Romania in 2023, it can be seen that Romania anticipates meeting its NO_x and PM_{2.5} reduction commitments by 2025 and 2030 in the WAM scenario, but not in the WEM scenario.

The measure contributing most to a reduction of NO_x emissions is a package of measures addressing road transport emissions with an expected reduction of 37kt by 2025 and by 2030. Actions are planned

to improve public transport with regard to connectivity and infrastructure, the use of e-vehicles, as well as improving primary and secondary road connectivity. A package from the industrial sector is expected to reduce NO_x emissions by 7-9 kt, which shall be achieved by improved reporting and higher energy efficiency at the level of industrial consumers.

The planned reduction of PM2.5 emissions is mainly driven by a package of measures for the residential sector, the expected reduction amounts to 26.5 in 2025 and 24.6 kt PM2.5 in 2030. The package includes the following activities: improvement energy performance of residential buildings, expansion of gas transmission and distribution networks, continuation of support schemes to enhance energy performance and use of renewable energy sources, information and campaigns, as well as improvement to the reporting of air pollutant reporting from the residential sector.

2.1.2 Comparison of reported climate and air pollution policies and measures

PaMs could be identified as already reported under the EU Monitoring Mechanism Regulation (MMR) climate mitigation policies, or ambient air quality (AQ) directive, using the 'Related to AQ/MMR?' field. This field was a tick-box field with two options; however, it was not mandatory.

Romania did not report that any of their PaMs reported under the NECD had been reported under the MMR, noting that only single PaMs were included in this analysis.

2.2 Analysis of the submission from Czechia

Czechia reported a total of 16 PaMs, whereby 6 of them are clustered into a group; 9 of these PaMs were also submitted in previous years.

The majority of reported PaMs (47%) were implemented in 2015, 12% in 2019 and 41% in 2020. The implementation end date for most of the PaMs (71%) is 2029, the remaining PaMs are to end in 2024, 2027, 2030 and 2034.

None of the reported PaMs are associated with Greenhouse Gas emissions.

There have been changes to the sectors targeted by Czechia's reported PaMs in comparison to their previous submission in 2019 (see Figure 2.2). In the current submission, one PaM less is targeted to the sectors 'Energy Supply' and 'Cross-cutting', respectively. The same number of PaMs in both submissions target to the sectors 'Other' and 'Transport'. No PaMs targeting the agricultural sector were reported in the current submission, however five PaMs in the 2019 submission are targeting this sector.

Figure 2.2: Number of PaMs targeted sectors in Period 1 and Period 2 reported by Czechia

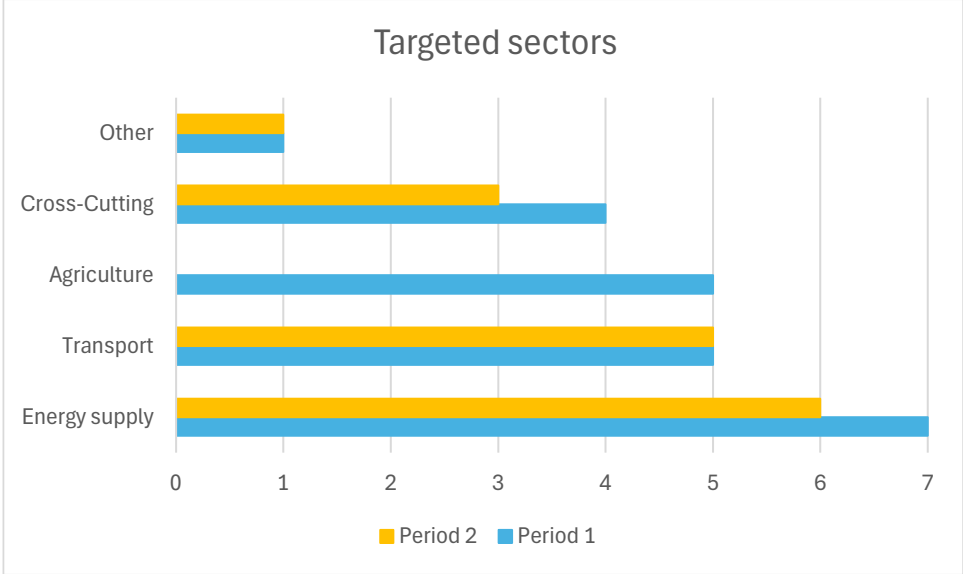
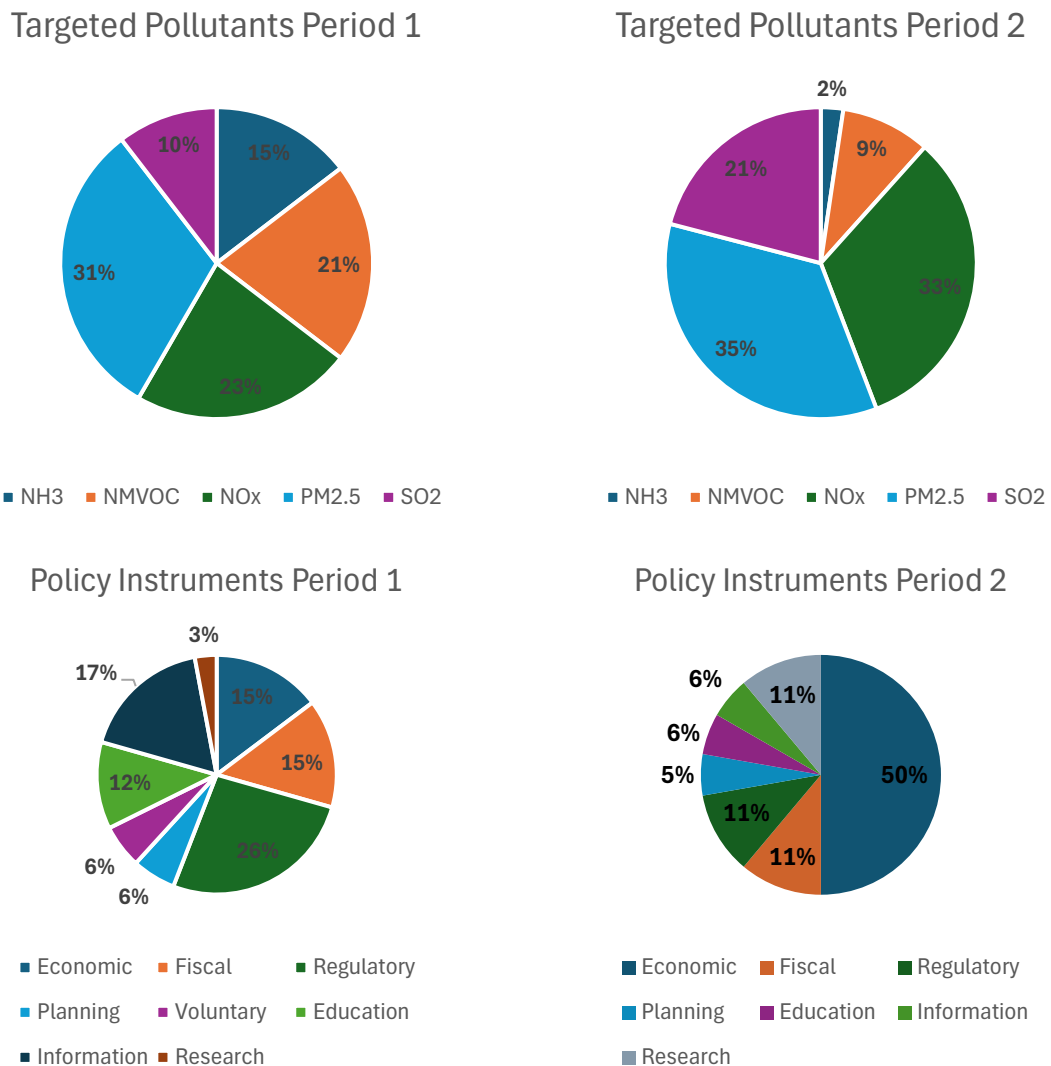


Figure 2.3 shows PaMs reported by Czechia targeting the main NECD pollutants and policy instruments for the previous submission (Period 1) and the current submission (Period 2).

In both periods, 15 PaMs are targeting PM_{2.5} emissions, which are mainly associated with the sectors ‘Energy supply’ and ‘Transport’.

In its new submission, Czechia did not submit any PaMs related to ‘Agriculture’, which is a major source of NH₃ emissions. That explains the significant decrease of PaMs targeting NH₃ from 15% to 2%. Also, PaMs, which are targeting NMVOC emissions, show a significant drop from 21% to 9% due to the reduced number of PaMs targeting at NMVOC emissions from sector ‘Energy supply’. However, an increase of submitted PaMs for NO_x (from 23% to 33%) and SO₂ (from 5% to 9%) has been detected. For both gases, PaMs associated with the sectors ‘Energy supply’ and ‘Transport’ are relevant.

Figure 2.3: Targeted pollutants and policy instruments in Period 1 and Period 2 reported by Czechia



The applied policy instruments have changed significantly in the current submission. While in the previous submission, economic policy instruments had a share of 15% of all submitted PaMs, this share has increased to 50% in the current submission. Significant decreases in the share of policy instruments were detected for the policy instruments ‘Information’ (from 18% to 3%) and ‘Education’ (from 12% to 6%). Furthermore, Czechia did not submit any PaMs considering voluntary policy instruments.

Czechia did not provide quantified reductions for any reported PaMs in the current submission.

2.3 Analysis of the submission from Estonia

Estonia reported a total of 66 PaMs in its current submission, which is an increase of 94%, compared with the previous submission (4 PaMs were submitted). None of these PaMs from Period 2 were previously submitted by the Member State. It has to be noted that 15 PaMs of the current submission are not selected for adoption and therefore are not considered in this analysis.

Most of reported PaMs – namely 15% - were implemented in 2015 as well as in 2023, for the remaining ones the implementation start year was reported as 1995, 2007, 2010, 2013-2024, 2030 or 2036.

The implementation end date for most of the PaMs (38%) are reported with the default end date of 9999 (this option is available for PaMs where the end date is not yet known), followed by the year 2027 (23% of reported PaMs). All other PaMs were reported with an implementation end date between 2022 and 2035.

Three of the reported PaMs are associated with Greenhouse Gas emissions. 2 of them target at Energy supply, one targets at Energy consumption.

There have been significant changes to the sectors targeted by Estonia’s reported PaMs in comparison to their previous submission in 2019 (see Figure 2.4). In the current submission, the focus is on sectors ‘Agriculture’, ‘Transport’ and ‘Energy Supply’. One PaM is reported in sectors ‘Other’ and ‘Industrial Processes’, respectively. Neither in Period 1 nor Period 2, PaMs targeted at cross-cutting sectors or on energy consumption were submitted by the Member State.

Figure 2.4: Number of PaMs targeted sectors in Period 1 and Period 2 reported by Estonia

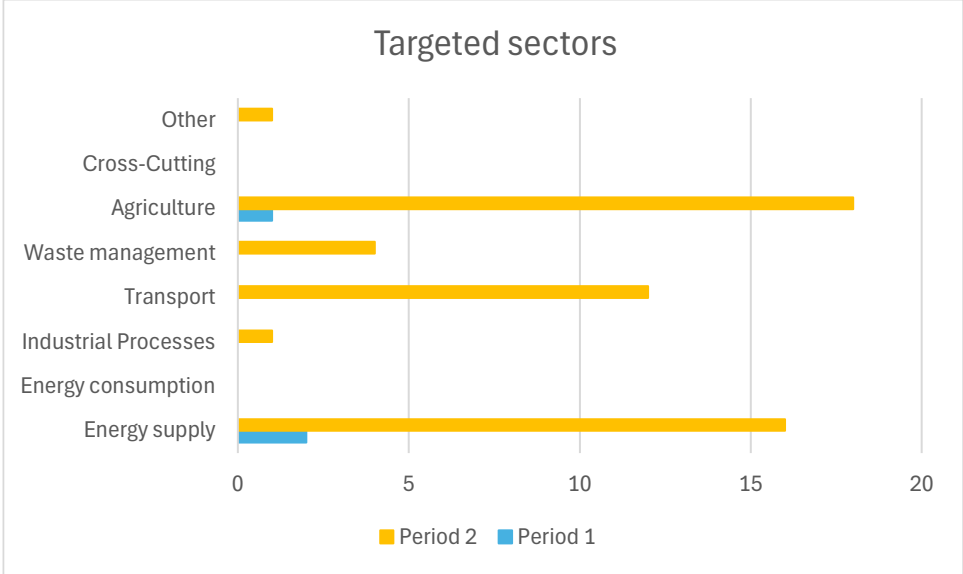
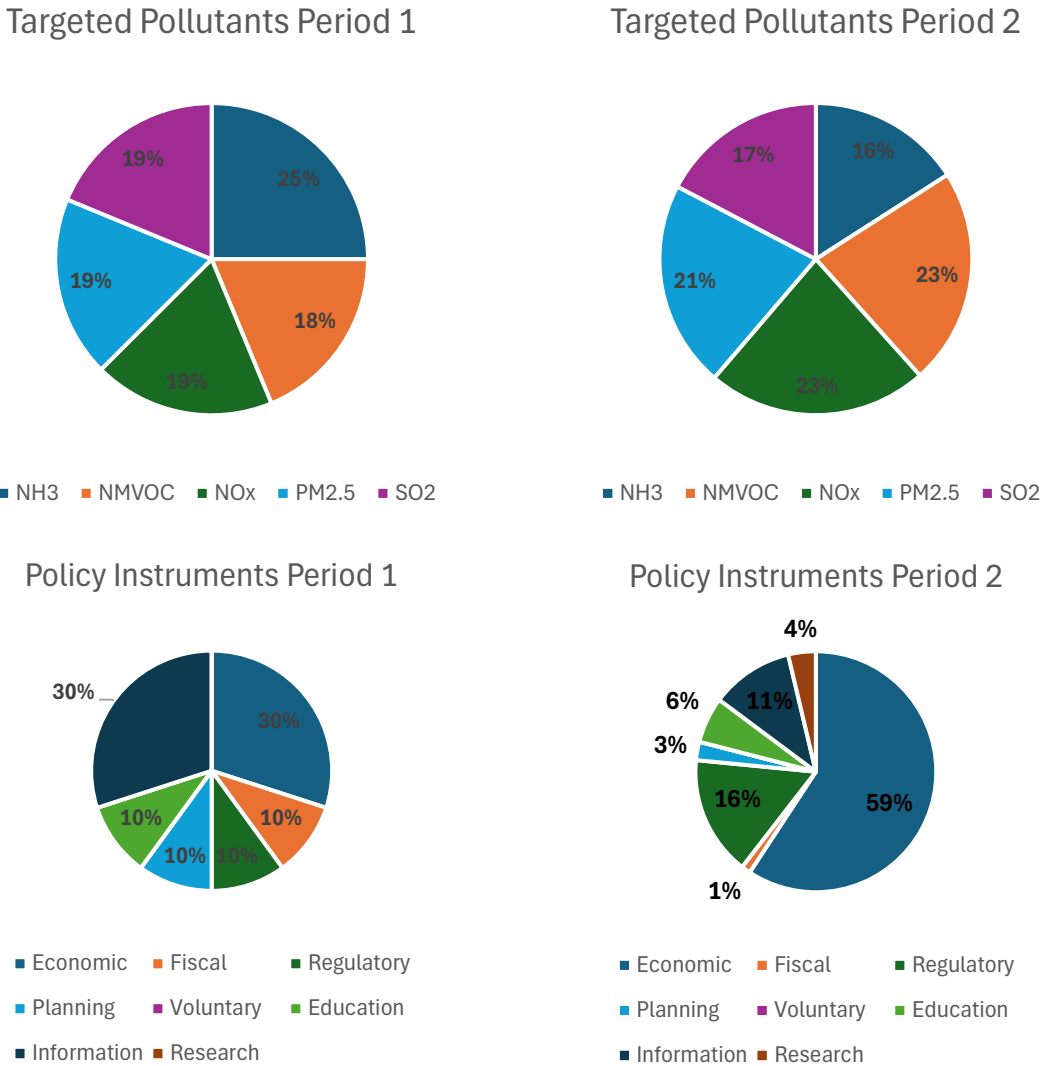


Figure 2.5 shows PaMs reported by Estonia targeting the main NECD pollutants and policy instruments for the previous submission (Period 1) and the current submission (Period 2).

In relative terms, the share of PaMs targeting the 5 main pollutants, did not change significantly over the two periods. In Period 2, most of the PaMs (66) are targeting NO_x emissions, followed by NMVOC emissions (65 PaMs), PM_{2.5} emissions (62 PaMs), SO₂ (50 PaMs) and NH₃ (46 PaMs).

Figure 2.5: Targeted pollutants and policy instruments in Period 1 and Period 2 reported by Estonia



The applied policy instruments have changed significantly in the current submission. While in the previous submission, economic policy instruments had a share of 30% of all submitted PaMs, this share has increased to 59% in the current submission.

In Period 1, three PaMs were targeting policy instruments connected to economy or information; one PaM was targeting fiscal, regulatory, planning, or educational policy instruments, respectively. In Period 2, 48 PaMs were targeting economic policy instruments, while 13 were connected to regulatory policy instruments. Further considered policy instruments were Information (9 PaMs), Education (5 PaMs), Research (3 PaMs), Planning (2 PaMs) and Fiscal (1PaM).

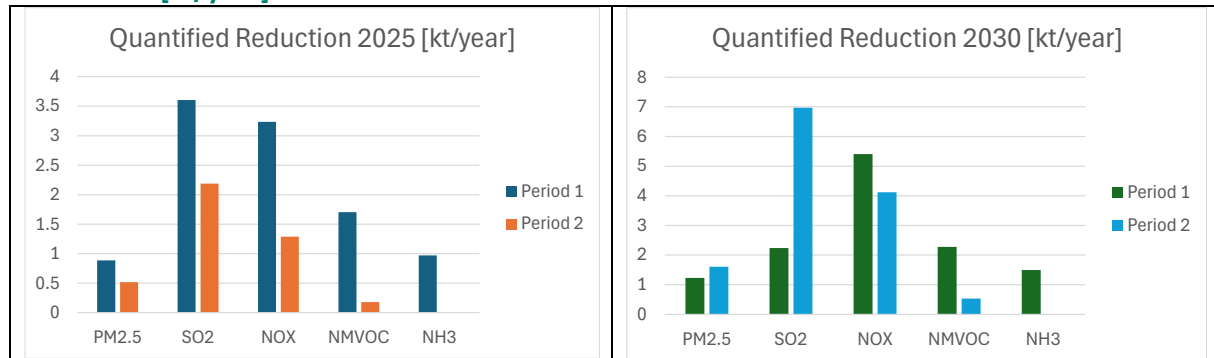
Estonia provided quantified reductions for each reported gas (see Figure 2.6), mainly for sectors ‘Energy Supply’, ‘Energy Consumption’ and ‘Transport’. Additionally, for NH₃ emissions, Estonia provided estimates for the agricultural sector in their previous submission but not in the current one.

Compared to Period 1, reported quantifications of PM_{2.5} emissions are now 42% lower for the reduction year 2025, but 31% higher for the reduction year 2030. The same trend applies to SO₂: while

SO₂ emission reductions for the year 2025 are 39% lower in the current submission, they are increasing by 211% for the year 2030.

A comparison of quantified reductions between both periods shows, that NO_x, NMVOC and NH₃ have all reduced in the current submission for both 2025 and 2030.

Figure 2.6: Quantified reductions for both Period 1 and Period 2 for the years 2025 and 2030 [kt/year]



2.4 Analysis of the submission from France

France reported in their current submission only 1 PaM, in contrast to their previous submission, where 49 PaMs were reported.

This PaM is connected to Greenhouse Gas emissions. It targets the cross-cutting sector, with an implementation starting in 2022 and an implementation ending of 2025.

Quantified reductions for NH₃ are reported as 558kt/year (2025) and 531kt/year (2030), for NMVOC as 524kt/year (2025) and 508kt/year (2030), for SO₂ 81kt/year (2025) and 75kt/year (2030), for NO_x 460kt/year (2025) and 342kt/year (2030) and for PM_{2.5} 95kt/year (2025) and 83kt/year (2030).

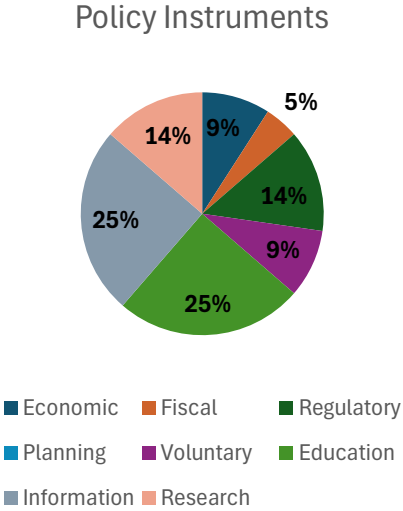
2.5 Analysis of the submission from Ireland

Ireland reported 13 PaMs in their current submission, all of them are selected for adoption. In previous submissions, Ireland reported 29 PaMs, but none of them was selected for adoption, therefore they are not further compared with the current submission.

For 4 of these PaMs, the starting year of implementation was 2023; the remaining were to be implemented in 2015, 2020, 2021 and 2022. The majority of the PaMs were reported with an implementation end date of 2030 (85%), all others are to end by 2027.

All submitted PaMs target the agricultural sector. A quarter of reported PaMs will be implemented through information and/or education, respectively. 6 submitted PaMs are targeting policy instruments connected to regulation or research, 4 PaMs are implemented by voluntarily agreements or economic instruments. Fiscal instruments are considered in 2 PaMs (see Figure 2.7)

Figure 2.7: Targeted policy instruments reported by Ireland



All reported PaMs of the most current submission provides quantified reduction for NH₃ for 2025 (8.6kt/year) and 2030 (12.9kt/year).

2.6 Analysis of the submission from Lithuania

Lithuania reported 65 PaMs, which is an increase of 23% compared to Period 1 (52 PaMs). 40 of these submitted PaMs of the current submission were already provided in previous submissions.

The majority of reported PaMs were implemented in 2019 (22%), 2021 (22%) and 2022 (23%). The remaining ones started in the years 2018, 2020, 2023, 2024, 2027 and 2028. The implementation end date for most of the PaMs (60%) is 2029, the others are to end between 2019 and 2030.

None of the reported PaMs is connected to Greenhouse Gas emissions.

There have been significant changes to the sectors targeted by Lithuania’s reported PaMs in comparison to their previous submission (see Figure 2.4). In the current submission, the focus is on sectors ‘Transport’, ‘Industrial Processes’, ‘Agriculture’ and ‘Other’. Only minor changes in absolute numbers of submitted PaMs were detected in sectors ‘Energy supply’, ‘Waste Management’ and ‘Cross-cutting. Neither in Period 1 nor Period 2, PaMs targeting energy consumption were submitted by the Member State.

Figure 2.8: Number of PaMs targeted sectors in Period 1 and Period 2 reported by Lithuania

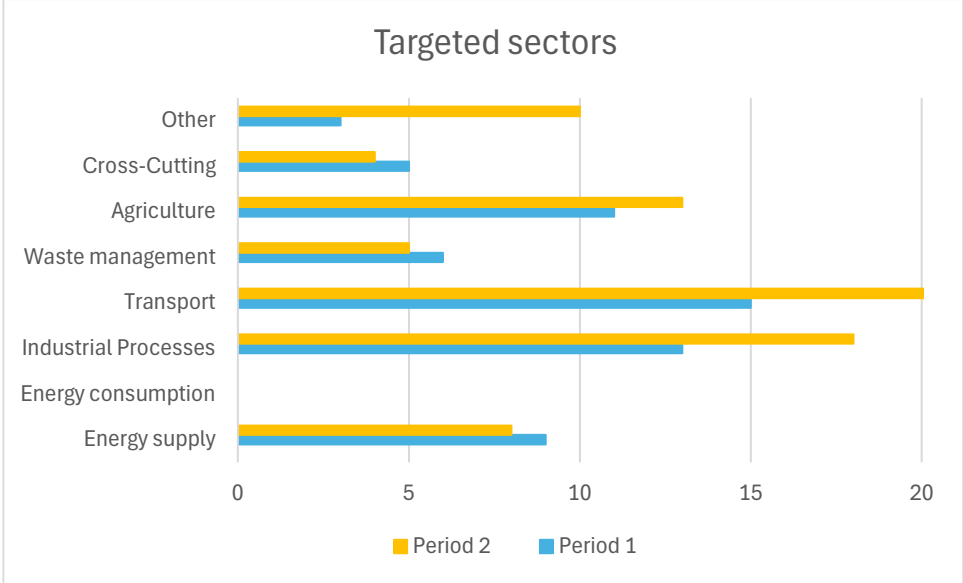
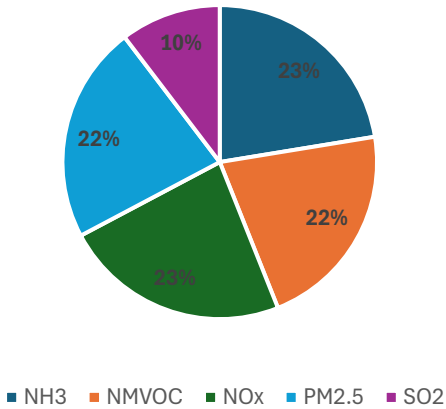


Figure 2.9 shows PaMs reported by Lithuania targeting the main NECD pollutants and policy instruments for the previous submission (Period 1) and the current submission (Period 2).

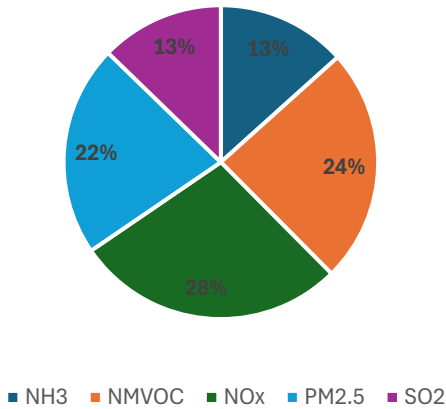
In relative terms, the share of PaMs targeting the 5 main pollutants, did not change significantly over the 2 periods. In Period 2, most of the PaMs (46) are targeting NO_x emissions, followed by NMVOC emissions (40 PaMs), PM_{2.5} emissions (36 PaMs), NH₃ (22 PaMs) and SO₂ (21 PaMs)

Figure 2.9: Targeted pollutants and policy instruments in Period 1 and Period 2 reported by Lithuania

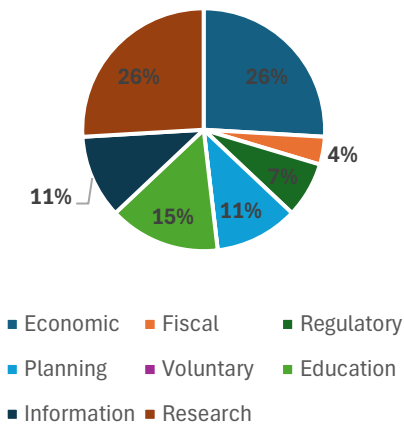
Targeted Pollutants Period 1



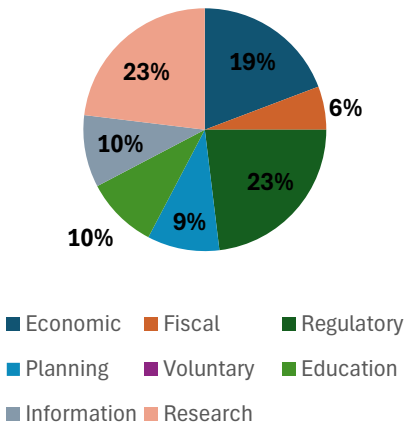
Targeted Pollutants Period 2



Policy Instruments Period 1



Policy Instruments Period 2

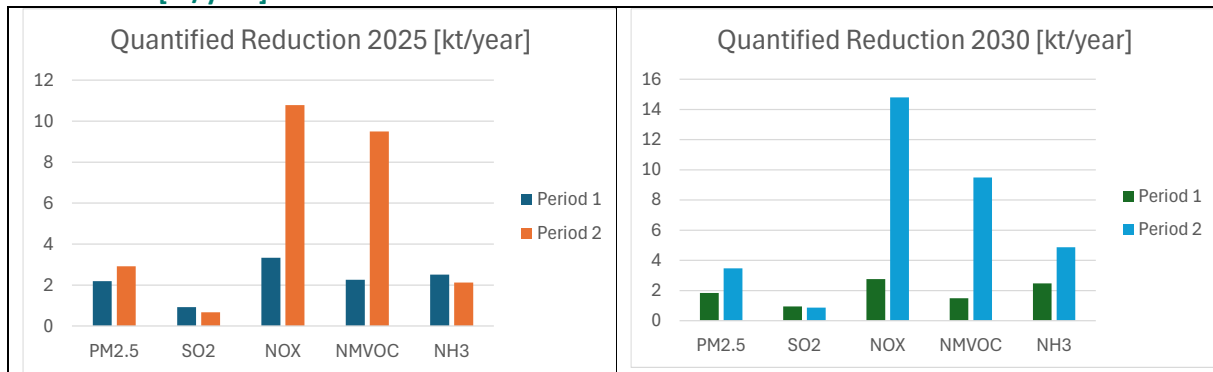


23% of PaMs will be implemented by regulatory means or research. The importance of these policy instruments has increased since the previous submission. A reduced number of reported PaMs in relative terms can be observed in targeting policy instruments such as economy and planning.

Compared to Period 1, higher reported quantifications of PM_{2.5}, NO_x and NMVOC emissions were reported for the reduction years 2025 and 2030. However, while quantified NH₃ emission reductions for the year 2025 are 15% lower in the current submission, they are reported 97% higher for the year 2030 than in the previous submission.

A comparison of quantified reductions between both periods shows, that SO₂ has lowered in the current submission for both 2025 and 2030.

Figure 2.10: Quantified reductions for both Period 1 and Period 2 for the years 2025 and 2030 [kt/year]



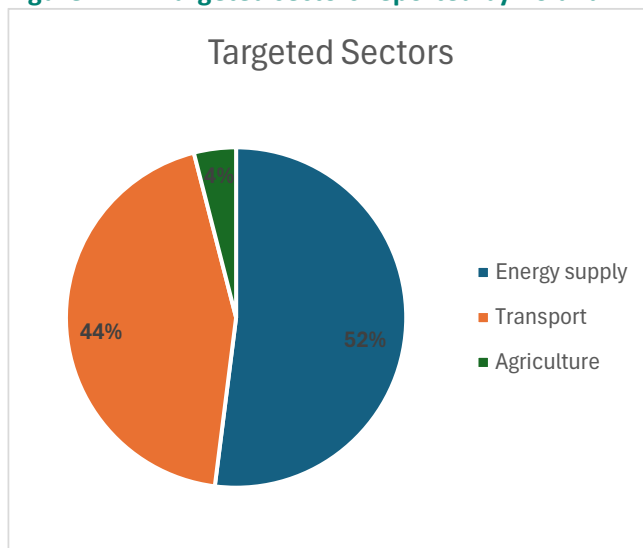
2.7 Analysis of the submission from Poland

Poland reported 31 PaMs in their current submission, all of them are selected for adoption. 30 of them are clustered into a group. In previous submissions, Poland reported 18 PaMs, but none of them was selected for adoption, therefore they are not part of this analysis.

For 12 of these PaMs, the starting year was 2019; the remaining were to be implemented in 2018, 2020, 2021 and 2022. The majority of the PaMs were reported with the default implementation end date of 9999 (68%), all others are to end between 2024 and 2058.

All submitted PaMs are targeting 3 sectors: Agriculture (1 PaM), Transport (11 PaMs) and Energy supply (13 PaMs). (see Figure 2.11)

Figure 2.11: Targeted sectors reported by Poland



As shown in Figure 2.12, most of the PaMs (29) are targeting NO_x emissions, followed by PM_{2.5} emissions (28 PaMs), SO₂ (20 PaMs), NMVOC emissions (14 PaMs), and NH₃ (1 PaM).

50% of PaMs will be implemented by regulatory means, followed by economic means (34%). Also, fiscal (8% of PaMs), planning (5% of PaMs) and research (3% of PaMs) policy instruments are in place (see Figure 2.12)

Figure 2.12: Targeted pollutants and policy instruments reported by Poland

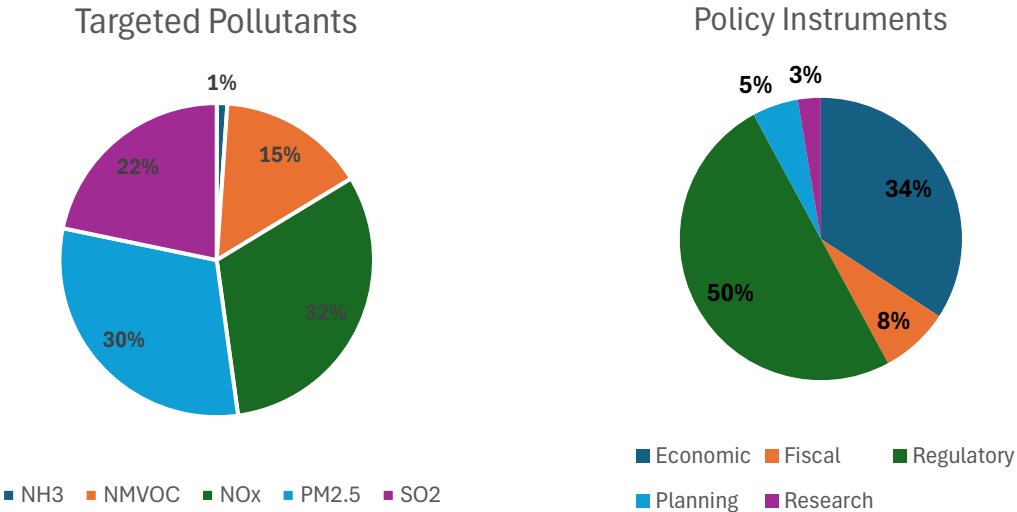
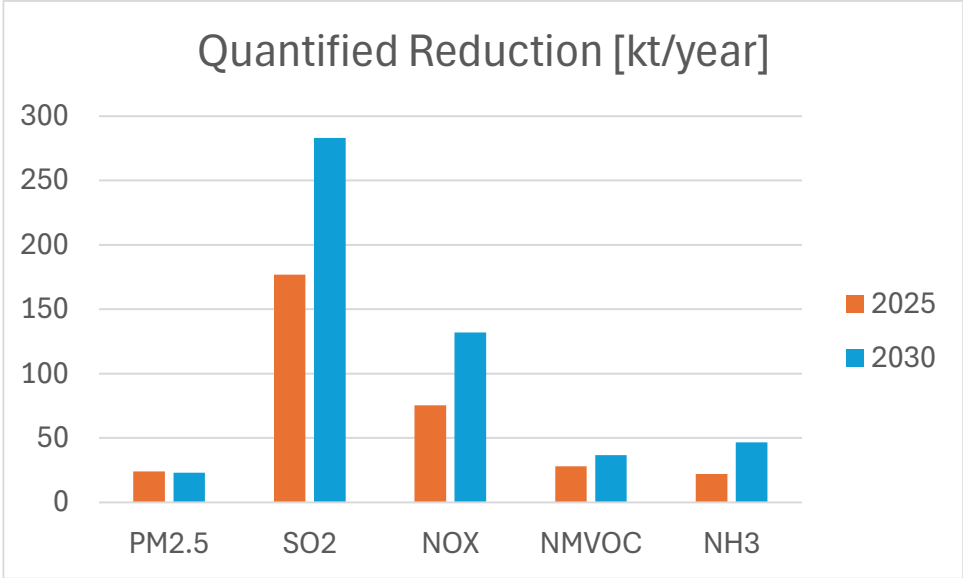


Figure 2.13 shows the quantified reductions per air pollutant for the years 2025 and 2030 in kt/year. Poland reports quantified reductions for the sectors Energy supply, Energy consumption and Transport. For all pollutants but PM_{2.5}, higher reductions for 2030 are reported than for 2025.

Figure 2.13: Quantified reductions per air pollutant for the years 2025 and 2030 [kt/year]



2.8 Analysis of the submission from Spain

Spain reported 57 PaMs in their current submission, all of them are selected for adoption and are clustered into 8 groups. In their previous submission, Spain reported 50 PaMs. Also, all reported PaMs are connected to Greenhouse gas emissions.

Most PaMs were implemented in 2020 (20%) and 2022 (39%). The remaining were implemented in 2019, 2021 and 2023. 98% of PaMs are to end 2024; 2023 was the end of implementation for one PaM.

There have been no significant changes to the sectors targeted by Spain’s reported PaMs in comparison to their previous submission (see Figure 2.14). The number of PaMs reported for ‘Waste management’ and ‘Agriculture’ remained the same. Slight increases in the number of PaMs can be detected in sectors ‘Energy supply’, ‘Industrial Processes’, ‘Transport’ and ‘Cross-cutting’. In both periods, Spain did not submit any PaMs targeting the energy consumption or other sectors.

Figure 2.14: Number of PaMs targeted sectors in Period 1 and Period 2 reported by Spain

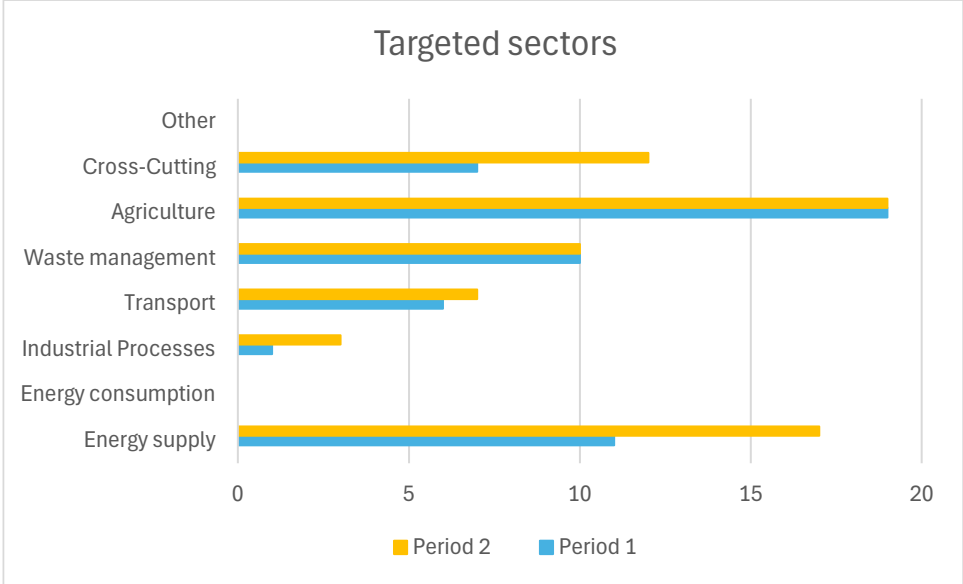
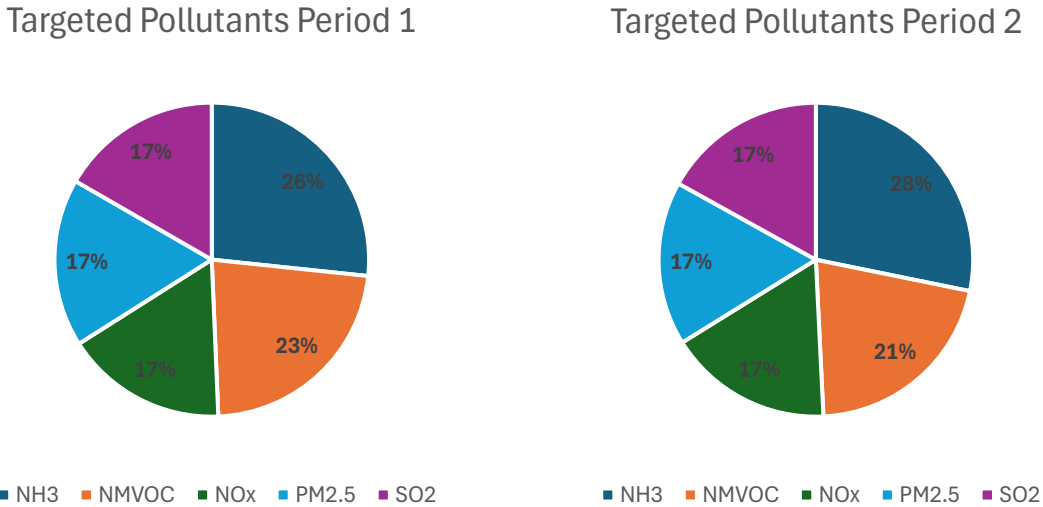


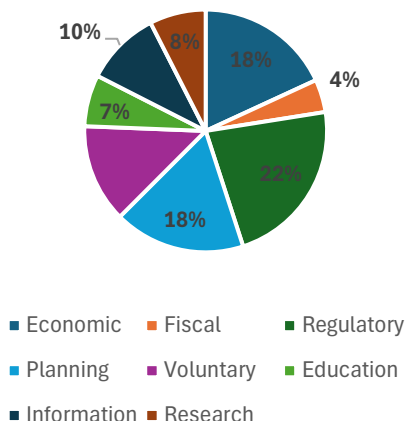
Figure 2.15 shows PaMs reported by Spain targeting the main NECD pollutants and policy instruments for the previous submission (Period 1) and the current submission (Period 2).

In relative terms, the share of PaMs targeting the 5 main pollutants, did not change substantially over the 2 periods. In Period 2, most of the PaMs (55) are targeting NH₃ emissions, followed by NMVOC emissions (41 PaMs), PM_{2.5} emissions, NO_x and SO₂ (33 PaMs, respectively)

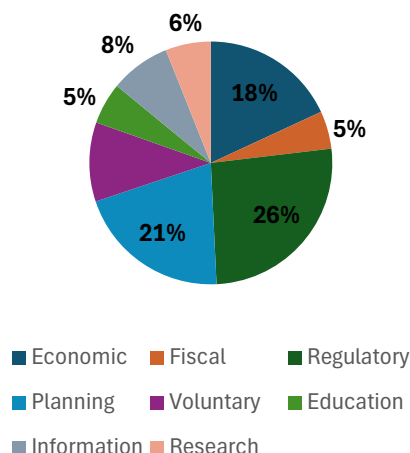
Figure 2.15: Targeted pollutants and policy instruments in Period 1 and Period 2 reported by Spain



Policy Instruments Period 1



Policy Instruments Period 2

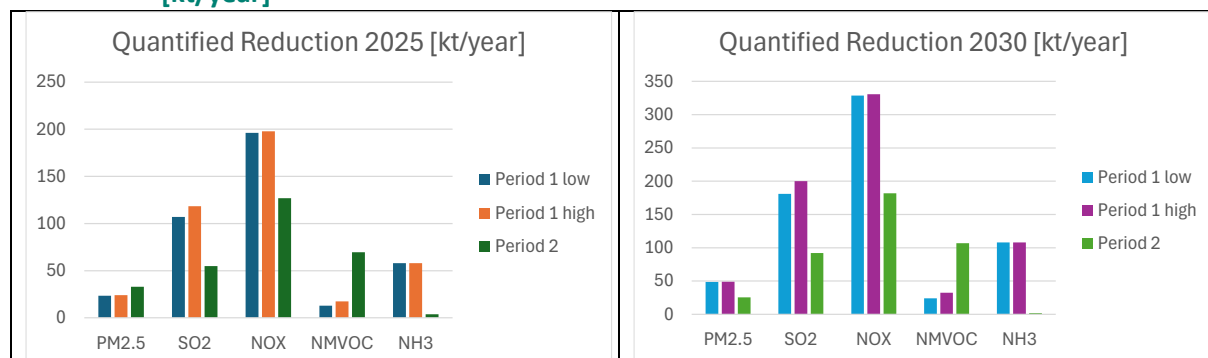


Some of the applied policy instruments have changed significantly in the current submission in absolute terms. In Period 1, 29 PaMs were implemented throughout economical instruments, while in Period 2, 36 PaMs were targeting this policy instrument. The absolute number of PaMs has also increased for fiscal instruments (from 7 to 10 PaMs), regulatory instruments (from 36 to 52 PaMs) and planning instruments (from 28 to 41 PaMs). The number of PaMs, that are implemented by voluntary, educational, informational or research instruments stayed the same for both periods.

For the first period, Spain has reported for some pollutants a range of quantified reductions. In Figure 2.16 this range is displayed as ‘Period 1 low’ for the lower range and ‘Period 1 high’ for the upper range.

Compared to Period 1, the member state reported lower quantified reductions of all pollutants but PM_{2.5} and NMVOC for the year 2025. For the year 2030, quantified reductions for NMVOC are reported significantly higher in the current submission. All other pollutants show a lower reduction in Period 2 than in Period 1.

Figure 2.16: Quantified reductions for both Period 1 and Period 2 for the years 2025 and 2030 [kt/year]



3 Results on EU level

In this chapter, all policies and measures reported by Member States under the Directive (EU) 2016/2284 and its implementing Decision (EU) 2018/1522 are presented on EU level. The submissions received are allocated to two periods: period 1 covering 2019-2021, and period 2 covering all submissions received from 2022 to January 2024. Austria's submission is not included in the analysis as it did not report using in the required format using the PAM reporting tool.

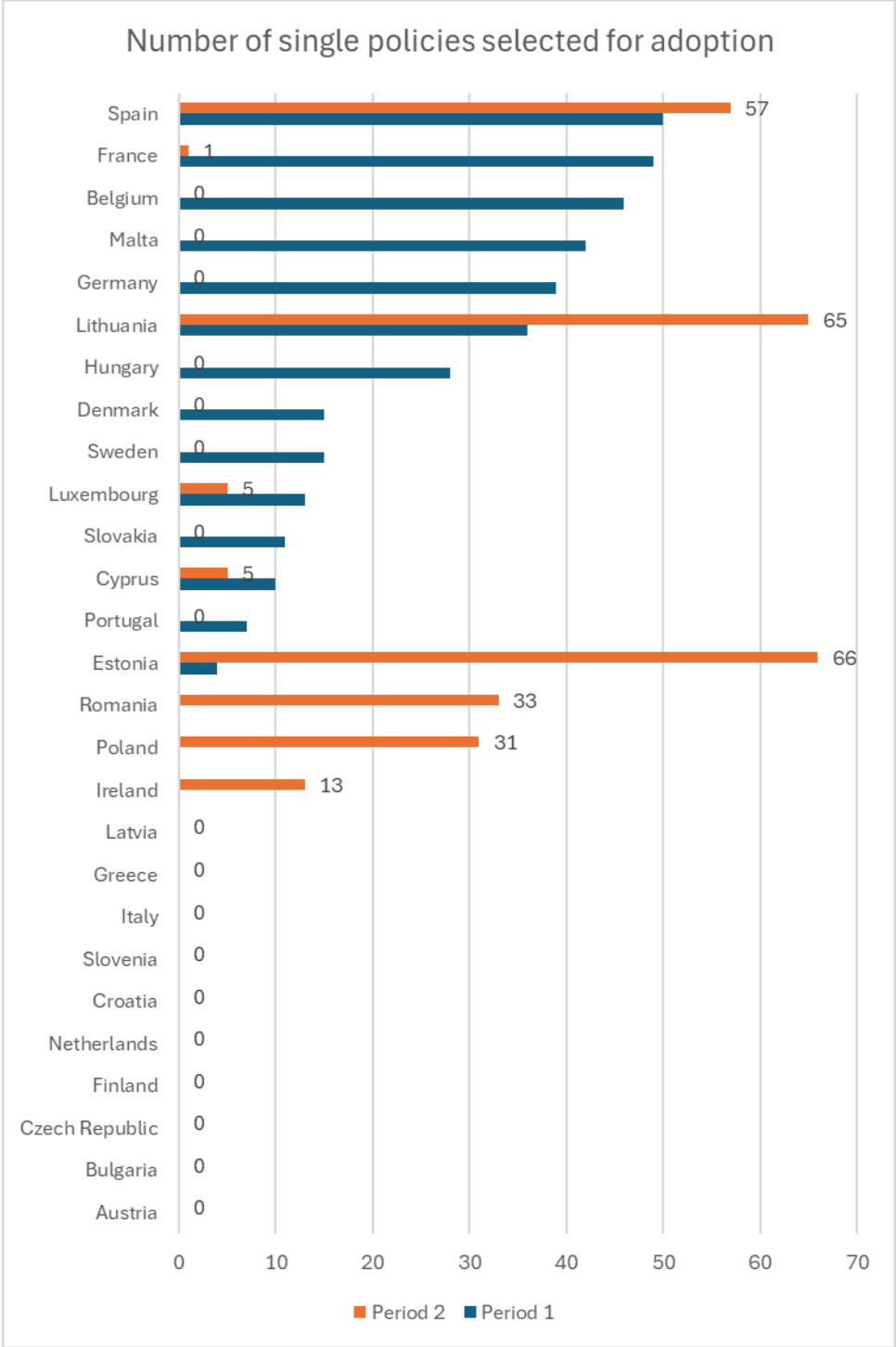
The following analyses take into account only the PaMs marked in the submission as selected for adoption.

3.1 EU wide analysis

In period 1 Member States reported 608 single measures, whereby only 365 were selected for adoption, which presents a share of 60%. In period 2, this share increased to 94%, meaning that almost all reported single measures have been selected for adoption (276 from a total of 295).

Figure 3.1 shows the number of single PaMs reported by Member States in every period. Spain, Lithuania and Estonia reported in both periods, with a substantial increase of PaMs in period 2. The opposite the case is for France, Luxembourg, and Cyprus. Romania reported only in period 2. Poland and Ireland reported in both periods, but they did not select any of the reported measures for adoption in period 1.

Figure 3.1: Number of single PaMs selected for adoption per Member State



The reporting on PaMs requires Member States to select the sectors to which the measures will contribute to a change in emissions. Figure 3.1 shows while in period 1 the transport sector is clearly mostly affected by the PaMs, in period 2 the targeted sectors are more equally distributed among the energy consumption, transport, agriculture and energy supply sector.

Figure 3.2: Number of PaMs per Sector

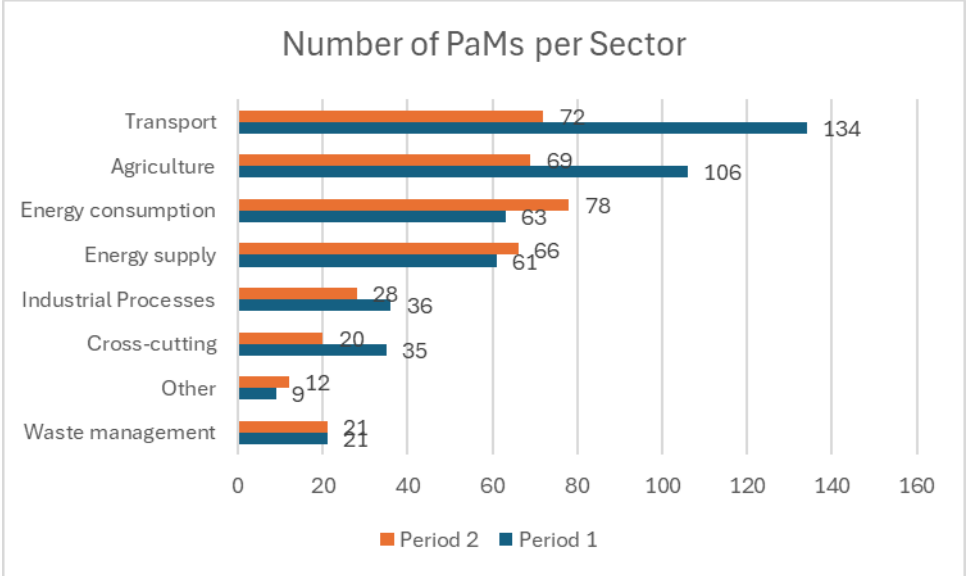
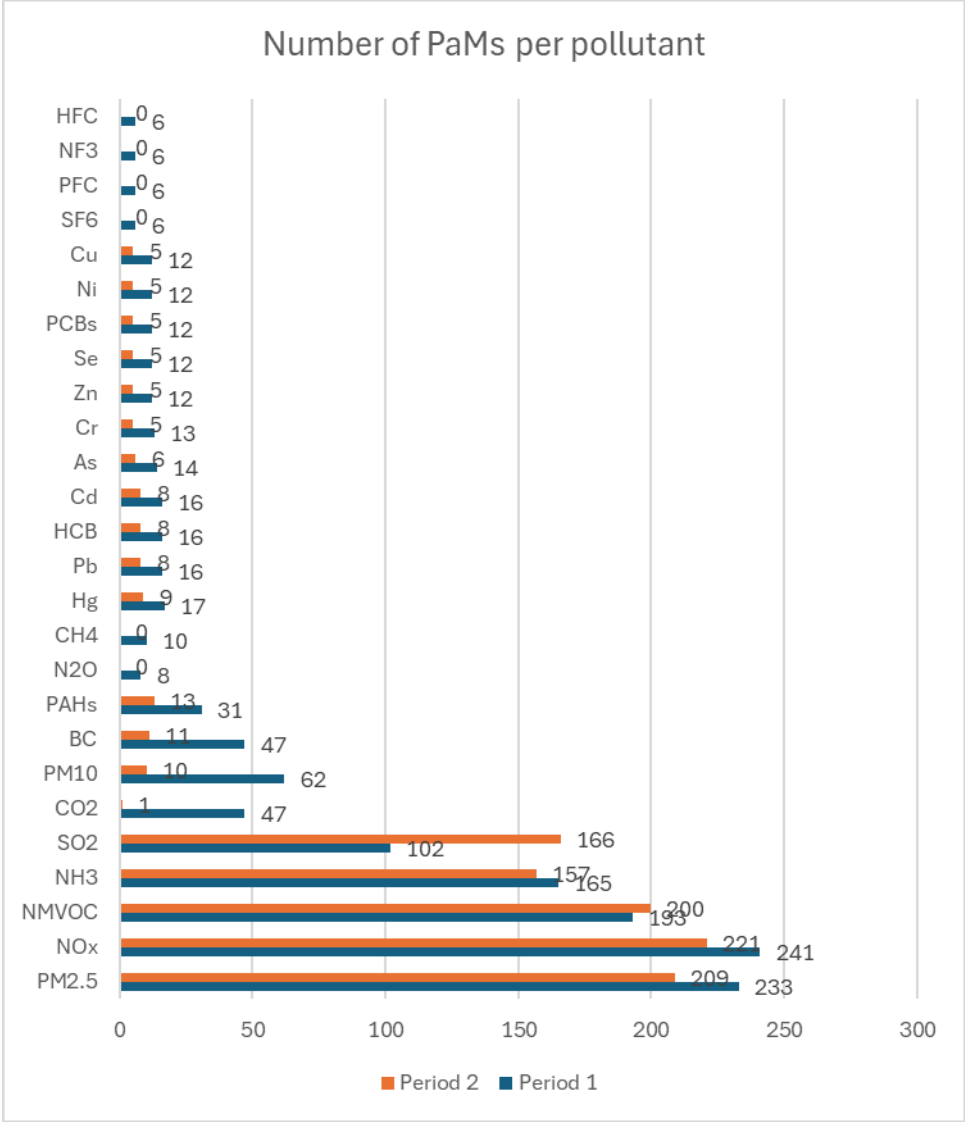


Figure 3.2 presents the number of single measures which have an impact on the various air pollutants. This shows clearly that the air pollutants for which an emission reduction commitment (ERC) exists are targeted most, which is SO₂, NO_x, NMVOC, NH₃ and PM_{2.5}. The number of policies addressing SO₂ and NMVOC emissions are in period 2 lower than in period 1, reflecting especially for SO₂ that ERC for this pollutant is widely met across the EU. In Period 2, PM_{2.5}, NO_x and NH₃ emissions are often more targeted than in period 1.

Figure 3.3: Number of single PaMs per pollutant



The reporting requires to select one or more instrument types, which are used for the implementation of the PaM. Figure 3.3 shows that economic policy instrument types, such as support schemes and subsidies are most frequently applied in period 2. The use of fiscal measures, such as taxes, and regulatory measures decreased between period 1 and period 2.

Figure 3.4: Number of single PaMs per instrument type

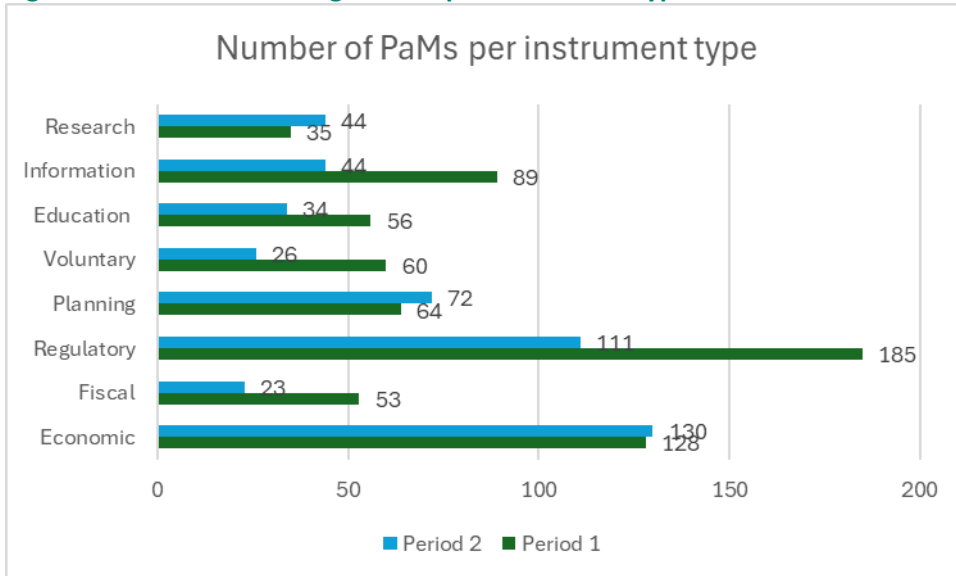
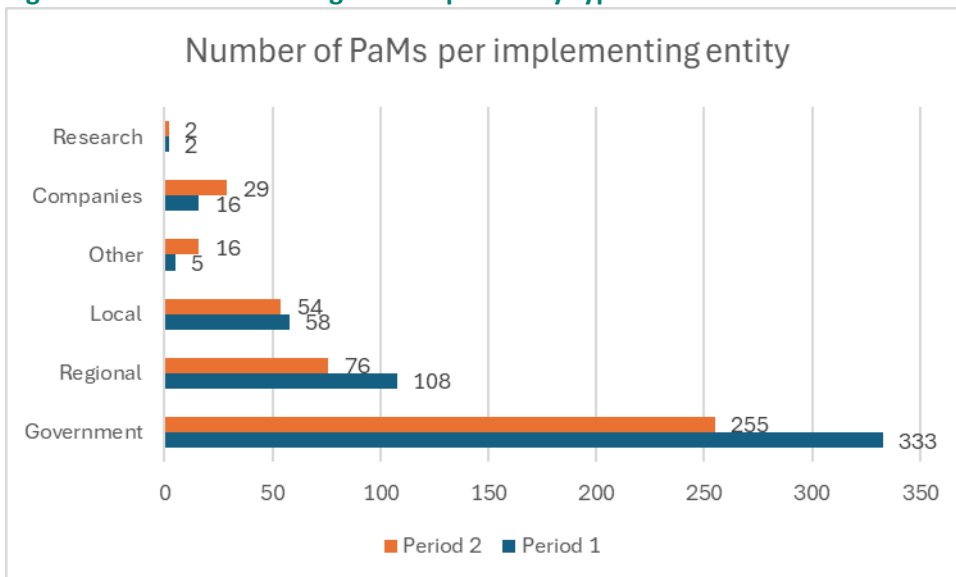


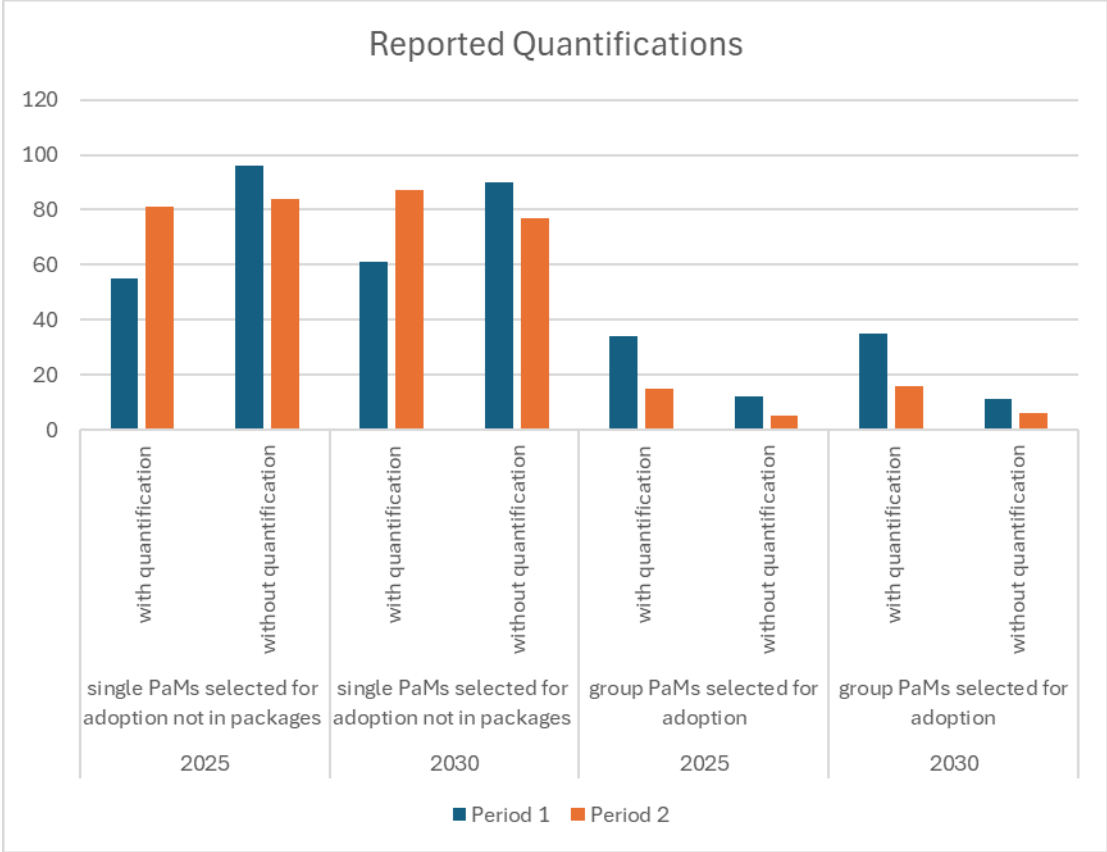
Figure 3.4 presents which entity or entities are responsible for the implementation of the PaM. In most cases this is the national government, supported by regional and local governments.

Figure 3.5: Number of single PaMs per entity type



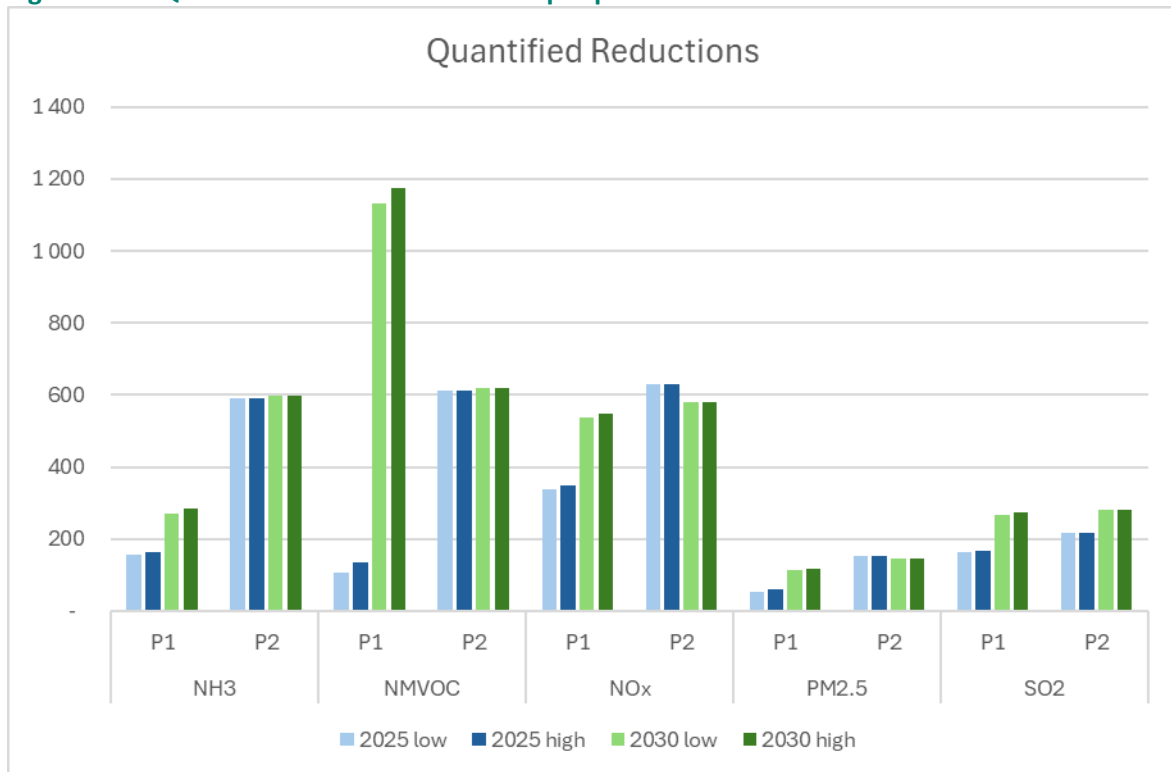
Member States are also required to quantify the expected emission reduction for 2025 and 2030, whereby not for all single or groups PaMs this information is available. Figure 3.6 provides an overview of the available quantified estimates for single PaMs selected for adoption and not included in a package of measures. It can be seen that for 2025 and 2030 the availability of estimates increased from period 1 to period 2. The opposite applies to grouped policies and measures selected for adoption; in period 1 more quantifications were available for grouped PaMs than in period 1.

Figure 3.6: Reported quantifications



Member States can report their expected emission reduction by providing a range. This is represented in Figure 3.7, whereby the low and high values represent the lower and higher range of quantified estimates for policies and measures selected for adoption and not included in a package. In most cases, the difference is very low. The high values for NMVOC in period 1 are due to Luxembourg, which reported a reduction of 929 kt in 2030. The highest reductions are anticipated for NH₃, NMVOC and NO_x.

Figure 3.7: Quantified emission reductions per pollutant



3.2 Completeness and quality assessment of submissions from Period 2

Member States are obliged to report following mandatory information via the PaM tool for reporting on Policies and Measures under the Directive (EU) 2016/2284 and its implementing decision of the European Parliament and of the Council on the reduction of national emission of certain atmospheric pollutants (NEC Directive):

- PaM Name
- Short description of PaM
- Affected NECD pollutant
- Sector/objective affected
- Type of policy instrument
- Implementation period
- Entities responsible for implementing the policy
- Details of the methodology used for analysis
- Quantified emission reductions

A QA/QC check was performed on submissions from Period 2 to determine whether submissions contained all mandatory information.

8% (26 out of 331) of reported PaMs did not contain a PaM description. 11% (36 out of 331) did not provide details on the methodology. Instead of details to the methodology, 'NE' was reported two times, a '0' was reported 36 times.

15% of reported reductions were not quantified. 178 out of 1200 submitted quantified reductions for individual pollutants were reported as '0' or '#'.

All other mandatory information was completely provided.

3.3 Links with GHG PaMs

Almost a quarter of the PaMs selected for adoption have either a connection to, or are the same as those reported under, the MMR for climate mitigation. Of these, over a tenth are targeted at reducing emissions from transport and more than a third focus on the energy sector, while 42% of the PaMs are focused on the agricultural sector. However, the potential intersection between the two sets of PaMs (for climate and for clean air purposes) may be even greater, as Member States' reporting of interlinkages across the two policy domains was voluntary and may be incomplete.

4 Conclusions

This report contains information on national air pollution policies and measures (PaMs) reported by European Union (EU) Member States under Directive (EU) 2016/2284 of the European Parliament and of the Council on the reduction of national emission of certain atmospheric pollutants (the 'NECD') and Commission Implementing Decision (EU) 2018/1522. The NECD requires Member States to report on their additional national air pollution PaMs considered and selected for adoption to meet emission reduction commitments.

This information was reported for the first time in 2019 and analysis was undertaken and presented in a previous Eionet report 3/2020⁽⁵⁾ and an update report in 2021⁽⁶⁾

The data analyzed in this report provides an update to the initial analysis; one more Member State, Romania, has reported their air pollution PaMs and nine Member States, Cyprus, Czechia, Estonia, France, Ireland, Lithuania, Luxembourg, Poland, and Spain, have provided an updated submission. All Member States except Bulgaria, Finland and the Netherlands have now submitted their additional air pollution PaMs under the NECD.

⁽⁵⁾ <https://www.eionet.europa.eu/etcs/etc-atni/products/etc-atni-reports/etc-atni-report-3-2020-analysis-of-the-air-pollution-policies-and-measures-reported-under-the-national-emissions-reduction-commitments-directive-necd>

⁽⁶⁾ <https://www.eionet.europa.eu/etcs/etc-atni/products/etc-atni-reports/etc-atni-report-12-2021-air-pollution-policies-and-measures-reported-under-the-national-emissions-reduction-commitments-directive-necd-2021-update>

Annex 1 Member States submissions

This table provides an overview of those submissions, that are considered for the analysis in this report and the allocation to the respective period.

Table A.1: Member States PaM submissions

Country	File Name	Years	submission date	link	Period
Belgium	NEC PaMs Belgium 2019	2019	04.04.2019	https://cdr.eionet.europa.eu/be/eu/nec_revised/pams/envxj4kpg	1
Croatia	Policies and measures Croatia 2019. Adopted	2018	04.10.2019	https://cdr.eionet.europa.eu/hr/eu/nec_revised/pams/envxzcqpw	1
Cyprus	CY Policies and Measures (PaMs) 2019	2019	02.04.2019	https://cdr.eionet.europa.eu/cy/eu/nec_revised/pams/envxkjebq	1
Cyprus	CY Policies and Measures (PaMs) 2023	2023	14.07.2023	https://cdr.eionet.europa.eu/cy/eu/nec_revised/pams/envzkpnjw	2
Czechia	NECD PaMs Czech Republic 2019	2019	13.01.2020	https://cdr.eionet.europa.eu/cz/eu/nec_revised/pams/envxfzhiq	1
Czechia	CZE_National Emission Reduction Programme (2023 update)_ PaMs	2023	21.12.2023	https://cdr.eionet.europa.eu/cz/eu/nec_revised/pams/envzyr_5w	2
Denmark	PaMs in Danish NAPCP	2019-2022	01.04.2019	https://cdr.eionet.europa.eu/dk/eu/nec_revised/pams/envxkip_a	1
Estonia	NECD PAMs 2019 resubmission	2019	03.06.2019	https://cdr.eionet.europa.eu/ee/eu/nec_revised/pams/envxpt_lw	1
Estonia	NECD_PAMs 2023_v2	2023-2030	31.03.2023	https://cdr.eionet.europa.eu/ee/eu/nec_revised/pams/envzczvg	2
France	NECD PAMs France 2019	2019	09.10.2019	https://cdr.eionet.europa.eu/fr/eu/nec_revised/pams/envxzxfia	1
France	NECD PAM 2023 NAPCP	2022-2025	12.06.2023	https://cdr.eionet.europa.eu/fr/eu/nec_revised/pams/envzgy1fa	2

Country	File Name	Years	submission date	link	Period
Germany	NECD PaMs Germany 2019 Resubmission	2019	18.07.2019	https://cdr.eionet.europa.eu/de/eu/nec_revised/pams/envxtachg	1
Greece	NECD PaMs Greece 2019	2019	22.02.2021	https://cdr.eionet.europa.eu/gr/eu/nec_revised/pams/envybfvfw	1
Hungary	NECD PaMs HU 2020	2020	18.05.2020	https://cdr.eionet.europa.eu/hu/eu/nec_revised/pams/envxsjikq	1
Ireland	IE 2021 Updated NAPCP and Pams	2020	26.02.2021	https://cdr.eionet.europa.eu/ie/eu/nec_revised/pams/envydkr_a	1
Ireland	Updated Ammonia PaM's	2022	15.09.2023	https://cdr.eionet.europa.eu/ie/eu/nec_revised/pams/envzqrpaq	2
Italy	Delivery 2019	2005-2030	01.04.2019	https://cdr.eionet.europa.eu/it/eu/nec_revised/pams/envxiox1q	1
Latvia	NECD PAMs adopted Latvia (23.04.2020)	2019	23.04.2020	https://cdr.eionet.europa.eu/lv/eu/nec_revised/pams/envxqeq5g	1
Lithuania	PaM's 2019	2019	02.06.2019	https://cdr.eionet.europa.eu/lt/eu/nec_revised/pams/envxpoxgg	1
Lithuania	PaM's_2022	2022	05.10.2022	https://cdr.eionet.europa.eu/lt/eu/nec_revised/pams/envyzldeq	2
Luxembourg	PaMs 2020 Luxembourg	2020	18.12.2020	https://cdr.eionet.europa.eu/lu/eu/nec_revised/pams/envx9eq5g	1
Luxembourg	PaMs Update 2023 Luxembourg	2023	20.07.2023	https://cdr.eionet.europa.eu/lu/eu/nec_revised/pams/envzk1a6g	2
Malta	PAMs	2019	18.03.2020	https://cdr.eionet.europa.eu/mt/eu/nec_revised/pams/envxtfwnw	1
Poland	Policies and measures_NAPCP	2019	03.10.2019	https://cdr.eionet.europa.eu/pl/eu/nec_revised/pams/envxyhc6a	1
Poland	NAPCP_PaMs_PL_2023	2023	04.12.2023	https://cdr.eionet.europa.eu/pl/eu/nec_revised/pams/envzw3jmw	2

Country	File Name	Years	submission date	link	Period
Portugal	NECD PaMsPT_2019	2019	01.04.2019	https://cdr.eionet.europa.eu/pt/eu/nec_revised/pams/envxj5wfa	1
Romania	NECD_PaMs_2023	2022-2030	24.02.2022	https://cdr.eionet.europa.eu/ro/eu/nec_revised/pams/envyil4w	2
Slovakia	NAPCP - Policies and Measures	2020-2030	26.03.2020	https://cdr.eionet.europa.eu/sk/eu/nec_revised/pams/envxn3wq	1
Slovenia	NECD PaMs Slovenia 2019	2019	25.11.2019	https://cdr.eionet.europa.eu/si/eu/nec_revised/pams/envxdunq	1
Spain	Spain_PaMs_NAPCP_2019	2019	22.10.2019	https://cdr.eionet.europa.eu/es/eu/nec_revised/pams/envxzgng	1
Spain	Spain_PaMs_NAPCP_2023	2023	19.01.2024	https://cdr.eionet.europa.eu/es/eu/nec_revised/pams/envzakz0a	2
Sweden	NECD PaMs Sweden 2019	2019	01.04.2019	https://cdr.eionet.europa.eu/se/eu/nec_revised/pams/envxkh6rg	1



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