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**Economic Commission for Europe**

Executive Body for the Convention on Long-range  
Transboundary Air Pollution

**Steering Body to the Cooperative Programme for  
Monitoring and Evaluation of the Long-range  
Transmission of Air Pollutants in Europe**

**Working Group on Effects**

**Ninth joint session**

Geneva, 11–15 September 2023

Item 5 (a) (ii) of the provisional agenda

**Progress in activities of the Cooperative Programme for Monitoring and  
Evaluation of the Long-range Transmission of Air Pollutants in Europe  
and its workplan for 2024–2025: improvement and reporting of emission data and  
adjustments under the Protocol to Abate Acidification, Eutrophication and  
Ground-level Ozone: improvement and reporting of emission data**

**Present state of emission data, review process and  
data for modellers**

**Report of the Centre on Emission Inventories and Projections**

*Summary*

The present report was prepared by the Centre on Emission Inventories and Projections in line with the 2022–2023 workplan for the implementation of the Convention on Long-range Transboundary Air Pollution (ECE/EB.AIR/148/Add.1, items 1.1.1.2, 1.1.2.1, 1.1.2.5–1.1.2.7, 1.1.2.9–1.1.2.10, 1.2.2, 1.3.3 and 3.1–3.2) and the revised mandate for the Centre (Executive Body decision 2019/14).

The report reflects progress in emissions reporting under the Convention in the 2023 reporting round. It summarizes the main conclusions of the annual review of emission data carried out under the Cooperative Programme for Monitoring and Evaluation of the Long-range Transboundary Transmission of Air Pollutants in Europe and presents details of the stage 3 in-depth reviews of national inventories in 2023 and the plans for the year 2024 onwards. It also provides an overview of the review of adjustment applications submitted by Parties and progress in the development and improvement of gridded data and the gridding system.

Annexed to the present document is a table summarizing the status of emission reporting by Parties as at 30 May 2023.



## Introduction

1. At its thirty-second session (Geneva, 9–13 December 2013), the Executive Body for the Convention on Long-range Transboundary Air Pollution adopted the Guidelines for Reporting Emissions and Projections Data under the Convention on Long-range Transboundary Air Pollution (Reporting Guidelines) (ECE/EB.AIR/125) through its decisions 2013/3 and 2013/4.<sup>1</sup> The Reporting Guidelines were adopted for application in 2015 and subsequent years and contain background information on the reporting requirements, deadlines and procedures for reporting emissions under the Convention and their review. At its forty-second session (Geneva, 12–16 December 2022) the Executive Body for the Convention on Long-range Transboundary Air Pollution adopted an amended version of the Reporting Guidelines (as contained in document ECE/EB.AIR/GE.1/2022/20–ECE/EB.AIR/WG.1/2022/13, as amended during the session) for application in 2024 and subsequent years through its decision 2022/1.

2. The present report reflects progress in emissions reporting under the Convention in the 2023 reporting round (2021 emission data, including resubmissions for previous years since 1990, activity data and projections, and gridded and large point source data). It summarizes the main conclusions of the annual review and the review of emission data carried out under the Cooperative Programme for Monitoring and Evaluation of the Long-range Transmission of Air Pollutants in Europe (EMEP) in line with the 2022–2023 workplan for the implementation of the Convention (ECE/EB.AIR/148/Add.1). The report also outlines progress in improving the gridding system and developing historical data sets for modellers in the new resolution.

3. The report was prepared by the EMEP Centre on Emission Inventories and Projections (CEIP), which is hosted by the Environment Agency Austria. It was established by the Executive Body of the Convention at its twenty-fifth session<sup>2</sup> (Geneva, 10–13 December 2007) and began operating on 15 January 2008.

## I. Present state of emission data

4. *Completeness* – Of the 51 Parties to the Convention, 46 had submitted data up to 30 May 2023. All countries reported data in the standard formats (i.e. the Nomenclature for Reporting). No data were received from Azerbaijan, Bosnia and Herzegovina, Croatia, Kyrgyzstan or the Republic of Moldova. A current overview of the data submitted by Parties during the 2023 reporting round can be found in the table contained in the annex to the present document. In addition, the latest version of officially reported emission data can be accessed through the CEIP website.<sup>3</sup> Most of the Parties that submitted data (39) also provided the secretariat with the notification form.

5. *Timeliness* – Forty-one Parties reported emission data by the due date of 15 February (or, in the case of the European Union, 29 April) 2023 and five did so thereafter. Twenty-five Parties resubmitted data, with the most recent provided on 27 April 2023. Thirty-two Parties submitted informative inventory reports by the deadline of 15 March and ten did so thereafter.

6. *Uncertainty* – Twenty-four Parties included quantitative information on uncertainty estimates for the main pollutants in their informative inventory reports. Almost all of these Parties report both trend and level uncertainty estimates.

7. *Pollutants* – Forty-five Parties submitted inventories for 2021 for the main pollutants and particulate matter (PM) and forty-three did the same for cadmium, mercury and lead emissions. Forty-two Parties submitted inventories for priority persistent organic pollutants

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<sup>1</sup> All Executive Body decisions referred to in the present document are available at <https://unece.org/decisions>.

<sup>2</sup> See ECE/EB.AIR/91, para. 27 (f).

<sup>3</sup> Available at [www.ceip.at/status-of-reporting-and-review-results/2023-submission](http://www.ceip.at/status-of-reporting-and-review-results/2023-submission).

(POPs); and thirty-seven did the same for additional heavy metals. Activity data for 2021 were reported by thirty-seven Parties.

8. *Black carbon (BC)* – Thirty-nine Parties reported BC emissions (on a voluntary basis) for 2021 and thirty-eight of them submitted emission time series (at least 2000–2021) in 2023.

9. *Gridded data* – Gridded data are part of the quadrennial reporting obligation that was not due in 2023. In 2017, twenty-seven Parties reported gridded data, at least for 2015, for the first time in the 0.1° x 0.1° longitude/latitude resolution. Thirty-five Parties submitted gridded data in this resolution in 2021, while only twelve of them provided updates on historical years. Three Parties submitted gridded data in 2023.

10. *Large point source data* – Large point source data are also part of the quadrennial reporting obligation that was not due in 2023. Thirty-five Parties submitted data for at least 2015 in 2017. In 2021, thirty-six Parties submitted information on large point sources. Three Parties submitted information on large point source data in 2023.

11. *Documentation* – Only 82 per cent of the Parties submitted informative inventory reports in 2023. CEIP evaluates the informative inventory reports annually and the best national teams receive awards during the meetings of the Task Force on Emission Inventories and Projections (TFEIP). The names of countries receiving awards are published on the CEIP website.<sup>4</sup>

12. *Projections* – The year 2023 is a reporting year for projections (quadrennial reporting obligation that started in 2015). Emission projections for at least 2025 and 2030 were submitted or updated by 30 Parties.

13. *Condensables* – In 2023, information on the inclusion of the condensable component in emission factors for PM was submitted by 23 Parties.

14. *Access to the information* – CEIP makes Parties' submissions accessible on its website and regularly updates the WebDab emissions database and the online interactive data viewer,<sup>5</sup> which can help with the analysis and visualization of officially reported emissions data submitted by countries under the Convention. In addition, CEIP provides information on reporting instructions, the in-depth review, adjustment procedures and adjustment applications on its website.

15. *Emissions per capita and emissions per gross domestic product (GDP)* – These indicators are calculated for all Parties that submit total national emissions of main pollutants, PM, heavy metals and POPs by using information on population and GDP available from the World Bank database.<sup>6</sup> Significant differences are observed across Parties and years.

## II. Technical review of inventories

16. *Main objective* – The main objective of the technical review of inventories is to assist countries in improving their data for the next reporting round. All inventories submitted by Parties were tested via RepDab<sup>7</sup> and imported into the central CEIP database. As a next step, a technical review of all inventories was carried out. At each stage of the review, Parties had the opportunity to clarify issues and provide additional information. The process is seen by Parties as valuable and feedback is provided to CEIP by means of email communication and during TFEIP meetings.

17. *Initial (stages 1 and 2) review* – The findings of the initial review were communicated to the national designated experts through the country-specific status and assessment reports

<sup>4</sup> Available at [www.ceip.at/iir-awards](http://www.ceip.at/iir-awards).

<sup>5</sup> Available at [www.ceip.at/data-viewer](http://www.ceip.at/data-viewer).

<sup>6</sup> See World Bank, “GDP, PPP (constant 2017 international \$)”, available at <https://data.worldbank.org/indicator/NY.GDP.MKTP.PP.KD>; and World Bank, “Population, total”, available at <https://data.worldbank.org/indicator/SP.POP.TOTL>.

<sup>7</sup> Available at [www.ceip.at/repdab](http://www.ceip.at/repdab).

in March and May. An overview of the findings for the stage 1 and 2 reviews is summarized in the forthcoming “Inventory Review 2023”,<sup>8</sup> to be made available on the CEIP website.

18. *In-depth (stage 3) review* – The in-depth review of inventories supports Parties in compiling and submitting high-quality inventories and increases confidence in the data used for air pollution modelling. Resources are required from the expert review team, the reviewed Parties and CEIP. It is estimated that expert review team members devote approximately 10–15 days to their tasks, which include preparation, questions for the Parties, participation in the review meeting and follow-up activities, including finalizing the country review reports. CEIP coordinates the entire process, while the review team has full responsibility for findings and recommendations.

19. *EMEP roster of review experts* – Parties are expected to nominate review experts to the EMEP roster and provide sufficient resources to enable their participation in the process. One hundred and twenty-six reviewers from 30 Parties<sup>9</sup> are listed on the CEIP roster of inventory review experts. The nominated experts are suitably qualified to review submitted inventories.

20. *Previous review rounds* – For details and results of the first and second review rounds (respectively, 2008–2012 and 2013–2017) and third review round (2018–2021), see previous CEIP status reports to the EMEP Steering Body and the country reports, which are available online.<sup>10</sup>

21. *Stage 3 review 2023* – Paragraph 7 (c) of the annex to Executive Body decision 2018/1 on updated methods and procedures for the technical reviews of air pollutant emission inventories reported under the Convention states that stage 3 reviews may be annual centralized reviews or ad hoc reviews. In 2023, an ad hoc review was performed: agriculture sector emissions with a special focus on ammonia (NH<sub>3</sub>), non-methane volatile organic compounds (NMVOCs), nitrogen oxides (NO<sub>x</sub>) and fine particulate matter (PM<sub>2.5</sub>). This year, for the first time, gridded data for the agriculture sector were reviewed. In total, inventory submissions of forty-one Parties were reviewed. The results of the review will be documented in the country reports. A chapter summarizing the main findings will be included in the forthcoming “Inventory Review 2023”.<sup>11</sup>

22. A total of 17 experts accepted the invitation to join the in-depth review for 2023: 2 from Austria, 2 from the United Kingdom of Great Britain and Northern Ireland, 1 from the European Union and 1 from each of the following countries: Denmark, Finland, France, Georgia, Germany, Netherlands, Montenegro, North Macedonia, Republic of Armenia, Serbia, Slovakia and Sweden. The review began at the end of March and country reports should be completed and published before the forty-third session of the Executive Body (Geneva, 11–14 December 2023).

23. *Stage 3 review 2024–2026* – Plans for the review in the period 2024–2026 were discussed at the annual meeting of TFEIP (Oxford, United Kingdom of Great Britain and Northern Ireland, 18–20 April 2023) and will be decided at the ninth joint session of the EMEP Steering Body and Working Group on Effects (Geneva, 11–15 September 2023). The approach to focusing on sectors was welcomed by reviewers, especially as it fosters technical discussion and exchange between the experts. The proposed plan for the years 2024–2026 is: (a) a review of the sector Industrial Processes and Product Use solvents, with a special focus on NMVOC emissions, including gridded data reported for the sector Industrial Processes and Product Uses solvents in 2024; (b) a review of projected emission data in 2025 (exact scope to be determined); and (c) a review of the transport sector, including gridded data

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<sup>8</sup> Sabine Schindlbacher and others, *Inventory Review 2022: Review of emission data reported under the LRTAP Convention*, Centre on Emission Inventories and Projections Technical Report No. 4/2023 (Vienna, Environment Agency Austria, 2023) (forthcoming).

<sup>9</sup> Albania, Armenia, Austria, Belgium, Croatia, Czechia, Denmark, Estonia, the European Union, Finland, France, Georgia, Germany, Greece, Ireland, Italy, Kazakhstan, Latvia, the Netherlands, North Macedonia, Norway, Poland, Portugal, the Russian Federation, Serbia, Slovakia, Spain, Sweden, Türkiye and the United Kingdom of Great Britain and Northern Ireland.

<sup>10</sup> See [www.ceip.at/review-of-emission-inventories/in-depth-review-of-ae-inventories](http://www.ceip.at/review-of-emission-inventories/in-depth-review-of-ae-inventories).

<sup>11</sup> Schindlbacher and others, *Inventory Review 2022*.

reported, with a special focus on NO<sub>x</sub> and PM<sub>2.5</sub> emissions in 2026. For each year the exact scope has to be adapted to the number of participating experts.

### III. Emission data for modellers

24. *Gap-filled and gridded data sets* – Gap-filled and gridded data sets for main pollutants and PM for the years 2000–2021 and for heavy metals and POPs for 2021 will be calculated in June 2023.

25. Where sufficient reported data are not available or data have to be replaced, expert estimates were used for gap-filling. The gap-filling and gridding will be done on aggregated sectors (Gridding Nomenclature for Reporting 14) in 0.1° x 0.1° longitude/latitude grid resolution, based on the gridding system developed by CEIP. The gap-filling methods are documented in CEIP technical reports Nos. 02/2023 and 03/2023 (forthcoming) and are published on the CEIP website.<sup>12</sup>

26. *Access to gridded data* – Gap-filled and gridded emission data will be distributed to the modellers and should be publicly accessible on the CEIP website in summer 2023.<sup>13</sup> In addition, a list of Parties that clearly document that the condensable component is included in the PM emission estimates for the residential heating sector will be prepared.

27. *Shipping emissions* – Emissions for the sea regions were calculated using the Copernicus Atmosphere Monitoring System global ship data set for the years 2000–2021 (Finnish Meteorological Institute, 2022).<sup>14</sup>

### IV. Gridding system in 0.1 x 0.1 longitude/latitude resolution

28. *Gridding system* – The gridding system in higher spatial resolution (0.1° x 0.1°) developed by CEIP is module-based and uses reported gridded emission data as a first step. Where no reported gridded data in the 0.1° x 0.1° resolution are available, Copernicus Atmosphere Monitoring System and Emission Database for Global Atmospheric Research proxies are used and upgraded by point source information available from the European Industrial Emissions Portal.<sup>15</sup> The system also uses global shipping emissions from the Finnish Meteorological Institute. Those emissions are modelled using the Ship Traffic Emission Assessment Model, which is based on automatic identification system tracking data.

29. *Update of historical emissions* – In 2023, gridded data for the time series from 2000 to 2021 will be prepared for main pollutants. For heavy metals and POPs, gridded data for the year 2021 will be prepared.

### V. Review of submitted adjustment applications

30. *Review of adjustment applications* – Denmark, France, the Netherlands and the United Kingdom of Great Britain and Northern Ireland submitted previously approved adjustment applications to the secretariat in 2023. The amended Protocol to Abate Acidification, Eutrophication and Ground-level Ozone (Gothenburg Protocol) requires Parties to demonstrate compliance with emission reduction commitments for 2020 onwards. All submitted applications will be reviewed by the expert review team in May and June 2023 and

<sup>12</sup> See [www.ceip.at/ceip-reports](http://www.ceip.at/ceip-reports).

<sup>13</sup> Emissions as used in EMEP models, available at [www.ceip.at/webdab-emission-database/emissions-as-used-in-emep-models](http://www.ceip.at/webdab-emission-database/emissions-as-used-in-emep-models).

<sup>14</sup> See Emissions of atmospheric Compounds and Compilation of Ancillary Data, CAMS\_GLOB\_SHIP v3.2 (v4.1 model version: STEAM 4.1.6\_CAMS2\_61 (updated 1 November 2022); yearly basis, total TG). Available at <https://eccad.aeris-data.fr> (accessed on 24 April 2023).

<sup>15</sup> See <https://industry.eea.europa.eu/>.

recommendations to the EMEP Steering Body are provided in a special status report on adjustments.<sup>16</sup> The activity was covered by EMEP mandatory contributions.

31. *Guidance for adjustment applications* – Inventory adjustments that are applicable to emission reduction commitments (rather than ceilings) require different considerations and the submission of additional supporting information. A guidance document was prepared by TFEIP and CEIP in January 2022 and a new reporting template has been developed (annex IIa to ECE/EB.AIR/130).<sup>17</sup> Approved adjustments reported in previous years in annex VII have been imported into the website tool,<sup>18</sup> where all information is documented. Adjustments approved in 2022 reported in annex IIa have been imported into the website tool.<sup>19</sup>

## VI. Conclusions

32. *Timeliness and completeness* – In 2023, 46 Parties submitted their inventories. While the completeness of information on the priority pollutants is relatively good and is improving, not all Parties reported (voluntary) additional heavy metals, BC and activity data. The persisting problem with data completeness and quality, particularly in the eastern part of the EMEP domain, could not be resolved but is improving. The ECE capacity-building and awareness-raising programme in countries of Eastern Europe, the Caucasus and Central Asia and the Western Balkans seeks to improve the situation.

33. *Missing reporting* – Bosnia and Herzegovina has not, to date, reported any emission data to CEIP. Azerbaijan, the Republic of Moldova and Kyrgyzstan did not submit any data in 2022 and 2023. Croatia did not submit any data in 2023. Biannually, CEIP provides the Implementation Committee under the Convention with detailed information on how the Parties to the protocols under the Convention are fulfilling their reporting obligations.

34. *Gridded data and large point sources* – Gridded and large point sources are part of the quadrennial reporting obligation. Reporting was not due in 2023. In the 2023 reporting round, three Parties submitted gridded data and large point source data.

35. *Recalculations of emissions. Uncertainty* – The review of submitted inventories still identifies significant recalculations every year. This fact seems to indicate relatively high uncertainty of emission estimates at the sectoral or country level. However, only roughly half of the Parties provide quantitative information on uncertainty estimates. Currently, it is not possible to use the information provided for the calculation of the uncertainty of the emissions in the EMEP domain.

36. *Stage 3 in-depth reviews* – CEIP organized the 2023 stage 3 review and adjustment review as a remote desk and in-person centralized review in Vienna by reviewing the agriculture sector, with a special focus on NH<sub>3</sub>, NMVOC and PM<sub>2.5</sub> emissions for all forty-one Parties that submitted the inventory before the start of the review.

37. *Review of adjustment applications* – The assessment of adjustment applications submitted by four Parties in 2023 was organized in line with Executive Body decisions 2012/3, 2012/12 and 2014/1. Details on the process and findings are provided in document ECE/EB.AIR/GE.1/2023/INF.6–ECE/EB.AIR/WG.1/2023/INF.6.

38. *Resource limitations* – A persistent key constraint for both reviews is the limited nature of the resources provided to invited experts by Parties. Each year, a subset of the nominated experts cannot accept the invitation owing to technical issues or lack of resources. EMEP may wish to consider how to financially support the participation in the review process of experts from countries of Eastern Europe, the Caucasus and Central Asia and the Western Balkans. The travel/accommodation for three experts from the Western Balkan region and two experts from the Eastern Europe, the Caucasus and Central Asia region was supported

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<sup>16</sup> ECE/EB.AIR/GE.1/2023/INF.6–ECE/EB.AIR/WG.1/2023/INF.6.

<sup>17</sup> See [www.ceip.at/technical-guidance-adjustments-erc](http://www.ceip.at/technical-guidance-adjustments-erc).

<sup>18</sup> See [www.ceip.at/gothenburg-protocol/adjustment-tool](http://www.ceip.at/gothenburg-protocol/adjustment-tool).

<sup>19</sup> Ibid.

by two European Union- funded projects. The continuation of similar support would be greatly appreciated.

39. *Increasing reliability of gridded data* – In order to increase the reliability of emission data for modellers, it is extremely important that those Parties that did not submit gridded data in the 0.1° x 0.1° resolution in 2021, 2022 or 2023 do so in 2024. It is also important that Parties regularly update their gridded emissions for the years 1990 and 1995 (voluntary), 2000, 2005, 2010, 2015 and 2019, as encouraged in the Reporting Guidelines<sup>20</sup> and invited to do in the fifth joint session of the Steering Body to EMEP and the Working Group on Effects (Geneva, 9–13 September 2019).<sup>21</sup>

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<sup>20</sup> See ECE/EB.AIR/125, para. 47.

<sup>21</sup> See ECE/EB.AIR/GE.1/2019/2–ECE/EB.AIR/WG.1/2019/2, para. 24.

## Annex

### Status of emission reporting by Parties as at 30 May 2023

<i>Party</i>	<i>Annual reporting submission date</i>			<i>Quadrennial reporting submission date</i>			<i>Adjustments</i>	
	<i>Annex I</i>	<i>Latest resubmission</i>	<i>IIR</i>	<i>Notification form</i>	<i>Projections</i>	<i>Gridded data</i>	<i>Large point sources</i>	<i>New adjustment application</i>
Albania	15 Feb. 2023							
Armenia	15 Feb. 2023		2 Apr. 2023	X				
Austria	15 Feb. 2023		15 Mar. 2023	X	15 Mar. 2023			
Azerbaijan								
Belarus	15 Feb. 2023							
Belgium	15 Feb. 2023	15 Mar. 2023	15 Mar. 2023	X	20 Mar. 2023			
Bosnia and Herzegovina								
Bulgaria	15 Feb. 2023	4 Apr. 2023	15 Mar. 2023		10 May 2023			
Canada	15 Feb. 2023		15 Mar. 2023	X	15 Feb. 2023			
Croatia								
Cyprus	15 Feb. 2023	15 Mar. 2023	16 Mar. 2023	X	17 Mar. 2023			
Czechia	15 Feb. 2023	15 Mar. 2023	15 Mar. 2023	X	15 Mar. 2023			
Denmark	15 Feb. 2023		15 Mar. 2023	X	15 Mar. 2023			
Estonia	10 Feb. 2023	14 Mar. 2023	14 Mar. 2023	X	15 Mar. 2023			



<i>Party</i>	<i>Annual reporting submission date</i>				<i>Quadrennial reporting submission date</i>			<i>Adjustments</i>
	<i>Annex I</i>	<i>Latest resubmission</i>	<i>IIR</i>	<i>Notification form</i>	<i>Projections</i>	<i>Gridded data</i>	<i>Large point sources</i>	<i>New adjustment application</i>
European Union	27 Apr. 2023			X				
Finland	10 Feb. 2023		14 Mar. 2023	X	14 Mar. 2023			
France	7 Feb. 2023		15 Mar. 2023	X	12 May 2023			
Georgia	14 Feb. 2023	29 Mar. 2023	29 Mar. 2023	X				
Germany	10 Feb. 2023	14 Mar. 2023	15 Mar. 2023	X	2 May 2023			
Greece	16 Feb. 2023	3 Mar. 2023	13 Mar. 2023	X	13 Mar. 2023			
Hungary	15 Feb. 2023	21 Mar. 2023	21 Mar. 2023	X				
Iceland	15 Feb. 2023	15 Mar. 2023	15 Mar. 2023	X	16 Mar. 2023			
Ireland	15 Feb. 2023	15 Mar. 2023	15 Mar. 2023	X	4 Apr. 2023			
Italy	15 Feb. 2023	15 Mar. 2023	15 Mar. 2023	X	15 Mar. 2023			
Kazakhstan	27 Oct. 2022	29 Mar. 2023	11 Nov. 2022					
Kyrgyzstan								
Latvia	15 Feb. 2023	27 Apr. 2023	15 Mar. 2023	X	6 Apr. 2023			
Liechtenstein	13 Apr. 2023		26 Apr. 2023					
Lithuania	15 Feb. 2023	8 Apr. 2023	16 Mar. 2023	X	21 Apr. 2023			
Luxembourg	10 Feb. 2023		23 Mar. 2023	X	24 Mar. 2023			
Malta	28 Feb. 2023				6 Apr. 2023			
Monaco	13 Feb. 2023		15 Mar. 2023	X	13 Feb. 2023	13 Feb. 2023	13 Feb. 2023	
Montenegro	15 Feb. 2023	15 Apr. 2023	15 Mar. 2023	X				

<i>Party</i>	<i>Annual reporting submission date</i>				<i>Quadrennial reporting submission date</i>			<i>Adjustments</i>
	<i>Annex I</i>	<i>Latest resubmission</i>	<i>IIR</i>	<i>Notification form</i>	<i>Projections</i>	<i>Gridded data</i>	<i>Large point sources</i>	<i>New adjustment application</i>
Netherlands	15 Feb. 2023	27 Mar. 2023	15 Mar. 2023	X	15 Mar. 2023			
North Macedonia	14 Feb. 2023	6 Mar. 2023	7 Apr. 2023	X				
Norway	14 Feb. 2023		15 Mar. 2023	X	15 Mar. 2023			
Poland	15 Feb. 2023		15 Mar. 2023	X	15 Mar. 2023			
Portugal	14 Feb. 2023	14 Mar. 2023	14 Mar. 2023	X	9 May 2023			
Rep. of Moldova								
Romania	15 Feb. 2023	15 Mar. 2023	15 Mar. 2023	X	16 Feb. 2023			
Russian Federation	23 May. 2023		23 May 2023	X				
Serbia	14 Feb. 2023	5 Apr. 2023	15 Mar. 2023	X				
Slovakia	15 Feb. 2023	14 Mar. 2023	15 Mar. 2023	X	15 Mar. 2023			
Slovenia	2 Feb. 2023		14 Mar. 2023	X	14 Mar. 2023			
Spain	14 Feb. 2023		15 Mar. 2023	X		27 Apr. 2023	26 Apr. 2023	
Sweden	3 Feb. 2023		14 Mar. 2023	X	10 Mar. 2023			
Switzerland	13 Feb. 2023		13 Mar. 2023	X	13 Mar. 2023	14 Feb. 2023	13 Mar. 2023	
Türkiye	15 Feb. 2023	15 Mar. 2023	15 Mar. 2023	X				
Ukraine	14 Feb. 2023	15 Mar. 2023	15 Mar. 2023					
United Kingdom	14 Feb. 2023		15 Mar. 2023	X	15 Mar. 2023			

<i>Party</i>	<i>Annual reporting submission date</i>				<i>Quadrennial reporting submission date</i>			<i>Adjustments</i>
	<i>Annex I</i>	<i>Latest resubmission</i>	<i>IIR</i>	<i>Notification form</i>	<i>Projections</i>	<i>Gridded data</i>	<i>Large point sources</i>	<i>New adjustment application</i>
United States	15 Mar. 2023	15 Apr. 2023	15 Apr. 2023	X				

*Abbreviations:* IIR, informative inventory report.