Convention on Long-range Transboundary Air Pollution

emep

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Review of the 2015 Adjustment Application by Spain

Expert Review Team Report for the EMEP Steering Body

Report title	Review of the 2015 Adjustment Application by Spain
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Expert Review Team

Role	NFR14 sectors	Name (country)
Adjustment lead reviewer	All	Chris Dore (UK)
Primary expert reviewer	Road transport (1A3bi, 1A3biii)	Jean-Marc ANDRE (FR)
Secondary expert reviewer	Road transport (1A3bi, 1A3biii)	Michael KOTZULLA (DE)
Basic checks (Steps 1 and 2)	N/A	Katarina Mareckova (CEIP)

Executive Summary

1. As mandated by decision 2012/3 (ECE/EB.AIR/111/Add.1) of the Executive Body to the Convention on Long-range Transboundary Air Pollution (CLRTAP), the nominated expert review team (ERT) undertook a detailed review of the adjustment application submitted by Spain. The review was undertaken on behalf of the EMEP[1] Steering Body (SB) 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).

2. Each section of the application was reviewed by two independent sectoral experts in May and June 2015. The findings were discussed at the meeting held from 22 to 26 June 2015 at the EEA in Copenhagen. The conclusions and recommendations for the EMEP Steering Body have been documented in this country report.

Table ES1: Summary Information on the Submitted Application, Spain 2015

Reasons for adjustment application (decision 2012/3, para 6 as amended by decision 2014/1, annex, para 3)	Road transport (1A3bi and 1A3biii): EF revisions
Pollutant for which adjustment is applied for	NO_x
Year(s) for which inventory adjustment is (are) applied for	2010, 2011, 2012
Date of notification of adjustment to the Convention Secretariat	13 February 2015
Date of submission of supporting documentation	13 March 2015

3. The expert review team (ERT) reviewed and evaluated the documents submitted by Spain.

4. **NO_x emissions from road transport 1A3bi and 1A3biii:** Spain provided information that transparently presented "extraordinary" revisions of NO_x emission factors and, moreover, clearly quantified the impact of the EF revisions separately. The ERT concluded that the application meets all the requirements laid out in decision 2012/12 of the Executive Body of the CLRTAP and therefore recommends that the EMEP Steering Body **ACCEPT** this adjustment application.

5. The quantity and impact of the adjustments recommended for acceptance is summarized in tables ES2 and ES3 below.

Table ES2: Sum Total of Recommended Inventory Adjustments (ktonnes), Spain 2010-2012

Pollutant		2010	2011	2012
NO_x	kt	-126.97	-121.42	-111.22

[1] Co-operative Programme for Monitoring and Evaluation of the Long-range Transmission of Air Pollutants in Europe

Table ES3: Impact of Recommended Inventory Adjustments on National Emissions, Spain 2010 and 2012

Poll.	GP emission reduction commitment (kt)	2010 emissions reported in 2015 (kt)	2010 emissions (adjusted) (kt)	Difference (%)	2012 emissions reported in 2015(kt)	2012 emissions (adjusted) (kt)	Difference (%)
NOx	847	959.66	832.69	13%	919.64	808.42	12%

6. Spain's total national emissions will be below the Gothenburg Protocol ceilings from 2010 onwards if the proposed adjustments are accepted.

Content

1 Introduction and Context

7. Parties may apply for an adjustment to their inventory data or emission reduction commitments whenever they are (or expect to be) in non-compliance with their emission reduction targets[2]. However, in making an adjustment application, they must demonstrate that extraordinary circumstances have given rise to the need to revise their emission 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 (for a more detailed definition see decision 2014/1, annex, para. 3 (a) (i)–(iii)); or

b) the emission factors used to determine emissions levels for the year in which emissions reduction commitments are to be attained are significantly different than the emission factors applied to these categories when the emission reduction commitments were set; or

c) the methodologies used to determine emissions from specific source categories change significantly between the time when the emission reduction commitments are set and the year they must be attained.

8. Any Party submitting an application for 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 and the Technical Guidance document (ECE/AB.Air/130) must be provided (either as part of the Informative Inventory Report or in a separate report) by 15 March of the same year.

9. Decision 2012/12, as amended by the decision 2014/1, of the Executive Body of the CLRTAP, mandates that applications for adjustments submitted by Parties shall be subject to an expert review[3]. Technical coordination and support in the review is provided by EMEP's Centre on Emission Inventories and Projections (CEIP). The members of the review team are selected from the available review experts[4] nominated by Parties to the CEIP roster of experts.

10. The expert review team (ERT) undertakes a detailed technical review of the adjustment application in cooperation with the technical bodies under EMEP 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 each adjustment application based on the outcome of the technical assessment completed by the ERT.

11. 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 provide a detailed description of the ERT findings at each of the decision gates in the process.

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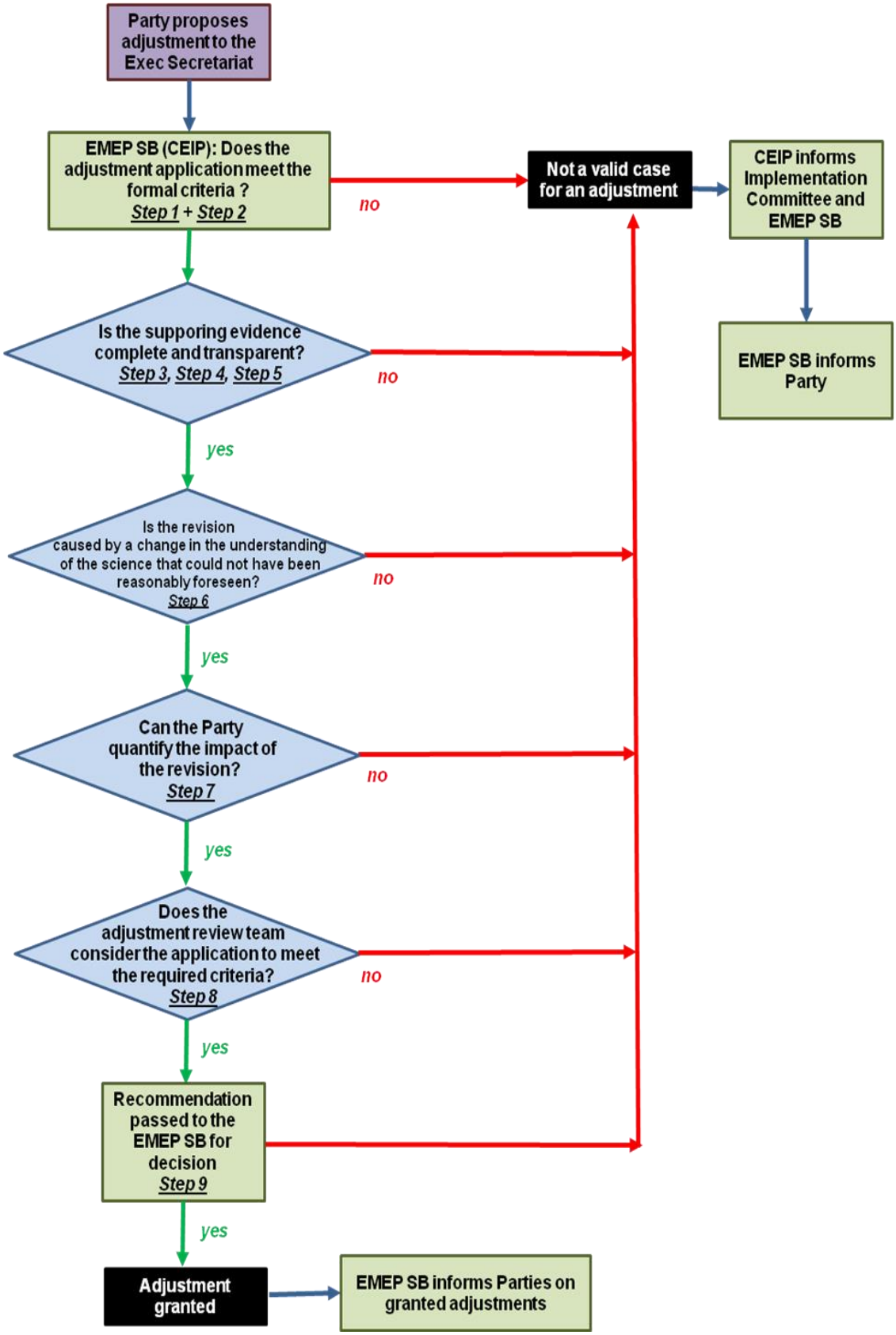
[2] The term "emission reduction commitments" is used throughout this report. However, the term "emission ceilings" is equally applicable.

[3] 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 para 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/EB.Air/130 ..

[4] http://www.ceip.at/fileadmin/inhalte/emep/pdf/2015/0_Roster_2015.pdf

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



2 Review of Adjustments Submitted in 2015

2.1 Assessment of Formal Criteria

12. Spain submitted an adjustment application in 2014, which was given an "open" status. It was therefore scheduled to be reviewed in 2015. Prior to the 2015 adjustment reviews, Spain was asked whether they intended to submit and update information. They submitted notification form on 13 February 2015 to the UNECE secretariat. All supporting information requested by decision 2012/12 as amended by decision 2014/1 was provided as part of the Informative Inventory Report before the legal deadline of 15 March of the same year that it was submitted for review by the EMEP Steering Body (Decision 2012/12, annex, para 1). Additional documentation was provided during the review in response to requests from the ERT. Section 4 lists the documentation provided by the Party.

13. Spain submitted an application for NO_x emissions adjustments for 2010-2012 in the following sectors:

a) Road transport (1A3bi and 1A3biii)

14. Spain does not comply with its emission reduction commitments listed in Annex II of the Gothenburg Protocol (para 1 of decision 2012/3).

15. Spain provided information relating to the adjustment impact on its emission inventory and the extent to which it would reduce the current exceedance and presumably bring the Party in compliance with the emission reduction commitments.

16. In the supporting documentation, Spain included information on when it expects to meet its NO_x emission ceiling.

2.2 Road Transport (1A3bi and 1A3biii), NO_x

2.2.1 Assessment of Consistency with Requirements of EB Decision 2012/3 as amended by EB Decision 2014/1

17. Spain submitted an application for significant EF and methodology revisions.

18. The adjustment application requires the provision of specific supporting information to demonstrate compliance with specific criteria (decision 2012/3, para 6a-c as amended by decision 2014/1, annex, para 3). The ERT reviewed the supporting documentation (see section 4) on the basis of these criteria and concluded that emission factors used to determine emission levels for road transport source categories 1A3bi and 1A3biii for the year in which emission reduction commitments are to be attained are significantly different than the emission factors applied to these categories when the emission reduction commitments were set.

19. The EF changes highlighted in the adjustment application could not have been foreseen at the time the 2010 emission ceilings were set and result entirely from the Euro standards not delivering the originally projected emission reductions in the real world.

20. The ERT therefore concluded that the supporting evidence provided complies with the criteria presented in decision 2012/3 and that the circumstances on which the adjustment is based could not have been reasonably foreseen by the Party at the time the emission ceilings were established for 2010.

21. The ERT reviewed the documentation that was provided to support the application (listed in section 4).

22. The supporting information provided by Spain on the emission factor revisions was deemed complete. However, the ERT found that Spain failed to clearly demonstrate that the model used to estimate adjusted emissions was appropriate (i.e. COPERT III). Spain explained that not all relevant information was currently available for historic versions of the inventory. The ERT therefore requested that the Party provide clarification and information on the following:

- more detailed information on the underlying assumptions used to quantify the adjustments presented in the application and, in particular, a statement on how the original emission estimates compared to those made using the COPERT III model in view of the fact that it had been used to generate 2010 emission estimates at the time the ceilings were set, and the emissions calculated by IIASA for 2010.

23. The Party provided clarifications on these issues (see Section 4). The ERT concluded that this additional information failed to provide any clarification on how COPERT III could be used to make emission estimates, but that the methodology used was a conservative calculation and hence was an appropriate approach.

2.2.2 Assessment of the Quantification of the Revision Impact

24. The adjustment application requires that the Party submit a quantification of the impact of the adjustment for which an application is submitted. Table 1 provides an overview of Spain's NOx adjustment applications in the road transport sector.

Table 1: Spain's NO_x Adjustment Applications for Road Transport, 2010-2012

Reference number	Pollutant	NFR14	unit	2010	2011	2012
ES/2015/1a	NO_x	1A3bi	kt	-45.58	-48.33	-47.99
ES/2015/1b	NO_x	1A3biii	kt	-81.39	-73.09	-63.23
	NO_x	**Total 1A3b**	**kt**	**-126.97**	**-121.42**	**-111.22**

25. The ERT has concluded that the quantification of the impact of this adjustment, as calculated by the Party, on total national emissions is based on an appropriate methodology and does not include any calculation errors. Furthermore, the ERT concluded that the information presented by Spain is in line with the most up-to-date guidance available from the EMEP/EEA Guidebook and the scientific literature.

3 Conclusions and Recommendations

26. The ERT has undertaken a full and thorough assessment of the application for an adjustment of NO_x emission inventory submitted by Spain for the following source sectors:

a. Road transport (1A3bi and 1A3biii)

27. The review of the submitted application was performed in accordance with the guidance provided in the Annex to decision 2012/12 of the Executive Body of the CLRTAP. The ERT findings are described in detail in Section 2 of this report.

28. Table 2 below provides a summary of the adjustment applications received from Spain as well as the subsequent recommendations the ERT made to the EMEP Steering Body.

Table 2: ERT Recommendations to the EMEP Steering Body

Country	Sector	NFRs2014	Pollutant	Years	ERT recommendation
Spain	Road Transport	1A3bi, 1A3biii	NO_x	2010 - 2012	Accept

29. **Road transport (1A3bi, 1A3biii), NO_x**: Spain provided information to support their application for an adjustment. During the review, the ERT requested more detailed information from Spain, in particular, information on how the adjustments had been quantified and how this compared with the estimates that would originally have been made (using COPERT III) for emission estimates in 2010. The Party pointed out that they were not in a position to fully provide such material as “old” activity data was not available. However, the ERT concluded that the use of COPERT III is a conservative calculation. The ERT concluded that the application meets all the requirements set out in decision 2012/12 of the Executive Body of the CLRTAP and therefore recommends that the EMEP Steering Body **ACCEPT** this adjustment application.

4 Information Provided by the Party

30. Table 3 lists the information provided by the Party in its adjustment application. The information provided by the Party can be downloaded from the CEIP website[5].

Table 3: Information Provided by Spain

Filename	Short description of content
Spain_Notification_Template_ CLRTAP_EMEP_ 2015.pdf & 2. Spain_Notification_Template_ CLRTAP_EMEP_ 2015.pdf	MS Word file describing the proposed adjustments, including: – reasons for adjustment of emission inventory for NO_x emissions – compliance check – outlook on future evolution of transport emissions + ANNEXES
Appendix_B1_Adjustment_Application_SPAIN-NOx-1A3b.xlsx	MS Excel file with detailed data serving as basis for the proposed NO_x adjustment applications for 1A3b
Spain_IIR_1990_2013.pdf	IIR 2015, pdf-document; especially: Chapter 11 emission inventory adjustments
Spanish re-estimation of NOX emissions (April 2014).doc	Supporting document for the adjustment proposal
Copert methodology.pdf	COPERT III methodology report
Annex Road Transport distance travelled and fuel consumptionr.doc	ADDITIONAL INFORMATION TO DOCUMENT "SPANISH REESTIMATION OF NO_X EMISSIONS (APRIL 2014)" - RUNNING FLEET IN HIGHWAY AND RURAL PATTERNS AND URBAN DISTANCES TRAVELLED

31. The ERT found it necessary to ask Spain for further information. The information provided is described in Table 4 below.

Table 4: Additional Information Provided by Spain

Filename	Short description of content
Email from Spain of 16 June 2015	Text states that the Party used COPERT III to estimate the emissions and that no activity data is available for the year 2010 from an inventory edition as close as possible to the year in which the ceilings were set
e-mail from Spain of 10 May 2015	Information on recalculations plus updated Appendix B1

[5] http://www.ceip.at/ms/ceip_home1/ceip_home/adjustments_gp/

5 References

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

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 to inventories for the purposes of comparing total national emissions with them

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 to inventories for the purposes of comparing total national emissions with them

Data submitted by Parties applying for an adjustment:
http://www.ceip.at/ms/ceip_home1/ceip_home/adjustments_gp/

EMEP/EEA air pollutant emission inventory guidebook 2013 (EMEP/EEA Guidebook)
http://www.eea.europa.eu/publications/emep-eea-guidebook-2013

EMEP/CORINAIR atmospheric emission inventory guidebook - Second edition 1999. (1999 Guidebook)

http://www.eea.europa.eu//publications/EMEPCORINAIR

Guidelines for reporting emissions and projections data under the Convention on Long-range Transboundary Air Pollution (ECE/EB.AIR/125)
http://www.ceip.at/ms/ceip_home1/ceip_home/reporting_instructions/

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

http://www.unece.org/environmental-policy/conventions/envlrtapwelcome/guidance-documents-and-other-methodological-materials/emissions-reporting.html

The 1999 Protocol to Abate Acidification, Eutrophication and Ground-level Ozone (Gothenburg Protocol)
http://www.unece.org/env/lrtap/multi_h1.html