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# **Review of the 2024 Adjustment Application**

## **CZECHIA**

Expert Review Team Summary Note

FINAL REPORT

<b>Report title</b>	Review of the 2024 Adjustment Application by Czechia
<b>Country</b>	Czechia
<b>Report reference</b>	CEIP/Adjustment RR/2024/CZ
<b>Date</b>	03/09/2024
<b>Version</b>	Final Report

## Expert Review Team

<b>Role</b>	<b>Sectors</b>	<b>Name</b>	<b>Country</b>
Adjustment lead reviewer	All	Ben Richmond	United Kingdom
Primary expert reviewer	Agriculture (3B, 3D)	Susana Lopez-Aparicio	EU/(EEA/ETC)
Secondary expert reviewer	Agriculture (3B, 3D)	Anđelka Radosavljević	Serbia
Basic checks (Step 1 and 2)	N/A	Sabine Schindlbacher	CEIP

## Executive Summary

1. As mandated by Decision 2012/3 (ECE/EB.AIR/111/Add.1) of the Executive Body of the Air Convention the nominated Expert Review Team undertook a detailed review of the adjustment application submitted by Czechia. The review was undertaken on behalf of the EMEP Steering Body and following the guidance published in the Annex to decision 2012/12 (ECE/EB.AIR/113/Add.1) and 2014/1 (ECE/EB.Air/130) and additional Guidance provided in “Inventory adjustments in the context of emission reduction commitments (ERCs)”.
2. The application was reviewed by two independent sectoral experts during May and June 2024. The findings were discussed during the review week from 3 to 7 June 2024. The conclusions and recommendations for the EMEP SB are documented in this country report.

**Table ES1: Summary Information on the Submitted Application**

Reasons for adjustment application (Decision 2012/3, para 6)	Emission factors used to determine emissions levels for a particular source category (i.e. 3Da1 Inorganic N fertilisers (includes urea)) for the year in which emissions reduction commitments are to be attained are significantly different than the emission factors applied to this category when emission the reduction commitments were set.
Pollutant for which adjustment is applied for	NH <sub>3</sub>
Sector/Pollutant for which adjustment is applied for	3Da1/NH <sub>3</sub>
Year(s) for which inventory adjustment is applied	2020-2022
Date of notification of adjustment to the Secretariat	16 February 2024
Date of submission of supporting documentation	15 March 2024
Resubmission of the adjustment application	25 April 2024

3. The Expert Review Team reviewed and evaluated the documents submitted by Czechia.

**NH<sub>3</sub> emissions from Inorganic N fertilizers (includes urea) (3Da1):** The ERT finds that the significant changes that occurred between the NH<sub>3</sub> emission factors from EEA/EMEP Guidebook 2016 (2019) and from EEA/EMEP Guidebook 2023 cannot be expected and predicted by the party. Evidence that the: original EF was used in determining emissions; the origin of both original and updated EF; and a comparison of the original and updated EFs, demonstrating that Czechia is in exceedance, are presented. Hence, the ERT is of the view that the application for adjustment meets the criteria as outlined in the Directive. The ERT therefore recommends that the EMEP Steering Body **ACCEPT** this adjustment application from Czechia.

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## 1 Introduction and Context

5. Parties may apply to adjust their inventory data or emission reduction commitments if they are (or expect to be) in non-compliance with their emission reduction targets. However, in making an adjustment application, they must demonstrate that extraordinary circumstances have given rise to revisions to their emissions estimates. These extraordinary circumstances fall into three broad categories:

- a) Emission source categories are identified that were not accounted for at the time when the emission reduction commitments were set; or
- b) For a particular source, the emission factors used to estimate emissions for the year in which emissions reduction commitments are to be attained are significantly different to those used when the emission reduction commitments were set; or
- c) The methodologies used for determining emissions from specific source categories have undergone significant changes between the time when emission reduction commitments were set and the year they are to be attained.

6. Any Party applying an adjustment to its inventory is required to notify the Convention Secretariat through the Executive Secretary by 15 February at the latest. The supporting information detailed in Decision 2012/12 must be provided (either as part of the Informative Inventory Report or in a separate report) by 15 March of the same year.

7. As mandated by Decision 2012/12 and as amended by the Decision 2014/1 of the Executive Body of the CLRTAP, applications for adjustments that are submitted by Parties are subject to an expert review<sup>1</sup>. Technical coordination and support for the reviews provided by EMEP's Centre on Emission Inventories and Projections (CEIP). The members of the review team are selected from the available review experts that Parties have nominated to the CEIP roster of experts.

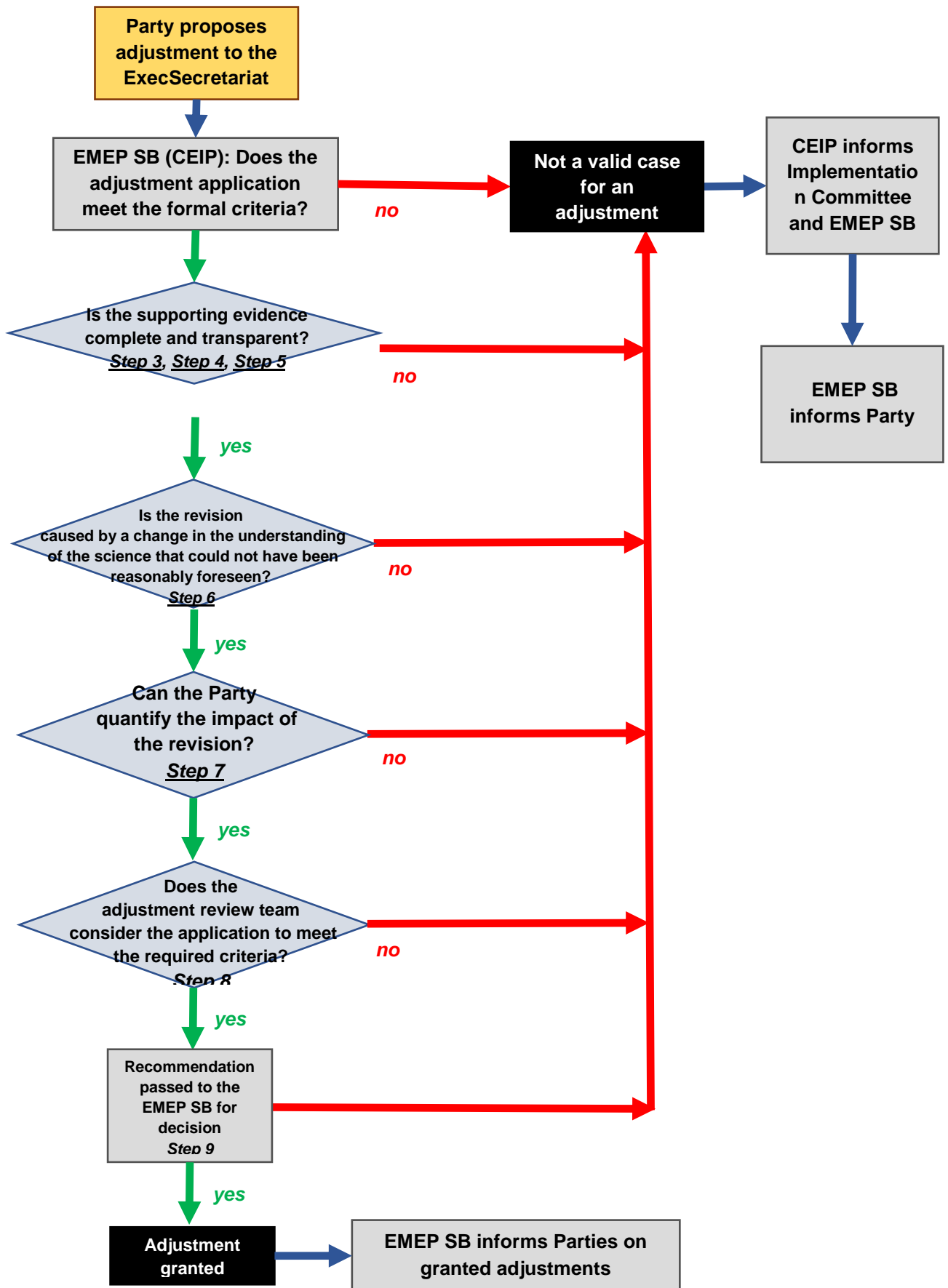
8. The Expert Review Team (ERT) undertakes a detailed technical review of the adjustment application in cooperation with the EMEP technical bodies and makes a recommendation to the EMEP Steering Body on the acceptance or rejection of the application. The EMEP Steering Body then takes its decision on any adjustment application based on the outcome of the technical assessment completed by ERT.

9. The flow diagram below outlines the different stages of the technical review. The following sections of this report are structured in the same way, and describe in detail the findings of the ERT at each of the decision gates in the process.

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<sup>1</sup> The EMEP Steering Body, in conjunction with other appropriate technical bodies under EMEP, shall review the supporting documentation and assess whether the adjustment is consistent with the circumstances described in paragraph 6 of EB decision 2012/3 and the further guidance in EB decision 2012/12 as amended by EB decision 2014/1 and Technical guidance document ECE/AB.Air/130 ..

Figure 1: Flow Diagram/Decision Tree for the Review of Adjustment Applications



## 2 Review of Submitted new Adjustments

### 2.1 Assessment of Formal Criteria

10. Czechia notified the secretariat through the ECE Executive Secretary of its intention to apply for a new adjustment within the legal deadline of 15 February 2024. Limited supporting information requested by decision 2012/12 was provided as part of the Informative Inventory Report before the legal deadline of 15 March of the same year that it is being submitted for review by the EMEP Steering Body (decision 2012/12, annex, para. 1).

11. Additional information was provided during the review in response to requests from the ERT. It is strongly recommended that Czechia elaborate on the details provided in the IIR with the additional information provided during the review.

12. Czechia submitted an application for emissions adjustments to NH<sub>3</sub> for 2020-2022 for the following sector:

(a) NFR 3Da1, Inorganic N-fertilizers (includes also urea application)

13. Czechia does not comply with its NH<sub>3</sub> emission reduction commitments listed in Annex II of the Gothenburg Protocol, (paragraph 1 of Decision 2012/3).

14. Czechia provide partial information on the impact of the adjustment to its emission inventory, and the extent to which it would reduce the current exceedance and possibly bring the Party into compliance with its emission reduction commitments for the years 2020-2022 for NH<sub>3</sub>. It is strongly recommended that Czechia expand this information using the data provided by the ERT during the review.

15. Czechia included information that implies when it will meet its emission ceiling for NH<sub>3</sub> in the supporting documentation, however, it is recommended that this is more explicit.

16. Czechia indicated that it meets the set emission reduction commitments for NH<sub>3</sub> in the supporting documentation, however, it is recommended that this is more explicit.

### 2.2 Assessment of consistency with the requirements of decision 2012/3

17. All adjustments have been justified with the explanation that for category NFR 3Da1, Inorganic N-fertilizers (includes also urea application), the emission factors used to estimate emissions for the year in which emissions reduction commitments are to be attained are significantly different to those used when the emission reduction commitments were set.

In case of significantly different emissions factors are used, the following evidence shall be provided:

- The original EF, and information on its origin or derivation.
- Evidence that the original EF was used in determining the emission ceilings when they were set.
- The updated EF, and information on its origin or derivation.
- A comparison of the original and updated EFs, demonstrating that the change contributes to an MS being in exceedance.
- A rationale for deciding whether the changes in EF are significant.

18. The ERT concludes that the supporting evidence provided complies with the criteria presented in decision 2012/3 and that the circumstances in which the modification relates to a change in the scientific knowledge of the resource.

19. The ERT reviewed the documentation that was provided to support the application (see annex).

20. The ERT considers that Czechia's request generally meets the criteria for the supporting documents required by the Directive, as listed above.

### 2.3 Assessment of the quantification of the impact of the revision

21. The adjustment application process requires that the Party submit a quantification of the impact of the adjustment for which an application has been submitted. **Table 2** provides an overview of the NH<sub>3</sub> adjustment application of Czechia in the 3Da1 sector as provided by Czechia in Annex IIa.

The ERT reviewed the quantification of the emissions adjustments provided by the country. The ERT concluded that the information provided was consistent with the most up-to-date available EMEP/EEA emission inventory manual and showed that Czechia would fulfil its emission reduction commitment with the implemented adjustment. However, the ERT also notes that the information provided by Czechia across the Annex I submission template, Annex IIa adjustment template, and Czechia's calculation spreadsheet are inconsistent with each other. The ERT therefore strongly recommends that Czechia ensure that all reported emissions data relating to adjustments and the underlying spreadsheets are consistent with one another. The impact of the adjustment on the NH<sub>3</sub> emission inventories of Czechia for the years 2020-2022 in kilotons is detailed in **Table 2**.

**Table 2: Impact of adjustments on the NH<sub>3</sub> emission inventories of Czechia for the years 2020-2022 in kilotons**

	Unit	2005	2020	2021	2022
<b>ERC</b>	<b>% of 2005</b>		<b>7%</b>	<b>7%</b>	<b>7%</b>
ERC unadjusted	(kt)		77.20	77.20	77.20
NT for Compliance unadjusted	(kt)	83.01	80.02	79.65	77.95
<b>Gap to ERC unadjusted.</b>	<b>(%)</b>		<b>-4%</b>	<b>-3%</b>	<b>-1%</b>
ERC adjusted	(kt)		73.90	73.90	73.90
Adjusted NT for Compliance	(kt)	79.46	72.56	71.72	72.91
<b>Gap to ERC adjusted.</b>	<b>(%)</b>		<b>2%</b>	<b>3%</b>	<b>1%</b>
Impact of Adjustment on NT for Compliance	(kt)	-3.55	-7.46	-7.93	-5.04



### 3 Conclusions and Recommendations

22. The ERT has undertaken a full and thorough assessment of the application for an adjustment of the NH<sub>3</sub> emissions inventory that was submitted by Czechia for the source sectors listed in Table 3.
23. The review of the submitted application followed the guidance provided in the Annex to Decision 2012/12 of the Executive Body of the CLRTAP. The findings of the ERT are described in detail in Section 2 of this report.
24. Table 3 below provides a summary of the adjustment applications received from Czechia, and the subsequent recommendations made by the ERT to the EMEP SB.
25. The ERT recommends the EMEP SB accept the new adjustment application submitted by Czechia.
26. The ERT strongly recommends Czechia improve its transparency and consistency around reporting adjustments within the Informative Inventory Report, Annex IIa, and any supporting information that Czechia produce.

**Table 3: Recommendations from the ERT to the EMEP SB on new adjustments**

Country	Sector	NFRs	Pollutant	Years	ERT Recommendation
Czechia	Inorganic N-fertilizers (includes urea)	NFR 3Da1	NH <sub>3</sub>	2020-2022	Accept

## 4 Information Provided by the Party

27. Table 3 lists the information provided by the Party in its adjustment application. The information provided by Czechia can be downloaded from the CEIP website<sup>2</sup>.

**Table 3: Information Provided by the Party**

Filename	Short description of content
annex_iaa_to_ece- eb.air130_adjustment_application_v202423 01_final_CZ2024_v2.0.xlsx	<b>MS Excel file</b> with detailed data underlying the proposed adjustment applications for:  NFR 3Da1: Inorganic N fertilisers (includes urea)
CZ_IIR_2024_v2.0.pdf	<b>IIR (2024), pdf-document</b> ; here especially: Chapter XI Adjustments.
NFR-3D(recalculation2024).xlsx	<b>MS Excel file</b> with further detailed calculations underlying the estimates of emissions for NFR 3Da1 when using EFs from EMEP/EEA 2019 and 2023 Guidebooks respectively, available from:  <a href="https://www.chmi.cz/files/portal/docs/uoco/oez/embil/dokumentyEMEP.html">https://www.chmi.cz/files/portal/docs/uoco/oez/embil/dokumentyEMEP.html</a>
Annex 1	<b>Pdf-document</b> statement from Czechia

28. The ERT found it necessary to ask the Party for further information. The information provided is described in Table 4 below.

**Table 4: Additional Information Provided by the Party**

Filename	Short description of content
Answers to questions set up by ERT	Excel file at "Clever space" - platform at Umweltbundesamt website

<sup>2</sup> <https://www.ceip.at/gothenburg-protocol/review-of-adjustments>

## References

### Data submitted by Parties applying for an adjustment:

<https://www.ceip.at/gothenburg-protocol/review-of-adjustments>

[https://webdab01.umweltbundesamt.at/cgi-bin/adj\\_v2.pl](https://webdab01.umweltbundesamt.at/cgi-bin/adj_v2.pl)

**Decision 2012/3** (ECE/EB.AIR/111/Add.1): Adjustments under the Gothenburg Protocol to emission reduction commitments or inventories to compare total national emissions with them.

[https://unece.org/DAM/env/documents/2013/air/ECE\\_EB.AIR\\_111\\_Add.1\\_\\_ENG\\_DECISION\\_3.pdf](https://unece.org/DAM/env/documents/2013/air/ECE_EB.AIR_111_Add.1__ENG_DECISION_3.pdf)

**Decision 2012/4** (ECE/EB.AIR/111/Add.1): Provisional Application of Amendment to the Protocol to Abate Acidification, Eutrophication and Ground-level Ozone

[https://unece.org/DAM/env/documents/2013/air/ECE\\_EB.AIR\\_111\\_Add.1\\_\\_ENG\\_DECISION\\_4.pdf](https://unece.org/DAM/env/documents/2013/air/ECE_EB.AIR_111_Add.1__ENG_DECISION_4.pdf)

**Decision 2012/12** (ECE/EB.AIR/113/Add.1): Guidance for adjustments under the 1999 Protocol to Abate Acidification, Eutrophication and Ground-level Ozone to emission reduction commitments or inventories to compare total national emissions with them.

[https://unece.org/DAM/env/documents/2012/EB/Decision\\_2012\\_12.pdf](https://unece.org/DAM/env/documents/2012/EB/Decision_2012_12.pdf)

**Decision 2014/1** (ECE/EB.AIR/127/Add.1): Improving the guidance for adjustments under the 1999 Protocol to Abate Acidification, Eutrophication and Ground-level Ozone to emission reduction commitments or inventories to compare total national emissions with them.

[https://unece.org/DAM/env/documents/2014/AIR/EB/Decision\\_2014\\_1.pdf](https://unece.org/DAM/env/documents/2014/AIR/EB/Decision_2014_1.pdf)

**ECE/EB.AIR/125**: 2014 Reporting Guidelines for Estimating and Reporting Emission Data under CLRTAP [https://unece.org/DAM/env/documents/2013/air/eb/ece.eb.air.125\\_E\\_ODS.pdf](https://unece.org/DAM/env/documents/2013/air/eb/ece.eb.air.125_E_ODS.pdf)

**ECE/EB.AIR/GE.1/2022/20– ECE/EB.AIR/WG.1/2022/13**: *Guidelines for Reporting Emissions and Projections Data under the Convention on Long-range Transboundary Air Pollution*. United Nations Economic Commission for Europe:

[https://unece.org/sites/default/files/2022-08/ECE\\_EB.AIR\\_GE.1\\_2022\\_20-2210473E.pdf](https://unece.org/sites/default/files/2022-08/ECE_EB.AIR_GE.1_2022_20-2210473E.pdf)

**ECE/EB.AIR/130**: Technical Guidance for Parties Making Adjustment Applications and for the Expert Review of Adjustment Applications, 14 April 2015

[https://www.ceip.at/fileadmin/inhalte/ceip/4\\_adjustments/ece\\_eb\\_air\\_130\\_av\\_for\\_the\\_web.pdf](https://www.ceip.at/fileadmin/inhalte/ceip/4_adjustments/ece_eb_air_130_av_for_the_web.pdf)

**EMEP/EEA 2019**: EMEP/EEA Air Pollutant Emission Inventory Guidebook 2019, EEA Report 13/2019

<https://www.eea.europa.eu/publications/emep-eea-guidebook-2019>

**EMEP/EEA 2023**: EMEP/EEA Air Pollutant Emission Inventory Guidebook 2023, EEA Report 06/2023

<https://www.eea.europa.eu/publications/emep-eea-guidebook-2023>

**The 1999 Gothenburg Protocol** to Abate Acidification, Eutrophication and Ground-level Ozone

[http://www.unece.org/env/lrtap/multi\\_h1.html](http://www.unece.org/env/lrtap/multi_h1.html)

**TFEIP 2022**: Technical Guidance for Emissions Inventory Adjustments under the Amended Gothenburg Protocol: Inventory adjustments in the context of ERCs

<https://www.ceip.at/gothenburg-protocol/adjustments>

## 5 Summary of the Statement from Czechia on the conclusions presented by the Expert Review Team

The ERT summarises in this section, the statement from Czechia on the conclusions presented by the ERT. The full statement from Czechia is presented in Annex 1.

Czechia welcomes the conclusions of the ERT, which acknowledged the validity of the requirement to adjust the emission values and accepts the recommendations for subsequent improvement of the information provided in the IIR. In addition, Czechia has performed a revision of the data originally provided for the adjustment application. Czechia admits a certain degree of inconsistency in the reported data on the production of ammonia emissions from category 3Da1 Inorganic N fertilisers in the submitted documents; Annex I submission template, Annex IIA adjustment template, and a spreadsheet with the emission calculations.

Czechia confirms that the calculated values for the Impact of adjustment on NT for Compliance (**Table 2**) and the calculation method are both correct.

In the statement on the conclusions presented by the ERT, Czechia requested an assessment as to whether the fulfilment of emission obligations for 2020 compared to 2005 would be possible by adjusting the 2005 data according to a methodology elaborated in the statement.

## 6 ERT response to the Statement from Czechia

The ERT thanks Czechia for the comprehensive evaluation and statement on the conclusions presented by the ERT, including explanations to the inconsistencies. The ERT recommends Czechia improve the consistency around reporting adjustments in further submissions.

Regarding the request from Czechia to assess as to whether the fulfilment of emission obligations for 2020 compared to 2005 would be possible by adjusting the 2005 data according to the described steps, the ERT sees this possibility as a separate issue and not as part of the adjustment application submitted in 2024. Therefore, the data and method submitted in the response will not be reviewed as part of the adjustment application submitted in 2024. If Czechia plans to submit in 2025 an adjustment application based on the steps detailed in the statement, the ERT will review it in 2025.