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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**

#### Sixth joint session

Geneva, 14-18 September 2020

Item 12 (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 in 2020 and future work: 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 2020–2021 workplan for the implementation of the Convention on Long-range Transboundary Air Pollution (ECE/EB.AIR/144/Add.2, items 1.1.1.2, 1.1.2.1, 1.1.2.2, 1.1.2.3 and 1.3.3) and the revised mandate of the Centre (Executive Body decision 2019/14).<sup>1</sup>

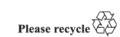
The report reflects progress in emissions reporting under the Convention in the 2020 reporting round. It summarizes the main conclusions of the annual review of emission data carried out under the Cooperative Programme for Monitoring and Evaluation of the Longrange Transboundary Transmission of Air Pollutants in Europe and presents the outcome of the stage 3 in-depth reviews of national inventories in 2020 and the plans for the year 2021. It also looks at 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 15 May 2020.

Available at www.unece.org/env/lrtap/executivebody/eb\_decision.html...









#### 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. 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.
- 2. The present report reflects progress in emissions reporting under the Convention in the 2020 reporting round (2018 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 as carried out in cooperation with the European Environment Agency and its European Topic Centre on Air Pollution, Transport, Noise and Industrial pollution 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 2020–2021 workplan for the implementation of the Convention (ECE/EB.AIR/144/Add.2). 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, which is hosted by the Environment Agency Austria, was established by the Executive Body of the Convention at its twenty-fifth session (Geneva, 10–13 December 2007) (ECE/EB.AIR/91, para. 27 (f)) and began operating on 15 January 2008.

#### I. Present state of emission data

- 4. Completeness. Of the 51 Parties to the Convention, 43 had submitted data up to 15 May 2020. All countries reported data in the standard formats (i.e., the Nomenclature for Reporting 2019<sup>2</sup> or 2014-2). No data were received from Albania, Azerbaijan, Bosnia and Herzegovina, Georgia, Liechtenstein, Monaco, the Russian Federation or the United States of America. A current overview of the data submitted by Parties during the 2020 reporting round can be found in the annex to the present document. In addition, the latest version of officially reported emission data can be accessed through an online database.<sup>3</sup> Most of the Parties that submitted data (37) also provided the secretariat with the notification form.
- 5. *Timeliness.* Thirty-one Parties reported emission data by the due date of 15 February (or, in the case of the European Union, 30 April) 2020. Twenty-eight Parties resubmitted data, with the most recent provided on 8 May 2020. Thirty-six Parties submitted informative inventory reports.
- 6. *Uncertainty*. Twenty-one 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-two Parties submitted inventories for 2018 for the main pollutants and particulate matter and cadmium, mercury and lead emissions. Forty-one Parties submitted inventories for priority persistent organic pollutants; and thirty-six did the same

The nomenclature for reporting 2019 is available at: https://www.ceip.at/ms/ceip\_home1/ceip\_home/webdab\_emepdatabase/reported\_emissiondata/index. html.

<sup>&</sup>lt;sup>3</sup> Centre on Emission Inventories and Projections, Official reported emission data in 2020. Available at: https://www.ceip.at/ms/ceip\_home1/ceip\_home/webdab\_emepdatabase/reported\_emissiondata/index. html.

for additional heavy metals. Activity data for 2018 were reported by only thirty-six Parties. In addition, the Republic of Moldova reported emissions of all pollutants listed in the Reporting Guidelines and activity data up to 2017.

- 8. *Black carbon*. Thirty-nine Parties reported black carbon emissions (on a voluntary basis) for 2018 and thirty-four of them submitted emission time series (at least 2000–2018) in 2020. The Republic of Moldova reported emissions of black carbon from 1990 to 2017.
- 9. *Gridded data*. Gridded data are part of the quadrennial reporting obligation. In 2017, twenty-seven Parties reported gridded data, at least for 2015, for the first time in the new resolution. Nine Parties submitted gridded data in 2020 and three of them Estonia, Spain and Switzerland provided updates on historical years.
- 10. Large point source data. Large point source data are also part of the quadrennial reporting obligation. Thirty-five Parties submitted data for at least 2015 in 2017, four Parties submitted data in 2018, three Parties submitted data in 2019 and seven Parties in 2020.
- 11. Documentation. Only 71 per cent of the Parties submitted informative inventory reports in 2020. The Centre on Emission Inventories and Projections 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. Due to the current situation and the fact that the Task Force meeting was held online, awards for informative inventory reports have been postponed to later in the year and will be published in the Task Force Newsletter and/or on the Centre website.
- 12. *Projections*. In 2020, emission projections for 2020, 2025 and 2030 were submitted or updated by six Parties (twenty-five in 2019).
- 13. *Condensable*. In 2020, information on the inclusion of the condensable component in emission factors for particulate matter was submitted by twenty-one Parties.
- 14. Access to the information. The Centre on Emission Inventories and Projections updated its website to reflect revisions in the Reporting Guidelines and to improve the transparency and accessibility of data for Parties, the EMEP Steering Body, the Implementation Committee and the public. Websites with information on adjustment procedures, adjustment applications, review, findings and approved adjustment have also been updated. In addition, the Centre provides its users with an online interactive data viewer<sup>4</sup> that can help with the analysis and visualization of officially reported emissions data submitted by countries under the Convention.
- 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, particulate matter, heavy metals and persistent organic pollutants by using information on population and GDP available from the World Bank Group database.<sup>5</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>6</sup> and imported into the Centre on Emission Inventories and Projections central 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 to provide additional information. The process is seen by Parties as valuable and the feedback is

Officially reported emission data, June 2020. See https://www.ceip.at/ms/ceip\_home1/ceip\_home/data\_viewers/official\_tableau/index.html.

<sup>5</sup> Available at: https://data.worldbank.org/indicator/NY.GDP.MKTP.PP.KD and https://data.worldbank.org/indicator/SP.POP.TOTL.

<sup>&</sup>lt;sup>6</sup> The RepDab tool is also available from the Centre on Emission Inventories and Projections website at https://www.ceip.at/ms/ceip\_home1/ceip\_home/repdab\_howtouse/index.html .

provided to the Centre by means of email communications and during the meetings of the Task Force on Emission Inventories and Projections.

- 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 by 6 March 2020, and again by 26 March 2020 (to reflect resubmissions). An overview of the findings for the stage 1 and 2 reviews is summarized in the forthcoming "Inventory Review 2020", 7 to be made available on the Centre's website.
- 18. *In-depth (stage 3) review.* This 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. The aim was to conduct a stage 3 review for every Party the participation of the United States of America and Canada in the review process is to be discussed –at least once in a five-year period. Resources are required from the expert review team, the reviewed Parties and the Centre on Emission Inventories and Projections. It is estimated that members of the expert review team devote about 10 to 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. The Centre coordinates the entire process, while the review teams have full responsibility for findings and recommendations.
- 19. 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 two reviewers from 24 Parties<sup>8</sup> are listed on the Centre on Emission Inventories and Projections roster of experts.<sup>9</sup> The nominated experts are suitably qualified to review submitted inventories.
- 20. During the first and second review rounds (respectively, 2008–2012 and 2013–2017), 44 Parties were reviewed in each round. Reviewers identified areas for improvement in all the inventories that were checked. The Parties had an opportunity to provide comments before the reports were published. The results are posted on the Centre on Emission Inventories and Projections website. 10
- 21. The plan for in-depth (stage 3) reviews for the period 2018–2020 (see table below) was approved by the EMEP Steering Body at its third joint session (Geneva, 11–15 September 2017) with the Working Group on Effects (ECE/EB.AIR/GE.1/2017/2–ECE/EB.AIR/WG.1/2017/2, para. 67 (e)). It reflects review activities under the European Union National Emission Ceilings Directive<sup>11</sup> and, in order to minimize duplication of work, focuses on non-European Union countries, including in Eastern Europe, the Caucasus and Central Asia. The plan is modified if any listed Party does not submit the requested information on time. Submission of emissions data and an informative inventory report is a prerequisite for a Party to be included in the stage 3 in-depth review (see Executive Body decision 2018/1, annex, para. 17). For details, see previous Centre on Emission Inventories and Projections status reports to the EMEP Steering Body and the country reports, which are available online. The feedback received during the meetings of the Task Force on Emission

Marion Pinteris and others, *Inventory Review 2020: Review of emission data reported under the LRTAP Convention and NEC Directive*, Technical Report of Centre on Emission Inventories and Projections 4/2020 (Vienna, Environment Agency Austria, 2020) (forthcoming).

<sup>&</sup>lt;sup>8</sup> Austria, Belgium, Croatia, Czechia, Denmark, Estonia, the European Union, Finland, France, Germany, Greece, Ireland, Italy, Kazakhstan, Latvia, the Netherlands, North Macedonia, Norway, Poland, Serbia, Slovakia, Spain, Sweden and the United Kingdom of Great Britain and Northern Ireland.

<sup>&</sup>lt;sup>9</sup> See https://www.ceip.at/fileadmin/inhalte/emep/review/0\_Roster\_2020.pdf.

<sup>10</sup> Sec

https://www.ceip.at/ms/ceip\_home1/ceip\_home/review\_process/stage3\_country\_reports/index.html

Directive (EU) 2016/2284 of the European Parliament and of the Council of 14 December 2016 on the reduction of national emissions of certain atmospheric pollutants, amending Directive 2003/35/EC and repealing Directive 2001/81/EC, Official Journal of the European Union, L 344 (2016), pp. 1–31.

<sup>12</sup> See:

https://www.ceip.at/ms/ceip\_home1/ceip\_home/review\_process/stage3\_country\_reports/index.html.

Inventories and Projections indicates that inventory compilers consider the in-depth reviews to be useful and recommend that they be continued.

#### Updated long-term plan for stage 3 reviews during the period 2018-2020

Year	Country for review
2018	Armenia, Azerbaijan, Belarus, Finland, Republic of Moldova and Ukraine
2019	Albania, Bosnia and Herzegovina, a Georgia, Montenegro, b Norway, Russian Federation, Serbia and Turkey
2020	European Union, Iceland, Kazakhstan, <sup>b</sup> Kyrgyzstan, Liechtenstein, <sup>b</sup> Monaco, <sup>b</sup> North Macedonia and Switzerland

<sup>&</sup>lt;sup>a</sup> Because Bosnia and Herzegovina had never submitted either inventory data or an informative inventory report, Party is not planned for in-depth review.

- 22. It is proposed that Kazakhstan, Lichtenstein, Monaco and Montenegro be reviewed in 2021.
- 23. A total of eighteen experts accepted the invitation to join the in-depth review for 2020: two from the European Union, the Netherlands and the United Kingdom of Great Britain and Northern Ireland, and one each from Austria, Croatia, Czechia, Denmark, Estonia, Finland, France, Germany, Norway, Poland, Slovakia and Spain. The review began in mid–May and the reports should be completed and published before the fortieth session of the Executive Body (Geneva, 14–18 December 2020).

#### III. Emission data for modellers

- 24. Gap-filled and gridded data sets. Gap-filled and gridded data sets for main pollutants and particulate matter and for heavy metals and persistent organic pollutants were calculated for the year 2018, with data as of 17 April 2020. Gap-filled and gridded data sets for main pollutants and particulate for the years 2000 to 2017 will be calculated in the second half of 2020.
- 25. Where sufficient reported data were not available or data had to be replaced, expert estimates (from, for example, the Greenhouse Gas and Air Pollution Interactions and Synergies model (GAINS ECLIPSE v6b data set), the Global Mercury Assessment 2018, the POPCYCLING-Baltic project or the Global atmospheric emission inventory of polycyclic aromatic hydrocarbons) were used for gap-filling. The gap-filling and gridding was 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 the Centre on Emission Inventories and Projections. The gap-filling methods are documented in Centre technical reports 1/2020, 2/2020 and 3/2020 (forthcoming) and are published on the Centre website.<sup>13</sup>
- 26. *Gap-filled and gridded emission data* were distributed to the modellers and should be publicly accessible on the Centre website in summer 2020.<sup>14</sup>
- 27. Shipping emissions. Shipping emissions are not reported by Parties. Emissions for the sea regions were calculated using the Copernicus Atmosphere Monitoring System global ship data set for the years 2000–2018 (Finnish Meteorological Institute, 2019), provided via

<sup>&</sup>lt;sup>b</sup> Because Kazakhstan, Lichtenstein and Monaco have not submitted either inventory data or an informative inventory report in due date, their review had to be cancelled (postponed to 2021).

<sup>&</sup>lt;sup>13</sup> See: https://www.ceip.at/ms/ceip\_home1/ceip\_home/ceip\_reports/index.html.

Emissions as used in EMEP models, available at https://www.ceip.at/ms/ceip\_home1/ceip\_home/webdab\_emepdatabase/emissions\_emepmodels/index .html.

Emissions of atmospheric Compounds and Compilation of Ancillary Data; CAMS-GLOB-SHIP (v2.1).<sup>15</sup>

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

- 28. The gridding system in higher spatial resolution  $(0.1^{\circ} \times 0.1^{\circ})$  developed by the Centre on Emission Inventories and Projections is module-based and uses reported gridded emission data as a first step. Where no reported gridded data in the  $0.1^{\circ} \times 0.1^{\circ}$  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 Pollutant Release and Transfer Register. 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 2020, gridded data for the whole time series from 2000 to 2017 were prepared.

## V. Review of submitted adjustment applications

30. Czechia submitted new adjustment applications to the secretariat in 2020. Ten Parties (Belgium, Denmark, Finland, France, Germany, Hungary, Luxembourg, the Netherlands, Spain and the United Kingdom of Great Britain and Northern Ireland) submitted the reporting templates in annex VII to the Reporting Guidelines, with adjustments approved in 2014, 2015, 2016, 2017, 2018 and/or 2019. Approved adjustments reported in annex VII have been imported into the website tool, <sup>17</sup> where all information can be easily viewed and compared. All submitted applications, both new and previously approved, have been reviewed by the expert review team and recommendations to the EMEP Steering Body are provided in a special status report on adjustments. <sup>18</sup> The activity was covered by EMEP mandatory contributions.

#### VI. Conclusions

- 31. *Timeliness and completeness*. In 2020, 43 Parties submitted their inventories (one only up to the year 2017). While the completeness of information on the priority pollutants is relatively good, not all Parties reported (voluntary) additional heavy metals, black carbon and activity data. The persisting problem with data completeness and quality, particularly in the eastern part of the EMEP domain, could not be resolved. The United Nations Economic Commission for Europe should consider enhancing its capacity-building and awareness-raising programme in countries of Eastern Europe, the Caucasus and Central Asia and in the Western Balkan countries.
- 32. Failure to report. Bosnia and Herzegovina have not to date reported emission data to the Centre on Emission Inventories and Projections. Albania, Azerbaijan, Georgia, Liechtenstein, Monaco, the Russian Federation and the United States of America did not submit any data in 2020. Several times a year, the Centre provides the Implementation Committee under the Convention with detailed information on how the Parties to the Protocols to the Convention are fulfilling their reporting obligations.
- 33. Gridded data and large point sources. In the 2020 reporting round, nine Parties submitted gridded data and seven Parties submitted large point source data. Mandatory reporting year was 2017, where a total of 29 countries (57 per cent of the Parties) submitted

<sup>&</sup>lt;sup>15</sup> See https://eccad.aeris-data.fr (accessed on 23 June 2020).

<sup>&</sup>lt;sup>16</sup> See http://prtr.ec.europa.eu (accessed on 23 June 2020).

<sup>&</sup>lt;sup>17</sup> See https://webdab01.umweltbundesamt.at/cgi-bin/adj\_GP.pl.

<sup>&</sup>lt;sup>18</sup> See https://www.ceip.at/ms/ceip\_home1/ceip\_home/adjustments\_gp/adj\_country\_data/.

- 2015 gridded sectoral data in the new resolution  $(0.1^{\circ} \times 0.1^{\circ})$ , and 39 countries (76 per cent of the Parties) submitted large point source data.
- 34. Recalculations of emissions. Uncertainty. 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.
- 35. Stage 3 in-depth reviews. The Centre on Emission Inventories and Projections organized the 2020 stage 3 review and adjustment review as a desk review in 2020 by reviewing inventory of five Parties. While most of the Parties reviewed clearly recognize the value of the review process in terms of improving the quality of their national inventories, difficulties are often encountered when EMEP requests complete inventory data and relevant explanatory information in a transparent format.
- 36. Review of adjustment applications. The assessment of adjustment applications submitted by 11 Parties in 2020 was organized in line with Executive Body decisions 2012/2, 2012/13 and 2014/1. Details on the process and findings are provided in document ECE/EB.AIR/GE.1/2020/10–ECE/EB.AIR/WG.1/2020/21.
- 37. 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 Eastern Europe, the Caucasus and Central Asia and Western Balkan countries. The European Environment Agency covered the travel costs of seven experts (from Czechia, Estonia, Greece, Kazakhstan and Latvia) and two trainees (from North Macedonia and Serbia) during the period 2010–2012, and of one expert from North Macedonia in 2018, in order to enable them to participate in stage 3 reviews.
- 38. The gridding system. The production of gridded data in high resolution (0.1° x 0.1°, World Geodetic System 1984 (a geographic coordinate system)) requires a huge amount of annual gap-filling and gridding work for the Centre on Emission Inventories and Projections and to do this in the limited time period between the submission of data (15 March for inventory data and 1 May for gridded data) and the deadline for the production of gridded data (beginning of May) is a big challenge.
- 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 the period 2017–2020 do so 2021. It is also important that Parties regularly update their gridded emissions for the years 1990 and 1995 (voluntary), 2000, 2005, 2010 and 2015, as encouraged) in the Reporting Guidelines and invited in the fifth joint session of the Steering Body to the Cooperative Programme for Monitoring and Evaluation of the Long-range Transmission of Air Pollutants in Europe and the Working Group on Effects

Status of emission reporting as at 15 May 2020

Party			Adjustments							
	Annex I Submission date	Resubmission date	Date of IIR	Notification form	Projection submission date	Gridded data submission date	Large point sources submission date	New adjustment application	Annex V	II
Albania										
Armenia	17 Feb. 2020	)	15 Mar. 202	17 Feb. 202	0					
Austria	14 Feb. 2020	)	12 Mar. 202	14 Feb. 202	0					
Azerbaijan										
Belarus	23 Feb. 2020	)		23 Feb. 202	0					
Belgium	14 Feb. 2020	11 Mar. 2020, 15 Mar. 2020	15 Mar. 202	0 14 Feb. 202	0					X
Bosnia and Herzegovina										
Bulgaria	14 Feb. 2020	17 Mar. 2020	16 Mar. 202	0		17 Mar. 202	20			
Canada	14 Feb. 2020	)		14 Feb. 202	0					
Croatia	14 Feb. 2020	)	03 Mar. 202	14 Feb. 202	0					
Cyprus	14 Feb. 2020	)	13 Mar. 202	14 Feb. 202	0					
Czechia			13 Mar. 2020	0,						
	14 Feb. 2020	15 Apr. 2020	07 Apr. 202	14 Feb. 202	0		06 Mar. 202	20	X	
Denmark	14 Feb. 2020	)	15 Mar. 202	14 Feb. 202	0					X
Estonia	13 Feb. 2020	13 Mar. 2020	13 Mar. 202	13 Feb. 202	0	28 Feb. 202	20			
European Union	30 Apr. 2020	)		30 Apr. 202	0					
Finland					13 Mar. 2020	),				
	14 Feb. 2020	13 Mar. 2020	13 Mar. 202	14 Feb. 202	0 17 Mar. 202	0 29 Apr. 202	20 29 Apr. 202	20		X
France	14 Feb. 2020	13 Mar. 2020	13 Mar. 202	14 Feb. 202	0					X
Georgia										
Germany	12 Feb. 2020	12 Mar. 2020	12 Mar. 202	12 Feb. 202	0					X
Greece	12 Feb. 2020	)	17 Feb. 202	17 Feb. 202	0					
Hungary		10 Mar. 2020,								
	17 Feb. 2020	18 Mar. 2020	18 Mar. 202	17 Feb. 202	0					X

		Quadrennial reporting			Adjustments				
Party	Annex I Submission date	Resubmission date Da	ite of IIR	Notification form	Projection submission date	Gridded data submission date	Large point sources submission date	New adjustment application	Annex VII
Iceland	19 Feb. 2020	30 Apr. 2020	30 Apr. 2020	19 Feb. 2020	)				
Ireland	14 Feb. 2020	0	13 Mar. 2020	14 Feb. 2020	0 17 Apr. 2020	0			
Italy	25 Feb. 2020	0 12 Mar. 2020	21 Mar. 2020	21 Mar. 2020	)	21 Mar. 20	20 21 Mar. 20	20	
Kazakhstan	12 May 2020	0							
Kyrgyzstan	23 Mar. 2020	0	23 Mar. 2020	)					
Latvia	14 Feb. 2020	0 13 Mar. 2020	13 Mar. 2020	14 Feb. 2020	)				
Liechtenstein									
Lithuania		17 Feb. 2020, 19 Feb. 2020, 21 Feb. 2020,							
	15 Feb. 2020	25 Feb. 2020	13 Mar. 2020	15 Feb. 2020	)	13 Feb. 202	20 12 Feb. 20	20	
Luxembourg	13 Feb. 2020	0 13 Mar. 2020	13 Mar. 2020	13 Feb. 2020	)				X
Malta	17 Feb. 2020	0 01 Apr. 2020		07 Apr. 2020	0 03 Mar. 2020	0 29 Apr. 20	20		
Monaco									
Montenegro		30 Mar. 2020,							
	15 Mar. 2020	08 May 2020	15 Mar. 2020	30 Mar. 2020	)				
Netherlands	16 Feb. 2020	0 16 Mar. 2020	15 Mar. 2020	)					X
North Macedonia	13 Feb. 2020	0 13 Apr. 2020	04 May 2020	13 Feb. 2020	)				
Norway	14 Feb. 2020	06 Mar. 2020	13 Mar. 2020	14 Feb. 2020	)				
Poland			12 Mar. 2020						
	12 Feb. 2020	0 09 Apr. 2020	09 Apr. 2020	12 Feb. 2020	)	27 Apr. 20	20		
Portugal		13 Feb. 2020,							
	40.71.000	13 Mar. 2020,	13 Mar. 2020						
	12 Feb. 2020	•	08 Apr. 2020						
Republic of Moldova	20 Feb. 2020			20 Feb. 2020					
Romania	14 Feb. 2020	0 13 Mar. 2020	13 Mar. 2020	14 Feb. 2020	)		06 Mar. 20	20	
Russian Federation									
Serbia	14 Feb. 2020		13 Mar. 2020	14 Feb. 2020	)				
Slovakia	12 Feb. 2020	0 13 Mar. 2020	13 Mar. 2020	)					

Party	Annual reporting				Quadrennial reporting			Adjustments	
	Annex I Submission date	Resubmission date Da	te of IIR N		Projection (submission date s	Gridded data submission date	Large point sources submission date	New adjustment application	Annex VII
Slovenia	06 Feb. 2020	13 Mar. 2020	13 Mar. 2020	06 Feb. 2020	)				
Spain		07 Feb. 2020,		17 Jan. 2020	,				
	17 Jan. 2020	12 Mar. 2020	12 Mar. 2020	07 Feb. 2020	)	28 Apr. 202	20 28 Apr. 202	20	X
Sweden	30 Jan. 2020		02 Mar. 2020	23 Jan. 2020	)				
Switzerland	13 Feb. 2020		13 Mar. 2020	13 Feb. 2020	13 Feb. 2020	13 Feb. 202	20 13 Feb. 202	20	
Turkey	14 Feb. 2020	21 Feb. 2020		14 Feb. 2020	)				
Ukraine	19 Feb. 2020		16 Apr. 2020						
United Kingdom	14 Feb. 2020	13 Mar. 2020	13 Mar. 2020	14 Feb. 2020	13 Mar. 2020				X
United States									