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Subject:	Proposal for a Directive of the European Parliament and of the Council on the reduction of national emissions of certain atmospheric pollutants and amending Directive 2003/35/EC - General approach

Delegations will find in Annex the text of the general approach reached at the Council
(Environment) on 16 December 2015.

Proposal for a

**DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL
on the reduction of national emissions of certain atmospheric pollutants and amending
Directive 2003/35/EC**

(Text with EEA relevance)

THE EUROPEAN PARLIAMENT AND THE COUNCIL OF THE EUROPEAN UNION,

Having regard to the Treaty on the Functioning of the European Union, and in particular Article 192(1) thereof,

Having regard to the proposal from the European Commission,

After transmission of the draft legislative act to the national Parliaments,

Having regard to the opinion of the European Economic and Social Committee ¹,

Having regard to the opinion of the Committee of the Regions ²,

Acting in accordance with the ordinary legislative procedure,

Whereas:

¹ OJ C , , p. .

² OJ C , , p. .

- (1) Significant progress has been achieved in the past 20 years in the Union in the field of anthropogenic air emissions and air quality in particular through a dedicated Union policy, including the 2005 Communication from the Commission "Thematic Strategy on Air Pollution" ("TSAP")³. Directive 2001/81/EC of the European Parliament and of the Council⁴ has been instrumental in this progress by setting caps on Member States' total annual emissions for 2010 onwards of sulphur dioxide (SO₂), nitrogen oxides (NO_x), ammonia (NH₃) and volatile organic compounds other than methane (NMVOC). As a result, SO₂ emissions were reduced by 82%, NO_x emissions by 47%, NMVOC emissions by 56% and NH₃ emissions by 28% between 1990 and 2010. However, as indicated in the "Clean Air Programme for Europe" ("revised TSAP")⁵, significant adverse impacts and risks remain on the environment and human health.
- (2) The seventh Environment Action Programme⁶ confirms the Union's long-term objective for air policy, to achieve levels of air quality that do not give rise to significant negative impacts on and risks to human health and the environment, and calls, to that end, for full compliance with the current air quality legislation of the Union, post-2020 strategic targets and actions, enhanced efforts in areas where the population and ecosystems are exposed to high levels of air pollutants, and reinforced synergies between air quality legislation and Union's policy objectives set for climate change and biodiversity in particular.
- (3) The revised TSAP sets out new strategic objectives for the period up to 2030 with a view to moving further towards the Union's long-term objective.

³ Communication of 21 September 2005 from the Commission to the Council and the European Parliament "Thematic Strategy on Air Pollution", COM(2005) 446 final.

⁴ Directive 2001/81/EC of the European Parliament and of the Council of 23 October 2001 on national emission ceilings for certain atmospheric pollutants (OJ L 309, 27.11.2001, p. 22).

⁵ Communication from the Commission to the Council and the European Parliament "A Clean Air Programme for Europe", COM(2013) [xxx].

⁶ Decision No 1386/2013/EU of the European Parliament and of the Council of 20 November 2013 on a General Union Environment Action Programme to 2020 "Living well, within the limits of our planet "(OJ...).

- (4) Member States and the Union are parties to the 1979 United Nations Economic Commission for Europe Convention on Long-Range Transboundary Air Pollution ("LRTAP Convention")⁷ and to several of its Protocols, including the 1999 Gothenburg Protocol to Abate Acidification, Eutrophication and Ground-level Ozone.
- (5) As regards the year 2020 and thereafter, the revised Gothenburg Protocol sets out new emission reduction commitments, taking the year 2005 as a base year, for each party regarding SO₂, NO_x, NH₃, NMVOC and fine particulate matter (PM_{2,5}), promotes emission reductions of black carbon and calls for the collection and keeping of information on the adverse effects of air pollutant concentrations and depositions on human health and the environment and participation in the effects-oriented programmes under the LRTAP Convention.
- (6) The national emission ceiling regime established by Directive 2001/81/EC should therefore be revised in order to align it with the international commitments of the Union and the Member States. To that effect, the national emission reduction commitments for any year from 2020 to 2029 in this Directive are identical to those set in the revised Gothenburg Protocol.
- (7) Member States should implement this Directive in a way that contributes effectively to the meeting of the Union's long-term objective on air quality as supported by the guidelines of the World Health Organisation and of the Union's biodiversity and ecosystem protection objectives by reducing the levels and deposition of acidifying, eutrophifying and ozone air pollution below critical loads and levels as set out by the LRTAP Convention.
- (8) This Directive should also contribute to the achievement of the air quality objectives set in Union legislation and to the mitigation of climate change impacts as well as to the improvement of air quality globally.

⁷ Council Decision 2003/507/EC of 13 June 2003 on the accession of the European Community, to the Protocol to the 1979 Convention on Long-Range Transboundary Air Pollution to Abate Acidification, Eutrophication and Ground-Level Ozone (OJ L179, 17.7.2003, p. 1).

- (9) Member States should comply with the emission reduction commitments set out in this Directive from 2020 and from 2030. So as to ensure demonstrable progress towards the 2030 commitments, Member States should identify indicative emission levels in 2025 which would be technically feasible and not entail disproportionate costs, and endeavour to comply with such levels. Where the 2025 emissions cannot be limited in accordance with the determined trajectory, Member States should explain the reasons in their reports under this Directive.
- (9a) The national emission reduction commitments set out in this Directive for 2030 onwards are based on the estimated reduction potential of each Member State contained in the TSAP Report n°16 of January 2015 (TSAP 16), on technical examination of the differences between national estimates and those in TSAP 16, and on the political objective to maintain the overall health impact reduction by 2030 (compared with 2005) as close as possible to that of the original Commission proposal. To enhance transparency, the Commission should publish the underlying assumptions contained in TSAP 16.
- (9b) Compliance with national emission reduction commitments should refer to the specific methodological status at the time the commitment was set.
- (10) Reporting requirements and emission reduction commitments should be based on national energy consumption and fuel sold. However, some Member States may opt under the LRTAP Convention to use the national emission total calculated on the basis of fuels used regarding the road transport sector as a basis for compliance. This option should be kept in order to ensure coherence between International and European legislation.

- (11) In order to address some of the uncertainties inherent in setting national emission reduction commitments, the Gothenburg Protocol includes flexibilities which should be incorporated into this Directive for 2020 and 2030. In particular, the Protocol establishes a mechanism to adjust national emission inventories and to average national annual emissions for a maximum of three years where certain conditions are met, and in case where this Directive imposes a reduction commitment, in order to comply with the Gothenburg Protocol, which exceeds the cost-effective reduction identified in TSAP 16. In addition, there should be a flexibility in this Directive to assist Member States in case of sudden and exceptional events related to energy generation or supply provided that specific conditions are met. The use of these flexibilities should be monitored by the Commission taking into account guidance developed under the LRTAP Convention. For the purposes of assessing applications for adjustments, the reduction commitments for 2020 should be considered to have been set on 4 May 2012, the date the Gothenburg Protocol was amended.
- (12) Member States should adopt and implement a national air pollution control programme with a view to meeting their emission reduction requirements, and to contributing effectively to the achievement of the Union air quality objectives. To this effect, Member States should take account of the need to reduce emissions in zones and agglomerations affected by excessive air pollutant concentrations and/or in those that contribute significantly to air pollution in other zones and agglomerations, including in neighbouring countries. National air pollution control programmes should, to that end, contribute to the successful implementation of air quality plans enacted under Article 23 of Directive 2008/50/EC of the European Parliament and of the Council ⁸.
- (13) Agriculture makes an important contribution to atmospheric NH₃ and PM_{2,5} emissions. In order to reduce these emissions, national air pollution control programmes should include measures applicable to the agricultural sector. However, Member States should be entitled to decide on the measures to adopt to meet the emission reduction commitments in the Directive.

⁸ Directive 2008/50/EC of the European Parliament and of the Council of 21 May 2008 on ambient air quality and cleaner air in Europe (OJ L 152, 11.6.2008, p. 1).

- (14) The national air pollution control programme, including the analysis supporting the identification of policies and measures, should be regularly updated.
- (15) In order to draw up well informed national air pollution control programmes and any significant updates, Member States should make those programmes and updates subject to consultation by the public and competent authorities at all levels when all options regarding policies and measures remain open. Member States should engage in transboundary consultations in case where the implementation of their programme could affect air quality in another country, in accordance with the requirements set out in Union and international legislation, including the Convention on Environmental Impact Assessment in a Transboundary Context (Espoo, 1991) and its Protocol on Strategic Environmental Assessment (Kyiv, 2003), as approved by the Council ⁹.
- (16) Member States should establish and report emission inventories, projections and informative inventory reports for all air pollutants covered by this Directive, which should then enable the Union to meet its reporting duties under the LRTAP Convention and its Protocols.
- (17) In order to preserve overall consistency for the Union as a whole, Member States should ensure that their reporting to the Commission of their national emission inventories, projections and informative inventory are fully consistent with their reporting under the LRTAP Convention.
- (18) In order to assess the effectiveness of the national emission reduction commitments laid down in this Directive, Member States should also monitor the impacts of air pollution on terrestrial and aquatic ecosystems, and report these effects. To ensure a cost-effective approach Member States should have the flexibility to decide on monitoring indicators and should coordinate with monitoring programmes under related Directives and, if appropriate, the LRTAP Convention.

⁹ Council Decision 2008/871/EC of 20 October 2008 on the approval, on behalf of the European Community, of the Protocol on Strategic Environmental Assessment to the 1991 UN/ECE Espoo Convention on Environmental Impact Assessment in a Transboundary Context (OJ L 308, 19.11.2008, p. 33).

- (19) In line with Directive 2003/4/EC of the European Parliament and of the Council ¹⁰, Member States should ensure active and systematic dissemination of information by electronic means.
- (20) It is necessary to amend Directive 2003/35/EC of the European Parliament and of the Council ¹¹ with a view to ensuring consistency of this Directive with the 1998 Aarhus Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters.
- (21) In order to take into account technical and international developments, the power to adopt acts in accordance with Article 290 of the Treaty on the Functioning of the European Union should be delegated to the Commission in respect of amending Annex I, as well as Part 2 of Annex III and Annex IV to adapt them to developments within the framework of the LRTAP Convention and amending Annex V to adapt it to technical progress and to developments within the framework of the LRTAP Convention. It is of particular importance that the Commission carry out appropriate consultations during its preparatory work, including at expert level. The Commission, when preparing and drawing up delegated acts, should ensure a simultaneous, timely and appropriate transmission of relevant documents to the European Parliament and to the Council.
- (22) In order to ensure uniform conditions for the implementation of Articles 5, 6 and 9(4) of this Directive, implementing powers should be conferred on the Commission. Those powers should be exercised in accordance with Regulation (EU) No 182/2011 of the European Parliament and of the Council ¹².

¹⁰ Directive 2003/4/EC of the European Parliament and of the Council of 28 January 2003 on public access to environmental information (OJ L 41, 14.2.2003, p. 26).

¹¹ Directive 2003/35/EC of the European Parliament and of the Council of 26 May 2003 providing for public participation in respect of the drawing up of certain plans and programmes relating to the environment and amending with regard to public participation and access to justice Council Directives 85/337/EEC and 96/61/EC (OJ L156, 25.6.2003, p. 17).

¹² Regulation (EU) No 182/2011 of the European Parliament and of the Council of 16 February 2011 laying down the rules and general principles concerning mechanisms for control by the Member States of the Commission's exercise of implementing powers (OJ L 55, 28.2.2011, p. 13).

- (23) Member States should lay down rules on penalties applicable to infringements of the national provisions adopted pursuant to this Directive and ensure that they are implemented. Those penalties should be effective, proportionate and dissuasive.
- (24) With a view to the nature and extent of the modifications which should be made to Directive 2001/81/EC, that Directive should be replaced to enhance legal certainty, clarity, transparency and legislative simplification. In order to ensure continuity in improving air quality, Member States should comply with the national emission ceilings set out in Directive 2001/81/EC until the new national emission reduction commitments laid down in this Directive become applicable in 2020.
- (25) Since the objective of this Directive, namely to ensure a high level of protection of human health and the environment, cannot be sufficiently achieved by Member States, but can rather, by reason of the transboundary nature of air pollution, be better achieved at Union level, the Union may adopt measures in accordance with the principle of subsidiarity as set out in Article 5 of the Treaty on European Union. In accordance with the principle of proportionality, as set out in that Article, this Directive does not go beyond what is necessary in order to achieve that objective.
- (26) In accordance with the Joint Political Declaration of Member States and the Commission of 28 September 2011 on explanatory documents¹³, Member States have undertaken to accompany, in justified cases, the notification of their transposition measures with one or more documents explaining the relationship between the components of a directive and the corresponding parts of national transposition instruments. With regard to this Directive, the legislator considers the transmission of such documents to be justified.

¹³ OJ C 369, 17.12.2011, p. 14.

HAVE ADOPTED THIS DIRECTIVE:

Article 1

Objectives and subject matter

In order to move towards achieving levels of air quality that do not give rise to significant negative impacts on and risks to human health and the environment, this Directive establishes the emission reduction commitments for the Member States' anthropogenic atmospheric emissions of sulphur dioxide (SO₂), nitrogen oxides (NO_x), volatile organic compounds other than methane (NMVOC), ammonia (NH₃) and fine particulate matter (PM_{2,5}) and requires that national air pollution control programmes be drawn up, adopted and implemented and that emissions for these and other pollutants and their impacts be monitored and reported.

Article 2

Scope

1. This Directive shall apply to emissions of the pollutants referred to in Annex I from all sources occurring in the territory of the Member States, their exclusive economic zones and pollution control zones.
2. It does not cover emissions in the Canary Islands, the French overseas departments, Madeira, and the Azores.

Article 3

Definitions

For the purposes of this Directive, the following definitions shall apply:

1. "emission" means the release of a substance from a point or diffuse source into the atmosphere;

- 1a. "anthropogenic emissions" means atmospheric emissions of pollutants associated with human activities;
2. "ozone precursors" mean nitrogen oxides, non-methane volatile organic compounds, methane, and carbon monoxide;
3. "air quality objectives" means the limit values, target values and exposure concentration obligations for air quality set out in Directive 2008/50/EC and Directive 2004/107/EC of the European Parliament and of the Council ¹⁴;
- 3a "sulphur dioxide" (SO₂) means all sulphur compounds expressed as sulphur dioxide (SO₂), including sulphur trioxide (SO₃), sulphuric acid (H₂SO₄), and reduced sulphur compounds such as hydrogen sulphide (H₂S), mercaptans and dimethyl sulphides;
4. "nitrogen oxides" (NO_x) mean nitric oxide and nitrogen dioxide, expressed as nitrogen dioxide;
5. "non-methane volatile organic compounds" (NMVOC) means all organic compounds other than methane, that are capable of producing photochemical oxidants by reaction with nitrogen oxides in the presence of sunlight;
6. "fine particulate matter (PM_{2,5})" means particles with an aerodynamic diameter equal to or less than 2,5 micrometers (µm);
7. "national emission reduction commitment" means the reduction in emissions of a substance expressed as a percentage of emission reduction between the total of emissions released during the base year (2005) and the total of emissions released during a target calendar year that Member States must not exceed;

¹⁴ Directive 2004/107/EC of the European Parliament and of the Council of 15 December 2004 relating to arsenic, cadmium, mercury, nickel and polycyclic aromatic hydrocarbons in ambient air (OJ L 23, 26.1.2005, p. 3).

8. "landing and take-off cycle" means the cycle that includes taxi in and out, take-off, climb out, approach, landing and all other aircraft activities that take place below the altitude of 3000 feet;
9. "international maritime traffic" means journeys at sea and in coastal waters by water-borne vessels of all flags, save fishing vessels, that depart from the territory of one country and arrive in the territory of another country;
10. [...]
11. "pollution control zone" means a sea area not exceeding 200 nautical miles from the baselines from which the breadth of the territorial sea is measured, established by a Member State for the prevention, reduction and control of pollution from vessels in accordance with applicable international rules and standards;
12. "black carbon" (BC) means carbonaceous particulate matter that absorbs light.

Article 4

National emission reduction commitments

1. Member States shall, as a minimum, limit their annual anthropogenic emissions of sulphur dioxide (SO₂), nitrogen oxides (NO_x), volatile organic compounds other than methane (NMVOC), ammonia (NH₃) and particulate matter (PM_{2,5}) in accordance with the national emission reduction commitments applicable from 2020 to 2029 and from 2030 onwards, as laid down in Annex II.

2. Without prejudice to paragraph 1, Member States shall endeavour to limit their 2025 anthropogenic emissions of SO₂, NO_x, NMVOC, NH₃ and PM_{2,5}. The indicative levels of those emissions shall be determined by a linear reduction trajectory established between their emission levels defined by the emission reduction commitments for 2020 and the emission levels defined by the emission reduction commitments for 2030.

Member States may follow a non-linear reduction trajectory if this is economically or technically more efficient, and shall set out the trajectory and the reasons for following it in the national air pollution control programmes to be submitted to the Commission in accordance with Article 9 (1).

Where the emissions for 2025 could not be limited in accordance with the determined trajectory, the Member States shall explain the reasons for that in the subsequent informative inventory reports submitted to the Commission in accordance with Article 9.

3. The following emissions are not accounted for the purpose of complying with paragraphs 1 and 2:
 - (a) aircraft emissions beyond the landing and take-off cycle;
 - (b) [...]
 - (c) emissions from national maritime traffic to and from the territories referred to in Article 2(2);
 - (d) emissions from international maritime traffic;
 - (da) NO_x and NMVOC emissions from activities falling under the Nomenclature for Reporting as provided by the LRTAP Convention (NFR) (2014) categories 3B (manure management) and 3D (agricultural soils).

Article 5
Flexibilities

1. Member States may establish, in accordance with Annex IV part 4, adjusted annual national emission inventories for SO₂, NO_x, NH₃, NMVOC and PM_{2,5} where non-compliance with their national emission reduction commitments would result from applying improved emission inventory methods updated in accordance with scientific knowledge.

For the purpose of determining whether the relevant requirements set out in Annex IV part 4 are fulfilled, the emission reduction commitments for the years 2020 to 2029 shall be considered as having been set on 4 May 2012.

- 1a. If in a given year a Member State finds that, due to a particularly cold winter, a particularly dry summer, or unforeseen variations in economic activities, it cannot comply with its emission reduction commitments, it may fulfil those commitments by averaging its national annual emissions for the year in question, the year preceding that year and the year following it, provided that this average does not exceed the Member State's commitment.
- 1b. If in a given year a Member State, for which one or more reduction commitments in Annex II are set at a more stringent level than the cost-effective reduction identified in TSAP 16, finds that it cannot comply with the relevant emission reduction commitment after having implemented all cost-effective measures, it shall be deemed to comply with the relevant commitment for no more than five years, provided that in the interim it compensates the non-compliance by an equivalent emission reduction of another pollutant in Annex II.

2. [...]

- 2a. A Member State shall be deemed to comply with its obligations under Article 4 for a maximum of three years, where non compliance with its emission reduction commitments for the relevant pollutants results from a sudden and exceptional interruption or loss of capacity in the power and/or heat supply or production system, which could not reasonably have been foreseen, and provided that the following conditions are met:
- (a) it has been demonstrated that all reasonable efforts, including the introduction of new measures and policies, have been made to ensure compliance, and will continue to be made to keep the period of non-compliance as short as possible, and
 - (b) it has been demonstrated that the introduction of measures and policies additional to those referred to in point (a) would lead to disproportionate costs, substantially jeopardise national energy security or pose a substantial risk of energy poverty to a significant part of the population.
3. [...]
4. Members States that intend to apply paragraphs 1, 1a, 1b and 2a shall inform the Commission thereof by 15 February of the reporting year concerned. That information shall include the pollutants and sectors concerned and, where available, the magnitude of the impacts upon national emission inventories.
5. The Commission, assisted by the European Environment Agency, shall review and assess whether the use of any of the flexibilities for a particular year fulfils the relevant requirements set out in Annex IV part 4, or in paragraphs 1a, 1b or 2a of this Article, where applicable.

Where the Commission considers the use of a flexibility not to be in accordance with the relevant requirements, it shall adopt a Decision within nine months from the date of receipt of the relevant report referred to in Article 7, paragraph 6, informing the Member State that the use of that flexibility cannot be accepted and stating the reasons for that refusal. Where the Commission has raised no objections within nine months from the date of receipt of the relevant report referred to in Article 7, paragraph 6, the Member State concerned shall consider the use of the flexibility applied to be accepted and valid for that year.

6. The Commission may adopt implementing acts specifying the detailed rules for the use of the flexibilities referred to in paragraphs 1, 1a, 1b and 2a of this Article, in accordance with the examination procedure referred to in Article 14.
- 6a. The Commission, when exercising its powers under paragraphs 5 and 6, shall take into account the relevant guidance documents developed under the LRTAP Convention.

Article 6

National air pollution control programmes

1. Member States shall draw up and adopt a national air pollution control programme in accordance with Part 1 of Annex III in order to limit their annual anthropogenic emissions in accordance with Article 4.

2. When drawing up, adopting and implementing the programme referred to in paragraph 1, Member States shall:
 - (a) assess to what extent national emission sources are likely to impact air quality in their territories and neighbouring Member States using, where appropriate, data and methodologies developed by the European Monitoring and Evaluation Programme (EMEP);
 - (b) take account of the need to reduce air pollutant emissions for the purpose of reaching compliance with air quality objectives in their territories and, where appropriate, in neighbouring Member States;
 - (c) prioritize emission reduction measures for black carbon when taking measures to achieve their national reduction commitments for PM_{2,5};
 - (d) ensure coherence with other relevant plans and programmes established by virtue of requirements set out in national or Union legislation.

With a view to meeting the relevant national emission reduction commitments Member States shall include the emission reduction measures laid down as obligatory in Part 2 of Annex III and may include the emission reduction measures laid down as optional in Part 2 of Annex III or measures having equivalent mitigation effect.

3. Member States shall update the national air pollution control programme at least every four years.

4. Without prejudice to paragraph 3, the emission reduction policies and measures contained in the national air pollution control programme shall be updated within 24 months after the submission of the latest national emission inventory or emission projections if according to submitted data the obligations set out in Article 4 are not complied with or there is risk of non-compliance.
5. Member States shall consult, in accordance with Directive 2003/35/EC¹⁵, the public and competent authorities, which, by reason of their specific environmental responsibilities in the field of air pollution, quality and management at all levels, are likely to be concerned by the implementation of the national air pollution control programmes, on their draft national air pollution control programme and any significant updates prior to their finalisation.
 - 5a. Where appropriate, transboundary consultations shall be conducted.
6. The Commission shall facilitate the elaboration and implementation of the programmes, where appropriate, through an exchange of good practice.
7. The Commission shall be empowered to adopt delegated acts in accordance with Article 13 in order to adapt Part 2 of Annex III to developments within the framework of the LRTAP Convention.
8. The Commission may establish guidance on the elaboration and implementation of national air pollution control programmes.

¹⁵ Directive 2003/35/EC of the European Parliament and of the Council of 26 May 2003 providing for public participation in respect of the drawing up of certain plans and programmes relating to the environment and amending with regard to public participation and access to justice Council Directives 85/337/EEC and 96/61/EC (OJ L156, 25.6.2003, p.17).

9. The Commission may also specify by means of implementing acts, the format of the national air pollution control programmes. Those implementing acts shall be adopted in accordance with the examination procedure referred to in Article 14.

Article 7

Emission inventories and projections

1. Member States shall prepare and annually update national emission inventories for the pollutants set out in table A of Annex I, in accordance with the requirements set out therein.

Member States may prepare and annually update national emission inventories for the pollutants set out in table B of Annex I, in accordance with the requirements set out therein.

2. Member States shall prepare and update every four years spatially disaggregated emission inventories, large point source inventories and emission projections for the pollutants set out in table C of Annex I, in accordance with the requirements set out therein.
3. The emission inventories and projections referred to in paragraphs 1 and 2 shall be accompanied by an informative inventory report, in accordance with the requirements set out in table D of Annex I.
4. [...]
5. [...]
6. Member States that opt for the flexibility under Article 5(1) shall include the information set out in Part 4 of Annex IV in the informative inventory report of the year concerned allowing the Commission to review and assess whether the requirements of that provision are met.

7. Member States shall prepare and update the national emission inventories, including adjusted emission inventories where relevant, emission projections and the informative inventory report in accordance with Annex IV.
8. The Commission, assisted by the European Environment Agency, shall annually prepare and update Union-wide emission inventories, projections, and an informative inventory report for all the pollutants referred to in Annex I, on the basis of the information referred to in paragraphs 1, 2 and 3 of this Article.
9. The Commission shall be empowered to adopt delegated acts in accordance with Article 13 in order to adapt Annex I and Annex IV to developments within the framework of the LRTAP Convention.

Article 8

Monitoring air pollution impacts

1. Member States shall ensure the monitoring of adverse impacts of air pollution upon ecosystems based on a network of monitoring sites that is representative of their freshwater, natural and seminatural habitats and forest ecosystem types, taking a cost-effective and risk-based approach.

To this end Member States shall coordinate with and, where appropriate, make use of data collected under other monitoring programmes established pursuant to Union legislation including Directive 2008/50/EC, Directive 2000/60/EC and Directive 92/43/EEC¹⁶ and, if appropriate, the LRTAP Convention.

¹⁶ Directive 2008/50/EC of the European Parliament and of the Council of 21 May 2008 on ambient air quality and cleaner air in Europe (OJ L 152, 11.6.2008, p.1).
Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 establishing a framework for Community action in the field of water policy (OJ L 327, 22.12.2000, p. 1).
Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and wild fauna and flora.

To meet the requirements of this Article, Member States may use the optional indicators listed in Annex V.

- 1a The methodologies on the Convention on Long-Range Transboundary Air Pollution and its Manuals for the International Cooperative Programmes may be used when collecting and reporting the information covered by Annex V.
2. [...]
3. The Commission shall be empowered to adopt delegated acts in accordance with Article 13 in order to adapt Annex V to technical and scientific progress and to developments within the framework of the LRTAP Convention.

Article 9

Reporting by Member States

1. Member States shall provide their first national air pollution control programme to the Commission [within nine months of the date referred to in the first subparagraph of Article 17, date to be inserted by OPOCE].

Where a national air pollution control programme is updated under Article 6(4), the Member State concerned shall inform the Commission thereof within two months.

2. Member States shall communicate their national emission inventories, emission projections, spatially disaggregated emission inventories, large point source inventories and reports referred to in Article 7(1), (2) and (3) and, where relevant, Article 7 (6), to the Commission and to the European Environment Agency in accordance with the reporting dates set out in Annex I.

This communication shall be consistent with the reporting to the Secretariat of the LRTAP Convention.

3. [...]

4. The Commission, assisted by the European Environment Agency and in consultation with the Member States, shall review the national emission inventory data in the first year of reporting and regularly thereafter. This review shall involve the following:

- (a) checks to verify the transparency, accuracy, consistency, comparability and completeness of information submitted;
- (b) checks to identify cases where inventory data is prepared in a manner which is inconsistent with the requirements set under international law, in particular under the LRTAP Convention;
- (c) where appropriate, calculation of the resulting technical corrections necessary, in consultation with the Member State concerned.

Where the Member State concerned and the Commission are unable to reach agreement on the necessity or content of technical corrections pursuant to point (c) of the first subparagraph, the Commission shall adopt a Decision laying down the technical corrections to be applied by the Member State concerned.

5. Member States shall report the following information referred to in Article 8 to the Commission and the European Environment Agency:
 - (a) By [the date referred to in the first subparagraph of Article 17 - date to be inserted by OPOCE] and every four years thereafter, the location of the monitoring sites and the associated indicators used for monitoring air pollution impacts, and
 - (b) By [one year of the date referred to in the first subparagraph of Article 17 - date to be inserted by OPOCE] and every four years thereafter, the monitoring data referred to in Article 8.

Article 10

Reports by the Commission

1. The Commission shall, every five years at least, report to the European Parliament and the Council on the progress made in the implementation of this Directive, including an assessment of its contribution to the achievement of the objectives of this Directive.

Notwithstanding the first subparagraph, the Commission shall report to the European Parliament and the Council as above for the year 2025, and shall also include information on the achievement of the indicative emission levels referred to in Article 4 paragraph 2 and the reasons for any non-achievement. Where the report indicates that non-achievement is the result of ineffective Union policy, the Commission shall identify the need for further action also considering the sectorial impacts of implementation. Where appropriate, the Commission shall present legislative proposals, including new source legislation, so to ensure compliance with the targets of this Directive.

2. The reports referred to in paragraph 1 may include an evaluation of the environmental and socioeconomic impacts of this Directive.

Article 11
Access to information

1. Member States shall, in compliance with Directive 2003/4/EC, ensure the active and systematic dissemination to the public of the following information by publishing it on a publicly accessible Internet site:
 - (a) the national air pollution control programmes and any updates.
 - (b) the national emission inventories, including when occurring, the adjusted emission inventories, the national emission projections and the informative inventory reports and additional reports and information communicated to the Commission in accordance with Article 9.

2. The Commission shall, in compliance with Regulation n° 1367/2006 of the European Parliament and of the Council ¹⁷, ensure the active and systematic dissemination to the public by publishing Union-wide emission inventories, projections and informative inventory reports on a publicly accessible Internet site.

- 2a. The Commission shall publish on its website the underlying assumptions considered for each Member State for the definition of their national emission reduction potential used to prepare the TSAP Report 16 of January 2015.

¹⁷ Regulation n° 1367/2006 of the European Parliament and of the Council of 6 September 2006 on the application of the provisions of the Aarhus Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters to Community institutions and bodies (OJ L 264, 25.09.2006, p. 13).

Article 12

Cooperation with third countries and coordination within international organisations

The Union and the Member States, as appropriate, shall pursue, without prejudice to Article 218 of the Treaty, bilateral and multilateral cooperation with third countries and coordination within relevant international organisations such as the United Nations Environment Programme (UNEP), United Nations Economic Commission for Europe (UNECE), the International Maritime Organization (IMO) and the International Civil Aviation Organization (ICAO), including through the exchange of information, concerning technical and scientific research and development, with the aim of improving the basis for the facilitation of emission reductions.

Article 13

Exercise of the delegation

1. The power to adopt delegated acts is conferred on the Commission subject to the conditions laid down in this Article.
2. The power to adopt delegated acts referred to in Articles 6(7), 7(9) and 8(3) shall be conferred on the Commission for a period of five years from ¹⁸. The Commission shall draw up a report in respect of the delegation of power not later than nine months before the end of the five year period. The delegation of power shall be tacitly extended for periods of an identical duration, unless the European Parliament or the Council opposes such extension not later than three months before the end of each period.
3. The delegation of power referred to in Articles 6(7), 7(9) and 8(3) may be revoked at any time by the European Parliament or by the Council. A decision to revoke shall put an end to the delegation of the power specified in that decision. It shall take effect the day following the publication of the decision in the Official Journal of the European Union or at a later date specified therein. It shall not affect the validity of any delegated acts already in force.

¹⁸ OJ: please insert date of entry into force of the Directive.

4. As soon as it adopts a delegated act, the Commission shall notify it simultaneously to the European Parliament and to the Council.
5. A delegated act adopted pursuant to Articles 6(7), 7(9) and 8(3) shall enter into force only if no objection has been expressed either by the European Parliament or the Council within a period of two months of notification of that act to the European Parliament and the Council or if, before the expiry of that period, the European Parliament and the Council have both informed the Commission that they will not object. That period shall be extended by two months at the initiative of the European Parliament or of the Council.

Article 14

Committee procedure

1. The Commission shall be assisted by the Ambient Air Quality Committee established by Article 29 of Directive 2008/50/EC. That committee shall be a committee within the meaning of Regulation (EU) No 182/2011.
2. Where reference is made to this paragraph, Article 5 of Regulation (EU) No 182/2011 shall apply.

Where the Committee delivers no opinion, the Commission shall not adopt the draft implementing act and the third subparagraph of Article 5(4) of Regulation 182/2011 shall apply.

Article 15

Penalties

Member States shall lay down the rules on the penalties applicable to infringements of the national provisions adopted pursuant to this Directive and shall take all measures necessary to ensure that they are implemented. The penalties provided for must be effective, proportionate and dissuasive.

Article 16
Amendment to Directive 2003/35/EC

In Annex I of Directive 2003/35/EC, the following letter (g) shall be added:

"(g) Article 6(1) of Directive XXXX/XX/EU of the European Parliament and of the Council on the reduction of national emission for certain atmospheric pollutants and amending Directive 2003/35/EC *

* OJ L XX of XX.XX.XXXX, p. X)"

Article 17
Transposition

1. Member States shall bring into force the laws, regulations and administrative provisions necessary to comply with this Directive by [eighteen months after the entry into force - date to be inserted by OPOCE] at the latest.

Notwithstanding the first subparagraph, Member States shall bring into force the laws, regulations and administrative provisions necessary to comply with Article 9(2) by 15 February 2017.

They shall forthwith communicate to the Commission the text of those provisions.

When Member States adopt those provisions, they shall contain a reference to this Directive or be accompanied by such a reference on the occasion of their official publication. Member States shall determine how such reference is to be made.

2. Member States shall communicate to the Commission the text of the main provisions of national law which they adopt in the field covered by this Directive.

Article 18
Repeal and transitional provisions

1. Directive 2001/81/EC of the European Parliament and of the Council is repealed with effect from [the date referred to in the first subparagraph of Article 17 of this Directive - date to be inserted by OPOCE].

However, Article 1, Article 4 and Annex I of the repealed Directive shall continue to apply until 31 December 2019.

References to the repealed Directive shall be construed as references to this Directive and shall be read in accordance with the correlation table set out in Annex VI.

2. Until 31 December 2019, Member States may apply Article 5(1) of this Directive in relation to the ceilings under Article 4 and Annex I of Directive 2001/81/EC.

Article 19
Entry into force

This Directive shall enter into force on the twentieth day following that of its publication in the *Official Journal of the European Union*.

Article 20
Addressees

This Directive is addressed to the Member States.

Done at Brussels,

For the European Parliament
The President

For the Council
The President

ANNEX I

Monitoring and reporting of atmospheric emissions

A. Annual emission reporting requirements as referred to in article 7(1), first subparagraph

Element	Pollutants	Time series	Reporting dates
Total national emissions by NFR ¹ source category *	- SO ₂ , NO _x , NMVOC, NH ₃ , CO - heavy metals (Cd, Hg, Pb)** - POPs*** (total PAHs and benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, indeno(1,2,3-cd)pyrene, dioxins/furans, PCBs, HCB)	Annual, from 1990 to reporting year minus 2 (X-2)	15/02****
Total national emissions by NFR source category*	- PM _{2,5} , PM ₁₀ ****and, if available, BC.	Annual, from 2000 to reporting year minus 2 (X-2)	15/02*****

¹ Nomenclature for reporting as provided by the LRTAP Convention.

* natural emissions shall be reported according to the methodologies on the LRTAP convention and the EMEP/EEA air pollutant emission inventory guidebook. They shall not be included in national totals and shall be reported separately.

** Cd (cadmium), Hg (mercury), Pb (lead).

*** POPs (persistent organic pollutants).

**** "PM₁₀" means particles with an aerodynamic diameter equal to or less than 10 micrometers (µm).

***** Re-submissions due to errors shall be provided within four weeks at the latest and include a clear explanation of the changes made.

B. Annual emission reporting requirements as referred to in article 7(1), second subparagraph

Element	Pollutants	Time series	Reporting date
Total national emissions by NFR source category*	- heavy metals (As, Cr, Cu, Ni, Se and Zn and their compounds)* * - TSP****	Annual, from 1990 (2000 for TSP,) to reporting year minus 2 (X-2)	15/2

* natural emissions shall be reported according to the methodologies on the LRTAP convention and the EMEP/EEA air pollutant emission inventory guidebook. They shall not be included in national totals and shall be reported separately.

** As (arsenic), Cr (chromium), Cu (copper), Ni (nickel), Se (selenium), Zn (zinc).

*** TSP (total suspended particles).

C. Reporting requirements on emissions and projections as referred to in article 7(2)

Element	Pollutants	Time series / target years	Reporting dates
National gridded data of emissions by source category (GNFR)	- SO ₂ , NO _x , NMVOC, CO, NH ₃ , PM ₁₀ , PM _{2,5} - heavy metals (Cd, Hg, Pb), - POPs (total PAHs, HCB, PCBs, dioxins/furans) - BC (if available)	Every four years for reporting year minus 2 (X-2) as from 2017	01/05 *
Large Point Sources (LPS) by source category (GNFR)	- SO ₂ , NO _x , NMVOC, CO, NH ₃ , PM ₁₀ , PM _{2,5} , - heavy metals (Cd, Hg, Pb), - POPs (total PAHs, HCB, PCBs, dioxins/furans) - BC (if available)	Every four years for reporting year minus 2 (X-2) as from 2017	01/05 *
Projected emissions by aggregated NFR	SO ₂ , NO _x , NH ₃ , NMVOC, PM _{2,5} and, if available, BC	Every four years, covering projection years 2020, 2025, 2030 and, where available, 2040 and 2050 as from 2017	15/03

* Re-submissions due to errors shall be provided within four weeks and include a clear explanation of the changes made.

D. Annual reporting of informative inventory report referred to in article 7(3)

Element	Pollutants	Time series / target years	Reporting dates
Informative Inventory Report (IIR)	<ul style="list-style-type: none"> - SO₂, NO_x, NMVOC, NH₃, CO, , PM_{2,5}, PM₁₀; - heavy metals (Cd, Hg, Pb) and BC; - POPs (total PAHs and benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, indeno(1,2,3-cd)pyrene, dioxins/furans, PCBs, HCB); - If available, heavy metals (As, Cr, Cu, Ni, Se and Zn and their compounds) and TSP 	All years (as indicated in tables A-B-C)	15/03

ANNEX II

National emission reduction commitments

Table (a): Emission reduction commitments for sulphur dioxide (SO₂), nitrogen oxides (NO_x) and non-methane volatile organic compounds (NMVOC). Fuels sold *, base year 2005.

Member State	SO ₂ reduction compared with 2005		NO _x reduction compared with 2005			NMVOC reduction compared with 2005		
	For any year from 2020 to 2029	For any year from 2030	For any year from 2020 to 2029		For any year from 2030	For any year from 2020 to 2029		For any year from 2030
Belgium	43%	66%	41%		59%	21%		35%
Bulgaria	78%	88%	41%		58%	21%		42%
Czech Republic	45%	66%	35%		64%	18%		50%
Denmark	35%	52%	56%		58%	35%		37%
Germany	21%	58%	39%		64%	13%		24%
Estonia	32%	68%	18%		30%	10%		28%
Greece	74%	88%	31%		50%	54%		62%
Spain	67%	87%	41%		62%	22%		39%
France	55%	75%	50%		69%	43%		52%
Croatia	55%	82%	31%		57%	34%		48%
Ireland	65%	85%	49%		69%	25%		32%
Italy	35%	71%	40%		65%	35%		46%
Cyprus	83%	93%	44%		55%	45%		50%
Latvia	8%	46%	32%		34%	27%		38%
Lithuania	55%	60%	48%		51%	32%		47%
Luxembourg	34%	45%	43%		82%	29%		41%
Hungary	46%	73%	34%		66%	30%		58%

Member State	SO ₂ reduction compared with 2005		NO _x reduction compared with 2005			NMVOC reduction compared with 2005		
	For any year from 2020 to 2029	For any year from 2030	For any year from 2020 to 2029		For any year from 2030	For any year from 2020 to 2029		For any year from 2030
Malta	77%	95%	42%		79%	23%		27%
Netherlands	28%	58%	45%		61%	8%		15%
Austria	26%	41%	37%		71%	21%		36%
Poland	59%	69%	30%		39%	25%		26%
Portugal	63%	83%	36%		61%	18%		38%
Romania	77%	85%	45%		57%	25%		43%
Slovenia	63%	91%	39%		65%	23%		53%
Slovakia	57%	82%	36%		48%	18%		32%
Finland	30%	34%	35%		47%	35%		48%
Sweden	22%	22%	36%		66%	25%		36%
United Kingdom	59%	87%	55%		72%	32%		39%
EU 28	59%	78%	42%		62%	28%		39%

* Member States having the choice to use the national emission total calculated on the basis of fuels used as a basis for compliance under the LRTAP Convention may keep this option in order to ensure coherence between international and EU law.

Table (b): Emission reduction commitments for ammonia (NH₃) and fine particulate matter (PM_{2,5}).

Fuels sold *, base year 2005.

Member State	NH ₃ reduction compared with 2005		PM _{2,5} reduction compared with 2005			
	For any year from 2020 to 2029		For any year from 2030	For any year from 2020 to 2029		For any year from 2030
Belgium	2%		13%	20%		38%
Bulgaria	3%		9%	20%		41%
Czech Republic	7%		22%	17%		60%
Denmark	24%		24%	33%		41%
Germany	5%		29%	26%		42%
Estonia	1%		1%	15%		41%
Greece	7%		10%	35%		45%
Spain	3%		16%	15%		50%
France	4%		13%	27%		56%
Croatia	1%		23%	18%		55%
Ireland	1%		5%	18%		41%
Italy	5%		14%	10%		40%
Cyprus	10%		20%	46%		70%
Latvia	1%		1%	16%		43%
Lithuania	10%		10%	20%		35%
Luxembourg	1%		22%	15%		40%
Hungary	10%		25%	13%		48%
Malta	4%		24%	25%		50%
Netherlands	13%		21%	37%		40%
Austria	1%		18%	20%		46%
Poland	1%		22%	16%		46%
Portugal	7%		14%	15%		51%

Member State	NH ₃ reduction compared with 2005			PM _{2,5} reduction compared with 2005		
	For any year from 2020 to 2029		For any year from 2030	For any year from 2020 to 2029		For any year from 2030
Romania	13%		22%	28%		39%
Slovenia	1%		15%	25%		58%
Slovakia	15%		30%	36%		40%
Finland	20%		20%	30%		34%
Sweden	15%		17%	19%		19%
United Kingdom	8%		11%	30%		45%
EU 28	6%		18%	22%		45%

* Member States having the choice to use the national emission total calculated on the basis of fuels used as a basis for compliance under the LRTAP Convention may keep this option in order to ensure coherence between international and EU law.

ANNEX III

Content of National Air Pollution Control Programmes

PART 1

MINIMUM CONTENT OF THE NATIONAL AIR POLLUTION CONTROL PROGRAMME

1. The initial national air pollution control programme referred to in Articles 6 and 9 shall at least cover the following content:
 - (a) the national air quality and pollution policy framework in which context the programme has been developed, including:
 - (i) the policy priorities and their relationship to priorities set in other relevant policy areas, including climate change;
 - (ii) the responsibilities attributed to national, regional and local authorities;
 - (iii) the progress made by current policies and measures in reducing emissions and improving air quality, and the degree of compliance with national and EU obligations;
 - (iv) the projected further evolution assuming no change to already adopted policies and measures.
 - (b) the policy options considered to meet the emission reduction commitments for 2020 and 2030 onwards and the intermediate emission levels determined for 2025 and to contribute to further improve the air quality, and their analysis, including the method of analysis; where available, the individual or combined impacts of the policies and measures on emission reductions, air quality and the environment and the associated uncertainties;

- (c) the measures and policies selected for adoption, including a timetable for their implementation and review and the competent authorities responsible;
 - (d) where relevant, an explanation of the reasons why the indicative emission levels for 2025 cannot be met without measures entailing disproportionate costs;
 - (da) where relevant, an account of the use of flexibilities set out in Article 5 and any environmental consequences;
 - (e) an assessment of how selected policies and measures ensure coherence with plans and programmes set up in other relevant policy areas.
2. The national air pollution control programme updates referred to in Articles 6 and 9 shall at least include:
- (a) an assessment of the progress made with implementation of the programme, the reduction of emissions and the reduction of concentrations;
 - (b) any significant changes in the policy context, assessments, the programme or the implementation time table.

PART 2

MEASURES REFERRED TO IN ARTICLE 6.2

Member States shall take into account the relevant UNECE Guidance Document for Preventing and Abating Ammonia Emissions (Ammonia Guidance Document) ¹⁹, and shall make use of best available techniques in accordance with Directive 2010/75/EU of the European Parliament and of the Council ²⁰.

A. Measures to control ammonia emissions

1. Member States shall establish a national advisory code of good agricultural practice to control ammonia emissions, taking into account the 2014 UNECE Framework Code for Good Agricultural Practice for Reducing Ammonia Emissions ²¹, covering at least the following items:
 - (a) nitrogen management, taking into account the whole nitrogen cycle;
 - (b) livestock feeding strategies;
 - (c) low-emission manure spreading techniques;
 - (d) low-emission manure storage systems;
 - (e) low-emission animal housing systems;

¹⁹ Decision 2012/11, ECE/EB/AIR/113/Add. 1.

²⁰ Directive 2010/75/EU of the European Parliament and of the Council of 24 November 2010 on industrial emissions (integrated pollution prevention and control) (OJ L 334, 17.12.2010, p. 17).

²¹ Decision ECE/EB.AIR/75, paragraph 28a.

- (f) possibilities for limiting ammonia emissions from the use of mineral fertilisers.
2. Member States may establish a national nitrogen budget to monitor the changes in overall losses of reactive nitrogen from agriculture, including ammonia, nitrous oxide, ammonium, nitrates and nitrites, based on the principles set out in the UNECE Guidance Document on Nitrogen Budgets ²².
 3. Member States shall prohibit the use of ammonium carbonate fertilizers and may reduce ammonia emissions from inorganic fertilizers by using the following approaches:
 - (a) [...]
 - (b) replacing urea-based fertilizers by ammonium nitrate-based fertilizers;
 - (c) where urea-based fertilizers continue to be applied, using methods that have been shown to reduce ammonia emissions by at least 30% compared with the use of the reference method, as specified in the Ammonia Guidance Document;
 - (d) spreading inorganic fertilisers in line with the foreseeable requirements of the receiving crop or grassland with respect to nitrogen and phosphorus, also taking into account the existing nutrient content in the soil and the nutrients from other fertilizers.

²² Decision 2012/10, ECE/EB.AIR/113/Add.1.

4. Member States may reduce ammonia emissions from livestock manure by using the following approaches:
- (a) reducing emissions from slurry and solid manure application to arable land and grassland, by using methods that reduce emissions by at least 30 % compared with the reference method described in the Ammonia Guidance Document and on the following conditions:
 - (i) only spreading manures and slurries in line with the foreseeable nutrient requirement of the receiving crop or grassland with respect to nitrogen and phosphorous, also taking into account the existing nutrient content in the soil and the nutrients from other fertilizers;
 - (ii) not spreading manures and slurries when the receiving land is water saturated, flooded, frozen or snow covered;
 - (iii) applying slurries spread to grassland using a trailing hose, trailing shoe or through shallow or deep injection;
 - (iv) incorporating manures and slurries spread to arable land within the soil within four hours of spreading.
 - (b) reducing emissions from manure storage outside of animal houses, by using the following approaches:
 - (i) for slurry stores constructed after 1st January 2022, using low emission storage systems or techniques which have been shown to reduce ammonia emissions by at least 60% compared with the reference method described in the Ammonia Guidance Document, and for existing slurry stores at least 40%;
 - (ii) covering stores for solid manure;
 - (iii) ensure farms have sufficient manure storage capacity to spread manure only during periods that are suitable for crop growth.

- (c) reducing emissions from animal housing, by using systems which have been shown to reduce ammonia emissions by at least 20% compared with the reference method described in the Ammonia Guidance Document.
- (d) reducing emissions from manure, by using low protein feeding strategies which have been shown to reduce ammonia emissions by at least 10% compared with the reference method described in the Ammonia Guidance Document.

B. Emission reduction measures to control emissions of particulate matter and black carbon

1. Without prejudice to Regulation 1306/2013 (AnnexII) ²³ Member States may, ban open field burning of agricultural harvest residue and waste and forest residue, and shall monitor and enforce its implementation. Any exemptions to such a ban shall be limited to preventive programs to avoid uncontrolled wildfires, to control pest or to protect biodiversity.
2. Member States may establish a national advisory code of good agricultural practices for the proper management of harvest residue, on the basis of the following approaches:
 - (a) improvement of soil structure through incorporation of harvest residue;
 - (b) improved techniques for incorporation of harvest residue;

²³ Annex II on "cross compliance" of Regulation (EU) No 1306/2013 of the European Parliament and of the Council of 17 December 2013 on the financing, management and monitoring of the common agricultural policy and repealing Council Regulations (EEC) No 352/78, (EC) No 165/94, (EC) No 2799/98, (EC) No 814/2000, (EC) No 1290/2005 and (EC) No 485/2008; OJ L 347, 20.12.2013, p. 549–607.

- (c) alternative use of harvest residue;
- (d) improvement of the nutrient status and soil structure through incorporation of manure as required for optimal plant growth, thereby avoiding burning of manure (farmyard manure, deep-straw bedding).

C. Preventing impacts on small farms

In taking the measures outlined in sections A and B above, Member States shall ensure that impacts on small and micro farms are fully taken into account. Member States may, for instance, exempt them from those measures where possible and appropriate in view of the applicable reduction commitments.

ANNEX IV

Methodologies for the preparation and the updating of national emission inventories, emission projections, informative inventory reports and adjusted emission inventories

For the pollutants referred to in Annex I, Member States shall prepare emission inventories, adjusted emission inventories where relevant, projections and informative inventory reports using the methodologies adopted by Parties to the LRTAP Convention (EMEP Reporting Guidelines) and are requested to use the EMEP/EEA Guidebook referred to therein. In addition, supplementary information, in particular the activity data, needed for the assessment of the inventories and projections shall be prepared in accordance with the same guidelines.

Reliance upon the EMEP Reporting Guidelines is without prejudice to the additional modalities specified in this Annex and to the requirements on reporting nomenclature, time series and reporting dates specified in Annex I.

PART 1

NATIONAL ANNUAL EMISSION INVENTORIES

1. National emission inventories shall be transparent, consistent, comparable, complete and accurate.
2. Emissions from identified key categories shall be calculated in accordance with the methodologies defined in the EMEP/EEA Guidebook and with the aim of using a Tier 2 or higher (detailed) methodology.

Member States may use other scientifically based and compatible methodologies for establishing national emission inventories if producing more accurate estimates than the default methodologies set out in the EMEP/EEA Guidebook.

3. For emissions from transport, Member States shall calculate and report emissions consistent with national energy balances reported to Eurostat.
4. Emissions from road vehicle transport shall be calculated and reported on the basis of the fuel sold ²⁴ in the Member State concerned. In addition, Member States may also report emissions from road vehicles based on fuel used or kilometres driven in the Member State.
5. Member States shall report their annual national emissions expressed in the applicable unit specified in the NFR reporting template of the LRTAP Convention.

PART 2

EMISSION PROJECTIONS

1. Emission projections shall be transparent, consistent, comparable, complete and accurate and reported information shall include at least the following:
 - (a) clear identification of the adopted and planned policies and measures included in the projections;
 - (b) where appropriate, the results of sensitivity analysis performed for the projections;
 - (c) a description of methodologies, models, underlying assumptions and key input and output parameters.
2. Projections of emissions shall be estimated and aggregated to relevant source sectors. Member States shall provide a ‘with measures’ (adopted measures) and, where relevant, a ‘with additional measures’ (planned measures) projection for each pollutant in accordance with the guidance established in the EMEP/EEA Guidebook.

²⁴ Member States having the choice to use the national emission total calculated on the basis of fuels used as a basis for compliance under the LRTAP Convention may keep this option in order to ensure coherence between international and EU law.

3. Projections shall be consistent with the national annual emission inventory for the year x-3 and with projections reported under Regulation No 525/2013.

PART 3

INFORMATIVE INVENTORY REPORT

The informative inventory reports shall be prepared in accordance with the EMEP Reporting Guidelines and reported using the template for inventory reports as specified therein. The inventory report shall include, as a minimum, the following information:

- (a) descriptions, references and sources of information of the specific methodologies, assumptions, emission factors and activity data, as well as the rationale for their selection;
- (b) a description of the national key categories of emission sources;
- (c) information on uncertainties, quality assurance and verification;
- (d) a description of the institutional arrangements for inventory preparation;
- (e) recalculations and planned improvements;
- (f) if relevant, information on the use of the flexibilities provided for under Article 5(1) (1a), 1(b) and (2a);
- (g) an executive summary.

PART 4

ADJUSTMENT OF NATIONAL INVENTORIES

1. A Member State that proposes an adjustment to its national emission inventory in accordance with the provision of article 5 (1) shall include in its proposal to the Commission, at least, the following supporting documentation:
 - (a) evidence that the concerned national emission reduction commitment(s) is/are exceeded;
 - (b) evidence of the extent to which the adjustment to the emission inventory reduces the exceedance and contributes to compliance with the concerned national emission reduction commitment(s);
 - (c) an estimation of whether and when the concerned national emission reduction commitment(s) is/are expected to be attained based on emission projections without the adjustment;
 - (d) evidence that the adjustment is consistent with one or several of the following three circumstances. Reference can be made, as appropriate, to relevant previous adjustments:
 - (i) for new emission source categories:
 - evidence that the new emission source category is acknowledged in scientific literature and/or the EMEP/EEA Guidebook;
 - evidence that this source category was not included in the relevant historic national emission inventory at the time when the emission reduction commitment was set;

- evidence that emissions from a new source category contribute to a Member State being unable to meet its emission reduction commitments, supported by a detailed description of the methodology, data and emission factors used to arrive at this conclusion;
- (ii) for significantly different emission factors used for determining emissions from specific source categories:
- a description of the original emission factors, including a detailed description of the scientific basis upon which the emission factor was derived;
 - evidence that the original emission factors were used for determining the emission reductions at the time when they were set;
 - a description of the updated emission factors, including detailed information on the scientific basis upon which the emission factor was derived;
 - a comparison of emission estimates made using the original and the updated emission factors, demonstrating that the change in emission factors contributes to a Member State being unable to meet its reduction commitments;
 - the rationale for deciding whether the changes in emission factors are significant.

(iii) for significantly different methodologies used for determining emissions from specific source categories:

- a description of the original methodology used, including detailed information on the scientific basis upon which the emission factor was derived;
- evidence that the original methodology was used for determining the emission reductions at the time when they were set;
- a description of the updated methodology used, including a detailed description of the scientific basis or reference upon which it has been derived;
- a comparison of emission estimates made using the original and updated methodologies demonstrating that the change in methodology contributes to a Member State being unable to meet its reduction commitment;
- the rationale for deciding whether the change in methodology is significant;

2. Member States may submit the same supporting information for adjustment procedures based on similar preconditions, provided that each Member State submits the required individual country-specific information as described in paragraph 1.

3. Member States shall recalculate adjusted emissions to ensure consistency, to the extent possible, of the time series for every year that the adjustment(s) are applied.

ANNEX V

Optional indicators for monitoring air pollution impacts referred to in Article 8

1. [...]

2. [...]

- (a) for freshwater ecosystems: establishing the extent of biological damage, including sensitive receptors (micro- and macrophytes and diatoms), and loss of fish stock or invertebrates:

the key indicator acid neutralising capacity (ANC) and the supporting indicators acidity (pH), dissolved sulphate (SO₄), nitrate (NO₃) and dissolved organic carbon
frequency of sampling: from yearly (in lake autumn turnover) to monthly (streams).

- (b) for terrestrial ecosystems: assessing the soil acidity, soil nutrients loss, nitrogen status and balance as well as biodiversity loss:

- (i) the key indicator soil acidity: exchangeable fractions of base cations (base saturation) and exchangeable aluminium in soils

frequency of sampling: every ten years;

supporting indicators : pH, sulphate, nitrate, base cations, aluminium concentrations in soil solution

frequency of sampling: every year (where relevant);

- (ii) the key indicator soil nitrate leaching (NO_{3,leach})

frequency of sampling: every year;

- (iii) the key indicator carbon-nitrogen ratio (C/N) and the supporting indicator of total nitrogen in soil (N_{tot}),

frequency of sampling: every ten years;

- (iv) the key indicator nutrient balance in foliage (N/P,N/K, N/Mg)

frequency of sampling: every four years.

- (c) for terrestrial ecosystems: assessing ozone damage to vegetation growth and biodiversity:
 - (i) the key indicator vegetation growth and foliar damage and the supporting indicator carbon flux (C_{flux})
frequency of sampling: every year;
 - (ii) the key indicator exceedence of flux-based critical levels
frequency of sampling: every year during the growing season.

3. [...]

PM: ANNEX VI - Correlation Table
